

DRAFT CHANGES TO GRID CODE TO INTRODUCE ASPECTS OF COMPLIANCE PROCESS FOR WORKING GROUP DISCUSSION

GLOSSARY & DEFINITIONS

New defined terms for inclusion in the G&D:

Compliance Statement	A statement, utilising the form provided by NGET , to be duly completed and signed by a Generator or DC Converter Station owner detailing the compliance against the relevant Grid Code provisions and the supporting evidence in respect of such compliance, of the Generating Unit(s) , CCGT Module(s) , Power Park Module(s) or DC Converter(s) in the form provided by NGET to the Generator or DC Converter Station owner.
<u>Energisation</u> Operational Notification —Energisation	Notification by NGET to a User confirming that the User can in accordance with the Bilateral Agreement and/or Construction Agreement , and in the case of Embedded Medium Power Stations in accordance with the CUSC , energise such User's Plant and Apparatus specified in such notification.
<u>Final</u> Operational Notification —Final	Notification by NGET to a Generator or DC Converter Station owner confirming that the Generator or DC Converter Station owner has demonstrated compliance with the Grid Code <u>to NGET's satisfaction</u> (and/or where applicable that the relevant Derogations have been granted) and where applicable, with <u>Appendices F1 to F5 of the CUSC Contract(s)</u> Bilateral Agreement in respect of the User's Plant and Apparatus specified in such notification. <u>[Need to capture Appendix E when addressing LEEMPS]</u>
<u>Interim</u> Operational Notification —Interim	Notification by NGET to a Generator or DC Converter Station owner acknowledging that the Generator or DC Converter Station owner has demonstrated compliance <u>to NGET's satisfaction</u> except for the Unresolved Compliance Issues , with the Grid Code and where applicable, with <u>Appendices F1 to F5 of the CUSC Contract</u> Bilateral Agreement in respect of the User's Plant and Apparatus specified in such notification. <u>[Need to capture Appendix E when addressing LEEMPS]</u>
Operational	Where a Generating Unit, CCGT Module, Power Park Module or DC Converter is energised and Synchronised.

Operational Notifications	Any Operational Notification → Energisation, Operational Notification → Interim, Operational Notification → Final <u>Operational Notification</u> issued by NGET.
Notification of Users Intention to Synchronise	Notification by a Generator or DC Converter Station owner to NGET advising <u>informing</u> that of the date upon which a Generating Unit(s) , CCGT Module(s) , Power Park Module(s) or DC Converter(s) is <u>will be</u> ready to be Synchronised to the Total System .
Unresolved Compliance Issues	Any issues referred to as such in <u>the compliance issues identified by NGET as not having been demonstrated by the Generator or DC Converter Station owner to NGET's satisfaction at a certain date and detailed in the Interim</u> Operational Notification – Interim.
User Data Library	A file structure (a specimen of which is included for information purposes at CCXXXDRCXXX) which will be provided by NGET under which a Generator or DC Converter Station owner shall <u>for the purposes of CC.5</u> submit DRC data Schedules and information demonstrating compliance with the Grid Code and where appropriate, with the CUSC Contract(s) .
User Self Certification of Compliance	A certificate, in the form attached at CCXXXCC.A.XX , signed by a Generator or DC Converter Station owner <u>to which the Compliance Statement is attached</u> and provided to NGET in the required timescales in respect of its Plant and Apparatus which is the subject of the procedure set out at CC.4 and CC.5 which certifies that such Plant and Apparatus complies with the Grid Code and where appropriate, with the CUSC Contract(s) , and, if appropriate, identifies any <u>Unresolved Compliance Issues and/or any</u> exceptions to such compliance and details the Derogation(s) granted in respect of such exceptions.

CONNECTION CONDITIONS

CC.1 INTRODUCTION

CC.1.1 The **Connection Conditions** ("CC") specify both the minimum technical, design and operational criteria which must be complied with by any **User** connected to or seeking connection with the **GB**

Transmission System or **Generators** (other than in respect of **Small Power Stations**) or **DC Converter Station** owners connected to or seeking connection to a **User's System** which is located in **Great Britain**, and the minimum technical, design and operational criteria with which **NGET** will comply in relation to the part of the **GB Transmission System** at the **Connection Site** with **Users**.

CC.1.2 The **CC** also details the process which must be followed by any **Generator** or **DC Converter Station** owner to demonstrate its compliance with the **Grid Code**. This process ~~is designed to~~shall be followed prior to and during the course of the **User's Plant** and **Apparatus** ~~becoming~~Operational~~being energised and Synchronised~~. *[Note need to adapt for LEEMPS]*

CC.2 OBJECTIVE

CC.2.1 The objective of the **CC** is to ensure that by specifying minimum technical, design and operational criteria the basic rules for connection to the **GB Transmission System** and (for certain **Users**) to a **User's System** are similar for all **Users** of an equivalent category and will enable **NGET** to comply with its statutory and **Transmission Licence** obligations.

