PR-NET-OSM-016

CO-ORDINATION OF WORK AND OPERATIONS ON THE LOW VOLTAGE SYSTEM

OPERATIONAL SAFETY MANUAL – SECTION 2.6

Scottish & Southern Electricity Networks

	Name	Title
Author	Jason Black	Operational Safety Manager
Checked by	Peter Vujanic	Head of SHE Distribution
Approved by	Richard Gough	Designated Engineer

CONTENTS

1 Introduction

This **Approved** procedure provides the safe system of work needed for **Persons** to work on the **Low Voltage System** without being exposed to unnecessary risk and detriment caused by other **Persons** working on the same or adjacent part(s) of the **System**.

2 Scope

This **Approved** procedure applies to work and operations on the **Low Voltage System(s)** owned and operated by **SSEN-D** and concentrates on maintaining safety from the **System** by setting out certain requirements for the safe coordination of work and operations on the **Low Voltage System**.

When used correctly, the principles and requirements of this **Approved** procedure help to ensure effective control and coordination of operational **Persons** and activities on the **Low Voltage System** and its interfaces with other **Systems**.

3 References

This document forms part of the SSEN Distribution Operational Safety Manual, SHE Management System, and business management system. It should be read and used in conjunction with other documents within the manuals and systems; it has however been developed with the user and in-scope activity in mind, meaning it should provide the user with the information they need to complete in-scope activities without referencing other documents.

In addition to the above, this document has been put in place to align SSEN Distribution with the associated Legal requirements and good practice electricity sector guidance.

For further help and guidance on how this document relates to other documents and requirements, please contact a member of the SSEN Distribution Operational Safety team.

4 Definitions

The words printed in bold text within this document are either headings or definitions. Definitions used within this **Approved** procedure are defined within the list presented immediately below, or within section 2 of the **Operational Safety Rules**.

- **Default Control Engineer** – the **Authorised Person** who, in line with the requirements of this **Approved** procedure, isolates a defined part of the **Low Voltage System**. Once isolation is complete, the **Authorised Person** becomes the **Default Control Engineer** for that isolated part of the **Low Voltage System**; this remains until isolation of that part of the **Low Voltage System** is removed; or 'default control' is transferred to another **Authorised Person** in accordance with the requirements of this **Approved** procedure

5 Principles

5.1 Only one **Person** can be in control of any one part of the **System** at any one point in time. This **System** control principle is critical in providing safety from the **System** by helping to ensure suitable and sufficient coordination, cooperation, and communication of **Persons** completing operations, testing, and work on the **System**.

5.2 As a standard principle the **Control Engineer** responsible for the **High Voltage System** is responsible for the first isolatable device (e.g., transformer fuses, links, circuit breaker, etc) on the **Low Voltage System** at the interface with the **High Voltage System**. In practice this means that the **Control Engineer** responsible for the **High Voltage System Shall** instruct all operations on distribution transformer links, fuses, etc. The only exception to this **System** control principle, is when an **Authorised Person** for the **Low Voltage System**, follows the requirements of this **Approved** procedure when establishing the points of isolation, and where practicable the earthing/ bonding, needed to maintain safety from the **System** during their intended work.

5.3 This procedure **Shall** not be used for work on the **High Voltage System** which requires operations to be completed on the **Low Voltage System** to achieve safety from the **System** in accordance with the requirements of the **Operational Safety Rules**. In such cases the **Control Engineer** for the **High Voltage System Shall** control the necessary operations, on either the **Low Voltage** or the **High Voltage System**.

6 Exemptions

6.1 Work associated with work on overhead and/or underground service cables/ wires is exempt from the requirements of this **Approved** procedure. This is because the risk of another **Person** clashing with a **Person** working on a service cable/ wire is low and tolerable – meaning no additional control measures are required.

6.2 Work involving the use of **Live** Working Procedures is exempt from the requirements of this **Approved** procedure. This is because the risk associated with another **Person** negatively affecting a **Person** using a **Live** Working Procedure is low and tolerable – meaning no additional control measures are required.

Note – the above exemptions are applicable to work on **Low Voltage** cut-outs unless the work requires the **Low Voltage** circuit to be isolated. In such cases the requirements of this **Approved** procedures must be met, e.g., isolation at all open points and ends of the main circuit.

