



Please note this Amendment Proposal is being processed as urgent. Therefore, as directed by the Authority, the following timetable applies:

- Amendment Proposal raised and approved as urgent 27/02/09
- Amendment submitted to Company Consultation 03/03/09
- Close of Company Consultation 13/03/09
- Draft Amendment Report circulated to Industry 18/03/09
- Panel undertake recommendation vote 23/03/09
- Final Amendment Report submitted to the Authority 25/03/09

## CONSULTATION DOCUMENT VOLUME 1

### CUSC Amendment Proposal CAP170

### Category 5 System to Generator Operational Intertripping Scheme

*The purpose of this document is to consult on Amendment Proposal CAP170 with CUSC Parties and other interested Industry members*

Amendment Ref	CAP170
Issue	1.0
Date of Issue	03/03/09
Prepared by	National Grid

## I DOCUMENT CONTROL

### a National Grid Document Control

Version	Date	Author	Change Reference
1.0	03/03/09	National Grid	Formal version for release

### b Distribution

Name	Organisation
The Gas and Electricity Markets Authority	Ofgem
CUSC Parties	Various
Panel Members	Various
National Grid Industry Information Website	

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Responses to this consultation should be sent to [Cusc.Team@uk.ngrid.com](mailto:Cusc.Team@uk.ngrid.com) by close of business on 13<sup>th</sup> March 2009. Please make reference to CAP170 in the subject of your email.

## 1.0 SUMMARY AND RECOMMENDATIONS

### Executive Summary

- 1.1 CAP170 - Category 5 System to Generator Operational Intertripping Scheme was submitted to the Amendments Panel for consideration on the 27<sup>th</sup> February 2009. The proposer requested that the Amendment Proposal be considered as an Urgent Amendment Proposal, on the basis that the nature of the proposal exhibits the following characteristics:
- The proposal is linked to an imminent date related event
  - There is a very real likelihood of significant commercial impact upon, NGET, industry parties, or customers if the Amendment Proposal is not treated as urgent
- The Panel agreed that the amendment merited urgent treatment and, along with a proposed timetable, requested approval as such by the Authority. The Authority approved the urgent request, and proposed a slightly more constrained timetable to facilitate submission of the Amendment Report to the Authority by 25<sup>th</sup> March 2009.
- 1.2 CAP170 seeks to introduce a new category of System to Generator Operational Intertripping Scheme to cover intertrips capable of being armed with respect to a derogated non-compliant transmission boundary (as specified in the definition – see 1.3).
- 1.3 Category 5 intertripping schemes would be defined as an intertripping scheme required to alleviate thermal overloads, unacceptable voltage conditions or power system instability arising out of an event which result in the interruption of powerflow on a circuit or circuits that form part of a derogated non-compliant transmission boundary and can only be armed in respect of such a boundary.
- 1.4 A derogated non-compliant transmission boundary would be defined as a transmission circuit or circuits forming part of the GB transmission system subject to an Authority approved derogation to the GB Security and Quality of Supply Standards.
- 1.5 It is the proposer's intention that category 5 intertripping schemes will be specified in the F3 appendix of the relevant Bilateral Agreements, and applied to existing or new intertrip providers identified as being capable of being armed in respect of a derogated non-compliant transmission boundary.
- 1.6 It is proposed that the category 5 intertripping schemes, as specified in the F3 appendices of the relevant Bilateral Agreements, would receive remuneration in line with the existing categories 2 and 4 as administered by the CUSC (an annual Capability Payment, an Intertrip Payment following trip and a Restricted Export Level Payment following a trip).
- 1.7 At derogated non-compliant transmission boundaries the need to take action to manage constraints is more onerous than at compliant transmission boundaries. As such, the use of intertrips (assuming it is more economic than alternative Bid-Offer action to constrain generation pre-fault) is a necessity rather than an occasional tool in order to maximise flows across the derogated non-compliant transmission boundary.
- 1.8 Whilst intertrips are armed pre-fault, the principal cost is incurred post-fault following tripping. Therefore based on the low probability of tripping they should represent an economic and efficient means for managing constraints

as opposed to the alternative Bid-Offer action to constrain generation pre-fault. The proposer of CAP170 believes that administering prices for intertrips capable of being armed in respect of derogated non-compliant transmission boundaries would offer a useful means to limit potential constraint costs, thereby facilitating competition, as well as allowing for the economic and efficient operation of the system.

### **Amendment Panels View**

- 1.9 The Amendments Panel agreed that CAP170 merited urgent status, and as such should proceed directly to wider consultation by the Company.

### **National Grid's View**

- 1.10 National Grid as proposer of CAP170 considers that it merits progress via the urgent amendment process.
- 1.11 National Grid also believes that CAP170 would better achieve the CUSC Applicable Objectives. National Grid believes that administering the costs for intertrips capable of being armed with respect to non-compliant derogated boundaries will provide the potential for National Grid to manage constraints in a more efficient and effective manner.

