

Access for Work on Low Voltage and Mechanical Apparatus

Summary:

This document supports the Power System Safety Rules and its requirements assembled under Work on Low Voltage (LV) and Mechanical (MECH) Apparatus - Category 4.

It applies to the issue, suspension and cancellation of LV/MECH Access Authorities for work on Low Voltage and Mechanical power system apparatus.

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When referring to TransGrid's policies, frameworks, procedures or work instructions, please use the latest version on the Wire [PSSR Page](#) or [Power System Safety Rules @ TransGrid](#)

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1. Overview

1.1. Purpose

This document supports the Power System Safety Rules and its requirements assembled under Work on Low Voltage (LV) and Mechanical (MECH) Apparatus - Category 4.

1.2. Policy Base

Document
Power System Safety Rules

1.3. Reference Documents

Document
Operating Process for Access to Low Voltage and Mechanical Apparatus
Safe Work Practices on Low Voltage and Mechanical Apparatus

1.4. Scope

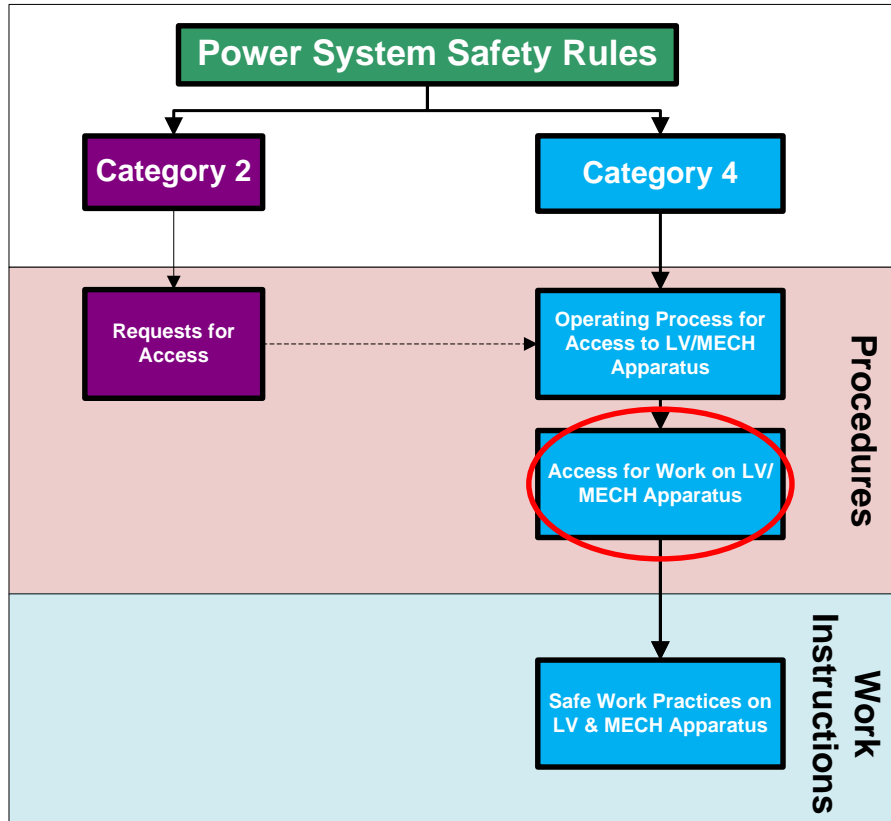
This standard applies to the issue, suspension and cancellation of LV/MECH access authorities for work on Low Voltage and Mechanical power system apparatus.

1.5. Accountability

Responsible person	Responsibility
Manager Health, Safety & Environment	Maintenance and ownership of this standard
Mgr – Training	Implementation of training programs associated with this standard
Authorised persons	Comply with this standard

1.6. Document Location

Block diagram showing location of document in relation to others.



