STCP 18-1 Issue 0011 Connection and Modification Application

CM089 – Electricity System Restoration Standard

18 April 2023

STC Procedure Document Authorisation

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

To be replaced by reference to STC Parties in new Schedule 1

STC Procedure Change Control History

Issue 001	15/03/2005	First Issue following BETTA Go-Live
Issue 002	25/10/2005	Issue 002 incorporating PA034 & PA037
Issue 003	17/12/2009	To reflect implementation of offshore transmission regime
Issue 004	30/07/2014	Issue 004 incorporating PM079
Issue 005	19/05/2016	Issue 005 incorporating PM089
Issue 006	25/07/2017	Issue 006 introduction of Lead Person(s) and admin updates
Issue 007	01/04/2019	Issue 007 incorporating National Grid Legal Separation changes
Issue 008	13/05/2019	Issue 008 'Housekeeping Modification to align STCP18-1 - STCP18-6 with existing working practices'
Issue 009	1/08/2019	Issue 009 'STCP Modifications as a result of CM070 'Consequential STC updates post RFG and HDVC implementation'
Issue 0010	31/12/2020	Amendments to STCP18-1'Connection and Modification Application to incorporate Interactivity process
Issue 0011	06/04/2022	Issue 0011 incorporating change for PM0123
Issue 0012	18/04/2023	Issue 0012 Incorporating changes to facilitate the Electricity System Restoration Standard

1 Introduction

1.1 Scope

1.1.1 This process defines the data exchange required between NGESO and the TO(s) for the purposes of Connection and Modification applications.

1.1.2 This procedure describes the process for making a TO Construction Offer to NGESO within a specified time, as a result of an Applicant applying to NGESO for a New or Modified Connection. It defines the tasks, formal documentation, interface requirements, timescales and responsibilities between NGESO and the Host TO, Affected TO(s) and Other Affected TO(s), from receipt of a User Application to the signing/modification of an Offer. It sets out the process to be followed when dealing with interactive offers, customer build applications and changes to signed offers. It also addresses the circumstances where there is a need to work under an indemnity in order to meet the terms of the User Application.

1.1.3 NGESO is responsible, inter alia, for the co-ordination of the application process and, additionally in the case of offshore projects, carrying out an economic impact assessment of the connection and infrastructure options proposed by the Affected Parties.

1.1.4 Each TO is responsible for the design of the connection and the infrastructure of its Transmission System, provision of charging and capital cost information to NGESO, initial Outage requirements, programme of works, asset details, and the issue of the TO Construction Offer to NGESO.

1.1.5 This procedure applies to NGESO and each TO.

1.1.6 For the purposes of this document, the TOs are

- NGET;
- SPT;
- SHE-T;
- All Offshore Transmission Licence holders as appointed from time to time by the Authority

1.2 Objectives

1.2.1 The objective of this procedure is to detail:

- how the Connection and Modification Application process is addressed across the NGESO ~ TO interface, the TO ~ TO interface, and where appropriate the NGESO/TO ~ Tender Panel interface;
- the responsibilities of NGESO and the TO(s) in relation to working under indemnities activities between the TO(s) & NGESO;
- the requirements for exchange of information in relation to these activities; and
- the lines of communication to be used.

2 Key Definitions

2.1 For the purposes of STCP 18-1:

2.1.1 **Affected Parties** means the Host TO, Affected TO(s) and Other Affected TO(s) as appropriate, involved in producing TO Construction Offers relating to a particular User Application.

2.1.2 **Affected TO**(s) means any Transmission Owner in relation to whose Transmission System the Relevant Connection Site satisfies the criteria set out in the STC, Schedule four. (see STC Section D, part 2, paragraph 2.2.2).

For the avoidance of doubt, no OFTO has a role under the STCP in respect of a Relevant Connection Site until an OFTO has been appointed under the Tender Process.

2.1.3 **Agreements:** means a combination of the Bilateral Agreement and the Construction Agreement.

2.1.4 **Application Programme** means a programme to manage the application process and forms part of the NGESO Construction Application (see pro-forma in Appendix B1).

The Application Programme lists the milestones and the dates agreed by all parties.

2.1.5 **Application Steering Group** means a team made up of named representatives from NGESO, Host TO, Affected TO(s) and Other Affected TO(s) (as appropriate), the "Application Steering Group", which shall be formed to oversee the application process in relation to offshore connection applications. The remit of this group is to agree the Application Programme and monitor progress. The Application Steering Group is also responsible for resolving any disagreements relating to an NGESO Construction Application at first instance, prior to any necessary escalation. Dialogue will take place in person, by email, telephone or video conferencing as appropriate.

2.1.6 **Clock Start Date** means the date determined by NGESO, and advised to the Host TO, Affected TO(s) and Other Affected TO(s) as appropriate, when the NGESO Construction Application has been deemed competent

2.1.7 **Conditional Interactive Offer** means a TO Construction Offer which is interactive and is dependent on one or more TO Construction Offers not being accepted in order to be able to successfully accepted.

2.1.8 **Connections and Infrastructure Options Note (CION)** means the document that is used for offshore projects to record the overall economic and efficient connection option together with all the primary options considered throughout the development of the project. It requires inputs from all participants with NGESO coordinating these. It is used by the TOs to outline the options for their Transmission Construction works. NGESO shall also use the note to describe the economic assessment of the connection options (see pro forma in Appendix B2). The economic assessment should consider both the capital cost as well as operational costs associated with the different connection options. The CION may be reissued through the life of a project as a result of changes to Construction Planning Assumptions, Mod Notices, Mod Apps, technological advances etc. The CION may continue to be revised until there is no further enhancement of the benefit to the GB end consumer. The CION may refer to subsidiary documents for the provision of detail. The CION pro forma may be used for onshore projects where the collation and coordination of information is of particular importance.

2.1.9 **Host TO** – The Transmission Owner, whose Transmission System is located at the Connection Site. (see STC Section D, part 2, paragraph 2.2.1).

2.1.10 **Indemnity Agreement** means the indemnity agreement between NGESO and the Applicant.

2.1.11 **Interactivity** means where there are two or more applications for connection which would be connected to the same part of the existing or future network where not all

the applicants can be connected, interactivity is the process that determines the queue position of the applications that can be connected with or without further changes to the network.

2.1.12 **TO/NGESO Indemnity Offer** means details of the indemnity offer being made by the TO.

2.1.13 **TO/NGESO Indemnity Proposal** means details of the proposed indemnity provided by NGESO to the TO (see pro-forma in Appendix B3).

2.1.14 **Lead Person(s)** means representatives from NGESO, the Host TO, Affected TO(s) and Other Affected TO(s) (as appropriate), the "Lead Person(s)", shall oversee the application process. The remit of the Lead Person(s) is to agree the Application Programme, monitor progress and agree any changes. The Lead Person(s) are also responsible for resolving any disagreements relating to an NGESO TEC Exchange Rate Application at first instance, prior to any necessary escalation. Dialogue will take place in person, by email, telephone or video conferencing as appropriate.

2.1.15 **Material Impact** means anything that NGESO or Host TO/Affected TO reasonably assess would prevent an Offer being made to the Applicant in accordance with their Transmission Licence.

2.1.16 **Modern Equivalent Asset Valuation** is as defined in the Statement of Connection Charging Methodology.

2.1.17 **Other Affected TO(s)** means any Transmission Owner who is not a Host TO or an Affected TO, but which receives Construction Planning Assumptions or NGESO otherwise identifies that it is likely to be required to enter into a TO Construction Agreement in respect of the Construction Project.

2.1.18 **Schedule of NETS Location Codes** means the list of unique NETS letter site location codes.

2.1.19 **NGESO Construction Application** means the document that is provided from NGESO to the TO to provide details of the NGESO Connection Application, NGESO Modification Application or the System Construction Application. (see pro-forma in Appendix B1).

2.1.20 **Tender Panel** means the panel selected by the Authority in accordance with the Offshore Tender Regulations.

2.1.21 **Tender Process** means the tender process for the selection of an Offshore Transmission Owner in accordance with the Offshore Tender Regulations.

2.1.22 **TO/NGESO Indemnity Agreement** means the indemnity agreement between NGESO and the TO to reflect, where appropriate, the Indemnity Agreement (see 10).

2.1.23 **Unconditional interactive offer** means a TO Construction Offer which is interactive but is able to successfully accept, irrespective of any other acceptances of related interactive offers.

3 Procedure

3.1 Nuclear Site Licence Provision

3.1.1 Where this process 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 SO/TO Code to ensure compliance with all of these obligations.

3.2 Basic Process

3.2.1 In the case of connections offshore, under the CUSC, Connection Applications will be received from the generator for an offshore connection. NGESO will produce a Connection Offer on basic assumptions as to the offshore works, subject to review and variation as a result of the offshore transmission Tender Process to be run by the Authority, and the grant of an offshore transmission licence to a preferred bidder, and their accession to the STC. Any subsequent variations to the said Connection Agreement will then include the newly appointed offshore TO within the ambit of this STCP 18.1 to the extent appropriate to the particular scheme. This procedure shall also be used in the case where the developer adopts the generator build option.

3.2.2 Modification Applications to connections offshore will include the offshore TO within its ambit as the Host TO, with onshore TO's and other offshore TO's potentially being included as Affected Parties or Other Affected Parties as appropriate

3.2.3 **NGESO receives the User Application**

3.2.3.1 NGESO will receive a completed User Application for a new connection or Modification from an Applicant. This may include the results of any feasibility study work.

