STCP 11-1 Issue 008~~7~~ Outage Planning

STC Procedure Document Authorisation

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

STC Procedure Change Control History

Issue 001	16/03/2005	BETTA Go-Live Version
Issue 002	26/05/2005	Issue 002 incorporating PA010
Issue 003	05/10/2005	Issue 003 incorporating PA034 and PA037
Issue 004	17/12/2009	Issue 004 incorporating changes for Offshore Transmission
Issue 005	27/07/2010	Issue 005 incorporating PA057 (corrections for Offshore Transmission)
Issue 006	07/10/2011	Issue 006 incorporating PA059
Issue 007	01/04/2019	Issue 007 i~~I~~ncorporating National Grid Legal Separation Changes
Issue 008	27/04/2023	Issue 008 – incorporating changes to facilitate the Electricity System Restoration Standard

1 Introduction

1.1 Scope

1.1.1 This document specifies the requirements for the exchange of information across the NGESO:TO interfaces throughout the Outage Planning process, from Outage requirements identified up to six years and beyond (for complex schemes and National Electricity Transmission System reinforcement) to handover of the plan into the Control Phase (including Outage Proposals submitted in the Control Phase).

1.1.2 This document applies to Outage requirements on Plant and Apparatus used on or associated with TO Transmission Systems including Protection, associated communication channels and exchange of information related to User Outage requirements that could affect the operation of TOs' Transmission Systems.

1.1.3 This document has been revised to take account of the introduction of the offshore transmission networks and the resultant increase in the number of TOs that will require to interact with NGESO in the role as coordinator of generator and network outage data.

1.1.4 This document applies to NGESO and TOs. For the purposes of this document, the TOs are:

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

1.1.5 No distinction is generally made within the document between Onshore and Offshore TOs. References are applicable to both unless specific conditions or exceptions are made in the document relating to an Onshore TO or Offshore TO and such distinction will be prefixed accordingly.

1.1.6 This document recognises that an onshore TO may become the owner of one or more Offshore Networks and that the ownership of TO networks may change over time.

1.2 Objectives

1.2.1 The objective of this STCP is to provide for an efficient exchange of information between NGESO and TOs to facilitate:

- the co-ordinated development of Outage Proposals by each TO; and
- preparation of Outage Plans for the National Electricity~~-~~ Transmission System by NGESO, taking into account each TO's Outage Proposals.

1.2.2 To meet this objective, this STCP specifies the following:

- the requirements for exchange of information between NGESO and TOs related to Outage Planning;
- NGESO responsibilities to develop and maintain Outage Plans;~~ and~~
- TO responsibilities to develop and keep up to date Outage Proposals; and~~.~~
- NGESO responsibilities for satisfying the requirements of the Electricity System Restoration Standard against Outage Plans.

1.3 Key Definitions

1.3.1 For the purposes of STCP11-1:

1.3.1.1 **Capacity Declaration** means a statement indicating restrictions to the import and/or export capability of the network boundary

1.3.1.2 **Core Outage** means an Outage of an asset associated with the 400kV, 275kV or 132kV interconnected Transmission System including all User Outages (other than DNO User Outage).

1.3.1.3 **Draft Outage Plan** means the Outage Plan published for consultation in engineering week 34 for Years 1 and 2.

1.3.1.4 **Final Outage Plan** means the Outage Plan as agreed and issued in engineering week 49 for Years 1 and 2.

1.3.1.5 **Key Outages** means outages which affect the operation of the MITS and/or those outages that are agreed between the TO's and NGESO. These will include outages

on connections to generators that have only a single connection to the transmission system.

1.3.1.6 **MITS (Main interconnected Transmission System)** means all the 400kV, 275kV and the 132kV network elements of the National Electricity Transmission System but excludes Generation Circuits, Transformer Connection to a Lower Voltage System & External Interconnections between the Scottish Transmission System and External Systems.

1.3.1.7 **NGESO Outage Database** means the database (currently known as TOGA) used by National Grid to record and monitor details of Outages of equipment forming part of the National Electricity Transmission System. (See also Appendix B – Outage Database)

1.3.1.8 **Offshore Network** means a collection of offshore substations and assets that connect offshore generation plants with the onshore transmission system.

1.3.1.9 **Outage Planning** means the development of an Outage Plan.

1.3.1.10 **Outage Start Time** means the time the Outage is released to the TO for safety isolation.

1.3.1.11 **Outage Return Time** means the time the Outage is released by the TO for operational use by NGESO.

1.3.1.12 **Opportunity Outage** means an Outage of an asset with no System security or no cost issues which is planned after issue of the Final Outage Plan.

1.3.1.13 **Outage Plan Build** means the staged development of the Outage Plan at the year ahead and following year (Years 1 & 2) stage.

1.3.1.14 **Plan Freeze** means end of Week 49 following the issue of the Final Outage Plan by NGESO and after which all changes to the Final Outage Plan shall be monitored in accordance with Section 5 'Change Management' of this procedure.

1.3.1.15 **Plan Year** means engineering week 14 to the end of engineering week 13 of the following calendar year.

1.3.1.16 **Provisional Outage Plan** means the Outage Plan prior to publication as the Draft Outage Plan in engineering week 34 of Year 2.

1.3.1.17 **Risk of Trip (ROT)** means agreed work where there is the potential of inadvertent operation of specified switchgear.

1.3.1.18 **Unplaced Outage** means an Outage included in an agreed list of Outages that have been requested but have not been placed up to the publication of the Final Outage Plan.

1.3.1.19 **Winter Period** means November (week 45) to February/March (week 9) inclusive.

1.3.1.20 **Year 0** means the current Plan Year that is being delivered.

1.3.1.21 **Year Ahead (Year 1)** means the following Plan Year.

1.3.1.22 **Year 2** means the year following Year 1.

