

STCP 18-1 Issue 004 Connection and Modification Application

STC Procedure Document Authorisation

Party	Name of Party Representative	Signature	Date
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	18/07/2014	Issue 004 incorporating PM079 to refine CION process

1 Introduction

1.1 Scope

- 1.1.1 This process defines the data exchange required between NGET 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 NGET within a specified time, as a result of an Applicant applying to NGET for a New or Modified Connection. It defines the tasks, formal documentation, interface requirements, timescales and responsibilities between NGET 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 NGET 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 NGET, initial Outage requirements, programme of works, asset details, and the [issue of the TO Construction Offer to NGET](#).
- 1.1.5 This procedure applies to NGET and each TO.
- 1.1.6 For the purposes of this document, the TOs are
- SPT;
 - SHETL.
 - 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 NGET ~ TO interface, the TO ~ TO interface, and where appropriate the NGET/TO ~ Tender Panel interface;
 - the responsibilities of NGET and the TO(s) in relation to working under indemnities activities between the TO(s) & NGET;
 - 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 offshore generation development shall be included within the ambit of this STCP in respect of a Relevant Connection Site 18.1 process until an OFTO such time as it has been appointed under entered the Tender Process. Any changes to the committed system which may impact such a development prior to its entry into the Tender Process will be dealt with under CUSC 6.9 MODIFICATIONS, through the issue of Modification Notification by NGET to the User of that committed development.~~

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 NGET Construction Application (see ~~pro-forma~~ ~~proforma~~ in Appendix B1).

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

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2.1.5 **Application Steering Group** means a team made up of named representatives from NGET, Host TO, Affected TO(s) and Other Affected TO(s) (as appropriate), the "Application Steering Group", shall be formed to oversee the application process. The remit of this group is to agree the Application Programme ~~and~~ ~~monitor progress, and agree any changes.~~ The Application Steering Group is also responsible for resolving any disagreements relating to an NGET 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 NGET, and advised to the Host TO, ~~Affected TO(s)~~ and ~~Other~~ ~~the~~ Affected TO(s) as appropriate, when the NGET Construction Application has been deemed competent

2.1.7 **Connections and Infrastructure Options Note ()** means the document that is used ~~for offshore projects~~ to record the overall economic and efficient connection option together with all the ~~primary~~ ~~ether~~ options considered throughout the development of ~~the an offshore~~ project. It requires inputs from all participants ~~and~~ with NGET coordinating these. It is used by the TOs to outline the options for their Transmission Construction works. NGET shall also use the note to describe the ~~it~~ 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.

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

2.1.9 **Indemnity Agreement** means the indemnity agreement between NGET and the Applicant.

- 2.1.10 **TO/NGET Indemnity Offer** means details of the indemnity offer being made by the TO.
- 2.1.11 **TO/NGET Indemnity Proposal** means details of the proposed indemnity provided by NGET to the TO (see [pro-forma](#) in Appendix B3).
- 2.1.12 **Lead Person** means the person nominated by each Party to lead on the processing of the application on behalf of the Party.
- 2.1.13 **Material Impact** means anything that NGET or Host TO/Affected TO reasonably assess would prevent an Offer being made to the Applicant in accordance with their Transmission Licence.
- 2.1.14 **Modern Equivalent Asset Valuation** is as defined in the Statement of Connection Charging Methodology.
- 2.1.15 **National Electricity Transmission System (NETS)** is the network of interconnected transmission systems in England & Wales and Scotland and Territorial Waters and Development Zones.
- 2.1.16 **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 NGET otherwise identifies that it is likely to be required to enter into a TO Construction Agreement in respect of the Construction Project.
- 2.1.17 **Schedule of NETS Location Codes** means the list of unique NETS letter site location codes.
- 2.1.18 **NGET Construction Application** means the [document](#) that is provided from NGET to the TO to provide details of the NGET Connection Application, NGET Modification Application or the System Construction Application. (see [pro-forma](#) in Appendix B1).
- 2.1.19 **Tender Panel** means the panel selected by the Authority in accordance with the Offshore Tender Regulations.
- 2.1.20 **Tender Process** means the tender process for the selection of an Offshore Transmission Owner in accordance with the Offshore Tender Regulations.
- 2.1.21 **TO/NGET Indemnity Agreement** means the indemnity agreement between NGET and the TO to reflect, where appropriate, the Indemnity Agreement (see [2.1.9-2.1.10](#)).

3 Procedure

3.1 Nuclear Site Licence Provision

- 3.1.1.1 ~~Where~~~~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 SO/TO Code to ensure compliance with all of these obligations.

3.2 Basic Process

- 3.2.1 In the [case of connections](#) offshore, ~~environment~~, under the CUSC, Connection Applications will be received from the generator for an offshore connection. NGET 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 ~~u~~ild18.1 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 in the~~ offshore ~~environment~~ 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 **NGET receives the User Application**

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

3.2.4 **NGET checks the User Application**

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

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

3.2.4.3 The NGET Lead Person shall utilise the information in the User Application to produce the relevant NGET 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. The NGET Lead Person shall record on the NGET Construction Application, as to whether the Application Fee has been cleared or not.

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 NGET Lead Person shall submit an NGET Construction Application to each relevant TO in each capacity. For the avoidance of doubt, these mutually exclusive NGET Construction Applications shall continue to be referred to in this STCP 18.1 as the NGET Construction Application.