## **2.0 PURPOSE AND INTRODUCTION**

- 2.1 This is a consultation document issued by National Grid under the rules and procedures specified in the Connection and Use of System Code (CUSC) as designated by the Secretary of State.
- 2.2 Further to the submission of Amendment Proposal CAP170 this document seeks views from industry members relating to the Amendment Proposal.
- 2.3 CAP170 was proposed by National Grid and submitted to the CUSC Amendments Panel for consideration at their meeting on 27<sup>th</sup> February 2009. Following agreement by the Panel CAP170, and the proposed urgent timetable, were submitted to the Authority for approval. The Authority approved the urgent request, and proposed a slightly more constrained timetable to facilitate submission of the Amendment Report to the Authority by 25<sup>th</sup> March 2009.

- Amendment Proposal raised and approved as urgent 27/02/09
- Amendment submitted to Company Consultation 03/03/09
- Close of Company Consultation 13/03/09
- Draft Amendment Report circulated to Industry 18/03/09
- Panel undertake recommendation vote 23/03/09
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The proposer is aware that the timetable does not allow for Working Group development of the proposal or for alternatives to be raised. Therefore; following implementation of this Amendment Proposal, in accordance with CUSC section 8.21.1.9, a Working Group review will be necessary.

- 2.4 This consultation document outlines the nature of the CUSC changes that are proposed. Representations received in response to this consultation document will be included in National Grid's Amendment Report that will be furnished to the Authority for their decision.

- 2.5 This consultation document has been prepared in accordance with the terms of the CUSC. An electronic copy can be found on the National Grid website, at [www.nationalgrid.com/uk/Electricity/Codes/](http://www.nationalgrid.com/uk/Electricity/Codes/) along with the Amendment Proposal form. This document invites views upon CAP170 and the closing date for responses is **13<sup>th</sup> March 2009**.

### **3.0 PROPOSED AMENDMENT**

- 3.1 CAP170 was raised alongside a request for treatment as an Urgent Amendment Proposal. The proposer considers that the nature of the proposal exhibits the following characteristics:
- The proposal is linked to an imminent date related event
  - There is a very real likelihood of significant commercial impact upon, NGET, industry parties, or customers if the Amendment Proposal is not treated as urgent

On the 17th of February 2009 Ofgem wrote to National Grid asking National Grid to conduct an urgent review to consider (and if appropriate consult on) whether urgent changes to the existing commercial and charging arrangements for access to the GB transmission system are necessary before the next charging year (starting April 2009). Moreover, as Ofgem indicate in this letter, the rate at which constraint costs are incurred will increase significantly in the next few weeks (when the planned Cheviot outage programme commences). Therefore, the proposer believes that this proposal is linked to an imminent date related event.

Furthermore, the Amendment Proposal seeks to limit the price of intertrips capable of being armed only with respect of derogated non-compliant transmission boundaries, and in doing so limit the potential contribution to constraint costs. As all industry parties are charged for the cost of constraints, and this charge is ultimately passed on to consumers, this Amendment Proposal also has the potential to have significant commercial impact on both the industry and consumers.

- 3.2 The Panel and the Authority both agreed that this proposal should be treated as urgent.
- 3.3 At derogated non-compliant transmission boundaries the need to take action to manage constraints is more onerous than at compliant transmission boundaries. As such, the use of intertrips (assuming it is more economic than alternative Bid-Offer action to constrain generation pre-fault) is a necessity rather than an occasional tool in order to maximise flows across the derogated non-compliant transmission boundary. . This can be demonstrated by the volume of constraints at the Cheviot boundary (presently the only derogated non-compliant transmission boundary<sup>1</sup>) which is forecast to outturn at 3127 GWh in 2008/09 and compares to the rest of England, Wales and Scotland which is forecast to outturn at 1849 GWh in 2008/09. Further the cost of managing constraints on the Cheviot boundary is forecast to outturn at £153m in 2008/09 and compares to the rest of England, Wales and Scotland which is forecast to outturn at £85m in 2008/09.

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<sup>1</sup> Information on the derogation is available on Ofgem's website:  
[http://epr.ofgem.gov.uk/document\\_fetch.php?documentid=11759](http://epr.ofgem.gov.uk/document_fetch.php?documentid=11759)  
[http://epr.ofgem.gov.uk/document\\_fetch.php?documentid=11777](http://epr.ofgem.gov.uk/document_fetch.php?documentid=11777)