1.3.2 In this document week numbers refer to engineering (calendar) week numbers.

1.3.3 There are three key stages to the Outage Planning process:

1.3.3.1 **Outage Definition** means a statement by a TO of a firm Outage requirement to undertake work, based on the combination of individual work requirements on or associated with given Plant and Apparatus specifying the work content and the following Flexibility Parameters (as appropriate):

- the proposed start and finish date(s) and times of each Outage;
- details of the technical limits which a TO anticipates will apply to its Transmission Services whilst they are the subject of the Outage;

- if necessary, any information about the associated configuration of any parts of the National Electricity Transmission System and associated arrangements that may be required in relation to the Outage;
- details from TO,of agreed DNO demand transfers where this agreement exists between TO and DNO, as specified in OC1 and/or DNO network connection support to be provided for the duration of the Outage;
- information to assist NGESO with the efficient sequencing of Outages, including the relationship, if any, between each Outage and any other proposed Outages and/or any known interdependencies with User Outages;
- an indication of the importance that a TO affixes to each Outage(ie a priority as defined in Appendix C4 of STCP 11-2 Outage Data Exchange);
- details of a TO's flexibility margins in respect of each Outage (e.g. alternative dates, or potential movement of other Outage dates or times); ~~and~~
- Emergency Return to Service Times associated with each Outage in accordance with Appendix D (including a statement of the actions that would be taken to restore the provision of the relevant associated Transmission Services to their Normal Capability Limits or, where such actions do not restore such Transmission Services to their Normal Capability Limits, the limits that would otherwise apply). If, for any reason, an alternative Emergency Return to Service Time is required, alternative actions may be agreed with NGESO; and~~.~~
- information relating to the Outage which could impact the ability to successfully initiate Restoration Plans.

1.3.3.2 **Outage Placement** means the provision of 'firm' Outage dates by NGESO.

1.3.3.3 **Plan Production** means the process of producing all the necessary operational and work plans by each Party to enable the Outage to take place.

1.4 Procedure Overview and Responsibilities

1.4.1 Sections 1.5 and 1.6 provide an overview of the key responsibilities and requirements of NGESO and each TO with respect to the Outage Planning process. The detailed Outage Planning process is covered in Sections 2 to 6 of this procedure.

1.5 TO Role

1.5.1 Each TO shall provide NGESO with Outage Definitions for all Outage Proposals or Outage change requests and assist NGESO in co-ordinating and facilitating User Outages and Outages of each other Party.

1.5.2 Each TO shall take account of all relevant information when preparing Outage Definitions to provide an Outage Proposal or Outage change request to NGESO. This may include, but is not limited to:

- known User Outages;
- User information, provided to the TO either by Users or by NGESO;
- agreed DNO demand transfers as specified in OC1 and/or DNO network connection support to facilitate an Outage~~.~~; ~~and~~
- information obtained through discussions with another TO; and
- Outages on Restoration Contractors equipment or Outages which have an impact on a Restoration Plan.

1.5.3 Where practicable Outages shall be planned without dependencies on other Outages.

1.5.4 Each TO shall continually monitor the validity of Outage Proposals (including Outage Definitions) and the Outage Plan and promptly notify NGESO of any amendments or additional information that could impact on the implementation of an Outage Proposal or the Outage Plan.

1.5.5 Each TO shall notify NGESO of changes to Plant and/or Apparatus technical data that could affect the operation of that Plant or Apparatus (including any appropriate Operational Capability Limits).

1.5.6 Each TO shall provide NGESO with details of Offshore Network ownership and / or operational changes as soon as reasonably practicable.

1.6 NGESO Role

1.6.1 NGESO shall build the Outage Plans to the NETS Security and Quality of Supply Standards. See also Appendix B – NGESO Outage Database (known as TOGA).

1.6.2 Once a prospective offshore network TO have their application approved NGESO~~T~~ will associate the new TO with the appropriate offshore substations, assets and parties in the NGESO Outage database

1.6.3 NGESO will maintain details of offshore network ownership and changes of ownership and / or operational changes within the NGESO Outage database.

1.6.4 NGESO shall maintain an Outage database of all placed Outages and shall provide each TO with access to the Outage database entries for User Outages (in accordance with STC Schedule 3) and any Outages that are likely to materially affect that TO's Transmission System.

1.6.5 NGESO will provide each TO with the means to obtain visibility of any outages that are planned within the boundary of influence with adjacent TO networks.

1.6.6 NGESO shall determine the final placement of all Outages.

1.6.7 NGESO shall issue the Draft Outage Plan in week 34 each year.

1.6.8 NGESO shall review and update the Draft Outage Plan as necessary, taking into consideration any Outage change requests received.

1.6.9 NGESO shall issue the Final Outage Plan when completed but in any event no later than the end of week 49. NGESO shall then:

- monitor changes to the Final Outage Plan (following the procedure in Section 5 Change Management);
- assess any proposed Outage change requests to determine the priority and impact of the request; and
- separately record all Service Reductions (if greater than 3 hours duration) and Outages in the NGESO Outage database.

1.6.10 To support the TOs in preparing their Outage Proposals and Outage change requests, NGESO shall inform each TO of User Outages (in accordance with STC Schedule 3) that, in the opinion of NGESO or the TO, are likely to materially effect that TO's Transmission System.

1.6.11 For Outages involving Offshore Network connections into an Onshore Transmission site, NGESO will perform a co-ordinating role between the Offshore TO and Onshore TO.

1.6.12 For Outages involving Offshore Network connections into a DNO network in England & Wales NGESO will perform a co-ordinating role between the Offshore TO, Onshore TO and the DNO.

1.6.13 Where a DNO network in England & Wales acts as the connecting point for an Offshore Network and the DNO makes a Capacity Declaration in respect of any restrictions for designated circuit(s), NGESO will carry out a process to determine how the capacity restriction should be apportioned between the Offshore connecting parties and will distribute this information to all affected parties.