Within 3 Business Days of receipt of the User Application, the NGET Lead Person shall send by email the relevant NGET Construction Application to the TO

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

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

3.2.4.6 ~~A technically effective NGET Construction Application is where all the necessary technical data has been provided.~~ An effective NGET Construction Application is one that is technically effective and NGET has informed the TO via email that the Application Fee has been cleared.

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

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

3.2.6 **Application Fee**

3.2.6.1 NGET shall inform the TO(s) once the Application Fee has cleared.

- 3.2.6.2 The TO(s) invoice NGET with their relevant TO component of the Application Fee in accordance with STCP 19-6 Application Fees.
- 3.2.7 **NGET shall be informed as to whether the NGET Construction Application is technically effective or not**
- 3.2.7.1 A technically non-effective User Application is one where all technical data has not been received.
- 3.2.7.2 Within 5 Business Days of receipt of the NGET Construction Application, the Host TO and Affected TO(s) shall notify NGET by email, as to whether the NGET Construction Application is technically effective or not. Where the NGET Construction Application is considered to be technically non-effective, then the Host TO and Affected TO(s) (as appropriate), shall e-mail to NGET 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.
- 3.2.8 **Resolve technical non-effectiveness**
- 3.2.8.1 Where a NGET 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 best endeavours to liaise and assist NGET to resolve their elements of the technical non-effectiveness. In order to achieve this, NGET may request the TO to resolve the technical non-effectiveness with the Applicant directly.
- 3.2.8.2 If the Applicant cannot submit the data (e.g. because data is not available for new technology) then the Application Steering Group shall assess and advise the Parties whether it can progress the application or not and note/agree any assumptions made. If the NGET Construction Application is to continue then alternative data may be requested from the Applicant.
- 3.2.8.3 If the Application Steering Group assess that the NGET Construction Application cannot progress without the missing technical data then the NGET Construction Application will be put on hold as ineffective. If and when the missing technical data is supplied to NGET then the process will recommence from **3.2.9**.
- 3.2.9 **NGET is informed that the NGET Construction Application is now technically effective**
- 3.2.9.1 On receipt of the missing/additional data from the Applicant, the NGET Lead Person shall circulate the data to the Host TO and Affected TO(s) (as appropriate) Lead Person(s).
- 3.2.9.2 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 NGET Lead Person by email whether their NGET Construction Application is now technically effective. If the NGET Construction Application is still not technically effective then the process returns to 3.2.77 otherwise proceed to 3.2.100.
- 3.2.10 **NGET confirms Clock Start Date**
- 3.2.10.1 The NGET 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 NGET [needwill require](#) to issue an Offer to the Applicant.
- 3.2.11 **Construction Planning Assumptions**
- 3.2.11.1 The Host TO and/or Affected TO(s) will base their TO Construction Offer on the Construction Planning Assumptions most recently provided by NGET
- 3.2.11.2 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.
- 3.2.11.3 NGET may change, or Affected Parties may request a change to, the Construction Planning Assumptions (see 3.3.7).

3.2.12 Affected Parties confirm their intention to submit a TO Construction Offer

3.2.12.1 Each Affected Party shall confirm to NGET within 21 calendar days of the Clock Start Date whether or not it intends to submit a TO Construction Offer.

3.2.12.2 Where an Affected Party notifies NGET that it will not be submitting a TO Construction Offer it shall at the same time also notify NGET 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 ~~3.2.223-2.233~~.

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

3.2.13 NGET and Affected Parties create NETS models

3.2.13.1 NGET and the Affected Parties shall each take the Construction Planning Assumptions provided by NGET 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.

3.2.14 Affected Parties assess the impact of the NGET Construction Application

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

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

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

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

3.2.15.1 Each Affected Party shall submit by email to NGET, 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 NGET may request additional information that is reasonably required to represent the performance of the User's plant and apparatus.

3.2.15.2 The preferred options and any alternative options are ~~compiled~~~~confirmed~~ by the Application Steering Group - this may be at a meeting to discuss the User Application and options. Following ~~compilation~~~~confirmation~~ by the Application Steering Group of the preferred options and any alternative options, each Affected Party shall ~~update email NGET using~~ the CION pro--forma where necessary and email NGET for offshore projects.

3.2.16 NGET carries out economic impact assessment (for connections offshore)

3.2.16.1 NGET 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 NGET 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

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3.2.16.2 The results of the economic impact assessment shall be recorded by NGET in the Connections and Infrastructure Options Note and will ~~identify; highlight:~~

- ~~the most overall economic and efficient connection option~~
- ~~problematic Outages and implicit connection works Outage combinations; and~~
- ~~associated risks and issues~~

- ~~problematic transmission reinforcements.~~

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

3.2.16.4 NGET 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.

~~3.2.17~~ **Affected Parties assess economic impact assessment**

~~3.2.17.1~~ ~~The Host TO, and where necessary, the Affected TO(s) and the Other Affected TO(s), shall assess the economic impact assessment in accordance with the Application Programme.~~

3.2.17 Meeting of Application Steering Group

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

3.2.17.2 The Application Steering Group shall ~~agree and advise~~confirm 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 Application Steering Group.

3.2.17.3 As a result of NGET'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 3.2.15 to 3.2.16 inclusive will be repeated. This will involve the Affected Parties resubmitting their Connection and Infrastructure Option Note, for NGET to carry out an economic impact assessment. The Application Steering Group may need to meet to confirm the option.

3.2.17.4 The selected option shall be confirmed by the Application Steering Group and each Affected Party shall update its Connections and Infrastructure Options Note Section. The Affected Parties shall notify the NGET Lead Person that this has been done in accordance with the Application Programme.

