

Amendment proposal:	<b>Connection and Use of System Code (CUSC) Amendment Cap144: Emergency Instruction to emergency de-energise</b>
Decision:	<b>The Authority<sup>1</sup> directs that the WGAA1 amendment to the original proposal be made<sup>2</sup></b>
Target audience:	<b>National Grid Electricity Transmission PLC (NGET), Parties to the CUSC and other interested parties</b>

Date of publication: **13<sup>th</sup> June 2008** Implementation **27th June 2008**

## Background to the amendment proposal

Under the Grid Code (GC), NGET can issue Emergency Instructions (EI), which may require Balancing Mechanism (BM) Units to operate outside their submitted parameters, in order to preserve the integrity of the transmission system<sup>3</sup>. NGET can issue an EI to increase or decrease generation or demand in certain circumstances. The GC states that an EI issued to a BM Unit is treated as a Bid-Offer Acceptance ("BOA"), unless it is rejected by the Transmission System User or the GC explicitly states to the contrary<sup>4</sup>.

Modification proposal P172<sup>5</sup> changed the treatment of EIs taken for System Balancing reasons in cash out. P172 provided NGET with discretion to determine whether an EI is taken for Electricity Balancing or System Balancing reasons. This was to reduce the risk that System actions related EIs could lead to unrepresentative Energy Imbalance Prices<sup>6</sup>

In our decision letter on P173<sup>7</sup> we acknowledged that "...it may be inappropriate for the pay-as-bid approach to apply in certain circumstances when actions are taken outside the normal operation of the market." We also noted that as EIs were only issued in limited circumstances to ensure the integrity of the system and could therefore represent a departure from normal BM operation, different treatment of EI in Settlement in terms of the payments made to/from affected Parties may be warranted. Ofgem suggested that this was important as "'sleeper' Bids could be accepted as EIs with potentially significant implications for Settlement and associated cashflows." Finally, we stated that "it may be appropriate for alternative compensation arrangements to be put in place for EIs."

## The amendment proposals

Cap 144 was raised by NGET and submitted to the CUSC Panel for consideration on 26 January 2007. The Panel sent the proposal for further development to a Working Group (WG). Two alternatives to the original were proposed by the WG, whilst a further two alternatives were raised during the consultation process.

### The original proposal

If NGET needs to remove a generator's access to the system in unplanned emergency circumstances (via an operational instruction), the only mechanism currently available is to issue an EI in accordance with the GC, which is treated as a BOA. NGET notes that this allows generators the freedom to set prices up to £99,999/MWh. NGET believes that the treatment of such an event as a Commercial Balancing Service is inappropriate and has the potential to expose the industry to high costs via BSUoS charges.

<sup>1</sup> The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority.

<sup>2</sup> This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

<sup>3</sup> See Grid Code BC2.9.1 and BC2.9.2.

<sup>4</sup> Grid Code BC2.9.2.3 states that a BOA will not be issued for provision of the Maximum Generation Service, during the Black Start process or the re-synchronisation of a de-synchronised island.

<sup>5</sup> "Removal of Emergency Instructions taken for System reasons from Imbalance Price"

<sup>6</sup> Please refer to our decision letter on P172 for further information.

<sup>7</sup> "Settlement Arrangements for Emergency Instructions"

NGET believes that it has identified a 'gap' within the existing CUSC provisions (Cap048<sup>8</sup>), between planned and unplanned interruptions. Currently as an EI to de-energise is instructed, it is not covered by the current unplanned interruption arrangements which apply to a disconnection following an automatic trip. However, NGET believe that in certain circumstances the outcome is the same as an unplanned interruption.

The original proposal is therefore seeking to close the 'gap' between a planned interruption (a required disconnection identified in operational planning timescales (i.e. where NGET provides a generator with advanced warning of a potential loss of access)) and an unplanned interruption (by automatic trip caused by the loss of transmission equipment) by extending the loss of access compensation provisions introduced by Cap048 to cover the instance where a generator is exporting but is required to de-energise/disconnect from the Transmission System in an emergency in BM timescales. The compensation arrangements under Cap048 and those proposed under the original modification proposal are MIP (Market Index Price<sup>9</sup>) for the first 24 hours, followed by a rebate of TNUoS).

NGET notes that a Cap144 type EI to de-energise/disconnect would not be used for wider system issues and would only be used where there is a local fault which may adversely affect the integrity of the System or a connected external system or poses a threat of injury or material damage that requires a BMU to be disconnected from the system.

