



National Grid

GRID CODE CONSULTATION DOCUMENT

Grid Code changes consequential to CUSC Amendment Proposal CAP076 – Treatment of System to Generator Intertripping Schemes

The purpose of this document is to consult on the above Grid Code Modification Proposal with authorised electricity operators liable to be materially affected by the proposed changes

Consultation Ref	A/05
Issue	1
Date of Issue	19 January 2005
Responses required by	16th February 2005
Prepared by	National Grid

DOCUMENT LOCATION

National Grid website:

http://www.nationalgridinfo.co.uk/grid_code/mn_consultation_papers.html

DISTRIBUTION

Name	Organisation
AEO's	Various
GCRP Members/Alternates	Various
Interested Parties	Various
National Grid Industry Information Website	

A. Introduction

1. National Grid Company plc ("National Grid") is undertaking this consultation in accordance with its obligations under paragraph 2 of Condition C14 of the Transmission Licence.
2. This consultation is concerned with the proposed changes to the Grid Code required as a consequence of the changes to the CUSC proposed in CUSC Amendment Proposal CAP076. CAP076 seeks to clarify the obligations between NGC and generators with respect to the arming and operation of Intertripping Schemes as set out in a party's Bilateral Connection Agreement (BCA). To enable CAP076 changes to be effective, consequential changes to the Grid Code are required. All comments on the CAP076 proposals should be addressed via the CUSC Consultation process. This consultation A/05 is solely concerned with the consequential Grid Code changes. The requirement to change the Grid Code was discussed with the Grid Code Review Panel at the November 2004 meeting and the actual Grid Code changes were circulated to GCRP members by e-mail for comment prior to the issuing of this consultation.
3. Following receipt of comments from those authorised electricity operators which it has consulted by this Paper, National Grid intends, in accordance with paragraph 2 of Condition C14 of the Transmission Licence, to send to the Authority :-
 - (a) a report on the outcome of its review, including this consultation process;
 - (b) the proposed revisions to the Grid Code which National Grid (having regard to the outcome of such review) reasonably thinks fit for the achievement of the objectives of the Grid Code referred to in subparagraph (b) of paragraph 1 of Condition C14 of the Transmission Licence; and
 - (c) any written representations or objections from authorised electricity operators (including any proposals by such operators for revisions to the Grid Code not accepted by National Grid in the course of the review) arising during the consultation process and subsequently maintained.
4. The report along with any responses not marked as confidential, will also be made publicly available on National Grid's website.
5. The revisions to the Grid Code proposed by National Grid and sent to the Authority will, if approved, come into force on such date (or dates) of which you will be notified by National Grid, in accordance with the Authority's approval.

B. DESCRIPTION OF THE PROPOSED AMENDMENTS AND THEIR EFFECTS

6. Background

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- 6.1 This consultation paper focuses on the changes required to the Grid Code as a result of the raising of CUSC Amendment Proposal CAP076: "Treatment of System to Generator Intertripping Schemes".
- 6.2 CAP076 was raised by NGC in August 2004 and the CUSC Amendments Panel determined that a Working Group should consider the proposals and report back to the Panel. The Working Group subsequently reported back to the December meeting of the CUSC Amendments Panel.
- 6.3 The CUSC Amendments Panel agreed with the recommendation in the Working Group Report that the proposal should proceed to wider industry consultation along with four Working Group Alternative Amendments. The CAP076 consultation was subsequently issued on 23 December 2004 with a closing date for responses of 16 February 2005. For information the CAP076 consultation can be accessed from the Industry Information website using the following link:

<http://www.nationalgridinfo.co.uk/cusc/documents.asp?id=3>

- 6.4 In summary CAP076 proposes a revised framework for System to Generator Intertripping Schemes and aims to clarify the obligations between National Grid and the associated Generator with respect to arming and operation of such schemes. In addition CAP076 aims to establish an administered pricing mechanism within the CUSC for certain categories of intertrips also proposed in CAP076. These categories would, under the original proposal, be defined in the CUSC. In simple terms they can be described as:
- **Category 1** – A System to Generator Intertripping Scheme that forms part of a Variation to Connection Design requested by the connecting party.
 - **Category 2** – A System to Generator Intertripping Scheme required to prevent local overloads during planned system outages.
 - **Category 3** - A System to Generator Intertripping Scheme installed as an alternative to reinforcement of a third party system, where the installation of the scheme removes the potential overload on the third party system.
 - **Category 4** - A System to Generator Intertripping Scheme installed to facilitate the timely restoration of critical circuits.
- 6.5 The associated proposed Grid Code changes (attached in Appendices 1 and 2) aim to clarify notifications and instructions, clarify the Connection Conditions and introduce consequential text changes required as a result of new CUSC payment mechanisms.
- 6.6 There was a view in the CUSC Working Group that, as the Categories described above are of a technical nature, they should be defined in the Grid Code rather than the CUSC. Working Group members

agreed that, rather than present a further suite of Alternative CUSC Amendments, this option would be considered as an alternative in the Grid Code consultation. Therefore alternative Grid Code text has been developed to support this option.