3.2.4 **NGESO checks the User Application**

3.2.4.1 NGESO shall appoint the NGESO Lead Person. The NGESO Lead Person shall check that the User Application is completed correctly. Where the User Application is not completed correctly or the correct fee is not received, the NGESO Lead Person shall inform the Applicant as soon as they determine that it is not correct. NGESO shall issue the Applicant with an invoice for the Application Fee. The fee is dealt with by NGESO and the TO(s) in accordance with STCP 19-6 Application Fees.

3.2.4.2 The NGESO Lead Person shall determine who is the Host TO Affected TO(s) and Other Affected TO(s).

3.2.4.3 The NGESO Lead Person shall utilise the information in the User Application to produce the relevant NGESO Construction Application as set out in Appendix B1, in accordance with the appropriate Schedule 5 or 6 of the STC, for each of the Affected Parties.

Where the User Application is in the vicinity of a boundary between TOs, such that either TO might be either the Host TO or an Affected TO, the NGESO Lead Person shall submit an NGESO Construction Application to each relevant TO in each capacity. For the avoidance of doubt, these mutually exclusive NGESO Construction Applications shall continue to be referred to in this STCP 18.1 as the NGESO Construction Application.

3.2.4.4 Within 3 Business Days of receipt of the User Application, the NGESO Lead Person shall send by email the relevant NGESO Construction Application(s) to the Host and/or Affected TO.

3.2.4.5 The NGESO Construction Application will be sent to the Affected Parties within 3 Business Days of receipt of the User Application, regardless of whether the User Application is effective or not, so that the TO(s) are aware a User Application has been received. Should any Party decide to undertake any work on the NGESO

Construction Application, before it is effective, then this will be at such Party's own risk.

3.2.4.6 An effective NGESO Construction Application is one that is technically effective and NGESO has informed the TO via email that the Application Fee has been cleared.

3.2.5 **Receipt of an NGESO Construction Application acknowledged by TO(s)**

3.2.5.1 Within 2 Business Days of receipt of the NGESO Construction Application, the Affected Parties shall acknowledge receipt of the NGESO Construction Application to the NGESO Lead Person by email.

3.2.6 **NGESO shall be informed as to whether the NGESO Construction Application is technically effective or not**

3.2.6.1 A technically non-effective User Application is one where all technical data has not been received.

3.2.6.2 Within 5 Business Days of receipt of the NGESO Construction Application, the Host TO and Affected TO(s) shall notify NGESO by email, as to whether the NGESO Construction Application is technically effective or not. Where the NGESO Construction Application is considered to be technically non-effective, then the Host TO and Affected TO(s) (as appropriate), shall e-mail to NGESO with detailed reasons as to why it considers it incomplete or unclear in a material respect and the amendments it considers are required to make it technically effective.

3.2.7 **Resolve technical non-effectiveness**

3.2.7.1 Where a NGESO Construction Application is technically non-effective as a consequence of the User Application being technically non-effective, the Host TO and Affected TO(s) (as appropriate) shall use reasonable endeavours to liaise and assist NGESO to resolve their elements of the technically non-effectiveness. In order to achieve this, NGESO may request the TO to resolve the technical non-effectiveness with the Applicant directly.

3.2.7.2 If the Applicant cannot submit the data (e.g. because data is not available for new technology) then the Lead Person(s) shall assess and advise the Parties whether it can progress the application or not and note/agree any assumptions made. If the NGESO Construction Application is to continue then alternative data may be requested from the Applicant.

3.2.7.3 If the Lead Person(s) assess that the NGESO Construction Application cannot progress without the missing technical data then the NGESO Construction Application will be put on hold as ineffective. If and when the missing technical data is supplied to NGESO then the process will recommence from **3.2.8**.

3.2.8 **NGESO is informed that the NGESO Construction Application is now technically effective**

3.2.8.1 On receipt of the missing/additional data from the Applicant, the NGESO Lead Person shall circulate the data to the Host TO and Affected TO(s) (as appropriate) Lead Person(s).

3.2.8.2 Within 3 Business Days of receipt of the missing/additional data, the Host TO and Affected TO(s) (as appropriate) Lead Person(s) shall confirm to the NGESO Lead Person by email whether their NGESO Construction Application is now technically effective. If the NGESO Construction Application is still not technically effective then the process returns to 3.2.6 otherwise proceed to 3.2.9.

3.2.9 **NGESO confirms Clock Start Date**

3.2.9.1 Once the NGESO Application is technically effective and the Application Fee has cleared, the NGESO Lead Person shall email confirmation of the Clock Start Date to

each Affected Party. Such email confirmation will also advise as to the date when NGESO need to issue an Offer to the Applicant.

3.2.10 **Construction Planning Assumptions**

3.2.10.1 The Host TO and/or Affected TO(s) will base their TO Construction Offer on the Construction Planning Assumptions most recently provided by NGESO.

3.2.10.2 The TO Construction Offer provided by The Host TO and/or Affected TO(s) will reference the Construction Planning Assumption that such TO Construction Offer has been based on.

3.2.10.3 NGESO may change, or Affected Parties may request a change to, the Construction Planning Assumptions (see 3.3.7).

3.2.11 **Affected Parties confirm their intention to submit a TO Construction Offer**

3.2.11.1 Each Affected Party shall confirm to NGESO within 21 calendar days of the Clock Start Date if it does not intend to submit a TO Construction Offer.

3.2.11.2 Where an Affected Party notifies NGESO that it will not be submitting a TO Construction Offer it shall at the same time also notify NGESO of any technical design or operational criteria which that Party intends, in planning and developing its Transmission System, to assume will apply to User Equipment at the Relevant Connection Site. That Party shall then follow this procedure from 3.2.21.

3.2.11.3 Where an Affected Party will be submitting a TO Construction Offer then it shall continue to follow this procedure.

3.2.12 **NGESO and Affected Parties create NETS models**

3.2.12.1 NGESO and the Affected Parties shall, where required for an application each take the Construction Planning Assumptions provided by NGESO together with the relevant network models and create a series of consistent NETS models in accordance with STCP22-1 Production of Models for NETS System Planning.

3.2.13 **Affected Parties assess the impact of the NGESO Construction Application**

3.2.13.1 The Affected Parties shall assess the impact of the NGESO Construction Application on their respective networks. The Affected Parties shall carry out the assessment in accordance with the Application Programme.

3.2.13.2 The Affected Parties shall discuss and agree Connection/infrastructure solutions as appropriate. NGESO shall be included (as appropriate) in any discussions between the Affected Parties.

3.2.13.3 The Affected Parties shall liaise with NGESO to co-ordinate indicative Outages, in accordance with STCP 11-1 Outage Planning.

3.2.13.4 Where an Affected Party is aware of potential interactivity on any application, they will, where possible, inform NGESO of which application is affected with an indication of which other TO Construction Offer(s) and/or application(s) it may be interactive with, as early as possible in the application process.

3.2.14 **Preferred Connection option (and any alternatives) and infrastructure works submitted by the TO(s)**

3.2.14.1 Each Affected Party shall submit by email to NGESO, their view of the best Connection option(s) and infrastructure works (in the CION pro forma for offshore projects). Timescales of the submission is to be in line with the agreed Application Programme. As outlined in Grid Code PC.A.7 the NGESO may request additional

information that is reasonably required to represent the performance of the User's plant and apparatus.

3.2.14.2 The preferred options and any alternative options are compiled by the Lead Person(s) - this may be at a meeting to discuss the User Application and options.

3.2.14.3 For offshore projects, following compilation by the Lead Person(s) of the preferred options and any alternative options, each Affected Party shall update the CION pro-forma where necessary and email NGESO for offshore projects.

3.2.15 **NGESO carries out economic impact assessment (for connections offshore)**

3.2.15.1 NGESO shall carry out an economic impact assessment of the Connection, associated infrastructure (as provided by the Affected Parties), the construction Outage programme and ongoing operation of the National Electricity Transmission System, in accordance with the timescales set out in the Application Programme. The output of the economic impact assessment carried out by NGESO shall include:

- the calculation of constraint costs during the construction phase, based on the Outage information provided in the Affected Parties initial investment plans; and
- an estimate of enduring constraint costs, based on average circuit unavailability.
- a lifetime cost benefit analysis which takes into account both the capital cost of TO connection options as well as their associated operational costs

3.2.15.2 The result of the economic impact assessment shall be recorded by NGESO in the Connections and Infrastructure Options Note and will identify:

- the most economic and efficient connection option and implicit connection works
- associated risks and issues

3.2.15.3 Where appropriate, the narrative on the results may suggest changes to Outage timing to minimise constraint costs whilst still achieving completion dates.

3.2.15.4 NGESO shall notify the Affected Parties by email, that the results of the economic impact assessment have been recorded in the Connections and Infrastructure Options Note.

3.2.16 **Meeting of Lead Person(s)**

3.2.16.1 The NGESO Lead Person and Affected Parties' Lead Person may meet at any time, if they so wish, to discuss the Application Programme.

3.2.16.2 The Lead Person(s) shall agree and advise the proposed Connection and infrastructure option to be progressed and decide whether any further analysis is required. This may be at a meeting of the Lead Person(s).

3.2.16.3 As a result of NGESO's economic impact assessment, an Affected Party may choose to re-evaluate its connection and infrastructure design proposals. In such a case the steps detailed in steps 3.2.14 to 3.2.15 inclusive will be repeated. This will involve the Affected Parties resubmitting their Connection and Infrastructure Option Note, for NGESO to carry out an economic impact assessment. The Lead Person(s) may need to meet to confirm the option.

3.2.16.4 The selected option shall be confirmed by the Lead Person(s) and each Affected Party shall update its Connections and Infrastructure Options Note Section. The

Affected Parties shall notify the NGESO Lead Person that this has been done in accordance with the Application Programme.