7 Requirements

7.1 This **Approved** procedure **Shall** be used by **Authorised Persons** for the **Low Voltage System** when considering the **System** operations (isolation, earthing, etc) and control measures required for the safe management of work on the **Low Voltage System**.

7.2 The requirements of the **Operational Safety Rules** and all associated **Approved** procedures and guidance **Shall** be complied with in conjunction with this **Approved** procedure.

7.3 When making safe a **Low Voltage System** circuit in preparation for work under this **Approved** procedure, the **Authorised Person Shall** create points of isolation at all interconnectable ends, and open points on the **Low Voltage** circuit. When achieving this the **Authorised Person Shall** fix a **Caution Notice**(s) at each point of isolation.

7.4 When creating points of isolation and fixing **Caution Notices**, the **Authorised Person Shall** legibly record the information listed below on each **Caution Notice**:

- The **Authorised Person**'s name
- The date of application
- The **Authorised Person**'s contact telephone number

Note – it is acceptable to use different types of **Caution Notices** to best suit the **Isolating Device** in question, e.g., tape, signs, wraparounds, etc. If the **Authorised Person** positioning the **Caution Notice** is not able to write the details prescribed above directly on the **Caution Notice**(s), they **Shall** ensure a separate robust notice is secured at the location displaying the required information.

7.5 Once the **Low Voltage System** circuit has been isolated in accordance with the requirements above; the **Authorised Person** can continue to test and apply earths and/or bonds as necessary, before completing the intended work.

7.6 When using this **Approved** procedure and establishing the point of isolation on the first isolatable device on the **Low Voltage System** side of a **High Voltage** to **Low Voltage** transformer (i.e., transformer links, fuses, circuit breaker, etc) the requirement for the **Control Engineer** responsible for the **High Voltage System** to instruct the isolation operation(s) is negated. This is because the presence of the **Caution Notice** with the date, name and contact details of the **Low Voltage System Authorised Person** included, improves communication and awareness, and mitigates the risk posed to **Persons** completing work and/or operations on either the **High Voltage** and/or **Low Voltage System**.

Note – it is possible (and acceptable) that two sets of **Caution Notices** could be applied to a set of transformer links or fuses at the same point in time, i.e. one set put in place by an **Authorised Person** for the **Low Voltage System** under the requirements of this **Approved** procedure; and a second set instructed by the **Control Engineer** responsible for the **High Voltage System**.

7.7 Once an **Authorised Person** for the **Low Voltage System** has established isolation of a **Low Voltage System** circuit using this **Approved** procedure, they become the **Default Control Engineer** for the part of the **Low Voltage System** they have isolated. Notwithstanding the exemptions detailed in section 6 of this **Approved** procedure; any other **Person** needing to complete work and/or operations on the same circuit **Shall** contact the **Authorised Person** who has established the isolation (referencing the information written on the **Caution Notices** fixed at the points of isolation) to agree the work and/ or operations they need to complete.

7.8 In accordance with standard operating requirements under the **OSR**, any agreed operations and/or work must be instructed by the **Authorised Person** who has become the **Default Control Engineer** for the **Low Voltage System** circuit; and written down and accepted by the second **Authorised Person**. If this scenario occurs, both **Authorised Persons Shall** use their standard operating log to record instructions, operations, confirmation times, etc. No work or operations on a circuit **Shall** be completed by the second **Authorised Person** (or anyone under their control) unless agreed with, and instructed by, the **Authorised Person** who has established the isolation on that circuit.

7.9 As the **Default Control Engineer**, the **Authorised Person** who established the isolation on the respective circuit has the authority to agree/ decline requests to complete work and/or operations on the respective isolated circuit. Any disputes associated with these activities **Shall** be escalated via Line Management, or to the **Designated Engineer** (or their nominated deputy for resolution).