1.6.14 In discussion with each TO, NGESO shall agree and compile operational plans and actions to enable each Outage included in the Outage Plan to be released. NGESO shall provide this information to the relevant TO in accordance with Sections 2 to 6 of this procedure.

1.6.15 During an Outage, NGESO shall identify the need for the Emergency Return To Service (ERTS) of an Outage within the provisions of the Outage Definition. This shall include specifying and agreeing the operational requirements in the event that full asset availability, including full Protection and control facilities cannot be achieved due to the urgency of the return to service agreed in the Outage Definition. (See Appendix D - Emergency Return to Service).

2 Outage Planning

2.1 Principles and Overview

2.1.1 The Outage planning process covers identification of Outage requirements for up to six years ahead (for all known schemes and National Electricity Transmission System reinforcement) to the handover of the plan at day ahead into the Control Phase. More detail will be added when developing the plan in Years 1 & 2.

2.1.2 Production of the Outage Plan (as described in Section 4 of this STCP) shall include the production of detailed operational and work plans to enable each individual Outage to take place.

2.1.3 NGESO and each TO shall communicate with each other throughout the outage planning process and as a minimum will arrange to handover the Year 1 & 2 Final Outage Plan.

2.1.4 NGESO and each TO shall seek to resolve any Outage placement conflicts through collaboration with each other and any relevant Party.

3 Outage Planning Procedure for Year 3 to 6 (and beyond) and Outage Plan Build at Year Ahead (Year 1 & 2)

3.1 Year 3 to 6 (and Beyond)

3.1.1 At any time for Year 3 to 6 (and beyond), any Party shall~~ould~~ initiate discussions with another Party regarding Outages as and when they become known.

3.1.2 For Year 3 and beyond the main driver for Outage Proposals will be from the Initial Outage Plan. STCP 16-1, Section 4.4 includes more detail on co-ordination and the method for ensuring the Provisional Outage Plan is available at the start of Year 2

3.1.3 When a TO has indicative dates for Outage Proposals, that TO shall propose such dates to NGESO and update their Outage Proposal accordingly. NGESO shall then update the NGESO Outage database as appropriate.

3.1.4 NGESO shall take no longer than 8 weeks to review outages relating to new or modified connection applications and respond to the relevant TO. If there are

issues to discuss and agree, NGESO and the TO will endeavour to resolve these issues as soon as reasonably practicable.

3.1.5 If and when NGESO determines that an Outage Proposal is not viable, NGESO shall discuss the alternatives with the relevant TO(s). This process should follow that detailed in STCP 16-1, Section 4.4

3.1.6 In week 6 each year the Initial Outage Plan for Year 3 shall become the Provisional Outage Plan for Year 2 and each Outage Plan beyond Year 3 to 6 (and beyond) will similarly be rolled forward.

3.2 Outage Plan Build at Year 1 & 2

3.2.1 Overview

3.2.1.1 The objective of Outage Plan Build is to construct a Provisional Outage Plan that provides each TO with access to their Transmission System for that Plan Year. The development of the Provisional Outage Plan is an iterative process requiring frequent NGESO and TO liaison.

3.2.1.2 The starting point at 2 years ahead will be the plan that has been developed in accordance with STCP16-1 with the addition of other Key Outages.

3.2.1.3 NGESO and each TO will meet as required in line with this Section 3.2, to review the Provisional Outage Plan to discuss and exchange the following information:

- Each TO to provide NGESO with details of Outage Definitions in respect of Outage Proposals or Outage change requests.
- NGESO shall notify each TO of User Outages (in accordance with STC Schedule 3) that are likely to materially affect that TO's Transmission System as they become known; and
- NGESO to notify each TO with any points on the transmission system where there are known or expected constraint issues Or other system security issues

3.2.1.4 The meetings do not preclude Outage Proposals or Outage Change request being notified to NGESO as they become known to that TO, taking account of known or advised User Outages or any other information exchange detailed in 3.2.1.3 above.

3.2.1.5 For Outages involving Offshore Network connections into an Onshore Transmission site, NGESO will perform a co-ordinating role between the Offshore TO and Onshore TO

3.2.1.6 For Outages involving Offshore Network connections into a DNO network in England & Wales, NGESO will perform a co-ordinating role between the Offshore TO, Onshore TO and the DNO

3.2.1.7 Where a DNO network in England & Wales acts as the connecting point for an Offshore Network and the DNO makes a Capacity Declaration in respect of any restrictions for designated circuit(s), NGESO will carry out a process to determine how the capacity restriction should be apportioned between the Offshore connecting parties and will distribute this information to all affected parties.

3.2.1.8 The timetable to be followed during the 1 Year and 2 Year Ahead process is described below.

3.2.2 For Year 2 the outages proposed should focus on those that affect the operation of the MITS and/or those outages that are agreed between the TO's and NGESO. These are known as the Key Outages. Thereafter for Year 1 all outages are required.

3.2.3 Outage Placement (week 6-34)

3.2.3.1 Week 6 - Provisional Outage Plan additions and changes

- The TO shall review the Provisional Outage Plan and provide NGESO with Outage Proposals (including Outage Definitions) for all known construction and maintenance work in the Provisional Outage Plan in an agreed format. Outages that are essential to meet construction programmes, third party works or for the integrity of a TO's Transmission System shall be tagged appropriately.