- 6.7 The proposed Grid Code changes are detailed in Appendix 1 and Appendix 2. Appendix 1 shows the proposed Grid Code changes should the Authority approve the CAP076 proposals and determine that the Category 1 to 4 technical definitions are not required in the Grid Code. Appendix 2 shows the proposed Grid Code changes should the Authority approve the CAP076 proposals and determine that the Category 1 to 4 technical definitions are required in the Grid Code.
- 6.8 Please note that only comments in relation to the Grid Code changes should be provided as part of any response to this consultation A/05. Views on the proposed changes to the CUSC or other associated documents should be provided under the relevant consultation.

7. Proposed Changes

Appendix 1 – Proposed Grid Code changes if the Authority determines that the technical Definitions are not required in the Grid Code.

7.1 Glossary and Definitions - Include two new definitions:

- System to Generator Operational Intertripping; and
- System to Generator Operational Intertripping Scheme.

These definitions would be directly referenced to the definitions set out in the CUSC.

7.2 Connection Conditions

- Include text to indicate the possible need for System to Generator Operational Intertripping Schemes to be installed in relation to a Connection Site (CC.6.2.3.2) or as a General Generating Unit Requirement (CC.6.3.15).
- Include System to Generator Operational Intertripping in the list of Part 2 Ancillary Services in CC.8.1

7.3 OC2

- Include references to Operational Intertripping (an existing defined term in the Grid Code) to the range of information that will be provided as part of the Planning of GB Transmission System Outages (OC2.4.1.3.2, OC2.4.1.3.3 and OC2.4.1.3.4).

7.4 BC1

- Remove reference to intertrip schemes from Special Actions (BC1.7.1).

7.5 BC2

- Remove the text indicating that Operational Intertripping would be deemed as a Bid Offer Acceptance (BC2.5.2.3) and (BC2.10.3).
- Include the requirement for a BM Participant to re-declare MEL to reflect more accurately output capability (or constrained output capability) following the Operational Intertripping of its plant (BC2.5.3.1).
- Reference arming arrangements for System to Generator Operational Intertripping Schemes to BC2.8.1 detailing call off of Ancillary Services.
- For clarification, ensure that Operational Intertripping is not considered to be an Emergency Instruction (BC2.9.3.2).
- For consistency, refer to 'arming or disarming' rather than 'switch into or out of service' (BC2.10.2(a)).
- In BC2 Appendix 2 include System to Generator Operational Intertripping in the list of Part 2 System Ancillary Services.

Appendix 2 – Grid Code changes required if the Authority determines that the technical Definitions are required in the Grid Code.

7.6 Glossary and Definitions - Include the following new definitions:

- Category 1 Intertripping Scheme
- Category 2 Intertripping Scheme
- Category 3 Intertripping Scheme
- Category 4 Intertripping Scheme
- Group
- Secured Event
- Security and Quality of Supply Standard
- System to Generator Operational Intertripping; and
- System to Generator Operational Intertripping Scheme.

- 7.7 Changes to the Connection Conditions, OC2, BC1, BC2 and BC2A as described for Appendix 1 above.

C. COMMENTS

8. National Grid would be grateful to receive your comments on, or any suggestions you may have in relation to, these proposed amendments to the Grid Code. Comments would be welcomed and should be sent to National Grid by **16th February 2005**. The comments will be reviewed and responded to and National Grid will then prepare its report to the Authority.
9. Unless otherwise marked as confidential, any responses will be published on our website and in the Report to the Authority referred to in paragraphs 3 and 4. As indicated above the Report will also subsequently be published on our website.
10. Your formal responses may be:-

Posted to: David Payne
Industry Codes
Commercial Frameworks
National Grid Company plc
National Grid Transco House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Emailed to: david.payne@ngtuk.com

Appendix 1 – Proposed Grid Code changes if the Authority determines that the technical Definitions are not required in the Grid Code.

