

# UE Network Access

UE PR 0001

This procedure outlines the Service requirements for access to work on or near the UE electricity network for the performance of works

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## APPROVAL AND AMENDMENT RECORD

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## 1 SCOPE

This procedure applies to all employees, contractors and members of the public who require access to, or need to undertake work on or near the United Energy (UE) electricity network

### 1.1 Application

The application of services under this Procedure includes, but is not limited to network access requirements and types as described in the Electrical Safety Rules for the VESI Distribution Networks, (the Green Book).

## 2 OBJECTIVE

The objective of this procedure is to ensure that access to the UE network meets the relevant Regulatory, Code of Practice and industry requirements.

## 3 RESPONSIBILITIES

### 3.1 General

Service Provider is required to notify UE of all new employees, Sub Contractor employees and those employees who are no longer required to access the UE network. In all cases, network access must meet the requirements outlined in this procedure. Where supervised network access is required, the supervision shall be performed by an Authorised person.

Access is treated according to 3 categories:

1. Direct access
  2. Supervised access; and
  3. Third party access
- Direct and Supervised access is subsequently managed according to the knowledge and training the Authority holder has. This is determined according to industry standards and as defined in the Green Book. Such definitions are known as Person types and they are:
  - Authorised Person – means a person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of the organisation to perform the duty concerned.

**NOTE:** Other than in 3.4.2, in all instances in this procedure, Authorised means approval in writing and the Authorised Person shall be the holder of an ESI Passport which shall contain a record of all Authorities issued to that person and the training related to each Authority.

- Instructed person – means a person adequately advised or supervised by an authorised person to enable them to avoid the dangers which electricity may create.
- Ordinary person – means a person without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create.
- In summary a person shall not come closer to energised network assets than described by the Safe Approach Distances, (SAD's) unless Authorised or under Supervision by an Authorised Person.
- Third party access relates to non-Electricity Supply Industry (ESI) works or activities performed by non ESI persons, e.g. commercial construction, road works, work by other utilities

Unless workers are directly engaged by United Energy, all applications for network access authorities shall be made by a Service Provider who has an established Network Services Agreement, (NSA) with United Energy.

## **3.2 Direct Network Access**

### **3.2.1 Authorised Persons**

Direct access to the UE electricity network is granted only to Authorised Persons who are ESI workers performing ESI related works or activities. Authority types are described by the Green Book and granted according to the functional role of the Authority holder. A person may hold multiple Authorities. UE issue the following Authority types:

#### **3.2.1.1 Authority to Operate HV Electrical Apparatus**

Approvals which allow operational (or switching) access for personnel to UE sub transmission and distribution networks are controlled by an Operating Authority (OA) system. OA's are issued for a broad range of operating levels, known as Classes. The Class of an OA designates the type of equipment and/or area to which the Authority applies and their issue is restricted to employees and contractors who meet the appropriate standards of skills, training, experience and demonstrated competency. For definitions of OA Classes, see Appendix 1.

Holders of an OA shall meet training and competency testing standards as defined in the VESI Training Standards. The OA designates the system elements to be operated, equipment types and areas to which the OA applies.

The details of all employees and contractors issued with an OA by UE are entered into a database and maintained by Work Practices

#### **3.2.1.2 Authority to Receive Access Permits**

Recipients of an Electrical Access Permit shall be "Authorised Recipients" as defined in the Green Book. They shall meet training and competency testing standards as defined in the VESI Training Standards.

Authorisation shall be by the issue of a Certificate and endorsement in the Network Authorities section of the Electricity Supply Industry (ESI) Skills Passport.

Non-Authorised Recipients shall meet the Green Book requirements for Instructed Persons who are approved to work under the EAP.

#### **3.2.1.3 Authority to Receive Sanction for Testing (SFT)**

A SFT shall be issued for the purpose of testing electrical Apparatus as defined in the Green Book. Prior to being authorised as the Tester in Charge, a SFT a person shall be an Authorised Recipient, qualified as a Tester and shall meet training and competency testing standards as defined in the VESI Training Standards.

Authorisation shall be by the issue of a Certificate and endorsement in the Authorised Persons section of the ESI Skills Passport.

It is a common requirement for persons who are not Authorised Testers to sign on to a SFT to assist the Tester in Charge. In such instances it shall be the responsibility of the tester in charge or the tester responsible at a remote location to ensure that such persons are placed in the charge of an authorised tester, (who may be the tester in charge).