3.2.16.5 The non-preferred options for offshore projects shall be summarised within the CION pro forma with the reasons for their non-selection explained for audit and reference in the event of subsequent challenge.

3.2.17 **Affected Parties develop detailed Connection and infrastructure proposals**

3.2.17.1 The Affected Parties for offshore projects shall work up the connection and infrastructure design proposals in further detail for the preferred option. Each Affected Party shall update its Connections and Infrastructure Options Note with the detailed connection and infrastructure design and email its CION to the NGESO Lead Person.

3.2.17.2 As part of the detailed connection and infrastructure design, the Affected Parties shall develop their designs in accordance with relevant standards and the interface equipment specification in Appendix C. The interface equipment specification covers the requirements for the provision of interface equipment at Connection Sites. It provides minimum agreed specifications for new plant and apparatus at Connection Sites or new embedded generation to be included in the TO Construction Offer.

3.2.17.3 The TO may include, but shall not be limited in including, in a TO Construction Offer, provision as appropriate for the following schedules within the interface equipment specification:

- Schedule A Telecommunication Equipment; and
- Schedule B SCADA Data.

3.2.17.4 During the application process NGESO shall discuss with the TO any requirements NGESO may have for additional communications infrastructure so that delivery by the TO can be optimised.

3.2.17.5 When changes are made to the relevant standards and interface equipment specification schedules, they shall not normally be retrospectively applicable unless otherwise agreed between the Parties.

3.2.18 **Charging information required from Host TO**

3.2.18.1 The Affected Parties shall be required to include in the TO Construction Offer to NGESO, the following information:

- The Host TO shall provide a one off charge associated with the One Off Works, calculated in accordance with the TO Charging Statement.
- If the Applicant has requested to make a capital contribution for the Transmission Connection Assets, then the Host TO shall calculate a capital contribution, in accordance with the TO Charging Statement.
- If an Applicant has specified a fixed price Connection Charge, then the GAV for the Transmission Connection Assets above shall be based on the estimated cost plus a risk margin.
- For each Transmission Connection Asset, the Host TO shall provide the information set out in Appendix B5.
- Where requested by NGESO, The Host TO shall provide a cost breakdown of the Transmission Connection Assets.

3.2.19 **NGESO and Affected Parties liaise to agree indicative Outages for construction**

3.2.19.1 NGESO and Affected Parties shall liaise to agree the feasibility of the indicative Outages to facilitate the completion of the TO Construction Offer. NGESO confirms the Outages to the Affected Parties.

3.2.20 **NGESO Receives TO Construction Offer**

3.2.20.1 The Affected Parties' Lead Person(s) shall submit their respective draft TO Construction Offers to the NGESO Lead Person within 2 months of the Clock Start Date by e-mail. The draft TO Construction Offers may exclude the Charging information.

3.2.20.2 Where it is possible to do so, the Affected Parties' Lead Person(s) will issue the draft TO Construction Offer in advance of the 2 months timescale in order to provide the ESO with an opportunity to provide the Offer to the Applicant in a more efficient manner.

3.2.20.3 The Affected Parties' Lead Person(s) shall submit their respective final TO Construction Offers to the NGESO Lead Person within 2 months + 14 calendar days of the Clock Start Date by e-mail. The TO Construction Offer will be open for acceptance for a minimum of six months from the NGESO Application Date, unless an application for extension is agreed with the Authority.

3.2.20.4 Where it is possible to do so, the Affected Parties' Lead Person(s) will issue the final TO Construction Offer in advance of the 2 months + 14 days timescale in order to provide the ESO with an opportunity to provide the Offer to the Applicant in a more efficient manner.

3.2.20.5 The TO Construction Offer(s) may, where it is necessary to carry out additional extensive system studies to evaluate more fully the impact of the NGESO Construction Application, indicate the areas that require more detailed analysis. NGESO shall advise by email whether it wishes the Affected Parties to make a revised TO Construction Offer within the STC timescales, or such other timescales agreed by the Authority. Where NGESO does wish the Affected Parties to vary their TO Construction Offer(s), NGESO shall provide necessary detailed planning data requested by the Affected Parties, to enable the Affected Parties to carry out the detailed system studies.

3.2.20.6 Where a TO Construction Offer is interactive, the Affected Parties will notify NGESO which other TO Construction Offer(s) it is interactive with. NGESO will advise the affected parties whether a reduction to the acceptance period is required for the interactive TO Construction Offer(s).

3.2.20.7 Where an acceptance of a Conditional Interactive offer(s) does not conclude in being successful in the interactivity process, NGESO will notify the Affected Parties and proceed to 3.2.9.

3.2.21 **Post Offer negotiation**

3.2.21.1 If the Applicant requests clarification on certain aspects of the Offer or requests a meeting to clarify certain aspects of the Offer, NGESO and the Affected Parties shall provide all reasonable assistance to answer any queries raised by the Applicant. NGESO and the Affected Parties shall accommodate a request for a meeting at the convenience of all relevant parties.

3.2.21.2 If the Applicant requests an extension to the 3 months offer acceptance period for additional time to consider the Offer, NGESO shall reasonably consider the request. If the request for extension is considered reasonable by NGESO, NGESO shall ask the Affected Parties if they will extend their TO Construction Offer(s). NGESO will request agreement in writing from the Affected Parties, to the extension, and request confirmation that there is no change to the Affected Parties' TO Construction Offer(s) to NGESO if it is to agree such matters with the Applicant. If this agreement/confirmation has been received, the NGESO Lead Person shall inform

the Applicant that the offer acceptance period has been extended, and email the appropriate Affected Party.

3.2.21.3 Should the Applicant require a change to the Offer or the extension of the offer acceptance period gives rise to a change in the Offer, NGESO and the Affected Parties shall use reasonable endeavours to agree whether this is a material change leading to a new User Application or not. Where a new User Application is not required, NGESO and the Affected Parties shall agree the process and timescales for agreeing a change to the terms of the original TO Construction Offer. NGESO shall advise the Applicant of the timescales for the revised Offer or whether a new User Application is required.

3.2.21.4 Where NGESO receives an acceptance of an Unconditional Interactive offer(s), NGESO will liaise with the Affected Parties to confirm whether the other Conditional Interactive offer(s) are either still valid, should lapse or require new clock starts.

3.2.22 **Applicant signs Offer**

3.2.22.1 When signed Agreements are returned from the Applicant, NGESO shall then sign the TO Construction Offer(s) from the Affected Parties and return them to the Affected Parties.

3.2.22.2 On signing the TO Construction Offer(s), NGESO shall notify all Affected Parties of any resultant updates to the network model within the Affected Parties' Boundary of Influence. NGESO shall agree Site Location Codes for use in Network Models with the TOs.

3.2.22.3 The Affected Parties shall issue Project Listing Documents, in accordance with STCP16-1 Investment Planning, and revised datasets, in accordance with STCP22-1 Production of Models for NETS System Planning, within 3 months of acceptance of the TO Construction Offers or as agreed.

3.2.23 **Applicant requests a modification to the signed Agreements**

3.2.23.1 Where an Applicant requests a change to their signed agreement for a New Connection or for a Modification, then the process is followed from step 3.2.22.3 onwards where appropriate.

3.2.24 **Post Offshore Tender Process variation to signed Agreements (not applicable to Generator-Build Projects**

3.2.26.1 Where the Tender Process operated by the Authority to appoint an Offshore TO for a project results in changes to the design, scope of works or programme for their completion such that the newly appointed Offshore TO is required to issue a TO Construction Offer to NGESO, this will trigger the Modification Process, which will be followed from step 3.2.1 above as appropriate.

3.2.26.2 Any such Modification Process shall be undertaken against the Construction Planning Assumptions against which the original Stage 1 agreement was assessed, as may have been updated from time to time since that agreement in line with this process.

3.2.26.3 Where an increase in TEC has been requested, the modification process will be assessed against a new set of Construction Planning Assumptions, if applicable.

3.3 Subsidiary Processes

3.3.1 **Working Under Indemnities – TO Initiated**

3.3.1.1 If the TO(s) identify a requirement for working under an indemnity, the TO shall submit a proposal to NGESO. The proposal shall be in the form of a template (see Appendix B3), or in a form agreed between the TO and NGESO and include the detail of work to be undertaken, objectives, alternative dates for completion, estimated value and duration of indemnity, and the latest date by which the indemnity

needs to be signed to meet the proposal terms. A request for an indemnity may also be identified by NGESO or the Applicant. In these cases the process will continue from step 3.3.2.1 or 3.3.3.1.

3.3.1.2 NGESO shall reasonably consider the TO(s) proposal, liaising with the Lead Person if appropriate, and decide if it wishes to pursue working under an indemnity. If NGESO decides not to pursue working under indemnity then no working under indemnity process shall take place.

3.3.1.3 NGESO shall discuss the options with the Applicant and continue the process if they wish to pursue the possibility of working under indemnity. Otherwise no working under indemnity process shall take place.

3.3.2 **Working Under Indemnities – NGESO Initiated**

3.3.2.1 Where NGESO considers that working under an indemnity is required, NGESO shall request an TO/NGESO Indemnity Offer from the TO for work to be carried out under an indemnity. The request will include the TO/NGESO Indemnity Proposal together with, where appropriate, details of the works to be carried out, period of indemnity cover and any special terms applicable.

3.3.2.2 The TO(s) shall submit its TO/NGESO Indemnity Offer to NGESO within 10 Business Days unless otherwise agreed, on receipt of the request for an TO/NGESO Indemnity Offer. The TO/NGESO Indemnity Offer should cover the period, value and nature of works to be undertaken, and the date by which the TO/NGESO Indemnity Agreement shall be signed in order to achieve its objectives.

