PR-NET-OSM-086

MANAGEMENT OF ACTIVITIES AT THE INTERFACE WITH INDEPENDENT DISTRIBUTION NETWORK OPERATORS

OPERATIONAL SAFETY MANUAL - SECTION 13.4

Scottish & Southern Electricity Networks

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1 Introduction

1.1 The Utilities Act 2000 introduced distribution of electricity as a separate activity requiring authorisation, enabling any person to apply for a licence to operate existing or newly built distribution **Networks**.

1.2 There are now many embedded distribution **Networks** within both licensed areas of **SSEN-D**, which are generally owned and operated by **Independent Distribution Network Operators** (**IDNO**s) and typically exist as **Network** extensions connected to the **SSEN-D System** with an ownership and operational boundary and interface.

1.3 When work is carried out at or near these interface points, either by **SSEN-D** or by the **IDNO**, it is essential to have a robust procedure to formally document any **Switching** requests or other agreements made between each party.

1.4 Typically, there will be two or more control entities operating and liaising across the operational boundary between **SSEN-D** and the **IDNO** and this needs to be carefully managed and operated.

1.5 This document defines the **Approved** procedure as to how **SSEN-D** manages the interfaces with **IDNO**s, to ensure the safety of employees or contractors working on either side of such interfaces.

1.6 Compliance with this **Approved** procedure will enable all employees to follow the correct process in the event of any work or operations being required at an interface with an **IDNO**.

1.7 The purpose of this **Approved** procedure is to provide information on the types of **IDNO** interface which might be present on the **System** and to give guidance for the operational requirements across such interfaces and to ensure that employees and those working on behalf of **SSEN-D**, who carry out work at the interface with **IDNO**s, are provided with sufficient guidance on the documentation required to ensure that the necessary safety precautions are established, coordinated and maintained for the duration of work, so as to ensure their own safety and the safety of **IDNO** personnel and the general public.

2 Scope

2.1 This **Approved** procedure only relates to the requirements for the management of **IDNO** interfaces, i.e. between **SSEN-D** and **IDNO** embedded Networks.

2.2 It applies to all persons employed by or working on behalf of **SSEN-D**.

2.3 This **Approved** procedure is provided to help ensure that employees and contractors are provided with all the necessary information to ensure that any work or operations associated with an **IDNO** interface are carried out safely and correctly, so as to comply with **Operational Safety Rules (OSR)** and all relevant legal and industry regulatory obligations.

2.4 The scope of this document relates to:

- Distribution **Systems** at all voltages from **Low Voltage** to 132kV controlled by an **SSEN-D** Control Centre
- Interfaces with **IDNO** embedded Networks connected to the **SSEN-D System**

2.5 This scope does <u>not</u> apply to:

- **IDNO** assets beyond any interface with **SSEN-D Systems**
- Interfaces with **SSEN-D** owned **Networks** embedded in other Distribution Network Operators (DNOs) **Systems**, as these will be covered by the interface procedures of the relevant host DNO

- Interfaces with customers' **Networks**
- Interfaces with Transmission **System** Operators (TSOs) and other DNO **Networks** adjoining **SSEN**s **System**
- On site safety requirements, procedures and working practices, which are covered in other **Approved** procedures

3 References

The documents detailed in Table 3.1 - Scottish and Southern Electricity Networks Documents, and Table 3.2 - External Documents, should be used in conjunction with this document.

Table 3.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
PR-NET-OSM-006	SSEN Distribution Operational Safety Rules – Operational Safety Manual – Section 1.1
PR-NET-OSM-028	Switching Terminology and Approved Abbreviations - Operational Safety Manual - Section 4.4
PR-NET-OSM-025	Network Operating Procedures - Operational Safety Manual – Section 4.1
WI-PS-886	Perth Network Management Centre Working at Control Boundaries
PR-PS-007	Operations and Work by SSE Staff on Users HV / EHV Networks
PR-NET-ENG-031	Procedure to Change Control and Safety Rule Boundaries
FO-PS-181	User Authorisation Document
PR-NET-ENG-031	Procedure to Change Control and Safety Rule Boundaries
WI-NET-OSM-002	Personal Protective Equipment and Workwear for Live Environments
N/A	SSEN SHE Handbook (Held in Safety, Health and Wellbeing SharePoint Site)

Table 3.2 - External Documents

Reference	Title
ESQCR	Electricity Safety, Quality and Continuity Regulations 2002 (as amended)
Utilities Act	The Utilities Act 2000 (as amended)
Grid Code	OC 8 – Safety Coordination
Distribution Code	DOC 8 – Safety Coordination
ENA Engineering Recommendation G88	Principles for the Planning, Connection and Operation of Electricity Distribution Networks at the Interface Between Distribution Network Operators (DNOs) and Independent Distribution Network Operators (IDNOs)

4 Definitions

4.1 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 (OSR).**

4.2 **Independent Distribution Network Operator (IDNO)**

A licensed electricity distribution company operating embedded **Networks** where the supply is provided from the **SSEN-D System**.