- 3.4 One tool available to National Grid, as System Operator, to manage constraints is the use of intertrips. Whilst intertrips are armed pre-fault, the principal cost is incurred post-fault following tripping. Therefore based on the low probability of tripping they should represent a more economic and efficient means for managing constraints than the alternative Bid-Offer action to constrain generation pre-fault. Administering prices for intertrips capable of being armed in respect of derogated non-compliant transmission boundaries would offer a useful means to limit potential costs.
- 3.5 Therefore, CAP170 seeks to introduce a new category of System to Generator Operational Intertripping Scheme to cover intertrips capable of being armed only with respect to derogated non-compliant transmission boundaries (as specified in the definition - see 3.6).
- 3.6 Category 5 intertripping scheme would be defined as an intertripping scheme required to alleviate thermal overloads, unacceptable voltage conditions or power system instability arising out of an event which result in the interruption of powerflow on a circuit or circuits that form part of a derogated non-compliant transmission boundary and can only be armed in respect of such a boundary.
- 3.7 A derogated non-compliant transmission boundary would be defined as a transmission circuit or circuits forming part of the GB transmission system subject to an Authority approved derogation to the GB Security and Quality of Supply Standards.
- 3.8 It is the proposer's intention that category 5 intertripping schemes will be specified in the F3 appendix of the relevant Bilateral Agreements, and applied to existing or new intertrip providers capable of being armed in respect of a derogated non-compliant transmission boundary.
- 3.9 A methodology will be used to determine which Users will be required to provide category 5 intertripping schemes. Such methodology will be based upon a cost-benefit analysis, considering aspects such as installation costs and the cost associated with the administered scheme.
- 3.10 It is envisaged that such schemes will be in place under these arrangements until such time as the nature of the boundary changes (i.e. the derogation is removed).
- 3.11 If a decision to implement this Amendment Proposal is made changes to the F3 appendices of the relevant Bilateral Agreements would be required to reflect the requirement to provide the category 5 intertripping scheme.
- 3.12 A section to deal with the implementation process for CAP170 has been provided to facilitate the issuing of amended Appendix F3s to the Bilateral Agreement to relevant Users. This process envisages, upon identification of a requirement for a category 5 intertripping scheme, National Grid issuing agreements to vary the relevant Bilateral Agreements with amended Appendix F3s providing details for the category 5 intertripping scheme. The relevant User would either sign and return the varied Bilateral Agreement or make a referral to the Authority for the terms to be settled. Following determination by the Authority, where applicable, National Grid would, in accordance with the variation clause of the relevant Bilateral Agreement, sign the agreement to vary on the User's behalf.

- 3.13 The category 5 System to Generator Operational Intertripping Scheme will be administered via the generic terms within the CUSC and Grid Code. Site specific technical details, as with categories 1-4, will be included in the relevant F3 appendix of the Bilateral Agreement.
- 3.14 It is proposed that the category 5 System to Generator Operational Intertripping Scheme, as specified in the F3 appendices of the relevant Bilateral Agreements, will receive remuneration in line with existing arrangements for the Category 2 and 4 System to Generator Operational Intertripping Schemes as detailed in the CUSC. This payment includes:
- An annual Capability Payment for the installation and right to arm the scheme covering costs such as additional staff training, upkeep of policies and procedures
  - An Intertrip Payment covering costs of wear and tear following a trip
  - A Restricted Export Level Payment following tripping should National Grid be unable to restore the Transmission capacity within 24 hours following the trip
- These payment terms were proposed by the Working Group during the CAP076 development process, having been considered by the Working Group to be cost-reflective and offer appropriate terms for remuneration.

## **4.0 ASSESSMENT AGAINST APPLICABLE CUSC OBJECTIVES**

### **Proposed Amendment**

- 4.1 The proposer believes that CAP170 would better facilitate the CUSC Objectives:
- (a) the efficient discharge by the Licensee of the obligations imposed upon it by the act and the Transmission Licence;
- Facilitating economic and efficient use of all intertrips which are capable of being armed with respect to derogated non-compliant transmission boundaries
  - Clarifying the responsibility and remuneration for intertrips capable of being armed with respect to derogated non-compliant transmission boundaries
  - Removing National Grid and industry exposure to the consequences of the operation of bilaterally negotiated schemes capable of being armed with respect to derogated non-compliant transmission boundaries
- (b) facilitating effective competition in generation and supply of electricity and facilitating such competition in the sale, distribution and purchase of electricity.
- Ensuring an enhanced level of market certainty with regards to processes, responsibilities and remuneration for intertrips capable of being armed with respect to derogated non-compliant transmission boundaries
  - Limiting the potential BSUoS cost for all parties, by limiting the cost of intertrips capable of being armed with respect to derogated non-compliant transmission boundaries

## **5.0 PROPOSED IMPLEMENTATION**

- 5.1 National Grid proposes that CAP170 should be implemented immediately upon a decision being made by the Authority. In accordance with 8.19.3(b) views are invited on this proposed implementation date.
- 5.2 The change introduced by this Amendment Proposal would be applicable to existing and new providers.
- 5.3 A section to deal with the implementation process for CAP170 has been provided to facilitate the issuing of amended Appendix F3s to the Bilateral Agreement to relevant Users. This process envisages, upon identification of a requirement for a category 5 intertripping scheme, National Grid issuing agreements to vary the relevant Bilateral Agreements with amended Appendix F3s providing details for the category 5 intertripping scheme. The relevant User would either sign and return the varied Bilateral Agreement or make a referral to the Authority for the terms to be settled. Following determination by the Authority, where applicable, National Grid would, in accordance with the variation clause of the relevant Bilateral Agreement, sign the agreement to vary on the User's behalf.

## **6.0 IMPACT ON THE CUSC**

- 6.1 CAP170 requires amendment to Section 4.2A and Schedule 4 of the CUSC. It will also require the introduction of additional definitions to facilitate these changes.
- 6.2 The text required to give effect to the Amendment Proposal is contained as Annex 1 of this document.