3.3.2.3 NGESO shall send the Indemnity Agreement to the Applicant.

3.3.2.4 Upon the Applicant signing their Indemnity Agreement, NGESO shall accept and send the TO/NGESO Indemnity Agreement to the TO(s).

3.3.2.5 If specified in the TO/NGESO Indemnity Agreement, by the 10th of each month, the TO(s) shall submit a status report to NGESO in respect of any works being carried out under indemnity (see Appendix B4). This report should contain:

- NGESO scheme number;
- Site;
- brief description;
- indemnity value and validity period;
- liability to the end of the previous month; and
- forecast liability to the end of the indemnity period.

3.3.2.6 NGESO shall assess the report and contact the TO(s) with any queries if necessary.

3.3.2.7 The TO(s) shall respond to NGESO's queries within 5 Business Days, unless otherwise agreed.

3.3.2.8 NGESO may request that the TO(s) extend the term and value of the TO/NGESO Indemnity Agreement. Proceed to section 3.3.2.2 above.

3.3.2.9 If specified in the TO/NGESO Indemnity Agreement, at any time prior to the signing of the TO Construction Offer, NGESO may instruct in writing the TO(s) to cease working under the TO/NGESO Indemnity Agreement. The TO will then cease to work as soon as it is reasonably practicable and safe to do so and shall not incur any further costs.

3.3.2.10 Where the TO Construction Offer has not been accepted by the expiry of the TO Construction Offer validity period**,** or upon instruction from NGESO to cease work under the TO/NGESO Indemnity Agreement, the TO(s) shall invoice NGESO in accordance with the terms of the TO/NGESO Indemnity Agreement for all work up to

the indemnity validity period or until the TO(s) stopped work following an instruction from NGESO.

3.3.2.11 NGESO shall pay the invoice in accordance with STCP13-1 Invoice and Payments ad hoc payments.

3.3.3 Working Under Indemnities – Offshore Generators

3.3.3.1 Where an Applicant is an Offshore generator who falls within the requirements of the Offshore Transmission regime, works triggered by the project will not normally be progressed until such time as the project has been through the Tender Process, an Offshore Transmission Owner has been appointed, and the Agreements with the User varied as necessary to reflect the results of the Tender Process. However, it is open to the Applicant to request progression of the works identified in its Stage 1 Agreements under indemnity.

3.3.3.2 In the event that the Applicant wishes to progress its works in this way, then NGESO shall submit an NGESO Indemnity Request as detailed in 3.3.2.1 above, and the process shall be followed from there.

3.3.3.3 NGESO shall ensure that the costs identified by the TOs in response to the NGESO Indemnity Request are appropriately secured by the Applicant throughout the validity of the Indemnity.

3.3.4 Requests for extension to application process timescale

3.3.4.1 NGESO may request from the Authority an extension in timescales for providing an Offer to an Applicant under its Transmission Licence. The STC allows NGESO to agree alternative timescales for the provision of a TO Construction Offer from a TO.

3.3.4.2 A TO may request from the Authority an extension in timescales for providing a TO Construction Offer under its Transmission Licence. Where a TO has been granted an extension by the Authority, NGESO may need to separately request an extension in timescales for providing an Offer to an Applicant under its Transmission Licence.

3.3.4.3 It may be necessary at any stage of the application process for an extension to the application timescales to be considered. Where a Party identifies the need for an extension in timescales then this shall initially be discussed by the Lead Person(s) . If the Lead Person(s) agrees that there is a need for an extension, NGESO shall submit an application to the Authority for an extension in timescales. The Affected Parties shall provide any relevant information reasonably requested by NGESO to enable NGESO to make a timely submission for such an extension to the application timescales.

3.3.4.4 Where a Party requires an extension to its timescales and the Lead Person(s) does not agree then that Party may submit such a request to the Authority. Any Party submitting such a request to the Authority shall inform (as appropriate) NGESO and the other Affected Parties of the request. NGESO may need to separately submit a request to the Authority for an extension to its application timescales. The Affected Party shall provide any relevant information requested by NGESO to enable NGESO to make a timely submission for such an extension to its application timescales.

3.3.4.5 NGESO and the Affected Parties shall work to the agreed Application Programme, unless notified by the Party making the request that the Authority has granted an extension to its application timescales. If an extension to the application timescales is granted, the Parties shall discuss the Application Programme and the NGESO Lead Person shall update the Scheme Briefing Notes as necessary and email the appropriate updated Scheme Briefing Note to each Affected Party.

3.3.5 Amendments to the User Application by Applicant

3.3.5.1 If details of the User Application change after the User Application has been submitted, then NGESO and the Affected Parties shall assess what impact this will have on the ability of Affected Parties to make the TO Construction Offer to NGESO in the required timescales. NGESO shall then advise the Applicant whether the changes are likely to have a Material Impact on NGESO's planned Offer in terms of

Connection/Modification to the National Electricity Transmission System, and whether the timescales need to be revised as a result of the amendment.

3.3.5.2 If the change will not have a Material Impact on the Affected Parties' ability to make their TO Construction Offer to NGESO, and subsequently NGESO's ability to make the Offer to the Applicant in the required timescales, then NGESO and Affected Parties shall proceed to make their respective Offer and TO Construction Offer of terms as planned.

3.3.5.3 If the change is to have a Material Impact on the TO's ability to make its TO Construction Offer to NGESO and/or NGESO's subsequent ability to make the Offer to the Applicant in the required timescales, then the relevant Parties have the choice of:

- requesting an extension of time from the Authority (using the process set out in 3.3.4); or
- requesting the Applicant to withdraw the original User Application and submit a new User Application with the new details.

3.3.6 **User Applications following a Modification Notification**

3.3.6.1 User Applications may also be received following a Modification Notification to the Applicant by NGESO, which may in turn have been prompted by a TO's transmission investment plan (SCTP 16-1 Investment Planning refers). In such cases, no Application Fee applies (Appendix D3 refers to Modifications Proposed by NGESO).

3.3.7 **Modifications to Construction Planning Assumptions**

3.3.7.1 **NGESO initiated modifications to Construction Planning Assumptions prior to issue of the Offer to the Applicant**

3.3.7.1.1 At any time after providing the TO(s) with the Construction Planning Assumptions and prior to receipt of the TO Construction Offer, NGESO may decide to change the Construction Planning Assumptions.

3.3.7.1.2 NGESO may decide to convene a meeting of the Lead Person(s) to discuss the revision of the Construction Planning Assumptions giving Affected Parties reasonable notice in writing.

3.3.7.1.3 NGESO shall provide the revised Construction Planning Assumptions and request confirmation from the TO that the TO will meet the Application Programme. This may be at the meeting of the Lead Person(s) convened in 3.3.7.1.2.

3.3.7.1.4 The Affected Parties shall either confirm the Application Programme timescales or request a revision to the Application Programme. Where a requested revision to the Application Programme requires an extension to the application timescales then the process under 3.3.4 will be followed.

3.3.7.2 ~~–~~**TO initiated modifications to Construction Planning Assumptions prior to issue of the Offer to the Applicant**

3.3.7.2.1 At any time prior to issuing its TO Construction Offer, the TO may make a request to NGESO to change the Construction Planning Assumptions such request shall include reasons for the request.

3.3.7.2.2 NGESO may decide to convene a meeting of the Lead Person(s) to discuss the request for revision of the Construction Planning Assumptions giving Affected Parties reasonable notice in writing.

3.3.7.2.3 NGESO shall consider whether or not and, where relevant, how it intends to address the request and notify the TO and any other TO materially affected by the requested change. Where relevant NGESO shall issue revised Construction Planning Assumptions and request confirmation from the TO that the TO will meet the Application Programme. This may be at the meeting of the Lead Person(s) convened in 3.3.7.2.2.

3.3.7.2.4 The Affected Parties shall either confirm the Application Programme timescales or request a revision to the Application Programme. Where a requested revision to the

Application Programme requires an extension to the application timescales then the process under 3.3.4 will be followed.

3.3.7.2.5 Notwithstanding any request submitted by the TO each Affected Party shall continue to take into account the Construction Planning Assumptions provided by NGESO.

3.3.7.3 **NGESO initiated modifications to Construction Planning Assumptions after issue of the Offer**

3.3.7.3.1 At any time after issuing of the Offer to the Applicant and prior to acceptance of the TO Construction Offer or the lapsing of the TO Construction Offer, NGESO may decide to change the Construction Planning Assumptions e.g. due to an interactive offer being accepted, a disconnection, a TEC increase etc.

3.3.7.3.2 In such circumstances, NGESO shall convene a meeting of the Lead Person(s) to discuss the revision of the Construction Planning Assumptions and a programme for a revised TO Construction Offer.

3.3.7.3.3 NGESO shall provide to each Affected Party the revised Construction Planning Assumptions and a new Scheme Briefing Note setting out the revised Application Programme.

3.3.7.4 **TO initiated modifications to Construction Planning Assumptions after issue of the Offer by NGESO**

3.3.7.4.1 At any time after issuing the Offer to the Applicant and prior to the acceptance or lapse of the TO Construction Offer, the TO may make a request to NGESO to change the Construction Planning Assumptions such request shall include reasons for the request.

3.3.7.4.2 NGESO may decide to convene a meeting of the Lead Person(s) to discuss the request for revision of the Construction Planning Assumptions.

3.3.7.4.3 NGESO shall consider whether or not and, where relevant, how it intends to address the request and notify the TO and any other TO materially affected by the requested change.

