STCP19-3 Issue 009 Operational Notification & Compliance Testing

CM089 – Electricity System Restoration Standard
21 April 2023

STC Procedure Document Authorisation

Company	Name of Party Representative	Signature	Date
National Grid Electricity System Operator Ltd			
National Grid Electricity Transmission plc			
SP Transmission plc			
SHE Transmission plc			
Offshore Transmission Owners			

STC Procedure Change Control History

Issue 001	04/07/2005	First Issue following BETTA Go-Live
Issue 002	25/10/2005	Incorporating change PA034 & PA037
Issue 003	18/05/2006	Incorporating change PA046
Issue 004	20/03/2008	Incorporating change PA049
Issue 005	25/11/2013	Incorporating changes PA066 and Offshore amendments
Issue 006	25/06/2018	Minor updates to reflect current practice.
Issue 007	01/04/2019	Incorporating changes for National Grid Legal Separation
Issue 008	01/08/2019	'Consequential STC Updates following implementation of RfG and HVDC into the GB Grid Code'
Issue 009	06/04/2022	Incorporating changes for PM0123
Issue 010	18/05/2023	Issue 010 incorporating changes to facilitate the Electricity System Restoration Standard

1 Introduction

1.1 Scope

1.1.1 To connect or use the National Electricity Transmission System (NETS), a User must comply with the requirements of the CUSC. This procedure outlines the responsibilities of NGESO and the TO associated with checking Compliance that involve NGET or affect the TO.

1.1.2 A User request for connection to the NETS may require a New Connection Site to be provided by the TO, or may require a modification to an existing Connection Site, either of which may necessitate reinforcement of the NETS.

1.1.3 NGESO shall procure that relevant Grid Code and site specific contractual requirements are met. This may be managed through the Operational Notification Panel (ONP) chaired by NGESO.

1.1.4 Where a request to change an existing connection has Compliance implications which may involve or affect a TO, NGESO and the TO(s) shall agree which parts of this procedure are required and which parts of this procedure may be omitted.

1.1.5 For the avoidance of doubt, User information shall only be exchanged between Parties when required by the TO and in accordance with STC Schedule 3.

1.1.6 This procedure applies to NGESO and each TO. For the purpose of this document, the TOs are:

- NGET
- SPT;
- SHE-T; and
- All Offshore Transmission Owner as appointed by the Authority. (For the avoidance of doubt, this includes Preferred Bidders)

1.1.7 This procedure sets out the requirements for the exchange of information in respect of Compliance between NGESO and each TO associated with a User request for connection to or use of the NETS. However, it should be noted that this does not cover the full process that is triggered by a request for embedded generation, as the DNO interfaces are not reflected in STCPs. The additional details are incorporated in an agreement involving the DNOs.

1.2 Objectives

1.2.1 The objectives of this procedure are to specify:

- the responsibilities of Parties in relation to Energisation Operational Notification (EON)/Interim Operational Notification (ION)/Final Operational Notification (FON) and Compliance Testing activities;
- the requirements for exchange of information between Parties related to EON/ION/FONs and Compliance activities;
- an outline structure for the organisation of data; and
- the means of communication to be used across the NGESO – TO interface.

1.2.2 This procedure includes the Parties' responsibilities in respect of Compliance which involve or affect TO Plant and/or Apparatus. This applies to all requests and data changes submitted by Users for connection to or use of the NETS.

1.2.3 Appendix B contains a summary of responsibilities on Parties with respect to EON/ION/FON and Compliance Testing.

1.2.4 For the avoidance of doubt the testing and energisation of TO Plant and/or Apparatus is covered under STCP 19-4 Commissioning and Decommissioning.

2 Key Definitions

2.1 For the purposes of STCP 19-3 Operational Notification & Compliance Testing:

2.1.1 **Commissioning Panels** are the panels chaired by the TO to manage and facilitate the commissioning and decommissioning of Plant and/or Apparatus.

2.1.2 **Compliance** means the Compliance of User Equipment to the requirements of the Grid Code, CUSC, Construction Agreements and the User's Bilateral Agreement and "Compliant" shall be construed accordingly. As per the procedure outlined in the Compliance Process section of the Grid Code.

2.1.3 **Compliance Monitoring Statement** means a statement produced by NGESO or a TO (in accordance with Appendix A1) for each new connection covering all areas of Compliance. NGET and the TO are to produce their own Compliance Monitoring Statement.

2.1.4 **Compliance Testing** means the process validating User Equipment for Compliance.

2.1.5 **Distribution Network Operator (DNO)** means a holder of a Distribution Licence.

2.1.6 **Energisation Operational Notification** (EON) means a certificate issued by NGET to the User prior to energisation (see example in Appendix A3), as per the procedure outlined in the Compliance Process section of the Grid Code.2.1.7 **Final Operational Notification (FON)** means a certificate issued by NGESO to the User following successful completion of the Compliance process (see example in Appendix A7), as per the Compliance Process section of the Grid Code.

2.1.8 **Host TO** means either;

(i) the TO of the Connection Site or New Connection Site; or

(ii) in the case of an Embedded User, the TO to which the relevant Distribution System is connected.

2.1.9 **Interim Operational Notification (ION)** means a certificate issued by NGESO to the User prior to synchronisation (see example in Appendix A5), as per the procedure outlined in the Compliance Process section of the Grid Code.

2.1.10 **Operational Notification Panel (ONP)** means a panel chaired by NGESO comprising of the parties in 3.1.2 to ensure Compliance.

