

## 1. SCOPE


This document details the procedures to be followed when **HV Apparatus** is to be connected, energised and commissioned to the **System**, or **Permanently Disconnected** from the **System** and when the Safety Rules shall apply.

## 2. ISSUE RECORD

This document is not controlled. The current version is held on the Energy Networks Intranet.

| Issue Date | Issue No | Author       | Amendment Details   |
|------------|----------|--------------|---|
| Jan 2003   | 4        | Alan Kelly   | Amendments to introduce the Completion Certificate & Commissioning Certificate. Rebranding changes incorporated and flowcharts introduced.<br>26 page document  |
| March 2003 | 5        | Jack Neilson | Amendment to Update Electricity Supply Regs to The Electricity Safety Quality & Continuity Regs 2002.   |
| March 2005 | 6        | Fiona Muir   | Amendment to Appendix 4 & 6, one line added for substation name.  |
| Dec 2010   | 7        | Geoff Ryan   | Changes to procedures relating to IDNO/Customers. Separate versions of Withdrawal Notification Certificate introduced for IDNO/Customers. Removal of jumpers not adequate for <b>Permanent Disconnection</b> extended to cover all voltages not just 33kV and below.<br>Appendix 5 Installation Certificate expanded to include energisation request. |

## 3. ISSUE AUTHORITY

| Author  | Owner                                     | Issue Authority  |
|---|---|--|
| Geoff Ryan<br>Operational Safety Section Head | Phil Currie<br>Operational Safety Manager | Andy Bird<br>Health & Safety Director<br><br><br>Date: 4/5/11 |

## 4. REVIEW

This document shall be reviewed as dictated by business change. The proposed revision date can be viewed in the Management Safety Procedure Document Index DOC-00-238.

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## 6. INTRODUCTION

The procedures are necessary to ensure that:

- (a) Staff and Contractors employed by the **Company** are notified that **HV Apparatus** is to be considered as being part of the **System** and subject to the Safety Rules.
- (b) Staff and Contractors employed by IDNOs and/or Customers are notified that **HV Apparatus** is to be considered as being part of the **System** and subject to the Safety Rules.
- (c) The appropriate **Control Person(s)** for the **System** is/are notified of any proposed connection or disconnection of **HV Apparatus**.
- (d) **HV Apparatus** that is ready for connection is fit to be energised at **System** voltage.

This document does not cover the Control Room procedures which are required to ensure that Operational Control Diagrams are updated in preparation for the new equipment or deletion of the old equipment. The Operational Control Diagrams may be different dependant on voltage. Procedures shall be put in place by the Manager of the appropriate Control Room to ensure that a suitable procedure is in place to maintain and update their Operational Control Diagrams.

Note that the sections of this document relating to IDNO and/or Customer Representative may also be relevant when dealing with embedded generation or 3<sup>rd</sup> Party Meter Operators.

## 7. DEFINITIONS

Terms printed in **bold** type are as defined in the ScottishPower Safety Rules (Electrical and Mechanical) 4<sup>th</sup> Edition.

Terms printed in italics are as defined in the Definitions document (OPSAF-11-002) of the Management Safety Procedures.

Terms defined in this document are shown in **bold italic**:

**Direct Control** – Where Contractors or other **Company** staff work exclusively for, and report directly to, a SPEN project manager/supervisor who allocates their work activities.

**Permanent Disconnection (Permanently Disconnected)** – **Apparatus** is considered to be **Permanently Disconnected** when it has been disconnected from the **System** and associated auxiliary supplies such that it is no longer considered part of the **System** and cannot be made **Live** by closing an **Isolating Device** or a switch, or inserting a fuse or link. A jumper shall be considered a link on **HV Apparatus**. It is accepted that **Permanently Disconnected Apparatus** may return to service in some form or another after work or testing has been completed and a Connection Notification Certificate issued. Work or testing carried out on **Apparatus** that has been **Permanently Disconnected** is not subject to the application of the Safety Rules (Electrical & Mechanical) 4<sup>th</sup> Edition.

Note that although an item of **Apparatus** may have been **Permanently Disconnected** from the **System**, **Danger** to persons may still exist due to its proximity to the **System** and this **Danger** must be controlled.

Abbreviations:

|            |   |   |
|------------|---|---|
| IDNO       | – | Independent Distribution Network Operator |
| SPEN       | – | ScottishPower Energy Networks             |
| <b>SAP</b> | – | <b>Senior Authorised Person</b>           |
| ASC        | – | <b>Apparatus</b> Status Certificate       |
| RISSP      | – | Record of Inter System Safety Precautions |

**8. DOCUMENTATION LIST**

| <b>Certificate</b>  | <b>Description</b>   | <b>Issued By</b>  | <b>Issued To</b>   |
|---|--|---|--|
| SPEN Withdrawal Notification Certificate<br><br>(Appendix 1)                        | A certificate issued to all parties who have been working on <b>Apparatus</b> to make it clear which <b>Apparatus</b> is to be considered as <b>Live</b> . Received by a responsible representative of each party working on the construction or reconstruction of SPEN <b>HV Apparatus</b> prior to its connection to the SPEN <b>System</b> , acknowledging that the <b>HV Apparatus</b> is to be considered <b>Live</b> and connected to the SPEN <b>System</b> and that all persons in the charge of the recipient of the certificate have been informed that no further work shall be carried out unless the <b>Person</b> in charge of such work is in possession of a SPEN <b>Safety Document</b> . | SPEN project manager/supervisor   | Responsible representative of SPEN or SPEN Contractor or other <b>Company</b> Division/Section |
| SPEN Connection Notification Certificate<br><br>(Appendix 2)                        | A certificate completed prior to the connection of SPEN <b>HV Apparatus</b> to the SPEN <b>System</b> following construction or reconstruction work, advising the appropriate SPEN <b>Control Person(s)</b> of the transfer of responsibility for that <b>Apparatus</b> .  | <b>SAP</b>  | SPEN <b>Control Person</b>   |
| Completion Certificate<br><br>(Appendix 3)  | A certificate completed prior to the energisation of <b>HV Apparatus</b> from the <b>System</b> following the completion of construction or reconstruction work, recording a declaration from the Contractor or <b>Company</b> Division/Section responsible for the work or testing that the <b>HV Apparatus</b> is fit to be energised from the <b>System</b> .   | Responsible representative of Contractor or <b>Company</b> Division/Section | SPEN project manager/supervisor  |
| Commissioning Certificate<br><br>(Appendix 4)                                       | A certificate completed prior to the energisation of <b>HV Apparatus</b> from the <b>System</b> following construction or reconstruction work, advising the appropriate <b>Control Person(s)</b> that the <b>HV Apparatus</b> is fit to be energised and the state of such <b>Apparatus</b> throughout the testing programme.  | <b>SAP</b>  | SPEN <b>Control Person</b>   |
| IDNO/Customer Installation Certificate and Energisation Request<br><br>(Appendix 5) | A certificate completed by the IDNO/Customer or <i>Customer's Authorised Person</i> , stating that the IDNO/Customer's installation complies with appropriate regulations, has been pressure tested and can be energised.  | IDNO/Customer or <i>Customer's Authorised Person</i>                        | SPEN <b>SAP</b>  |
| Disconnection Notification Certificate<br><br>(Appendix 6)                          | A certificate completed by a <b>SAP</b> detailing <b>HV Apparatus Permanently Disconnected</b> from the <b>System</b> and agreeing with the appropriate <b>Control Person(s)</b> the transfer of responsibility for that <b>Apparatus</b> back to the <b>SAP</b> .   | <b>SAP</b>  | <b>Control Person</b>  |
| IDNO/Customer Withdrawal Notification Certificate<br><br>(Appendix 7)               | A certificate which is received by a responsible representative of the IDNO/Customer prior to the SPEN interface <b>Apparatus</b> being connected to the SPEN network, acknowledging that no further work shall be undertaken at the interface between the SPEN network and the IDNO/Customer installation without the application of appropriate safety precautions and exchange of interface documentation.  | <b>SAP</b>  | IDNO/Customer or <i>Customer's Authorised Person</i>   |

## 9. CONDITIONS WHICH DETERMINE WHEN THE SAFETY RULES APPLY

9.1 The Safety Rules shall apply to work or testing on or adjacent to **HV Apparatus** which is part of the **System** or to **HV Apparatus** which may be made **Live** by closing an **Isolating Device** or a switch, or inserting a fuse or link. A jumper shall be considered a link on **HV Apparatus**. The Safety Rules shall also apply to work or testing on **HV Apparatus** which may be made **Live** from the **LV System** by closing an **Isolating Device** or a switch or by inserting a fuse or link.

