

Connection and Use of System Code (CUSC)

Title of the CUSC Modification Proposal

A fixed Response Energy Payment option for all generating technologies

Submission Date

19 May 2015

Description of the Issue or Defect that the CUSC Modification Proposal seeks to address

All licensed generators are obliged to provide the mandatory Frequency Response (FR) service as required by the Grid Code. Currently, when instructed to provide FR, a generator is paid an hourly Holding Payment and is paid or pays a Response Energy Payment (REP) for net energy delivery per settlement period.

Generators submit individual Holding Prices on a monthly basis whilst the universally-applied REP is defined in the CUSC and is designed to reflect the energy cost incurred or saved from service provision, which includes the associated cost of fuel. The REP is based on Market Index Price (MIP) with different ratios: -0.75 for High Frequency and 1.25 for Low Frequency. The negative sign for High Frequency indicates that the REP is made by generators, as it is anticipated that the generator has saved money by not using as much fuel.

The current model for FR payment is outdated and better suited to a time where renewable generation on the system was sparse and the marginal costs of generators were similar. Presently the marginal costs of generators are very different, with some generators having negative marginal costs. For example, wind and solar generators have negative marginal costs as these technologies have no fuel cost associated with the production of electricity. In addition these types of generation receive low carbon support e.g. ROCs for every unit of electricity generated i.e. the value of a ROC represents the opportunity cost for these generators.

The increase in negative marginal cost renewable generation connected to the system will lead to increased volatility and uncertainty around the MIP. This effect will tend to increase the volatility of the MIP as the MIP is determined by the marginal source of generation. The marginal source of generation will vary throughout the day as demand fluctuates. As different technologies have significantly different marginal costs, this will drive increased volatility of within day prices. For example, during the day when demand is relatively high, a conventional generator will likely be the marginal source of generation and will set the MIP. As conventional generators have positive marginal costs, this will likely result in a positive MIP. In addition, as conventional generators will increasingly operate for a limited number of hours, the requirement to recover fixed costs in a limited number of hours will lead to increases in MIP prices, specifically at peak times. Conversely, in low demand periods (such as overnight), a wind

generator may be the marginal source of power. As this will have a negative marginal cost, the MIP will likely go negative. Indeed traded power prices have gone negative on a number of occasions in April and May 2015.

This trend of increasingly volatile MIPs will be accentuated by proposed changes to the cash-out price arrangements. By making cash-out prices more marginal, the impact of more marginal cash-out prices can be expected to impact the volatility of the MIP.

This increasing price volatility risk will most likely have an effect on the holding fees submitted by generators and some generators may price themselves out of the market. This is because generators cannot anticipate the volatility of the MIP and thus are uncertain of the costs associated with being utilised to provide FR.

As such, the current REP calculation is an inefficient way to manage this risk and will have a detrimental effect on National Grid's ability to efficiently procure FR. This increased cost will eventually be passed on to the end consumer.

Description of the CUSC Modification Proposal

We propose that all generators regardless of technology type should have the option of choosing whether their REP is based on the current methodology, or a REP fixed at a suggested value of £0/MWh. A Workgroup may wish to consider fixing the REP at a different price if they felt it was more appropriate.

We consider this modification proposal to be straightforward and of minimal cost.

We believe that all generators, regardless of technology type, should have the option of fixing the price of their REP. Allowing generators this option will allow them to better manage the risks noted above. This will also likely maximise the quantity of plant providing cost effective FR. This will both improve the SO's procurement and utilisation of FR (thus ensuring more efficient system operation), as well as maximising effective competition between providers of FR. Both impacts will benefit end consumers.

Impact on the CUSC

Changes would be required to section 4.

Do you believe the CUSC Modification Proposal will have a material impact on Greenhouse Gas Emissions? Yes / No

No

Impact on Core Industry Documentation. Please tick the relevant boxes and provide any supporting information

BSC

Grid Code

STC

Other
(please specify)

This is an optional section. You should select any Codes or state Industry Documents which may be affected by this Proposal and, where possible, how they will be affected.

Urgency Recommended: Yes / No

No

Justification for Urgency Recommendation

N/A

Self-Governance Recommended: Yes / No

No

Justification for Self-Governance Recommendation

N/A

Should this CUSC Modification Proposal be considered exempt from any ongoing Significant Code Reviews?

N/A

Impact on Computer Systems and Processes used by CUSC Parties:

Low impact on:

- Generator frequency response pricing processes

Medium impact on:

- National Grid administration of Frequency Response Price Submission process
- National Grid and Generator Settlement processes

Details of any Related Modification to Other Industry Codes

CMP237: This modification addressed the disparity between the payments received for FR for non-fuel cost generation.

It is proposed that the REP calculation be retained for conventional generators or generators that have a fuel cost (e.g. fossil fuel or biomass). For all other generators the REP would be settled at £0/MWh. This will ensure that generators are not penalised by the cost of changing their energy output in providing FR, whether that change involves a fuel cost or not. We would like to emphasise that the new modification we are proposing rectifies a separate defect to that which CMP237 is concerned with, although the solution is similar and would be compatible with solving the CMP237 defect.

Justification for CUSC Modification Proposal with Reference to Applicable CUSC Objectives:

Our proposal will better facilitate Applicable CUSC Objectives (a) and (b) for the following reasons.

Against Objective (b), allowing generators this option (£0/MWh REP) will allow them to better manage the risk associated with the volatility of the MIP. By allowing generators to eliminate the price risk associated with the MIP, generators will be able to more keenly price the provision of FR. This will maximise the quantity of plant providing cost effective FR and thus effective competition.

Against Objective (a), by facilitating effective competition for FR, the proposal will increase the number of options available to the SO for FR provision. As a result this will improve the SO's procurement and utilisation of the service, thus ensuring more efficient system operation.

Both impacts will benefit end consumers by more efficiently procuring and utilising FR.

Please tick the relevant boxes and provide justification:

(a) the efficient discharge by The Company of the obligations imposed upon it by the Act and the Transmission Licence

(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.

(c) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.

These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1.

Objective (c) was added in November 2011. This refers specifically to European Regulation

2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).

Additional details

Details of Proposer: (Organisation Name)	Drax Power Limited
Capacity in which the CUSC Modification Proposal is being proposed: (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Cem Suleyman Drax Power Limited 01757 612338 cem.suleyman@drax.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Joseph Underwood Drax Power Limited 01757 612736 joseph.underwood@drax.com
Attachments (Yes/No): No If Yes, Title and No. of pages of each Attachment:	

Contact Us

If you have any questions or need any advice on how to fill in this form please contact the Panel Secretary:

E-mail cusc.team@nationalgrid.com

Phone: 01926 653606

For examples of recent CUSC Modifications Proposals that have been raised please visit the National Grid Website at <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/Current/>

Submitting the Proposal

Once you have completed this form, please return to the Panel Secretary, either by email to jade.clarke@nationalgrid.com and copied to cusc.team@nationalgrid.com, or by post to:

Jade Clarke
CUSC Modifications Panel Secretary, TNS
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If no more information is required, we will contact you with a Modification Proposal number and the date the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, the Proposal can be rejected. You will be informed of the rejection and the Panel will discuss the issue at the next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform you.