



Direct Dial: 020-7901-7412

22 November 2002

The National Grid Company, CUSC Signatories and
Other Interested Parties

Your Ref: CAP010
Our Ref: IND/COD/CUSC/CAP010

Dear Colleague

Amendment to the Connection and Use of System Code ("CUSC") - Decision in relation to Proposed Amendment CAP010: "Mandatory Response Imbalance Exposure"

The Gas and Electricity Markets Authority (the "Authority"¹) has carefully considered the issues raised in the Amendment Report² in respect of Proposed Amendment CAP010 "Mandatory Response Imbalance Exposure".

The National Grid Company plc ("NGC") has recommended to the Authority that the Proposed Amendment should not be made and implemented.

The Authority has decided not to direct an amendment to the CUSC.

This letter explains the background to the Proposed Amendment and sets out the Authority's reasons for its decision.

Background to the proposal

As part of the Grid Code³, all generators are required to provide and must be capable of providing Mandatory Balancing Services if the system is to operate safely and reliably. The Grid

¹ Ofgem is the office of the Authority. The terms "Ofgem" and the "Authority" are used interchangeably in this letter.

² CAP010 Amendment Report dated 10 May 2002

³ Stated in Connection Condition 8.1 of the Grid Code.

Code requires generators to provide frequency response⁴ and reactive power⁵ to specified capabilities.

Parties can become in a position of electricity imbalance (i.e. where the BSC Party's notified generation/demand does not equal its actual generation/demand) when called upon by NGC to provide frequency response. Generators are compensated via the CUSC for the imbalance charges incurred under the BSC when providing Mandatory Frequency Response. An Amendment to the CUSC, CAP001⁶, altered the method used to calculate the response energy volume delivered or avoided by generators to more accurately reflect the energy volume delivered or avoided when providing Mandatory Frequency Response. In addition, it duplicated the BSC algebra used for calculating Non-Delivery Charges to compensate generators for Non-Delivery Charges incurred in the delivery of Mandatory Frequency Response.

The payment that generators currently receive for providing Mandatory Frequency Response is based around the difference between a reference price and the relevant Energy Imbalance Price. For responding to a low frequency event, a generator is refunded the reference price less the System Sell Price ("SSP") for response energy provided. Similarly for high frequency events, a generator is refunded the System Buy Price ("SBP") less the reference price for the response volume. The volume of frequency response delivered is currently calculated by the mechanism in section 4.1.3.9A of the CUSC (as amended by Approved Amendment CAP001, and as further amended by Approved Amendment CAP016⁷).

The reference price is calculated for each month and is the average of the previous month's SBP and SSP prices. To date the reference price has varied from one month to the next.

Innogy submitted Proposed Amendment CAP010: "Mandatory Response Imbalance Exposure" to the CUSC Panel at its meeting on 9 November 2001. The Proposer suggested that the Proposed Amendment will better facilitate achievement of the Applicable CUSC Objectives⁸.

⁴ Frequency response is used to balance the continuously changing system frequency that is determined and controlled by the balance between system demand and total generation. National Grid has a statutory obligation to maintain system frequency within 1% of 50Hz.

⁵ The requirement for reactive power is primarily driven by the interaction of real power flows on the transmission system with the complex impedances of the various elements that make up the network together with the demand at the lower voltage system interfaces. NGC is required to maintain the real and reactive power balances between sources of generation and points of demand. Without the appropriate injections of reactive power at correct locations, the voltage profile of the transmission system will exceed statutory planning and operational limits.

⁶ The decision letter for Approved Amendment CAP001 can be found at <http://www.nationalgrid.com/uk/indinfo/cusc/>

⁷ The Authority's decision letter in respect of Approved Amendment CAP016 can be viewed and downloaded from NGC's webpages at <http://www.nationalgrid.com/uk/indinfo/cusc/>

⁸ The Applicable CUSC Objectives are contained in Condition C7F.1 of the Transmission Licence and are:
(a) the efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence; and

The Proposer considered that the Proposed Amendment seeks to better reflect generating units' costs when providing Mandatory Frequency Response.