Extract from the Glossary And Definitions (G & D)

System to Generator Operational Intertripping Has the meaning set out in the CUSC.

System to Generator Operational Intertripping Scheme Has the meaning set out in the CUSC.

Extract from the Connection Conditions

CC.6.2.3.2 **Fault Disconnection Facilities**

(a) Where no **Transmission** circuit breaker is provided at the **User's** connection voltage, the **User** must provide **NGC** with the means of tripping all the **User's** circuit breakers necessary to isolate faults or **System** abnormalities on the **GB Transmission System**. In these circumstances, for faults on the **User's System**, the **User's Protection** should also trip higher voltage **Transmission** circuit breakers. These tripping facilities shall be in accordance with the requirements specified in the **Bilateral Agreement**.

(b) **NGC may require the installation of a System to Generator Operational Intertripping Scheme in order to enable the timely restoration of circuits following power System fault(s). These requirements shall be set out in the relevant Bilateral Agreement.**

...

System to Generator Operational Intertripping Scheme

CC.6.3.15 NGC may require that a System to Generator Operational Intertripping Scheme be installed as part of a condition of the connection of the Generator. Scheme specific details shall be included in the relevant Bilateral Agreement.

(Note: If the changes associated with Consultation paper H/04 – Generic Provisions – are approved before these proposed changes paragraph CC.6.3.15 would need to be renumbered to CC.6.3.17.)

CC.8.1 **System Ancillary Services**

The **CC** contain requirements for the capability for certain **Ancillary Services**, which are needed for **System** reasons...

Part 2

- (c) **Frequency Control by means of Fast Start** - CC.6.3.14
- (d) **Black Start Capability** - CC.6.3.5
- (e) **System to Generator Operational Intertripping**

.....

Extract from OC2

OC2.4.1.3.2 In each calendar year:

...

- (e) By the end of week 34

NGC will draw up a draft **GB Transmission System** outage plan covering the period Years 2 to 5 ahead and **NGC** will notify each **Generator** and **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations**) or **Network Operator**. **NGC** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertripping scheme**) or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

OC2.4.1.3.3 **Operational Planning Phase - Planning for Financial Year 1 ahead**

...

- (h) By the end of week 49

...

- (ii) **NGC** will notify each **Generator** and each **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations**) or **Network Operator** including in particular proposed start dates and end dates of relevant **GB Transmission System** outages. **NGC** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertripping scheme**) or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System**

to be maintained within the **Licence Standards**. **NGC** will also inform each relevant **Non-Embedded Customer** of the aspects of the plan which may affect it.

OC2.4.1.3.4 **Operational Planning Phase - Planning in Financial Year 0 down to the Programming Phase (and in the case of load transfer capability, also during the Programming Phase)**

(d)...

(iii) The provisions of OC2.4.1.3.3(i)(z)(2), (3) and (5) shall apply to the provision of data under this part of OC2.4.1.3.4(d) as if set out in full.

NGC will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an Operational Intertripping scheme) or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

OC2.4.1.3.5 **Programming Phase**

(a) By...

(ii) **NGC** will notify each **Generator**...
...and (y) (if OC2.4.1.3.3(i)(z) does not apply).

NGC will also indicate where a need may exist to usearm an Operational Intertripping scheme, emergency switching, emergency **Demand** management or other measures including the issuing of other operational instructions or notifications or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

.....

Extract from BC1

BC1.7 **Special Actions**

BC1.7.1 **NGC** may need to identify special actions (either pre- or post-fault) that need to be taken by specific **Users** in order to maintain the integrity of the **GB Transmission System** in accordance with the **Licence Standards** and **NGC Operational Strategy**.

(a) For a **Generator** special actions will generally involve a **Load** change or a change of required Notice to Deviate from Zero NDZ, in a specific timescale on individual or groups of **Gensets**. ~~They may also include selection of "System to Genset" or "System to CCGT Unit", as the case may be, intertrip schemes for stability or thermal reasons.~~

.....
Extract from BC2

BC2.5.2.3 **BM Participants** must only **Synchronise** or **De-Synchronise BM Units** (or in the case of a **Cascade Hydro Scheme** a **Generating Unit**);

- (a) at the times indicated to **NGC**, or
- (b) at times consistent with variations in output or input arising from provisions described in BC2.5.1,

