STCP Amendment Proposal Form

PA017

1. Title of Amendment Proposal

STCP 16-1 – Creation of new STCP and incorporation within Schedule 2 of the STC

2. Description of the Proposed Amendment *(mandatory field)*

The creation of STCP 16-1: Investment Planning and its incorporation within Schedule 2 of the STC.

It is proposed that this STCP Amendment becomes effective on 26th May 2005.

3. Description of Issue or Defect that Proposed Amendment seeks to Address *(mandatory field)*

Prior to BETTA Go-Live the STC Parties identified a number of STCPs that while necessary were not required to be introduced before the BETTA Go-Live Date of 1 April 2005.

Since the BETTA Go-Live Date the development of these STCPs has progressed to such a stage that a number of these STCPs are now ready to be formally created and incorporated with Schedule 2 of the STC. This STCP Amendment Proposal proposes that STCP 16-1: Investment Planning is created and incorporated within Schedule 2 of the STC.

4. Impact on the STC *(information should be given where possible)*

Introduction of STCP 16-1: Investment Planning, which is attached at Attachment 1 to this STCP Amendment Proposal.

5. Impact on other frameworks e.g. CUSC, BSC *(information should be given where possible)*

NONE

6. Impact on Core Industry Documentation *(information should be given where possible)*

NONE

7. Impact on Computer Systems and Processes used by STC Parties *(information should be given where possible)*

NONE

8. Details of any Related Modifications to Other Industry Codes *(where known)*

NONE

9. Justification for Proposed Amendment with Reference to Applicable STC Objectives *(mandatory field)*

Although the introduction of this STCP was not deemed as critical for Go-Live it is the view of the proposer that should this STCP now be created and incorporated within Schedule 2 of the STC this would better facilitate the following Applicable STC Objectives:

- the development, maintenance and operation of an efficient, economical and co-ordinated system of electricity transmission
- protection of the security and quality of supply and safe operation of the GB Transmission System insofar as it relates to the interactions between transmission licensees
- promotion of good industry practice and efficiency in the implementation and administration of the arrangements described in the STC.

Details of Proposer Organisation's Name	National Grid Company plc
Capacity in which the Amendment is being proposed (i.e. STC Party or other Party as designated by the Authority pursuant to STC section B7.2.2.1 (b))	STC Party
Details of Proposer's Representative Name Organisation Telephone Number Email Address	 Mark Duffield National Grid Company plc 01926 654971 mark.duffield@ngtuk.com
Details of Representative's Alternate Name Organisation Telephone Number Email Address	 Ben Graff National Grid Company plc 01926 656368 Ben.Graff@ngtuk.com
Attachments (Yes/No): Yes If yes, title and number of pages of each attachment: Attachment 1 (xx Pages): Legal text for STCP 16-1: Investment Planning	

Notes:

1. Those wishing to propose an Amendment to the STC should do so by filling in this "Amendment Proposal Form" that is based on the provisions contained in Section 7.2 of the STC.

2. The Committee Secretary will check that the form has been completed, in accordance with the requirements of the STC, prior to submitting it to the Committee. If the Committee Secretary accepts the Amendment Proposal form as complete, then she/he will write back to the Proposer informing them of the reference number for the Amendment Proposal and the date on which the Committee will consider the Proposal. If, in the opinion of the Committee Secretary, the form fails to provide the information required in the STC, then he/she may reject the Proposal. The Committee Secretary will inform the Proposer of the rejection and report the matter to the Committee at their next meeting. The Committee can reverse the Committee Secretary's decision and if this happens the Committee Secretary will inform the Proposer.

   The completed form should be returned to:

   Lilian Macleod
   STC Committee Secretary
   Commercial Frameworks
   National Grid Company plc

NGT House
Warwick Technology Park
Gallows Hill
Warwick, CV34 6DA

Or via e-mail to: STCTeam@uk.ngrid.com

Attachment 1: Legal Text for STCP 16-1 Investment Planning

STCP 16-1 Issue 001 Investment Planning

STC Procedure Document Authorisation

Company	Name of Party Representative	Signature	Date
National Grid Company plc			
SP Transmission Ltd			
Scottish Hydro-Electric Transmission Ltd			

STC Procedure Change Control History

Issue 001	26/05/2005	First Issue following BETTA Go-Live

1 Introduction

1.1 Scope

1.1.1 This procedure applies to NGC and each TO. For the purposes of this document, TOs are:

- SPT; and
- SHETL.

1.2 Objectives

1.2.1 This STCP describes the processes and procedures for investment planning and, individual project development across both the NGC-TO and TO-TO interfaces.

2 Key Definitions

2.1 For the purposes of STCP 16-1:

2.1.1 **Distribution Network Operator** means a holder of a Distribution Licence.

2.1.2 **Joint Planning Committee (JPC**) means the committee formed under section 4.1.1.

2.1.3 **Joint System Development Liaison group (JSDL)** means the groups formed under section 4.1.2.

2.1.4 **Operational Assessment** means an estimate of the system constraint costs against the Project Listings proposed by the relevant TOs.