3.3.7.4.4 Where NGESO decides to revise the Construction Planning Assumptions, NGESO shall convene a meeting of the Lead Person(s) to discuss the revision of the Construction Planning Assumptions and a programme for a revised TO Construction Offer.

3.3.7.4.5 NGESO shall provide the revised Construction Planning Assumptions and a new Scheme Briefing Note setting out the revised Application Programme.

3.3.8 **Withdrawal of a User Application by the Applicant**

3.3.8.1 Where an Applicant withdraws their User Application, NGESO shall email the Affected Parties within 2 Business Days.

3.3.9 **Additional Documentary Evidence to support the Applicant**

When requested to do so, NGESO shall produce a summary document, describing why a particular option was pursued, and why, typically, 1-4 others were not, for internal consumption by the developer/TOs involved. If the document is intended for release into the public domain or a more detailed document, NGESO may request additional funding to cover legal review and/or additional costs incurred.

3.3.10 **Allocation of Temporary and Final BMU Names**

3.3.10.1 Once an applicant has signed a connection agreement, NGESO shall create a unique Temporary BMU ID in the Generator Lookup Table in accordance with STCP22-1 Production of Models for GB System Planning.

3.3.10.2 The Final BMU ID shall be agreed between NGESO and ELEXON in accordance with BSCP15 BM Unit Registration.

Modifications to Construction Planning Assumptions
External
SO
TO
SO initiated mod prior to issue of Offer to Applicant
SO change Construction Planning Assumptions
IS Lead Person(s) meeting req'd?
Yes
No
Advise Affected Parties of meeting of Lead Person(s) Group
Receive notice of Lead Person(s)meeting
Lead Person(s) discuss the request for revision of Construction Planning Assumptions
Revise Construction Planning Assumption and request confirmation from TO that the TO will meet the Application Programme
Receive revised Construction Planning Assumptions
Does Application Programme need revising?
No
Yes
Confirm Application Programme timescales
Receive confirmation
Request a revision to the Application Programme
Go to N

Appendix B: Standard Forms/Certificates

B1. NGESO Construction Application

B2. Connections and Infrastructure Options Note

B3. **TO/NGESO Indemnity Proposal**

B4. Indemnity Status Report

B5. **Charging Information Requirements**

B6. **Other Charging Information Requirements**

Appendix B1: NGESO Construction Application

SBN

Data Required	Data Format [Where appropriate]
Application Type	
CCM Name	
CCM Telephone Number	
Host TO	
Affected TO	
User	
User's Registered Address	
User's Registered Company Number	
Developer Name & Address	
Site Name	
Connection Site/GSP	
Point Of Connection Co-ordinates	
POC Connection Voltage	
Site coordinates (if different)	
Consents Status (Date if Consented)	
User Application Date received by NGET	
Date Application emailed to TO(s)	
Application Fee Type	
Level of Application Fee	
Application Fee received	
Overview of the Application	
Is the User considering building any assets that would be identified as Transmission Connection Assets?	
Details of the intended legal estate in the Connection Site in so far as NGET is aware.	
Occupier of the Connection Site in so far as NGET is aware	
Where a substation may be needed, User's suggested location for it, giving dimensions of the area.	
Is space available on the Connection Site for working storage and accommodation areas for the Transmission Owner contractors? If so, indicate location and approximate dimension of such areas.	

Details (including copies of any surveys or reports) of the physical nature of any additional land in which the User has an interest at the Connection Site including the nature of the ground and the sub-soil	
Details of any existing restrictions for access to or use of the Connection Site for the purposes of installing, maintaining and operating the User's Plant and Apparatus	
Does User wish to partipate in BM	
If New Connection Site is located in Offshore waters, earliest date for entry of this project into the Offshore Tender \Process (if no date is provided it will be assumed to be for entry into the first Offshore Tender Process following acceptance of the Offer)	
If New Connection Site is located in Offshore waters, please indicate if any of the following items are included alongside the application: * Feasibility Studies * Crown Estate Lease * Identified sub-sea cable routes * Identified cable landing points * Other (please specify)	
Connection Entry Capacity	
Transmission Entry Capacity	
Demand (If applicable)	
Connection Security Requested	
Planning Application Submitted	
Planning Consent Awarded	
Plant Ordered (i.e. Power Station or substation)	
Construction Started (site mobilisation)	
Construction Completed	
Requested Completion Date	
Connection Charging Payment Options	
Standard Planning Data included?	
Copy of User's Safety Rules	

Please delete or type over any red text, which is guidance on how to fill in this document.

Appendix B2 – Offshore Connections and Infrastructure Options Note

Connection and Infrastructure Options Note

User	Insert Developer's name			
Site Name	Insert site name			
Application Steering Group Members (Add / Delete As Applicable)	**NGESO as SO**	NGESO	**Lead details** Name: Contact No: Email:	
	Host TO	None	**Lead details** Name: Contact No: Email:	
	Affected TO 1	None	**Lead details** Name: Contact No: Email:	
	Affected TO 2	None	**Lead details** Name: Contact No: Email:	Add additional rows as required
Application Type	New Generation Connection Application			
Overview of the application (Short description of the application)	Provide a short description of the connection using information provided within the customer connection application; ▪ Capacity of the connection (CEC, TEC) ▪ Type of generation ▪ Coordinates of generation site ▪ Ownership boundary ▪ Connection date requested ▪ Whether customer has requested a NETS SQSS design variation ▪ If this is an offshore connection and thus whether the Applicant is undertaking an OTSDUW Build			

Revision Number	Date of Revision	Reason for Revision	Revised by
001	Day/Month/Year	First Draft	Person 1 **(NGESO)**
002	Day/Month/Year	Final V1.0: Issued with Grid Connection offer	Person 1 **(NGESO)**

Notes for Completion:

1. *Please complete the tables above when the document is first used for a scheme and when any subsequent revisions are made to any of the information in the live document.*

2. *Please insert the site name and document version number in the header.*

3. *This page should be retained throughout the life of the document and remain with the final version.*

4 CION Executive Summary

In this section, provide an overall summary of the CION highlighting what the preferred Connection and Infrastructure option is and how it has been selected.

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5 Purpose of CION

The aim of this document is to provide a record of the assessment undertaken in considering the connection of [Insert project name] to the National Electricity Transmission System. The document facilitates an appraisal of a variety of options and identifies the preferred onshore connection points and offshore transmission network configuration.

The Connection and Infrastructure Options Note (CION) has been developed as a means to initially make a representative Connection Offer to an applicant and subsequently develop the most economic and efficient design option. The purpose of the CION is;

- To provide a joint process to centrally record decisions and design rationale from the technical, commercial, regulatory, environmental, and socio-economic aspects of a project as it progresses
- To document the clear reasoning why a specific design option has been chosen
- To provide visibility of the decision making process and to record the underlying assumptions

As part of the economic assessment, the CION will consider the total life cost – assessing both the capital and projected operational costs (over a project's lifetime) to determine the overall economic and efficient design option.

The CION supports the initial customer connection offer and is issued together with the customer offer - **it is however a working document and is subject to periodic review until a final preferred design solution is reached.**

Following the initial customer connection offer, all the parties undertake more detailed assessments which take into account (but are not limited to) deliverability, construction complexity, land issues, consents, technology, costs, and Environmental issues. These detailed assessments will either reconfirm the initial preferred design option or trigger the need for a modification application. Also, these assessments will feed directly into an Interface Selection Report which is used to support planning applications.

Further development of the costs, updates in technology and the commercial frameworks will continue to be edited into the CION as existing and alternative options are further explored. It is customary that once the preferred design option (i.e. the most economic and efficient) is reached this document will be finalised and signed-off by all Steering Group Members.

6 Overview of Options Appraisal Process

The appraisal process assists the assessment of the optimal way to connect [Insert project name]. This process enables NGESO and the Affected Parties to identify and balance technical, environmental and cost considerations in selecting options, while also documenting the information on which judgements have been based. The options appraisal process is carried out in three stages and decisions are made based on the best available information at the time. A description of the appraisal process is given below and identifies the respective filters applied at each stage:

Stage 1 captures the onshore TO's assessment of the potential locations for connecting the generation. As part of the initial connection application process, technical, environmental and benefit filters are applied to narrow the onshore interface sites; options are assessed against distance from the generation site, the extent of onshore reinforcements, NETS SQSS compliance, technical limitations and high level environmental issues. At this stage, options can be Discounted, Parked or Taken Forward. Within the subsequent iterations of the CION, the onshore TOs will undertake more detailed assessments of the options 'Taken Forward'. This detailed assessment will cover NETS SQSS

compliance, Deliverability, construction complexity, Land issues, Technology, Costs, and Environmental issues.

Stage 2 captures the offshore TO's assessment of various offshore transmission network design concepts to connect the generation to the onshore interface sites. Technical and benefit filters are applied to narrow the transmission network design concepts; options are assessed against chosen interface points for compliance with NETS SQSS, for various transmission technologies and network flexibility. Integrated options are also considered as part of the offshore design options. At this stage, options can be Discounted, Parked or Taken Forward. Within the subsequent iterations of the CION, the offshore TOs will undertake more detailed assessments of the options 'Taken Forward'. This detailed assessment will cover NETS SQSS compliance, Deliverability, construction complexity, Land issues, Offshore consents, Technology, Costs, and Environmental issues.

At **Stage 3**, the shortlisted options from Stage 1 & 2 are appraised in more detail to determine the most economic and efficient solution and therefore identify the preferred option. Shortlisted options are economically assessed by taking into account the capital costs and operational costs with major risks highlighted. The offshore TO costs used in the economic assessment are initially based on published costs within the National Grid Electricity Ten Year statement; however, these are subsequently revised by the relevant parties in subsequent CION revisions.