## **7.0 IMPACT ON INDUSTRY DOCUMENTS**

### **Impact on Core Industry Documents**

- 7.1 CAP170 has a consequential impact upon the Grid Code due System to Generator Intertripping Schemes and the associated categories being defined in the Grid Code. Changes required to the Grid Code including, but are not limited to, the following:
- A new definition for category 5 intertripping scheme
  - A new definition for derogated non-compliant transmission boundary
  - Amendment to the existing definition for System to Generator Operational Intertripping Scheme
  - Amendment to the existing definition for System to Generator Operational Intertripping

### **Impact on other Industry Documents**

- 7.2 CAP170 has an impact upon the relevant Bilateral Agreements which would require amendment as a result of this Amendment Proposal. A section to deal with the implementation process for CAP170 has been provided as outlined in the Proposed Implementation section 5 of this consultation.

## **8.0 NATIONAL GRID VIEW**



- 8.1 National Grid believes that CAP170, through introducing administered prices for intertrips capable of being armed with respect to derogated non-compliant transmission boundaries, has the potential to significantly limit constraint costs. National Grid considers that this is particularly important given the nature of such boundaries where intertrips are required as a necessity rather than occasional tool in order to maximise the flow across the boundary, as well as allowing for extended periods of outage to facilitate the necessary reinforcement work.
- 8.2 National Grid therefore believes that CAP170 would better facilitate competition, as well as allow more economic and efficient operation of the system, and as such would better facilitate the applicable CUSC objectives.

## **9.0 VIEWS INVITED**

- 9.1 National Grid is seeking the views of interested parties in relation to the issues raised by Amendment Proposal CAP170 and issues arising from the proposed timescale for implementation of CAP170.
- 9.2 Please send your responses to this consultation to National Grid by no later than close of business on **13<sup>th</sup> March 2009**.
- 9.3.1 Please address all comments to the following e-mail address:  
[Cusc.Team@uk.ngrid.com](mailto:Cusc.Team@uk.ngrid.com)

## ANNEX 1 – PROPOSED LEGAL TEXT TO MODIFY THE CUSC

The proposed legal text to modify the CUSC is detailed below by inserting the coloured, underlined text and deleting the coloured, underlined, struck through text.

<u>“Category 5 Intertripping Scheme”</u>	<u>as defined in the Grid Code:</u>
<u>“Category 5 Agreement to Vary”</u>	<u>as defined in section 4.2A.8.2</u>
<u>“GB SQSS Derogation”</u>	<u>as defined in the Grid Code:</u>
<u>“Derogated Non-Compliant Transmission Boundary”</u>	<u>as defined in the Grid Code:</u>

### 4.2A SYSTEM TO GENERATOR OPERATIONAL INTERTRIPPING

#### 4.2A.1 Application

The provisions of this Paragraph 4.2A shall apply to **The Company** and a **User** in respect of the provision by that **User** to **The Company** of **System to Generator Operational Intertripping** where details of a **System to Generator Operational Intertripping Scheme** are set out in Appendix F3 of the relevant **Bilateral Agreement**.

#### 4.2A.2 Provision of System to Generator Operational Intertripping

4.2A.2.1 Each **User** hereby agrees, as between **The Company** and that **User**, to:-

- (a) (save where **Force Majeure** applies) make available its **System to Generator Operational Intertripping Scheme** for arming at all times when **Active Power** is being exported to the **GB Transmission System** from the **Connection Site** at which such **System to Generator Operational Intertripping Scheme** is located;
- (b) arm the **System to Generator Operational Intertripping Scheme** in accordance with the terms of the relevant **Bilateral Agreement** when instructed by **The Company** (in accordance with **Grid Code** BC 2.8) by telephone (such instruction to be confirmed by facsimile substantially in the form set out in Schedule 3, Part I to this Section 4);
- (c) (where an instruction from **The Company** has been confirmed by facsimile in accordance with Paragraph 4.2A.2.1(b) above) following the tripping of the **User’s relevant Circuit Breaker(s)** upon receipt of a signal from the **System to Generator Operational Intertripping Scheme**:-
  - (i) restrict the export of **Active Power** from the **Connection Site** to the **GB Transmission System** to the level of MW specified in such facsimile confirmation (or such increased level(s) as **The Company** may subsequently notify

pursuant to Paragraph 4.2A.2.2(c)(i)) (“the **Restricted MW Export Level**”); and

- (ii) maintain such restricted export until such time as the **User** is notified by **The Company** in accordance with Paragraph 4.2A.2.2(c)(ii) that the **Restricted MW Export Level** no longer applies, whereupon the **User** shall be permitted to increase the export of **Active Power** from the **Connection Site** above the **Restricted MW Export Level**;
- (d) comply with any special instructions given by **The Company** in the performance of its obligations under Paragraph 4.2A.2.1(c); and
- (e) disarm the **System to Generator Operational Intertripping Scheme** when instructed by **The Company** (in accordance with **Grid Code** BC2.8) by telephone (such instruction to be confirmed by facsimile substantially in the form set out in Schedule 3, Part I to this Section 4).