2.1.11 **Relevant Standards** means the NETS SQSS.

2.1.12 **Schedule of Unresolved Compliance Issues** means a register of outstanding Compliance issues attached to the ION which require resolution prior to the issue of the FON.

2.1.13 **Certificate of Readiness (COR)** means a statement from a User indicating that User Equipment is ready to be energised or synchronised, as appropriate.

2.1.14 **User Data File Structure** (UDFS) means the file structure specified by NGESO which will be used by the User to submit information demonstrating Compliance. The UDFS is submitted by the User prior to issue of an EON/ION/FON. (see example in Appendix A8).

3 Procedure

3.1 Operational Notification Panel (ONP)

3.1.1 The ONP's function is to assist the Compliance process. For the avoidance of doubt, the ONP's objectives do not remove a similar obligation placed on a Party, and where an objective of the ONP is not achieved, a similar obligation shall remain on the relevant Party, where one exists.

3.1.2 The ONP shall comprise technical, operational and commercial representation from NGESO and the User, and technical and operational representation from the TO.

3.1.3 The objectives of the ONP may include :-

- to exchange Parties contact details with the User for Compliance issues;
- to provide the User with generic guidance about the Compliance process;
- to ensure that the process leading to the issue of an EON/ION/FON is implemented as appropriate;
- to discuss /explain the technical requirements the User will have to meet in relation to the Relevant Standards and Other Codes, and enduring data and data submission requirements and to implement this process;
- to identify any requirement for a new NETS boundary point registration with Elexon and identify any information exchange required between NGESO, the User and TO in respect of this. In identifying such requirement consideration should be given to Generation and Demand connections and (where appropriate) any Generation with associated Transmission connected demand.
- to effect the exchange of the Safety Rules (in accordance with CUSC and Grid Code requirements) and make the User aware of the Grid Code Safety From The System, and safety authorisation requirements;
- to exchange the names of Safety Co-ordinators acting on behalf of the User and TO (in accordance with Grid Code OC8b).
- to obtain confirmation that the Safety Co-ordinators acting on behalf of the User and TO are authorised and competent pursuant to the requirements of the Grid Code;
- to facilitate the exchange of technical and non-technical data between the User, NGESO and the TO relating to the User's Connection;
- to establish a forum for the review of the UDFS following submission by the User;
- to agree with the User the programme for checking the theoretical Compliance with Grid Code to be completed prior to the issue of an EON/ION, and the agreement of a programme for validation thereafter;
- to ensure the User submits the relevant documentation to demonstrate that their Plant and/or Apparatus is compliant to the Relevant Standards and Other Codes, during the different stages of the project;
- to agree the connection requirements for the first energisation or synchronisation, and identify any issues or restrictions relating to the assets involved;
- to ensure that the programme of Compliance Testing and checks have been successfully completed to allow either energisation or synchronisation of the User Equipment to the system; and
- to provide a forum to progress any issue of non-Compliance that may arise;

3.1.4 NGESO shall maintain notes of the meetings containing the actions, and the progress records, it may also receive progress reports from the Commissioning Panels as required. The ONP shall agree the schedule and nature of its meetings.

3.2 ONP Process

3.2.1 An ONP is required following:

- acceptance of an offer by a User for a connection to the NETS;
- acceptance of an offer by a User for a connection of a Large Power Station to a DNO's System; or
- receipt of a notification by NGESO of changes to be made to User Equipment.

3.2.2 If a change to an existing connection has Compliance implications that may involve or affect a TO, NGESO shall organise an initial meeting with the TO. At this meeting, NGESO and the TO shall agree which parts of this procedure are required and which parts may be omitted.

3.2.3 Where a site has a Bilateral Agreement and a Transmission Owner Construction Agreement (TOCA) then NGET and the relevant TO are to nominate a lead representative.

3.2.4 For Demand connections where the Compliance issues may be dealt with by the Commissioning Panels with no requirement for an ONP, NGESO shall seek agreement with the TO for this to be dealt with in accordance with STCP 19-4 Commissioning and Decommissioning. In such cases, the relevant sections of the UDFS provided by the User to NGET will be forwarded to the Commissioning Panels. NGESO shall procure User data reasonably required by the TO for Commissioning of Plant and/or Apparatus at the Connection Site to the prescribed timetable.

3.2.5 Any Party may propose that an ONP is not required. If all Parties agree that an ONP is not required, then any Compliance issues may be dealt with at any relevant Commissioning Panel(s).

3.2.6 If Parties agree that an ONP is required, NGESO shall organise a meeting between the User (including any User representatives), NGESO, the TO representatives and, where relevant, the appropriate DNO representatives. The purpose of this meeting is:

- to discuss/agree the timescales for Compliance Testing; and
- to discuss/ explain the Compliance process the User shall be required to meet for the connection requested and how this will be achieved.

3.2.7 When an ONP is required, NGESO shall set up and act as chairperson for the ONP, provide a point of contact for Compliance issues and ensure the operational notification process is implemented.

3.2.8 Following the establishment of the ONP, Parties and the affected User shall exchange contact names and contact details.

3.2.9 In accordance with the Grid Code, NGESO shall forward to the TO the list of the names of Safety Co-ordinators provided by the User to NGESO, together with written confirmation that the Safety Co-ordinators acting on behalf of the User have been certified authorised and competent by the User.

3.2.10 The TO shall notify the ONP of any issues affecting the operational capability of TO assets involved in Compliance Testing and checks, for establishing the User connection.