7 Common Assumptions for Options

[Expand as appropriate]

The following assumptions are common across all listed options within this document and are agreed as of [Insert date].

- Onshore and offshore cable routes are estimated and have been chosen to avoid known constraints, e.g. existing wind farms in the area. Cable routes may be subject to revision following detailed survey works.
- There remains significant uncertainty around some costs, particularly HVDC converter station costs and of offshore cable installation. All costs used are estimated from past projects and market intelligence at the time of writing.
- Onshore converter station to be located near to MITS substation.
- Cable parameters are estimated on a set of generic assumptions. May be subject to revision following detailed design works. [Please insert any cable assumptions made]
- Detailed dynamic reactive compliance studies have not been performed and the reactive compensation provided is simply indicative. The sizing of reactive compensation plant will be subject to detailed studies undertaken by the developer in line with Grid Code requirements.
- Harmonic studies have not been performed and at present no allowance has been made for harmonic filtering plant.
- Costs of cable sealing ends have not been included at this stage.
- Onshore works are based upon contracted generation background as of [Insert date]
- The changes in generation background are the following:
    - X terminated on Day/Month/Year
    - Y terminated on Day/Month/Year
- Environmental and consenting risks have been assessed qualitatively; no financial weighting has been applied.
- No consideration has been given to the lifetime cost of electrical losses in this analysis.
- Offshore turbine details and location of substations is based upon information within the grid connection application submitted by the Developer as of dd/mm/yy ref XXXXX
- No consideration in this analysis has been given to developer sunk costs with respect to the X connection option, or the impact repeating survey works would have on the deliverability of the project for Year.Day/Month/Year and accepted Day/Month/Year
- Electrical plant for the OFTO onshore substation has been costed as installed.
- The onshore costs are attributed only to [Insert project name]. Cost sharing with other generators was not taken into consideration
- Any further offshore assumptions and their implications may be listed here

8 SECTION 1 – Project Overview

Introduction

In this section provide an overview of the proposed project covering the following key pieces of information. Provide a historic background to the project where necessary;

- Location
- Type of project, e.g. offshore wind, interconnector, etc.
- Capacity
- Number of phases / platforms (if applicable)

9 SECTION 2 – Stage 1: Onshore TO Interface Points Appraisal

Onshore and Offshore Distances

In this section, provide the assumed onshore and offshore distances within the table provided. Include a geographical map showing the project location with reference to the onshore interface points under consideration.

MAP

Insert Map

Table 1: Summary of project distances

	Distance (km)		
Site	**Onshore**	**Offshore**	**Total distance**
SITE A 132kV			
SITE B 275kV			
SITE C 400kV			

Onshore TO Interface point appraisal Matrix

In this section, provide a summary of the appraisal of all the onshore connection points considered. Include descriptions of the connection, assumed landing points, technical limitations, assessment of required transmission works, and environmental issues. Provide an overall option appraisal together with a justification for the appraisal. The onshore TO should cost all the options **'taken forward'** and provide the capital cost to NGESO for the stage 3 economic assessment.

Connection Point	Connection Route Distance from XX to Interface point on GB MITS (km)[1]	Connection Issues and Technical Limitations (to include Thermal/Voltage/Stability/ Fault Level)	Onshore TO / DNO Transmission Works (Minimal/Local/ Moderate/Extensive)[2]	Environmental Issues	Overall Options Appraisal[3]
SITE A 132kV	[Insert distance from Table 1~~Table 1~~]	Describe any technical / connection issues	**Minimal / Local/Moderate / Extensive** (Delete as appropriate and include a short summary of the required works) E.g. ▪ A new substation is required ▪ New xxkm OHL	Provide high level summary of environmental issues where applicable	**Discounted / Parked / Taken Forward** (Delete as appropriate and include reasoning for the overall appraisal)
SITE B 275kV	[Insert distance]				
SITE C 400kV	[Insert distance]				

[1] Distances have been estimated using Google Earth; direct routes have been used with some high level engineering judgement.
[2] For guidance the Transmission Works are defined as: **Minimal** = limited to works to satisfy Chapter 2.6 of NETS SQSS (i.e. additional bay at a connection point); **Local** = requiring circuit uprating and compensation up to and including the next adjacent substation (in any direction); **Moderate** = requiring circuit reconfigurations, some reconductoring and compensation in local vicinity (i.e. up to 3 substations away); **Extensive** = new circuits or upgrading 275 kV to 400 kV or widespread re-conductoring and compensation.
[3] Definition of terms is included in Appendix A.

10 SECTION 3 – Stage 2: Offshore TO design concepts Appraisal

In this section, provide the variety of Offshore Transmission design concepts under consideration including the future OFTO network and onshore substations. Consider integrated design options. Include single line diagrams and apply technical and benefit filters to narrow the transmission network design concepts: assess options against compliance with NETS SQSS, cable technology and network flexibility. The Offshore TO should cost all the options **'taken forward'** and provide the capital cost to NGESO for the stage 3 economic assessment.

Option A – [Include short description]	
[Insert Single Line Diagram]	**Pros**: **Cons**: **Discounted / Parked / Taken Forward** (Delete as appropriate and include reasoning for the overall appraisal)
Option B – [Include short description]	
[Insert Single Line Diagram]	**Pros**: **Cons**: **Discounted / Parked / Taken Forward** (Delete as appropriate and include reasoning for the overall appraisal)
Option C – [Include short description]	
[Insert Single Line Diagram]	**Pros**: **Cons**: **Discounted / Parked / Taken Forward** (Delete as appropriate and include reasoning for the overall appraisal)

11 SECTION 4 – Stage 3: Overall economic and efficient options Appraisal

In this section, NGESO will combine the options taken forward from stage 1 and stage 2 to provide a list of options for economic assessment. NGESO will use the capital costs provided by the onshore and offshore TOs to assess the total cost of the options. The economic assessment will consider both the capital cost and operational cost associated with each option. Major risks associated with the options will also be highlighted.

Option	Summary	Major Risks	Capital Cost		Operational Cost[4]	Total Cost (£m)
			Onshore Network Costs (£m)	Offshore Network Costs (£m)	Constraint cost / Cost of Energy not supplied	
1	Provide a summary of the design option – connection point, technology, voltage	• Highlight any major risks – technological, environmental, regulatory				
2		•				
3		•				
4		•				
5		•				
6		•				
7	.	•				

[4] See Appendix C: Cost Benefit Analysis Methodology

12 SECTION 5 – The Preferred Option

This section aims to capture the reasoning behind the selection of the preferred option and to provide a record of any changes to the preferred option at any point and the rationale at the time for the change.

Current preferred option	Option name, e.g. Option 4 – Sensitivity 03
Brief Description	Brief description of the option design
Reasoning	Reasoning behind decision to select as the preferred option
Preferred option within initial connection offer	Preferred option at the initial connection offer acceptance
Reason for change (if applicable)	Brief description of the reason of change of preferred option from connection offer acceptance to now, i.e. what assumptions have changed to make a different option preferred
Previous preferred option (if applicable)	Any other options which were preferred options, CION version & date when investigated and reasons for change

This section provides the details of the preferred option including onshore and offshore works, single line diagrams and any risks and outage requirements.

Option X – [Insert short description, connection point] **(Preferred Option)**		
Offshore Works (completed by Relevant TO/OTSDUW))	**Description of Works** (Detailed description of the works)	**Offshore Works:**
	Cost	[Insert cost breakdown for the offshore TO works] Cables – £m Onshore Substation – £m Offshore Platform – £m TOTAL – £m
	Completion Date	Assumed to be completed prior to connection date
	Issues, Risks & Comments	TBC
	Outage Requirements	
Onshore Works (completed by Affected TO)	**Description of Works** (Detailed description of the works)	**Onshore Works:**
	Cost	[Insert total cost of onshore TO works] TOTAL - £m
	Completion Date	[Insert completion date from contract]
	Issues, Risks & Comments	[Insert any potential issues which may impact on the delivery of the work]
	Outage Requirements	[Insert comment on outage programme required for works to be completed]

Option X – [Insert short description, connection point] **(Preferred Option)**	
Single Line Diagram	[Insert single line diagram]

13 SECTION 6 – Alternative Options

This section provides the details of the alternative options which have **NOT** been taken forward following the stage 3 assessment. It describes the onshore and offshore works, single line diagrams and any risks and outage requirements.

Option X – [Insert short description, connection point]		
Offshore Works (completed by Relevant TO/OTSDUW))	**Description of Works** (Detailed description of the works)	**Offshore Works:**
	Cost	[Insert cost breakdown for the offshore TO works] Cables – £m Onshore Substation – £m Offshore Platform – £m TOTAL – £m
	Completion Date	TBC
	Issues, Risks & Comments	TBC
	Outage Requirements	
Onshore Works (completed by Affected TO)	**Description of Works** (Detailed description of the works)	**Onshore Works**
	Cost	[Insert total cost of onshore TO works] TOTAL - £m
	Completion Date	TBC
	Issues, Risks & Comments	
	Outage Requirements	

Option X – [Insert short description, connection point]	
Single Line Diagram	[Insert single line diagram]

14 Appendix A – Glossary of Terms

Discounted: An option can be discounted after it has been demonstrated sufficiently that it is not technically feasible to implement.

Parked: An option can be parked when it is demonstrated sufficiently that it does not provide additional benefit in comparison to all other options as part of the 'benefit filter'. It can however be revisited and re-appraised again should circumstances change.

Preferred: An option is categorised as preferred when it is demonstrated to be the most optimal design (i.e. Economic, efficient & coordinated) considering all criteria (i.e. Technical, Cost, Environmental & Deliverability).