On 9 November 2001 the CUSC Panel appointed the Balancing Services Standing Group ("BSSG") to act as a Working Group to consider the Proposed Amendment and to identify any possible Alternative Amendments.

The Proposed Amendment

The Proposed Amendment seeks to replace the current reference price with a mechanism that uses Bid prices for high frequency response and Offer prices for low frequency response. The Proposer considered that the effect would be the same as if the variation in the volume of energy supplied had been achieved by way of a series of Bid Offer Acceptances ("BOAs"), each of one minute duration.

The Proposer considered that the volume calculation of the energy delivered for frequency response should be that of Approved Amendment CAP001, or Proposed Amendment CAP009. The payment for the delivered response energy would be the sum of the Offer payments less the sum of the Bid payments over the settlement period.

The Proposed Amendment proposes that the imbalance compensation element of the payment in each settlement period continues to be calculated by reference to SBP or SSP depending on the overall direction of the variation in energy delivery due to delivering frequency response.

The majority view of the BSSG was that the Proposed Amendment would better facilitate achievement of Applicable CUSC Objective (a) as set out in Condition C7F.1 of NGC's Transmission Licence. The majority argued that the Proposed Amendment would improve on NGC's ability to purchase ancillary services from the most economical sources available, having regard to the quantity and nature of the ancillary services. Furthermore, the majority of the BSSG argued that the payments made under the Proposed Amendment would more accurately align with the costs incurred, producing greater transparency in the relative costs of the service provision. This would ensure that the most economic sources of Mandatory Frequency Response continue to make their full capability available to NGC.

NGC did not agree with the majority view and argued that the Proposed Amendment would not better facilitate achievement of the Applicable CUSC Objectives. NGC opined that the Proposed Amendment would move away from a cost reflective towards a value based payment mechanism for frequency response without any of the benefits of a market mechanism. NGC argued this would lead to an increase in the costs of providing frequency response and a

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- (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.

subsequent increase in Balancing Services Use of System charges. NGC also argued that the proposed mechanism could provide the potential for service providers to preclude selection by submitting extreme Bid and Offer prices. NGC was also of the opinion that the Proposed Amendment could blur the distinction between short term energy balancing and frequency response provision, and prohibit competition in such services. Finally, NGC considered that Proposed Amendment would make optimal despatch in control time-scales difficult and require significant development of despatch systems.

The BSSG considered whether any Alternative Amendments to the Proposed Amendment existed that would better facilitate achievement of the Applicable CUSC Objectives. Several alternatives were suggested but the majority view of the BSSG was that none of these would better facilitate the achievement of the Applicable CUSC objectives compared to the Proposed Amendment.

A number of BSC Modification Proposals, CUSC Amendment Proposals and a modification to the Transmission Licence have been raised proposing changes to the arrangements for addressing a Party's imbalance exposure when providing Balancing Services. These are outlined in Appendix 1.

Respondents' views

At its meeting 22 February 2002 the CUSC Amendments Panel agreed that the Proposed Amendment should proceed to wider consultation. Subsequently, NGC issued a consultation document on 8 March 2002, inviting views from interested parties by no later than 12 April 2002.

On 27 March 2002, NGC requested an extension from Ofgem of the timetables for Proposed Amendments CAP004 to CAP010 inclusive to allow the CUSC panel the opportunity to consider the consultation responses prior to making their recommendations to the Authority. Ofgem decided not to object to a timetable extension.

On 1 May 2002 NGC issued a draft Amendment Report for Proposed Amendment CAP010 and invited further comments by 9 May 2002.

NGC received eight responses from interested parties in relation to the consultation on the Proposed Amendment. Of these, six respondents supported implementation of the Proposed Amendment, one did not support the Proposed Amendment, whereas the remaining respondent commented without expressing a firm view for or against the Proposed Amendment.

One of the arguments put forward in support of the Proposed Amendment was that using Bids and Offers to pay for frequency response would make it possible to better reflect changes in short-term costs, such as fuel costs. Therefore, contrary to NGC's view, respondents in favour of the Proposed Amendment argued that the Bid and Offer approach does not move away from a

cost-reflective remuneration of the provision of Mandatory Frequency Response, but would lead to costs for this service being transparent.