Such persons fit into one of three categories, as either an Instructed Person or as an Authorised Recipient or HV Operator and shall meet the following conditions:

An Authorised Recipient or Authorised HV Operator may sign-on to a SFT if the Authorised Recipient or Authorised HV Operator:

- a) understands instructions given on what approach is permitted to the electrical apparatus; and
- b) understands instructions given on what activity is permitted to be taken in relation to the electrical apparatus; and
- c) is aware of the nearest adjacent live electrical apparatus; and
- d) agrees to the general supervision of a nominated authorised tester (who may be the tester in charge)

An Instructed Person may sign-on to a SFT if the Instructed Person:

- a) understands instructions given on what approach is permitted to the electrical apparatus; and
- b) is made aware of the nearest live electrical apparatus
- c) understands instructions given on what activity is permitted to be taken in relation to the electrical apparatus; and
- d) agrees to the continuous and close supervision of a nominated authorised tester (who may be the tester in charge)

#### **3.2.1.4 Authority to Make Application**

An Authority to Make Application for; shall be issued for the purpose of applying for access to electrical apparatus as defined in the Green Book. Prior to making applications for specified types of network access authorities, a person shall meet training and competency testing standards as defined in the Green Book and the VESI Training Standards and hold an Authority to Make Application.

The applicant must have a clear and complete understanding of the work to be done, the means of doing it, knowledge of the physical arrangements of apparatus and existing or potential hazards

#### **3.2.1.5 Authority to Enter Enclosures**

An Authority to enter enclosures is issued to persons who do not hold an appropriate OA or Authority to Receive and who need to access facilities where there is an electrical hazard to perform single or multiple tasks which are repeated at one or more sites for example:

- (a) Project Planners, Engineers and Network Controllers for the purpose of audits and inspections.
- (b) Maintenance personnel who perform cleaning, gardening maintenance, minor building service maintenance utilising hand tools only, minor non-electrical repairs within zone and ground type substations.
- (c) SCADA works in Zone Substations that does not require lifting/disconnecting of links or connections.
- (d) Fire equipment inspectors who conduct regular inspections of extinguishers

An Authority to Enter HV Enclosures, does not overrule any other access requirements relating to work, i.e. EAP's, notification etc. Prior to being issued an Authority to Enter Enclosures, a person shall meet the requirements of the relevant VESI training module and the UE Operations Manual.

Instructed Persons may enter a HV enclosure under the supervision of a holder of an Authority to Enter HV Enclosures

### **3.2.2 Instructed Persons**

Instructed Persons do not hold a written Authority as defined in this procedure, they are treated under either Section 3.2.1.1, 3.2.1.2, 3.2.1.4, 3.3 or 3.5

### **3.3 Supervised Network Access**

Supervised network access is usually undertaken for a short term and typically relates to a single project or task where it is not usually suitable to issue an Authority. This is dependent on the scope and duration of the works and the type of supervision a person is subject to. Where a unique or non-electrical task is to be performed across multiple sites or for an extended period, see Section 3.4

Therefore, supervised network access can be described as a “*short term task which can be completed under general or direct supervision*”, examples being:

- (a) A crane operator sub-contracted to a work party to install new equipment
- (b) A plumber or carpenter performing minor repairs at a zone substation
- (c) A subject matter expert engaged to undertake a singular specialised activity at a single site.
- (d) A non-Authorised visitor to an electricity substation, e.g. a manager accompanying an auditor

Other requirements apply in regard to the use of plant by supervised persons. Where plant is used in a Zone Substation HV enclosure, an Authority to work in the Vicinity of Electrical Apparatus and/or Mechanical Plant is required. Supervised Network access shall be performed by an Authorised person.

### **3.4 Third Party Network Access**

Where non ESI persons require arrangements to perform non-ESI works on or near the UE network, such applications are categorised as Third Party access. Third Party requirements fall under 4 main categories:

- (a) Shared use for telecommunications companies, typically managed by Facilities Access contracts
- (b) Shared use for other attachments, e.g. signage, decorations
- (c) Civil activities near the UE network, managed under the VESI No Go Zone (NGZ) access arrangements
- (d) Tree clearing works for Victorian Municipal councils

#### **3.4.1 Shared Use – Telecommunications and other Attachments**

Attachments to UE network assets including telecommunications assets shall be assessed and managed according to the VESI Shared Use Code of Practice. Where a Facilities Access Agreement, (FAA) is required such processes shall be managed by UE Stakeholder relations, Network Access Manager.