2.1.5 **Project Listings** means a summary of proposed projects to modify the GB Transmission System corresponding to a set of planning assumptions, i.e. to accommodate new connections, modification to existing connections, and GB Transmission System reinforcements. Each entry on the Project Listing will have referenced a completed Project Listing Document (see Appendix D).

2.1.6 **Project Listing Document (PLD)** means a document describing a specific project or set of projects to modify the GB Transmission System (see Appendix C).

2.1.7 **Relevant Standards** means the GB Security and Quality of Supply Standard (GB SQSS).

2.1.8 **Week 24 Data Submission** means that data which is submitted to NGC by Users in week 24 (as defined in Grid Code).

3 General Provisions

3.1.1 Nuclear Site Licence Provisions Agreement

3.1.2 When following this process where this may interact with, impact upon or fall within the boundary of a Nuclear Site Licence holder's site, or may otherwise have any form of affect and/or implication for a nuclear power station consideration must be given to the relevant provisions of the applicable Nuclear Site Licence Provisions Agreement, the CUSC Bilateral Connection Agreement for that site, paragraph 6.9.4 of the CUSC and Section G3 of the STC to ensure compliance with all of these obligations.

4 Procedure

4.1 Committees/Liaison Groups

4.1.1 Joint Planning Committee

4.1.1.1 The Joint Planning Committee (JPC), consisting of named representatives from NGC and each TO, shall facilitate the co-ordination between the Parties of investment planning and

the production of the SYS. The JPC shall meet quarterly, however the frequency of the meeting can be varied with the agreement of all Parties.

4.1.1.2 It is envisaged that agenda items for consideration at a meeting may include, for example:

- the production of draft Investment Planning Demand backgrounds and the Investment Planning Ranking Orders by NGC;
- the agreement of tolerances for the Boundary of Influence studies;
- the production of Investment Planning and SYS Models by Parties;
- resolution of modelling issues, including contingencies and tolerances for consistency checking;
- review and consistency checking of the GB Models for Investment Planning and SYS production;
- the production of Project Listings and supporting Project Listing Documents (PLDs) by all Parties;
- the Operational Assessment performed by NGC;
- the programme for annual production of Project Listings and supporting PLDs. (NB this is envisaged as an annual process but could be updated on an ad-hoc basis); and proposed and issued Grid Code and/or SQSS derogations.

4.1.1.3 The quarterly meetings may be supplemented with ad-hoc meetings as required. The JPC does not preclude separate bilateral TO-TO, or TO-NGC meetings.

4.1.1.4 The JPC may appoint sub-groups as appropriate to consider specific issues. It is envisaged that such sub-groups, for example, may be set up to consider:

- dynamic models of new generators;
- System stability; or
- modelling consistency issues.

4.1.2 Joint System Development Liaison Group

4.1.2.1 A Joint System Development Liaison group (the JSDL) may be formed with a User for the purpose of investment planning co-ordination. Such groups shall be organised by NGC and formed at the request of NGC or a TO.

4.1.2.2 The JSDL shall consist of named representatives from the relevant User, NGC and the relevant TO or TOs. The JSDL shall meet twice a year, although the frequency of the meetings can be varied with the agreement of all members of the JSDL. The agenda at the meeting may include, for example:

- all parties' relevant projects from the Project Listings, including infrastructure and asset replacement projects;
- Information about Grid Supply Points (DNOs only);
- Information about Outages; or
- Information about general issues.

4.2 Production of Investment Planning Project Listings

4.2.1 The JPC shall, at the first meeting of the calendar year, discuss and agree the programme, and key milestones for delivery of, the annual investment plan.

4.2.2 The Parties shall review the Boundaries of Influence and produce the Hybrid GB Investment Planning Model and Minimum GB Investment Planning Model in accordance with STCP 22-1 Production of Models for GB System Planning.

4.2.3 Each Party shall perform analysis on these Models based on the requirements of the Relevant Standards, including any sensitivity analysis considered relevant. Both the deterministic and economic requirements of the Relevant Standards shall be taken into account in any analysis.

4.2.4 Each Party shall consider future infrastructure reinforcements when considering any non-compliance with the Relevant Standards identified by the security analysis. Each Party shall also consider any new connection or asset replacement projects that are required, and will look to co-ordinate any future infrastructure reinforcements with such projects. Each Party shall also consider enduring changes to the capability of existing assets.

4.2.5 Each Party will produce a Project Listing, which is a summary of projects that will propose changes to its Transmission System, to make the Transmission System compliant with Relevant Standards.

4.2.6 For each Party's projects, that Party shall produce an initial PLD, in such detail as is reasonably practicable and appropriate at the time, which may include the following items:

- project name;
- brief narrative;
- any changes to node and line data;
- schematic diagram;
- key dates (including commissioning date, date by which stage by stage drawings will be available and date of initial Commissioning Panel meeting); and,
- outline Outage requirements (circuits, duration, order and Emergency Return to Service Times).

4.2.7 Where a TO identifies a number of options for system reinforcement or modification that meet the deterministic and economic requirements of the Relevant Standards, they may request additional data from NGC in order to complete a more detailed economic comparison of the options. Additional data may include estimates of MWh & MVArh costs, constraint volumes and constraint locations.