(within a tolerance of +/- 5 minutes) or unless that occurs automatically as a result of ~~intertrip schemes~~ **Operational Intertripping** or **Low Frequency Relay** operations or an **Ancillary Service** pursuant to an **Ancillary Services Agreement**. ~~For a BM Unit in relation to which the intertrip has been instructed to be switched into service under BC2.10 in order to protect the GB Transmission System, if it is De-Synchronised due to an operation of the intertrip that is not due to a fault at the BM Unit then a Bid- Offer Acceptance will be treated as having been issued. This will reflect the operation of the intertrip in order to form the Bid- Offer Acceptance data to be given to the BMRA under the BSC.~~

BC2.5.3.1 At any time, any **BM Participant** (or the relevant person on its behalf) may, in respect of any of its **BM Units**, submit to **NGC** the data listed in **BC1**, Appendix 1 under the heading of **Dynamic Parameters** from the **Control Point** of its **BM Unit** to amend the data already held by **NGC** (including that previously submitted under this BC2.5.3.1) for use in preparing for and operating the **Balancing Mechanism**. The change will take effect from the time that it is received by **NGC**. For the avoidance of doubt, the **Dynamic Parameters** submitted to **NGC** under BC1.4.2(e) are not used within the current **Operational Day**. The **Dynamic Parameters** submitted under this BC2.5.3.1 shall reasonably reflect the true current operating characteristics of the **BM Unit** and shall be prepared in accordance with **Good Industry Practice**.

Following the **Operational Intertripping** of a **System to Generating Unit** or a **System to CCGT Module**, the **BM Participant** shall as soon as reasonably practicable re-declare its MEL to reflect more accurately its output capability.

BC2.8.1 **Call-off of Ancillary Services by NGC**

.....
 ...

(e) **A System to Generator Operational Intertripping Scheme** will be armed in accordance with BC2.10.2 (a)

-
- BC2.9.3.2 In the case of a **Generator, Emergency Instructions** may include:
- (a) an instruction to trip one or more **Gensets** (excluding Operational Intertripping); or
 - ...
- BC2.10.2 Such instructions or notifications may include:
- Intertrips
- (a) an instruction to arm or disarm ~~switch into or out of service~~ an **Operational Intertripping** scheme;
- BC2.10.3 Where an instruction or notification under BC2.10.2 ~~(a),~~(c) or (d) results in a change to the input or output level of the **BM Unit** then **NGC** shall issue a **Bid-Offer Acceptance** or **Emergency Instruction** as appropriate.

Appendix 2 - Type and Form of **Ancillary Service** Instructions

- BC2.A.2.1 This part of the Appendix consists of a non-exhaustive list of the forms and types of instruction for a **Genset** to provide **System Ancillary Services**. There may be other types of **Commercial Ancillary Services** and these will be covered in the relevant **Ancillary Services Agreement**.
- As described in CC.8, **System Ancillary Services** consist of Part 1 and Part 2 **System Ancillary Services**.
- ...
- Part 2 System Ancillary Services comprise:
- (c) **Frequency Control** by means of **Fast Start**.
 - (d) **Black Start Capability**
 - (e) **System to Generator Operational Intertripping**

Appendix 2 – Proposed Grid Code changes if the Authority determines that the technical Definitions are required in the Grid Code.

Extract from the Glossary And Definitions (G & D)

Category 1 Intertripping Scheme **A System to Generator Operational Intertripping Scheme** arising from a Variation to Connection Design following a request from the relevant **User** which is consistent with the criteria specified in the **Security and Quality of Supply Standard**.

Category 2 Intertripping Scheme **A System to Generator Operational Intertripping Scheme** which is:-
 (i) **required to alleviate an overload on a circuit which connects the Group containing the User's Connection Site to the GB Transmission System; and**
 (ii) **installed in accordance with the requirements of the planning criteria of the Security and Quality of Supply Standard in order that measures can be taken to permit maintenance access for each transmission circuit and for such measures to be economically justified,**
and the operation of which results in a reduction in Active Power on the overloaded circuits which connect the User's Connection Site to the rest of the GB Transmission System which is equal to the reduction in Active Power from the Connection Site (once any system losses or third party system effects are discounted).

Category 3 Intertripping Scheme **A System to Generator Operational Intertripping Scheme** which, where agreed by **NGC** and the **User**, is installed to alleviate an overload on, and as an alternative to, the reinforcement of a third party system, such as the **Distribution System** of a **Public Distribution System Operator**.