#### **3.4.2 Tree Clearing for Victorian Municipal Councils and other non-ESI persons**

Tree clearing activities performed by municipal councils and other non ESI persons (non ESI applicants) shall meet the requirements of:



- (a) section 84 of the Electricity Safety Act 1998
- (b) section 318 and 319 of the Electricity Safety (Installations) Regulations 2009, and
- (c) Electricity Safety (Electric Line Clearance) Regulations 2010

Where the vegetation can fall within 2m of the UE network, persons cutting trees shall be authorised according to Section 319 of the Electricity Safety (Installations) Regulations 2009.

A non-ESI responsible person shall document in their management plan a method of applying for approval to undertake vegetation management works near the UE network.

Network access enquiries and applications shall be managed by the Service Provider who shall manage these processes within their quality assurance system.

### **3.4.3 No Go Zone (NGZ)**

All applications by ordinary persons for non-ESI third party works near the UE Network shall be assessed and managed according to the VESI Guidelines for Network Operators in Granting Permission for Work near Overhead and Underground Network Assets.

NGZ applications shall be managed by the Service Provider who shall manage their processes within their quality assurance system.

### **3.5 Other Network Access**

Where a unique or non-electrical task is to be performed across multiple UE sites or for an extended period, those persons shall meet the training requirements described in the VESI training standards for a Technical Officer/Maintenance Worker. Where required an Authority to Enter may be issued to such workers.

Notwithstanding if they are authorised to enter a HV enclosure or otherwise, such workers may still be subject to supervision by an electrically trained and Authorised person(s). The level of supervision is dependent on the task and at the direction of the Work Practices team.

Examples of such work being:

- (a) An environmental hygienist undertaking asbestos, noise or lead sampling and/or inspections across multiple sites
- (b) An environmental hygienist undertaking soil tests across multiple sites
- (c) Any other worker undertaking non-electrical work across multiple sites or for an extended duration.

Clarification regarding access for these types of works should always be sought from the Work Practices team *prior* to engagement.

### **3.6 Unauthorised Network Access**

A failure by any person to undertake network access in accordance with this procedure may result in immediate suspension from the UE network.

## **4 INITIAL TRAINING AND AUTHORITY ISSUE**

Initial training for network access Authorities shall meet the requirements of:

- (a) the Green Book and;
- (b) the relevant national Unit of Competency and/or
- (c) the established VESI training standard and;
- (d) the assessment standards published in Appendix 1 of this document
- (e) any requirements established by UE including the maintenance of a log book.

Unless workers are directly engaged by United Energy, all initial applications for network access authorities shall be made by a Service Provider who has an established NSA with United Energy.

Applications for initial authority issue shall include the following evidence of:

- (a) Qualification; and
- (b) currency of all VESI training, (in the first instance shall be in certificate form); and
- (c) training and assessment relevant to the authority requested, (shall be certificate from training provider); and
- (d) where relevant a log book with a history of completed tasks related to the requested authority

Alternatively UE may choose to recognise an equivalent VESI authority issued by another network operator as evidence.

United Energy may require the employer to submit full evidence of qualifications and training for all or a sample group of personnel.

## **5 REFRESHER TRAINING AND RECORDS MANAGEMENT**

### **5.1 Refresher Training**

All holders of Operating Authorities shall undertake competency based testing at intervals of no more than 3 years and shall complete refresher training where appropriate. Refresher training shall meet the requirements of the relevant VESI refresher training module and be recorded in the ESI Skills Passport.

### **5.2 Authority Records**

Records of Authorities issued to employees and contractors are to be recorded in the database maintained by UE Work Practices. Access to the database must be available to the NCC for immediate determination of an individual's authority.

## **6 RENEWAL OF EXISTING AUTHORITY**

Unless workers are directly engaged by United Energy, all applications for the renewal of network access authorities shall be made by a Service Provider who has an established NSA with United Energy.

Applications for authority renewal shall include evidence of training relevant to the authority requested including First Aid and CPR (which shall be in the form of a certificate from the training provider).

## 7 WITHDRAWAL OF EXISTING AUTHORITIES

Work Practices shall be responsible for the withdrawal and review of any Authority issued. An Authorisation may be withdrawn, altered, suspended or reviewed when it is apparent the person concerned:

- a) Should no longer be authorised. (i.e. as an outcome of poor audit results)
- b) Requires additional training
- c) Has been or is unable to perform operating duties due to any circumstance, or
- d) As the result of an investigation.