9.2 Work or testing on **HV Apparatus** or equipment which is neither part of the **System** nor connected to it, but by its proximity to the **System** creates **Danger** to persons working thereon, shall only be carried out when **Safety from the System** has been established and an appropriate **Safety Document** has been issued.

## 10. CONNECTION, ENERGISING AND COMMISSIONING OF HV APPARATUS

### 10.1 Preconditions for Accepting Apparatus for Connection, Energising and Commissioning to the System

10.1.1 Before any **HV Apparatus** is accepted for connection to the **System**, it shall be examined by the persons carrying out the work for defects and/or omissions and these, if found, shall be rectified satisfactorily. It shall be given a thorough inspection to ensure that no extraneous materials have been left behind and that all temporary connections used for testing purposes have been removed.

10.1.2 There are two versions of the Withdrawal Notification Certificate:

- i) SPEN Withdrawal Notification Certificate (see Appendix 1); and
- ii) IDNO/Customer Withdrawal Notification Certificate (see Appendix 7).

Section 10.6 provides further details on the use of IDNO/Customer Withdrawal Notification Certificates.

10.1.3 Subject to bullet points 1, 2 and 3 below, a SPEN Withdrawal Notification Certificate(s) shall be completed so that due notice is given to all SPEN staff and Contractors and to other **Company** Divisions/Sections concerned that new or reconstructed SPEN **HV Apparatus** is going to be connected to the **System**.

A SPEN Withdrawal Notification Certificate is not required:

- 1) In the situation when all work and testing has been carried out by persons working under the **Direct Control** of the project manager/supervisor responsible for the work.
- 2) For cable laying contractors (excluding jointers).
- 3) Where the work has been carried out under **Safety Document(s)**.

Note: When a SPEN Withdrawal Notification Certificate is not required, the project manager/supervisor shall ensure that all persons working on the **Apparatus** are made aware that the **Apparatus** is about to be made **Live**, and that no further work shall be undertaken on that **Apparatus** unless the **Person** in charge of the work is in possession of a SPEN **Safety Document**.

- 10.1.4 The appropriate Control Centre shall be notified of the intention to connect new or reconstructed **HV Apparatus** to the **System** a minimum of 48 hours in advance and shall be given a **Switching** programme and/or **Switching** outage request detailing the connection programme.
- 10.1.5 The appropriate Control Centre must ensure that their Operational Control Diagram has been updated and, where practicable, tested in preparation for acceptance of the new **HV Apparatus**.
- 10.1.6 A SPEN Connection Notification Certificate shall be completed prior to connecting new or reconstructed **Apparatus** to the **System** in all situations where a SPEN or IDNO/Customer Withdrawal Notification Certificate has been issued.
- 10.1.7 At 33kV and lower voltages where no Withdrawal Notification Certificate has been issued, a **Switching** programme which clearly identifies the new or reconstructed **Apparatus** that is to be connected to the **System** may be used in place of a SPEN Connection Notification Certificate.
- 10.1.8 The SPEN Completion Certificate is intended to ensure that the SPEN Contractor accepts full responsibility for the work and testing they have carried out on the SPEN **HV Apparatus** and that the work and testing is sufficient to ensure the **Apparatus** is fit to be energised from the **System**.
- 10.1.9 Subject to the note below, a SPEN Completion Certificate shall be completed prior to the energising of SPEN **HV Apparatus** from the **System** that has been subject to construction and reconstruction work or testing by Contractors or **Company** staff working as Contractors.
- Note: A SPEN Completion Certificate may not be required when work and testing has been carried out by Contractors or **Company** staff working under the **Direct Control** of the project manager/supervisor responsible for the work, and the project manager/supervisor is satisfied that the **HV Apparatus** is fit to be energised.
- 10.1.10 The Commissioning Certificate replaces the 'Transmission Network Management Testing Certificate' and shall be used to record the commissioning of **HV Apparatus** in the following situations:
- **HV Apparatus** operating at 132kV and above;
  - Primary Substations;
  - Protection only schemes below 33kV which have been installed/modified, with the exclusion of factory set protection.
- 10.1.11 An IDNO/Customer Installation Certificate and Energisation Request shall be completed for an **HV** installation that will be owned and controlled by an IDNO or Customer prior to its connection to the SPEN **System**. The IDNO/Customer Installation Certificate and Energisation Request shall confirm the installation complies with the Electricity at Work Regulations 1989, The Electricity Safety Quality & Continuity Regulations 2002, the current edition of the IET Wiring Regulations as applicable and appropriate tests have been completed to ensure the installation is safe for energisation. See Section 10.6.



## 10.2 Withdrawal Notification Certificate

- 10.2.1 The SPEN or IDNO/Customer Withdrawal Notification Certificate (Appendix 1 or Appendix 7) shall state clearly the **HV Apparatus** that is to be connected to the **System**.
- 10.2.2 Subject to 10.1.3 and 10.6, **HV Apparatus** shall not be connected to the **System** until a Withdrawal Notification Certificate has been signed and received by a responsible representative of each party involved in the work. The representative signing the Certificate shall be responsible for informing all persons in his charge that no further work shall be carried out on or near the **HV Apparatus** unless in receipt of a **Safety Document**.
- 10.2.3 The SPEN project manager/supervisor responsible for the project shall retain a signed copy of each Withdrawal Notification Certificate for record purposes. When it is necessary to issue more than one Withdrawal Notification Certificate, each one shall be numbered uniquely.

## 10.3 SPEN Connection Notification Certificate

- 10.3.1 Subject to 10.1.7, a SPEN Connection Notification Certificate (Appendix 2) shall be prepared by the responsible **SAP** when the SPEN **HV Apparatus** is ready for connection to the **System**. The project manager/supervisor shall enter details of Withdrawal Notification Certificate(s) and, where appropriate, Completion Certificate(s) in Section 1 "Declaration" and shall then sign Section 1 in the presence of the **SAP** accepting the **HV Apparatus** for transfer to the **Control Person**. (Note: for some projects the **SAP** and the project manager may be the same person).
- 10.3.2 The SPEN Connection Notification Certificate shall serve as a complete record of all Withdrawal Notification Certificates.
- 10.3.3 Details of Completion Certificates shall only be included if a Commissioning Certificate is not required and all work is complete.
- 10.3.4 The responsible **SAP** shall ensure that the **Control Person** and where applicable the Power Station Manager has received an advance copy of the SPEN Connection Notification Certificate detailing the **HV Apparatus** to be connected to the **System** prior to that **HV Apparatus** being connected to the **System**.
- 10.3.5 Section 2 "Transfer of Control" of the SPEN Connection Notification Certificate shall be completed by the responsible **SAP** with the **Consent** of the **Control Person** accepting the **HV Apparatus** for connection to the **System**. The **HV Apparatus** shall now be considered as being connected to the **System**.
- 10.3.6 After the "Transfer of Control" procedure has been completed, any **Safety Documents** required to enable the final connection to the **System** to be made and tested shall be issued with the **Consent** of the **Control Person**.
- 10.3.7 The **SAP** shall retain the original SPEN Connection Notification Certificate. A copy shall be sent to the project manager/supervisor, Control Manager, Grid System Manager and Power Station Manager as appropriate which will be completed / updated by the **Control Person** as appropriate.