3.2.3.2 Week 7 to 28 - Development of the Provisional Outage Plan

- Each TO shall also provide NGESO with any Outage change requests and deletions from or additions to the Provisional Outage Plan as they become known.
- NGESO shall continue to refine the Provisional Outage Plan in discussion and meetings with the TOs. This may include placing TO Outages that were not taken or completed in the previous outage year
- In providing Outage Definitions in respect of Outage Proposals or Outage change requests, TOs should prioritise Core Outages.
- NGESO shall continue to build the Provisional Outage Plan based on the information provided by the TOs. Where Outage conflicts occur, NGESO shall discuss the viability of the proposed Outages with the relevant TO(s) and suggestions for alternative Outages.
- Each TO shall provide NGESO with changes to Outage Proposals as they become known.
- NGESO shall update the NGESO Outage database with any changes to User Outages. Any User Outages that are likely to materially affect a TO Transmission System, shall be made available to that TO in accordance with STC Schedule 3.
- Each TO shall provide its final Outage Proposals for Year 1 before the end of week 27 each year
- By the end of week 28, the Provisional Outage Plan shall be provided to each TO in writing if required by that TO.

3.2.3.3 Week 29 to 33 – Further Development of the Provisional Outage Plan

- NGESO shall continue to develop the Provisional Outage Plan.
- NGESO shall arrange a tripartite meeting with the Onshore TOs (which may include use of video-conference or teleconference) to consider Provisional Outage Plan issues that relate to Outages affecting the TO Onshore Transmission Systems and any outstanding Outage placement issues that affect Onshore TOs.
- NGESO shall arrange a bilateral meeting with each TO (which may include use of video-conference or teleconference) to discuss those elements of the Provisional Outage Plan that affect that TO alone.

3.2.3.4 Week 34 - NGESO publishes the Draft Outage Plan

- Following any changes to the Provisional Outage Plan subsequent to the meetings with each TO, NGESO shall publish the Draft Outage Plan. NGESO will not consider any new outage changes submitted during week 34.

3.2.4 Plan Optimisation (week 35-48)

3.2.4.1 General

- NGESO and each TO shall continue to review the Draft Outage Plan. Final Outage placements shall be completed by week 49 at year ahead. TO's shall make all final requests by the end of week 48. Outages shall be identified in accordance with Appendix C - Plan Firmness.

- Where a DNO network in England & Wales acts as the connecting point for an Offshore Network and the DNO makes a Capacity Declaration in respect of any restrictions for designated circuit(s), NGESO will carry out a process to determine how the capacity restriction should be apportioned between the offshore connecting parties and will distribute this information to all affected parties

3.2.4.2 Week 35-39 - Development of the Draft Outage Plan

- NGESO shall refine the Draft Outage Plan in conjunction with each TO and any relevant Users, taking account of comments received.
- Outages represented must include both outages within a TO's network, and all outages within the boundary of influence for that TO
- By the end of week 39 each TO shall advise NGESO of any remaining Outage requests. Although forming part of the Draft Outage Plan, some of these remaining Outages may not be placed. Outages with no firm date agreed shall be assessed and placed during Year 0 where practicable.

3.2.4.3 Week 40-48 – Further development of the Draft Outage Plan

3.2.4.4 NGESO shall continue to refine the Draft Outage Plan in discussion with the TOs. This may include placing TO Outages that were not taken or completed in Year 0.

3.2.5 Plan Freeze (week 49)

3.2.5.1 At the end of week 49, NGESO shall publish the Final Outage Plan.

3.2.5.2 Following publication of the Final Outage Plan, all changes (including placement of Unplaced Outages) shall be monitored in accordance with Section 5 (Change Management).

3.2.6 Final Outage Plan Handover (weeks 3 and 4 in following calendar year)

3.2.6.1 The increased number of Transmission Owners following the introduction of~~-~~ Offshore Networks means that the Final outage Plan handover will continue to take place primarily in week 3 but may be extended into week 4 depending on workload and available resource.

3.2.6.2 When the Final Outage Plan is handed over to the current year, any Outages that have been agreed but cannot be placed shall either:

- have been moved out of the relevant Outage database year following a risk assessment; or
- left in the Outage database pending an Opportunity Outage placement by agreement between NGESO and the relevant TO.

3.2.6.3 Opportunity Outages shall be identifiable in the Outage database

3.2.6.4 Weeks 3 and 4 (in following calendar year)

- NGESO shall arrange meetings (including by videoconference or teleconference) between NGESO and each TO during weeks 3 and 4 as workload permits to "hand over" the Final Outage Plan to Current Year. The Plan Year shall then become Year 0 and the Year 2 Provisional Outage Plan prepared for handover (to Year 1) in week 6 to continue the cycle.

4 Procedure for Implementing The Plan (Current Year)

4.1 Overview

4.1.1 During the current year, NGESO shall refine, optimise and update the Outage Plan to accommodate essential changes, additional work and previously Unplaced Outages, taking into account Service Reductions, ~~and~~ generation profile changes and System Restoration requirements. NGESO shall use reasonable endeavours to have dates for all Unplaced Outages, Opportunity Outages or Outage change requests agreed by four weeks in advance of the Outage start date. The TO shall use reasonable endeavours to have in place firm work plans

4.1.2 A key objective in delivering a firm Outage Plan is to minimise the number of Outage changes. Outage changes should be discussed at System Access meetings as outlined in Section 4.3.2 to seek performance improvements. The aim of all Parties shall be to minimise changes to the Outage Plan at less than 4 weeks ahead of Outage start date.

4.1.3 Outage change requests shall be undertaken in accordance with Section 5 (Change Management).

4.2 Current Year (Year 0)

4.2.1 When considering any changes that impact on the Outage Plan, each TO shall use information provided by Users or NGESO (in accordance with STC Schedule 3) and liaise with other TOs and NGESO as required.

4.2.2 Opportunity Outages may be accommodated by NGESO at short notice within the current year.

4.2.3 NGESO shall make the Outage Plan available to the TOs in respect of their Licensed area in written or electronic format as requested by the TO.