3.2.17.5 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.

3.2.18 Affected Parties develop detailed Connection and infrastructure proposals

3.2.18.1 The Affected Parties for offshore projects shall work up the connection and infrastructure design proposals in further detail for the ~~preferred~~confirmed 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 NGET Lead Person.

~~3.2.19.2~~ ~~User technical plant data shall be submitted to NGET using the format defined in the Grid Code, Data Registration Code.~~

3.2.18.2 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.

3.2.18.3 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.

3.2.18.4 During the application process NGET shall discuss with the TO any requirements NGET may have for additional communications infrastructure so that delivery [by the TO](#) can be optimised.

3.2.18.5 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.

3.2.19 Charging information required from Host TO

3.2.19.1 The Affected Parties shall be required to include in the TO Construction Offer to NGET 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 NGET, The Host TO shall provide a cost breakdown of the Transmission Connection Assets.

3.2.20 NGET and Affected Parties liaise to agree indicative Outages for construction

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

3.2.21 NGET Receives TO Construction Offer

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

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

3.2.21.3 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 NGET Construction Application, indicate the areas that require more detailed analysis. NGET 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 NGET does wish the Affected Parties to vary their TO Construction Offer(s), NGET shall provide necessary detailed planning data requested by the Affected Parties, to enable the Affected Parties to carry out the detailed system studies.

3.2.22 Post Offer negotiation

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

3.2.22.2 If the Applicant requests an extension to the 3 months offer acceptance period for additional time to consider the Offer, NGET shall reasonably consider the request. If the request for extension is considered reasonable by NGET, NGET shall ask the Affected Parties if they will extend their TO Construction Offer(s). NGET 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 NGET if it is to agree such matters with the Applicant. If this agreement/confirmation has been received, the NGET Lead Person shall inform the Applicant that the offer acceptance period has been extended, and email the appropriate Affected Party.

3.2.22.3 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, NGET 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, NGET and the Affected Parties shall agree the process and timescales for agreeing a change to the terms of the original TO Construction Offer. NGET shall advise the Applicant of the timescales for the revised Offer or whether a new User Application is required.

3.2.23 Applicant signs Offer

3.2.23.1 When signed Agreements are returned from the Applicant, the NGET Lead Person shall confirm this to the TO(s) via email within 2 Business Days. NGET shall then sign the TO Construction Offer(s) from the Affected Parties and return them to the Affected Parties.

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

3.2.24 Applicant requests a modification to the signed Agreements

3.2.24.1 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 3.2.33.5 onwards where appropriate.

3.2.25 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 NGET, 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.

3.3 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 NGET. The proposal shall be in the form of a template (see Appendix B3) 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 NGET 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 NGET shall reasonably consider the TO(s) proposal, liaising with the Application Steering Group if appropriate, and decide if it wishes to pursue working under an indemnity. If NGET decides not to pursue working under indemnity then no working under indemnity process shall take place.

3.3.1.3 NGET 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 – NGET Initiated

3.3.2.1 Where NGET considers that working under an indemnity is required, NGET shall request an TO/NGET Indemnity Offer from the TO for work to be carried out under an indemnity. The request will include the TO/NGET 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/NGET Indemnity Offer to NGET within 10 Business Days unless otherwise agreed, of receipt of the request for an TO/NGET Indemnity Offer. The TO/NGET Indemnity Offer should cover the period, value and nature of works to be undertaken, and the date by which the TO/NGET Indemnity Agreement shall be signed in order to achieve its objectives.

3.3.2.3 NGET shall send the Indemnity Agreement to the Applicant.

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

- 3.3.2.5 If specified in the TO/NGET Indemnity Agreement, by the 10th of each month, the TO(s) shall submit a status report to NGET in respect of any works being carried out under indemnity (see Appendix B4). This report should contain:
- NGET 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 NGET shall assess the report and contact the TO(s) with any queries if necessary.
- 3.3.2.7 The TO(s) shall respond to NGET's queries within 5 Business Days, unless otherwise agreed.
- 3.3.2.8 NGET may request that the TO(s) extend the term and value of the TO/NGET Indemnity Agreement. Proceed to section 3.3.2.2 above.
- 3.3.2.9 If specified in the TO/NGET Indemnity Agreement, at any time prior to the signing of the TO Construction Offer, NGET may instruct in writing the TO(s) to cease working under the TO/NGET 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 NGET to cease work under the TO/NGET Indemnity Agreement, the TO(s) shall invoice NGET in accordance with the terms of the TO/NGET Indemnity Agreement for all work up to the indemnity validity period or until the TO(s) stopped work following an instruction from NGET.
- 3.3.2.11 NGET shall pay the invoice in accordance with STCP13-1 Invoice and Payments ad hoc payments.
- 3.3.3 Working Under Indemnities – Applicant Initiated (not Generator-Build projects)**
- 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 NGET shall submit an NGET Indemnity Request as detailed in 3.3.2.1 above, and the process shall be followed from there.
- 3.3.3.3 NGET shall ensure that the costs identified by the TOs in response to the NGET 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 NGET may request from the Authority an extension in timescales for providing an Offer to an Applicant under its Transmission Licence. The STC allows NGET 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, NGET 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 Application Steering Group. If the Application Steering Group agrees that there is a need for an extension, NGET shall submit an application to the Authority for an extension in timescales. The Affected Parties shall provide any relevant information reasonably requested by NGET to enable NGET 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 Application Steering Group 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) NGET and the other Affected Parties of the request. NGET 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 NGET to enable NGET to make a timely submission for such an extension to its application timescales.
- 3.3.4.5 NGET 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 NGET 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 NGET and the Affected Parties shall assess what impact this will have on the ability of Affected Parties to make the TO Construction Offer to NGET in the required timescales. NGET shall then advise the Applicant whether the changes are likely to have a Material Impact on NGET'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 NGET, and subsequently NGET's ability to make the Offer to the Applicant in the required timescales, then NGET 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 NGET and/or NGET'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 NGET, 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 NGET).