## 10.4 Completion Certificate

- 10.4.1 Subject to 10.1.9 a Completion Certificate (Appendix 3) shall be completed by the Contractor(s) carrying out work and testing on **HV Apparatus** prior to its energisation from the **System**. The Contractor shall clearly state the **HV Apparatus** to which the work and testing has been applied and is fit to be energised in Section 1 "Declaration". On major projects more than one Completion Certificate may be required to cover all items of **Apparatus**.

- 10.4.2 All work and test records completed throughout the project to meet the requirements of the Contract and necessary to ensure **HV Apparatus** is fit to be energised shall be available to the project manager/supervisor prior to receiving the Completion Certificate.
- 10.4.3 All limitations detailing the **HV Apparatus** not fit for normal service shall be recorded in Section 1.
- 10.4.4 The project manager/supervisor shall sign to confirm receipt of the Completion Certificate and work & test records in Section 2 “Receipt”.
- 10.4.5 The project manager/supervisor shall retain the Completion Certificate. When it is necessary to issue more than one Completion Certificate, each one shall be numbered uniquely. Details of all Completion Certificates received shall be recorded in the Commissioning Certificate as per 10.5.1 or in a Connection Notification Certificate if a Commissioning Certificate is not used as per 10.3.3.

## 10.5 Commissioning Certificate

- 10.5.1 Subject to the conditions listed in 10.1.10 a Commissioning Certificate (Appendix 4) shall be prepared by the responsible **SAP** when the **HV Apparatus** is fit for energising from the **System**. The project manager/supervisor shall enter details of relevant Completion Certificate(s) in Section 1 “Declaration” and shall then sign Section 1 in the presence of the **SAP** accepting the **HV Apparatus** for commissioning.
- 10.5.2 The responsible **SAP** shall ensure that the **Control Person** and where applicable the Power Station Manager has received an advance copy of the Commissioning Certificate detailing the **HV Apparatus** to be energised from the **System** prior to that **HV Apparatus** being energised from the **System**.
- 10.5.3 The engineer responsible for the protection testing shall sign Section 2 “Protection Setting Declaration” stating that all testing which can be done before the **HV Apparatus** is energised has been completed and suitable settings have been applied to enable the **Apparatus** to be energised. These settings shall be recorded.
- 10.5.4 The **HV Apparatus** may now be energised with the **Consent** of the **Control Person** and the details recorded in Section 3 “Energising” by the **SAP**.
- 10.5.5 The engineer responsible for the protection testing shall complete Section 4 “Completion of Protection Testing” noting any limitations that apply.
- 10.5.6 The **SAP** responsible for operational checks shall complete Section 5 “Completion of Operational Testing” noting any limitations that apply.
- 10.5.7 When all protection and operational limitations are removed, Section 6 “Completion” shall be completed by the appropriate SPEN staff and the **SAP** shall notify the **Control Person** that the **HV Apparatus** is now in normal service.
- 10.5.8 The **SAP** shall retain the original certificate. A copy shall be sent to the project manager/supervisor, Control Manager, Grid System Manager and Power Station Manager as appropriate which will be completed/updated by the **Control Person** as appropriate.

## 10.6 IDNO or Customer’s HV Installation

Where the **HV** Installation to be connected to the **System** is owned and controlled by an IDNO or Customer the two items of documentation detailed below will be exchanged between the SPEN **SAP** and the appropriate IDNO/Customer Representative. These documents can be issued in any order.



### 10.6.1 IDNO/Customer Withdrawal Notification Certificate (Appendix 7)

Before any new SPEN owned and operated **Apparatus** which is to supply an IDNO or Customer is connected to the SPEN **System** then, in addition to the process set out in Sections 10.1 to 10.5 of this procedure, the following shall apply:

- i) A SPEN **SAP** shall establish precautions at the interface with the IDNO/Customer to ensure the IDNO/Customer network cannot be inadvertently energised e.g. the interface circuit breaker disconnect or switch disconnect shall be confirmed as open and shall be **Locked** in the open position.
- ii) An IDNO/Customer Withdrawal Notification Certificate shall be issued by the SPEN **SAP** to the IDNO/Customer Representative. A record of the issue of this document shall be made on the SPEN Connection Notification Certificate issued to the SPEN **Control Person** as detailed in Section 10.3 of this procedure.
- iii) As the SPEN interface **Apparatus** must now be considered as being connected to the SPEN **System** the following shall apply:
  - Before any further work is undertaken at the IDNO/Customer to SPEN interface, safety precautions shall be established by both parties and appropriate interface documentation exchanged i.e. RISSP or ASC.
  - Before the IDNO/Customer carries out any further work within the rest of their network they shall establish safety precautions as required by their own safety rules.

### 10.6.2 IDNO/Customer Installation Certificate and Energisation Request (Appendix 5)

This document shall be completed by the IDNO/Customer Representative prior to their installation being energised from the SPEN **System**. This shall be accompanied by a copy of the IDNO/Customer interface diagram. The following conditions shall be complied with:

- 10.6.2.1 Before energising the IDNO/Customer installation the SPEN **SAP** and SPEN **Control Person** shall consult to confirm that all interface documentation (RISSP or ASC) has been cancelled.
- 10.6.2.2 The SPEN **SAP** shall confirm that only a minimum of the IDNO/Customer installation will be initially energised, i.e. the first circuit breaker or switch is open, and no earths have been left on that section of network.
- 10.6.2.3 Where practicable the SPEN **SAP** shall energise the IDNO/Customer installation by remote operation.

## 11. PERMANENT DISCONNECTION OF HV APPARATUS FROM THE SYSTEM

- 11.1 The procedure detailed in this section applies to **Apparatus** that is **Permanently Disconnected** from the **System**, control of which is being transferred from the **Control Person** responsible for the **System** to which the **Apparatus** was connected, to a **SAP** representing a Business Unit Manager.

The procedure does not, in general, apply where **Apparatus** is being replaced e.g. where a faulty transformer is removed and replaced by another transformer under the terms of a **Safety Document Consented** to by the **Control Person** responsible for the **System**.

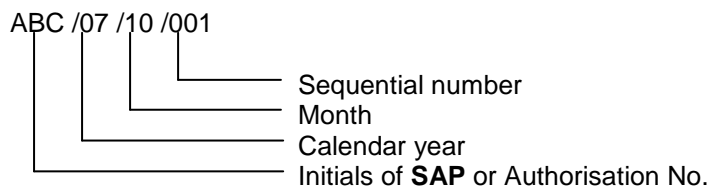
The procedure may however be used at the discretion of the **Control Person** and the **SAP** when the job is long term and would involve the issue of numerous **Safety Documents** e.g. the change of a faulty primary transformer or the refurbishment of a complete substation. The decision to use this procedure may only be taken once the equipment has been physically disconnected under **Safety Documentation** and **Safety from the System** can be assured until it is necessary to connect the new **Apparatus** to the **System**.

**HV Apparatus** shall only be considered to be **Permanently Disconnected** from the **System** and excluded from the requirements of the Safety Rules when all **HV** and **LV** conductors connected to the **HV Apparatus** have been physically removed to give the required **Safety Distance** and all **Safety Documents** associated with the **HV Apparatus** have been cancelled. Removal of jumpers shall not be considered as adequate for **Permanent Disconnection** of **HV Apparatus**.

- 11.2 The appropriate Control Centre shall be notified of the intention to Permanently Disconnect any **HV Apparatus** from the **System** a minimum of 48 hours in advance and shall be given a **Switching** programme and/or **Switching** outage request detailing the disconnection programme.
- 11.3 Where appropriate and following disconnection of the **HV Apparatus** by removal of **HV** and **LV** connections a **SAP** shall complete a Disconnection Notification Certificate (Appendix 6) jointly with the relevant **Control Person**. The Disconnection Notification Certificate shall state clearly the **HV Apparatus** that has been **Permanently Disconnected** from the **System** and the position and number of any earths transferred to the control of the **SAP**.
- 11.4 The **SAP** shall retain the original Disconnection Notification Certificate. A copy shall be sent to the Control Manager, Grid System Manager and Power Station Manager as appropriate.