Work Practices shall be responsible for the re-issue of any individual Authority. The withdrawal or review of an authority shall be recorded in the database. Where an authority is withdrawn it must be accompanied by advice to the employer of the authority holder.

## 8 UE NETWORK KEYS

### 8.1 Purpose and Responsibilities

The UE network is secured using a key process and keys are provided to authorised employees and contractors where required for the performance of their work. The issue and control of secure keys to access the UE network is undertaken to:

- a) maintain a safe and secure working environment
- b) prevent theft from infrastructure assets
- c) protect critical electricity infrastructure

### 8.2 Keys

There are 2 key types which provide access to UE assets:

- a) Controlled keys for zone substations; and
- b) Uncontrolled distribution keys for use external to a station environment. These keys are legacy arrangements from the SECV and councils.

Network access keys remain the property of UE and the issue of zone substation keys is controlled by the UE Work Practices Group who are responsible for administration of the master key software system which will record:

- i. the name of the Authorised person to whom the key has been issued
- ii. the date of issue
- iii. the date of return (where applicable)
- iv. facts where a key has been reported as lost, stolen or damaged

It is the responsibility of every individual key holder to:

- a) ensure security of the key and to prevent its unauthorised use
- b) return a key when requested to do so by UE
- c) report lost, stolen or damaged keys as soon as practicable
- d) report the malfunctioning of any locks
- e) adhere to any additional requirements described in the application and receipt forms

### 8.3 Application for Network Access Keys

Network Access keys shall only be granted to Authorised Persons using the approved UE form available on the UE intranet or via the Alliance Hub.

## 9 Definitions

### Authorised Person

Other than in 3.4.2, in all instances in this procedure, Authorised means approval in writing and the Authorised Person shall be the holder of an ESI Passport which shall contain a record of all Authorities issued to that person and the training related to each Authority

### Authority

Any government or regulatory body, instrumentality, minister, agency, court, tribunal or other Authority with jurisdiction over the activity or thing about which the reference to an Authority is made.

### Contractor

Any person, company or organisation engaged to perform any part of the services under this Standard Work Procedure

### NCC

Network Control Centre

### Direct Supervision

Where a person is required to perform a task during the issue of an Access Authority they shall be inducted on to the site and deemed to be an Instructed Person placed under the direct and constant supervision of an Authorised Recipient (Green Book Clause 9.2.6).

### ESI

Electricity Supply Industry

### General Supervision

Where an Ordinary Person is required to perform a task in the vicinity of live apparatus; these persons shall not be issued an Authority to Enter HV Enclosures, rather the approval shall be by their signature at the completion of a network induction process utilising document number UED RF 0612.

Where the task involves the use of plant and equipment a VA shall be issued to the Authorised Recipient supervising the Ordinary Person. In this instance the authorised recipient cannot be an apprentice The VA shall meet the minimum information requirements as listed in the Green Book, Appendix A and shall be reviewed at intervals not exceeding 30 days.

### Green Book

Electrical Safety Rules for the VESI Distribution Networks, (the Green Book)

### High Voltage or 'HV'

Means a nominal voltage exceeding 1000 volts AC. or exceeding 1500 volts DC.

### Instructed Person

Means a person adequately advised or supervised by an authorised person to enable them to avoid the dangers which electricity may create.

### Low Voltage or 'LV'

Means nominal voltage exceeding 50 V AC or 120 V DC but not exceeding 1000 V AC and 1500 V DC

### Near

Means a situation where there is a reasonable possibility of a person either directly or through any conducting medium (e.g. via mobile plant) coming within the relevant safe approach distances.

### Network Asset

Means any asset that is owned or operated by a network operator for the purposes of generating, transmitting, distributing or supplying electricity of the network operator.

### Network Operator

Means the owner, controller or operator of an electricity network.

### NGZ

No Go Zone

### Ordinary Person

Means a person without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create.

### Recipient

Means a person who has signed on an access authority.

### Safe Approach Distance

Means the minimum distance that shall be maintained by a person, vehicle or mobile plant (including its load, controlling ropes and any other

accessories) when approaching electrical apparatus other than for work in accordance with an access authority.

#### **Safety Observer**

Means a person with sufficient knowledge of the task being performed and competent for the duty of observing and warning against unsafe approach to electrical apparatus...

#### **Short Term**

a singular project specific task which can be completed with supervision.

#### **Vicinity**

Means a situation where it is unlikely that a person will, either directly or through any conducting medium (e.g. via mobile plant), come within the relevant safe approach distances.