4.3 **Network**

An interconnected independent electricity distribution network at any voltage embedded in or connected to the **SSEN-D System**.

4.4 **Operational Safety Rules (OSR)**

The **SSEN-D** Distribution set of rules, as read with related documents and procedures, that provide generic safe systems of work on the **System** therefore ensuring the health and safety of all who are liable to be affected by any **Danger** that might arise from the **System**.

4.5 **Site Responsibility Schedule**

A schedule of ownership, Control and operational responsibility agreed between the **IDNO** and **SSEN-D**, as detailed in the Distribution Code (DOC 8). This forms part of the Bi-lateral Connection Agreement (BCA) for the connection.

5 General Responsibilities

5.1 All duties related to the operational interface with an **IDNO**, **Shall** be carried out in compliance with this **Approved** procedure, WI-PS-886, PR-PS-007, PR-NET-ENG-031 and **OSR**, and **Shall** also follow the high level principles given in Engineering Recommendation G88 (as amended).

NOTE: Engineering Recommendation G88 (as amended) recommends the principles for the planning, connection and operation of electricity distribution Networks at the interface between DNOs and **IDNO**s.

5.2 The procedures and instructions in this **Approved** procedure **Shall** only be carried out by suitably trained and **Authorised Persons**.

5.3 Employees **Shall** ensure that at all times whilst carrying out any work or operations associated with an **IDNO** interface, **General Safety** arrangements are maintained and that other employees, including those of the **IDNO**, any contractors and members of the general public are not adversely affected by any such works or operations.

5.4 **OSR** 9.5 'Duties of **Control Engineers**' include consulting with **Control Engineers** of other **Systems** to agree and initiate **Switching** where there is inter-connection across Control boundaries and also agreeing responsibility for Control of circuits in the **Isolated** state preparatory to sanctioning the issue of **Safety Documents**. Either a 'Record Of Inter-System Safety Precautions' (RISSP) (see Section 14.2) or an Isolation Certificate (see Section 14.4), may be used, as appropriate, for this purpose, depending on the circumstances.

5.5 All other specific responsibilities in this **Approved** procedure **Shall** be followed.

6 Authorisation

6.1 All employees involved in work or operations associated with an **IDNO** interface **Shall** hold the requisite competence and authorisations for any and all procedures they may undertake.

6.2 Competence and authorisation certificates **Shall** be retained personally and be made available upon request.

7 Personal Protective Equipment

7.1 When carrying out any activities in relation to an **IDNO** interface, Approved PPE **Shall** be worn at all times, appropriate to the location and circumstances of the required works and/or operations.

7.2 As a minimum, PPE **Shall** meet the requirements of WI-NET-OSM-002. However, it must be kept in mind that where **SSEN-D** employees are required to enter beyond the **IDNO** ownership boundary, the **IDNO** might have their own or additional PPE requirements which **Shall** be adhered to whilst employees are within the boundary, as long as there is no conflict with **SSEN-D** minimum PPE requirements.

8 General Requirements

8.1 Work or operations at the interface with **IDNO**s requires clear and unambiguous agreements to ensure that work by each party proceeds safely with the correct safety precautions taken. All employees involved in work or operations on or near to an **IDNO Network** interface **Shall** have the correct authorisation and training for the activities required; have received basic first aid training; have available an **Approved** first aid kit; and **Shall** wear and make use of the appropriate **Approved** PPE provided for their safety and protection.

8.2 All employees involved with work or operations associated with **IDNO** interfaces **Shall** be fully conversant with the relevant clauses of the **OSR** pertaining to cross boundary operations and work and all relevant **SSEN-D Approved** procedures and policies.

8.3 Any activities required at the interface between **SSEN-D** and an **IDNO Shall** only be carried out in accordance with **Approved** procedures and **Shall** be fully risk assessed taking into account all relevant health and safety requirements, site specific issues and any reasonably foreseeable hazards to employees, contractors and, if appropriate, the general public, such that all reasonably practicable control measures are taken to avoid **Danger**.

8.4 The relevant **IDNO Shall** nominate in writing a suitably **Competent Person**, **Authorised Person**, or **Senior Authorised Person** (as appropriate) for the activities to be completed.