3.2.11 The TO shall be responsible for managing safety on the TO side of the ownership boundary and where access to the User Equipment is through the Transmission Site. The TO shall provide guidance to the User on how Safety From The System will be maintained and any safety authorisation requirements.

3.2.12 NGESO shall require the exchange and agreement of Safety Rules (in accordance with the CUSC and Grid Code) in relation to a Connection Site. The TO shall confirm to NGESO in writing when a copy of the User's Safety Rules have been received and approved, and when a copy of that TO Safety Rules have been sent to the User. NGESO shall confirm to the TO in writing when the TO's Safety Rules have been agreed by the User. Should a User fail to provide Safety Rules then the TO shall require NGESO to procure the User's Safety Rules.

3.2.13 The TO shall be responsible for managing their own Transmission works, protection, substation control co-ordination, and determining co-ordination requirements across the ownership boundary to the User at the Connection Site. Should the User fail to carry out any necessary co-ordination requirements identified by the TO then the TO shall be entitled to require NGET to resolve the issue with the User.

3.2.14 For each new connection or change to User Equipment, NGESO or the TO (as appropriate) shall produce the relevant parts of a Compliance Monitoring Statement. This shall be produced in accordance with Appendix A1 and shall cover all areas of Compliance that need to be satisfied prior to issue of an Interim Operational Notification (ION) or FON (as appropriate). NGESO shall then provide the affected TO(s) with copies of the Compliance Monitoring Statement.

3.2.15 NGESO shall procure that the User provides the technical and non-technical data and information set out in CUSC Section 2, the Grid Code and the relevant Bilateral Agreement. NGESO shall forward the appropriate technical data and information received from the User to the TO. For the avoidance of doubt the data provided to the TO shall include, but not be limited to, any data required for design and development of their Transmission System, including updates to Grid Code DRC data, network models and excitation models, and shall be provided in accordance with STC Schedule 3.

3.2.16 The TO shall provide Site Responsibility Schedules (SRS) for the Connection Site to NGESO prior to either energisation or synchronisation of the User Equipment. NGET shall procure that the User provides the data required by the TO for the SRS.

3.2.17 The TO shall confirm that the Operational Metering signals (as outlined in the TOCA), are being passed on from the User to NGESO.

3.2.18 In the case of a Transmission Site, the TO shall provide Operation Diagrams for the Transmission Site prior to either energisation or synchronisation of the User Equipment. NGET shall procure that the User provides the data required by the TO for the Operation Diagram.

3.2.19 In the case of a User Site, the TO shall provide the data required by the User for the creation of an Operation Diagram to NGESO. NGESO shall procure that the User provides the Operation Diagram to NGET and to the TO prior to either energisation or synchronisation of the User Equipment.

3.2.20 NGESO shall consider the NETS risks that may arise from the User Equipment being Synchronised to the NETS, identify any contingency arrangements required, and advise the TO and any TO appropriately.

3.2.21 Prior to the EON and ION being issued, NGESO shall extract from the UDFS provided by the User, and copy to the TO, the relevant parts of the technical data schedules for matters associated with the TO Construction Agreement. This will include all updates to Grid Code DRC data, network models and excitation models. If the relevant parts of the technical data schedules make references to external documents, those external documents should be provided to the TO.

3.2.22 NGSO shall ensure that the User or their representative will carry out such off-load Compliance Testing as required to ensure the User Equipment meets Compliance requirements.

3.2.23 NGESO shall review Compliance Testing documentation and may witness off load tests, and/or checks on User Equipment as considered appropriate by NGESO or the TO, and report back to the ONP. NGESO shall forward to the TO the results of tests relevant to the technical specification advised by the TO in the TO Construction Agreement. The TO may, with User agreement, make reasonable requests to review Compliance Testing documentation and may witness off load tests.

3.2.24 Completion of the ‘Approved Signature’ column in the Compliance Monitoring Statement in Appendix A1 can be electronic. i.e. it is sufficient for this to contain a date and the initials of the point of contact for NGESO or the TO.

3.2.25 NGESO shall review any remaining Compliance aspects of the UDFS and obtain resolution of any issues of non-Compliance from the User to both NGESO’s satisfaction and, with respect of the items discussed in section 3.2, the satisfaction of the TO.

3.3 Agreement for Energisation, Interim Operational Notification and Connection Site Specification (CSS)

3.3.1 On receipt of the Certificate of Readiness (COR) from a User, NGESO shall request confirmation from the TO that the TO is satisfied that the User Equipment can be Energised or Synchronised as specified in the COR. The TO's lead representative shall provide a letter of Authorisation to issue the EON or ION, as appropriate, to NGESO within 5 Business Days or where appropriate, provide NGESO with reasons as to why the EON or ION should not be released (see example of TO agreement to Energisation in Appendix A2, and example of TO agreement for ION in Appendix A4). This letter is to confirm that any TO construction works relating to the construction agreement are commissioned and operational, and there are no issues outstanding prior to the issuing of the EON or ION, as appropriate.

3.3.2 The TO shall submit to NGESO a Connection Site Specification prior to the issue of an EON or ION agreement. The TO must create or revise (as appropriate) any Connection Site Specification to reflect the information contained in the TO Construction Agreement.

3.4 Energisation Operational Notification (EON) and Interim Operational Notification (ION)

3.4.1 On receipt of the TO agreement for EON or ION, NGESO shall follow the Grid Code process for issuance of an EON or ION, to the User. A copy of the EON or ION will be provided to the TOs. The ION will include a Schedule of Unresolved Compliance Issues.