Category 4 Intertripping Scheme **A System to Generator Operational Intertripping Scheme** installed to enable the disconnection of the **Connection Site** from the **GB Transmission System** in a controlled and efficient manner in order to facilitate the timely restoration of the **GB Transmission System**.

Group **Those GB Transmission System sub-stations bounded solely by the faulted circuit(s) and the overloaded circuit(s) excluding any third party connections between the Group and the rest of the GB Transmission System, the faulted circuit(s) being a Secured Event.**

<u>Secured Event</u>	<u>Has the meaning set out in the Security and Quality of Supply Standard.</u>
<u>Security and Quality of Supply Standard</u>	<u>The version of the document entitled 'Security and Quality of Supply Standard' established pursuant to the Transmission Licence in force at the time of entering into the relevant Bilateral Agreement.</u>
<u>System to Generator Operational Intertripping</u>	<u>A Balancing Service involving the initiation by a System to Generator Operational Intertripping Scheme of automatic tripping of the User's circuit breaker(s) resulting in the tripping of BM Unit(s) or (where relevant) Generating Unit(s) comprised in a BM Unit to prevent abnormal system conditions occurring, such as over voltage, overload, System instability, etc, after the tripping of other circuit-breakers following power System fault(s);</u>
<u>System to Generator Operational Intertripping Scheme</u>	<u>A System to Generating Unit or System to CCGT Module Intertripping Scheme details of which shall be specified in Appendix F3 of the relevant Bilateral Agreement, being either a Category 1 Intertripping Scheme, Category 2 Intertripping Scheme, Category 3 Intertripping Scheme or Category 4 Intertripping Scheme.</u>

Extract from the Connection Conditions

CC.6.2.3.2 Fault Disconnection Facilities

- (c) Where no **Transmission** circuit breaker is provided at the **User's** connection voltage, the **User** must provide **NGC** with the means of tripping all the **User's** circuit breakers necessary to isolate faults or **System** abnormalities on the **GB Transmission System**. In these circumstances, for faults on the **User's System**, the **User's Protection** should also trip higher voltage **Transmission** circuit breakers. These tripping facilities shall be in accordance with the requirements specified in the **Bilateral Agreement**.
- (d) **NGC** may require the installation of a **System to Generator Operational Intertripping Scheme** in order to enable the timely restoration of circuits following power **System** fault(s). These requirements shall be set out in the relevant **Bilateral Agreement**.

...

System to Generator Operational Intertripping Scheme

CC.6.3.15 **NGC** may require that a **System to Generator Operational Intertripping Scheme** be installed as part of a condition of the connection of the **Generator**. Scheme specific details shall be included in the relevant **Bilateral Agreement**.

(Note: If the changes associated with Consultation paper H/04 – Generic Provisions – are approved before these proposed changes paragraph CC.6.3.15 would need to be renumbered to CC.6.3.17.)

CC.8.1 **System Ancillary Services**

The **CC** contain requirements for the capability for certain **Ancillary Services**, which are needed for **System** reasons...

Part 2

(c) **Frequency Control** by means of **Fast Start** - CC.6.3.14

(d) **Black Start Capability** - CC.6.3.5

(e) **System to Generator Operational Intertripping**

Extract from OC2

OC2.4.1.3.2 In each calendar year:

...

(e) By the end of week 34

NGC will draw up a draft **GB Transmission System** outage plan covering the period Years 2 to 5 ahead and **NGC** will notify each **Generator** and **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations**) or **Network Operator**. **NGC** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertripping scheme**) or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

OC2.4.1.3.3 **Operational Planning Phase** - Planning for **Financial Year 1** ahead

...

(h) By the end of week 49

...

(ii) **NGC** will notify each **Generator** and each **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations**) or **Network Operator** including in particular proposed start dates and end dates of

relevant **GB Transmission System** outages. **NGC** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an Operational Intertripping scheme) or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**. **NGC** will also inform each relevant **Non-Embedded Customer** of the aspects of the plan which may affect it.

OC2.4.1.3.4 **Operational Planning Phase - Planning in Financial Year 0 down to the Programming Phase (and in the case of load transfer capability, also during the Programming Phase)**

(d)...

(iii) The provisions of OC2.4.1.3.3(i)(z)(2), (3) and (5) shall apply to the provision of data under this part of OC2.4.1.3.4(d) as if set out in full.

NGC will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an Operational Intertripping scheme) or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

OC2.4.1.3.5 **Programming Phase**

(a) By...

(iii) **NGC** will notify each **Generator**...
...and (y) (if OC2.4.1.3.3(i)(z) does not apply).