CC.3 SCOPE

CC.3.1 The **CC** applies to **NGET** and to **Users**, which in the **CC** means:

- (a) **Generators** (other than those which only have **Embedded Small Power Stations**)
- (b) **Network Operators**;
- (c) **Non-Embedded Customers**;
- (d) **DC Converter Station** owners; and
- (e) **BM Participants** and **Externally Interconnected System Operators** in respect of CC.6.5 only.

CC.3.2 The above categories of **User** will become bound by the **CC** prior to them generating, distributing, supplying or consuming, as the case may be, and references to the various categories should, therefore, be taken as referring to them in that prospective role as well as to **Users** actually connected.

CC.3.3 The obligations within the **CC** that are expressed to be applicable to **Generators** in respect of **Embedded Medium Power Stations** not subject to a **Bilateral Agreement** and **DC Converter Station** Owners in respect of **Embedded DC Converter Stations** not subject to a **Bilateral Agreement** (where the obligations are in each case listed in CC.3.4) shall be read and construed as obligations that the **Network Operator** within whose **System** any such **Medium Power Station** or **DC Converter Station** is **Embedded** must ensure are performed and discharged by the **Generator** or the **DC Converter Station** owner.

CC.3.4 The **Network Operator** within whose **System** a **Medium Power Station** not subject to a **Bilateral Agreement** is **Embedded** or a **DC Converter Station** not subject to a **Bilateral Agreement** is **Embedded** must ensure that the following obligations in the **CC** are performed and discharged by the **Generator** in respect of each such **Embedded Medium Power Station** or the **DC Converter Station** owner in the case of an **Embedded DC Converter Station**:

CC.5.1
CC.5.2.2
CC.5.3
CC.6.1.3
CC.6.1.5 (b)
CC.6.3.2, CC.6.3.3, CC.6.3.4, CC.6.3.6, CC.6.3.7, CC.6.3.8, CC.6.3.9, CC.6.3.10, CC.6.3.12, CC.6.3.13, CC.6.3.15, CC.6.3.16
CC.6.4.4

In respect of CC.6.2.2.2, CC.6.2.2.3, CC.6.2.2.5, CC.6.1.5(a), CC.6.1.5(b) and CC.6.3.11 equivalent provisions as co-ordinated and agreed with the **Network Operator** and **Generator** or **DC Converter Station** owner may be required. Details of any such requirements will be notified to the **Network Operator** in accordance with CC.3.5.

CC.3.5 In the case of **Embedded Medium Power Stations** not subject to a **Bilateral Agreement** and **Embedded DC Converter Stations** not subject to a **Bilateral Agreement** the requirements in:

CC.6.1.6
CC.6.3.8
CC.6.3.12
CC.6.3.15
CC.6.3.16

that would otherwise have been specified in a **Bilateral Agreement** will be notified to the relevant **Network Operator** in writing in accordance with the provisions of the **CUSC** and the **Network Operator** must ensure such requirements are performed and discharged by the **Generator** or the **DC Converter Station** owner.

CC.4 PROCEDURE

CC.4.1 The **CUSC Contract(s)** contain certain provisions relating to the procedure for connection to the **GB Transmission System** or, in the case of **Embedded Power Stations** or **Embedded DC Converter Stations**, becoming **Operational**operational and include provisions relating to certain conditions to be complied with by **Users** prior to and during the course of **NGET** notifying the **User** that it has the right to become **Operational**operational.

CC.4.2 The provisions contained in CC.4 and CC.5 relate to the connection of **User's Plant** and **Apparatus** to the **GB Transmission System** or where **Embedded**, to a **User's System**, and additionally for **Generators** and **DC Converter Station** owners the process for

~~demonstration of demonstrating~~ compliance by such **Generators** and **DC Converter Station** owners with the **Grid Code** and with, where appropriate, the **CUSC Contract(s)** prior to and during the course of such **User's Plant** and **Apparatus** becoming ~~Operational~~operational. CC.4 contains details of the process to be followed in order for the **User's Plant** and **Apparatus** to become ~~Operational~~operational. CC.5 specifies the details which must be submitted by the **User** to **NGET** at specific times in the process ~~to become Operational. of becoming operational~~. In addition CC.5 specifies the testing requirements that must be performed and which must be demonstrated to **NGET's** satisfaction at specific times in the process ~~to become Operational of becoming operational~~. For illustration purposes only, this process is ~~shown~~illustrated diagrammatically at CC.A.XX.

Energisation Operational Notification

CC.4.3 Certain provisions relating to the connection and energisation of the **Connection Site** are specified in the **CUSC** and/or **CUSC Contract(s)** (CC.5.1 refers). The obligations under the provisions of the **CUSC** and/or **CUSC Contract(s)** must have been completed to **NGET's** satisfaction and an Energisation Operational Notification ~~—Energisation~~ must have been issued by **NGET** prior to the remainder of this CC.4.3 being completed. The remainder of this CC.4.3 details the ~~provisions required of requirements that apply to~~ the **Generator** or **DC Converter Station** owner before and during ~~demonstration of the process of demonstrating~~ compliance with the **Grid Code**. Progression through this process is dependent on submission by the **Generator** or **DC Converter Station** owner of the items referred to at CC.5.3 and CC.5.4.

