

Connection and Use of System Code (CUSC)

Title of the CUSC Modification Proposal
Response Energy Payment for Low Fuel Cost Generation
Submission Date
18 September 2014
Description of the Issue or Defect that the CUSC Modification Proposal seeks to address
<p>The current Response Energy Payment methodology creates a barrier to competition for low fuel cost generators.</p> <p>All licensed generators are obliged to provide the mandatory frequency response service as required by the Grid Code. Currently, when instructed to provide frequency response, 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.</p> <p>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.</p> <p>This methodology evolved during a period when the majority of generators providing frequency response had fuel costs that made up a reasonable proportion of the cost of providing frequency response. As such, the current methodology is tailored to these conventional generators, and does not consider the different financing approaches of generators with low or negative energy costs or those that receive additional financial incentives, e.g. Renewable Obligation Certificates (ROC) and, in the future, Feed In Tariff incentives.</p> <p>An example of this might be a wind farm for whom there is a financial incentive to output at full capability, as ROCs are earned on a MWh output basis. If this unit were to be instructed to carry High Frequency response, it would pay REP for any consequent reduction in energy output, but would have no avoided fuel cost to offset this against. There is a reverse effect for low frequency response, as the wind farm would first need to be bid down (i.e. its output is reduced through acceptance of a bid in the balancing mechanism) in order for it to have the headroom to be able to provide low frequency response. The bid price for this would include lost ROC revenue, and the wind farm would also get paid REP despite having used no additional fuel.</p>

This is illustrated in the following table:

Generator Type	Response Type	Cost	Benefit
Conventional	High Frequency	MIP*-0.75	Avoided fuel
	Low Frequency	Used fuel [Reduced output if req.d]	MIP*1.25 [BOA payment if req.d]
Low Carbon	High Frequency	MIP*-0.75	-
	Low Frequency	Reduced output	BOA payment MIP*1.25

For clarity it should be noted that when a generator has been dispatched for frequency response they are not subject to imbalance payments (or cashout), and therefore any variations in output from their position as a result of providing response would not affect the amount of ROCs earned.

The current methodology therefore provides a measure of cost mitigation for conventional fuel-stock generators by balancing the avoided/used fuel costs against the REP, but does not appropriately reflect the cost for renewable generators. With the increasing installed capacity of these generators we believe the calculation of the REP needs to be re-defined to accommodate a diverse range of frequency response service providers.

Description of the CUSC Modification Proposal

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 frequency response, whether that change involves a fuel cost or not. The effect of this is illustrated in the following table:

Generator Type	Response Type	Cost	Benefit
Conventional	High Frequency	MIP*-0.75	Avoided fuel
	Low Frequency	Used fuel Reduced output (if req.d)	MIP*1.25 BOA payment (if req.d)
Low Carbon	High Frequency	-	-
	Low Frequency	Reduced output	BOA payment

NGET considers this proposal to be a pragmatic step that should be straightforward to implement at minimal cost. By removing the REP from non-conventional generators the proposal removes the financial penalty as a result of assumed fuel costs, whilst ensuring that there would be minimal impact for existing fossil fuel generators.

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. It is envisaged that the new methodology would encourage renewable generators to participate in the frequency response market, however payments for frequency response are not sufficiently large by themselves to drive a material change in either the investment in new generation or the operation of existing generation.

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

No other Codes would be impacted.

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

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

This modification proposal proposes relatively simple changes that are believed to have modest implementation costs which should be outweighed by the benefit brought by facilitating competition described below.

(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.

This modification proposal removes a barrier to competition that the current Response Energy Payment methodology presents to generators that have low fuel costs.

(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)	National Grid
Capacity in which the CUSC Modification Proposal is being proposed: (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party

<p>Details of Proposer's Representative:</p> <p style="padding-left: 40px;">Name: Adam Sims</p> <p style="padding-left: 40px;">Organisation: National Grid</p> <p style="padding-left: 40px;">Telephone Number: 01926 655292</p> <p style="padding-left: 40px;">Email Address: adam.sims@nationalgrid.com</p>	
<p>Details of Representative's Alternate:</p> <p style="padding-left: 40px;">Name: Steve Lam</p> <p style="padding-left: 40px;">Organisation: National Grid</p> <p style="padding-left: 40px;">Telephone Number: 01926 653534</p> <p style="padding-left: 40px;">Email Address: steven.lam@nationalgrid.com</p>	
<p>Attachments (Yes/No): No</p> <p>If Yes, Title and No. of pages of each Attachment:</p>	

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 655223.

For examples of recent CUSC Modifications Proposals that have been raised please visit the National Grid Website at <http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/currenamentmentproposals/>

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
National Grid Electricity Transmission plc
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

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.