4.2A.2.2 **The Company** hereby agrees to:-

- (a) notify the **User** as soon as reasonably practicable following **The Company** becoming aware of the requirement for arming of the **System to Generator Operational Intertripping Scheme**;
- (b) (where relevant) take any steps necessary to arm the **System to Generator Operational Intertripping Scheme** in accordance with the terms of the relevant **Bilateral Agreement**;
- (c) following the tripping of the User's relevant **Circuit Breaker(s)** upon receipt of a signal from the **System to Generator Operational Intertripping Scheme**, notify the **User**:-
  - (i) as soon as the **Restricted MW Export Level**, whilst still applying, can be increased; and/or
  - (ii) as soon as the **Restricted MW Export Level** (as may be increased from time to time pursuant to (i) above) no longer applies

each such notification to be in accordance with **Grid Code** BC 2.8 and to be made by telephone (such notification to be confirmed by facsimile substantially in the form set out in Schedule 3, Part II to this Section 4); and

- (d) issue an instruction to disarm, referred to in Paragraph 4.2A.2.1(e), as soon as reasonably practicable following **The Company** becoming aware that the requirement for arming of the **System to Generator Operational Intertripping Scheme** has ceased (and such an instruction shall be deemed to have been issued for the purposes of this Paragraph 4.2A upon tripping of the User's relevant **Circuit Breaker(s)** upon receipt of a signal from the **System to**

**Generator Operational Intertripping Scheme).**

**4.2A.3 Intertrip Volume**

Following the tripping of a User's relevant Circuit Breaker(s) following receipt of a signal from a **System to Generator Operational Intertripping Scheme**, the resulting reduction in **Output** for each tripped **BM Unit** *i* or (where relevant) any tripped **Generating Unit(s)** comprised in a **BM Unit** shall be determined in accordance with the relevant formula set out in the **ABSVD Methodology Statement**, where such resulting reduction in **Output** is termed  $SE_{sj}$ .

**4.2A.4 Payments to the User**

**The Company** shall make the following payments to the **User** in respect of **System to Generator Intertripping Schemes**:

(a) a **Capability Payment** shall be paid in respect of each **Category 2 Intertripping Scheme**, and each **Category 4 Intertripping Scheme** and each Category 5 Intertripping Scheme as follows:-

(i) **The Company** shall pay to the **User** an amount ("the **Capability Payment**") in consideration of the installation of the **System to Generator Operational Intertripping Scheme** and the **User's** obligations under Paragraphs 4.2A.2.1(a) and (b), being an amount per month determined by reference to the number of **Settlement Periods** during the month in question (and in respect of which the requirement for **System to Generator Operational Intertripping** is stated in Appendix F3 of the relevant **Bilateral Agreement**) and the payment rate (£/**Settlement Period**) specified in Schedule 4 to this Section 4; and

(ii) for the avoidance of doubt, where a **System to Generator Operational Intertripping Scheme** comprises more than one of both a **Category 2 Intertripping Scheme**, and a Category 4 Intertripping Scheme or a Category 5 Intertripping Scheme, only one **Capability Payment** shall be payable by **The Company** to the **User** in respect thereof;

(b) subject always to Paragraph 4.2A.5, a **Restricted Export Level Payment** shall be paid in respect of each **Category 2 Intertripping Scheme**, each **Category 3 Intertripping Scheme**, and each **Category 4 Intertripping Scheme** and each Category 5 Intertripping Scheme as follows:-

(i) the payment shall only be made where, following the tripping of the User's relevant Circuit Breaker(s) upon receipt of a signal from the **System to Generator Operational Intertripping Scheme**, restrictions on the export of **Active Power** from the **Connection Site** apply in accordance with the terms of Paragraph 4.2A.2.1(c)

above at any time after the period of 24 hours has elapsed following such tripping; and

(ii) in such a case, **The Company** shall pay to the **User** upon request the **Restricted Export Level Payment**, by reference to the period from expiry of such 24 hour period until the time when **The Company** notifies the **User** in accordance with Paragraph 4.2A.2.2(c)(ii) that the **Restricted MW Export Level** no longer applies (“the **Restricted Export Level Period**”); and

(c) subject always to Paragraph 4.2A.5, in respect of each **Category 2 Intertripping Scheme**, and each **Category 4 Intertripping Scheme** and each Category 5 Intertripping Scheme, where the User’s relevant Circuit Breaker(s) are tripped upon receipt of a signal from the **System to Generator Operational Intertripping Scheme**, **The Company** shall pay to the **User** an amount (“the **Intertrip Payment**”) being an amount (£/**Intertrip Contracted Unit**/trip) specified in Schedule 4 to this Section 4.

#### 4.2A.5 **Withholding of payments**

**The Company** shall not be obliged to make any **Restricted Export Level Payment** or **Intertrip Payment** pursuant to Paragraph 4.2A.4 where the tripping of **BM Unit(s)** or (where relevant) **Generating Unit(s)** comprised in a **BM Unit** occurs:-

- (a) during any period where the **System to Generator Operational Intertripping Scheme** is not instructed by **The Company** to be armed in accordance with Paragraphs 4.2A.2.2(a) and 4.2A.2.2(d); and/or
- (b) where the **User** has failed to arm the **System to Generator Operational Intertripping Scheme** in accordance with the terms of Paragraph 4.2A.2.1(b); and/or
- (c) where the **User** has failed to exercise **Good Industry Practice** to restrict the export of **Active Power** from the **Connection Site** to the **Restricted MW Export Level** as required by Paragraph 4.2A.2.1(c) (ignoring any export above **Restricted MW Export Level** where pursuant to an instruction from **The Company** to provide any **Balancing Service(s)**); and/or
- (d) where no signal is received by the User’s relevant Circuit Breaker(s) from the **System to Generator Operational Intertripping Scheme**.