Interim Operational Notification

CC.4.3.1 Not less than 28 days prior to the **Generator** or **DC Converter Station** owner wishing to **Synchronise**, the **Generator** or **DC Converter Station** owner will:

- i. CC.4.3.1 — Not less than 28 days prior to the **Generator** or **DC Converter Station** owner wishing to **Synchronise**, the **Generator** or **DC Converter Station** owner will notify **NGET** that the **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** as applicable ~~is~~will be ready to be **Synchronised** to the **Total System** through the delivery to **NGET** of a **Notification of Users Intention to Synchronise**. ~~Such **Notification of Users Intention to Synchronise** shall be accompanied by the items referred to at CC.5.3., and~~
- ii. submit to **NGET** the items referred to at CC.5.3.

CC.4.3.2 No **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** shall be **Synchronised** to the **GB Transmission System**, or where **Embedded**, to a **User System**, until the later of:

- (i) the date specified by **NGET** in the Interim Operational Notification ~~—Interim~~; and

- (ii) in the case of **Synchronous Generating Unit(s)** only, written confirmation from **NGET** that the **Generating Unit(s)** or **CCGT Module(s)** as applicable, have performed the tests detailed at CC.4.3.4.3.3 to **NGET's** satisfaction.

CC.4.3.3 ~~NGET shall assess the items submitted by the Generator or DC Converter Station owner with the Notification of Users Intention to Synchronise, and shall determine whether or not such items have been completed to NGET's satisfaction so as to enable NGET to issue an Operational Notification—Interim.~~ CC.4.3.4 In the case of **Synchronous Generating Unit(s)** only, the **Generator** must complete the following tests to **NGET's** satisfaction to demonstrate compliance with the relevant provisions of the **CCs** prior to being **Synchronised** to the **Total System**:

- (a) ~~testing tests~~ to establish the open and short circuit saturation characteristics of the **Generator** to allow assessment of the short circuit ratio in accordance with CC.6.3.2. ~~Factory~~ These tests on the **Generating Unit** are acceptable may be carried out at a location other than the **Power Stations**; and
- (b) open circuit step response ~~testing tests~~ to demonstrate compliance with CC.A.X.X.

CC.4.3.4 ~~NGET shall assess the items submitted by the Generator or DC Converter Station owner with the Notification of Users Intention to Synchronise, and shall determine whether or not such items have been completed to NGET's satisfaction so as to enable NGET to issue an Interim Operational Notification.~~

CC.4.3.5 Subject to CC.4.3.2 and CC.4.3.3,4.3.4, **NGET** will notify the **Generator** or **DC Converter Station** owner that the **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** as applicable may (subject to the **Generator** or **DC Converter Station** owner having fulfilled the requirements of CC.4.3.4.3.3 where applicable) be **Synchronised** to the **Total System** through the issue of an Interim Operational Notification—Interim. The Interim Operational Notification—Interim will be time limited but may be renewed by **NGET** if appropriate. An Interim Operational Notification shall not remain in effect, nor be renewed so as to remain in effect, for longer than 24 months from the date of the initial Interim Operational Notification, except where:

- (a) the **Generator** or **DC Converter Station** owner and **NGET** have applied for and been granted a **Derogation** in respect of the **Unresolved Compliance Issues**; or
- (b) **NGET** believe that a longer period is appropriate.

The **Generator** or **DC Converter Station** owner must operate the **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** in accordance with the terms of the Interim Operational Notification—Interim.

CC.4.3.6 In the case of **Power Park Module(s)** the Interim Operational Notification—~~Interim~~ will limit the number of **Power Park Unit(s)** which can be **Synchronised** to the **Total System** such that neither of the following figures are exceeded:

- (a) 20% of **Registered Capacity** of the **Power Station** (or a single Power Park Unit where this exceeds 20% of the Power Station's Registered Capacity); nor
- (b) 50MW,

until the **Generator** has completed the [voltage control tests in accordance with Appendix XXX] to **NGET**'s satisfaction whereupon the provisions of CC.4.3.7 shall apply.

CC.4.3.7 In the case of **Power Park Module(s)** ~~the~~where the Power Station has a Registered Capacity greater than 100 MW, the Interim Operational Notification—~~Interim~~ will limit the number of **Power Park Unit(s)** which can be **Synchronised** to the **Total System** to 70% of **Registered Capacity** of the **Power Station** until the **Generator** has completed:

- (a) further [voltage control tests in accordance with Appendix XXX]; and
- (b) the [frequency control tests in accordance with Appendix XXX]

in each case, to **NGET**'s satisfaction.

CC.4.3.8 Other than ~~matters~~Unresolved Compliance Issues that are ~~the subject of any witness testing~~subject to tests required under CC.5.5 to be witnessed by NGET, the **Generator** or **DC Converter Station** owner must ~~progress the resolution of~~resolve any **Unresolved Compliance Issues** ~~so that they are resolved~~ prior to the commencement of the ~~witness testing process~~tests, unless NGET agrees to a later resolution, and shall liaise with **NGET** in respect of such resolution.

CC.4.3.9 Not less than 28 days prior to the **Generator** or **DC Converter Station** owner wishing to commence ~~the witness testing process~~tests required under CC.5.5 to be witnessed by NGET, the **Generator** or **DC Converter Station** owner will notify **NGET** that the **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** as applicable is ready to be ~~witness~~-tested.