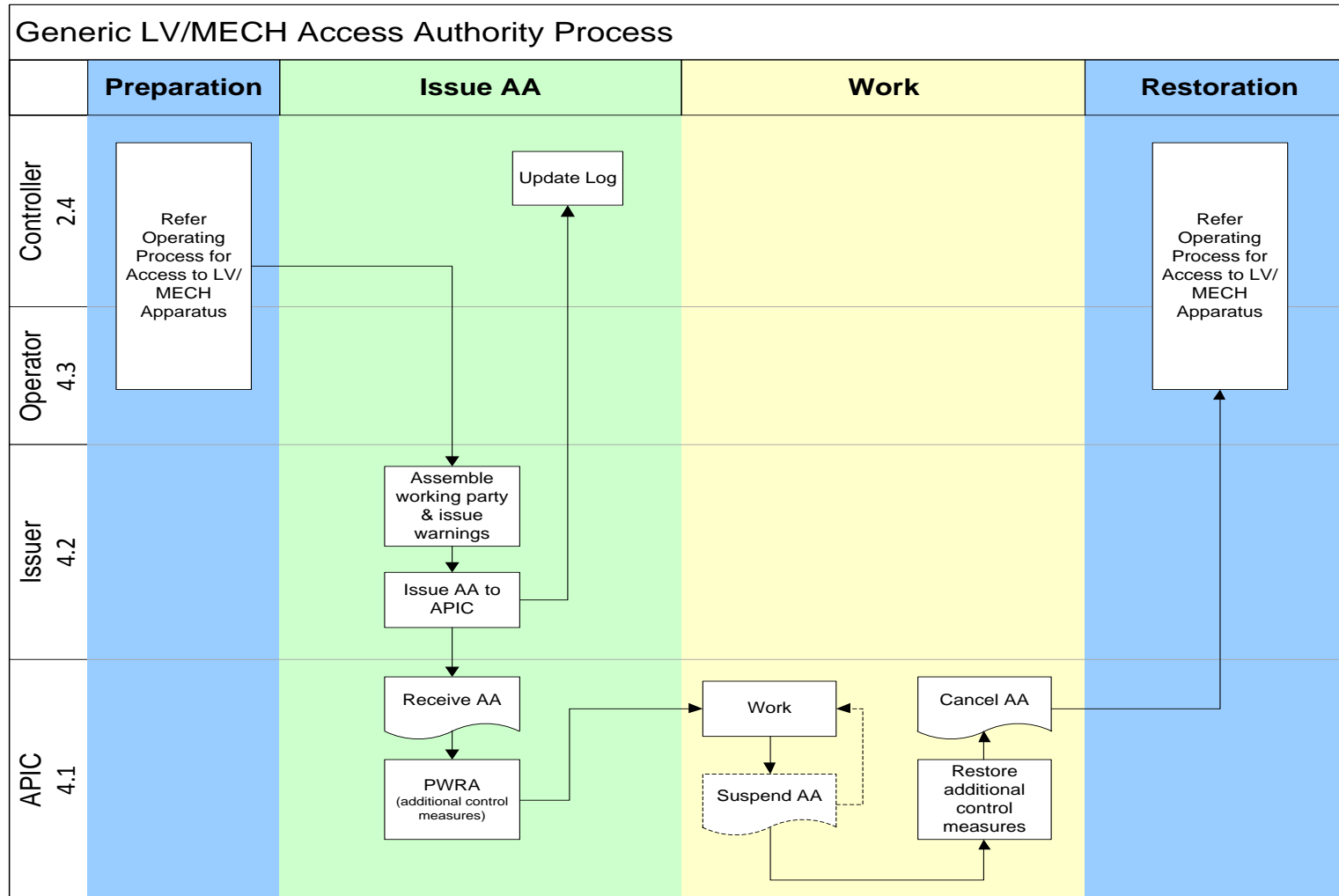
2. Introduction

The issue of a LV/MECH Access Authority is required before work is commenced on any Low Voltage and Mechanical apparatus in the charge of a Controller. The apparatus shall be made safe for work and a LV/MECH Access Authority shall be issued in accordance with Section 4 of the Power System Safety Rules.

This document covers the sequence required to safely issue a LV/MECH Access Authority and the sequence required after completion of work for cancellation of a LV/MECH Access Authority.

This document should be read in conjunction with 'Operating Process for Access to Low Voltage and Mechanical Apparatus', which covers the generic sequence for preparation and restoration of Low Voltage and Mechanical apparatus.