3.3.7 Modifications to Construction Planning Assumptions

3.3.7.1 NGET 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, NGET may decide to change the Construction Planning Assumptions.

3.3.7.1.2 NGET may decide to convene a meeting of the Application Steering Group to discuss the revision of the Construction Planning Assumptions giving Affected Parties reasonable notice in writing.

3.3.7.1.3 NGET 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 Application Steering Group 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 NGET to change the Construction Planning Assumptions such request shall include reasons for the request.

3.3.7.2.2 NGET may decide to convene a meeting of the Application Steering Group to discuss the request for revision of the Construction Planning Assumptions giving Affected Parties reasonable notice in writing.

3.3.7.2.3 NGET 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 NGET 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 Application Steering Group 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 NGET.

3.3.7.3 NGET 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, NGET 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, NGET shall convene a meeting of the Application Steering Group to discuss the revision of the Construction Planning Assumptions and a programme for a revised TO Construction Offer.

3.3.7.3.3 NGET 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 NGET

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 NGET to change the Construction Planning Assumptions such request shall include reasons for the request.

3.3.7.4.2 NGET may decide to convene a meeting of the Application Steering Group to discuss the request for revision of the Construction Planning Assumptions.

3.3.7.4.3 NGET 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 NGET decides to revise the Construction Planning Assumptions, NGET shall convene a meeting of the Application Steering Group to discuss the revision of the Construction Planning Assumptions and a programme for a revised TO Construction Offer.

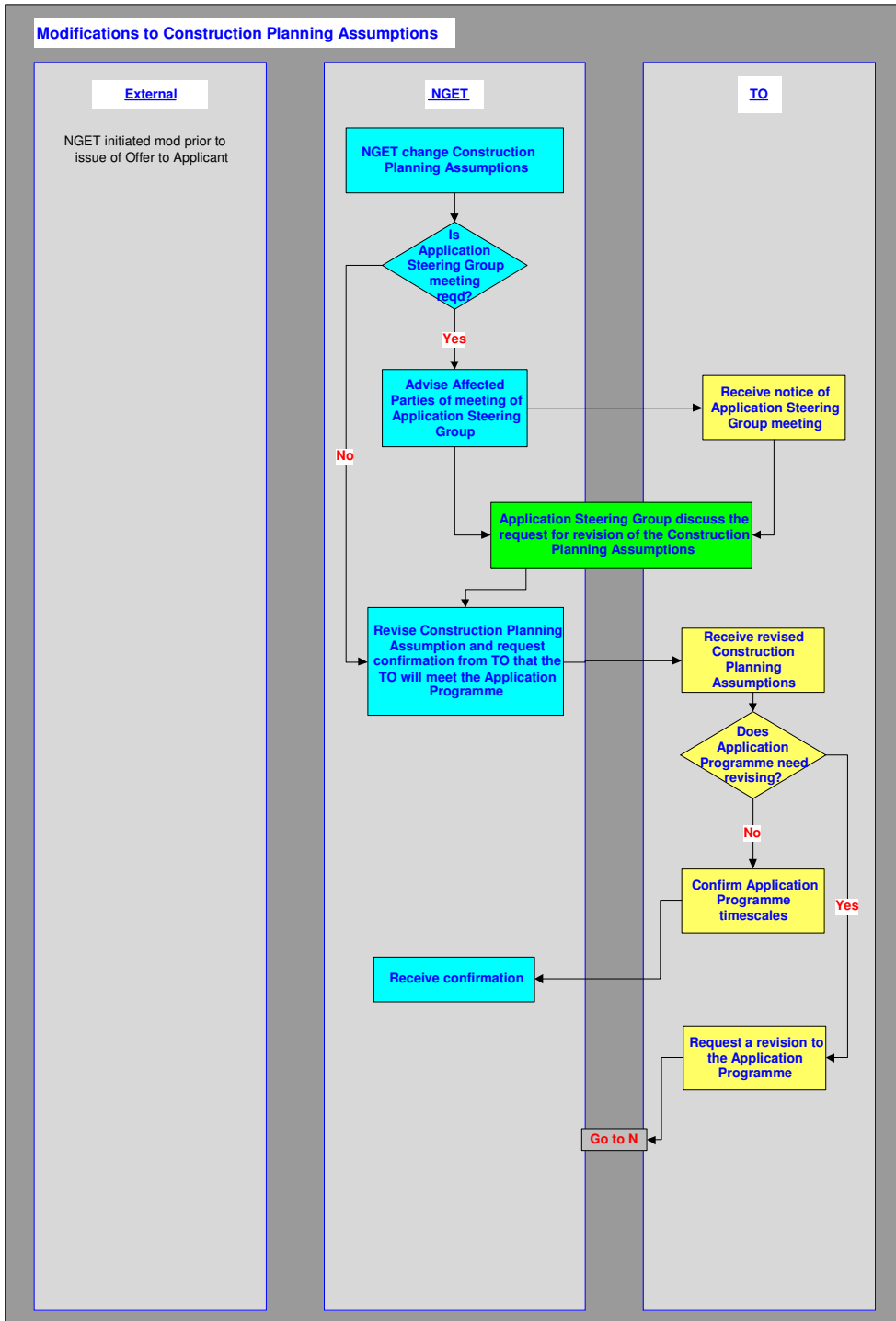
3.3.7.4.5 NGET shall provide the revised Construction Planning Assumptions and a new Scheme Briefing Note setting out the revised Application Programme.