8.5 Full communication between all parties on site **Shall** be established before work or **Switching** commences, such that each party understands the processes, protocols and scope of work at each stage.

8.6 Before work or **Switching** is required to remove any of the safety precautions or to restore supplies, a full and comprehensive agreement **Shall** be reached between all parties.

8.7 The Control and operation of **High Voltage Systems** is based on the principle that each part of the **System Shall** only be under the operational Control of one Control Person at any one time.

8.8 The **Site Responsibility Schedule** for the site **Shall**, where available, be consulted to clarify the ownership, operational and control boundaries, and details of any other hazards applicable to the site.

8.9 A clear understanding of who is responsible for the necessary safety precautions **Shall** be agreed between the **IDNO** or their representative and the **SSEN-D** representative.

8.10 In general, the **IDNO**s **Authorised Person Shall** be responsible for, and operate **Apparatus** on the **IDNO**s **System** and the **SSEN-D Authorised Person Shall** be responsible for and operate **SSEN-D System Apparatus**.

8.11 As **SSEN-D** typically controls the supply to the **IDNO**s **Apparatus**, the **IDNO Shall** formally request **SSEN-D** to provide **Isolation** of the supply to allow the **IDNO** to work on their **System** safely.

8.12 Where an **IDNO** connected at **High Voltage** does not have their own control authority, then to ensure that operational requests are properly co-ordinated at the interface with such **IDNO**s, an Isolation Certificate **Shal**l be used (see Section 14.4).

8.13 Where the **IDNO** has their own control authority, the Record of Inter-**System** Safety Precautions (RISSP) process in accordance with the appropriate Grid or Distribution Code **Shall** be used (see Section 14.2).

8.14 Where **SSEN-D** carries out work on its own **Apparatus**, which might include part of the **IDNO System**, e.g. switchgear replacement, the **IDNO** or their representative may wish to transfer operational control of, and appoint an **SSEN-D** appointed **Senior Authorised Person** to operate the **IDNO**s **Apparatus** (see Section 14.4).

8.15 The responsibility for the full and correct application of the requirements of this **Approved** procedure sits with the operational person on the site. Where there is more than one operational person on site, then the responsibility for compliance is held both individually and collectively.

8.16 Where site conditions or the circuit configuration precludes full compliance with this **Approved** procedure, dispensation may be given by the Control Room Operations Manager to use an alternative procedure which **Shall** ensure that the safe and robust process detailed within this document is achieved in some other way. However, where an alternative is to be used this **Shall** be agreed with the Distribution Operational Safety Manager in advance.

9 Low Voltage IDNO Connection Modes

There are several different connection modes generally in use within **SSEN-D** for **IDNO Low Voltage Networks**. The more common modes are shown in Appendix A.

10 High Voltage IDNO Connection Modes

10.1 The most common connection modes for **IDNO Networks** connected at **High Voltage** are shown in Appendix B.

10.2 **IDNO** connections made at 132kV tend to be more bespoke in design and depending upon the specific requirements of the **IDNO**.

11 Identification of IDNO Networks on SSEN-D Records and Control Systems

11.1 Any **IDNO** Network connected to the **SSEN-D System** is shown as a coloured area on **SSEN**s GIS and **Low Voltage** schematic diagrams with a warning stating “Embedded **Network**”.

11.2 The interface point with an **IDNO** and the **SSEN-D System** is clearly marked on the Network Control system as an **IDNO** boundary point.

11.3 **SSEN-D** record systems generally do not hold detailed information of any of the assets on an **IDNO Network** beyond the operational interface. The relevant **IDNO** is responsible for managing the records of its own assets and for making them available to other interested parties on request through the New Roads and Street Works Act (NRSWA) process.

11.4 Contact details for all **IDNO**s operating in the two **SSEN-D** licensed areas are accessible by the relevant Control Centre, should contact be required.

12 On Site Identification of SSEN-D and IDNO Apparatus at Shared Premises

12.1 Where a substation contains both **SSEN-D** and **IDNO Apparatus**, it is typically the majority asset owner who has the responsibility under the Electricity Safety, Quality and Continuity Regulations (ESQCR) and whose ESQCR Schedule 1 "Danger of Death" notice and 24-hour emergency contact details are displayed externally. A common example of this being where the **IDNO** owns the transformer and **Low Voltage** distribution board and would therefore be the majority asset owner.

12.2 A dual locking facility **Shall** be provided to allow unfettered access to a shared substation by both parties.

12.3 External to the substation, **SSEN-D Shall** fit a unique identification and substation number label, in addition to any other required notices, e.g., SF6, etc.