CC.4.3.10 The items referred to at CC.5.4 shall be submitted by the **Generator** or the **DC Converter Station** owner after successful completion of the ~~testing process~~tests required under CC.5.5.

Final Operational Notification

CC.4.3.11 **NGET** shall assess the items submitted by the **Generator** or **DC Converter Station** owner under CC.4.3.10 ~~and shall~~to determine whether or not such items have been completed to **NGET**'s satisfaction so as to enable **NGET** to issue ~~an~~a Final **Operational**

~~Notification—Final. NGET's assessment as to whether or not the Generating Unit(s), CCGT Module(s), Power Park Module(s) or DC Converter(s) comply with the relevant provisions of the Grid Code shall be final and binding between the parties (except where the matter has been referred to and determined by the Authority).~~

CC.4.3.12 Subject to CC.4.3.11, NGET will notify the **Generator** or **DC Converter Station** owner that compliance with the relevant ~~connection conditions~~Connection Conditions has been demonstrated for the **Generating Unit(s)**, **CCGT Module(s)**, **Power Park Module(s)** or **DC Converter(s)** as applicable through the issue of ~~an~~an Final ~~Operational Notification—Final~~.

CC.5. CONNECTION

CC.5.1 The provisions relating to connecting to the **GB Transmission System** (or to a **User's System** in the case of a connection of an **Embedded Large Power Station** or **Embedded Medium Power Station** or **Embedded DC Converter Station**) are contained in

- (a) the **CUSC** and/or **CUSC Contract** (or in the relevant application form or offer for a **CUSC Contract**);
- (b) or, in the case of an **Embedded Development**, the relevant **Distribution Code** and/or the **Embedded Development Agreement** for the connection (or in the relevant application form or offer for an **Embedded Development Agreement**),

and include provisions relating to both the submission of information and reports relating to compliance with the relevant **Connection Conditions** for that **User**, **Safety Rules**, commissioning programmes, **Operation Diagrams** and approval to connect (and their equivalents in the case of **Embedded Medium Power Stations** not subject to a **Bilateral Agreement** or **Embedded DC Converter Stations** not subject to a **Bilateral Agreement**). References in the **CC** to the "**Bilateral Agreement**" and/or "**Construction Agreement**" and/or "**Embedded Development Agreement**" and/or "**CUSC Contract**" shall be deemed to include references to the application form or offer ~~therefor~~thereof.

CC.5.2 Items for submission prior to the issue of an **Energisation Operational Notification—Energisation**

CC5.2.1 Prior to the **Completion Date** under the **Bilateral Agreement** and/or **Construction Agreement**, the following is submitted pursuant to the terms of the **Bilateral Agreement** and/or **Construction Agreement**:

- (a) updated **Planning Code** data (both **Standard Planning Data** and **Detailed Planning Data**), with any estimated values assumed for planning purposes confirmed or, where practical, replaced by validated actual values and by updated estimates for the future and by updated forecasts for **Forecast Data** items such as **Demand**, pursuant to the requirements of the **Planning Code**;

- (b) details of the **Protection** arrangements and settings referred to in CC.6, and/or the **Bilateral Agreement**;
- (c) copies of all **Safety Rules** and **Local Safety Instructions** applicable at **Users' Sites** which will be used at the **NGET/User** interface (which, for the purpose of **OC8**, must be to **NGET's** satisfaction regarding the procedures for **Isolation** and **Earthing**. For **User Sites** in Scotland **NGET** will consult the **Relevant Transmission Licensee** when determining whether the procedures for **Isolation** and **Earthing** are satisfactory);
- (d) information to enable **NGET** to prepare **Site Responsibility Schedules** on the basis of the provisions set out in Appendix 1;
- (e) an **Operation Diagram** for all **HV Apparatus** on the **User** side of the **Connection Point** as described in CC.7;
- (f) the proposed name of the **User Site** (which shall not be the same as, or confusingly similar to, the name of any **Transmission Site** or of any other **User Site**);
- (g) written confirmation that **Safety Coordinators** acting on behalf of the **User** are authorised and competent pursuant to the requirements of **OC8**;
- (h) **RISSP** prefixes pursuant to the requirements of **OC8**. **NGET** is required to circulate prefixes utilising a proforma in accordance with **OC8**;
- (i) a list of the telephone numbers for **Joint System Incidents** at which senior management representatives nominated for the purpose can be contacted and confirmation that they are fully authorised to make binding decisions on behalf of the **User**, pursuant to **OC9**;
- (j) a list of managers who have been duly authorised to sign **Site Responsibility Schedules** on behalf of the **User**;
- (k) information to enable **NGET** to prepare **Site Common Drawings** as described in CC.7;
- (l) a list of the telephone numbers for the **Users** facsimile machines referred to in CC.6.5.9; and
- (m) for **Sites** in Scotland a list of persons appointed by the **User** to undertake operational duties on the **User's System** and to issue and receive operational messages and instructions in relation to the **User's System**; and an appointed person or persons responsible for the maintenance and testing of **User's Plant** and **Apparatus**.