3.3.8 Withdrawal of a User Application by the Applicant

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

3.3.9 Additional Documentary Evidence to support the Applicant

When requested to do so, NGET 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, NGET may request additional funding to cover legal review and/or additional costs incurred.



Appendix B: Standard Forms/Certificates

- B1. NGET Construction Application
- B2. Connections and Infrastructure Options Note
- B3. TO/NGET Indemnity Proposal**
- B4. Indemnity Status Report
- B5. Charging Information Requirements**
- B6. Other Charging Information Requirements**

NGET Construction Application - Version 0.6			
BELLA APPLICATION			
Data Required	Distribution [Host TO and/or Affected TO(s)]	Data Format [where appropriate]	Location of Data (where appropriate)
CAM Name	Host TO and Affected TO(s)		
CAM Telephone Number	Host TO and Affected TO(s)	[01926 650000]	
Host TO	Host TO and Affected TO(s)		
Affected TO	Host TO and Affected TO(s)		
User	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
User's Registered Company Details	Host TO and Affected TO(s)		[Section A3 of CUSC Application Form]
Site Name	Host TO and Affected TO(s)		[CAM to advise]
GB Reference Number	Host TO and Affected TO(s)	[Number on GB Tracker]	
User Application Date received by NGET	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Date Use of System Application emailed to TO(s)	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Level of Application Fee	Host TO and Affected TO(s)	[£]	[Obtain from CAM]
Application Fee received	Host TO and Affected TO(s)	[Yes/No]	[Obtain from CAM]
Intended point of Connection to the Distribution System (preferably by reference to an extract from an ordinance survey map)	Host TO		[Section B1 of CUSC Application Form]
Standard Planning Data included ?	Host TO and Affected TO(s)	[Yes/No]	[Section C1 of CUSC Application Form]
Requested Completion Date	Host TO and Affected TO(s)		[Obtain from CAM]

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NGET Construction Application - Version 0.5			
STATEMENT OF WORKS			
Data Required	Distribution [Host TO and/or Affected TO(s)]	Data Format [where appropriate]	Location of Data (where appropriate)
CAM Name	Host TO and Affected TO(s)		
CAM Telephone Number	Host TO and Affected TO(s)	[01926 65xxxx]	
Host TO	Host TO and Affected TO(s)		
Affected TO	Host TO and Affected TO(s)		
User	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
User's Registered Company Details	Host TO and Affected TO(s)		[Section A3 of CUSC Application Form]
Site Name	Host TO and Affected TO(s)		[Section D1 of CUSC Application Form]
GB Reference Number	Host TO and Affected TO(s)	[Number on GB Tracker]	
User Application Date received by NGET	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Date Statement of Works Request emailed to TO(s)	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Level of Application Fee	Host TO and Affected TO(s)	[£]	[Obtain from CAM]
Application Fee received	Host TO and Affected TO(s)	[Yes/No]	[Obtain from CAM]
Intended location of the Plant and Apparatus which it is desired should be connected to the Distribution System	Host TO		[Section B1 of CUSC Application Form]
Intended Grid Supply Point through which that part of the User's Distribution System to which the Relevant Embedded Medium Power Station or Relevant Embedded Small Power Station is connected	Host TO		[Section B2 of CUSC Application Form]
Standard Planning Data included ?	Host TO and Affected TO(s)	[Yes/No]	[Section C of CUSC Application Form]
Programme			
* Anticipated Date when the Embedded Power Station(s) will have its connection energised and/or commence use of the Distribution System	Host TO and Affected TO(s)		[Section D of CUSC Application Form]