4.2.8 NGC shall provide any data to the TO as reasonably requested in 4.2.7, to facilitate economic comparison of TO options. The data will not however, be detailed about the economics of any particular generator.

4.2.9 Each Party shall provide a Project Listing and associated PLDs to other Parties for each project within their Boundary of Influence to facilitate the co-ordination of TOs' Transmission Investment Plans and the NGC Investment Plan, and Outage planning.

4.2.10 The TOs shall provide NGC with the complete Project Listing, the associated PLDs and complete Datasets representing the changes at this stage. All projects in the Project Listing will be used to form the Transmission Investment Plan or the NGC Investment Plan for each of the Parties.

4.2.11 All Parties shall review projects which fall within their Boundary of Influence that have been provided by other Parties in 4.2.9. Parties shall review and provide comments on these projects to consider whether they are co-ordinated, economic, and efficient.

4.2.12 NGC shall collate the Project Listings and perform an Operational Assessment.

4.2.13 The initial Operational Assessment will be based on the Investment Planning Background with any additional sensitivities agreed by the JPC. The Operational Assessment shall be based on node and line data and include:

- a calculation of constraint costs during the construction phase, based on the Outage information provided in the PLDs; and,
- an estimate of enduring constraint costs, based on average circuit availabilities and plausible planned Outage scenarios.

4.2.14 NGC shall prepare separate Operational Assessment reports for each TO based on the results of the Operational Assessment. NGC shall send to the TO a first draft of its Operational Assessment report. The Operational Assessment report will make suggestions and comments on:

- problematic Outages and Outage combinations;
- problematic transmission reinforcements;
- operational complexity issues; and
- Outages that impact on Users.

4.2.15 All Parties shall consider the first draft of their Operational Assessment report and the reviews carried out under 4.2.11. Where suggested changes to the timing of Outages can be accommodated without a detrimental impact on the TOs capital programme, the relevant PLD will be updated, and revised Datasets, Project Listing and revised PLDs provided to NGC, by the TOs.

4.2.16 If required, NGC shall re-perform the Operational Assessment to reflect any agreed changes to the PLD(s). Where necessary, NGC shall then revise and send to the relevant TO its Operational Assessment report.

4.2.17 If NGC is not satisfied that the comments made in the draft Operational Assessment report have been properly considered by a TO, NGC can contact the TO to set out the concerns.

4.2.18 Affected Parties can hold a meeting in order to try and resolve any disagreement. If the disagreement is resolved, then the TO shall update their PLDs and Project Listing or NGC acknowledge the TO's final Project Listings.

4.2.19 Any updated Project Listing and PLDs will be sent to all relevant Parties by NGC as appropriate.

4.2.20 If Parties cannot resolve the dispute, any of the Parties may refer the matter to the Authority, in accordance with the STC.

4.2.21 Based on the determination of the Authority, any changes required to the TOs Project Listing and PLDs will be re-issued to all affected Parties as appropriate.

4.2.22 NGC shall provide information on longer-term Project Listings on the GB Transmission System that could affect Users, as part of the JSDLs' regular meetings. The information will be provided in the same form that it appears in the final PLD.

4.2.23 NGC shall review the final PLD and identify developments on the GB Transmission System that could impact on Transmission Connection Assets. NGC shall issue a Replacement Notice associated with these projects to Users as soon as reasonably practicable (ideally at least two years ahead of the need to start construction works). The Replacement Notice shall be in the form of a written letter, detailing the key reasoning for the proposals. For the avoidance of doubt, this notice does not place an obligation on the TOs to carry out this work.

4.2.24 Following the issue of the Replacement Notice, NGC and the relevant TO shall meet the Users if required to discuss the engineering and economic reasons for the project, and to consider options, programme and costs associated with the replacement.

4.3 Quarterly Investment Plan Update

4.3.1 Each TO shall make a formal update to its Investment Plan every quarter (including Project Listing, any changed PLDs and appropriate datasets). Any material changes in between the quarterly updates (including schemes changing status from planned to firm and new schemes being added to the plan) shall be notified as soon as possible via an email to NGC and the appropriate TO if within Boundary of Influence. Any Party may request further details about proposed changes, e.g. updated datasets or PLDs if required.

4.4 Changes to Planning Assumptions

4.4.1 At any time, NGC may produce new Planning Assumptions either as a consequence of a TO requesting additional information from NGC (this may follow the TO receiving notification from NGC of a disconnection notice), or if NGC decides it is appropriate to produce new Planning Assumptions. In such cases, the Parties shall agree which parts of the process in section 4.2 shall be followed to produce revised Project Listings and their associated revised or new Project Listing Documents.

4.5 Detailed Option Development

4.5.1 Economic Analysis

4.5.1.1 At the discretion of theTO, the TO shall work up an option in detail, using the consistent data Models. This will include detailed analysis of the chosen option against the latest Investment Planning Ranking Orders and Investment Planning Demand background, and will enable the production of a more detailed Outage programme.

