# *STCP 04-1 Issue 006 Real Time Data Change Management*

## STC Procedure Document Authorisation

| Party | Name of Party Representative | Signature | Date |
|---|---|---|---|
| ~~National Grid Electricity System Operator Ltd~~The Company | | | |
| National Grid Electricity Transmission plc | | | |
| SP Transmission plc | | | |
| Scottish Hydro Electric Transmission plc | | | |
| Offshore Transmission Owners | | | |

## *STC Procedure Change Control History*

| | | |
|---|---|---|
| Issue 001 | 21/12/2004 | BETTA Go-Live Version |
| Issue 002 | 20/04/2005 | Issue 002 incorporating STCPAP004 |
| Issue 003 | 25/10/2005 | Issue 003 incorporating PA034 & PA037 |
| Issue 004 | 14/01/2011 | Issue 004 incorporating changes for Offshore Transmission |
| Issue 005 | 26/02/2014 | Issue 005 incorporating PM075 |
| Issue 006 | 01/04/2019 | Issue 006 incorporating National Grid Legal Separation changes |
| Issue 007 | X/X/2023 | Issue 007 incorporating use of 'The Company' definition as made in the STC |

# 1 Introduction

## *1.1 Scope*

1.1.1 It is essential that all changes to real time data that involve modification to SCADA databases or displays are reported to, and co-ordinated with any affected Party. Affected Parties must be notified of changes in sufficient time to permit discussions to manage change effectively.

1.1.2 This document applies to ~~NGESO~~The Company, as defined in the STC and meaning the licence holder with system operator responsibilities, and the TOs for real time data changes brought about by events such as:

- new Plant and/or Apparatus connected to the National Electricity Transmission System;
- Plant and/or Apparatus reconnected to the National Electricity Transmission System;
- Plant and/or Apparatus disconnected from the National Electricity Transmission System;
- changes to Protection Apparatus or control equipment;
- changes to numbering or nomenclature of existing Plant and/or Apparatus;
- temporary changes made to the National Electricity Transmission System;
- emergency changes to the National Electricity Transmission System;
- User's System changes; and
- any other changes

that require modification to ~~the NGESO~~The Company and TO SCADA database displays.

1.1.3 This procedure applies to ~~NGESO~~The Company and each TO.

1.1.4 For the purposes of this document, TOs are:

- NGET;
- SPT;
- SHE-T and
- All Offshore Transmission Licence holders as appointed by OFGEM

In the event that specific conditions or exceptions are made in the document relating to an Onshore TO or Offshore TO these will be prefixed appropriately

1.1.5 At ~~NGESO~~The Company sites that connect with TO sites, certain real time data is provided to the TO via local Data Transmission equipment that is owned and maintained by the TO. Any changes that may affect this data are subject to the provisions of this document.

1.1.6 TO - TO data change management is outside the scope of this document. It is anticipated that a similar procedure shall be followed.

1.1.7 The procedure for the management of ~~NGESO~~The Company – TO Datalinks is detailed in STCP 4-2 (Real Time Datalink Management) and is outside the scope of this document.

## *1.2 Objectives*

1.2.1 This document specifies the requirements and responsibilities placed on ~~NGESO~~The Company and TOs for ensuring that changes to real time data and displays are captured and made available to the other affected Parties in good time.

## *1.3 General Provisions*

1.3.1 The change management process for SCADA data shall apply during the Commissioning and De-commissioning process (see STCP 19-4 Commissioning / Decommissioning) and shall also apply to changes to equipment outside the scope of the Commissioning and De-commissioning process.

1.3.2 Each TO and ~~NGESO~~The Company shall each nominate a contact point for data co-ordination, including a dedicated email account, to facilitate data co-ordination between ~~NGESO~~The Company and that TO.

1.3.3 Communication of TO SCADA database changes shall be supplied electronically in a format to be agreed with ~~NGESO~~The Company and is to include a description of the change~~.~~ The format and content of the pro-forma for use in documenting the change as agreed from time to time is included in Appendix B.