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NGET Construction Application - Version 0.5			
CONNECTION			
Data Required	Distribution [Host TO and/or Affected TO(s)]	Data Format [where appropriate]	Location of Data (where appropriate)
CAM Name	Host TO and Affected TO(s)		
CAM Telephone Number	Host TO and Affected TO(s)	[01926 65xxxx]	
Host TO	Host TO and Affected TO(s)		
Affected TO	Host TO and Affected TO(s)		
User	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
User's Registered Company Details	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
Site Name	Host TO and Affected TO(s)		[CAM to advise or Section C1 of CUSC Application Form]
GB Reference Number	Host TO and Affected TO(s)	[Number on GB Tracker]	
User Application Date received by NGET	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Date Connection Application emailed to TO(s)	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Level of Application Fee	Host TO and Affected TO(s)	[£]	[Obtain from CAM]
Application Fee received	Host TO and Affected TO(s)	[Yes/No]	[Obtain from CAM]
* Intended location of User's Plant and Apparatus (preferably by reference to an extract from an ordinance survey map)	Host TO		[Section B1 of CUSC Application Form]
* Where the Application is in respect of a proposed New Connection Site, name of the New Connection Site together with details of access to the New Connection Site, including from the nearest main road	Host TO		[Section B2 of CUSC Application Form]
* Plan(s) of the proposed Connection Site indicated (as far as NGET is able) the position of all buildings, structures, User's Plant and Apparatus and of all services located on the Connection Site.	Host TO		[Section B3 of CUSC Application Form]
* Details of the intended legal estate in the Connection Site in so far as NGET is aware.	Host TO		[Section B4 of CUSC Application Form]
* Occupier of the Connection Site in so far as NGET is aware	Host TO		[Section B5 of CUSC Application Form]
* Where a substation may be needed, User's suggested location for it, giving dimensions of the area.	Host TO		[Section B6 of CUSC Application Form]
* Where the User is prepared to make available to the Transmission Owner the land or Offshore Platform necessary for the substation, brief proposals for the Transmission Owner's interest in it including (if relevant) such interest and the consideration to be paid for it	Host TO		[Section B7 of CUSC Application Form]
* 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.	Host TO		[Section B8 of CUSC Application Form]
Details (including copies of any surveys or reports) of the physical nature of land in which the User has an interest at the proposed Onshore Connection Site including the nature of the ground and the sub-soil	Host TO		[Section B9 of CUSC Application Form]
User Consents status	Host TO		[Section B10 of CUSC Application Form]
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	Host TO		[Section B11 of CUSC Application Form]
To the extent that NGET is aware of them, identification by reference to a plan (if possible) the owners and (if different) occupiers of the land adjoining the Connection Site and brief details of the owner's and occupier's respective interests in such land.	Host TO		[Section B12 of CUSC Application Form]
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)	Host TO and Affected TO(s)		[Section C1 of CUSC Application Form]
Overview of what application is for [brief description of plant to be connected]	Host TO and Affected TO(s)		[Section C2 of CUSC Application Form]
Standard Planning Data included ?	Host TO and Affected TO(s)	[Yes/No]	[Section C3 of CUSC Application Form]
Copy of User's Safety Rules	Host TO	[Included/Already Provided/Will be Provided later]	[Section C4 of CUSC Application Form]
Connection Entry Capacity	Host TO and Affected TO(s)	[MW]	[Section C5 of CUSC Application Form]
Transmission Entry Capacity	Host TO and Affected TO(s)	[MW]	[Section C6 of CUSC Application Form]
Connection Security Requested	Host TO	[GBSQQS compliant connection and/or Design Variation Non-Firm connection]	[Section C7 of CUSC Application Form]
Is the User considering building any assets that would be identified as Transmission Connection Assets?	Host TO	[Yes/No]	[Section C8 of CUSC Application Form]
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)	Host TO and Affected TO(s)		[Section C9 of CUSC Application Form]
Programme * Requested Completion Date * In the case of a Connection Site located in Offshore Waters, procurement of a Crown Estate Lease * In the case of a Connection Site located in Offshore Waters, earliest date of entry into the Offshore Tender Process * Projected Date for Planning Application to be submitted * Projected Date for Planning Application to be awarded * Projected Date for Plant to be ordered * Projected Date to start construction (site mobilisation) * Projected Date for Completion of Construction	Host TO and Affected TO(s)		[Section D of CUSC Application Form]
Connection Charging Payment Options	Host TO	[Annual/Indicative, Annual/Firm, Advanced/Indicative, Advanced/Firm]	[Obtain from User/CAM]

NGET Construction Application - Version 0.5			
MODIFICATION			
Data Required	Distribution [Host TO and/or Affected TO(s)]	Data Format [where appropriate]	Location of Data (where appropriate)
CAM Name	Host TO and Affected TO(s)		
CAM Telephone Number	Host TO and Affected TO(s)	[01926 65xxxx]	
Host TO	Host TO and Affected TO(s)		
Affected TO	Host TO and Affected TO(s)		
User	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
User's Registered Company Details	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
Site Name	Host TO and Affected TO(s)		[CAM to advise or Section B2 of CUSC Application Form]
GB Reference Number	Host TO and Affected TO(s)	[Number on GB Tracker]	
User Application Date received by NGET	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Date Modification Application emailed to TO(s)	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Level of Application Fee	Host TO and Affected TO(s)	[£]	[Obtain from CAM]
Application Fee received	Host TO and Affected TO(s)	[Yes/No]	[Obtain from CAM]
Details of the rights in any additional land which the User is proposing to acquire at the Connection Site (to include legal interests and heritable or leasehold interests including servitudes or other real rights so as to undertake the Modification)	Host TO		[Section B3 of CUSC Application Form]
*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.	Host TO		[Section B4 of CUSC Application Form]
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	Host TO		[Section B5 of CUSC Application Form]
User Consents status	Host TO		[Section B6 of CUSC Application Form]
An indication of what, if any, of the necessary construction works necessary for the Modification NGET would like the Transmission Owner to conduct on its behalf (or on behalf of the User)	Host TO		[Section B7 of CUSC Application Form]
Overview of what application is for [brief description of plant to be connected]	Host TO and Affected TO(s)		[Section C1 of CUSC Application Form]
Standard Planning Data included ?	Host TO and Affected TO(s)	[Yes/No]	[Section C2 of CUSC Application Form]
Connection Entry Capacity	Host TO and Affected TO(s)	[MW]	[Obtain from User/CAM]
Transmission Entry Capacity	Host TO and Affected TO(s)	[MW]	[Obtain from User/CAM]
Connection Security Requested	Host TO	[GBS/SS compliant connection and/or Design Variation Non-Firm connection]	[Obtain from User/CAM]
Programme * Requested Completion Date * Projected Date for Planning Application to be submitted * Projected Date for Planning Application to be awarded * Projected Date for Plant to be ordered * Projected Date to start construction (site mobilisation) * Projected Date for Completion of Construction	Host TO and Affected TO(s)		[Section D of CUSC Application Form]
Connection Charging Payment Options	Host TO	[Annual/Indicative, Annual/Firm, Advanced/Indicative, Advanced/Firm or None]	[Obtain from User/CAM]