## 12. NUMBERING OF CERTIFICATES

Certificates shall be numbered in the following manner:



Note: This numbering system has been modified to correspond with the new proposal for numbering **Safety Documents**.

## 13. APPENDICES

Appendix 1

Certificate No. ....

**SPEN WITHDRAWAL NOTIFICATION CERTIFICATE**

(To be completed by all parties working on SPEN **HV Apparatus** prior to its connection to the SPEN System)

**1 DECLARATION**

To: ..... of .....  
(Contractor or Company Division/Section)

Please note that the following **HV Apparatus**:

.....  
.....  
.....  
.....  
.....

at ..... Substation/Site

shall now be considered as being **Live** and connected to the SPEN **System**.

No further work shall be undertaken without the application of the appropriate safety precautions as defined in the ScottishPower Safety Rules and the **Person** in charge of such work is in possession of a SPEN **Safety Document**.

**2 ISSUE**

Signature: ..... Name: ..... Authorisation No. ....

On behalf of SPEN

Designation: ..... Time: ..... Date: .....

**3 RECEIPT**

I acknowledge receipt of the above notice and confirm that all persons under my charge have been notified that no further work shall be done on the **HV Apparatus** detailed in Section 1 above without the application of the appropriate safety precautions as defined in the ScottishPower Safety Rules.

Signature: ..... Name: ..... Authorisation No.\* .....

On behalf of: ..... (Contractor or Company Division/Section)

Designation: ..... Time: ..... Date: .....

\* Where applicable.

**Appendix 2**

Certificate No. ....

**SPEN CONNECTION NOTIFICATION CERTIFICATE**

(To be completed prior to connection of SPEN **HV Apparatus** to the SPEN **System**)

**1 DECLARATION**

To: Control Manager/Grid System Manager (Delete as appropriate)

Please note that the following **HV Apparatus**:

.....  
 .....  
 .....

Numbered in accordance with Drawing .....

at ..... Substation/Site

shall now be considered as being **Live** and connected to the SPEN **System**. I certify that all persons under my charge including other **Company** Sections/Departments, Contractors' staff and any other parties involved, have been notified that no work shall be undertaken on the **HV Apparatus** unless the **Person** in charge of such work is in possession of a SPEN **Safety Document** or in the case of IDNO/Customer's **HV Apparatus**, appropriate safety precautions have been applied. The relevant Withdrawal Notification Certificate/Completion Certificate numbers are detailed below:

| <b>Withdrawal Notification or Completion Cert. No. *</b> | <b>Plant Item</b> | <b>Contractor</b> |
|--|-------------------|-------------------|
|  |                   |                   |
|  |                   |                   |
|  |                   |                   |
|  |                   |                   |
|  |                   |                   |

Signed: ..... Name: ..... Time: ..... Date: .....  
 (Project manager/supervisor)

Designation: ..... On behalf of: .....  
 (**Company** Division/Section)

I confirm that the **HV Apparatus** detailed above is ready for transfer to the **Control Person** for connection to the **System**.

Signed: ..... Name: ..... Authorisation No. ....  
 (Being a **SAP**)  
 Time: ..... Date: .....

**2 TRANSFER OF CONTROL**

Control of the above mentioned **HV Apparatus** is hereby transferred to: .....  
 (**Control Person**) with his **Consent** and shall now be considered as being connected to the **System**.  
 All further work shall be carried out under a **Safety Document**.

Signed: ..... Name: ..... Authorisation No. ....  
 (Being a **SAP**)  
 Time: ..... Date: .....

\* Note: Only record Completion Certificate numbers on this form if no Commissioning Certificate has been issued.

**Appendix 3**

Certificate No. ....

**COMPLETION CERTIFICATE**

(To be completed by the Contractor or **Company** representative responsible for the work or testing of the **HV Apparatus** and its associated protection, monitoring and control systems prior to its energisation from the SPEN **System**).

**1 DECLARATION**

To: The project manager/supervisor, please note that the following **HV Apparatus**:

.....  
.....  
.....

Numbered in accordance with Drawing .....

At ..... Substation/Site

is fit to be energised from the **System** and may now be used, operated or put into service for the purpose of undertaking off-load and on-load commissioning tests. All works have been completed, tested and set to work by the Contractor(s) in accordance with the Conditions of Contract and SPEN requirements. The **HV Apparatus** is fit for service apart from the Limitations specified below. This certificate does not signify Taking-Over nor does it alter the responsibility for the safety of personnel or equipment.

**Limitations** .....

.....  
.....  
.....

Signed: ..... Name: ..... Time: ..... Date: .....

Designation ..... On behalf of: .....  
(**Company** Division/Section or Contractor)

**2 RECEIPT**

I acknowledge receipt of the above notice(s) and all work and testing certificates associated with the above **HV Apparatus** necessary to demonstrate it is fit to be energised.

Signed: ..... Name: ..... Time: ..... Date: .....  
(Being the project manager/supervisor)

**Appendix 4**

Certificate No. ....

**COMMISSIONING CERTIFICATE**

**1 DECLARATION**

To: Control Manager/Grid System Manager (Delete as appropriate)

Please note that work and testing has been carried out on the undernoted **HV Apparatus** permitting it to be energised.

.....  
.....  
.....

At ..... Substation/Site

Where the work and testing has been subject to a Completion Certificate, details are provided below:

| <b>Completion Certificate No.</b> | <b>Plant Item</b> | <b>Contractor</b> |
|-----------------------------------|-------------------|-------------------|
|                                   |                   |                   |
|                                   |                   |                   |
|                                   |                   |                   |
|                                   |                   |                   |
|                                   |                   |                   |
|                                   |                   |                   |

I have received the above Completion Certificates, or work and testing has been carried out under **Direct Control** to my satisfaction, and the **HV Apparatus** is fit to be energised from the **System**.

Signed: ..... Name: ..... Time: ..... Date: .....  
(Project manager/supervisor)

I accept that the **HV Apparatus** detailed above is ready for energising from the **System**.

Signed: ..... Name: ..... Time: ..... Date: .....  
(Being a **SAP**)

**2 PROTECTION SETTING DECLARATION**

Suitable protection settings have been applied to all relays permitting the **HV Apparatus** detailed in Section 1 to be energised.

In order to complete off-load and on-load commissioning tests, energising is now required.

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **Authorised Person**)

**3 ENERGISING**

The **HV Apparatus** detailed in Section 1 was energised at:

Time: ..... Date: ..... by ..... **Control Person**

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **SAP**)



Appendix 4 (Cont'd)

**4 COMPLETION OF PROTECTION TESTING**

Off-load and on-load protection testing has now been completed on the above **HV Apparatus**. Service settings have been applied to all relays and the relays may be put into service subject to any limitations noted hereunder. (Enter N/A if no limitations).

**Limitations** .....  
.....  
.....  
.....  
.....

At ..... Substation/Site

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **Authorised Person**)

**5 COMPLETION OF OPERATIONAL TESTING**

Operational checks have now been completed on the above **HV Apparatus** and the **HV Apparatus** may be put into service subject to any limitations noted hereunder. (Enter N/A if no limitations).

**Limitations** .....  
.....  
.....  
.....  
.....

At ..... Substation/Site

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **SAP**)

**6 COMPLETION**

All limitations detailed in Section 4 are removed and the **HV Apparatus** may now be put into normal service.

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **SAP**)

All limitations detailed in Section 5 are removed and the **HV Apparatus** may now be put into normal service.

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **Authorised Person**)

The **HV Apparatus** is now in normal service.

Time: ..... Date: ..... by ..... **Control Person**

**Appendix 5**

Certificate No. ....

**IDNO/CUSTOMER INSTALLATION CERTIFICATE AND ENERGISATION REQUEST**

(To be completed by the IDNO/Customer Representative or *Customer's Authorised Person* when the IDNO/Customer installation is ready for energisation from the SPEN network. Return this form to the SPEN Representative/**SAP**:

.....)

**IDNO/Customer Name:** .....

**Site Location:** .....

**Plant/Apparatus Identification:** .....

.....