3. LV/MECH Access Authority Process



3.1. Preparation

Step	Safety Rules Authorisation	Task	Comment	Reference Document
1	4.3	Carry out the LVMPRI up to the point of issue of the LV/MECH Access Authority		Operating Process for Access to LV/MECH Apparatus

3.2. Issue LV/MECH Access Authority

Step	Safety Rules Authorisation	Task	Comment	Reference Document
5	4.2	Assemble the working party. Issue warnings to all staff involved in work.		
6	4.2	Issue LV/ MECH Access Authority to Authorised Person in Charge (APIC).		PSSR - Sect 4.2
7	4.1	Receive LV/MECH Access Authority	Operational control is now with the APIC.	PSSR - Sect 4.1
8	4.1	Pre-Work Risk Assessment PWRA	All members of the work party to participate	Safe Work Practices on LV/MECH Apparatus

3.3. Work

Step	Safety Rules Authorisation	Task	Comments	Reference Document
1	4.1	Work.		PSSR - Sect 4.1
2	4.1	At completion of work remove any additional control measures implemented in the PWRA.		
3	4.1	Cancel LV/MECH Access Authority (serviceable/unserviceable).		

3.4. Restoration

Step	Safety Rules Authorisation	Task	Comments	Reference Document
1	4.3	LVMPRI restoration		Operating Process for Access to LV/MECH Apparatus

4. LV/MECH Access Authority

4.1. Preparation of a LV/MECH Access Authority

The LV/MECH Access Authority is normally printed to the relevant substation switching printer by the Controller, blank Access Authorities are also supplied in book form. The LV/MECH Access Authority shall be prepared for issue by filling in details as shown in the following examples:

- Detail of Work**

The numbers of the RFA and the LV/MECH Access Authority (issued by the Controller) shall be entered in the spaces provided.

The description of apparatus and description of work entered shall be identical to the relevant details on the associated RFA.

1. Detail of Work			
Location / Call Sign:	RFA Number:	HV PRI Number:	Access Authority No.:
Canberra	2015-965	/	135024

	Description of Apparatus:	Description of Work:	Access Given ("X" appropriate boxes)
High Voltage	Parallel Operation	Replace faulty relay	<input type="checkbox"/> HV <input checked="" type="checkbox"/> LV/Mech <input type="checkbox"/> Field <input type="checkbox"/> Cable <input type="checkbox"/> Testing - HV <input type="checkbox"/> Testing - LV/Mech <input type="checkbox"/> Testing - Cable
LV / Mechanical	Parallel Operation Panel 34	Replace faulty relay	
- Status of Apparatus at Start of Work**

The issuer of the LV/MECH Access Authority shall delete all of the listed options that are NOT applicable at the time of issue.

2. Status of Apparatus at Start of Work (delete conditions not applicable)	
Above HV apparatus is:	In-service / off load / de-energised / isolated / earthed / disconnected
Above LV/Mech apparatus is:	In-service / serviceable / out of service / isolated / earthed & short circuited / discharged
LV/Mech isolations (LVMPRI/PMWI):	2015-965/1

4.2. Warnings

The person issuing the LV/MECH Access Authority shall give relevant warnings and record these on the [Access Authority Warning form – LV/MECH](#) and sign the form with the understanding that all staff have been made aware of the hazards. The Access Authority Warning form – LV/MECH, shall be attached to the LV/MECH Access Authority when it is issued.

4.3. Issuing a LV/MECH Access Authority

The LV/MECH Access Authority shall be issued in accordance with the general requirements of the PSSR section 4.2 by filling in details as shown in the following example:

The necessary demonstrations and warnings have been given to the person receiving this Access Authority				
Warning and Hazard Form No.:	Name	Signature	Time	Date
2015-965	A. Fortoo	A. Fortoo	0750	10/7/15

Once the entire work party has been given the warnings and demonstrations required by the PSSR, the LV/MECH Access Authority will be issued to the Authorised Person In Charge (APIC), who then has operational control of the apparatus listed on the LV/MECH Access Authority and is responsible for the safety of persons working under the LV/MECH Access Authority. The work party will then sign on to the LV/MECH Access Authority. Once all of the work party has signed on, the APIC shall rule a line across the signature section, confirming that everyone above the line has received the appropriate safety briefing.