1.3.4 Parties will acknowledge receipt of data via the agreed contact points.

1.3.5 On application ~~NGESO~~The Company can provide guidance to SCS suppliers on the process required for SCS changes

# 2 Key Definitions and Interpretation

## *2.1 For the purposes of STCP04-1:*

2.1.1 **Data Transmission Equipment** means equipment that collects indications and data from an ~~NGESO~~The Company site and relays it to the relevant TO through a communications route.

# 3 Procedure

## *3.1 Changes not associated with Plant and/or Apparatus*

3.1.1 Following changes to real time data that are not directly associated with Plant and/or Apparatus for example alarms, modifications to an outstation or a database legend change, the TO shall prepare a pro-forma (Appendix B) identify the change and provide a supporting real time electronic data submission. The format must align with ~~NGESO~~The Company's GI74 or IEC60870-5-101 configuration file, as agreed with ~~NGESO~~The Company, detailed in the data spreadsheet (Appendix C) listing the changes made to the database including all the relevant attributes and date of change. Where relevant an operational or EMS display diagram shall also be included.

3.1.2 The information detailed in 3.1.1 shall be sent by the nominated TO contact point to the nominated ~~NGESO~~The Company contact point as soon as reasonably practicable, which shall normally be not less than 6 weeks in advance of the implementation date. ~~NGESO~~The Company shall provide acknowledgement of receipt of the relevant information to the TO via the agreed contact point. ~~NGESO~~The Company shall ensure that its database is updated in line with the supplied information.

3.1.3 Where ~~NGESO~~The Company requires changes to real time data at ~~NGESO~~The Company sites where the TO has Data Transmission Equipment installed ~~NGESO~~The Company shall identify the changes and provide the information to the TO using the pro forma Appendix B via the respective contact point, to enable changes to be made to the TO SCADA database. Where relevant an operational or EMS display diagram shall also be included.

3.1.4 ~~NGESO~~The Company shall notify the relevant TO(s) of any User initiated changes of which ~~NGESO~~The Company has been made aware and which will require modification to that TO database or displays. Notification shall take place as soon as reasonably practicable which shall normally be not less than 6 weeks prior to implementation in order to allow sufficient time for the TO to satisfy its obligations under 3.1.1 and 3.1.2. ~~NGESO~~The Company shall co-ordinate the change process between all parties.

3.1.5 Appropriate and timely testing shall be arranged at the request of either party, to validate the transmission of real time data from the TO to ~~NGESO~~The Company following changes made to either or both the TO and ~~NGESO~~The Company database.

## *3.2 Commissioning / De-Commissioning*

3.2.1 STCP 19-4 Commissioning / De-Commissioning specifies the process for initiating and completing changes to the National Electricity Transmission System. Changes to real time data are an essential part of that process.

3.2.2 The key dates in the Plant and/or Apparatus change process are:

- the planned date on which equipment becomes subject to or is removed from the TO safety rules
- the planned date of commissioning or de-commissioning of equipment

3.2.3 The TO and ~~NGESO~~The Company shall plan the change process to allow sufficient time for all parties to evaluate and co-ordinate the changes. This shall normally be not less than 6 weeks prior to the planned database change implementation date that aligns with the key dates in 3.2.2

3.2.4 The TO shall supply the relevant real time data (specified in STCP 4-3: Provision of Real Time Data) via the respective contact point. This shall be in the format agreed between the TO and ~~NGESO~~The Company showing the proposed / amended /deleted data, and associated attributes and proposed date of change. Where applicable operational or EMS display diagrams shall be supplied.

3.2.5 ~~NGESO~~The Company shall supply the TO, via the agreed contact point, details of any changes to the real time information (specified in STCP 4-3) for ~~NGESO~~The Company sites that contain TO Data Transmission Equipment using Appendix B. Where applicable, operational and or display diagrams shall be supplied.

3.2.6 Where changes to the National Electricity Transmission System are to take place in a staged manner, the TO shall provide the data relevant to each stage of the change together with the proposed implementation dates.

3.2.7 As soon as reasonably practicable, ~~NGESO~~The Company shall notify the relevant TO(s) of any User initiated Commissioning / De-commissioning of which they have been made aware that may require amendment to the TO SCADA database and/or operational or EMS display diagrams.

