

Amendment Proposal Form

Those wishing to propose an Amendment to the CUSC should do so by filling in this “Amendment Proposal Form” that is based on the provisions contained in Section 8.15 of the CUSC. The form seeks to ascertain details about the proposed Amendment so that the CUSC Panel can determine more clearly whether the proposal should be considered further by a Working Group or go straight to wider National Grid Consultation.

The Panel Secretary will check that the form has been completed, in accordance with the requirements of the CUSC prior to sending it to the Panel. They will then write back to the Proposer, letting him know the Amendment Proposals reference number, and the date on which the Panel will consider the proposal further.

The form should be returned to:

Mark Cox
Panel Secretary
Commercial Development
National Grid Company plc
National Grid House
Kirby Corner Road
Coventry
CV4 8JY

Or via e-mail to:

CUSC.Team@uk.ngrid.com

(Participants submitting this form by email will need to send a statement to the effect that the proposer acknowledges that on acceptance of the proposal for consideration by the Amendments Panel, a proposer which is not a CUSC Party shall grant a licence in accordance with Paragraph 8.15.7 of the CUSC. A Proposer which is a CUSC Party shall be deemed to have granted this Licence.

Proposers Name:

(Name of party making the proposal)

National Grid.

Proposers Representative:

(The name of the person representing the proposer [and his alternate])

Richard Phillips [John Pettigrew]

Organisations Name:

(Organisation on whose behalf the Amendment is proposed)

National Grid are proposing this urgent amendment (CAP001), however, the proposal is based on the recommendations of the informal, pre-CUSC, Frequency Response Imbalance Working Group that was set up to consider revisions to the imbalance compensation mechanism introduced at NETA go-live.

Organisation Address:

National Grid House
Kirby Corner Road
Coventry
CV4 8JY

Capacity in which the Organisation Proposes to make an Amendment:

(CUSC Party, BSC Party, or Other. Other Parties must submit proposed Amendments via "Energy Watch")

CUSC Party

Description of the issue or defect which the proposed Amendment seeks to address:

(This should be in reasonable, but not excessive detail)

Mandatory Frequency Response is an obligation placed on generators under the Grid Code. The payment mechanism for mandatory frequency response was put in place for the commencement of NETA and was intended to be broadly cost reflective. These mechanisms were reviewed and developed for NETA by the R2P2 (Response / Reserve Procurement Principles) sub group of the Transmission Users Group (TUG).

Mandatory Frequency Response payments comprise of:

- De-load payments via bid / offer acceptance;
- Holding payment to cover the cost of a generator holding frequency response;
- Delivery or imbalance exposure payment.

During development of the payment mechanism, it was considered that the mechanism should be simple and not jeopardise the NETA project. In particular, the intention of the imbalance compensation was that on average providers were left neutral over a period of time. It was not intended to be a

“value based” principle but to compensate for energy imbalance from actual provision of frequency response. In light of experience, a number of providers have raised concerns over the imbalance exposure element of the payment. There are 5 potential shortfalls with the current payment mechanism for imbalance exposure:

- Response energy calculations are performed on a settlement period basis. This is adequate where generators are capable of providing equal volumes of energy for both positive and negative deviations of frequency within the period. However, where this is not the case, providers can be exposed to energy imbalance volumes that are not adequately reflected in the current payment mechanism;
- Response energy is calculated by linearly interpolating between zero and the capability at a 0.5Hz frequency deviation. Because this straight-line interpolation underestimates the actual response capability curve, adjustment factors are used to scale up these values. These factors were calculated for typical response providing generators and because they are not reflective of each individual generator may lead to inaccuracies;
- When selected for primary and secondary low frequency response, the energy delivered by the generator may be greater than the primary response contract value currently used in the volume calculation. This may lead to an underestimation of the low frequency response delivered by the generator;
- The payment calculation does not take into account non-delivery charges that generators may be exposed to following the acceptance of Bids and Offers by National Grid and the delivery of frequency response; and
- The payment calculation takes into account the cost or avoided cost of energy production. This is currently calculated from a monthly average of SSP/SBP data in the preceding month. This so-called reference price has proved to be an inadequate proxy for cost of production as it fails to represent with any degree of reflectivity the differences in production cost across the various plant types on the system.

Description of the proposed Amendment and of its nature and purpose:

(This should be in reasonable but not excessive detail)

The nature of the change is to move to a more accurate estimate of actual imbalance. More specifically, four main changes are proposed:

- Per-minute response energy – calculating response energy for each minute of each settlement period would provide a more accurate calculation of a generator’s response energy volume in each settlement

period. Payment calculations will still be undertaken on a settlement period basis;

- Detailed interpolation of the response matrix – by linearly interpolating between de-load points and frequency deviation data within the response matrix, a more accurate value of response capability can be ascertained. This will remove the need for adjustment factors and the associated inaccuracy of this element of the payment mechanism;
- For generating units selected to provide primary, secondary and high frequency response – calculating the low frequency response energy of a generator using the average of the primary and secondary contract values improves the approximation of a generators actual imbalance; and
- Compensation for non-delivery charges – using the BSC algebra to calculate non-delivery charges it will be possible to calculate a compensation payment based on the volume of response energy delivered.

Although the fifth shortfall highlighted above (i.e. the issue regarding the payment calculation) was discussed and debated in detail by the informal, pre-CUSC, Frequency Response Imbalance Working Group, no agreement as to a way forward regarding this matter was agreed. The CUSC Panel have therefore been invited to consider how this issue may be taken forward (possibly through further discussion/debate at the proposed Balancing Services Standing Group) as part of the recommendations of the Working Group Report.

An indication of those parts of the CUSC which would require amendment in order to give effect to (or would otherwise affected by) the proposed amendment and an indication of the nature of those amendments or effect.

(This should be given where possible)

Section 4.1.3 – calculation of payments and payment formulae. Amendment required to reflect revised payment for frequency response imbalance as outlined above.

Reasons why the Proposer believes that the proposed Amendment would better facilitate achievement of the Applicable CUSC Objectives as compared with the current version of the CUSC with background information in support thereof.

The Transmission Licence obligates National Grid to purchase ancillary services from the most economical sources available to it having regard to the

quantity and nature of the ancillary services. The payment calculations outlined in the CUSC for Frequency Response are based on broadly cost reflective charging principles i.e. based and founded upon actual or estimated costs directly incurred by the provider.

This proposed amendment will better facilitate the efficient discharge of this licence obligation by aligning more accurately payments made with costs incurred, producing greater transparency in the relative costs of service provision. This in turn will ensure that the most economic sources of mandatory frequency response continue to make their full capability available for despatch by National Grid. In addition, this amendment will ensure that providers are not over compensated for providing mandatory frequency response.

An indication of the impact of the proposed Amendment on Core Industry Documents.

(This should be given where possible)

No impact on BSC, Grid Code or any other core industry document is foreseen.

The revised formulae may require a change to National Grid's incentive scheme target and consequently the Transmission Licence.

An indication of the impact of the proposed Amendment on relevant computer systems and processes used by CUSC Parties.

(This should be given where possible)

The proposed amendment will require modification to the payment calculation system (GENRES) used by National Grid to calculate the Frequency Response payments.

There will be no significant impact on processes used by CUSC Parties.

A statement to the effect that the Proposer acknowledges that on acceptance of the proposal for consideration by the Amendments Panel a Proposer shall grant a licence in accordance with 8.15.7 of the CUSC.

(A signature to this effect must be given.)

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