Respondents in favour of the Proposed Amendment also argued that the use of Bids and Offers would allow more competition in the provision of frequency response with the consequence that fewer providers would try to withdraw from providing the service. In addition, it was also argued that there is no difference between short-term energy balancing and frequency response. Therefore, both services should be paid via Bids and Offers.

The respondent that did not support the Proposed Amendment argued that there is currently insufficient competition for it to be successful.

No Alternative Amendment was put forward by any respondents.

Amendments Panel Members' Views

Those CUSC Amendment Panel members that expressed a view supported implementation of the Proposed Amendment.

NGC's Recommendation

NGC considered that the Proposed Amendment would not better facilitate achievement of the Applicable CUSC Objectives. NGC considers that the costs of frequency response provision would increase under the Proposed Amendment, leading to an increase in Balancing Services Use of System charges. This would not better facilitate achievement of the Applicable CUSC Objective of the efficient discharge by NGC of the obligations imposed upon it.

NGC also argued that using the same prices for short-term energy balancing as those for frequency response would prohibit competition in such Balancing Services by blurring the distinction between such services.

Ofgem's view

Ofgem considers, having had regard to its statutory duties, that the Proposed Amendment does not better facilitate achievement of the Applicable CUSC Objectives. This conclusion has been reached, taking into consideration respondents' views on Modification Proposals P34, P36, P71, Proposed Amendments CAP009, CAP011 and all related Alternative Modification Proposals and Alternative Amendments as well as the responses to the associated consultation on a Transmission Licence modification. Although the Authority has considered the issues raised in these Modification Proposals, Amendment Proposals and the Transmission Licence Modification consultation concurrently, each proposal is subject to separate Determination.

Ofgem agrees with the view that providers of certain Balancing Services should have the option of not being exposed to imbalance risk as a result of imbalance volumes created by the provision of Balancing Services. Ofgem considers that participation from the demand side in providing Balancing Services may be particularly inhibited as demand side participants do not have any compensation mechanism for the imbalance incurred as a consequence of providing Balancing Services⁹.

Ofgem does not believe it is appropriate to use Bid/Offer prices to remunerate the provision of Mandatory Balancing Services.

Ofgem is concerned that the Proposed Amendment may lead to service providers effectively excluding themselves from providing Mandatory Frequency Response by submitting extreme Bid and Offer prices. Ofgem considers that this could decrease the amount of Mandatory Frequency Response available to the System Operator and increase the costs of balancing the System. Ofgem considers this would be to the detriment of facilitating achievement of Applicable CUSC Objective (a) as set out in Condition C7F.1 of NGC's Transmission Licence.

Ofgem notes that section 4.4 of the CUSC requires payments for Mandatory Frequency Response to be cost reflective. Ofgem considers that the reference price that is currently used to compensate for the volume of energy which is due to delivering frequency response may not always accurately reflect the costs incurred or avoided as a consequence of delivering Mandatory Frequency Response. However, as set out above, Ofgem does not believe an approach using Bids and Offers to remunerate Mandatory Balancing Services is appropriate.

Ofgem considers that a competitive tender process for commercial frequency response already exists. However, to further encourage competition in frequency response provision, Ofgem supports the development of a market mechanism for frequency response. Ofgem is aware of the work currently being undertaken by the BSSG under the governance of the CUSC to develop a market mechanism for frequency response. Ofgem does not, in principle, oppose a move towards a more market-based product for Balancing Services where market based arrangements for such products, which incorporate effective competition, can be demonstrated. Ofgem will consider any proposals arising from the work undertaken by the BSSG having regard to Ofgem's statutory duties and the Applicable CUSC Objectives. Ofgem considers that matters concerning remuneration of frequency response naturally sit within the governance of the CUSC/Transmission Licence.