Taken Forward: Means that an option is being progressed for economic assessment

Within the Stage 1 onshore assessment, Transmission Works levels were defined as follows;

Minimal = limited to works to satisfy Chapter 2.6 of NETS SQSS (i.e. additional bay at a connection point);

Local = requiring circuit uprating and compensation up to and including the next adjacent substation (in any direction);

Moderate = requiring circuit reconfigurations, some reconductoring and compensation in local vicinity (i.e. up to 3 substations away);

Extensive = new circuits or upgrading 275 kV to 400 kV or widespread re-conductoring and compensation.

15 Appendix B– Unit Cost Assumptions

[Insert summary of unit cost assumptions]

16 Appendix C – Cost Benefit Analysis (CBA) methodology

[Insert specific cost benefit assumptions where appropriate]

As part of the economic assessment, NGESO will undertake a cost benefit analysis to account for the total life cost of the options. As part of this assessment;

- NGESO will utilise the capital costs of the options as provided by the Transmission Owners
- NGESO will calculate the constraint costs by taking into equipment unavailability due to failure and maintenance. Assumptions on the cost of energy, failure rates, Mean time to repair (MTTR), Mean time between failure (MTBF), mean time between planned maintenance (MTBM) will be based on industry agreed figures where available or Transmission Owner assumptions based on existing practice.
- For wind generation, **Expected Energy Curtailed per year** = Wind Farm Output X Constrained Energy Factor X Load factor X failure/maintenance rate X number of circuits X duration of failure/maintenance
- NGESO will calculate the Net Present Value using the Spakman approach which is used in discounting CBAs that involve private investment for public benefit[5]

[5] https://www.ofgem.gov.uk/publications-and-updates/discounting-cost-benefit-analysis-involving-private-investment-public-benefit

Appendix B3 - - TO/NGESO Indemnity Proposal

TO/NGESO Indemnity Proposal under STCP 18-1	
NGESO Scheme Number:	
Proposal no.:	(Format: YYYY/MM/DD/TO/????)
To:	NGESO
From (contact at TO):	
Contact at NGESO:	
Date of proposal:	
Date response required:	
User concerned:	
Site:	
Completion Date requested:	
Completion Date achievable under Indemnity:	
Completion Date without an indemnity	
Indemnity value excluding VAT	
Period of indemnity cover	
Date by which indemnity needs to be signed	
Reasons and details of works required to achieve completion date in indemnity	
Other details: (special terms etc)	

Appendix B4 - Indemnity Status Report

Indemnity Status Report under STCP 18-1								
NGESO Scheme Number								
Scheme Description								
To (at NGESO):								
From (at TO):								
Contact at NGESO:								
Indemnity Reference	**User**	**Site**	**Indemnity signing date**	**Indemnity expiry date**	**Target date for Agreement signing**	**Total Value**	**Latest Commitments**	**Comments**
						£(ex vat)	**£(ex vat)**	

Appendix B5 – Charging Information Requirements

Spreadsheet listing all Transmission Connection Assets and attributes required e.g. Gross Asset Value, cable length, rating etc.

Description of One Off Works

Description of infrastructure works

For all Transmission Connection Assets sufficient detail to enable a Modern Equivalent Asset (MEA) valuation.

Including:

- For Overhead Line, the composition, length and nominal rating
- For cables the nominal rating and length
- For Transformers the voltages and nominal rating
- For switchgear the air or gas insulated and indoor or outdoor

Appendix B6 – Other Charging Information Requirements

Spreadsheet containing list of all Transmission Connection Assets with Gross Asset Values in a specified price base, and other specified attributes.

Gross Asset Values are provided in a specified price base, and are calculated in accordance with the Statement of Connection Charging Methodology.

For indicative GAVs, the values are estimated initially at this stage and updated through the construction phase and finalised during scheme closure. The indicative GAV of a post vesting connection asset is the total historical cost of an asset inclusive of construction costs, allocated equipment & direct engineering cost, interest during construction, and liquidated damages premiums if applicable

If an Applicant has specified a fixed price connection charge then the GAVs will be based on the estimated cost plus a risk margin.

If an Applicant has specified a capital contribution then this will be calculated in accordance with the Statement of Connection Charging Methodology, in a specified price base, based on actual costs (plus a risk margin if the Applicant has requested a fixed price).

One Off charges calculated in accordance with the Statement of Connection Charging Methodology in a specified price base, based on actual costs (plus a risk margin if the Applicant has requested a fixed price).

Other information required for the commercial aspects of the Offer to the Applicant:

- Asset specific commissioning date[1]
- Scheme Completion date (Charging commencement date)[1,2]
- Commissioning Programme Commencement Date[1]
- Site Access date
- Consents requirements and anticipated dates
- Description of any User Works[1]
- Description of any Third Party works and associated dates[1]
- Any special terms
- Single line diagram of connection with connection/infrastructure boundary shown

[1]Staged where the Applicant has applied for a phased connection

[2]Independent of completion of User's Works

Appendix C: Interface Equipment Specification

C Schedule A – Control Telephony

C4.3 Services to be provided

C4.3.1 Power Station (both Adjacent and Not Adjacent to the TO's Transmission System)

C4.3.1.1 The TO Construction Offer to NGESO shall include terms for the connection of control telephones at the User's Site to the TO telephone network, which shall facilitate communications for control purposes between the User and NGESO and between the User and the TO.

C4.3.1.2 The TO Construction Offer to NGESO shall include terms for the connection of an extension bell.

C4.3.1.3 The TO Construction Offer to NGESO shall include terms for a PSTN connection

C4.3.1.4 For the avoidance of doubt, the TO Construction Offer shall not contain terms for any of the following:

- a Telegraph Instructor (Grid Code CC6.5.7 or ECC.6.5.7):
- or Electronic Data Communication Facilities (Grid Code CC.6.5.8 or ECC.6.5.8); or
- a fax machine.

C4.3.1.5 To the extent that NGESO requires these facilities, NGESO shall include relevant terms in their Bilateral Agreement directly with the User.

C4.3.1.6 The TO Construction Offer to NGESO shall include terms for the provision of relevant Critical Tools and Facilities where these are provided by the TO to the User. To the extent that NGESO requires these Critical Tools and Facilities, NGESO shall include relevant terms in their Bilateral Agreement directly with the User.

C4.3.2 Demand Site

C4.3.2.1 The TO Construction Offer to NGESO shall include terms for the connection of control telephones at the User's Control Point to the TO telephone network, which shall facilitate communications for control purposes between the User and NGESO and between the User and the TO.

C4.3.2.2 The TO Construction Offer to NGESO shall include terms for a PSTN connection.

C4.3.2.3 For the avoidance of doubt, the TO Construction Offer shall not contain terms for any of the following:

- a Telegraph Instructor (Grid Code CC.6.5.7 or ECC.6.5.7);
- or Electronic Data Communication Facilities (Grid Code CC.6.5.8 or ECC.6.5.8); or
- a fax machine.

C4.3.2.4 To the extent that NGESO requires these facilities, NGESO shall include relevant terms in their Bilateral Agreement directly with the User.

C4.3.2.5 The TO Construction Offer to NGESO shall include terms for the provision of relevant Critical Tools and Facilities where these are provided by the TO to the User. To the extent that NGESO requires these Critical Tools and Facilities, NGESO shall include relevant terms in their Bilateral Agreement directly with the User.

C4.3.3 Large Embedded Generator

C4.3.3.1 Where requested by NGESO, the TO shall use reasonable endeavours to agree terms with the relevant Distribution Network Operator to facilitate the connection of control telephones at the User's Control Point to the TO telephone network, which shall facilitate communications for control purposes between the User and NGESO and between the User and the TO.

C4.3.3.2 For the avoidance of doubt, the TO shall not facilitate any of the following:

- a Telegraph Instructor (Grid Code CC.6.5.7 or ECC.6.5.7):
- or Electronic Data Communication Facilities (Grid Code CC.6.5.8 or ECC.6.5.8):
- PSTN connection:
- fax machine: or
- extension bell.

C4.3.3.3 Where requested by NGESO, the TO shall use reasonable endeavours to agree terms with the relevant Distribution Network Operator to facilitate the provision of relevant Critical Tools and Facilities where these are provided by the TO to the User. To the extent that NGESO requires these Critical Tools and Facilities, NGESO shall include relevant terms in their Bilateral Agreement directly with the User.

C5 Schedule B – SCADA

C5.3 Services to be provided

C5.3.1 Power Station or Demand Site Adjacent to the TO's Transmission System

C5.3.1.1 The TO Construction Offer to NGESO shall include terms for the collection and transmission of the following User data via the TO (or as agreed) SCADA system to NGESO. The collection of this data shall be in line with STCP4-3 Provision of Real Time Data.

Data Requirements from Users (Grid Code CC.6.5.6 or ECC.6.5.6)

(a) Analogues / Metering

Item	**Analogue Data**
Power Stations	_
Balancing Mechanism Unit	HV MW MVAr Frequency
Individual Alternator	HV MW MVAr
Interface with Transmission System	Voltage
Individual Unit Transformer	LV MW MVAr
Station Transformer	LV MW MVAr
Site TGO	HV MW MVAr
Wind Speed / Direction (Wind Farms only)	

(b) Digital Status Indications

Item	**Digital Status Indication**
Power Stations	
All Generator circuits (but see note)	LV and HV circuit breakers and disconnectors.
Unit Transformer	Circuit breaker
Each Generator Transformer	Tap Position Indicator

Note – It is recognised that for windfarms containing many small units, it may be impracticable and unnecessary for indications on a per unit basis. It would be appropriate for TOs to propose and for NGESO to review and agree groupings of wind turbines, with each group being above 5MW in size.