- CC.5.2.2 ~~prior~~Prior to the **Completion Date** the following must be submitted to **NGET** by the **Network Operator** in respect of an **Embedded Development**:
- (a) updated **Planning Code** data (both **Standard Planning Data** and **Detailed Planning Data**), with any estimated values assumed for planning purposes confirmed or, where practical, replaced by validated actual values and by updated estimates for the future and by updated forecasts for **Forecast Data** items such as **Demand**, pursuant to the requirements of the **Planning Code**;
 - (b) details of the **Protection** arrangements and settings referred to in CC.6 and/or the Bilateral Agreement;
 - (c) the proposed name of the **Embedded Medium Power Station** or **Embedded DC Converter Station Site** (which shall be agreed with **NGET** unless it is the same as, or confusingly similar to, the name of other **Transmission Site** or **User Site**);
- CC.5.2.3
- (a) Of the items CC.5.2.1 (c), (e), (g), (h), (k) and (m) need not be supplied in respect of **Embedded Power Stations** or **Embedded DC Converter Stations**,
 - (b) item CC.5.2.1(i) need not be supplied in respect of **Embedded Small Power Stations** and **Embedded Medium Power Stations** or **Embedded DC Converter Stations** with a **Registered Capacity** of less than 100MW, and
 - (c) items CC.5.2.1(d) and (j) are only needed in the case where the **Embedded Power Station** or the **Embedded DC Converter Station** is within a **Connection Site** with another **User**.
- CC.5.2.4 In addition, at the time the information is given under CC.5.2.1(g), **NGET** will provide written confirmation to the **User** that the **Safety Co-ordinators** acting on behalf of **NGET** are authorised and competent pursuant to the requirements of **OC8**.
- CC.5.2.5 The items referred to in CC.5.2 must be submitted by the **Generator** or **DC Converter Station** owner or **Network Operator** using the **User Data Library** structure.
- CC.5.3 Items for submission prior to issue of the **Interim Operational Notification** ~~—Interim~~
- CC.5.3.1 Prior to the issue of an **Interim Operational Notification** ~~—Interim~~ the **Generator** or **DC Converter Station** owner must submit to **NGET**:
- (a) updated **Planning Code** data (both **Standard Planning Data** and **Detailed Planning Data**), with any estimated values assumed for planning purposes confirmed or, where practical, replaced by validated actual values and by updated estimates for

the future and by updated forecasts for **Forecast Data** items such as **Demand**;

- (b) Details of any special **Power Station, Generating Unit(s), Power Park Module(s)** or **DC Converter Station(s)** protection as applicable. This may include Pole Slipping protection and islanding protection schemes;
- (c) any items required by CC.5.2, updated by the **User** as necessary;
- (d) Simulation study results demonstrating compliance with **Grid Code** requirements of:
 - PC.A.5.4.2
 - PC.A.5.4.3.2,
 - CC.6.3.4,
 - CC.6.3.7(c)(i),
 - CC.6.3.15,as applicable to the **Power Station, Generating Unit(s), Power Park Module(s)** or **DC Converter(s)**;
- (e) A detailed schedule of the tests and the procedures for the tests required to be carried out by the **Generator** or **DC Converter Station** owner under CC.5. to demonstrate compliance with relevant **Grid Code** requirements. Such schedule to be consistent with Appendix XXX; and
- (f) An interim **Compliance Statement** ~~and completed to NGET's satisfaction and a User Self Certification of Compliance~~ which has been duly completed to NGET's satisfaction and signed by an authorised signatory of the **User** (including any Unresolved Compliance Issues) against the relevant **Grid Code** requirements including details of any requirements that the **Generator** or **DC Converter Station** owner has identified that will not or may not be met or demonstrated.

CC.5.3.2 The items referred to in CC.5.3.1 must be submitted by the **Generator** or **DC Converter Station** owner using the **User Data Library structure**.

CC.5.4 Items for submission prior to issue of the **Final Operational Notification**—~~Final~~

CC.5.4.1 Prior to the issue of ~~ana~~ **Final Operational Notification**—~~Final~~ the **Generator** or **DC Converter Station** owner must submit to **NGET**:

- (a) updated **Planning Code** data (both **Standard Planning Data** and **Detailed Planning Data**), with validated actual values and by updated estimates for the future and by updated forecasts for **Forecast Data** items such as **Demand**;
- (b) any items required by CC.5.2 and CC.5.3, updated by the **User** as necessary;