#### **VESI**

Victorian Electricity Supply Industry

## **10 VESI – HV SWITCHING AUTHORITY CLASSES**

The Victorian Electricity Supply Industry (VESI) High Voltage Switching Authority Classes are agreed HV Switching classifications which will be mutually recognised between Network Operators. The classifications are based on the basic principles of operating and may have restrictions placed on them by the issuing Network Operator. Where necessary, inductions may be undertaken by a Network Operator

### **10.1 Restricted Switching Overhead (RSO) = G class**

#### **Authorised to carry out HV switching, earthing and issue electrical access authorities on:**

All distribution overhead substations, ground type substations, spurs, SWER lines, SWER associated ACR's, FuseSavers and the underground network excluding metal enclosed switchgear.

### **10.2 Distribution Switching Overhead (DSO) = New**

#### **Authorised to carry out HV switching, earthing and issue electrical access authorities on:**

All Distribution overhead field apparatus and the underground network excluding metal enclosed switchgear

### **10.3 Distribution Switching (DS) = D class**

#### **Authorised to carry out HV switching, earthing and issue electrical access authorities on:**

All Distribution field apparatus and the underground network including metal enclosed switchgear

### **10.4 Zone Substation Switching (ZSS) = A class**

#### **Authorised to carry out HV switching, earthing, issue electrical access authorities on:**

All Sub Transmission and Distribution apparatus within zone substations

### **10.5 Terminal Switching Feeders (TSF) = AA class**

#### **Authorised to carry out HV switching, earthing and issue electrical access authorities on:**

All Distribution controlled feeder apparatus in Terminal Stations

### **10.6 Terminal Switching (TS)**

#### **Authorised to carry out HV switching, earthing and issue electrical access authorities on:**

All Transmission and Sub Transmission apparatus in Terminal Stations excluding Distribution Assets

**Note:** .Any Authority may have restrictions determined by the Network Operator. Such restrictions may typically be geographical or itemised plant. Such restrictions shall be recorded in the Network Authority section of the Australian ESI Skills Passport

**Example:** ZSS restrictions -

- Distribution feeder circuit breakers and station configuration for distribution parallels only
- Switching only (= C class)

## **11 APPENDIX 1 - ASSESSMENT STANDARDS FOR UE NETWORK AUTHORITIES**

### **11.1 Purpose**

The purpose of this Appendix is to clarify the method and quality of assessment to determine if an applicant has reached a suitable level of understanding and skill prior to applying for a UE network authority.

This Appendix does not address the requirements of prerequisite training. For further information of these types of training refer to the VESI Skills and Training Guideline.

The requirements outlined in this process are mandatory and shall be met in all instances of initial UE Authorisation

Re-Authorisation is subject to evidence of successful completion and currency of all relevant VESI refresher training.

### **11.2 References**

- a) UET12 Transmission, Distribution and Rail Sector Training Package
- b) Electrical Safety Rules for the VESI Distribution Networks (the Green Book)
- c) VESI Skills and Training Guideline
- d) UE HV Operations Manual
- e) UE Switching Manual
- f) VESI Fieldworker Handbook

### 11.3 Make Application For

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to apply for electrical access to the UE network	
<b>For whom</b>	All employees and contractors who are required to apply for network electrical access.	
<b>Prerequisites</b>	Relevant electrical qualification or suitable industry experience and training, (VESI Make Application Training)	
<b>Assessor</b>	This assessment/induction shall be conducted by a UE Network Control Officer	
<b>Assessment method and planned duration</b>	Written Assessment (open book)	NA – See below
	Practical:	NA
<b>Minimum Assessment Requirements</b>	<ul style="list-style-type: none"> <li>Assessment is by a familiarisation induction exercise undertaken with UE Network Control and shall include: <ul style="list-style-type: none"> <li>The WSS System</li> <li>Network Control protocols</li> <li>Minimum lead times</li> </ul> </li> </ul>	
<b>Refresher Training Frequency</b>	3 yearly, or as industry requirements change.	