4.5.1.2 Should the TO wish to carry out further economic analysis, NGC shall provide economic data at the request of the TO. For the avoidance of doubt, the data will not be detailed about the economics of any particular User.

4.5.1.3 Based on the options available for the project, the relevant TO shall confirm the preferred solution to address a particular need. This will enable a firm assessment of the Outage proposals for the project to be undertaken by the TO, and an assessment of the Outage plan to be undertaken by NGC. The TO shall also assess the impact of the project on other projects in its licensed area.

4.5.1.4 NGC shall provide comments on the project to the relevant TO. This will include for example:

- minor changes to timing to enable best fit with other projects;
- changes to design to minimise constraints;
- any impact on NGC assets; and
- estimate of impact, if any, on User assets.

4.5.1.5 Following receipt of any comments from NGC, the TO shall assess NGC's comments, and revise the project accordingly. At the TO's discretion the status of the project within Project Listings will then be flagged as "firm". At this stage the scheme can still be changed. Any resulting changes in Outages shall be requested in accordance with STCP 11-1 Outage Planning.

4.5.2 Changes to NGC assets

4.5.2.1 If changes to NGC assets are required as a result of a TO project, NGC shall consider the necessary works. These works will be added to NGC Project Listings and flagged as "firm".

4.5.3 User Works and changes to Transmission Connection Assets

4.5.3.1 NGC shall identify if there are changes to Transmission Connection Assets or a requirement for User works.

4.5.4 No User Works or changes to Transmission Connection Assets

4.5.4.1 Where the works do not involve changes to Transmission Connection Assets and do not trigger User works, NGC shall confirm that no TO Construction Offer shall be required and the works may proceed.

4.5.5 Changes to Transmission Connection Assets

4.5.5.1 If there are changes to Transmission Connection Assets, NGC shall request a TO Construction Offer, and the TO shall make an offer to NGC using relevant parts of STCP 18-1.

4.5.5.2 If Transmission Connection Assets require replacement, NGC shall make an offer for asset replacement to the User, in accordance with the GB CUSC. This offer shall be issued no sooner than 6 months after the asset Replacement Notice in section 4.2.23.

4.5.6 User works required

4.5.6.1 If User works are required, NGC shall submit a Modification Notification to the User in accordance with the GB CUSC.

4.5.6.2 Upon receipt of the Modification Notification, the User will submit a Modification Application, in accordance with the GB CUSC.

4.5.6.3 Upon receipt of the Modification Application from the User, in accordance with the GB CUSC, NGC shall make a Modification Offer. The process for Modifications is outlined in STCP 18-1 Connection and Modification Application

4.5.6.4 Following the signing of the Modification Offer by the User within the offer validity period, NGC shall sign the TO Construction Offer and the TO may proceed with the construction of the project in accordance with STCP 19.2 Construction Process and Scheme Closure.

4.5.6.5 Should the User not sign the Modification Offer within the offer validity period, the works cannot proceed and the User or NGC (with the agreement of the TO) can take the application to the Authority to settle any dispute under the terms of the CUSC.

4.5.6.6 Notwithstanding paragraphs 4.5.3.1 to 4.5.6.5, in the event of either a failure of a TO asset in situ, or an urgent safety issue, NGC and the TO shall consult with the User(s) as far as reasonably practicable prior to the replacement of the affected asset. NGC shall advise the User of the change, and as soon as possible make an offer for the replacement, which may be accepted or referred to the Authority, in accordance with the CUSC.

Appendix A: Definitions

Abbreviations

DNO	Distribution Network Operator
GB SQSS	GB Security and Quality of Supply Standard
JPC	Joint Planning Committee
JSDL	Joint System Development Liaison Group
PLD	Project Listing Document
SHETL	Scottish Hydro-Electric Transmission Ltd
SPT	SP Transmission Ltd
SRS	Site Responsibility Schedules
STC	System Operator Transmission Owner Code
SYS	Seven Year Statement
TO	Transmission Owner

STC definitions used:

- Authority
- Commissioning
- CUSC
- Customer
- Distribution Licence
- Emergency Return To Service
- GB
- GB Transmission System
- Grid Code
- Host TO
- Modification
- NGC Investment Plan
- Outage
- Party
- Seven Year Statement
- Transmission Connection Assets
- Transmission Investment Plan
- TO Construction Offer
- TO Construction Agreement
- Transmission Investment Plan
- User