#### Alternative proposals

*WGAA1* - Working Group Alternative Amendment 1 (WGAA1) is essentially identical to the original proposal except that it proposes an alternative compensation mechanism. Specifically, an Affected Generator would receive SBP up to 'the wall'<sup>10</sup>, followed by MIP for 24 hours, followed by a daily rebate of TNUoS. This is to reflect the inability of an Affected Generator to trade out its position up to and including Settlement Period +2 after receiving an EI. It was noted that if the market was long SBP would default to MIP.

*WGAA2* - Working Group Alternative Amendment 2 (WGAA2) also proposes alternative compensation arrangements. WGAA2 treats the emergency de-energisation in a similar manner to an intertrip (category II) as the Proposer felt the initiating event most closely parallels an inter-trip. The compensation is a one-off payment which seeks to remove the uncertainty around the volume and duration of the cash impact on the balancing arrangements. WGAA2 uses the inter-trip aspect of the Cap076<sup>11</sup> arrangements and proposes inclusion of energy volumes, up to 'the wall', in the cash out price calculation.

*CAA1* - Consultation Alternative Amendment 1 (CAA1) seeks to amend the proposed legal text of Cap144 original by excluding the reference to MEL<sup>12</sup> being declared to zero from the CUSC. As currently drafted NGET would be able to issue an instruction to a User to declare MEL to Zero as an alternative to an EI to de-energise. All other aspects of the modification are the same as the Cap144 original proposal.

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<sup>8</sup> Cap048 - introduced firm financial rights for generators to use the System by requiring NGET to pay compensation in the event of a disconnection: for planned interruptions a rebate of TNUoS, for unplanned interruptions Market Index Price (MIP) for the first 24 hours followed by a rebate of TNUoS. This is to reflect the additional costs of being out of balance in the BM as a result of a non-notified interruption event.

<sup>9</sup> MIP is a price reported by accredited Market Index Data Providers such as the within-day power exchange operated by the APX. The price is based on trades conducted on the exchange and is used to determine cash-out prices paid by parties who are out of balance.

<sup>10</sup> Balancing Mechanism window

<sup>11</sup> "Treatment of System to Generator Intertipping Schemes"

<sup>12</sup> MEL – Maximum Export Limit is the maximum power export level of a particular BM Unit for a given half hour period. A BM Unit is defined in Section K of the Balancing and Settlement Code

CAA2 - Consultation Alternative Amendment 2 (CAA2) provides an alternative compensation mechanism for the emergency disconnection. CAA2 proposes that an Affected Generator receives: SBP up to 'the wall'; and from the initiating event, MIP for the entire duration of the disconnection; and a daily pro-rated TNUoS rebate for any day or part day of the disconnection. The compensation payments are therefore coincident.

### **CUSC Panel<sup>13</sup> recommendation**

A majority of the CUSC panel (the "Panel") members considered that the original, WGAA1 and CAA1 would better facilitate achievement of the applicable CUSC objectives and that WGAA2 and CAA2 would not. The Panel considered WGAA1 best facilitated achievement of the applicable CUSC objectives and therefore recommended it for Authority approval.

### **The Authority's decision**

Each of the CUSC amendment options require changes to the GC to enable NGET to issue Cap144 type EI's. In this respect Ofgem has accepted (today) modification A/08, 'Emergency instruction to Emergency de-energise' that puts in place the required GC changes.

The Authority has considered the issues raised by the amendment proposals and the final Amendment Report dated 17 September 2007. The Authority has considered and taken into account the responses to NGET's consultations on the amendment proposals which are attached to the Final Amendment Report<sup>14</sup>. The Authority has concluded that:

1. implementation of WGAA1 will better facilitate the achievement of the applicable objectives of the CUSC<sup>15</sup>; and
2. directing that the amendment be made is consistent with the Authority's principal objective and statutory duties<sup>16</sup>.

### **Reasons for the Authority's current view**

Ofgem considers WGAA1 would better facilitate achievement of the applicable CUSC objectives relative to the current baseline, the original proposal and CAA1.