- (c) evidence to **NGET's** satisfaction that demonstrates that the controller models and/or parameters (as required under PC.A.5.3.2(c) option 2, PC.A.5.3.2(d) option 2, PC.A.5.4.2, and/or PC.A.5.4.3.2) supplied to **NGET** replicate the behaviour of the **User's Plant and Apparatus**;
 - (d) results from the tests required in accordance with CC.5.5 carried out by the **Generator** to demonstrate compliance with relevant **Grid Code** requirements including the tests witnessed by **NGET**; and
 - (e) the final **Compliance Statement** ~~and completed to NGET's satisfaction and a~~ **User Self Certification of Compliance** ~~which has been duly completed to NGET's satisfaction~~ and signed by an authorised signatory of the **User** and a statement of any requirements that the **Generator** or **DC Converter Station** owner has identified that have not been met together with a copy of the **Derogation** in respect of the same from the **Authority**.
- CC.5.4.2 The items in CC.5.4.1 should be submitted by the **Generator** or **DC Converter Station** owner using the **User Data Library** structure.
- CC.5.5 ~~Testing~~ Tests to be carried out prior to issue of the Final Operational Notification—Final.
- CC.5.5.1 Prior to the issue of ~~an~~ Final Operational Notification—Final the **Generator** or **DC Converter Station** owner must have completed the tests specified in this C.5.5.1 to demonstrate compliance with the relevant **Grid Code** provisions.
- CC.5.5.1.1 In the case of any **Generating Unit, CCGT Module, Power Park Module** and **DC Converter** these tests will ~~cover~~ include:
- (a) reactive capability ~~testing~~ tests to demonstrate that the **Generating Unit, CCGT Module, Power Park Module** and **DC Converter** can meet the requirements of CC.6.3.2. ~~This~~ These may be witnessed by **NGET** on site if there is no metering to the **NGET** Control Centre.
 - (b) voltage control system ~~testing~~ tests to demonstrate that the **Generating Unit, CCGT Module, Power Park Module** and **DC Converter** can meet the requirements of CC.6.3.6, CC.6.3.8 and, in the case of **Power Park Module** and **DC Converter**, the requirements of CC.A.6 and, in the case of **Generating Unit** and **CCGT Module**, the requirements of CC.A.7, and any terms specified in the **Bilateral Agreement** as applicable. ~~This testing~~ These tests may also be used to validate the **Excitation System** model or voltage control system model as applicable. ~~This testing~~ These tests may be witnessed by **NGET**.
 - (c) Governor or frequency control system ~~testing~~ tests to demonstrate that the **Generating Unit, CCGT Module** and **Power Park Module** can meet the requirements of CC.6.3.6, CC.6.3.7, CC.A.3 and BC.3.7. The results will also validate the

Mandatory Service Agreement required by CC.8.1. ~~This testing~~These tests may also be used to validate the Governor model or frequency control system model as applicable. ~~This testing~~These tests may be witnessed by **NGET**.

- (d) any further tests reasonably required by **NGET** and agreed with the User to demonstrate any aspects of compliance with the **Grid Code** and the **CUSC Contracts**.

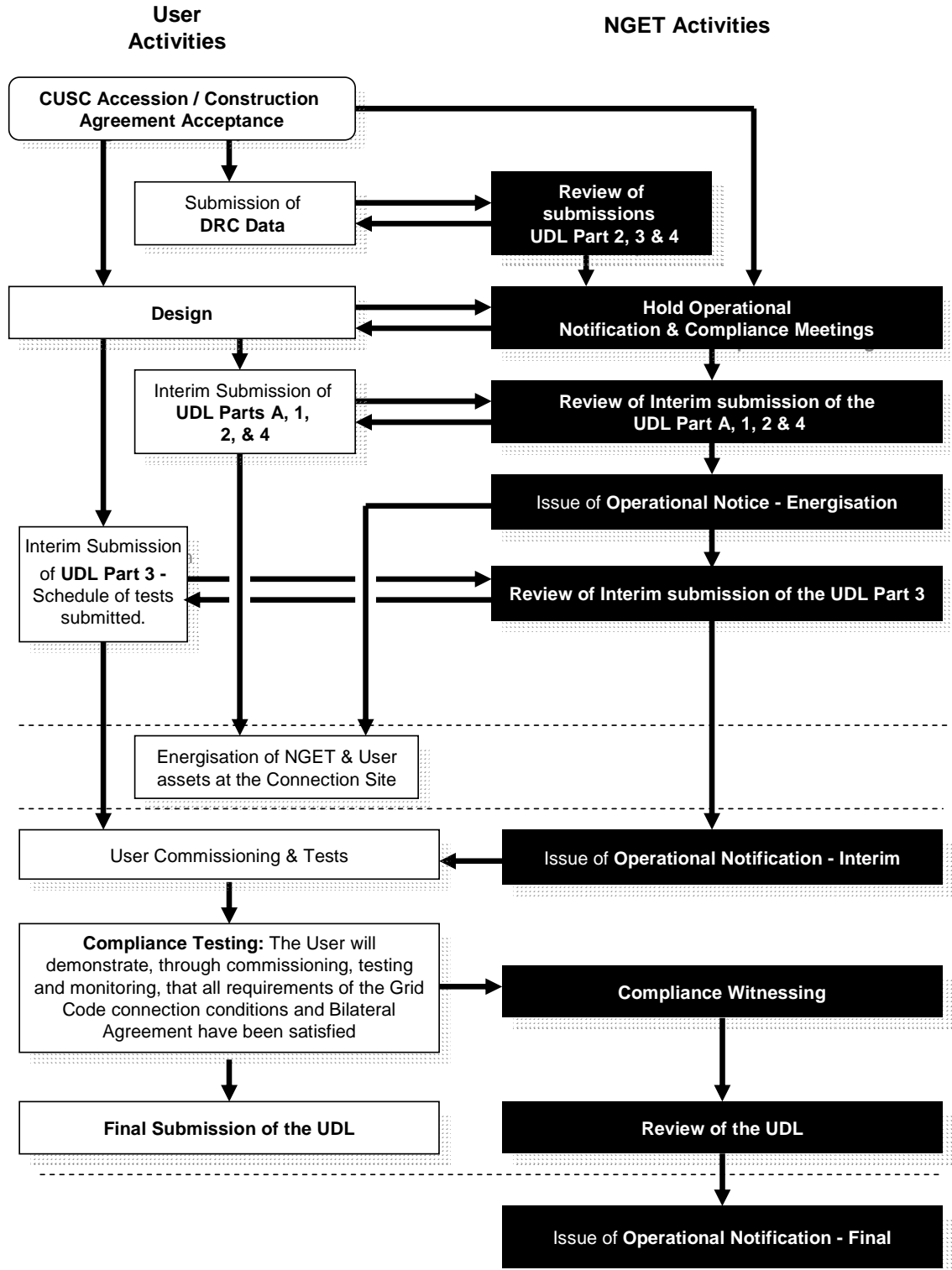
CC.5.5.2 Following completion of ~~testing, each of the tests specified in this CC.5.5.~~ **NGET** will notify the **Generator** or **DC Converter Station** owner whether, in the opinion of **NGET**, the results demonstrate compliance with the relevant **Grid Code** conditions.