Grid Code Definitions Used

- Grid Supply Points

CUSC Definitions Used

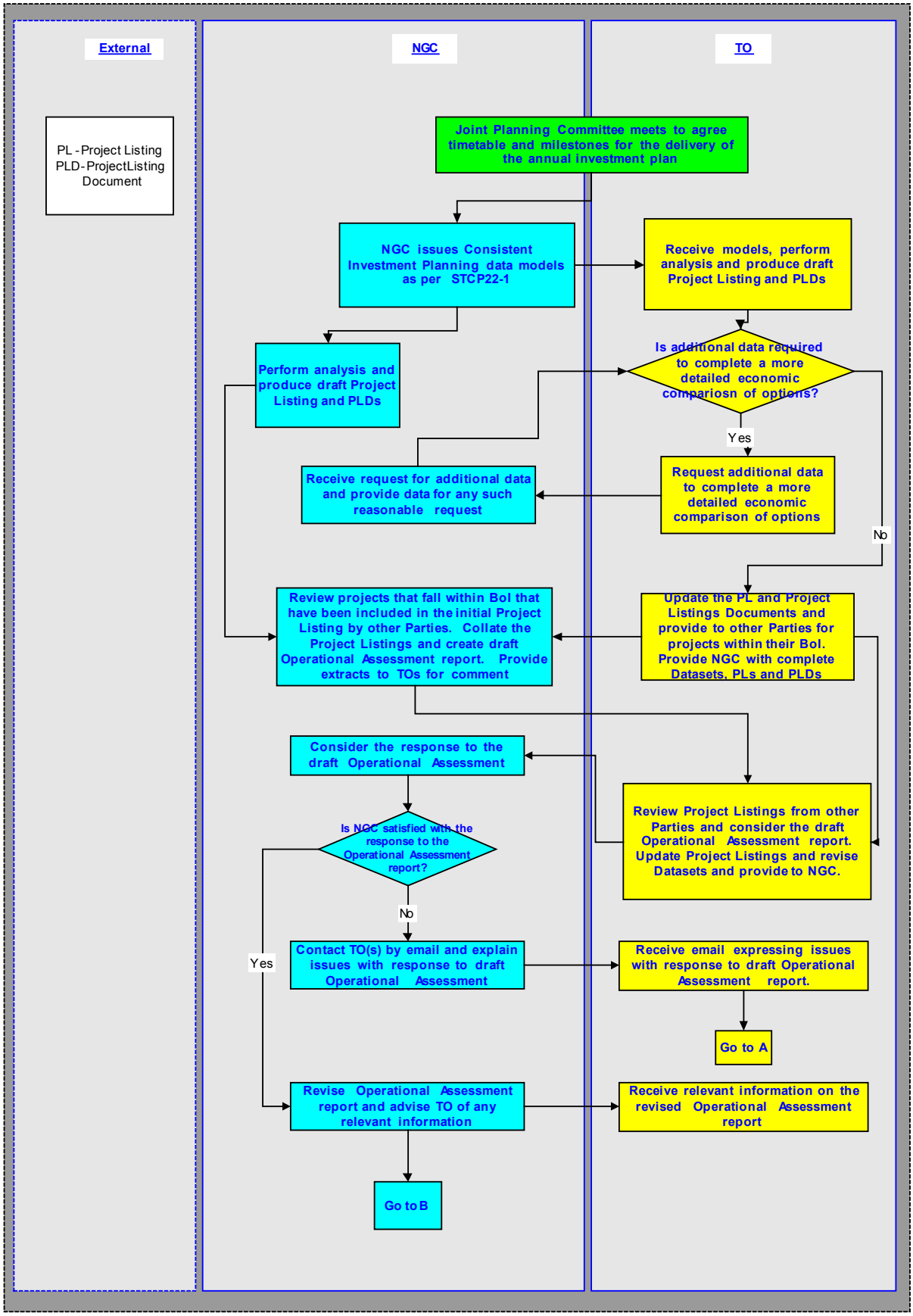
- Bilateral Agreement
- Modification Notification
- Modification Application
- Modification Offer
- Replacement Notice