4.2.4 NGESO shall prepare operational notes for Onshore TOs (in accordance with Appendix E) for each week in the current year. These shall include, but shall not be limited to:

- agreements with each TO and Users on the placement of Outages affecting that TO;
- details of actions required to ensure the National Electricity Transmission System is operated within the NETS Security and Quality of Supply Standards; and
- details of changes to the National Electricity Transmission System standard substation running arrangements required to deliver the Outage Plan.

4.2.5 Each TO shall prepare work plans to ensure resources and contracts etc are in place to deliver the Outages.

4.2.6 Outages represented on all TOGA reports must include both outages with a TO's network, and all outages within the boundary of influence for that TO.

4.2.7 For Outages involving Offshore Network connections into an Onshore Transmission site NGESO will perform a co-ordinating role between the Offshore TO and Onshore TO.

4.2.8 For Outages involving Offshore Network connections into a DNO network in England & Wales NGESO will perform a co-ordinating role between the Offshore TO, Onshore TO and the DNO.

4.2.9 Where a DNO network in England & Wales acts as the connecting point for an Offshore Network and the DNO makes a Capacity Declaration in respect of any restrictions for designated circuit(s), NGESO will carry out a process to determine how the capacity restriction should be apportioned between the Offshore connecting parties and will distribute this information to all affected parties.

4.2.10 When it receives a DNO Capacity Declaration, NGESO will carry out a process to determine how the capacity restriction should be apportioned between the various connecting parties where multiple generators are connected via a single connection.

4.2.11 Where a Network restriction exists in a TO's network, due to a customer choice connection, NGESO can also declare a Capacity Declaration to one or more connecting parties using the same process as above.

4.3 Optimisation Phase (the period down to 4 weeks ahead)

4.3.1 TOs may choose to receive relevant 4 week ahead rolling Outage information in written or electronic format in addition to, or instead of, direct access to the TOGA~~-~~ database.

4.3.2 System Access Meetings

4.3.2.1 The TOs and NGESO shall agree a programme of Transmission System access meetings to look at the Year 0 Outage Plan in the period 4 to 16 weeks ahead.

4.3.2.2 It is anticipated that Transmission System access meetings shall take place every 4 to 5 weeks and may take the form of telephone, videoconference or 'face to face' meetings. However, the format, timing and venue of the meetings shall be as agreed by all Parties in advance. For locational meetings the venue may be rotated between main company locations as convenient to attendees.

4.3.2.3 The aim of these meetings shall include:-

1. Noting any Opportunity Outages or Unplaced Outages that could be placed in the review period.
2. Consideration of Outage change requests for the period 4 to 16 weeks ahead (Outage change requests are to be made as soon as practicable) and review of Outage change requests proposed in the previous 4 to 5 weeks.
3. Resolution of new or outstanding Outage conflict issues.
4. Consideration of risks to the implementation of an Outage or associated with an Outage recorded in TOGA. (See Appendix B – NGESO Outage Database (known as TOGA).
5. Agreement of any operational requirements which are needed to facilitate an Outage, (e.g. additional security studies, Emergency Return to Service Time profiles, temporary Protection settings, local switching or switching restrictions, demand transfers etc.) and which interact with TO assets or resources.
6. Facilitating individual Outage and working plans to be produced in a timely manner with sufficient detail to enable all Outages to become "firm" prior to the rolling 4 week ahead delivery phase.
7. Provision of data for commissioning/testing of plant or equipment in the review period.
8. Consideration of any Outages that are likely to materially affect a TO Transmission System including Outages in the boundary of influence of that TO and User Outages (in accordance with STC Schedule 3) or Outages which could have an impact on System Restoration.

4.3.2.4 The focus of discussions at these meetings shall be the period 4-16 weeks ahead (change requests to be made as soon as practicable) to allow time to address issues in a timely manner. Outages shall be reviewed in detail for the 8-16 week ahead period, so that necessary actions can be identified and resolved.

4.3.2.5 In terms of interfacing with the Users the interface responsibilities shall be:

- NGESO shall liaise with Users on Outage placement and operational arrangements; and

- each TO shall provide identified resource requirements at interface sites.

4.3.2.6 Outages involving commissioning or decommissioning requirements shall be agreed between each TO and NGESO as part of operational plans in accordance with the requirements of STCP 19-4 Commissioning / Decommissioning.

4.4 Delivery phase (0-3 weeks ahead)

4.4.1 In the delivery phase, NGESO and each TO shall work together to implement each Outage. To minimise disruption to the existing programme and resources Outage changes in this period shall be limited to essential changes or Opportunity Outages.

4.4.2 Each TO shall advise NGESO of any changes to Outage Definitions or other factors that could affect an Outage.

4.4.3 As part of this process NGESO shall advise each TO of any changes to operational arrangements to facilitate an Outage. Agreements for operational actions including Emergency Return to Service Time, demand and generator intertrip requirements and demand transfers shall be confirmed by NGESO with the provider (i.e. TO or User) as appropriate. Any resource requirement for local switching shall be confirmed between each TO and NGESO as part of the Outage Planning process.

4.4.4 Commissioning requirements shall be finalised, agreed and circulated between each TO and NGESO as part of operational plans in accordance with the requirements of STCP 19-4 Commissioning / Decommissioning.

4.4.5 Non-standard running arrangements for interface sites that have been agreed and exchanged by NGESO and Users as part of the planning process and copies provided to each relevant TO (in accordance with STC Schedule 3).

4.4.6 Any Service Reductions (if greater than 3 hours duration) or new Outages shall be separately recorded in the NGESO Outage database and shall be taken into account in formulating the Outage Plan and operational notes.

4.4.7 By 1600 each Friday at the 2 weeks ahead stage:

4.4.7.1 NGESO shall provide to each Onshore TO the provisional 2 week ahead operational notes in a form agreed with and acceptable to NGESO as appropriate for comment by 1600 each Tuesday of the following week.