Ofgem continues to believe that it may be inappropriate for the pay-as-bid approach to apply in certain circumstances when actions are taken outside the normal operation of the market. In this respect Ofgem considers EIs to de-energise/disconnect, which are only issued in limited circumstances to ensure the integrity of the system, and which are currently permitted under the GC, to represent a departure from normal BM operation. Ofgem therefore, believes that these types of actions may warrant different treatment in Settlement in terms of the payments made to/from affected parties. This is particularly important given the potential for 'sleeper' Bids<sup>17</sup> to be accepted as EIs with potentially significant implications for Settlement and associated cashflows.

Ofgem agrees that a 'gap' does exist between planned and unplanned outages, specifically the outcome of an instruction to de-energise in BM timescales in most circumstances is the same as an unplanned interruption. Ofgem therefore welcomes the support offered by the CUSC Panel, the WG and all respondents of the principle that EIs

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<sup>13</sup> The CUSC Panel is established and constituted from time to time in accordance with section 8 of the CUSC.

<sup>14</sup> CUSC amendment proposals, amendment reports and representations can be viewed on NGET's website at <http://www.nationalgrid.com/uk/electricity/codes/systemcode/amendments/>

<sup>15</sup> As set out in Standard Condition C10(1) of NGET's Transmission Licence, see: [http://epr.ofgem.gov.uk/document\\_fetch.php?documentid=5327](http://epr.ofgem.gov.uk/document_fetch.php?documentid=5327)

<sup>16</sup> The Authority's duties are wider than matters which the panel must take into consideration and are detailed mainly in the Electricity Act 1989.

<sup>17</sup> 'Sleeper' bids may be submitted as a signal of a market participants unwillingness to be flexible.

issued to de-energise/disconnect should be treated under separate access compensation arrangements rather than through the BM.

#### Cap144 – original proposal and alternatives

Ofgem has assessed the original proposal and each of the alternatives against the applicable CUSC objectives<sup>18</sup> and Ofgem's wider statutory duties.

Ofgem believes that the original proposal would better facilitate objective (a) as it ensures that all types of total access interruptions are treated in a consistent manner. This removes any perverse incentives on NGET when deciding the most appropriate course of action when a potential emergency arises, for instance allowing a generator to trip off the system rather than removing the generator via BOA in the BM, which should provide greater certainty.

In addition, Ofgem believes that the original proposal better facilitates applicable objective (b) as it is likely to result in compensation that more appropriately reflects the cost of access than the current arrangements. The proposal is also likely to reduce the risk to Parties of exposure to volatile and potentially inappropriate BSUoS costs, as it moves away from a pay as bid system where the costs of a high price acceptance could have a significant impact on BSUoS charges. Ofgem considers that this should facilitate effective competition by reducing the risk of exposure to high BSUoS charges on market participants.

In terms of the applicable objectives Ofgem considers WGAA1 to have a similar impact as the original proposal. However, Ofgem believes WGAA1 better facilitates applicable objective (b) compared to the original proposal as it is more reflective of costs. Following an EI, the Affected Generator would pay System Buy Price (SBP), which is MIP at minimum, if they are short in the BM<sup>19</sup>. As WGAA1 proposes Affected Generators will receive compensation of SBP up to the Wall to reflect this higher cost, Ofgem considers WGAA1 more accurately reflect the cost of loss of access during a Cap144 type event. In addition, Ofgem believes WGAA1 reduces risks on market players (of facing imbalance exposure in the BM due to the EI). Ofgem believes this should enhance competition by placing market participants on a fair and level playing field.

In our Cap048 decision letter, Ofgem accepted the principle of differentiating the amount of compensation received between notified and non-notified events to reflect the additional costs of being out of balance in the BM. Whilst Ofgem appreciates that a Cap144 type event is a notified event, the notification is received by the Affected Party in BM timescales and thus has the same effect as a non-notified interruption.

With respect to WGAA2 Ofgem does not believe that the proposal reflects the cost of the loss of access as the compensation payment is unrelated to both the length of time that a generator may be off the System and the size of the affected station. This may therefore over or under compensate Affected Generators. In addition, the proposal will mean that not all types of access removal are compensated in the same manner, which could lead to perverse incentives on NGET when deciding the appropriate course of action to pursue during an emergency. Ofgem therefore does not believe that the proposal better facilitates the applicable objectives.