#### 4.2A.6 **Revisions to Appendix F3 of the Bilateral Agreement**

Where **The Company** requires **Routine Change(s)** (as defined below) to be made to Appendix F3 of the **Bilateral Agreement**, then the **User** shall not unreasonably withhold or delay providing to **The Company** written consent to any such **Routine Changes** and hereby authorises **The Company**, following receipt of such written

consent, to make amendments on its behalf to Appendix F3 of the **Bilateral Agreement** to reflect such **Routine Change(s)** and undertakes not to withdraw, qualify or revoke such authority or instruction at any time. For the purposes of this Paragraph 4.2A.6, "**Routine Change(s)**" shall mean changes to the nomenclature of transmission circuits associated with a **System to Generator Operational Intertripping Scheme** specified in Appendix F3 of the relevant **Bilateral Agreement** which do not necessitate replacement, renovation, modification, alteration or construction to the **User's Plant or Apparatus**.

#### 4.2A.7 **No payments for Category 1 Intertripping Schemes**

For the avoidance of doubt, no payment shall be made by **The Company** hereunder in respect of a **Category 1 Intertripping Scheme**.

#### 4.2A.8 Implementation

4.2A.8.1 The terms of certain **Bilateral Agreements** between **The Company** and certain **Users** require, or may in the future require, amendment to introduce **Category 5 Intertripping Schemes** into certain **Bilateral Agreements** and/or amend the provisions of such **Category 5 Intertripping Schemes**, specifically those **Bilateral Agreements** relating to **Connection Sites** whereby the use of such **Category 5 Intertripping Scheme** would alleviate thermal overloads, unacceptable voltage conditions or power system instability arising out of an event which results in the interruption of powerflow on a circuit or circuits that form part of a **Derogated Non-Compliant Transmission Boundary**. This Paragraph 4.2A.8 details the process that will be followed to effect the necessary amendments to such **Bilateral Agreements**.

4.2A.8.2 **The Company** shall be entitled, no later than **5 Business Days** following each of:

- (i) the implementation date of **Amendment Proposal CAP 170**; and/or
- (ii) the date of a **GB SQSS Derogation** issued by the **Authority** in respect of a **Derogated Non-Compliant Transmission Boundary**

to issue to the relevant **User** an agreement to vary the terms of the relevant **Bilateral Agreements** to give effect to **Amendment Proposal CAP 170** and/or the **GB SQSS Derogation** ("**Category 5 Agreement to Vary**").

4.2A.8.3 Where **The Company** issues to the **User** a **Category 5 Agreement to Vary**, the **User** shall either:

- (i) sign and return to **The Company** the **Category 5 Agreement to Vary**, or
- (ii) refer the terms of the **Category 5 Agreement to Vary** to the **Authority** to settle the terms thereof.

in either case no later than the date which is the last to occur of (1) the date **5 Business Days** after receipt by the **User** from **The Company** of the **Category 5 Agreement to Vary**, and (2) the date **10 Business Days** after the applicable date referred to in Paragraph 4.2A.8.2 above.

4.2A.8.4 If the **User** fails to comply with Paragraph 4.2A.8.3, then **The Company** shall refer the terms of the **Category 5 Agreement to Vary** to the **Authority** to settle the terms thereof.

4.2A.8.5 Upon the **Authority** settling the terms of the **Category 5 Agreement to Vary**, The **Company** shall in accordance with the variations clause of the relevant **Bilateral Agreement** sign the **Category 5 Agreement to Vary** on behalf of the **User**.

#### SCHEDULE 4

#### SYSTEM TO GENERATOR OPERATIONAL INTERTRIPPING - PAYMENT RATES

	Category 1	Category 2	Category 3	Category 4	<u>Category 5</u>
Capability Payment (£/Settlement Period)	N/A	£ 1.72	N/A	£ 1.72	<u>£1.72</u>
Intertrip Payment (£/Intertrip Contracted Unit/Trip)	N/A	£ 400,000	N/A	£ 400,000	<u>£ 400,000</u>

All rates in this Schedule 4 are specified at April 2005 base and shall be subject to indexation in accordance with Paragraph 4.5 with effect from 1st April 2006.