4.4.7.2 NGESO shall make available to each Offshore TO via the NGESO Outage Database, the provisional 2 week ahead notes as appropriate for comment by 1600 each Tuesday of the following week.

4.4.8 By 1600 each Thursday:

4.4.8.1 NGESO shall provide to each TO a copy of the Outage Plan covering the 4 weeks ahead period. This may be in writing or by electronic file transfer, as agreed with that TO.

4.4.8.2 Outages represented on all TOGA reports must include both outages within a TO network, and all outages within the boundary of influence for that TO

4.4.8.3 By 1600 each Friday at the week ahead stage:

4.4.8.3.1 NGESO shall provide to each Onshore TO final operational notes in a form agreed with and acceptable to NGESO containing details of all significant Outages and associated operational actions. The operational notes shall be based on the most recent System analytical studies and shall be provided to each Onshore TO for Outages of, or which are likely to materially affect, that Onshore TO's Transmission System and any relevant User Outages (in accordance with STC Schedule 3). NGESO shall notify the relevant Onshore TO of any subsequent changes to the operational notes.

4.4.8.3.2 NGESO shall provide to each Offshore TO via the NGESO Outage Database final notes containing details of all significant outages and relevant operational actions. The notes will be based on the most recent system analytical studies and shall be provided to each Offshore TO for outages of, or which are likely to materially affect, that Offshore TO's transmission system and any relevant user outages (in accordance with STC Schedule 3). NGESO shall notify the relevant Offshore TO of any subsequent change to these notes.

4.4.9 On a daily basis in the current week:

4.4.9.1 NGESO shall review the day ahead National Electricity Transmission System security and applicable operational notes. NGESO shall use all reasonable endeavours to issue the day ahead Outage Plan to each TO and NGESO Control Phase by 1600hrs. In order to allow for the timely completion of the process any changes relevant to the following day received after 15:30hrs shall normally be referred to NGESO Control Phase for consideration (see Section 4.5).

4.5 Control Phase

4.5.1 STCP 1-1 Operational Switching should be followed after the handover of the Outage Plan from planning to the Control Phase.

5 Change Management

5.1 Objectives

5.1.1 In order to maintain a stable Outage Plan that gives optimum National Electricity Transmission System access and facilitates delivery of priority work, it is essential that any changes to the plan are controlled and risk assessed.

5.1.2 The change management process shall ensure that all change requests after Plan Freeze at week 49 are monitored and the process and results are auditable.

5.1.3 The change management process shall be followed for any change to an Outage Definition following issue of the Final Outage Plan.

5.1.4 Change requests shall be given due consideration by all the affected Parties. Making changes to the Outage Plan may be iterative to ensure essential work can be added to the plan and less essential work moved or deleted from the plan where resource limits are infringed.

5.1.5 NGESO and the TO shall respond to all change requests as soon as reasonably practicable and taking account of the time remaining from the change request date to the Outage start or date of change.

5.2 Change Categories

5.2.1 Changes to the Outage Plan shall be categorised. Change monitoring codes for use in the register within the Outage database shall be agreed between NGESO and the TOs and are contained in STCP 11-2 Outage Data Exchange.

5.3 Process

5.3.1 Each Party shall keep the Outage Plan under continuous review (including up to the end of an Outage) and as soon as a Party becomes aware that a change is required to such Outage Plan, that Party shall:

- if a TO, request a change to the Outage Plan to NGESO including with such Outage change request a brief description of the reason(s) for the change; or
- if NGESO, notify each affected TO that NGESO itself requests or another TO or a User has requested (as appropriate), a change to the Outage Plan to the extent that it considers is likely to materially affect that TO's Transmission System; including a brief description of the reason(s) for the change.

5.3.2 A change request may be made or provided verbally where it is necessary and expedient to do so, provided that such a change request or notice is confirmed in writing as soon as reasonably practicable by the Party making the change request.

5.3.3 Any change request for a new Outage made pursuant to paragraph 5.3.1 shall include, to the extent reasonably practicable, an Outage Definition as described in 1.3.3.1.

5.3.4 NGESO shall maintain a register within the NGESO Outage database, which records in relation to any change which is made to the Outage Plan after week 49:

- a description of the change, including (where appropriate) the date(s) and times specified for an Outage in the Outage Plan both immediately prior to the time of the change and as changed;
- the identity of the Party which proposed or requested the Outage change;
- a brief description of the reason for the Outage change;

5.3.5 Where possible, any conflicts that arise shall be resolved through a collaborative process. NGESO shall discuss alternatives with the relevant TO(s) so that the optimal decision can be taken. This process may vary significantly dependant on the specifics of each situation.

6 Additional Considerations

6.1 Cross Boundary Outages

6.1.1 Cross boundary Outages between TO:TO shall be duplicated in the Outage Plan, although the Party with the majority of work shall take the lead in proposing the Outage (following liaison). The two Outages shall be linked in the Outage database.

6.2 Boundary of Influence

6.2.1 A boundary of influence circuit created for example for 'TO1' on assets owned by 'TO2' is not automatically created or linked in reverse for 'TO2' on assets owned by 'TO1 and so these also need to be created in the TOGA database.

6.3 DNO Capacity Declaration

6.3.1 A Capacity Declaration by the DNO shall be sent to NGESO who will log it in the NGESO Outage Database. When NGESO receives a DNO Capacity Declaration

they will carry out a process to determine how the capacity restriction should be apportioned between the various connecting parties.

6.4 Winter Emergency Return to Service Time of 24hrs or greater

6.2 The types of faults on the National Electricity Transmission System in winter tend to have a greater potential for longer repair times and there is a greater potential for circuits to be recalled to secure the Transmission System against severe weather conditions. All Outages placed in the Winter Period that have an Emergency Return to Service Time greater than 24 hours must be pre-approved by both NGESO and the relevant TO. (See Appendix D - Emergency Return to Service).