3.4.2 An EON and / or ION must be issued in accordance with this section prior to the first time a Generating Unit is either energised or Synchronised. Where there is a significant period between Energisation of new Plant or Apparatus connected to a Connection Site and the first time a Generating Unit is Synchronised at that Connection Site, NGESO shall issue an EON to the User for site demand only (in the form contained in Appendix A3).

3.5 Compliance Assessment

3.5.1 Following synchronisation of the User Equipment to the NETS, a programme of tests to confirm Compliance of the User Equipment will be proposed by the User for agreement by NGESO and the TOs. The tests may be witnessed by NGESO and, with User agreement, the TO. The TO may also make reasonable requests to review Compliance Testing documentation.

3.5.2 NGESO and TO shall co-ordinate activities to ensure that the control system models used by each Party accurately reflects as practically as possible the actual performance of User Equipment. The test results will be used to validate the control system models and data submitted previously to NGESO, where applicable, frequency control, voltage control and reactive capability.

3.5.3 NGESO shall update relevant parties of progress on unresolved Compliance issues by providing an updated ION from time to time.

3.6 Final Operational Notification (FON)

3.6.1 NGESO shall ensure the User complies with any site-specific technical conditions as set out in the Grid Code and the relevant Bilateral Agreement, including those specified by the TO in the TO Construction Agreement.

3.6.2 On successful completion of the Compliance Testing NGESO shall

- obtain a final UDFS from the User;
- confirm that NGESO has a valid control system model(s);
- request confirmation from the TO that the TO has valid control system model(s); and
- ensure that the data in the UDFS is the most up to date.

~~3.6.3 NGESO shall extract from the UDFS and copy to TO, the relevant parts of the technical data schedules for matters associated with the TO Construction Agreement including all updates to Grid Code DRC data, network models and excitation models. Wherever a User fails to provide any such documentation or notifications then the TO may require NGESO to obtain the appropriate documentation or notifications. If the relevant parts of the technical data schedules make references to external documents, those external documents should be provided to the TO.~~

3.6.3 NGESO shall extract from the UDFS and copy to TO, the relevant parts of the technical data schedules for matters associated with the TO Construction Agreement including all updates to Grid Code DRC data, network models and excitation models. Wherever a User fails to provide any such documentation or notifications then the TO may require NGESO to obtain the appropriate documentation or notifications. If the relevant parts of the technical data schedules make references to external documents, those external documents should be provided to the TO.

3.6.4 When NGESO is satisfied that the UDFS is suitably complete and that the User Equipment meets all the Compliance requirements, NGESO shall request confirmation, via email, from the TO that it is in agreement with the proposal to release the FON or to provide NGESO with reasons as to why they are unable to support the release of the FON.

3.6.5 Following confirmation from the TO, NGESO shall issue a FON to the User. A copy of the FON will be provided to the TO.

3.6.6 The TO shall update the Connection Site Specification as appropriate and submit such a revised Connection Site Specification to NGESO

3.7 Compliance post FON

3.7.1 If either NGESO or a TO has reasonable grounds to believe that a User is not Compliant in respect of the matters addressed in the ION and FON process:

3.7.1.1 That Party shall notify the other(s);

3.7.1.2 The Parties shall exchange such information as they have available concerning the suspected non-compliance; and

3.7.1.3 NGESO and the TO shall meet to discuss and agree any further action to be taken, which may include:

- gathering further information;
- raising issues with the User;
- NGESO requiring the User to partake in further Compliance verification. In such circumstances the TO shall provide NGESO with reasonable assistance, and NGESO shall provide to the TO any relevant technical information including all updates to Grid Code DRC data, network models and excitation models; or
- NGESO taking appropriate enforcement action.

3.8 User Data File Structure (UDFS)

3.8.1 To facilitate data sharing and organisation, all data provided by the User to NGESO as part of the Operational Notification and Compliance process will be located within a common and standard UDFS as specified in Appendix A8.

3.8.2 The UDFS is intended only as an as an outline structure to provide a common and consistent primary level of organisation for data and reports. NGESO and the TO will agree sub structures to the UDFS where deemed necessary to accommodate issues relating to particular connection sites.

3.8.3 For the avoidance of doubt the UDFS is limited to data relating to User owned equipment and data provided by the User relating to boundary and interface responsibilities. The content of

the UDFS will depend upon specific Bilateral Agreements and ownership boundaries.

3.8.4 The Lead Role (as marked in the UDFS in Appendix A8) is the Party responsible for reviewing the data.

3.8.5 The documentation contained within the UDFS is to be reviewed by the Party responsible for reviewing the data and written feedback is to be provided within 15 working days.

3.9 Embedded Connections

3.9.1 The TO is to advise NGESO of a lead TO representative for the ONP meetings, where there is a TOCA in place.

3.9.2 The TO is to amend and complete the TO Compliance Monitoring Statement as applicable removing any items not relevant to an embedded connection. If this is not required then this is to be agreed in advance with NGESO by the TO.

3.9.3 The TO's lead representative shall provide a letter of Authorisation to issue the ION to NGESO (see example of TO agreement to issue an ION in Appendix A4). This letter is to confirm that any construction works relating to the connection agreement are com missioned and operational, and there are no issues outstanding prior to the issuing of the ION.