NGET Construction Application - Version 0.5			
USE OF SYSTEM			
Data Required	Distribution [Host TO and/or Affected TO(s)]	Data Format [where appropriate]	Location of Data (where appropriate)
CAM Name	Host TO and Affected TO(s)		
CAM Telephone Number	Host TO and Affected TO(s)	[01926 65xxxx]	
Host TO	Host TO and Affected TO(s)		
Affected TO	Host TO and Affected TO(s)		
User	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
User's Registered Company Details	Host TO and Affected TO(s)		[Section A1 of CUSC Application Form]
Site Name	Host TO and Affected TO(s)		[CAM to advise or Section D1 of CUSC Application Form]
GB Reference Number	Host TO and Affected TO(s)	[Number on GB Tracker]	
User Application Date received by NGET	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Date Use of System Application emailed to TO(s)	Host TO and Affected TO(s)	[DD/MM/YYYY]	
Level of Application Fee	Host TO and Affected TO(s)	[£]	[Obtain from CAM]
Application Fee received	Host TO and Affected TO(s)	[Yes/No]	[Obtain from CAM]
* Intended location of User's Plant and Apparatus (preferably by reference to an extract from an ordinance survey map)	Host TO		[Section B1 of CUSC Application Form]
* If User believes that a new substation will be needed, User's proposed plan(s) of the suggested location	Host TO		[Section B2 of CUSC Application Form]
Overview of what application is for [brief description of plant to be connected]	Host TO and Affected TO(s)		[Section C1 of CUSC Application Form]
Standard Planning Data included ?	Host TO and Affected TO(s)	[Yes/No]	[Section C2 of CUSC Application Form]
Copy of User's Safety Rules	Host TO	[Included/Already Provided/Will be Provided later]	[Section C3 of CUSC Application Form]
Transmission Entry Capacity	Host TO and Affected TO(s)	[MW]	[Section C5 of CUSC Application Form]
Connection Security Requested Programme	Host TO	[GBSQQS compliant connection and/or Design Variation Non-Firm connection]	[Section C5a/C5b of CUSC Application Form]
* Requested Completion Date			
* Projected Date for Planning Application to be submitted			
* Projected Date for Planning Application to be awarded			
* Projected Date for Plant to be ordered			
* Projected Date to start construction (site mobilisation)			
* Projected Date for Completion of Construction	Host TO and Affected TO(s)		[Section D of CUSC Application Form]



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)	NGET as NETSO	NGET	Lead details Name: Contact No: Email:	Add additional rows as required
	Host OFTO	NoneNGET	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:	
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; <ul style="list-style-type: none"> ▪ 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 ▪ <u>If this is an offshore connection and thus whether the Applicant is undertaking an OTSDUW Build</u> 			

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

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.

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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. ~~Great Britain 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 ~~investigate the overall~~ 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 optimalbest way to connect [Insert project name]. This process enables NGET and the Affected Parties~~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.

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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)

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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

Site	Distance (km)		
	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 NGET 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 4]	Describe any technical / connection issues	<p>Minimal / Local/Moderate / Extensive</p> <p>(Delete as appropriate and include a short summary of the required works) E.g.</p> <ul style="list-style-type: none"> ▪ A new substation is required ▪ New xxkm OHL 	Provide high level summary of environmental issues where applicable.	<p>Discounted / Parked / Taken Forward</p> <p>(Delete as appropriate and include reasoning for the overall appraisal)</p>
SITE B 275kV	[Insert distance]				
SITE C 400kV	[Insert distance]				

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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.

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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 NGET for the stage 3 economic assessment.

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

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

In this section, NGET will combine the options taken forward from stage 1 and stage 2 to provide a list of options for economic assessment. NGET 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	<ul style="list-style-type: none"> 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)
--

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

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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]

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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 re-conductoring 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, NGET will undertake a cost benefit analysis to account for the total life cost of the options. As part of this assessment;

- NGET will utilise the capital costs of the options as provided by the Transmission Owners
- NGET 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
- NGET will calculate the Net Present Value using the Spakman approach which is used in discounting CBAs that involve private investment for public benefit⁵

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

Appendix B3 - - TO/NGET Indemnity Proposal

TO/NGET Indemnity Proposal under STCP 18-1	
NGET Scheme Number:	
Proposal no.:	(Format: YYYY/MM/DD/TO/????)
To:	NGET
From (contact at TO):	
Contact at NGET:	
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								
NGET Scheme Number								
Scheme Description								
To (at NGET):								
From (at TO):								
Contact at NGET:								
Indemnity Reference	User	Site	Indemnity signing date	Indemnity expiry date	Target date for Agreement signing	Total Value £(ex vat)	Latest Commitments £(ex vat)	Comments

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

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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 date¹
- Scheme Completion date (Charging commencement date)^{1,2}
- Commissioning Programme Commencement Date¹
- Site Access date
- Consents requirements and anticipated dates
- Description of any User Works¹
- Description of any Third Party works and associated dates¹
- Any special terms
- Single line diagram of connection with connection/infrastructure boundary shown

¹Staged where the Applicant has applied for a phased connection

²Independent 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 NGET 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 NGET and between the User and the TO.