6.5 Changes in Network Ownership

6.5.1 It is expected that over time, the ownership and/or control responsibilities of the offshore networks may change-, leading to different TO's being associated to the offshore substations and assets.

6.5.2 The TOGA database has been designed to allow the replacement of the current TO of an offshore network with a new TO.

6.5.3 The past/present ownership / control responsibilities of an asset will be recorded with the details of the start date and end date of the past and start date of the present ownership / control responsibility of the asset.

6.5.4 The integrity of all outage requests, reports etc over any period of change will be maintained within the database such that after the changeover date

- the new Offshore TO will be able to see all past outage information for that network
- the previous Offshore TO will not be able to see any information for that network

6.5.5 Until the changeover date

- the previous Offshore TO will still be able to submit outage requests even if they are for a period after the changeover
- the new Offshore TO will not be able to see not see any outages associated to the network

6.6 Managing Third Party Access

6.6.1 Third parties (excluding Users) may also require "access" to the Transmission System. Typical access requirements fall into the following categories:

- proximity Outages for work on plant or equipment near live overhead lines;
- earthwire work associated with fibre optic links (e.g. TO telecoms supplier);
- tower access for installation/work on cellular phone aerials;
- requirement to temporarily or permanently move equipment to accommodate roads and buildings or movement of equipment; or
- Equipment at interface sites to allow work on Users' assets e.g. Busbar disconnectors.

6.6.2 Each TO shall be responsible for submitting Outage Proposals or Outage change requests on behalf of third parties. A TO shall advise NGESO when an Outage is being requested on behalf of a third party.

6.6.3 Details or enquiries received by NGESO relating to third party work that could impact on Plant and/or Apparatus shall be passed to the relevant TO.

6.7 Commissioning / Decommissioning

6.7.1 Refer to STCP19-3 'Operational Notification and Compliance Issues' and STCP 19-4 'Commissioning and Decommissioning' for details of the requirements for commissioning/decommissioning of plant and equipment.

6.7.2 In the relevant Outage Proposal, each TO shall indicate any changes to HV equipment on the National Electricity Transmission System that requires a commissioning programme.

6.7.3 The Outage database shall also include any additional information required for commissioning and decommissioning of equipment (See Appendix B – Outage Database).

6.7.4 Any Outages required in addition to the plant/equipment being commissioned or decommissioned to facilitate the processes should be identified and included in the Outage database in accordance with this procedure.

6.7.5 'Information' entries may be made to the Outage database to indicate when additional NGESO or TO resource is required in carrying out commissioning or decommissioning (e.g. circuit name or nomenclature changes or major permit changes).

Appendix A – Flow Diagrams – Not Used

Appendix B NGESO Outage Database (known as TOGA – Transmission Outage And Generation Availability)

Description
All requirements for access to the Transmission System shall be recorded in the NGESO Outage database, (TOGA).

Creation of Entries
It is an in-built requirement of TOGA that all potential circuit Outages are created from a Basic Data record. This defines a number of fields that shall remain unchanged irrespective of the Outage arrangements. All Outage Proposals or Outage change requests have to be created from the Basic Data record for that circuit. This greatly reduces the quantity of data the user needs to enter, and ensures each entry has the correct codes allocated to it and ensures a level of consistency.

Recording of Data
The following information shall be recorded for primary equipment:

- All TO Transmission System equipment Outages identified by equipment owner.
- All third party owned transmission equipment Outages that may have an impact on the operation of the National Electricity Transmission System.
- User Outages on busbars at interface sites.
- Generator Outages for those required to submit data under the Grid Code.

The following shall be recorded for secondary equipment or Outage information:

- Risk of Trips
- Plant or Protection testing to an approved procedure. (Note circuit commissioning to an approved test program shall be included as part of the information on the main circuit booking).
- Trip tests with or without DAR
- Outages of cooling plant / equipment that causes thermal rating restrictions on primary plant.
- Protection depletions.
- Ancillary systems that could affect the MITS e.g. air systems, batteries, dc supplies etc.
- NGESO and TO dataset switch dates where these affect the availability of EMS facilities and/or control facilities.

The following shall be recorded in association with commissioning or decommissioning of circuits and equipment:

- New circuits shall be recorded as an out of service booking from the date the circuit comes under the appropriate HV Safety Rules to the date the circuit is commissioned on to the Transmission System.
- All equipment addition, removal and circuit name or nomenclature change dates
- Any circuit that has a commissioning program associated with it should have the appropriate code in the booking

This list does not preclude the inclusion of other useful records and comments where appropriate.

Monitoring Codes

Codes for monitoring the reason for Outage changes within the Outage Database shall be agreed between NGESO and TO at the time of the Outage change.

Appendix C - Plan Firmness

Firmness is required to ensure that the work required on the Transmission System can be completed. Clearly identifying the Outages that need to remain in a particular placement ensures that all parties are aware and concentrate their efforts on meeting the relevant deadline. All parties need to agree to the firmness as it is likely one particular party shall have committed significant resources and/or expenditure to ensure the Outage stays in its current placement. The remaining Outages which may be equally important from a work viewpoint but which have more flexible placement opportunities are identified as having a 'provisional' placement and can be used for resource profiling etc.

Requirement for Firmness

Requirement for firmness can be for a number of reasons, but shall usually be because one of the parties involved needs an Outage to remain within a particular placement period and duration

Typical examples of when firmness is required is when the Outage may:

Type of Outage	Party Requiring Firmness
Be part of a project plan	TO
Have a significant customer or third party impact or requires considerable third party actions to secure or where a Restoration Contractors Outage coincides with a Transmission Outage	NGESO
Be required at a specific time either for operational reasons (e.g. demand) or maintenance (e.g. WSE)	NGESO/TO
Have significant impact on a critical path	NGESO/TO
Require a specific resource commitment	TO
Have significant Wayleave issues	TO

Once an Outage has been identified as requiring firmness, an assessment shall need to be carried out as to what actions are needed to provide that firmness.