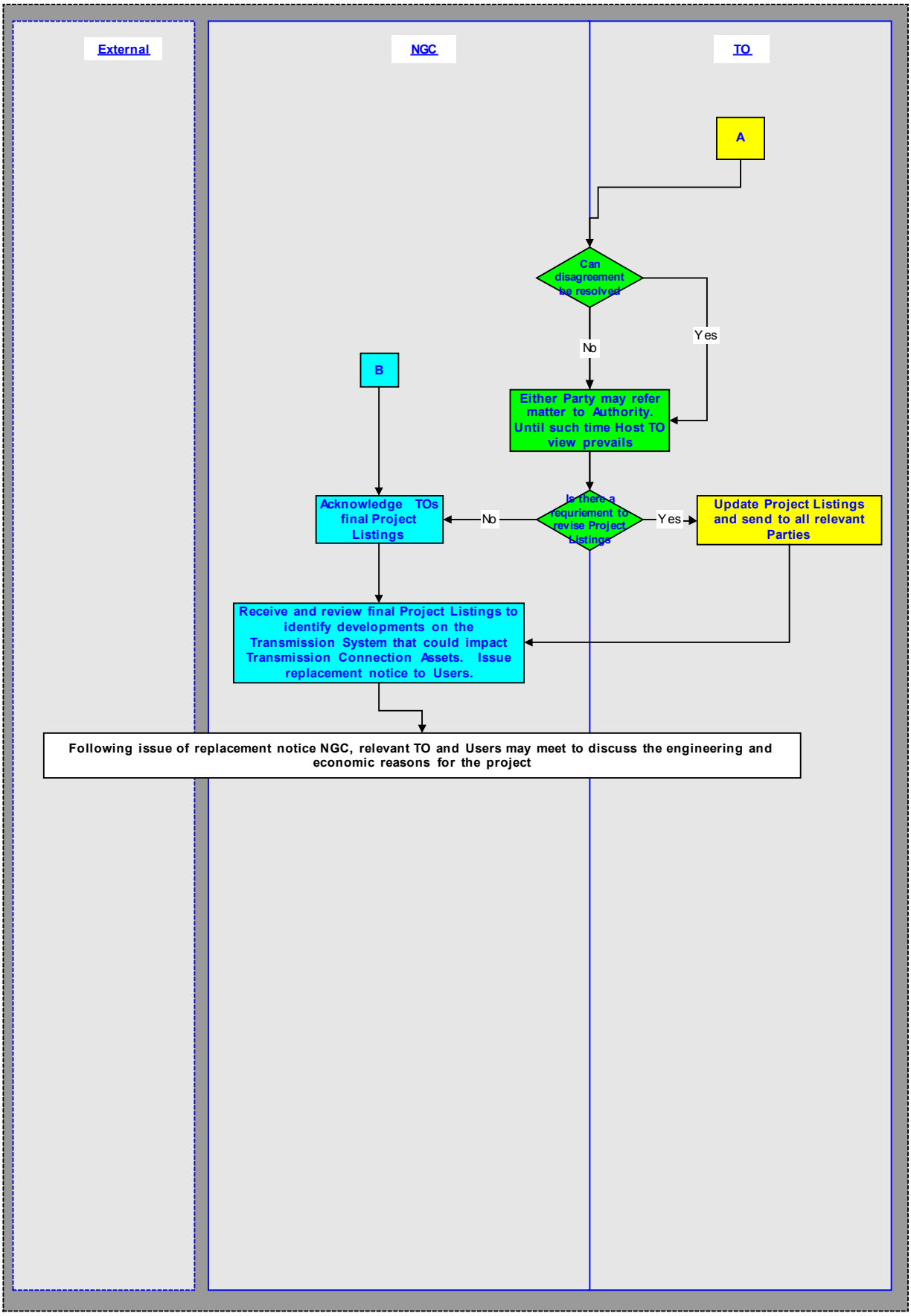
Definitions used in the document that are covered in other STCPs

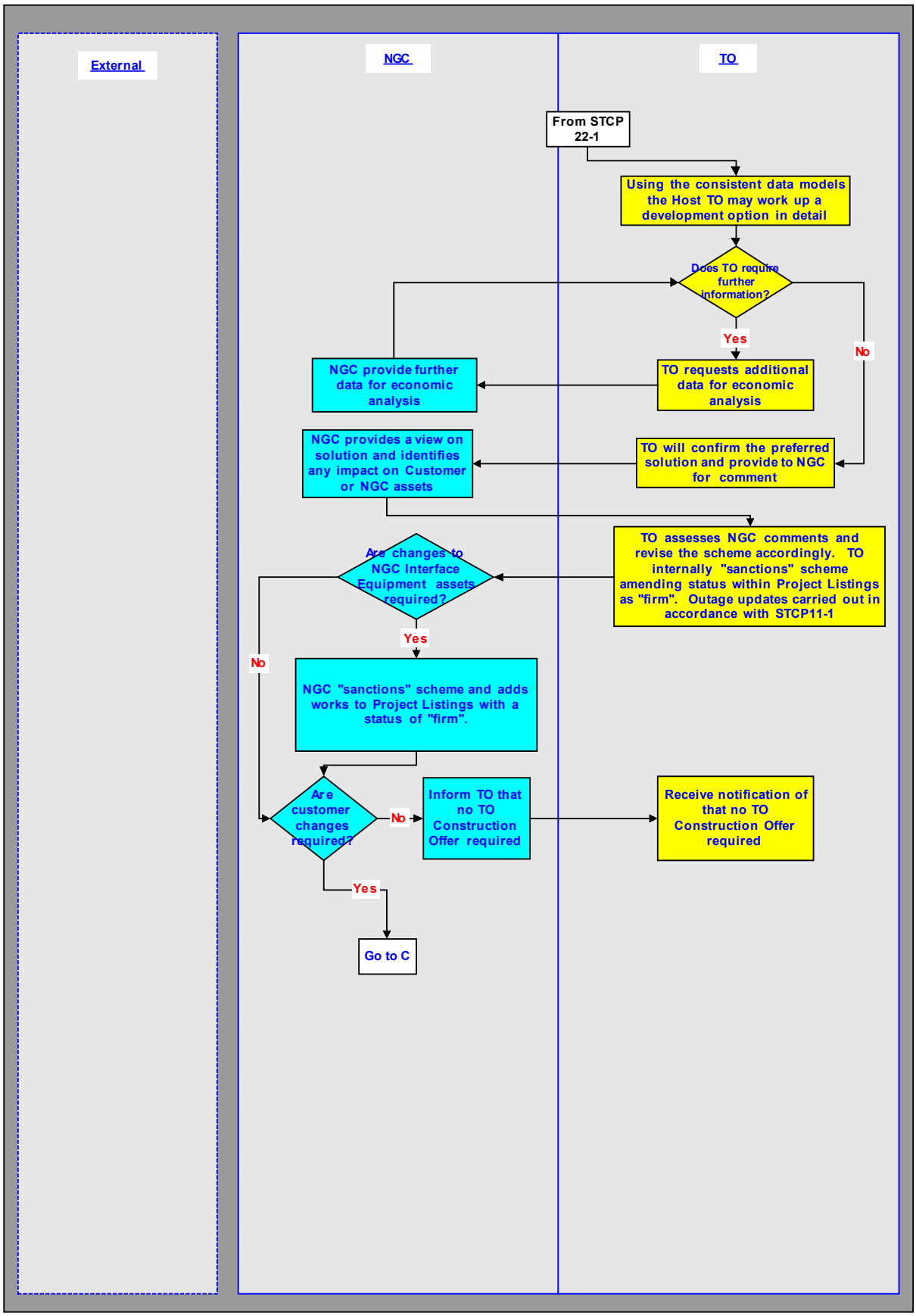
- Boundary of Influence – as defined in STCP 22-1.
- Commissioning Panel – as defined in STCP19-4
- Dataset **-** as defined in STCP 22-1.
- Host TO – as defined in STCP18-1
- Hybrid GB Investment Planning Model - as defined in STCP 22-1
- Investment Planning – as defined in STCP22-1
- Minimum GB Investment Planning Model - as defined in STCP 22-1
- Models - as defined in STCP 22-1.
- Ranking Order – as defined in STCP 22-1