CC.5.5.3 The **User** is responsible for carrying out the tests and retains the responsibility for safety and personnel during the test.

CC.5.5.4 ~~Unless otherwise agreed between the User and NGET,~~ **NGET's** preferred range of tests to demonstrate compliance with the **CCs** are specified in Appendix XXX and must will be carried out by the **User** and the results of such tests must will be provided to **NGET**. The User may carry out an alternative range of tests if this is agreed with **NGET**.

APPENDIX CC.A.XX

Compliance Process for demonstrating compliance with the Grid Code for New Power Stations/DC Converter Stations



CC.A.XX

USER SELF CERTIFICATION OF COMPLIANCE [\(Interim/Final\)](#)

Power Station/ DC Converter Station	[Name of Connection Site/site of connection]	User:	[Full User name]	Registered Capacity (MW):	
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This User Self Certification of Compliance records the compliance by the User of [NAME] Power Station/DC Converter Station with the Grid Code and the requirements of the Bilateral Agreement and Construction Agreement dated [] with reference number [].

We have recorded our compliance against each requirement of the Grid Code which applies to the [Power Station/DC Converter Station], together with references to supporting evidence and a commentary where this is appropriate, and have provided this to NGET. [A copy of the Compliance Statement is attached.](#)

Supporting evidence, in the form of simulation results, test results, manufacturer's data and other documentation, is attached in the User Data Library.

The User hereby certifies that the Power Station is compliant with the Grid Code and the Bilateral Agreement in all aspects [with the following Unresolved Compliance Issues*] [with the following ~~exceptions and Derogations in respect of such exceptions~~[Derogation\(s\)**](#)]:

Statement No.	Connection Condition	Requirement	Ref:	Issue

Compliance certified by:	Name:		Title:
		[PERSON]	[PERSON DESIGNATION]
	Signature:		Of
		[PERSON]	[User details]
	Date:		

* Include for Interim User Self Certification of Compliance ahead of ~~Operational Notification~~–Interim [Operational Notification](#).

** Include for final User Self Certification of Compliance ahead of ~~Operational Notification~~–Final [Operational Notification](#) where Derogation(s) have been granted. If no Derogation(s) required delete wording and Table.

DATA REGISTRATION CODE

-DRC.5 **PROCEDURES AND RESPONSIBILITIES**
- DRC.5.1 Responsibility for Submission and Updating of Data
- In accordance with the provisions of the various sections of the **Grid Code**, each **User** must submit data as summarised in DRC.6 and listed and collated in the attached schedules.
- DRC.5.2 Methods of Submitting Data
- DRC.5.2.1 Wherever possible the data schedules to the **DRC** are structured to serve as standard formats for data submission and such format must be used for the written submission of data to **NGET**.
- DRC.5.2.2 Data must be submitted to the **Transmission Control Centre** notified by **NGET** or to such other department or address as **NGET** may from time to time advise. The name of the person at the **User** who is submitting each schedule of data must be included.
- DRC.5.2.3 Where a computer data link exists between a **User** and **NGET**, data may be submitted via this link. **NGET** will, in this situation, provide computer files for completion by the **User** containing all the data in the corresponding **DRC** schedule.
- Data submitted under Schedule 5, with the exception of the single line diagram, shall be submitted electronically using a proforma to be supplied by **NGET**, or by any other means or format as may be agreed between the **User** and **NGET**. This proforma is to be supplied by **NGET** no later than calendar week 19 in each year.
- DRC.5.2.4 Other modes of data transfer may be utilised if **NGET** gives its prior written consent.
- DRC.5.2.5 Notwithstanding DRC.5.2.3 and 5.2.4 unless otherwise agreed with **NGET**, **Generators** and **DC Converter Station** owners submitting data for a **Generating Unit**, **DC Converter**, **Power Park Module** or **CCGT Module** before the issue of an **Operational Notification – Final** should submit the **DRC** data schedules and compliance information required under CC.5 electronically using the **User Data Library** [structure](#).