Ofgem notes that the Amendment Report does not contain a proposed implementation date despite this being required by Paragraph 8.20.2(f) of the CUSC. Section five of the Amendment Report outlines that the majority of the BSSG was of the opinion that implementation of the Proposed Amendment should be dependent on the necessary changes being completed to the despatch system algorithm. The minority, being the Proposer, suggested the Proposed

⁹ The CUSC contains provisions for generators to be reimbursed for imbalance costs incurred when providing Mandatory Balancing Services.

Amendment should be implemented as soon as possible by using a Microsoft Excel based optimisation solution in NGC's control room.

It is Ofgem's view that, while a Proposed Amendment can take effect if approved by the Authority, there is no power for the Authority to direct an implementation date other than that set out in the report. Ofgem does not consider that the provision of 8.23.3 provides power to propose or change a proposed implementation date and no such power is contained in Condition C7F. Ofgem considers that the implementation date should either be a specific date, or one which is otherwise clearly defined, such as the formulation in paragraph 8.23.3 of the CUSC of a specific number of days after the decision of the Authority. When it is important that a Proposed Amendment is implemented coincidentally with flagged changes to other documents, Ofgem considers it appropriate to specify a proposed implementation to be coincident to the time scales of implementation of the related changes to other documents. This approach was adopted for Proposed Amendment CAP011, which aided the Authority in an overall consideration of related Modification Proposals and Proposed Amendments. The Amendment Report for the Proposed Amendment fails to comply with the requirements of paragraph 8.20.2(f) and is unacceptable in that it provides no certainty to CUSC Parties as to when the Proposed Amendment may come into effect if the Authority directs an amendment to the CUSC.

The Authority's decision

The Authority has therefore decided not to direct that the Proposed Amendment should be made and implemented.

Please contact me on the above number if you have any queries in relation to the issues raised in this letter. Alternatively, contact Richard Ford on 020 7901 7411.

Yours sincerely



Sonia Brown

Director, Electricity Trading Arrangements

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

Appendix 1 – Related decisions

Modification Proposal P34 “Transfer of imbalances caused by Balancing Services to the Transmission Company Energy Account”

This Modification Proposal seeks to remove exposure to imbalance charges for providing Balancing Services.

The Modification Proposal requires that the methodology for determining the energy volumes associated with the provision of Balancing Services, and the list of Balancing Services that this Modification Proposal is to apply to (“Applicable Balancing Services”), be defined outside the provisions of the BSC. The Modification Proposal enables Balancing Services providers to “opt out” of the energy volume transfer process. The Modification Proposal has a retrospective implementation date of 23 August 2001.

During the assessment of the Modification Proposal, the Modification Group also developed an Alternative Modification Proposal. This Alternative Modification Proposal is based on the original Modification Proposal. The difference compared to the original Modification Proposal is that the Alternative Modification Proposal requires that the definition of Applicable Balancing Services and the methodology for calculating energy volumes associated with these Balancing Services are contained in a framework document linked to the BSC. The implementation date for the Alternative Modification Proposal is 1 December 2002.

The Authority has issued a decision to reject the Modification Proposal and the Alternative Modification Proposal concurrently with this letter.

Modification Proposal P36 “The generation of Bid/Offer Acceptances relating to energy delivered as a result of providing Applicable Balancing Services”

This Modification Proposal sought to address similar issues as Modification Proposal P34.

Under this Modification Proposal, the Transmission Company would be required to determine the energy volumes associated with the provision of Applicable Balancing Services for each BMU per Settlement Period. These energy volumes would be treated as Bid/Offer Acceptances (“BOAs”), but would be explicitly excluded from Energy Imbalance Price calculations as these BOAs are deemed to be due to System Balancing rather than Energy Balancing actions. As a result of these BOAs, the service provider would have any energy associated with the provision of Applicable Balancing Services cashed out at the Bid/Offer price and would not be exposed to imbalances due to these energy volumes. The Modification Proposal requires that the methodology for determining the energy volumes associated with the provision of Balancing Services, and the list of Balancing Services that it applies to, be held under the provisions of the BSC.