12.4 Ownership of all **Apparatus** within the substation **Shall** be clearly identified by an **Approved** property ownership label identifying the party or parties with ownership and operational responsibility for each asset. Labels **Shall** be placed as a minimum on the front (operation area) of each unit and, where necessary, on the rear of each unit, e.g., extensible **Apparatus,** Metering Units, etc.

12.5 24-hour contact details for both parties **Shall** also be displayed inside the substation.

13 Excavations and Jointing Work at IDNO Interfaces

13.1 Where excavations are to take place adjacent to or within an **IDNO** Network area, copies of the **IDNO**s records **Shall** be obtained in the same way as other utility records before any work is undertaken.

13.2 An **IDNO** might use cables, ducts and marker tapes which are indistinguishable or difficult to tell apart from those installed by **SSEN-D**. This makes compliance with the identification requirements of the **OSR** and Operational Safety Manual an essential requirement.

13.3 When preparing to carry out jointing work in areas adjacent to an **IDNO** Network or on **SSEN-D** cables, which might cross an **IDNO** Network area, cables **Shall** be positively identified by use of an **Approved** Cable Identifier.

14 Responsibilities at High Voltage IDNO Interfaces

14.1 Hierarchy of Methods

14.1.1 There are numerous procedures available for transferring **System** control between parties. The following hierarchy **Shall** be followed when deciding an appropriate procedure:

1. Record of Inter-**System** Safety Precautions (RISSP)
2. Change of Control and Safety Rule Boundary Declaration (CCSRBD)
3. Operational Documentation (Isolation Certificate / User Authorisation Document)
4. Field Control.

14.1.2 Field Control **Shall** only be used under the following conditions:

- The **IDNO** has given prior written consent for **SSEN-D** to operate their **High Voltage Network**

Or,

- All reasonable attempts to contact a representative from the **IDNO** have been unsuccessful

14.1.3 These conditions **Shall** apply to both planned and unplanned situations.

14.2 Record of Inter System Safety Precautions (RISSP)

14.2.1 The Grid Code requires each **System** operator to have a procedure for work or testing at the Control interface when it is necessary for two or more Control authorities to work together to establish and maintain safety from the **System** across the Control boundary.

14.2.2 When work is to be carried out on one **System** that requires safety precautions, e.g., isolation and **Earthing**, on an **IDNO Network**, then where co-ordination is between two or more Control authorities, the RISSP process **Shall** be used.

14.2.3 Full details of the RISSP procedure can be found in the Grid Code, under Operating Code 8 (OC8). When the use of a RISSP is required to make a Network safe to work on, the procedure detailed in Appendix C **Shall** be followed.

14.3 Change of Control and Safety Rule Boundary Declaration (CCSRBD)

14.3.1 See **Approved** procedure PR-NET-ENG-031 for this document. It describes the process to be used by **SSEN-D** when work is to be carried out on **Apparatus** and in order to facilitate this work, it is deemed appropriate to change the control and safety rule boundary from its normal location to another location, for the duration of the work.

14.3.2 The CCSRBD procedure is detailed in Appendix E.

14.4 Use of Isolation Certificates and User Authorisation Documents

14.4.1 Where operations or work is to be carried out on the boundary between **SSEN-D** and an **IDNO,** or on an **IDNO Network,** and the **IDNO** does not have their own control authority, then this **Shall** be done as per the guidelines set out in the Distribution Code.

14.4.2 Full details of the guidance can be found in the Distribution Code Documentation under Distribution Operating Code 8 (DOC8) Safety Co-ordination.

14.4.3 When working at or across an **IDNO** control interface, where the **IDNO** does not have their own control authority, the procedure detailed in Appendix D **Shall** be followed.

14.5 Field Control

14.5.1 Prior to undertaking field control of a **High Voltage IDNO Network**, the **Senior Authorised Person Shall** ensure the following conditions are in place:

- All **Plant** and **Apparatus** are visually inspected and assessed as being safe to operate. Any maintenance records available should be included in this assessment
- All substation or **Switching** stations are accessible and have clear access and egress routes
- All **Plant** and **Apparatus** is familiar to the operator
- An up-to-date **System** diagram is available

14.5.2 Where reasonably practicable, all **Switching** carried out under field control on a **IDNO High Voltage Network Shall** be carried out **Dead**. This **Shall** be achieved by the **Senior Authorised Person** carrying out **Switching** on the **SSEN-D System**, directed by the **Control Engineer**, to **Isolate** the **IDNO High Voltage Network**.