### 11.4 Operating Instruction (OI) Checker (Approval)

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to check and approve Operating Instructions written by other persons	
<b>For whom</b>	All employees and contractors who are required to check the correctness of Operating Instructions	
<b>Prerequisites</b>	Relevant electrical qualification, suitable industry experience of writing Operating Instructions and Make Application Authorisation	
<b>Assessor</b>	This assessment shall be conducted by a UE Work Practices person with suitable industry experience.	
<b>Assessment method and planned duration</b>	The applicant shall submit to UE the following instructions that have been written by the applicant: <ul style="list-style-type: none"> <li>10 x LV shutdown Operating Instructions; and</li> <li>10 x HV/LV shutdown Operating Instructions</li> </ul>	NA
	Practical Assessment:	NA
<b>Minimum Assessment Requirements</b>	<ul style="list-style-type: none"> <li>OI's shall meet all requirements of UE Network Control</li> </ul>	
<b>Refresher Training Frequency</b>	NA	



## 11.5 Receive Sanction for Test (Tester in Charge)

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to apply electrical access to the UE network	
<b>For whom</b>	All employees and contractors who are required to test HV network or cables equipment on the UE electricity network.	
<b>Prerequisites</b>	Relevant electrical qualification, Authority to Receive Access Permits, a demonstrated experience or exposure to HV test procedures and equipment and training (VESI Receive Sanction for Test)	
<b>Assessor</b>	This assessment shall be conducted by a person with a qualification/experience level of at least: <ul style="list-style-type: none"> <li>• Certificate IV Workplace Trainer and Assessor (TAE40110); and</li> <li>• Suitable industry experience</li> </ul>	
<b>Assessment method and planned duration</b>	Written Assessment (open book)	NA
	Practical Assessment:	NA – See below
<b>Minimum Assessment Requirements</b>	<ul style="list-style-type: none"> <li>• Submission of a log book that records at least 12 months of exposure to SFT procedures.</li> </ul>	
<b>Refresher Training Frequency</b>	3 yearly, or as industry requirements change.	

## 11.6 High Voltage Switching – Restricted Switching Overhead (RSO)

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to switch and issue electrical access permits on UE network in accordance with Clause 10.1	
<b>For whom</b>	All employees and contractors who are required to switch HV network apparatus at the level described in the RSO classification.	
<b>Prerequisites</b>	Relevant electrical qualification, successful completion of UETTDRIS44A or acceptable experience in network switching and completion of a VESI log book to the satisfaction of UE Work Practices	
<b>Assessor</b>	This assessment shall be conducted by a person approved by UE with a qualification/experience level of at least: <ul style="list-style-type: none"> <li>• Certificate IV Workplace Trainer and Assessor (TAE40110); and</li> <li>• Suitable VESI HV Operating/switching experience</li> </ul>	
<b>Assessment method and planned duration</b>	Written Assessment (open book)	4 hours
	Practical Assessment:	4 > 8 hours
<b>Minimum Technical Assessment Requirements</b>	<p>It is preferred that the practical assessment for an RSO Authority involves switching and the issue of an EAP for actual planned works. Where this is not possible, a situation that does not involve interruption to LV may be created. The practical assessment for an RSO Authority shall include any requirements described in the VESI Skills and Training Guideline and the following technical elements as a minimum:</p> <ol style="list-style-type: none"> <li>1. The operations of any type of overhead switch gear described in the UE Switchgear manual; or</li> <li>2. The isolation of a HV spur line by live line clamps; and</li> <li>3. The isolation (and if required paralleling) of LV; and</li> <li>4. The application of HV and LV earths and bonders; and</li> <li>5. The issue and cancellation of an Electrical Access Permit; and</li> <li>6. The restoration, commissioning, testing of new or altered apparatus.</li> </ol>	
<b>Resources required</b>	<ul style="list-style-type: none"> <li>• Operating Instruction for access to a single pole HV Structure, (HV overhead alive), or non-interconnected HV Spur Line, (LV may be interconnected)</li> <li>• HV Operating PPE, equipment and related paperwork</li> <li>• UE HV Operations Manual (optional)</li> <li>• UE HV Switchgear Manual (optional)</li> <li>• Electrical Safety Rules for the VESI Distribution Networks (Green Book)</li> </ul>	