3. Persons required to work on this Access Authority							
I understand the warnings and/or demonstrations given and my responsibilities under this Access Authority							
SIGN ON				SIGN OFF			
a) Person to whom this Access Authority is issued or transferred				I understand that Access under this Authority has been suspended			
Name	Signature	Time	Date	Signature	Serviceable	Time	Date
A. Forun	A. Forun	0750	10/7/15		Y <input type="checkbox"/> N <input type="checkbox"/>		
					Y <input type="checkbox"/> N <input type="checkbox"/>		
					Y <input type="checkbox"/> N <input type="checkbox"/>		
b) Other persons allocated to work on this Access Authority							
Name	Signature	Time	Date	Signature	Time	Date	
S. Body	S. Body	0750	10/7/15				
S. Else	S. Else	0750	10/7/15				
<hr/>							

The LV/MECH Access Authority shall be held and retained on site by the APIC.

Additional persons may become part of a work party after the LV/MECH Access Authority has been issued, provided they are given appropriate warnings and demonstrations by the APIC.

Note: The LV/MECH Access Authority number is entered on any additional signature sheets. The details of signature sheets shall be included on the LV/MECH Access Authority form as shown in the example below:

If space insufficient continue overleaf
Access Authority Additional Signature Sheet Number(s): 01

4.4. Responsibilities of the Person Receiving a LV/MECH Access Authority

4.4.1. Pre-Work Risk Assessment

Prior to commencement of work under a LV/MECH Access Authority, the LV/MECH Access Authority recipient shall, in conjunction with all other members of the work party, identify any hazards associated with the work and take appropriate additional control measures, as required by the relevant Safe Work Practices, Safe Work Method Statement (SWMS) and Pre-Work Risk Assessment forms for the equipment.

4.4.2. Additional control measures

The person receiving the LV/MECH Access Authority shall apply additional control measures as follows:

(a) Co-ordination with other Work Parties

When there are multiple work parties, each Access Authority recipient shall ensure that their work is coordinated with that of the other parties. Coordination arrangements shall be endorsed on the Access Authority Warning form for each Access Authority.

Where access authorities are to be issued to more than one work party on an item of apparatus, the control points for the apparatus, and the isolation points for the associated hazardous apparatus shall be under the control of the recipient of only one of the Access Authority carrying the most significant risk from premature restoration of isolations. The associated Warning Tags shall be endorsed with the number of this Access Authority.

Should any of the work parties require restoration of such isolations and/or operation of the apparatus, such restorations and operations shall be arranged by liaison with the holder of the Access Authority, the number of which appears on the Warning Tags. Where a Warning Tag has been applied to the door of a cabinet, all apparatus accessed via the door shall be treated in a uniform manner.

(b) Restoration of additional control measures

On completion of the work, the authorised person holding the LV/MECH Access Authority shall ensure the hazardous apparatus is left in a condition that allows the restoration steps of the PRI to be carried out without alteration, provided it is safe to do so. If this is not possible, it shall be noted that on the LV/MECH Access Authority whether the apparatus is or is not serviceable and the controller shall be notified.

When the apparatus is to remain out of service pending the issue of a new LV/MECH Access Authority for further work then, provided all PRI requirements remain unaltered, the work area and any associated warning signs may be left in place in readiness for the issue of a further LV/MECH Access Authority.

4.5. Suspension and Resumption of a LV/MECH Access Authority

When work under a LV/MECH Access Authority ceases, and it is intended to resume work under the same LV/MECH Access Authority, then the LV/MECH Access Authority shall be suspended. All staff shall sign off the LV/MECH Access Authority and the APIC shall indicate whether or not the apparatus is serviceable as far as their work is concerned and inform the Controller of the details of the suspended LV/MECH Access Authority.

3. Persons required to work on this Access Authority							
I understand the warnings and/or demonstrations given and my responsibilities under this Access Authority							
SIGN ON				SIGN OFF			
a) Person to whom this Access Authority is issued or transferred				I understand that Access under this Authority has been suspended			
Name	Signature	Time	Date	Signature	Serviceable	Time	Date
A. Forun	A. Forun	0750	10/7/15	A. Forun	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	1600	10/7/15
					Y <input type="checkbox"/> N <input type="checkbox"/>		
					Y <input type="checkbox"/> N <input type="checkbox"/>		
b) Other persons allocated to work on this Access Authority							
Name	Signature	Time	Date	Signature	Time	Date	
S. Body	S. Body	0750	10/7/15	S. Body	1600	10/7/15	
S. Else	S. Else	0750	10/7/15	S. Else	1600	10/7/15	

Before resuming work under a LV/MECH Access Authority that has been suspended, the APIC shall:

- obtain clearance from the Controller, confirm the identity of the apparatus;
- verify that the conditions of the LV/MECH Access Authority covering the apparatus are still valid;
- ensure all members of the work party shall sign on the LV/MECH Access Authority; and
- give appropriate warnings to any person not signed on to the LV/MECH Access Authority prior to its suspension.