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

C4.3.1.3 The TO Construction Offer to NGET 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 Electronic Data Communication Facilities (Grid Code CC6.5.8); or
- a fax machine.

C4.3.1.5 To the extent that NGET requires these facilities, NGET 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 NGET 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 NGET and between the User and the TO.

C4.3.2.2 The TO Construction Offer to NGET 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 CC6.5.7);
- or Electronic Data Communication Facilities (Grid Code CC6.5.8); or
- a fax machine.

C4.3.2.4 To the extent that NGET requires these facilities, NGET 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 NGET, 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 NGET 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 CC6.5.7):
- or Electronic Data Communication Facilities (Grid Code CC6.5.8):

- PSTN connection:
- fax machine: or
- extension bell.

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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 NGET shall include terms for the collection and transmission of the following User data via the TO (or as agreed) SCADA system to NGET. 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)

(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 NGET 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 NGET, 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 NGET via the TO SCADA system.

(d) ASB Monitoring Equipment

Where requested by NGET, the TO Construction Offer to NGET shall include terms

for the installation of ASB Monitoring Equipment and associated communications infrastructure which shall be issued free to the TO by NGET.

C5.3.2 Special Classes of Generators

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) Black Start Power Stations

For Power Stations that have entered into contracts with National Grid to provide a Black Start capability. Such 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 NGET, 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 NGET shall include terms for the collection and transmission of the following User data via the TO (or as agreed) SCADA system to NGET. 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 NGET.

C5.3.5.2 The SCADA data to be collected shall be as agreed with NGET, 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 / MVA _r / Volts
Transformer	Low Voltage MW / MVA _r / Volts: Winding temp / Tap position / MVA _r from tertiary winding where compensation is fitted
Quad Booster	MW / MVA _r / Volts / Winding temp / Tap position
Bus Section / Coupler CB	Amps
Shunt / Series Reactor	Mw / MVA _r / Winding Temp
Reactive compensation	MVA _r
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	In/ Out

scheme	
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 NGET.

C5.3.7 Remote Control Facilities

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

C5.3.8 Accuracy of Measurement Chain

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

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

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 NGET may preclude the signing of the other. In such circumstances, when NGET 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 NGET shall inform the TO(s) and provide the TO with revised Construction Planning Assumptions in respect of the NGET Construction Application relating to the recipient who has not signed following the process in 3.3.7

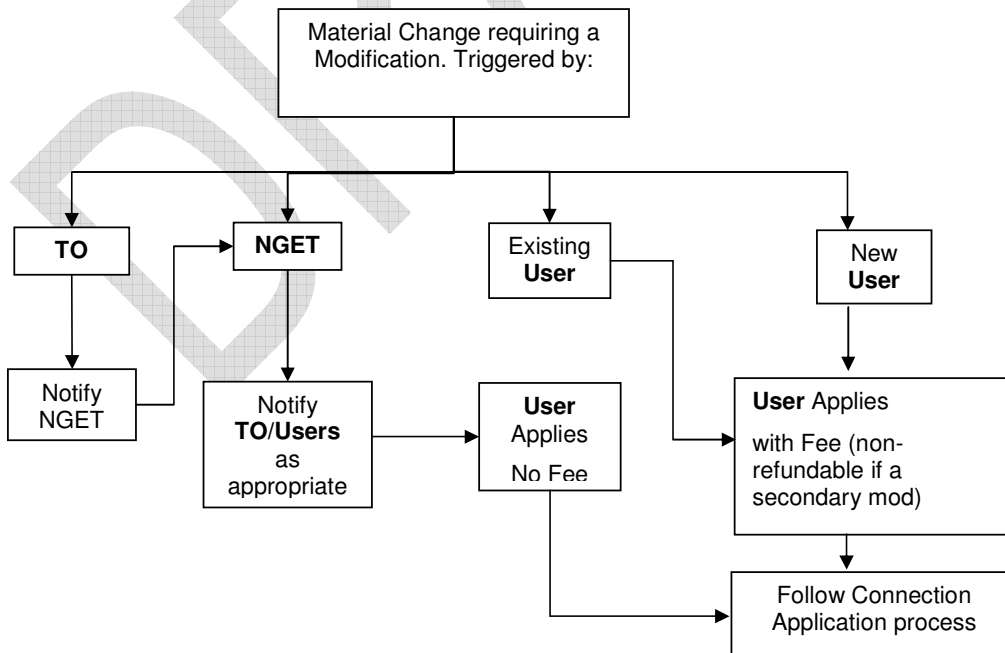
If a TO Construction Offer is signed by NGET which affects a TO Construction Offer being prepared then NGET shall provide the TO with revised Construction Planning Assumptions following the process in 3.3.7

The Host TO and any Affected TO(s) (as appropriate) should inform NGET 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 NGET

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

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

NGET 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.

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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
SHETL	Scottish Hydro-Electric Transmission Limited
SPT	SP Transmission Limited
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
National Electricity Transmission System
New Connection
NGET
NGET Construction Application Offshore Tender Regulations
Outage
One Off Works
Party
Power Station
Relevant Connection Site
TO Construction Agreement
TO Construction Offer
Transmission Transmission Connection Asset(s)
Transmission Owner
Transmission System
User Application
User Application Date
User Works

Grid Code definitions used:

Control Point
Demand

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