## 11.7 High Voltage Switching – Distribution Switching Overhead (DSO)

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to switch and issue electrical access permits on UE network in accordance with Clause 10.2	
<b>For whom</b>	All employees and contractors who are required to switch HV network apparatus at the level described in the DSO classification.	
<b>Prerequisites</b>	Relevant electrical qualification, the regular undertaking of HV switching under an RSO Authority for a minimum period of 12 months and completion of a VESI log book to the satisfaction of UE Work Practices.	
<b>performing Assessor</b>	This assessment shall be conducted by a person approved by UE with a qualification/experience level of at least: <ul style="list-style-type: none"> <li>• Certificate IV Workplace Trainer and Assessor (TAE40110)</li> <li>• Suitable VESI HV Operating/switching experience</li> </ul>	
<b>Assessment method and planned duration</b>	Written Assessment (open book)	4 hours
	Practical Assessment:	4 > 8 hours
<b>Minimum Technical Assessment Requirements</b>	<p>It is preferred that the practical assessment for a DSO Authority involves switching and the issue of an EAP for actual planned works. Where this is not possible, a situation that does not involve interruption to LV may be created. The practical assessment for a DSO Authority shall include any requirements described in the VESI Skills and Training Guideline and the following technical elements as a minimum:</p> <ol style="list-style-type: none"> <li>1. The operation of at least two of any type of overhead switch gear described in the UE Switching manual including ACR's and Capacitor Banks; and</li> <li>2. The isolation (and if required paralleling) of LV or the receipt from the work party of appropriate authority paperwork, and</li> <li>3. The application of HV and LV earths and bonders; and</li> <li>4. The issue and cancellation of an Electrical Access Permit that includes the equipment at points 1 and 2;</li> <li>5. The restoration, commissioning, testing of new or altered apparatus.</li> </ol>	
<b>Resources required</b>	<ul style="list-style-type: none"> <li>• Operating Instruction for access to any HV equipment that requires the operation of interconnected overhead HV assets. The instruction shall ensure that all of the technical assessment requirements can be met.</li> <li>• HV Operating PPE, equipment and related paperwork</li> <li>• UE HV Operations Manual (optional)</li> <li>• UE HV Switching Manual (optional)</li> <li>• Electrical Safety Rules for the VESI Distribution Networks (Green Book)</li> </ul>	

## 11.8 High Voltage Switching – Distribution Switching (DS)

<b>Purpose</b>	Successful completion of this assessment should demonstrate the applicant is suitably skilled to switch and issue electrical access permits on UE network in accordance with Clause 10.3	
<b>For whom</b>	All employees and contractors who are applying for a DS Authorisation from UE.	
<b>Prerequisites</b>	Relevant electrical qualification, the regular undertaking of HV switching under an RSO or DSO Authority for a minimum period of 12 months and completion of a VESI log book to the satisfaction of UE Work Practices.	
<b>Assessor</b>	This assessment shall be conducted by a person approved by UE with a qualification/experience level of at least: <ul style="list-style-type: none"> <li>• Certificate IV Workplace Trainer and Assessor (TAE40110)</li> <li>• Suitable VESI HV Operating/switching experience</li> </ul>	
<b>Assessment method and planned duration</b>	Written Assessment (open book)	4 hour
	Practical Assessment:	4 > 8 hours
<b>Minimum Technical Assessment Requirements</b>	<p>It is preferred that the practical assessment for a DS Authority involves switching and the issue of an EAP for actual planned works. Where this is not possible, a situation that does not involve interruption to LV may be created.</p> <p>The practical assessment for a DS Authority shall include any requirements described in the VESI Skills and Training Guideline and the following technical elements as a minimum:</p> <ol style="list-style-type: none"> <li>1. The operation of any type of overhead switch gear described in the UE Switching manual including ACR's and Capacitor Banks; and</li> <li>2. The operation of any type of metal clad switch gear described in the UE HV Switching Manual; and</li> <li>3. The disconnection, parking and earthing of 200/400 or 600A cable connector elbows; and</li> <li>4. The isolation (and if required paralleling) of LV or the receipt from the work party of appropriate authority paperwork<sup>1</sup>; and</li> <li>5. The application of HV and LV earths and bonders; and</li> <li>6. The issue and cancellation of an Electrical Access Permit that includes the equipment at points 1 &gt; 3; and</li> <li>7. The restoration, commissioning, testing of new or altered apparatus.</li> </ol> <p><sup>1</sup> Where the trainee already holds a DSO class operating Authority, the operating of OH switchgear may not be required. This would mean that the trainee shall operate at least two items of UG metal clad switch gear at different geographical locations.</p>	
<b>Resources required</b>	<ul style="list-style-type: none"> <li>• Operating Instruction for access to HV equipment that requires the operation of interconnected HV apparatus. The instruction shall ensure that all of the technical assessment requirements can be met.</li> <li>• HV Operating PPE, equipment and related paperwork</li> <li>• UE HV Operations Manual (optional)</li> <li>• UE HV Switching Manual (optional)</li> <li>• Electrical Safety Rules for the VESI Distribution Networks (Green Book)</li> </ul>	