## ANNEX 2 – AMENDMENT PROPOSAL FORM

<b>CUSC Amendment Proposal Form</b>	<b>CAP170</b>
<b>Title of Amendment Proposal:</b> Category 5 System to Generator Operational Intertripping Scheme	
<b>Description of the Proposed Amendment</b> ( <i>mandatory by proposer</i> ):  CAP076 (System to Generator Intertripping Scheme <sup>2</sup> ) was implemented in 2005 to improve the framework for system to generator intertripping schemes in terms of facilitating clarity of obligations between National Grid and the associated generator with respect to the arming and operation of intertripping schemes, and removing cost volatility associated with previous arrangements. To achieve this CAP076, and corresponding Grid Code amendment A/05, introduced four categories of system to generator operational intertripping schemes. As defined in the Grid Code, these are:  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 NGET 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.  CAP076 did not cover intertrips outside of these categories; all other schemes were envisaged to be covered via bilateral commercial arrangements between National Grid and the generator (going forward these will be referred to as commercial intertrips).  This proposal seeks to introduce a new category 5 System to Generator Operational Intertripping Scheme to cover intertrips capable of being armed with respect to a derogated non-compliant transmission boundary, which are not captured by categories 1-4. A	

<sup>2</sup> [http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/amendment\\_archive/](http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/amendment_archive/)



derogated non-compliant transmission boundary would be defined as a boundary on the transmission system which is subject to an Authority approved derogation to the GB Security and Quality of Supply Standards.

**(i) Remuneration for administered intertripping schemes**

It is proposed that the category 5 System to Generator Operational Intertripping Scheme will receive remuneration in line with existing arrangements for the Category 2 and Category 4 System to Generator Operational Intertripping Schemes as detailed in the CUSC. These payment terms were proposed by the Working Group during the CAP076 development process, having been considered by the Working Group to be cost-reflective and offer appropriate terms for remuneration. This payment includes:

- An annual Capability Payment for the installation and right to arm the scheme (covering costs such as additional staff training, upkeep of policies and procedures)
- An Intertrip Payment covering costs of wear and tear following a trip
- A Restricted Export Level Payment following tripping should National Grid be unable to restore the Transmission capacity within 24 hours following the trip

**(ii) Framework and obligations**

The category 5 System to Generator Operational Intertripping Scheme will be administered via generic terms in the CUSC and Grid Code (regarding obligations of schemes and remuneration terms). Site specific technical details, as with categories 1-4, will be included in the relevant F3 appendix of the Bilateral Agreement.

**(iii) Application**

The category 5 System to Generator Operational Intertripping Scheme would be applied to intertrips capable of being armed with respect to a derogated non-compliant transmission boundary, which are not captured by categories 1-4.

The Amendment Proposal would apply to existing generation which has an intertrip capable of being armed in respect of such a boundary, as well as being capable of being applied as a condition of connection to new connections with respect to such boundaries.

It is envisaged that such schemes will be in place under these arrangements until such time as the nature of the boundary changes (i.e. the derogation is removed).

If a decision to implement this Amendment Proposal is made, such a decision will need to include a direction from the Authority (in line with the variation clause of the relative Bilateral Agreement) to amend existing Bilateral Agreements in line with this Amendment Proposal.

Please note that whilst the proposer believes that this Amendment Proposal better facilitates the applicable CUSC objectives, the proposer is aware that a full review of commercial intertrip arrangements will be necessary should this Amendment Proposal be implemented on an urgent basis, in accordance with CUSC 8.21.1.9.

**Description of Issue or Defect that Proposed Amendment seeks to Address**  
*(mandatory by proposer):*

Ofgem wrote to National Grid on the 17<sup>th</sup> of February 2009<sup>3</sup> requesting an immediate and urgent review of the commercial and charging arrangements in order to facilitate more effective management of constraint costs.

Constraint costs have increased from £70m in 2007/08 to a forecast £238m in 2008/09 and £262m in 2009/10. As Ofgem highlight in this letter the forecast constraint costs are heavily influenced by transmission outages as part of the investment programme to increase

<sup>3</sup>

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=97&refer=Networks/Trans/ElecTransPolicy/tar&sid=email>

network capacity. This is particularly true at derogated non-compliant transmission boundaries which require significant periods of extended outage to allow the necessary reinforcement to work towards making the boundaries compliant and the use of intertrips is a necessity rather than an occasional tool in order to maximise flows across the boundary.

One tool available to National Grid, as System Operator, to manage constraints is the use of intertrips. Whilst intertrips are armed pre-fault, the principal cost is incurred post-fault following tripping. Therefore based on the low probability of tripping they should represent a more economic and efficient means for managing constraints than the alternative Bid-Offer action to constrain generation pre-fault. Administering prices for intertrips capable of being armed in respect of derogated non-compliant transmission boundaries would offer a useful means to limit potential costs.

Therefore in light of Ofgem's recent request to review the options for reducing the level of constraint costs, and with particular focus on the suggestion that "*NGET could seek to reduce the price of resolving constraint actions by limiting constraint payments and/or by reducing the right for parties to receive payments in certain situations*" National Grid is proposing the current amendment to introduce a category 5 System to Generator Operational Intertripping Scheme to cover intertrips capable of being armed with respect to a derogated non-compliant transmission boundary.