A1: EXAMPLE OF COMPLIANCE MONITORING STATEMENT

An example of a Compliance Monitoring Statement spreadsheet is available on the STC website

https://www.nationalgrideso.com/codes/system-operator-transmission-owner-code?code-documents

A2: EXAMPLE OF TO AGREEMENT FOR ENERGISATION

National Grid Electricity
System Operator Ltd

National Grid House

Warwick Technology Park

Gallows Hill

Warwick

CV34 6DA

Ref

Ref

Date

Contact

Telephone no

Dear XXXXXX

[Power Station]– Agreement for Energisation

[TO] and National Grid Electricity System Operator (NGESO) are parties to a TO Construction Agreement dated *[date]* in respect of *[Power Station]* ("the Site") which facilitates the connection of the Site to the National Electricity Transmission System or use of the National Electricity Transmission System in respect of the Site.

NGESO has received a Certificate of Readiness (COR) from the User, and has asked SPT for confirmation that the User Equipment can be energised as specified in the COR attached to this letter.

[TO] hereby confirms its agreement, that NGESO may issue an Energisation Notice consistent with the attached COR.

Should you require any further information please contact *[*[TO]*,* telephone *[telephone number].*

[TO]

Before Synchronisation (ION):								
Special Automatic Facilities (e.g. intertrip)	TOCA	2.3	Yes					
Site Specific Technical, BCA App F5, evidence of compliance - System Monitoring	CC 6.6, TOCA	2.7	Yes					
Before Final Operational Notification:								
Compliance Tests on Demands (harmonics, flicker etc)	CC6.1.5-7, CC6.2.1.1, CC6.4.2	2.8	Yes					

A3: EXAMPLE OF ENERGISATION OPERATIONAL NOTIFICATION

Date: [ ]

Our Ref: [ ]

Your Ref:

For the Attention of [ ]

Company Secretary

[ ]

[ ]

[ ]

[ ]

[ ]

National Grid Electricity System Operator Ltd
National Grid House
Warwick
Technology Park
Gallows Hill
Warwick CV34 6DA

Tel No: 01926-65#### Fax No: 01926-65#### Mobile: ##########
#######@nationalgrid.com

[power station] – Energisation of [xxx]

Dear XXXXXX

[COMPANY NAME] – ENERGISATION OF [PROJECT NAME] FOR THE PURPOSES OF TAKING DEMAND - EFFECTIVE ON AND FROM [TODAY'S DATE]

National Grid Electricity System Operator ("The Company") and [Company Name] (the "User") are parties to a Bilateral Connection Agreement with reference [Agreement Reference] dated [Agreement Date], as amended from time to time, ("the Bilateral Agreement") and Construction Agreement with reference [Agreement Reference] dated [Agreement Date], as amended from time to time, ("the Construction Agreement") providing for connection to and use of the National Electricity Transmission System at [Connection Site] substation.

By submission of a Certificate of Readiness to Energise High Voltage Equipment dated [check date] the User notified The Company of its readiness to connect and Energise certain of its User's Equipment at [Connection Site] [known as and] as identified in such notification on [Today's Date].

The Company confirms pursuant to [Clause 7.1] of the Construction Agreement that with effect on and from [Today's Date] the User's Equipment identified in the Certificate of Readiness to Energise High Voltage Equipment shall become Operational for the sole purpose of taking Demand in accordance with Paragraph 2.4 of the Connection and Use of System Code (CUSC). Such right is without prejudice to the exercise of any rights that The Company may have under the CUSC, Grid Code, Bilateral Agreement and Construction Agreement, including without limitation the Disconnection and/or De Energisation of the User's Equipment.

Please note that this notification by The Company does not give the User any right to export onto the National Electricity Transmission System and therefore the User's Equipment shall not become

Operational for Transmission Entry Capacity pursuant to [Clause 7.2] of the Construction Agreement until The Company has issued an Interim Operational Notification in respect of [Project Name].

Terms defined in the CUSC, the Bilateral Agreement, the Construction Agreement and the Grid Code have the same meaning in this letter.

Should you require any further information regarding this matter please contact [Contract Compliance Manager Name] by telephone on 01926 65[Ext number].

A4: EXAMPLE OF TO AGREEMENT FOR INTERIM OPERATIONAL NOTIFICATION

National Grid Electricity System Operator Ltd
National Grid House
Warwick Technology
Park Gallows Hill
Warwick
CV34 6DA

Ref
Ref
Date

Name
Telephone No

Dear XXXXXX

[Power Station]– Interim Operational Notification

[TO] and National Grid Electricity System Operator Ltd (NGESO) are parties to a TO Construction Agreement dated [date] in respect of [Power Station] ("the Site") which facilitates the connection of the Site to the National Electricity Transmission System or use of the National Electricity Transmission System in respect of the Site.

NGESO has received notification of the User's intention to synchronise generating units at the Site on or after [date].

There are a number of matters which are unresolved at the present. These must be resolved before [TO] can consent to NGESO issuing a final Operational Notification in respect of the Site. These issues are summarised in the attached Schedule of Unresolved Compliance issues. The unresolved matters do not however form grounds for [TO] preventing NGT from issuing an interim Operational Notification (ION).

[TO] hereby confirms its agreement, that NGESO may issue an ION effective from *[Start Date]* to *[End Date]* ("the Term") subject to the condition that significant progress is made towards the resolution of the unresolved issues within the timescales listed in the schedule during the Term. On completion of the Term, [TO] will decide whether to permit NGESO to issue a further ION for a fixed period or a FON.

This letter is issued without prejudice to the exercise of any rights [TO] may have under or pursuant to the Grid Code, the System Operator Transmission Owner Code or the TO Construction Agreement.