Firmness of Outage Definition

- Confirmed that Outage can be completed in the defined Outage length.
- Confirmed that the correct equipment is planned out of service.
- Construction / project delivery shall need to ensure that scheme Outages are identified correctly at an early stage.

Firmness of placement

Transmission Owner

- TO can confirm that the Outage allows sufficient lead times and that contractors have contractual commitments to meet the specified dates.
- Outage is accurately specified and that resources are available to deliver the Outage within the specified timescale.
- Outage start date is not critically dependent on any other single event that could result in slippage.
- Confidence that the total number of firm Outages in a particular time period can be resourced with little chance of failure.
- Wayleaves and / or alternative rights of access as required are agreed.

NGESO

- Confirmed that Outage can be secured.
- For Outages requiring a User pre or post fault action, need to have this agreed with the User and recorded.
- Confirmed for other Outages they do not require third party actions, or leave demand / generation at risk.
- Confirmed that for security reasons an Outage is not dependent on generation from all available power station BMUs for the associated electrical group.
- Confirmed that the Outage does not affect the impact of the ESO to satisfy the requirements of the Electricity System Restoration Standard.

Appendix D - Emergency Return to Service (ERTS)

The Emergency Return to Service (ERTS) time is the time taken to return an out of service circuit to operational service. This may be as a contingency measure against predicted conditions such as severe weather or as a post fault action to restore demand, or to re-secure the Transmission System to its Licence. Provided it has been agreed between the TO and NGESO a circuit can be accepted back into service in an emergency with depleted facilities that may include the depletion of Protection facilities, the use of temporary circuit bypass arrangements etc.

Application of Emergency Return to Service Time

Ensuring all Outages have a known ERTS assists NGESO to meet its obligations under the Security Standards. After the first fault, NGESO is obliged to re-secure the System "as soon as is reasonably practical". In the normal course of operating a power System there are many potential conditions that could require the recall of circuit(s) on Outage.

When applying an Emergency Return to Service Time to a circuit the following need to be considered:

- Criticality of the circuit – Is it one of a few circuits connecting a large group of demand or generation or fundamental to System Restoration?
- Time of year – Severe weather in winter significantly increases the likelihood of a circuit being recalled to service and can materially affect the time taken to do so.
- Demand and generation left at single circuit risk.
- Post fault actions – When securing an Outage requiring post fault drops from generation.
- Nuclear Site Licence obligations.
-

By prior agreement between the TO and NGESO a circuit can be accepted back into service in an emergency with depleted facilities. Each case shall be assessed on an individual basis but it can include the following:

- Local control, indications and alarms only.
- Local analogues only
- One fully operational Protection
- Without DAR or with restricted DAR facilities
- Tap change by local control only.
- Synchronising – Local synchronising must be available
- Cables, reactors or transformers without cooling or with reduced cooling – (Operating Capability Limit to be specified by Transmission Owner)
- Bypass of a circuit breaker or mesh corner or circuit breaker locked closed.

Minimising Emergency Return to Service Times

When potentially difficult Outages are discussed then methods of working may need to be considered to achieve a reduced Emergency Return to Service Time. This should be considered at an early stage in the planning process such as Year Ahead and a methodology agreed as part of contractual arrangements to minimise work and contractual disruption later. In complex cases (e.g. circuit bypass), there shall be a need to have in place a documented restoration process before the Outage starts.

ERTS Profiling

Profiling the Emergency Return to Service Time for the duration of the Outage should also be considered for high risk/ high cost Outages, (e.g. to achieve a short Emergency Return to Service Time at times of high demand). This shall also allow contingency arrangements to be better matched to the periods of high risk. If an Outage duration is extended as a consequence of achieving a reduced Emergency Return to Service Time requirement, then the risk of demand loss needs to be balanced against the longer Emergency Return to Service Time.

Appendix E - Operational Notes

The relevant operational notes provided by NGESO to each TO may include but are not limited to:

1. Summaries of new and existing Outages with start and finish dates
2. List of non-standard substation running arrangements
3. Outage Information in the form of notes about each Outage varying from simple transformer loading to detailed contingency arrangements.
4. Control staff comments from previously issued draft copies together with the NGESO planning staff responses
5. List of Outages requiring commissioning programmes and documentation and current status
6. Fault Level control guidance
7. User network information including agreed pre fault & post Fault demand transfers and User Outages affecting the MITS
8. Voltage control guidance
9. Special Actions arranged for identified limits and constraints
10. Electronic copies of non-standard substation running arrangements

~~10.~~11. Outage which could have an impact on System Restoration

Appendix F – Abbreviations and Definitions

Abbreviations

NETS SQSS Standard	National Electricity Transmission System Security and Quality of Supply
STCP	System Operator –Transmission Owner Code Procedure
TO	Transmission Owner
TSC	Transmission Status Certificate
GC	Grid Code
DNO	Distribution Network Operator
OHL	Overhead Line
SGT	Supergrid transformer
SHET	Scottish Hydro-Electric Transmission plc
SPT	SP Transmission plc

Definitions

STC definitions used:

Apparatus

Emergency Return to Service Time

Flexibility Parameters

High Voltage

NGESO

NGET

National Electricity Transmission System

Normal Capability Limits (NCL)

Operational Capability Limits (OCL)

Outage

Outage Change

Outage Plan

Outage Proposal

Party

Plant

Protection

Services Reduction

System Restoration

System
Transmission System

User

Terms defined in the Grid Code:

Control Phase

Electricity System Restoration Standard

Restoration Contractor

Restoration Plan