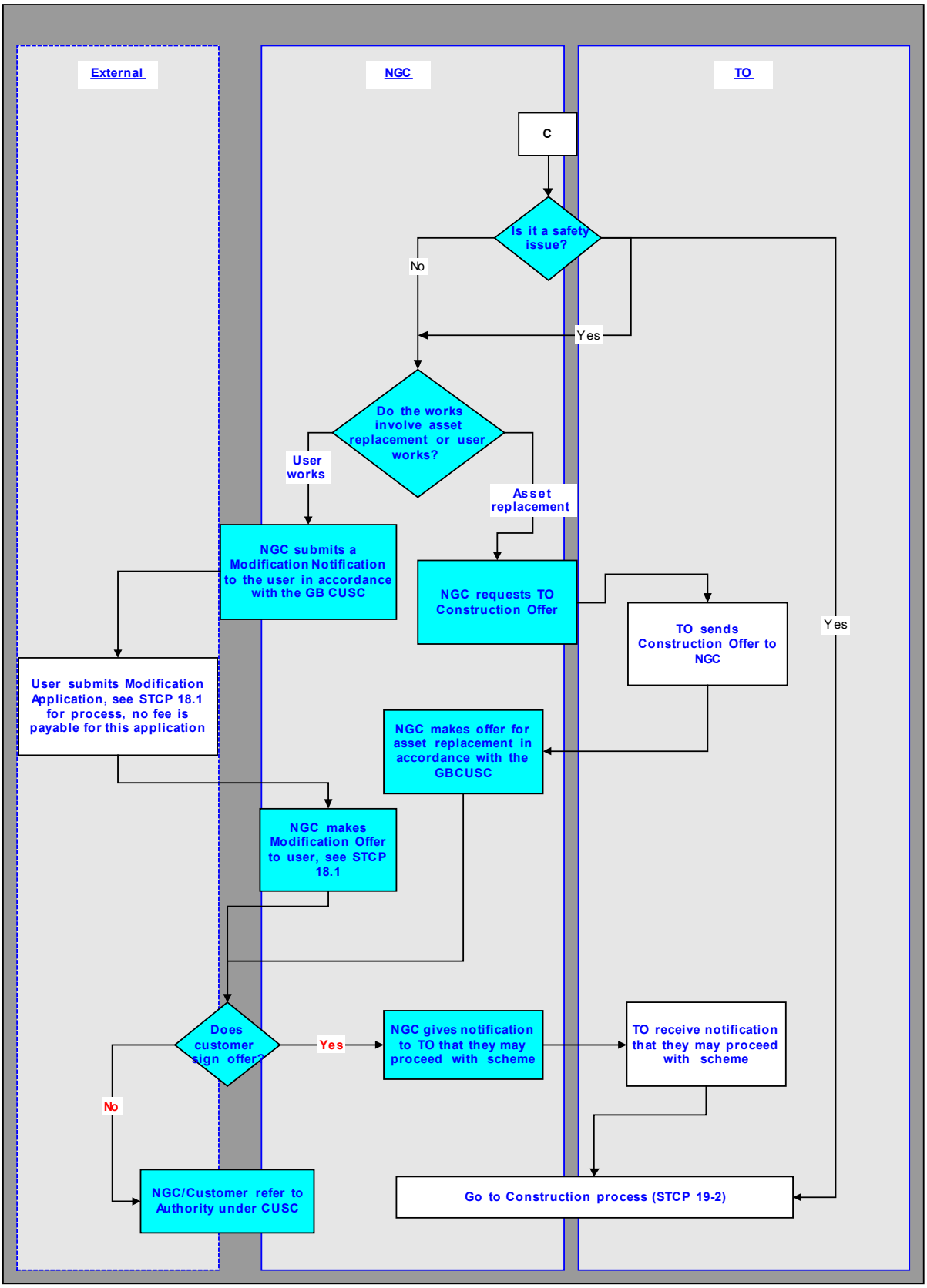
Appendix B: Flow Diagram

Note that the Process Diagrams shown in this Appendix 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.