14.5.3 Should it not be reasonably practicable for the **IDNO High Voltage Network** to be operated **Dead**, the **Senior Authorised Person Shall** discuss with the **Control Engineer** the **Switching** they intend to carry out on the **IDNO High Voltage Network**, and agree the steps they will take. The **Senior Authorised Person Shall** inform the **Control Engineer** when the **Switching** is completed.

14.6 Safety Log

14.6.1 Regardless of which process is used, each Safety Co-ordinator **Shall** maintain a Safety Log which **Shall** be a chronological record of all messages relating to changes of control and safety rule boundaries and agreement to switch for RISSP or Isolation Certificate procedures, both sent and received, by the Safety Co-ordinator(s).

14.6.2 The Safety Log **Shall** be retained for a period of not less than one year from the last entry associated with a particular change of Control and Safety Rule boundary or use of the RISSP procedure.

15 Network Operating Procedures (NOPs)

15.1 Planned **Switching** on any **Network** which crosses a Control boundary, including **IDNO**s, **Shall** be done under NOP1.

NOTE: See PR-NET-OSM-025 Network Operating Procedures - Operational Safety Manual – Section 4.1 for specific requirements relating to Network Operating Procedures.

15.2 Work across the boundary of an **IDNO High Voltage Network** under NOP 2, 3 or 4, is acceptable, except where the **IDNO** has their own Control authority.

15.3 Wherever **SSEN-D** are working across the boundary between **Networks** and are using the RISSP procedure, for example an interface with an **IDNO High Voltage Network**, then work **Shall** be done under direct control of the **Control Engineer** (NOP1). The reason for this is that **SSEN-D** cannot transfer the Control authority to a local controller on a **Network** that requires safety precautions on an adjacent **Network** controlled by another control authority. Once transferred, the local controller may decide to issue a **Sanction-for-Test**, this cannot be done without agreement between the Implementing Safety Co-ordinator (ISC) and the Requesting Safety Co-ordinator (RSC), see Appendix C.

15.4 In the situations involving safety precautions on **IDNO Apparatus**, where they do not have a Control authority, the procedure **Shall** be to establish the necessary **Isolation,** along with the **IDNO**s operators, locking them off using an ITEX lock guard, or equivalent lock, and obtain an Isolation Certificate or similar, as per Appendix D.

15.5 Then proceed under NOP 1, 2, 3 or 4 as appropriate. The key point is to establish isolations on the **IDNO Network** before issue of the NOP and remove them after the NOP has been cancelled. If these isolations are on **High Voltage** switchgear, then they **Shall** be stated as boundary points on the RISSP or Isolation Certificate, as appropriate.

15.6 The only way to issue a NOP 2, 3 or 4 on a **Network** involving another Control authority, is to agree a CCSRBD document to move all the isolations under **SSEN-D** Control, this may be advantageous on longer planned outages.

16 Liaison and Emergency Response with IDNOs for Low Voltage Incidents

16.1 To ensure that **SSEN-D** can quickly identify calls from **IDNO** customers, the **IDNO** is required under ENA Engineering Recommendation G88 (as amended) to provide **SSEN-D**

with customer information (MPAN, customer name and address) and keep this updated on a regular basis.

16.2 **SSEN-D Shall** provide information to the **IDNO** regarding any planned interruptions which might affect the **IDNO**s embedded **Network**. This **Shall** be done in accordance with the timescales laid down in the Electricity (Standards of Performance) Regulations 2015, which allow the **IDNO** to notify affected customers in accordance with its obligations under those standards.

16.3 Where calls are received from customers connected to an embedded **IDNO Network**, advice on how to contact their **IDNO Shall** be given to those customers.

16.4 Where only **IDNO** customers report being off-supply, then the **IDNO** may contact **SSEN-D** to check if **SSEN-D** customers are also affected before dispatching their personnel to site.

16.5 Where **IDNO** and **SSEN-D** customers are affected, then the organisation responsible for providing the supply **Shall** attend the incident, i.e., if the supply originates from **SSEN-D,** then **SSEN-D Shall** attend, but if the supply originates from the **IDNO**, then the **IDNO Shall** attend.

NOTE: Situations might occur whereby the **IDNO** is not able to attend site and a contractual agreement is in place with **SSEN-D** to attend site on their behalf.