(c) OMS Metering –

At sites where access to settlement metering pulses is available, and where requested by NGESO, the TO Construction Offer shall make provision for the procurement and installation of an Operational Metering Summator (OMS) or equivalent equipment.

For the avoidance of doubt, where either OMS Metering or equivalent equipment is installed, the information obtained from this equipment shall be provided to NGESO via the TO SCADA system.

(d) Frequency Response~~ASB~~ Monitoring Equipment

Where requested by NGESO, the TO Construction Offer to NGESO shall include terms for the installation of Frequency Response~~ASB~~ Monitoring Equipment and

associated communications infrastructure which shall be issued free to the TO by NGESO.

C5.3.2 Special Classes of Generators and Restoration Contractors

C5.3.2.1 The TO Construction Offer shall provide for the provision of information from the Transmission System to the Generator under the following circumstances so that the Generators can fulfil their obligations. Two classes of Generator have been defined for this purpose:

(a) Nuclear Generators

Nuclear Generators will receive indications and analogues from all Transmission circuits at the interface substation.

(b) Restoration Contractors~~Black Start Power Stations~~

For Generators and other parties~~Power Stations~~ that have entered into contracts with National Grid to provide an Anchor Plant ~~Black Start~~ C~~c~~apability or Top Up Restoration Capability. Such parties~~stations~~ shall be provided with indications and analogues from all Transmission circuits at the interface substation.

C5.3.3 Power Station Not Adjacent to the TO's Transmission System

C5.3.3.1 At a Power Station not adjacent to the TO's Transmission System, the TO Construction Offer will provide for SCADA data to be collected shall be as agreed with NGESO, but will be broadly in line (where applicable) with that described in C4.3.1 above. At a minimum this shall consist of TGO MW & MVAr and the circuit breakers controlling the point of connection.

C5.3.4 Demand Site

C5.3.4.1 The TO Construction Offer to NGESO shall include terms for the collection and transmission of the following User data via the TO (or as agreed) SCADA system to NGESO. The collection of this data shall be in line with STCP4-3 Provision of Real Time Data.

Demand User	Analogue
At Interface with Transmission System	MW MVAR Voltage

Demand User	Digital Points
At Interface with Transmission System	Circuit Breakers and Disconnectors

C5.3.5 Large Embedded Generator

C5.3.5.1 The TO shall use reasonable endeavours to agree terms with the relevant Distribution Network Operator to facilitate the collection and transmission of SCADA data to NGESO.

C5.3.5.2 The SCADA data to be collected shall be as agreed with NGESO, but will be broadly in line (where applicable) with that described in C4.3.1 above. At a minimum this shall consist of TGO MW & MVAr and the circuit breakers controlling the point of connection.

C5.3.6 SCADA Data from TO equipment at Connections Sites.

C5.3.6.1 The TO shall provide the following SCADA data in line with STCP4-3 from TO equipment at Connection Sites.

(a) Analogue Data Requirement

Plant / Apparatus / Equipment	Analogue Data
Feeder	MW / MVAr / Volts
Transformer	Low Voltage MW / MVAr / Volts: Winding temp / Tap position / MVAr from tertiary winding where compensation is fitted
Quad Booster	MW / MVAr / Volts / Winding temp / Tap position
Bus Section / Coupler CB	Amps
Shunt / Series Reactor	Mw / MVAr / Winding Temp
Reactive compensation	MVAr
General Site*	Frequency / Transmission Voltage / User Interface Voltage

(b) Digital Status Indications Requirement

Plant/ Apparatus /Equipment	Status Indication
Circuit Breaker	Open / Closed / DBI
Isolator	Open / Closed / DBI
Switch disconnector / Isolator	Open / Closed / DBI
Protection Equipment	In / Out
DAR Equipment/ schemes	In / Out
Auto Switching Schemes	In/ Out and Selections
Demand/System/Generator tripping schemes	In / Out and Selections
Fault thrower / ferro-resonance earth switch	Open / Closed (where available)
Blocking	In / Out

Ferro-resonance scheme	In/ Out
Zone 2 over ride	In / Out
Zone 1 extension	In / Out
Acceleration	In / Out

*At sites that are intended to be run permanently split, the analogue data collected under this heading shall be provided for each side of the electrical split.

At sites where either Generator Operational Tripping Schemes or Auto Switching Schemes are provided, as a minimum telemeter and controls shall be provided to facilitate the switching in/out of the scheme. Other controls / indications shall be as agreed with NGESO.

C5.3.7 Remote Control Facilities

C5.3.7.1 The TO and NGESO shall discuss the provision of remote control facilities.

C5.3.8 Accuracy of Measurement Chain

C5.3.8.1 The TO and NGESO shall discuss the overall accuracy (primary equipment to SCADA system at GCC) for the following analogue measurements:

- Generator TGO;
- Feeder Flow;
- Voltages; and
- Frequency.

C5.3.9 Distribution Restoration Zones

C5.3.9.1 The TO Construction Offer shall provide for the provision of information from the Transmission System to the Network Operator so that Network Operators who have a Distribution Restoration Zone Plan can fulfil their obligations. For Restoration Contractors who are part of a Distribution Restoration Zone Plan, this will enable Network Operators to receive and supply the necessary indications and analogues from the interfacing substation to facilitate the operation of the Distribution Restoration Zone.

Appendix D: Additional Considerations

Appendix D1 – Interactive Offers

A TO Construction Offer can be made which is interactive with an existing outstanding TO Construction Offer. Since both TO Construction Offers would have been made on the basis of the committed National Electricity Transmission System at the time they were made, the signing of one TO Construction Offer by NGESO may preclude the signing of the other. In such circumstances, when NGESO makes the Offer to the second recipient, both recipients are informed that their Offers are interactive. In the event that one recipient signs the Offer then NGESO shall inform the TO(s) and provide the TO with revised Construction Planning Assumptions in respect of the NGESO Construction Application relating to the recipient who has not signed following the process in 3.3.7

If a TO Construction Offer is signed by NGESO which affects a TO Construction Offer being prepared then NGESO shall provide the TO with revised Construction Planning Assumptions following the process in 3.3.7

The Host TO and any Affected TO(s) (as appropriate) should inform NGESO of any potential interactive situations (on the Scheme Briefing Note, initially).

Appendix D2 - Modification Offers

If at any point in the application process or prior to charging, changes arise which affect the design or contractual terms of an Offer, the materiality of those changes must be considered. If considered to be material it may necessitate a Modification Application being submitted (often referred to as a secondary modification). Modifications can also be triggered by the issuing of a Modification Notification to the User who may have two months to submit a Modification Application (see Appendix D3).

It may also be necessary to reassess works under an agreement following changes brought about as a consequence of another Offer being signed. In this case a new Offer would be given and there would be no additional advanced Application Fee payable.

Appendix D3 - Modifications Proposed by NGESO

If NGESO / TO(s) wish to make a Modification to the National Electricity Transmission System, NGESO issues a Modification Notification to the User and advises the User of any works which NGESO reasonably believes that User may have to carry out as a result.

The User may have 2 months to submit a Modification Application to NGESO. No fee shall be payable by the User to NGESO in respect of any such Modification Application.

NGESO shall make the Modification Offer to the User following the appropriate steps detailed in this procedure.

Appendix D4 - Customer Build Applications

Customer build applications are submitted where the Applicant has opted to construct the Transmission Connection Assets required to facilitate their Connection to the National Electricity Transmission System at new and existing Connection sites. Such schemes range from asset replacement on existing sites to the construction of a new site.

The assets are transferred to TO upon completion.

The formal three months customer build application process follows the basic principles detailed in this procedure.

Appendix E: Abbreviations & Definitions

Abbreviations

Affected TO	Affected Transmission Owner
CION	Connections and Infrastructure Option Note
Host TO	Host Transmission Owner
Other Affected TO	Other Affected Transmission Owner
SBN	Scheme Briefing Note
SCADA	Supervisory Control And Data Acquisition
SHE-T	Scottish Hydro Electric Transmission plc
SPT	SP Transmission plc
TO	Transmission Owner
GAV	Gross Asset Value

Definitions

STC definitions used:

Business Day

Commissioning Programme Commencement Date

Connection Site

Construction Assumptions Date

Construction Planning Assumptions

Critical Tools and Facilities

Distribution Restoration Zone Plan

National Electricity Transmission System

New Connection

NGESO

NGET

NGET Construction Application Offshore Tender Regulations

Outage

One Off Works

Party

Power Station

Relevant Connection Site

Restoration Contractor

System Restoration

TO Construction Agreement

TO Construction Offer

Transmission Connection Asset(s)

Transmission Owner

Transmission System

User Application

User Application Date

User Works

Grid Code definitions used:

Anchor Plant Capability

Bilateral Agreement

Control Point

Critical Tools and Facilities

Demand

Network Operator

Top Up Restoration Capability

User

CUSC definitions used:

Applicant

Authority

Bilateral Agreement

Bilateral Connection Agreement

Completion Date

Connection Application

Connection Charges

Connection Offer

Detailed Planning Data

Gross Asset Value

Modification Application

Modification Notification

Offer

Offshore Transmission Owner

Transmission Licence

User

Definitions used from other STCPs:

Joint Planning Committee	As defined in STCP16-1 Investment Planning
Project Listing Document	As defined in STCP16-1 Investment Planning
Application Fee	As defined in STCP19-6 Application Fee
TO Charging Statement	As defined in STCP19-6 Application Fee
Boundary of Influence	As defined in STCP22-1 Production of Models for NETS System Planning