The Modification Group developed an Alternative Modification Proposal where energy volumes associated with the provision of Applicable Balancing Services would be notified in two different ways:

- as a BMU Applicable Balancing Services BOA (essentially the same mechanism as original Modification Proposal P36); or
- as a BMU Applicable Balancing Services volume, which will be removed from the Energy Account of the Balancing Service provider and transferred to the Energy Account of the Transmission Company (the mechanism set out in Modification Proposal P34).

The Alternative Modification Proposal was developed to cover all aspects of Balancing Services provision, as the original Modification Proposal effectively excluded Balancing Services providers who are not the Lead Party of the BMU and/or are not active participants in the Balancing Mechanism.

The Authority has issued a decision to reject the Modification Proposal and the Alternative Modification Proposal concurrently with this letter.

Modification Proposal P71 "Transfer of imbalances caused by Balancing Services to the Transmission Company Energy Account"

This Modification Proposal is identical to Modification Proposal P34, except it has a prospective implementation date. The Modification Proposal was granted Urgent status by the Authority on the grounds of efficiency as many of the issues had been discussed and consulted on within the industry during the extended Assessment Phase for Modification Proposals P34 and P36.

The Authority has issued a decision to approve the Modification Proposal concurrently with this letter. The Modification Proposal is to be implemented on 25 February 2003.

Proposed Amendment CAP009 "Mandatory frequency response"

This Proposed Amendment proposes changes to the methodology used for calculating frequency response volumes.

The Authority is minded to accept the Proposed Amendment. However, Ofgem considers it is important that the Proposed Amendment is not implemented prior to Modification Proposal P71 being implemented. The Amendment Report in respect of the Proposed Amendment contained a recommendation to implement the Proposed Amendment 10 business days after the Authority's decision. The Authority expects to issue its decision in relation to the Proposed Amendment on or after 12 February 2003.

Proposed Amendment CAP011 "Changes to frequency response payments to reflect a potential change to the BSC"

This Proposed Amendment seeks to address the necessary changes to the CUSC if Modification Proposal P34 or any other Modification Proposal with the same effect were to be implemented. The CUSC Panel recognised that there would also need to be changes to the CUSC if Modification Proposal P36 or any other Modification Proposal with the same effect were to be implemented. An Alternative Amendment was therefore drafted to address the changes needed if Modification Proposal P36 or any other Modification Proposal with the same effect were implemented.

The Authority has issued a decision to accept the Proposed Amendment and reject the Alternative Amendment concurrently with this letter. The Proposed Amendment is to be implemented on 25 February 2003, the same day as Modification Proposal P71 is to be implemented.

Modification to the National Grid Company's Transmission Licence: Applicable Balancing Services Volume Data ("ABSVD") Methodology Statement

Modification Proposal P34 and Modification Proposal P71 both require an ABSVD Methodology Statement to be introduced under the governance of the CUSC/Transmission Licence. Ofgem issued a consultation on a modification to NGC's Transmission Licence on 23 September 2002 seeking to introduce a requirement for NGC to put in place an ABSVD Methodology Statement that would define:

- services for which a service provider would be allowed to transfer any imbalance volume caused by the delivery of the service to NGC's Energy Account, and
- the methodology by which such transferred imbalance volumes would be calculated.

In addition, the licence modification would also place an obligation on NGC to provide the Authority with information on the level of energy volumes that had been transferred to NGC's Energy Account via the mechanism defined in the ABSVD Statement.

The Authority has issued a decision to approve the modification to NGC's Transmission Licence concurrently with this letter.

Applicable Balancing Services Volume Data ("ABSVD") Methodology Statement consultation

NGC issued a consultation on establishing an ABSVD Methodology Statement on 1 October 2002 which invited views from respondents by 29 October 2002. NGC issued its report on the consultation to the Authority on 5 November 2002. In the report NGC recommended that a revised version of the ABSVD Methodology Statement should be approved if Ofgem decides to direct the necessary modification to NGC's Transmission Licence.

Ofgem is currently considering the findings of the report and the views expressed by interested parties. Ofgem will make its decision to approve or reject the proposed ABSVD Methodology Statement in due course.