.....

The [outline specimen](#) structure of the **User Data Library** is given below.

User Data Library - Outline Specimen Structure	
Part A: Commercial & Legal	
A.1	Signed Legal Agreements
A.2	Commissioning & Test Programmes
	Connection Site Commissioning & Test Programme
	Generating Unit Commissioning Program
	Generator Control Test Procedures and Programme
A.3	Statements of Readiness
A.4	TOGA Registration Details
A.5	Mandatory Services Agreement
A.6	Codes for Balancing Market Units
A.7	BMU Registration
A.8	Balancing Mechanism Process
A.9	Ancillary Services Monitoring
A.10	User Self Certification of Compliance
A.11	Compliance Statement
Part 1: Safety & System Operation	
1.1	Interface Agreements
1.2	Safety Rules
1.3	Local Switching Procedures
1.4	Earthing
1.5	Site Responsibility Schedules
1.6	Operational and Gas Zone Diagrams
1.7	Site Common Drawings
1.8	Control Telephony
1.9	Local Safety Procedures
1.10	Safety Co-ordinators
1.11	RISSP
1.12	Telephone Numbers for Joint System Incidents
1.13	Contact Details (fax, tel, email)
1.14	Local Joint Restoration Plan (incl. black start if applicable)
1.15	Maintenance Standards
Part 2: Connection Technical Data	
2.1	DRC Schedule 5 - Users System Data
2.1.1	<i>System Configuration Data</i>
	Users System Layout & Single Line Diagram
	Reactive Compensation
	Substation Infrastructure
	Circuit Parameters
	Transformer Data

User Data Library - ~~Outline~~Specimen Structure

Switchgear Data
2.1.2 Protection Systems
User System protection and settings
User System Auto Reclose facilities & settings
Circuit Breaker Fail
Generator Transformer protection and settings
System Fault Clearance Times
Generator protection and settings
2.1.3 User System Studies (if required)
2.2 Protection Settings Reports
2.2.1 Protection Discrimination Review
2.2.2 Protection of Interconnecting Connections
2.3 Special Automatic Facilities e.g. intertrip
2.4 Operational Metering
2.5 Tariff Metering
2.6 Operational Communications
2.6.1 EDL & EDT
2.7 Performance Monitoring
2.7.1 Ancillary Services Monitoring
2.7.2 Fault Recorder
2.7.3 Dynamic System Monitor (if required)
2.7.4 Power Quality Monitor (if required)
2.8 Power Quality Test Results (if required)
Part 3: Generator Technical Data
3.1 DRC Schedule 1 - Generating Unit Technical Data
3.1.1 Table of Generator Parameters
3.1.2 Controls System Details
3.1.3 Generator / Station Model
3.1.4 Power Quality - Harmonic Assessment Information
3.2 DRC Schedule 2 - Generation Planning Data
3.3 DRC Schedule 4 – Frequency Droop & Response
3.4 DRC Schedule 14 – Fault Infeed Data – Generators
3.5 Special Generator Protection
Pole Slipping Protection
Islanding Protection Schemes
3.6 Compliance Tests & Evidence
3.6.1 Reactive Capability
3.6.2 Voltage Control (e.g. Excitation, AVR PSS)
3.6.3 Frequency Response (Governor)
3.6.4 Fault Ride Through
3.7 Compliance Simulation Studies
3.7.1 Model Verification
3.7.2 Reactive Capability & Voltage Range
3.7.3 Voltage Control & Stability (e.g. AVR, PSS)
3.7.4 Fault Ride Through
3.8 Site Specific Technical Data & Compliance
3.8.1 Special Automatic Features e.g. intertrip

User Data Library - ~~Outline~~Specimen Structure

Part 4: General DRC Schedules

- | | |
|-----|---|
| 4.1 | DRC Schedule 3 – Large Power Station Outage Information |
| 4.2 | DRC Schedule 6 – Users Outage Information |
| 4.3 | DRC Schedule 7 – Load Characteristics |
| 4.4 | DRC Schedule 8 – BM Unit Data (if applicable) |
| 4.5 | DRC Schedule 10 – Demand Profiles |
| 4.6 | DRC Schedule 11 – Connection Point Data |

< End of **Data Registration Code (DRC)** >

Document comparison done by Workshare Professional on 18 June 2008
15:40:54

Input:	
Document 1	file:///ngtclswrk011.uk.corporg.net/jo.hutchison/My Documents/Word/Comparisons/Baseline (Text sent to WG in April).doc
Document 2	file:///ngtclswrk011.uk.corporg.net/jo.hutchison/My Documents/Word/Comparisons/Phase II Changes v10 (update to new connection process).doc
Rendering set	standard

Legend:	
<u>Insertion</u>	
Deletion	
Moved from	
Moved to	
Style change	
Format change	
Moved deletion	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	130
Deletions	104
Moved from	2
Moved to	2
Style change	0
Format changed	0
Total changes	238