16.6 For incidents on the **SSEN-D System** which affect **IDNO** customers, **SSEN-D Shall** provide information and regular updates to the IDNO. Such information includes:

- Nature of the interruption, e.g., damage, storm, fault, etc
- When the fault occurred
- Estimated time of restoration
- Estimated number of **SSEN-D** customers involved
- The **IDNO Network** and area affected; and
- The final restoration time

16.7 Where **SSEN-D** employees attend site and it is found on arrival that the customers are fed from an **IDNO** embedded **Network**, the following procedure **Shall** be followed:

1. Customers off supply:
   a. Confirm status of **SSEN-D** supply at the boundary position if appropriate
   b. Notify **IDNO** immediately
   c. Recharge costs to **IDNO** if **SSEN-D** supply healthy
2. Single customer off supply:
   a. Test incoming supply and replace blown cut-out fuse or report **Dead** incoming service to the **IDNO**
   b. Recharge Costs to **IDNO**
3. Customer(s) off supply (damaged or suspect **Apparatus**):
   a. Safeguard the public e.g. removal of public from immediate vicinity, isolation of the customer's supply, isolation of the **IDNO Network** (subject to agreement with **IDNO Control Engineer** unless there is immediate **Danger**)
   b. **SSEN-D** might have to remain on site until **IDNO** representative arrives
   c. Recharge Costs to **IDNO**
   d. **SSEN-D Shall** not undertake repairs on **IDNO Apparatus** unless an agreement exits between the **IDNO** and **SSEN-D** covering the intended activities.

17 Liaison and Emergency Response with IDNOs for High Voltage Incidents

17.1 **SSEN-D Shall** not normally despatch personnel to work on or advise on faults on an **IDNO**s **High Voltage Network**. The only exception is where there might be **Danger** to life. It is the **IDNO**s responsibility to ensure that there is a safe system of work in place, which includes the appointment and availability of suitably trained and authorised personnel.

17.2 **SSEN-D** personnel might, however, be required to attend a loss of supply to a **High Voltage** connected **IDNO** where the loss of supply is due to the operation of the **SSEN-D** incoming fuse switch or circuit-breaker.

17.3 Operation of the incoming **SSEN-D** fuse switch/circuit-breaker, to render the **IDNO Network** safe to work on is permitted. Where there is a requirement for the **SSEN-D** fuse switch/circuit-breaker to be **Isolated** and **Earthed** to allow the **IDNO Network** to be worked on by a third-party, then an appropriate document using a RISSP (see Section 14.2) or an Isolation Certificate (see Section 14.4), as appropriate, **Shall** be issued.

17.4 When an **SSEN-D High Voltage** incident affects an **IDNO Network**, the **IDNO** might request the following information from the control centre to enable them to manage enquiries from their own customers:

- Nature of the interruption, e.g., damage, storm, fault etc
- When the fault occurred
- Estimated time of restoration
- Estimated number of **SSEN-D** customers involved
- IDNO Network affected
- Area affected

17.5 The **IDNO** may provide **SSEN-D** with the numbers and types of customers affected on the **IDNO Network** to help **SSEN-D** deliver the appropriate response based on the numbers and types of those customers.

17.6 In the event that an interruption lasts longer than the estimated restoration time, the **IDNO** may seek further updates.

17.7 Following full restoration, **SSEN-D Shall** provide the actual restoration times, including any staged restorations to the **IDNO**.

18 Failure of an Asset at an IDNO Interface

18.1 Each party is responsible for their own assets. If an asset fails, the responsibility rests with the owner of the asset to make arrangements to rectify it.

18.2 In the event that the failure of the asset belonging to one party causes loss of supply or unacceptable reduction of **System** security to the other party, repair work **Shall** be undertaken by the party owning the failed asset as soon as reasonably practicable.

18.3 In the case of an **IDNO** connected at **High Voltage**, there is a possibility that the failure might be in the outgoing cable box of the **SSEN-D** metered fuse switch/circuit-breaker. Although the **IDNO** owns the outgoing **High Voltage** cable loop, **SSEN-D** would normally be responsible for carrying out repairs to the termination, **SSEN-D** might recharge the customer for this work.

18.4 If customers are off supply as a consequence of an asset failure, **SSEN-D** and the **IDNO Shall** co-operate to minimise the duration of the outage.

18.5 Where failures occur on newly installed **Apparatus**, the Competition in Connections team will be aware of any applicable guarantees with the Competition in Connections provider.

19 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document created	NA	1.00	Richard Gough
02	Minor revisions made	PR-NET-OSM-086 (Rev1.00)	1.01	Richard Gough
03				

Appendix A Low Voltage IDNO Connection Modes

1 Single Two-Way Link Box

1.1 A standard two-way link box owned and operated by **SSEN-D** forms the boundary between **SSEN-D** and the **IDNO**.

1.2 **SSEN-D** may allow the **IDNO** access to operate the fuses/links under their own Safety Rules, operational procedures and authorisation, subject to a Bi-Lateral Operational Agreement between **SSEN-D** and the **IDNO**.