External
NGC
TO
PL - Project Listing
PLD - ProjectListing Document
Joint Planning Committee meets to agree timetable and milestones for the delivery of the annual investment plan
NGC issues Consistent Investment Planning data models as per STCP22-1
Receive models, perform analysis and produce draft Project Listing and PLDs
Perform analysis and produce draft Project Listing and PLDs
Is additional data required to complete a more detailed economic compariosn of options?
Yes
No
Request additional data to complete a more detailed economic comparison of options
Receive request for additional data and provide data for any such reasonable request
Review projects that fall within BoI that have been included in the initial Project Listing by other Parties. Collate the Project Listings and create draft Operational Assessment report. Provide extracts to TOs for comment
Update the PL and Project Listings Documents and provide to other Parties for projects within their BoI. Provide NGC with complete Datasets, PLs and PLDs
Consider the response to the draft Operational Assessment
Review Project Listings from other Parties and consider the draft Operational Assessment report. Update Project Listings and revise Datasets and provide to NGC.
Is NGC satisfied with the response to the Operational Assessment report?
No
Yes
Contact TO(s) by email and explain issues with response to draft Operational Assessment
Receive email expressing issues with response to draft Operational Assessment report.
Go to A
Revise Operational Assessment report and advise TO of any relevant information
Receive relevant information on the revised Operational Assessment report
Go to B


External
NGC
TO
A
Can disagreement be resolved
Yes
No
B
Either Party may refer matter to Authority. Until such time Host TO view prevails
Acknowledge TOs final Project Listings
No
Is there a requirement to revise Project Listings
Yes
Update Project Listings and send to all relevant Parties
Receive and review final Project Listings to identify developments on the Transmission System that could impact Transmission Connection Assets. Issue replacement notice to Users.
Following issue of replacement notice NGC, relevant TO and Users may meet to discuss the engineering and economic reasons for the project


External
NGC
TO
From STCP 22-1
Using the consistent data models the Host TO may work up a development option in detail
Does TO require further information?
Yes
No
TO requests additional data for economic analysis
NGC provide further data for economic analysis
TO will confirm the preferred solution and provide to NGC for comment
NGC provides a view on solution and identifies any impact on Customer or NGC assets
TO assesses NGC comments and revise the scheme accordingly. TO internally "sanctions" scheme amending status within Project Listings as "firm". Outage updates carried out in accordance with STCP11-1
Are changes to NGC Interface Equipment assets required?
Yes
No
NGC "sanctions" scheme and adds works to Project Listings with a status of "firm".
Are customer changes required?
No
Inform TO that no TO Construction Offer required
Receive notification of that no TO Construction Offer required
Yes
Go to C


External
NGC
TO
C
Is it a safety issue?
No
Yes
Do the works involve asset replacement or user works?
User works
Asset replacement
NGC submits a Modification Notification to the user in accordance with the GB CUSC
NGC requests TO Construction Offer
TO sends Construction Offer to NGC
Yes
User submits Modification Application, see STCP 18.1 for process, no fee is payable for this application
NGC makes offer for asset replacement in accordance with the GBCUSC
NGC makes Modification Offer to user, see STCP 18.1
Does customer sign offer?
Yes
NGC gives notification to TO that they may proceed with scheme
TO receive notification that they may proceed with scheme
No
NGC/Customer refer to Authority under CUSC
Go to Construction process (STCP 19-2)

Appendix C Project Listing Document

Project Listing Document

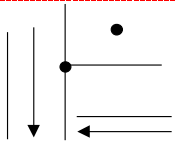
Project Number	
Project Name	
Description	
Scheme Driver	
Project Status	
Document Reference	
Planning Background	
Version Number of Document	
Project List Item Authorisation	
Company	
Representative	
Date	
Does this scheme trigger the replacement of Transmission Connection Assets?	
Will the scheme trigger User works?	
Material Impact	
Comments	

Schematic Diagram

Symbol Library (copy & paste as appropriate)

Substations XXXX2

Circuits, nodes, transformers and destinations



Text XXXX2

Indicative Outages (where appropriate)
Enter OUTLINE outage needs by circuit, in **weeks** *(use format **ww.d**) for the appropriate outage years*

Circuit	Circuit ID	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12

Commissioning Date	
Stage by stage drawings available	
First commissioning panel	

Node & Line Data	Circuit Identification			Parameters				Rating		
Data type	From	To	ID	R	X	B	Tap	Summer	Spr/Aut	Winter
Other Data	Parameter1	Parameter2	Parameter3	Parameter4	Parameter5	Parameter6	Parameter7	Parameter8	Parameter9	Parameter10

Appendix D Project Listing