.....

.....

**Declaration by IDNO/Customer Representative or Customer's Authorised Person.**

With reference to the **Plant/Apparatus** identified above I confirm that:

- i) The installation complies in every respect with the requirements of The Electricity at Work Regulations 1989, The Electricity Safety Quality & Continuity Regulations 2002, and the current edition of the IET Wiring Regulations as appropriate.
- ii) Appropriate tests have been completed to ensure the installation is safe for energisation e.g. insulation resistance testing, functional testing of protective devices, etc.
- iii) All persons under my control or involved in work on, or the operation of, the **Plant/Apparatus** identified above have been notified that the installation must be treated as **Live**.
- iv) A copy of the IDNO/Customer interface network diagram is attached.
- v) All interface documentation (i.e. RISSP or ASC) have been cleared and cancelled.
- vi) The minimum possible part of the IDNO/Customer installation will be energised when SPEN close their interface circuit breaker/switch (i.e. the first circuit breaker or switch within the IDNO/Customer installation is **Locked** in the open position).
- vii) All earths, tools and equipment have been removed from the section of the installation to be energised and any Safety Documents for that section cleared and cancelled.
- viii) The installation is ready for energisation.

Before energisation SPEN must liaise with the IDNO/Customer Control Person or *Customer's Authorised Person* named below:

Name: ..... Phone No. ....

ix) Other information: .....

.....

.....

**Name:** ..... **Signed:** .....

(IDNO/Customer Representative or *Customer's Authorised Person*)

**Designation:** ..... **Time:** ..... **Date:** .....

**Company:** .....

**Address:** .....

.....

**Phone Number:** ..... **Fax Number** .....

**Email:** .....



Appendix 6

Certificate No. ....

DISCONNECTION NOTIFICATION CERTIFICATE

To: \* Grid System Manager  
Control Manager  
Power Station Manager

The following **HV Apparatus** has been **Permanently Disconnected** from the **System** by physical removal of all **HV** and **LV** connections to give the required **Safety Distance**: #

.....  
.....  
.....

At ..... Substation/Site

The following earths have been transferred to my control by

..... **Control Person**

**Earths:** .....

.....  
.....  
.....

At ..... Substation/Site

All **Safety Documents** relating to the **Apparatus** have been cancelled.

I have agreed with ..... **Control Person** that the **HV Apparatus** is **Permanently Disconnected** from the **System** and is now under my control.

Other Remarks: .....

.....  
.....  
.....

Signed: ..... Name: ..... Time: ..... Date: .....

Authorisation No. .... (Being a SPEN **SAP**)

\* Delete as appropriate.  
# Removal of jumpers shall not be adequate for **Permanent Disconnection** of **HV Apparatus**.

Appendix 7

Certificate No. ....

**IDNO/CUSTOMER WITHDRAWAL NOTIFICATION CERTIFICATE**

(To be issued by the SPEN **SAP** to the IDNO/Customer Representative or *Customer's Authorised Person* before the SPEN interface **Apparatus** is connected to the SPEN network).

**1 DECLARATION**

To: ..... of .....  
(IDNO/Customer Representative or *Customer's Authorised Person*)

Please note that the following SPEN **Plant/Apparatus**:

.....  
.....  
.....

At ..... Substation/Site

shall now be considered as being **Live** and connected to the SPEN **System**.

No further work shall be undertaken on the following **Apparatus**, at the interface between the SPEN network and the IDNO/Customer installation, without the application of the appropriate safety precautions and exchange of interface documentation (e.g. RISSP or ASC) as defined in the ScottishPower Safety Rules/Procedures:

.....  
.....  
.....  
.....

Also note that any IDNO/Customer **Apparatus** connected to the IDNO/Customer installation may now require the application of the appropriate IDNO/Customer safety rules/procedures.

**2 ISSUE**

Name: ..... Signature: ..... On behalf of SPEN

Designation: ..... Time: ..... Date: .....

SPEN Authorisation No. ....

**3 RECEIPT**

I acknowledge receipt of the above notice and confirm that all persons under my charge have been notified that no further work shall be done on **Apparatus** at the interface with SPEN as detailed in Section 1 above without the application of the appropriate safety precautions as defined in the ScottishPower Safety Rules/Procedures.

I also acknowledge that IDNO/Customer **Apparatus** connected to the IDNO/Customer installation may now require the application of the appropriate IDNO/Customer safety rules/procedures.

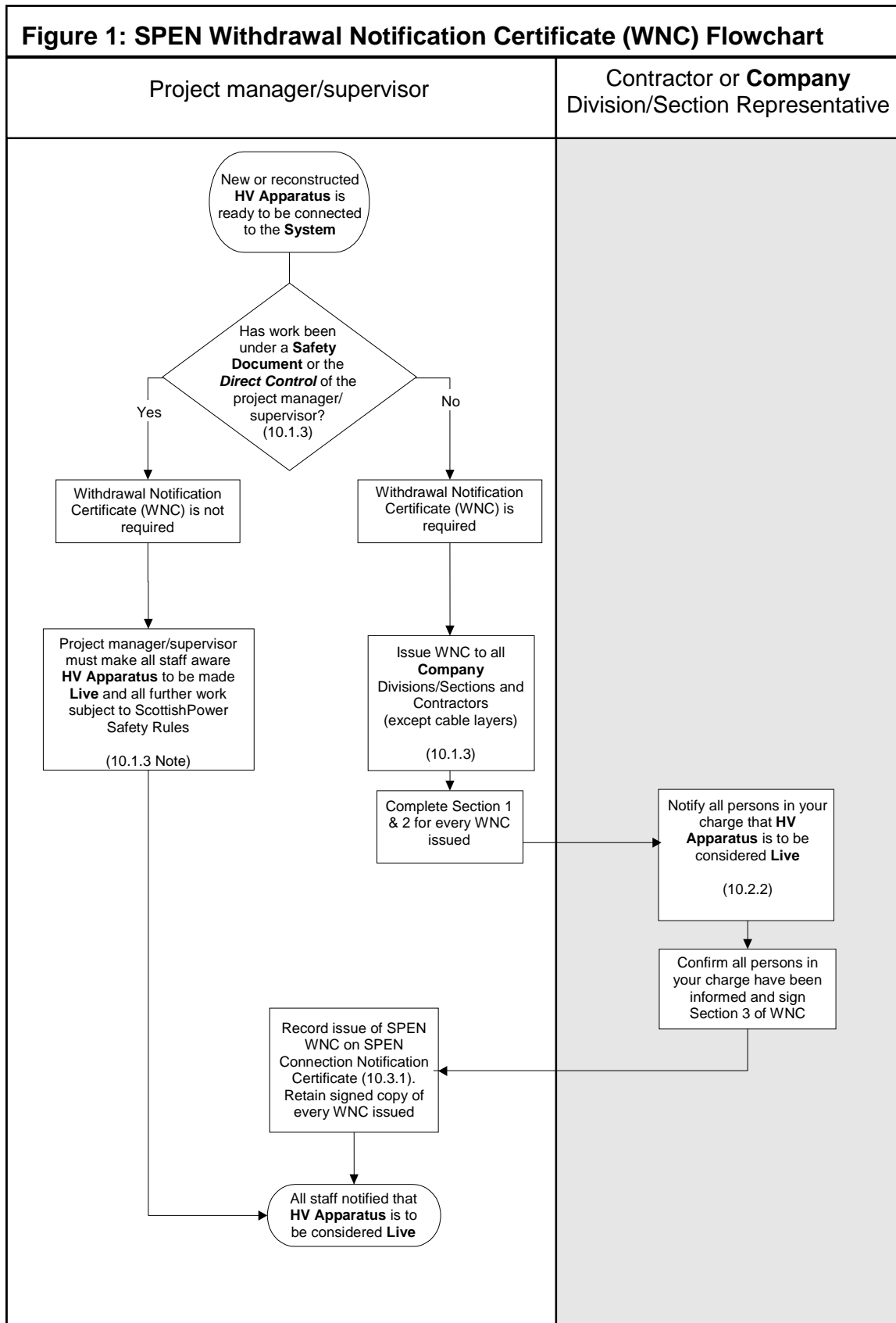
Name: ..... Signature: .....