1.3 In the majority of cases, i.e., where grading can be achieved, fuses **Shall** be installed in the link box to minimise the disruption to customers on the **SSEN-D System** and facilitating the **IDNO** to replace those fuses and restore supplies in the event of a fault on their **Network**.

2 Double Two-Way Link Box

2.1 In this scenario the boundary consists of two, two-way link boxes in series. The first link box (closest to **SSEN-D System**) is a standard two-way link box owned and operated by **SSEN-D**. The second box (owned by the **IDNO**) contains current transformers and small wiring which connects via a multicore cable to a small cabinet containing metering equipment.

2.2 **SSEN-D** may allow the **IDNO** access to operate the fuses/links under their own Safety Rules, operational procedures and authorisation subject to a suitable Operational Agreement between **SSEN-D** and the **IDNO**.

2.3 Where grading can be achieved, fuses **Shall** be installed in the standard two-way link box.

3 Dual Cut-Out Cabinet

In this example the **SSEN-D** cable terminates into a **SSEN-D** Industrial cut-out, similarly the **IDNO**'s cable terminates into their own industrial style cut-out. The **SSEN-D** cut-out contain links whilst the **IDNO** cut-out contains fuses. **SSEN-D** own the metering and associated equipment and the cabinet itself. Ownership labels **Shall** also be fitted.

4 Low Voltage Supply Direct from SSEN-D Substation

In this type of connection, the **IDNO** has their own separate **Low Voltage** cabinet/pillar, which **Shall** ideally be installed outside the **SSEN-D** substation and fed via a cable from the **SSEN-D Low Voltage** cabinet/pillar. The **IDNO** is responsible for labelling their own **Apparatus**.

5 Cable Connection

5.1 Where an **IDNO** is connected to the **SSEN-D System** by a cable joint, should a failure occur within the cable joint, **SSEN-D Shall** be responsible for excavation of the failed joint and any repairs to the **SSEN-D** owned cable.

5.2 The IDNO cable will either be:

- Connected into the **SSEN-D** cable joint with agreement from the **IDNO**.

or

- A short length of cable will be connected into the **SSEN-D** joint and made available for the **IDNO** to connect to.

5.3 Any **OSR** requirements for isolation and / or earthing on the **IDNO Network Shall** be the responsibility of **SSEN-D** and carried out in line with the requirements of Section 14.

Appendix B High Voltage IDNO Connection Modes

1 High Voltage Fed from a Close Coupled Substation

This type of connection has a traditional package type substation, i.e., close coupled **High Voltage** switchgear, transformer and **Low Voltage** fuse-board. The **Low Voltage** fuse-board and transformer remains the property of the **IDNO**, with the **High Voltage** switchgear belonging to **SSEN-D**.

2 High Voltage Feed Direct from SSEN-D Substation

This type of connection is usually made by providing a dedicated **High Voltage** circuit direct from one of **SSEN**s **High Voltage** circuit-breakers at an **SSEN-D** substation. The ownership boundary would normally be on the outgoing circuit side of the circuit-breaker at the cable termination. **SSEN-D** would retain ownership of the outgoing circuit-breaker terminals.

3 High Voltage Feed into IDNO Substation

This would be similar to the arrangement in Section 2 above, except that **SSEN-D** would retain ownership of the **High Voltage** circuit up to the **IDNO** substation remote from the **SSEN-D** source substation. The ownership boundary being where the circuit enters the **IDNO** substation.

4 High Voltage Feed from SSEN-D Ring Main Unit

Here **SSEN-D** retain ownership of the Ring Main Unit forming part of the **System**, the tee-off switch is dedicated to the **IDNO** outgoing circuit but remains under **SSEN-D** ownership. The ownership boundary being on the cable on the outgoing side of the tee off switch.

Appendix C RISSP Procedure

This procedure **Shall** be used where the **IDNO** has their own Control authority.

Terms used in this procedure:

- **ISC** (Implementing Safety Co-ordinator)
- **RSC** (Requesting Safety Co-ordinator)