**Impact on the CUSC** (*this should be given where possible*):

Changes including, but not limited to:

- CUSC Section 4: Balancing Services, including:
  - 4.2A amended to add additional reference to payment terms for category 5 intertrip
  - Schedule 4 amended to reflect payment rates for category 5

CUSC Section 11: Interpretations and Definitions

- New definition for "Category 5 Intertripping Scheme"

**Impact on Core Industry Documentation** (*this should be given where possible*):

Changes are also required to the following industry documents to fully implement this proposal:

- Grid Code including but not limited to a new definition for Category 5 Intertripping Scheme, a new definition for Derogated non-compliant Transmission Boundary and amendment to existing definition for System to Generator Operational Intertripping Scheme

**Impact on Computer Systems and Processes used by CUSC Parties** (*this should be given where possible*):

None

**Details of any Related Modifications to Other Industry Codes** (*where known*):

Changes to the relevant Bilateral Agreements to amend the appendix F3 for those covered by this amendment. If a decision to implement this Amendment Proposal is made, such a decision will need to include a direction from the Authority (in line with the variation clause of the relative Bilateral Agreement) to amend existing Bilateral Agreements in line with this Amendment Proposal.

**Justification for Proposed Amendment with Reference to Applicable CUSC Objectives\*\*** (mandatory by proposer):

As proposer of this modification National Grid believes that the introduction of category 5 System to Generator Operational Intertripping Scheme to cover intertrips capable of being armed with respect to a derogated non-compliant transmission boundary would better achieve the applicable CUSC objectives in the manner described below.

(a) the efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence.

- Facilitating economic and efficient use of all intertrips capable of being armed with respect to derogated non-complaint transmission boundaries
- Clarifying the responsibility and remuneration for intertrips capable of being armed with respect to derogated non-compliant transmission boundaries
- Reducing National Grid and industry exposure to the consequences of the operation of bilaterally negotiated schemes capable of being armed with respect to derogated non-compliant transmission boundaries

(b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.

- Ensuring an enhanced level of market certainty with regards to processes, responsibilities and remuneration for intertrips capable of being armed with respect to derogated non-compliant transmission boundaries
- Limiting the potential BSUoS cost for all parties, by limiting the cost of intertrips capable of being armed with respect to derogated non-compliant transmission boundaries

<b>Details of Proposer:</b> Organisation's Name:	National Grid
Capacity in which the Amendment is being proposed:  (i.e. CUSC Party, BSC Party or "energywatch")	CUSC Party
<b>Details of Proposer's Representative:</b> Name: Organisation: Telephone Number: Email Address:	David Smith National Grid 01926 5534 <a href="mailto:david.m.smith@uk.ngrid.com">david.m.smith@uk.ngrid.com</a>
<b>Details of Representative's Alternate:</b> Name: Organisation: Telephone Number: Email Address:	Rob Smith National Grid 01926 654076 robert.smith@uk.ngrid.com
<b>Attachments (Yes/No):</b> <b>If Yes, Title and No. of pages of each Attachment:</b> Yes – indicative drafting of changes to CUSC (as a separate 2 page attachment)	

## ANNEX 3 – CAP170 REQUEST FOR URGENCY

### Request for Urgency of CAP170

National Grid believes that this Amendment Proposal merits progress via an urgent amendments process, as the nature of the proposal exhibits the following characteristics:

- The proposal is linked to an imminent date related event
- There is a very real likelihood of significant commercial impact upon, NGET, industry parties, or customers if the Amendment Proposal is not treated as urgent

On the 17<sup>th</sup> of February 2009 Ofgem wrote to National Grid asking us to conduct an urgent review to consider (and if appropriate consult on) whether urgent changes to the existing commercial and charging arrangements for access to the GB transmission system are necessary before the next charging year (starting April 2009). Moreover, as Ofgem indicate in this letter, the rate at which constraint costs are incurred will increase significantly in the next few weeks (when the planned Cheviot outage programme commences). Therefore, this proposal is linked to an imminent date related event.

Furthermore, the amendment seeks to limit the price of intertrips (not classified as System to Generator Operational Intertripping Schemes) at derogated transmission boundaries, and in doing so limit the potential contribution to constraint costs. As all industry parties are charged for the cost of constraints, and this charge is ultimately passed on to consumers, this Amendment Proposal also has the potential to have significant commercial impact on both the industry and consumers.

Therefore, National Grid believes that it is appropriate that the proposal is considered in an expedited manner.

National Grid would propose that the amendment proceeds straight to company consultation under the urgent process based on the following timetable:

- |   |                           |
|---|---------------------------|
| ▪ Amendment Raised and approved as urgent | 27 <sup>th</sup> February |
| ▪ Launch of Company Consultation          | 3 <sup>rd</sup> March     |
| ▪ Close of Company Consultation           | 13 <sup>th</sup> March    |
| ▪ Report to industry for comment          | 19 <sup>th</sup> March    |
| ▪ Industry comment closes                 | 21 <sup>st</sup> March    |
| ▪ Panel vote                              | 25 <sup>th</sup> March    |
| ▪ Report to Authority                     | 27 <sup>th</sup> March    |

National Grid is aware that this timetable does not allow for Working Group development of the Amendment Proposal (and consequently does not allow for alternatives to be raised); therefore, following implementation of this amendment proposal, in accordance with CUSC section 8.21.1.9, a full review will be necessary.