NGC will also indicate where a need may exist to usearm an Operational Intertripping scheme, emergency switching, emergency **Demand** management or other measures including the issuing of other operational instructions or notifications or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **GB Transmission System** to be maintained within the **Licence Standards**.

Extract from BC1

BC1.7 **Special Actions**

BC1.7.1 **NGC** may need to identify special actions (either pre- or post-fault) that need to be taken by specific **Users** in order to maintain the integrity of the **GB Transmission System** in accordance with the **Licence Standards** and **NGC Operational Strategy**.

- (b) For a **Generator** special actions will generally involve a **Load** change or a change of required Notice to Deviate from Zero NDZ, in a specific timescale on individual or groups of **Gensets**. ~~They may also include selection of "System to Genset" or "System to CCGT Unit", as the case may be, intertrip schemes for stability or thermal reasons.~~

Extract from BC2

BC2.5.2.3 **BM Participants** must only **Synchronise** or **De-Synchronise BM Units** (or in the case of a **Cascade Hydro Scheme** a **Generating Unit**);

- (c) at the times indicated to **NGC**, or
- (d) at times consistent with variations in output or input arising from provisions described in BC2.5.1,

(within a tolerance of +/- 5 minutes) or unless that occurs automatically as a result of ~~intertrip schemes~~ **Operational Intertripping** or **Low Frequency Relay** operations or an **Ancillary Service** pursuant to an **Ancillary Services Agreement**. ~~For a BM Unit in relation to which the intertrip has been instructed to be switched into service under BC2.10 in order to protect the GB Transmission System, if it is De-Synchronised due to an operation of the intertrip that is not due to a fault at the BM Unit then a Bid-Offer Acceptance will be treated as having been issued. This will reflect the operation of the intertrip in order to form the Bid-Offer Acceptance data to be given to the BMRA under the BSC.~~

BC2.5.3.1 At any time, any **BM Participant** (or the relevant person on its behalf) may, in respect of any of its **BM Units**, submit to **NGC** the data listed in **BC1**, Appendix 1 under the heading of **Dynamic Parameters** from the **Control Point** of its **BM Unit** to amend the data already held by **NGC** (including that previously submitted under this BC2.5.3.1) for use in preparing for and operating the **Balancing Mechanism**. The change will take effect from the time that it is received by **NGC**. For the avoidance of doubt, the **Dynamic Parameters** submitted to **NGC** under BC1.4.2(e) are not used within the current **Operational Day**. The **Dynamic Parameters** submitted under this BC2.5.3.1 shall reasonably reflect the true current operating characteristics of the **BM Unit** and shall be prepared in accordance with **Good Industry Practice**.

Following the **Operational Intertripping** of a **System to Generating Unit** or a **System to CCGT Module**, the **BM Participant** shall as soon as reasonably practicable re-declare its MEL to reflect more accurately its output capability.

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- BC2.8.1 Call-off of **Ancillary Services** by **NGC**
- (a) **Ancillary Service** instructions may be issued at any time.
- ...
- ~~(e) A System to Generator Operational Intertripping Scheme will be armed in accordance with BC2.10.2 (a)~~
- BC2.9.3.2 In the case of a **Generator**, **Emergency Instructions** may include:
- (b) an instruction to trip one or more **Gensets** ~~(excluding **Operational Intertripping**)~~; or
- ...
- BC2.10.2 Such instructions or notifications may include:
- Intertrips
- (a) an instruction to ~~arm or disarm switch into or out of service~~ an **Operational Intertripping** scheme;
- BC2.10.3 Where an instruction or notification under BC2.10.2 ~~(a),~~(c) or (d) results in a change to the input or output level of the **BM Unit** then **NGC** shall issue a **Bid-Offer Acceptance** or **Emergency Instruction** as appropriate.

Appendix 2 - Type and Form of **Ancillary Service** Instructions

- BC2.A.2.1 This part of the Appendix consists of a non-exhaustive list of the forms and types of instruction for a **Genset** to provide **System Ancillary Services**. There may be other types of **Commercial Ancillary Services** and these will be covered in the relevant **Ancillary Services Agreement**.
- As described in CC.8, **System Ancillary Services** consist of Part 1 and Part 2 **System Ancillary Services**.
- ...
- Part 2 System Ancillary Services comprise:
- (e) **Frequency** Control by means of **Fast Start**.
- (f) **Black Start Capability**
- ~~(e) System to Generator Operational Intertripping~~