3.2.8 All real time data changes associated with Commissioning/ Decommissioning on the TO Transmission System or User System shall be the subject of close liaison between ~~NGESO~~The Company and the TO in order to ensure that changes are co-ordinated. All Parties shall agree the time and date of implementation.

3.2.9 As part of commissioning the communication links between site and ~~NGESO~~The Company should be proven prior to any formal testing.

3.2.10 The TO shall ensure transmission of real time data to the Datalink in accordance with STCP 4-2 (Real Time Datalink Management).

3.2.11 In order to validate the transmission of alarms and indications from the TO appropriate and timely testing shall be undertaken using agreed points of contact, at the request of either party, following changes made to either or both the TO and ~~NGESO~~The Company database

## 3.3 *Emergency Changes*

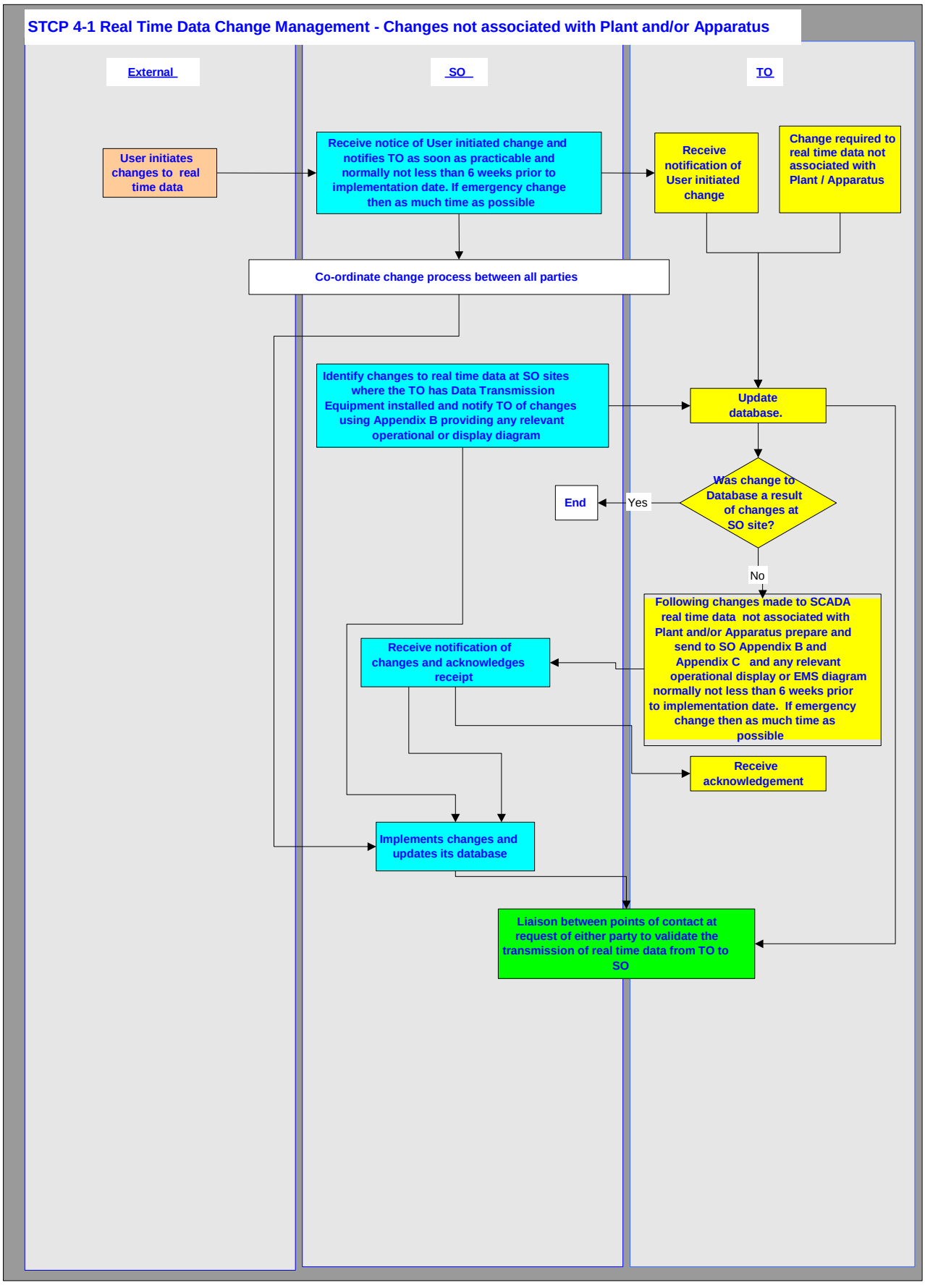
3.3.1 Emergency changes are those required at very short notice to accommodate modifications initiated by events such as:

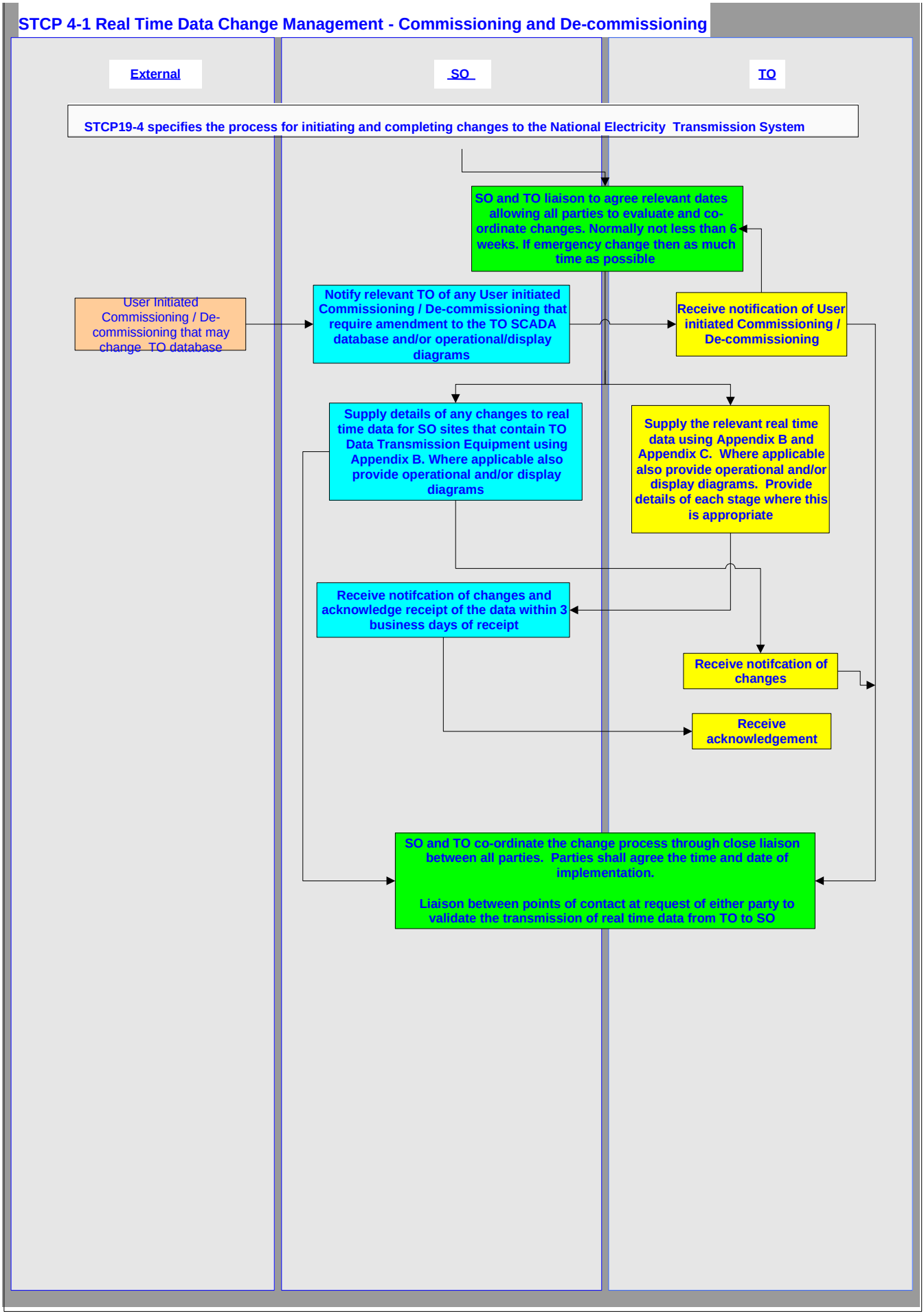
- emergency re-configuration of the National Electricity Transmission System
- urgent changes in control time scales.