Should you require any further information please contact *[TO Contact],* telephone *[telephone number].*

[TO]

A5: EXAMPLE OF INTERIM OPERATIONAL NOTIFICATION DOCUMENT

Date: [ ]

Our Ref: [ ]

Your Ref:

For the Attention of [ ]

Company Secretary
[ ]
[ ]
[ ]
[ ]
[ ]

National Grid Electricity System Operator Ltd

National Grid
House Warwick
Technology Park
Gallows Hill
Warwick CV34 6DA

Tel No: 01926-65####
Fax No: 01926-65####
Mobile: ##########
####@nationalgrid.com

[PROJECT NAME] POWER STATION – INTERIM OPERATIONAL NOTIFICATION

EFFECTIVE FROM [TODAY'S DATE] TO [FUTURE DATE]

National Grid Electricity System Operator Ltd ("The Company") and [Company Name] (the "User") are parties to a [Bilateral Connection Agreement/Bilateral Embedded Generation Agreement/Bilateral Embedded Licence exemptable Large power station Agreement] with reference [Agreement Reference] dated [Agreement Date], as amended from time to time (the "Bilateral Agreement") and Construction Agreement with reference [Agreement Reference] dated [Agreement Date], as amended from time to time (the "Construction Agreement")], providing for [connection to and use]/[use] of the National Electricity Transmission System at [Connection Site] substation.

The User has notified The Company of its intention to synchronise [Project Name] on or after [today's date]. Under [Clause 7] of the Construction Agreement, The Company is required to notify the User that the provisions of the Bilateral Agreement and the Construction Agreement have been complied with and that [Project Name] Power Station at the at [Connection Site] substation can therefore become Operational [at a Transmission Entry Capacity (TEC) of xxxMW] (an "Operational Notification") [subject to the Operational Restrictions in accordance with Clause xx of the Bilateral Agreement].

There are a number of matters which are unresolved at present which must be resolved before The Company can issue a Final Operational Notification (FON) in respect of [ ] Power Station. The current situation is summarised in the attached Schedule of Unresolved Issues. The unresolved matters do not however prevent The Company from issuing an Interim Operational Notification (ION).

The Company therefore confirms the issue of an ION effective from [today's date] to [future date] (the "Term") subject to the condition that significant progress be made towards the resolution of the unresolved issues within the timescales listed in the schedule during the Term. On completion of the Term, The Company will decide whether to issue an ION extension for a fixed period or a FON.

[This ION may be reviewed and reissued pursuant to Clause 7.x of the Construction Agreement in respect of [ ] Power Station becoming Operational at a TEC level above xxxMW.]

This ION is issued without prejudice to the exercise of any rights The Company may have under the Connection and Use of System Code (CUSC), the Grid Code, the Construction Agreement and the Bilateral Agreement, including without limitation the Disconnection and/or De Energisation of the User's Equipment.

Terms defined in the CUSC, the Grid Code, the Construction Agreement and the Bilateral Agreement have the same meaning in this letter.

Should you require any further information regarding this matter, or the attached schedule, please contact Contract Compliance Manager Name], telephone 01926 65[ext number].

[ ] Connection Site\Site of Connection

Schedule of Unresolved Compliance Issues in respect of [unit]

as at [date]

Item	GC* Ref	Issue – Brief Description	Programme to Resolve Including Expected End Date	Contact NGESO/Customer
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

A6: EXAMPLE OF FINAL OPERATIONAL NOTIFICATION

Date: [ ]
Our Ref: [ ]
Your Ref:

For the Attention of [ ]

Company Secretary
[ ]
[ ]
[ ]
[ ]
[ ]

National Grid Electricity System Operator Ltd
National Grid House
Warwick
Technology Park
Gallows Hill
Warwick CV34 6DA

Tel No: 01926-65####
Fax No: 01926-65####
Mobile: ##########
####@nationalgrid.com

Dear XXXXXX

[PROJECT NAME] POWER STATION – FINAL OPERATIONAL NOTIFICATION EFFECTIVE FROM [TODAY'S DATE]

Electricity System Operator Ltd ("The Company") and [Company Name] (the "User") are parties to a [Bilateral Connection Agreement]/[Bilateral Embedded Generation Agreement]/[Bilateral Embedded Licence exemptable Large power station Agreement]] and Construction Agreement with reference [Agreement Reference] dated [Agreement Date], as amended from time to time, providing for [connection to and use]/[use] of the National Electricity Transmission System at [Connection Site] substation.

On [Actual ION/LON issued date] The Company issued an [Interim/Limited] Operational Notification [("ION")/("LON")] in respect of [Project Name] Power Station which was to remain in effect until [check date] (the "Term"). [The [ION/LON] was subsequently extended on [[date] [and [insert subsequent dates]]] to remain in effect until [date] (the "Extended Term").] The Unresolved Issues associated with the [ION/LON] were set out in the schedule attached to the [ION/LON] [extension]. The [ION/LON] [extension] was issued subject to the condition that significant progress be made towards the resolution of the Unresolved Issues and on completion of the [Term/Extended Term], The Company would decide whether to issue [a further ION/LON]/[an ION/a LON] [extension] for a fixed period or a Final Operational Notification ("FON").

The Company is pleased to confirm that these issues have now progressed to the point where this FON for [Project Name] Power Station can be issued with effect from [today's date].

Terms defined in the CUSC, the Bilateral Agreement [, the Construction Agreement] and the Grid Code have the same meaning in this letter.