IDNO/Customer Representative or *Customer's Authorised Person* on behalf of: .....

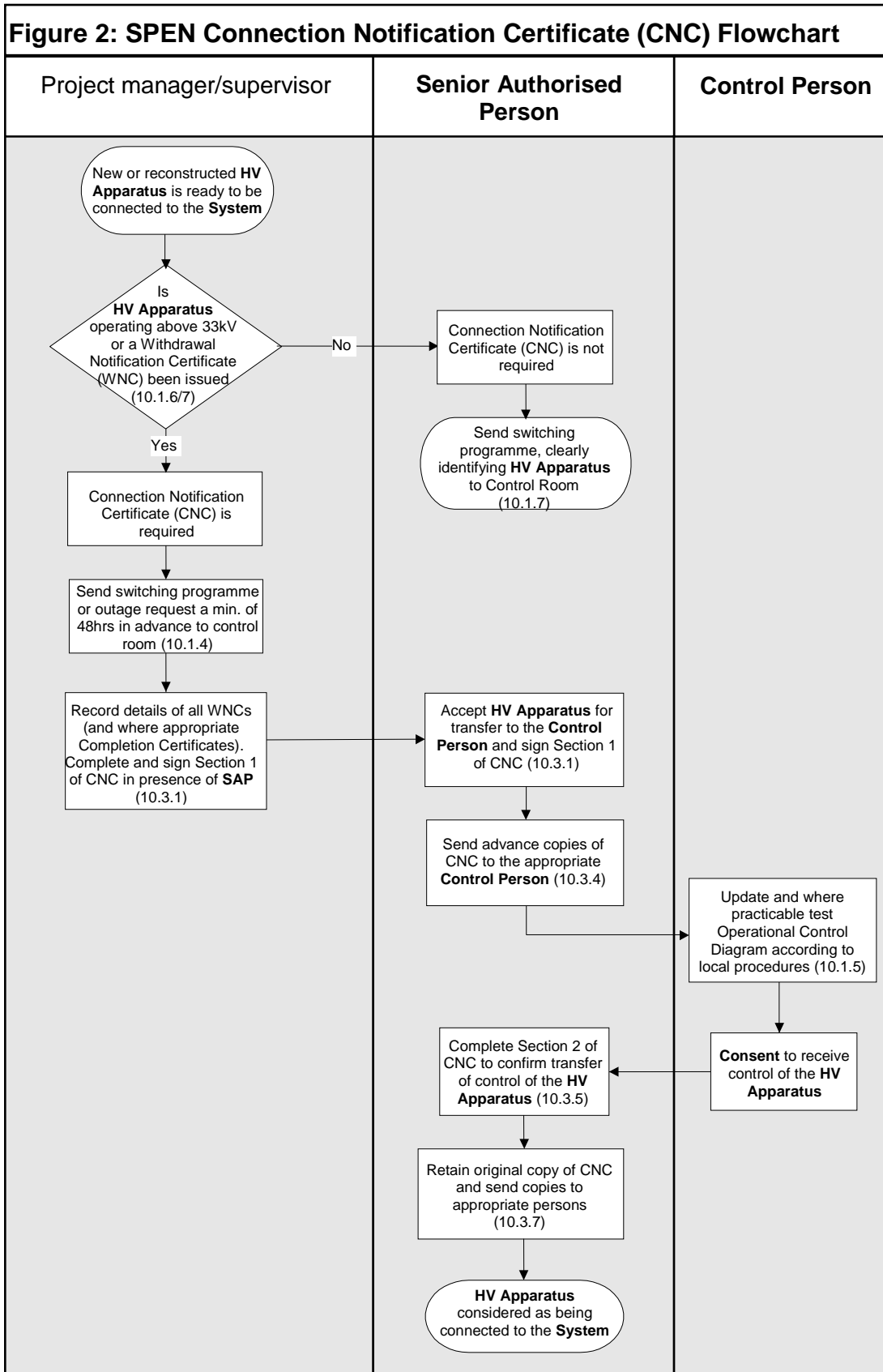
Designation: ..... Time: ..... Date: .....

SPEN Authorisation No. (If Applicable): .....

**14. FLOWCHARTS**



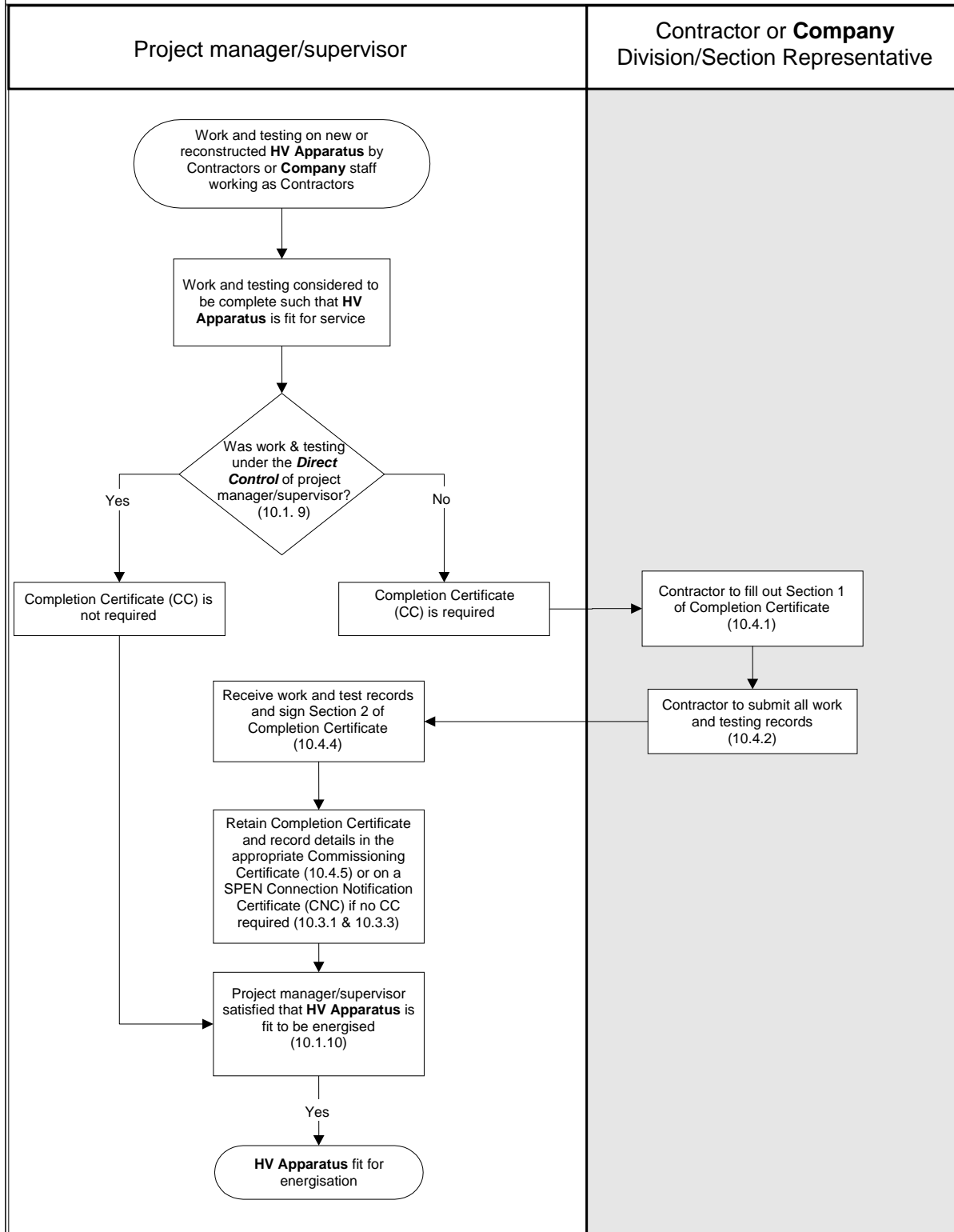
In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail



In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail

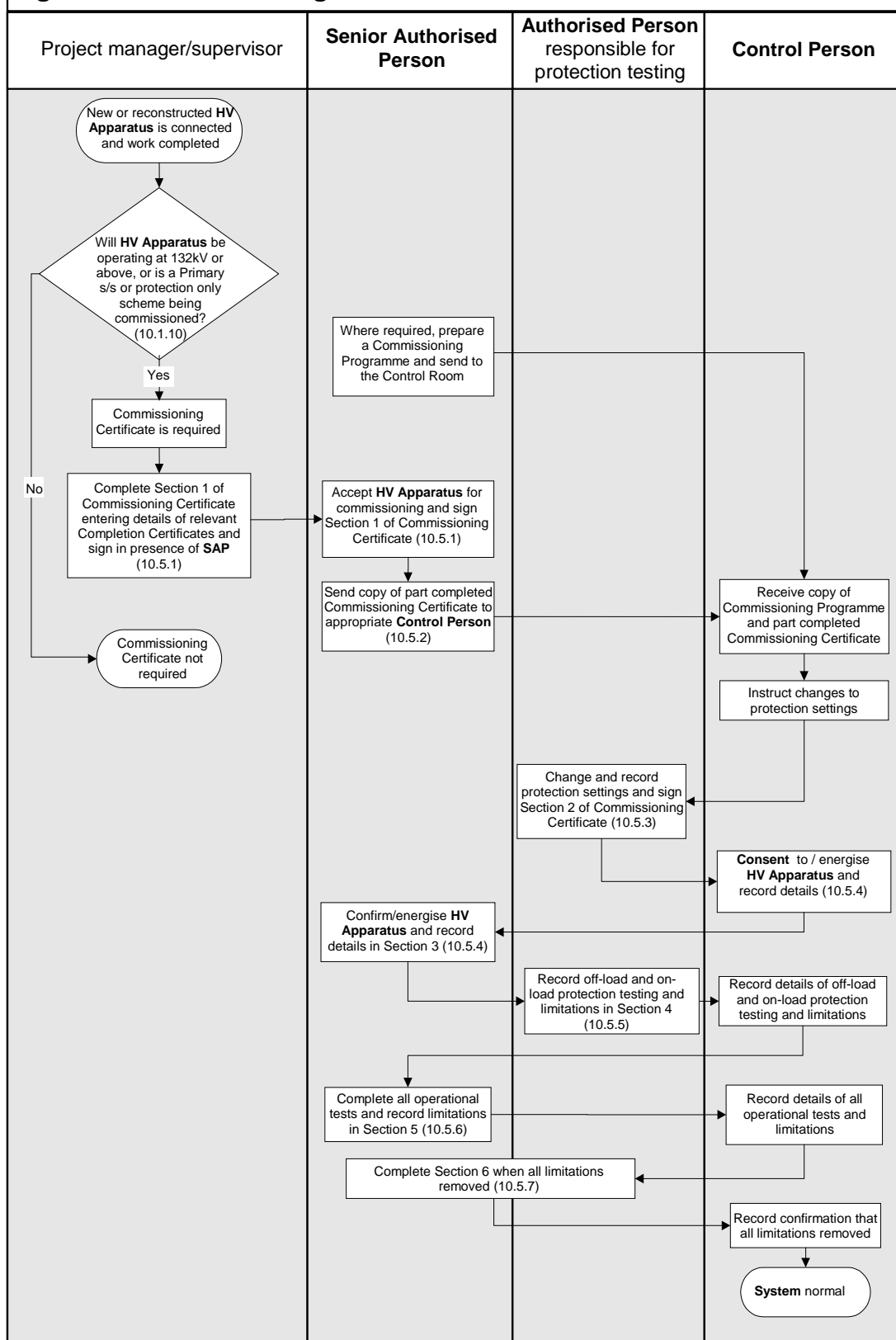


**Figure 3: Completion Certificate (CC) Flowchart**

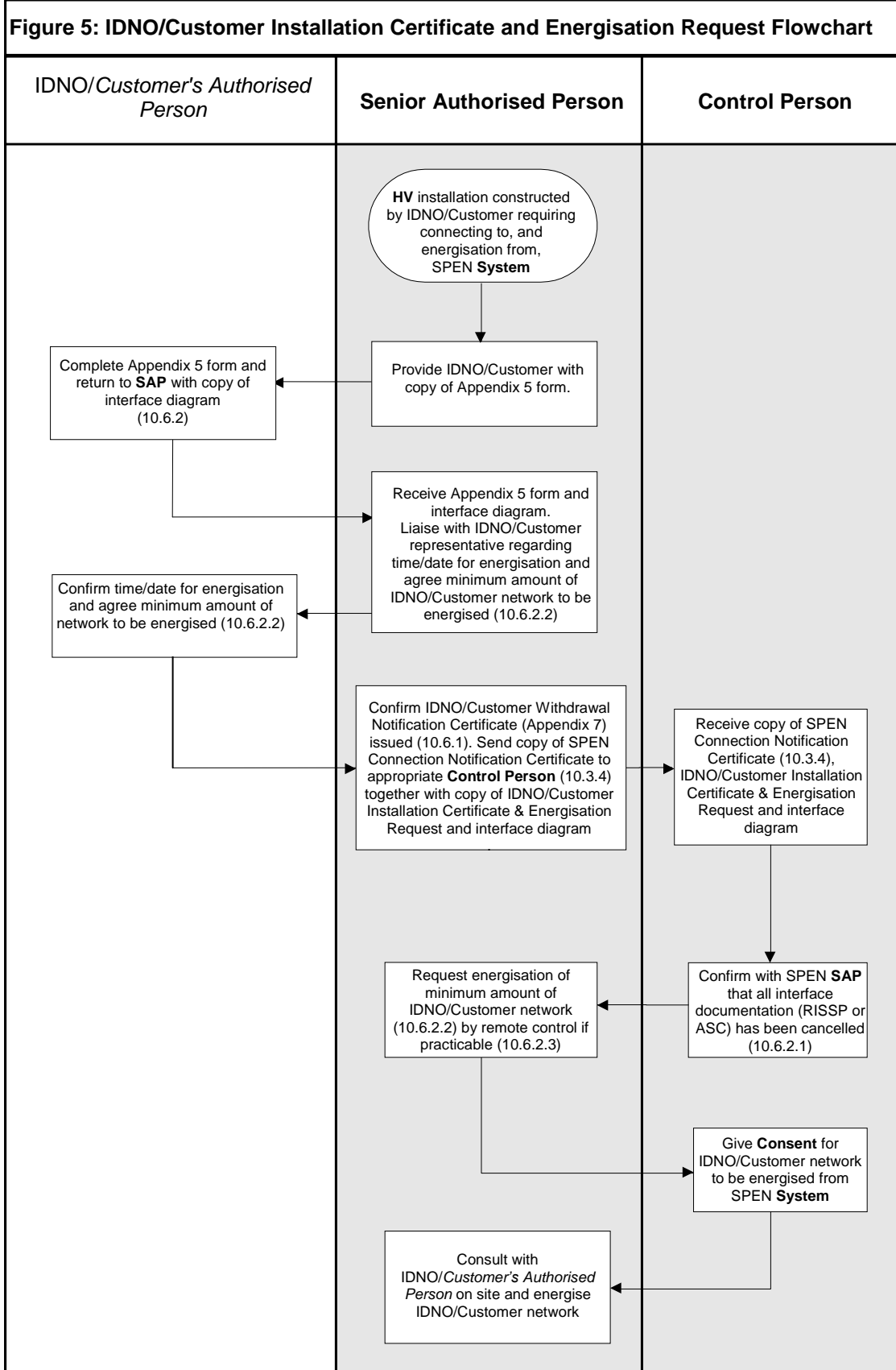


In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail

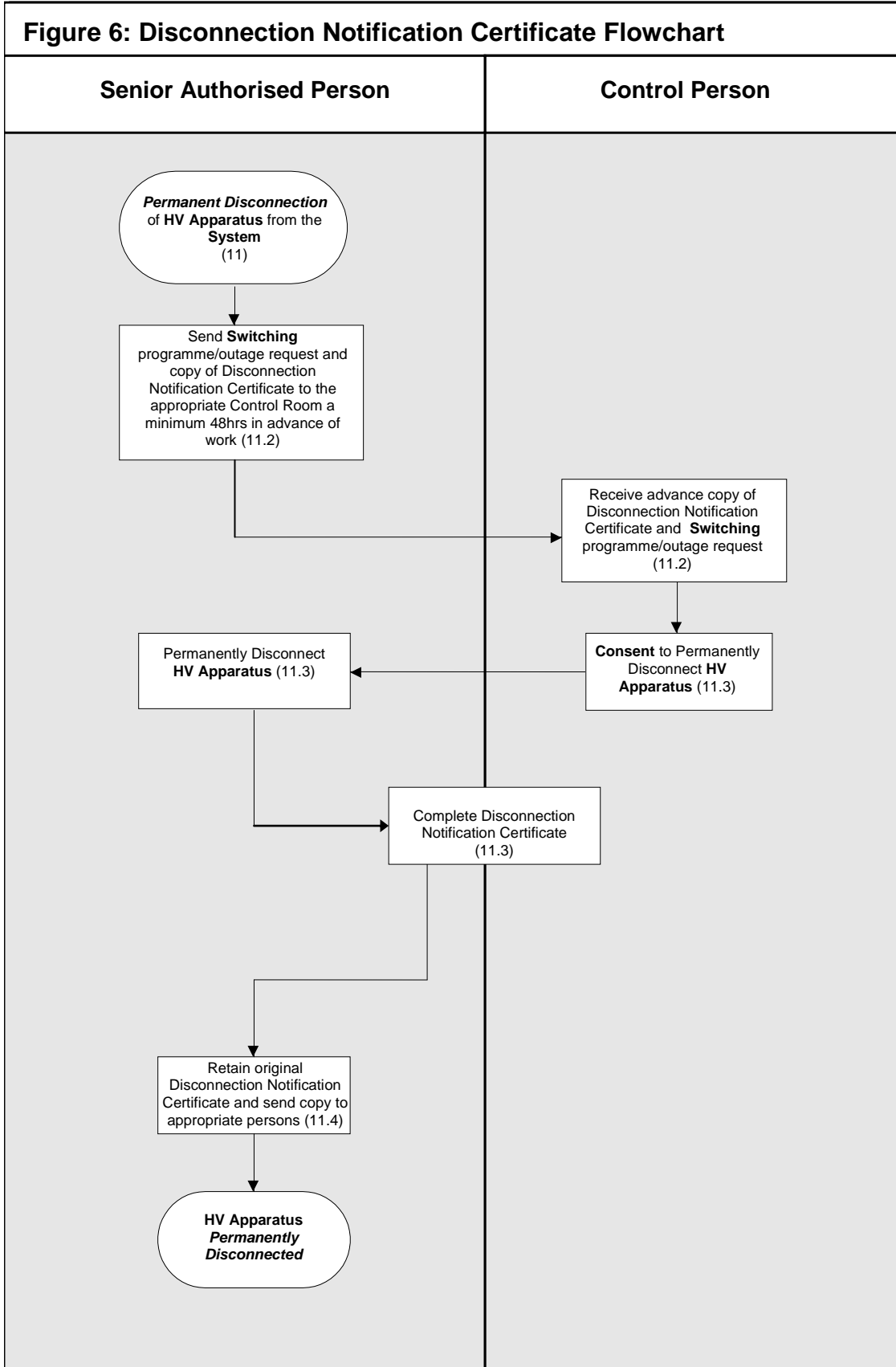
**Figure 4: Commissioning Certificate Flowchart**



In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail

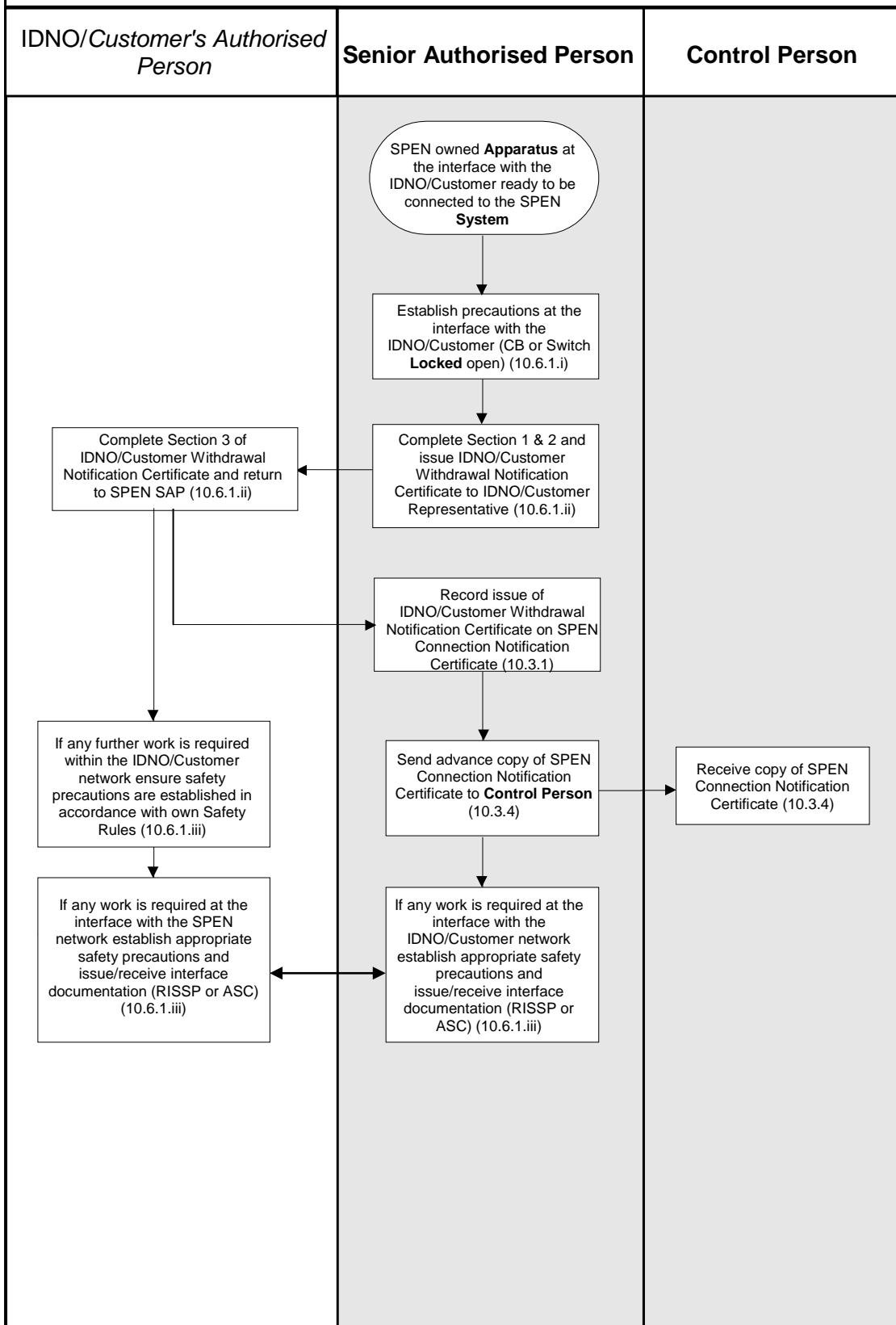


In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail



In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail

**Figure 7: IDNO/Customer Withdrawal Notification Certificate Flowchart**



In the case of conflict between the flowchart and the provisions of the written text, the written text will prevail