Note 1: If the APIC is not the same person who held the original LV/MECH Access Authority, then the requirements of the PSSR sect 4.1.8 for transferring a LV/MECH Access Authority shall be followed.

4.6. Issuing of a Testing Access Authority

A LV/MECH Testing Access Authority shall be issued in accordance with the general requirements of the Power System Safety Rules section 4.2.3.

The Authorised Person issuing a LV/MECH Testing Access Authority shall:

- (a) Ensure that any current Access Authorities relevant to the equipment under test are suspended or cancelled and all staff are signed off;
- (b) On the LV/MECH Testing Access Authority, record:
 - i) Particulars of testing and details of conductors that may have test voltages applied, which shall be identical to the relevant details on the associated RFA; and
- (c) Ensure that the recipient of the LV/MECH Testing Access Authority is authorised category 4.1.

A LV/MECH Testing Access Authority may be suspended, but during a period of suspension no person shall be permitted to work on the apparatus covered by the LV/MECH Testing Access Authority. Any LV/MECH Testing Access Authority must be cancelled before work is permitted to proceed or resume under any other Access Authority on the apparatus. This is to ensure that safe working conditions have been restored (i.e. earthing switches locked closed, portable earths applied and Warning Tags replaced by Do Not Operate Tags) before work is resumed under any other Access Authority.

It is the responsibility of the person in receipt of a LV/MECH Testing Access Authority to ensure that all conditions and isolations changed by them under the LV/MECH Testing Access Authority are restored prior to suspension or cancellation of the LV/MECH Testing Access Authority.

5. Cancellation of a LV/MECH Access Authority

On completion of work, the LV/MECH Access Authority shall be cancelled by the APIC. All staff shall sign off the LV/MECH Access Authority. The APIC shall:

- ensure the removal any additional control measures;
- indicate whether or not the apparatus is serviceable as far as their work is concerned; and
- inform the Controller of the details of the cancelled LV/MECH Access Authority.

4. Cancellation of Access Authority					
As far as the above is concerned, this Access Authority is cancelled and the System Controller has been notified of any warnings/adjustments.					
Working Earths removed	Apparatus Serviceable	Name	Signature	Time	Date
Y <input type="checkbox"/> N <input type="checkbox"/>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	A. Forun	A. Forun	1602	10/7/15

PT21112/003581485

6. Change history

Revision no	Approved by	Amendment
0	Lionel Smyth, EGM/Network Services & Operations	Replaces in part documents 'Operating Requirements – General' GD SR G2 005; Operating Requirements - Work On System Low Voltage and Mechanical apparatus - GD SR G2 012; and 'Operating Requirements - Local Safety Precautions' GD SR G2 007.
1	Lionel Smyth, EGM/Network Services & Operations	<ul style="list-style-type: none"> Deleted Attachment 'A' Added hyperlink to 'Warning and Hazard Assessment Form – LV/MECH'
2	K McCall, Manager Health, Safety & Environment	<p>All significant new additions and alterations from Revision 0 have been highlighted in this version by a vertical sidebar.</p> <p>The following has also been altered:</p> <ul style="list-style-type: none"> Revised accountability for this work instruction; Reference to Access Authority updated to LV/MECH Access Authority or LV/MECH Testing Access Authority where relevant.

7. Implementation

This procedure is to be implemented in conjunction with the implementation of TransGrid's Power System Safety Rules. It will be available as a resource, published on the Wire.

8. Monitoring and Review

The Manager Health, Safety & Environment is responsible for the ongoing monitoring and review of the documents associated with the Power System Safety Rules. This can include but is not limited to:

- Requesting regular feedback on the effectiveness of procedures and work instructions. Appropriate feedback tools include focus groups and online assessments;
- Where a change has occurred in our processes; and
- Recommendations arising from incidents.

9. Attachments

Nil.