I should like to take this opportunity to wish every success to your Power Station in its future operation.

Should you require any further information regarding this matter please contact [Compliance Account Manager Name], on 01926 65 [ext number].

A7: USER DATA FILE STRUCTURE (UDFS)

The UDFS is intended as an outline structure to provide a common and consistent primary level of organisation for data and reports. Further sub structures are added where necessary to accommodate issues relating to particular connection sites.

The UDFS should be limited to data relating to Developer owned equipment and data provided by the Developer relating to boundary and interface responsibilities. The populated data will vary depending upon connection agreements and ownership boundaries.

The UDFS has five main sections

- Part A: Commercial & Legal
- Part 1: Safety & System Operation
- Part 2: Connection Technical data
- Part 3: Generation Technical Data
- Part 4: General DRC Schedules

'Commercial and Legal' contains all the legal agreements and statements and all the connection process and registration documents essential to the Operational Notification and Compliance process but which are not requirements of the Grid Code or BCA Technical Appendices.

'Safety and System Operation' contains all documents that relate to safety across the ownership boundary and the operational interface of the Users equipment.

'Connection Technical Data' contains Grid Code DRC schedule 5 and all other documents relating the capability, performance and protection of the connection site equipment and complete details of the connection site metering facilities and communications.

'Generation Technical Data' contains Grid Code DRC schedules 1, 2, 4 & 14 and all other documents relating to the capability, performance and protection of the Users generation equipment (where applicable). It includes results of all studies & tests needed to confirm generation performance compliance.

'General DRC Schedules' contains all the remaining DRC schedules other than 1, 2, 5, 4 & 14.

All DRC schedules must be self contained submissions and not reference other parts of the User Data Library. However if convenient other library submissions may reference the DRC schedules. NGESO will on request provide suitable pro forma's for DRC data schedules submissions.

A8: EXAMPLE UDFS STRUCTURE

User Data Library - Outline Structure	Lead Role	Indicative Data Sharing	
		NGET	TO
Part A: Commercial & Legal			
A.1 Signed Legal Agreements	NGESO	#	
A.2 Commissioning & Test Programmes			
Connection Site Commissioning & Test Programme	NGESO	#	#
Generating Unit Commissioning Program	NGESO	#	#
Generator Control Test Procedures and Programme	NGESO	#	#
A.3 Certificates of Readiness	NGESO	#	#
A.4 TOGA Registration Details	NGESO	#	
A.5 Mandatory Services Agreement	NGESO	#	
A.6 Codes for Balancing Market Units	NGESO	#	
A.7 BMU Registration	NGESO	#	
A.8 Balancing Mechanism Process	NGESO	#	
A.9 Ancillary Services Monitoring	NGESO	#	
Part 1: Safety & System Operation			
1.1 Interface Agreements	TO	#	#
1.2 Safety Rules	TO	#	#
1.3 Local Switching Procedures	TO	#	#
1.4 Earthing	TO	#	#
1.5 Site Responsibility Schedules	TO	#	#
1.6 Operational and Gas Zone Diagrams	TO	#	#
1.7 Site Common Drawings	TO	#	#
1.8 Control Telephony	TO	#	#
1.9 Local Safety Procedures	TO		#
1.10 Safety Co-ordinators	TO		#
1.11 RISSP	TO	#	#
1.12 Telephone Numbers for Joint System Incidents	NGESO	#	#
1.13 Contact Details (fax, tel, email)	NGESO	#	#
1.14 ~~Local Joint~~ Restoration Plan (incl. System Restoration~~black start~~ if applicable)	TO	#	#
1.15 Maintenance Standards	TO	#	#

Part 2: Connection Technical Data			
2.1 DRC Schedule 5 - Users System Data			
2.1.1 System Configuration Data			
Users System Layout & Single Line Diagram	TO	#	#
Reactive Compensation	TO	#	#
Substation Infrastructure	TO	#	#
Circuit Parameters	TO	#	#
Transformer Data	TO	#	#
Switchgear Data	TO	#	#
2.1.2 Protection Systems			
User System protection and settings	TO	#	#
User System Auto Reclose facilities & settings	TO	#	#
User System protection and settings	TO	#	#
Circuit Breaker Fail	TO	#	#
Generator Transformer protection and settings	TO	#	#
System Fault Clearance Times	TO	#	#
Generator protection and settings	TO	#	#
2.1.3 User System Studies (if required)	TO	#	#
2.2 Protection Settings Reports			
2.2.1 Protection Discrimination Review	TO	#	#
2.2.2 Protection of Interconnecting Connections	TO	#	#
2.3 Special Automatic Facilities e.g. intertrip	TO	#	#
2.4 Operational Metering	TO	#	#
2.5 Tariff Metering	Elexon	#	#
2.6 Operational Communications	NGESO		
2.6.1 EDL & EDT	NGESO	#	#
2.7 Performance Monitoring			
2.7.1 Ancillary Services Monitoring	NGESO	#	#
2.7.2 Fault Recorder	TO	#	#
2.7.3 Dynamic System Monitor (if required)	TO	#	#
2.7.4 Power Quality Monitor (if required)	TO	#	#
2.8 Power Quality Test Results (if required)	TO	#	#
Part 3: Generator Technical Data			
3.1 DRC Schedule 1 - Generating Unit Technical Data			
3.1.1 Table of Generator Parameters	NGESO	#	#
3.1.2 Controls System Details	NGESO	#	#