## 12 APPENDIX 2 – SAMPLE HV OPERATING AUTHORITY ASSESSMENT REPORT

DATE:            /            /

Applicant Name	Authority Type			
Employer	HV Ops – RSO	<input type="checkbox"/>	HV Ops - TSF	<input type="checkbox"/>
Work Group	HV Ops – DSO	<input type="checkbox"/>		<input type="checkbox"/>
Assessor Name	HV Ops – DS	<input type="checkbox"/>		<input type="checkbox"/>
Employer	HV Ops – ZSS	<input type="checkbox"/>		<input type="checkbox"/>

Action/Result		Achieved?		
1 – PREPARATION		Yes	No	NA
a)	Personal PPE is correct and in a suitable condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Reviewed/checked all paperwork?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Contacted Control Room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Discussed and clarified requirements with Work Party / Crew Leader?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Access to appropriate reference material? e.g. Green Book, UE HV Ops & Switching Manuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Demonstrated appropriate use of reference materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Comment re Preparation</i>				
2 – SWITCHING & ISOLATION		Yes	No	NA
a)	Operating PPE is correct and in suitable condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Equipment (inc. EWP if used) is within test and OK?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Demonstrated an understanding of the consequences of the switching steps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Confirmed identification of apparatus prior to operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Demonstrated correct procedure for the equipment type? [Switch / ACR / Cap Bank etc.]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Checked correct operation of equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Attached appropriate tags?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h)	Correct use of barriers and signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Maintained Safe Approach Distances ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j)	Checked off each step against the Operating Instruction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment re Switching & Isolation

<b>3 – TESTING &amp; EARTHING</b>		Yes	No	NA
a)	Demonstrated the correct choice of earthing equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Checked the condition of earthing equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Equipment is within test and OK?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Selected optimum earthing point?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Handled earthing device in an appropriate manner? (E.g. cluster bracket)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Enforced correct clearance zones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Properly discharged equipment to be earthed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h)	Utilised appropriate test method?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Demonstrated correct technique?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j)	Maintained Safe Approach Distances ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment re Testing & Earthing

<b>4 – ACCESS AUTHORITY ISSUE &amp; CANCELLATION</b>		Yes	No	NA
a)	Correct form selected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Form filled out correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Issue technique appropriate? [clear concise instruction, pointing out relevant items etc.]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Complete verbal instruction given? [nearest live, isolation points, location of earths etc.]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Maps and electrical diagrams referred to?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Three questions asked? [satisfactory clarification given if required]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Signed the Access Authority?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h)	Ensured with RIC all Recipients have signed on?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Advised Network Control of Access Authority issue details?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j)	Received Access Authority from RIC and checked all signatories signed off?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k)	Clarified works performed and the state of apparatus with the RIC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l)	Confirmed Work Party earths are removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m)	Checked apparatus is fit for service prior to cancellation of Access Authority?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n)	Received any required Clearance forms from RIC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o)	Notified Network Control and received approval to restore supply?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment re Access Authority Issue

<b>5 – SUPPLY RESTORATION &amp; EQUIPMENT TEST/COMMISSION</b>		Yes	No	NA
a)	Operating PPE is correct and in suitable condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Demonstrated an understanding of the consequences of the switching steps in reverse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Confirmed identification of apparatus prior to operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Removed all operational earths?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Demonstrated correct procedure for the equipment type? [Switch / ACR / Cap Bank etc.]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Checked correct operation of equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Removed appropriate tags?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h)	Removed barriers and signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Maintained Safe Approach Distances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j)	Checked off each step against the Operating Instruction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k)	Carried out all required commissioning tests and recorded findings on DIS sheet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l)	Correctly carried out any phase out tests and energised any new equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m)	Notified Network Control that all supply is restored and the status of any new equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment re Supply Restoration and Equipment Testing/Commissioning

<b>6 – SUPPLY RESTORATION &amp; EQUIPMENT TEST/COMMISSION</b>		Yes	No	NA
a)	Understanding of the correct investigation fault process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Correct interpretation of line fault indicators?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Correct interrogation of fault Targets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comment re Access Authority Issue

RESULT	
Competent	<input type="checkbox"/>
Not Yet Competent	<input type="checkbox"/>

Comment regarding Trainee suitability or otherwise as a UE Authority Holder including any additional training requirements

SIGNED	
Assessor	
Trainee/Applicant	