3.3.2 When ~~NGESO~~The Company or the TO is made aware of emergency changes in real time data that must be implemented in a shorter timescale than that specified as normal, the process detailed in 3.2 and 3.3 shall still be followed wherever reasonably practicable.

# Appendix A: Flow Diagram

Note that the Process Diagrams shown in this Appendix A are for information only. In the event of any contradiction between the process represented in this Appendix and the process described elsewhere in this STCP, then the text elsewhere in this STCP shall prevail.




STCP 4-1 Real Time Data Change Management - Commissioning and De-commissioning
External
SO
TO
STCP19-4 specifies the process for initiating and completing changes to the National Electricity Transmission System
SO and TO liaison to agree relevant dates allowing all parties to evaluate and co-ordinate changes. Normally not less than 6 weeks. If emergency change then as much time as possible
User Initiated Commissioning / De-commissioning that may change TO database
Notify relevant TO of any User initiated Commissioning / De-commissioning that require amendment to the TO SCADA database and/or operational/display diagrams
Receive notification of User initiated Commissioning / De-commissioning
Supply details of any changes to real time data for SO sites that contain TO Data Transmission Equipment using Appendix B. Where applicable also provide operational and/or display diagrams
Supply the relevant real time data using Appendix B and Appendix C. Where applicable also provide operational and/or display diagrams. Provide details of each stage where this is appropriate
Receive notifcation of changes and acknowledge receipt of the data within 3 business days of receipt
Receive notifcation of changes
Receive acknowledgement
SO and TO co-ordinate the change process through close liaison between all parties. Parties shall agree the time and date of implementation.
Liaison between points of contact at request of either party to validate the transmission of real time data from TO to SO

## *Appendix B: Modification of Facilities Certificate*

| | | |
|---|---|---|
| Initiated by (Print Name)……<br>…<br><br>Contact Tel. No…… | Initiators Change Request Number | Company / Party |
| Date issued……<br><br>Date of Implementation…… Target Date for Testing……..<br>…….. | | |
| **Description of Required Change** Diagram / Description of required change Y/N | | |
| **Display Change**<br>Display / Circuit Name / Number | | |

## *Appendix C: Sample Real Time Data Spreadsheet*

Analogue

| substaion including voltage | Display digits | engunits | exdesc | pointid | point type | span | step | typical value | zero |
|---|---|---|---|---|---|---|---|---|---|
| xxxxxx | 2 | AMPS | xxxxxx | 22106 | float32 | 1400 | 1 | 1400 | 0 |
| xxxxxx | 0 | AMPS | xxxxxx | 136791 | float32 | 500 | 1 | 500 | 0 |
| xxxxxx | 2 | MVAR | xxxxxx | 22566 | float32 | 300 | 1 | 300 | -150 |
| xxxxxx | 2 | MW | xxxxxx | 22567 | float32 | 89 | 1 | 89 | 1 |
| xxxxxx | 0 | AMPS | xxxxxx | 22591 | float32 | 1400 | 1 | 1400 | 0 |

Digital

| substation including voltage | description | pointid | point type | normal state | abnormal state |
|---|---|---|---|---|---|
| xxxxx | xxxxxx | 12345 | digital | in | out |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# *Appendix D: Abbreviations & Definitions*

## *Abbreviations*

| | |
|---|---|
| SPT | SP Transmission plc |
| SHE-T | Scottish Hydro Electric Transmission plc |
| SCADA | Supervisory Control and Data Acquisition |
| TO | Transmission Owner |

## *Definitions*

**STC definitions used:**
Apparatus
~~NGESO~~The Company
NGET
Plant
User

**Grid Code definitions Used:**
Protection Apparatus

**Definition used from other STCPs:**

| | |
|---|---|
| **Datalink** | STCP04-2: Real Time Datalink Management |