1. **RSC Shall** consider the work to be carried out and safety precautions required
2. **RSC Shall** then contact the relevant **System Control Engineer** for the adjoining **Network** and confirm their authority to act as **ISC**.
3. Both parties **Shall** agree the safety precautions required and the switch out method.
4. Switch out circuit as agreed and log details, confirm to **ISC**.
5. Establish isolations as agreed and log details, confirm to **ISC**.
6. Establish **Earthing** as agreed and log details, confirm to **ISC**.
7. **ISC Shall** then raise RISSP document and fill in details of safety precautions established.
8. **RSC Shall** agree and make an exact copy of these details on their copy then issue a unique number to the **ISC**.
9. Both parties **Shall** sign and date the relevant issue sections of the document.
10. If both parties require to work on the **Network**, then two sets of RISSPs **Shall** be issued and agreed.
11. Once signed, no alteration can be made to the RISSP document, it can only be cancelled.
12. The **RSC** is now free to issue **Safety Documents** for work but not for testing.
13. If testing is required, the two Safety Co-ordinators **Shall** ensure that all **Safety Documents** relating to the **System** within the points of isolation on the RISSP documents are cancelled. Only one RISSP document can be held relating to the **System** to be tested. Both Safety Co-ordinators **Shall** agree on and log the scope of the testing to be carried out.
14. When **Earths** are removed under the test and are not intended to be re-applied, then the RISSP associated with the test **Shall** be cancelled on completion of the tests. Where the **Earths** are re-applied following the completion of the tests there is no requirement to cancel the relevant RISSP.
15. Restoring the **System** to normal is a reversal of the above process, with the key requirement to agree and log each stage between the **RSC** and **ISC**, i.e., cancel RISSP, agree removal of **Earths**, log, agree removal of isolations, log, agree circuit restoration procedure, log and finally confirm **Network** normal.

Appendix D Procedure for use of Isolation Certificates

This procedure **Shall** be used where the **IDNO** does not have their own control authority:

1. DOC8 specifies the Safety Management Criteria to be applied by the **SSEN-D** and **IDNO** for the co-ordination, establishment and maintenance of necessary safety precautions when work or testing is to be carried out on **Apparatus** of the **SSEN-D** or an **IDNO** and where for this to be done safely, isolation on and/or **Earthing** of the other's **System** is needed.
2. Included in this is the requirement for Site Responsibility Schedules, the appointment of **Authorised Persons**, etc.
3. Working across these boundaries is in line with the **SSEN-D Approved** Procedure PR-PS-007. This includes the use of Isolation Certificates and a User Authorisation Document (UAD). The UAD being a document issued by the **IDNO** to **SSEN-D** giving authority for **SSEN-D** to control and/or operate the **IDNO Network** (FO-PS-181).
4. A key requirement is to notify independent **Network** owners/operators of any action which has an effect, or the possibility of having an effect, on their **System**. An example of this is to contact an **IDNO** control centre before attempting to close their supply circuit-breaker following a trip.

Appendix E CCSRBD Procedure

This procedure **Shall** be used where it is necessary to change the control and safety rule boundary from its normal location to another location for the duration of any works:

1. The Safety Co-ordinator who is to relinquish Control of part of the **Network**, the "Relinquishing Safety Co-ordinator", **Shall** contact the Safety Co-ordinator who is to assume control of that part of the **Network**, the "Assuming Safety Co-ordinator", and they **Shall** implement the change procedure.
2. The Safety Co-ordinators **Shall** arrange for any work or testing which has been authorised on the **Apparatus** between the current Control and safety rule boundary and the newly determined temporary Control and Safety Rule Boundary to be terminated and for all **Safety Documents** pertaining to that work or testing to be cancelled.
3. The Relinquishing Safety Co-ordinator **Shall** complete Parts 1 & 2 of the CCSRBD-R.
4. The Relinquishing Safety Co-ordinator **Shall** then contact the Assuming Safety Co-ordinator and read out the contents of Parts 1 and 2 to the Assuming Safety Co-ordinator who **Shall** enter the precise details on the CCSRBD-A.
5. The Assuming Safety Co-ordinator **Shall** then read back the details to the Relinquishing Safety Co-ordinator and, if the Safety Co-ordinators agree that the details are correct, the Relinquishing Safety Co-ordinator **Shall** issue the CCSRBD identifying number to the other Assuming Safety Co-ordinator who **Shall** enter it on the CCSRBD.
6. Each Safety Co-ordinator **Shall** then sign Part 3 of their respective CCSRBDs and enter the time and date. When signed, no alteration to the CCSRBD is permitted; the CCSRBD may only be cancelled.
7. The Assuming Safety Co-ordinator may then utilise the RISSP procedure, or any other **Approved** procedure, as Requesting Safety Co-ordinator to enable work to be carried out on the **Apparatus** for which he has assumed control authority.
8. When the work is completed and the Assuming Safety Co-ordinator decides that there is no further requirement for the temporary Control and Safety Rule Boundary, he **Shall** contact the Relinquishing Safety Co-ordinator and confirm to him that the boundary change associated with a CCSRBD number is no longer required. They **Shall** establish verbally that the details entered in Parts 1 and 2 are identical on both forms before commencing the cancellation.