7.10 Upon the completion of work, and without unnecessary delay, the **Authorised Person** who established the isolation of the respective **Low Voltage System** circuit **Shall**:

- Confirm the work has been completed and all **Persons** involved in the work have been stood down and told to treat the circuit as **Live** and in service
- Remove all **Caution Notices** previously fixed and restore points of isolation

- Complete the normal/ standard tests and communications to ensure the **System** has been returned to normal and there are no residual customer and/or power supply issues
- Remove writing on **Caution Notices** retrieved from the **System**

Note – when using this **Approved** procedure and removing points of isolation on the first isolatable device on the **Low Voltage System** side of a **High Voltage** to **Low Voltage** transformer (i.e., transformer links, fuses, circuit breaker, etc) the requirement for the **Control Engineer** responsible for the **High Voltage System** to instruct the removal of isolation is negated. The **Authorised Person** using this **Approved** procedure **Shall** not remove **Caution Notices**, nor restore **Low Voltage System** points of isolation which have previously been established by another **Authorised Person** under the instruction of the **Control Engineer** responsible for the **High Voltage System**.

7.11 Transfer of 'default control' of a **Low Voltage System** circuit under this **Approved** procedure should be avoided at all times where practicable. When there is a definite need to transfer the 'default control' of a **Low Voltage System** circuit under this **Approved** procedure the process listed below **Shall** be followed in sequence and without compromise:

a) The **Authorised Person** who is operating as the **Default Control Engineer** for the **Low Voltage System** circuit in question, **Shall** engage the **Authorised Person** intending to become the **Default Control Engineer**. So far as is reasonably practicable, this engagement should be completed on site.

b) All work and testing on the **Low Voltage System** circuit in question **Shall** cease and **Persons Shall** be stood down until further instruction is provided by the **Default Control Engineer** for the circuit.

c) The **Authorised Person** who is operating as the **Default Control Engineer Shall** personally identify to the incoming **Authorised Person** intending to become the **Default Control Engineer**, the isolated **Low Voltage System** circuit and the **Point of Isolation** put in place previously by the **Default Control Engineer**. When doing this the **Default Control Engineer Shall** make clear the status of the **Low Voltage System** circuit in question, including any abnormalities and the status of any switches, links, fuses, bonds, earths, etc. The **Default Control Engineer Shall** also relay to the **Authorised Person** intending to become the **Default Control Engineer** any information regarding known work being completed on the **Low Voltage System** circuit being transferred.

d) The **Authorised Person** who is operating as the **Default Control Engineer** for the **Low Voltage System** circuit in question, and the **Authorised Person** intending to become the **Default Control Engineer Shall** visit each **Point of Isolation** and ensure that **Caution Notices** are revised such to ensure the name (date and contact number) for the incoming **Authorised Person** is written on the **Caution Notice**s used to create the **Points of Isolation** (see section 7.4).

e) The **Authorised Person** who is operating as the **Default Control Engineer** for the **Low Voltage System** circuit in question, and the **Authorised Person** intending to become the **Default Control Engineer Shall** log of the operations completed to transfer the circuit in question making sure times and operator names are recorded.

f) Once the **Low Voltage System** circuit in question has been transferred to the incoming **Authorised Person**, work on the circuit in question can recommence.

g) Situations involving the **Default Control Engineer** being not contactable/ unavailable should be escalated to the **Designated Engineer** (or their nominated representative) who will determine and agree the safe process to be followed. In cases of this nature the **Designated Engineer** nominated representatives are – Operational Safety Manager, Head of System Control, and Heads of Business with sufficient electrical/ operational competence to ensure safety from the system.

8 System Abnormalities

8.1 **SSEN-D** electronic **Low Voltage System** records **Shall** be used by **Authorised Persons** when completing operations and/or work on the **Low Voltage System** (planned or reactive). It is permissible to use recently printed paper records providing there are verified by the **Authorised Person** as being the same as the master electronic version.

8.2 **Authorised Persons Shall** never assume the **Low Voltage System** is configured in the way **System** records indicate. In accordance with standard operating practices and requirements; testing **Shall** be completed prior and immediately following operations on the **System** to check for expected **System** conditions.

Known **Low Voltage System** abnormalities identified or created by **Persons Shall** be reported in real-time to the regional Management team; and information describing the **Low Voltage System** abnormality **Shall** be securely positioned on site. In practice this means the **Person Shall** safely position the information (annotated diagrams, explanatory words, etc) in weather-proof packaging at the affected substations, link boxes, feeder pillars, etc.

9 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document created	NA	1.00	Richard Gough
02	AP to AP transfer process introduced – see section 7.11	PR-NET-OSM-016 (Rev1.00)	2.00	Richard Gough
03	Minor revisions to provide greater clarity for users	PR-NET-OSM-016 (Rev2.00)	3.00	Richard Gough
04				