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<sup>18</sup> Applicable Objective (a) – The efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence, Applicable Objective (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

<sup>19</sup> When the market is long SBP will default to MIP

Ofgem does not believe CAA2 better facilitates objective (b) as Ofgem considers the proposed compensation arrangements would significantly over compensate Affected Generators following a Cap144 type EI. For example, under CAA2 MIP and TNUoS are paid simultaneously; this may lead to an element of 'double counting' in the level of compensation paid to an affected party as, for instance, the MIP will incorporate the cost of system access (TNUoS).

Ofgem sympathises with concerns raised with respect to the inclusion of the MEL to zero term in the CUSC which led to the proposal of CAA1 which seeks to exclude the MEL to zero terminology. Specifically, Ofgem notes the concern raised by a respondent that instructions to vary physical parameters should ideally be contained within the GC. This respondent also argued that other than for unplanned interruptions, the price that a generator places on its access should be determined in the market. As indicated above Ofgem believes that when actions are taken outside the normal operation of the market it may be inappropriate for the pay-as-bid approach to apply. In addition, Ofgem would note that the Cap048 compensation payments also cover planned interruptions.

Ofgem observes that the arrangements defined in the GC focus on actions required in the event of a failure of a BM Unit and provide limited guidance about actions required following an unplanned transmission system outage. However, Ofgem appreciates that this could be dealt with through modification to the GC and would therefore suggest that this may be an area for further consideration by the industry. Ofgem also notes NGET's concerns that "CAA1...does not offer the level of flexibility for the type of circumstances where an emergency instruction could be requested, and so does not cover the potential events that may arise in the future". However, we understand the probability of such an event occurring is very low.

Ofgem notes conflicting views from respondents that both inclusion and non-inclusion of the MEL to zero term in the CUSC could result in an Affected Generator continuing to generate once an EI has been issued. However, we would note that if a generator continues to generate following an EI that was not rejected, the generator would be in breach of the GC.

On balance, given CAA1 is based on the Original proposal (see above), Ofgem considers that whilst the proposal would better facilitate the applicable objectives, it does not as accurately reflect the costs of loss of access to the System as WGAA1.

### **'Lost' volume**

Under the current arrangements an EI to de-energise/disconnect is treated as a bid/offer acceptance. Where the action is identified as being taken for System Balancing, the volume of this action feeds into the cash out price calculation as an unpriced volume. Under the proposed Cap144 arrangements, the generation volume of an Affected Generator would not be included in the calculation of cash out prices.

Both the WG and respondents raised the issue of how this 'lost' energy volume from Cap144 type EI events should be treated. The majority of respondents argued that the lost volume, up to the 'wall', should form part of system BSAD (Balancing Services Adjustment Data), as it will offset through the cash-out tagging rules any, potentially expensive, offer acceptances NGET may have to take to make up the lost EI volume and hence impact on SBP. One respondent suggested that the volume should not be included since access is removed and no energy is available at any price. It was also argued that as Cap144 type events are associated with rare removals in access, these events should not be considered as balancing actions of any type and therefore the affected volume should not be included in the cash-out price calculation.

Ofgem continues to believe in the principle that actions taken by the SO for system reasons should not influence the energy imbalance price. As such Ofgem supports the view of the majority of respondents that the 'lost' volume (up to the wall) should be included in the calculation of cash out prices as an 'unpriced' volume, as this will reduce the risk of an EI, taken for system reasons, affecting the Net Imbalance Volume and potentially distorting the energy imbalance price. This reduces the potential for market participants to be exposed to unrepresentative cash out prices.

Ofgem believes that the above issue should be considered in the context of the review of cash out arrangements currently being undertaken by Ofgem and the wider industry. Given the scope of the review includes what should be included and excluded in the calculation of cash out prices, Ofgem believes that it is appropriate to deal with the issue of 'lost' volume as part of this review.

#### **October 2007 'minded to' decision**

Ofgem issued a minded to decision letter on 19<sup>th</sup> October 2007 outlining our initial view that we were minded to accept WGAA1. However, as Cap144 required consequential changes to the GC Ofgem was unable to make a final determination. With the acceptance of modification A/08 (today) that implements the required GC changes Ofgem is able to issue a final determination on Cap144.

#### **Decision notice**

In accordance with Standard Condition C10 of NGET's Transmission Licence, the Authority hereby directs that WGAA1 in respect of Amendment Proposal CAP144: "Emergency Instruction to emergency de-energise" be made.

Yours sincerely



**Kersti Berge**  
**Head of GB Markets**

**Signed on behalf of the Authority and authorised for that purpose**