3.1.3 Generator / Station Model	NGESO	#	#
3.1.4 Power Quality - Harmonic Assessment Information	NGESO	#	#
3.2 DRC Schedule 2 - Generation Planning Data	NGESO	#	#
3.3 DRC Schedule 4 – Frequency Droop & Response	NGESO	#	#
3.4 DRC Schedule 14 – Fault Infeed Data - Generators	NGESO	#	#
3.5 Special Generator Protection			
Pole Slipping Protection	NGESO	#	#
Islanding Protection Schemes	NGESO	#	#
3.6 Compliance Tests & Evidence			
3.6.1 Reactive Capability	NGESO	#	#
3.6.2 Voltage Control (e.g. Excitation, AVR PSS)	NGESO	#	#
3.6.3 Frequency Response (Governor)	NGESO	#	#
3.6.4 Fault Ride Through	NGESO	#	#
3.7 Compliance Simulation Studies			
3.7.1 Model Verification	NGESO	#	#
3.7.2 Reactive Capability & Voltage Range	NGESO	#	#
3.7.3 Voltage Control & Stability (e.g. AVR, PSS)	NGESO	#	#
3.7.4 Fault Ride Through	NGESO	#	#
3.8 Site Specific Technical Data & Compliance			
3.8.1 Special Automatic Facilities e.g. intertrip	NGESO	#	#
Part 4: General DRC Schedules			
4.1 DRC Schedule 3 – Large Power Station Outage Information	NGESO	#	
4.2 DRC Schedule 6 – Users Outage Information	NGESO	#	
4.3 DRC Schedule 7 – Load Characteristics	NGESO	#	
4.4 DRC Schedule 8 – BM Unit Data (if applicable)	NGESO	#	
4.5 DRC Schedule 10 – Demand Profiles	NGESO	#	
4.6 DRC Schedule 11 – Connection Point Data	NGESO	#	

UDFS Content Guidance

In general all submissions should be in the following file formats.

- Specifications, Statements, Agreements and Technical Reports in PDF format
- Signed Documents in scanned PDF format.
- Test result data points in XLS format (e.g. Excel ®)
- Performance Charts/Plots PDF and/or XLS format.
- Drawings in PDF or DWG format.

Appendix B: Register of Responsibilities on Parties

B.1 Responsibilities on the ONP

- The ONP have no specific responsibilities, rather are a tool to assist other parties in fulfilling their responsibilities. The objectives of the ONP are listed in section 3.1 of this procedure.

B.2 Responsibilities on NGESO

- Nominate a Lead Compliance Representative
- Forward to the TO the list of Safety Co-ordinators
- Require the exchange of Safety Rules (when the TO and User can not do so)
- Require co-ordination of transmission works (when the TO and User can not do so)
- Produce the Part 1 of the Compliance Monitoring Statement (see Appendix A1), and ensure that the User fully complies with the Compliance Monitoring Statement.
- Require the User to meets technical requirements as set out in the Bilateral Agreement. If the User does not forward this data to the TO, NGESO shall ensure that they does so.
- Ensure co-operation between User and TO With respect to the SRS and Operational Diagrams
- Ensure that the User complies with any site specific technical conditions as set out in the Grid Code and the Bilateral Agreement.
- Extract from the UDFS relevant parts and copy to the TO. Review content within 15 working days.
- Review any Compliance issues.
- Witness any off load Compliance Testing and Compliance Testing documentation as necessary. Also ensure that off load Compliance Testing and Compliance Testing documentation have occurred / are in place.
- Issue EONs.
- Issue IONs.
- Agree programme of tests following synchronisation.
- Obtain the final UDFS, extract and sent relevant parts to the TO.
- Issue FON.

B.3 Responsibilities on TO

- Nominate a lead TO Representative
- Identify issues affecting the operational capacity of TO assets involved in Compliance Testing.
- Manage Safety on the TO side of the connection boundary
- Confirm to NGESO when Safety Rules have been exchanged
- Review TO elements of the UDFS within 15 working days, providing written feedback.
- Produce the Part 2 of the Compliance Monitoring Statement (see Appendix A1),
- Manage transmission works, co-ordinate works with Users
- Provide SRS and Operational Diagrams
- Submit technical specification of requirements to NGESO

Appendix C: Abbreviations & Definitions

Abbreviations

CUSC	Connection and Use of System Code
COR	Certificate of Readiness
DNO	Distribution Network Operator
EON	Energisation Operational Notification
FON	Final Operational Notification
ION	Interim Operational Notification
SHE-T	Scottish Hydro Electric Transmission plc
SPT	SP Transmission plc
SOC	Statement of Completeness
STC	System Operator Transmission Owner Code
TO	Transmission Owner
UDFS	User Data File Structure

Definitions

STC definitions used:
Agreement for Energisation
Agreement for Interim Operational Notification
Apparatus
Connection
Connection Site
Connection Site Specification
National Electricity Transmission System (NETS)
Interim Operational Notification
NGET
NGESO
Other Codes
Party
Plant
Power Station
Restoration Plan
Safety Rules
System Restoration
Site Responsibility Schedule (SRS)
TO Construction Agreement
Transmission System
User

CUSC definitions used:
Bilateral Agreement
Bilateral Connection Agreement
Construction Agreement
Operational Notification

Grid Code definitions used:
Operation Diagrams
Transmission Site
Statement of Readiness

Definition used from other STCPs:

Affected TO	As defined in STCP 18-1: Connection and Modification Application
Host TO	As defined in STCP 18-1: Connection and Modification Application