

CUSC Modification Proposal Form		At what stage is this document in the process?
<h1 style="color: #00a651;">CMP300: Cost reflective Response Energy Payment for Generators with low or negative marginal costs</h1>		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">01</span> <span style="background-color: #00a651; color: white; border-radius: 5px; padding: 2px 5px;">Proposal Form</span></div> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">02</span> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">Workgroup Consultation</span></div> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">03</span> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">Workgroup Report</span></div> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">04</span> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">Code Administrator Consultation</span></div> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">05</span> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">Draft CUSC Modification Report</span></div> <div style="margin-bottom: 5px;"><span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">06</span> <span style="border: 1px solid #ccc; border-radius: 5px; padding: 2px 5px;">Final CUSC Modification Report</span></div> </div>
<p><b>Purpose of Modification:</b> To ensure that the Response Energy Payment paid to or by generators with respect to a BM Unit with low or negative marginal costs is reflective of the cost or avoided cost of energy production.</p>		
	<p><b>The Proposer recommends that this modification should be:</b></p> <ul style="list-style-type: none"> <li>Subject to self-governance and proceed to Code Administrator Consultation</li> </ul> <p>This modification was raised <i>17 May 2018</i> and will be presented by the Proposer to the Panel on <i>25 May 2018</i>. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>	
	<p><b>High Impact:</b> None.</p>	
	<p><b>Medium Impact:</b> MFR providers, the SO.</p>	
	<p><b>Low Impact:</b> None.</p>	

Contents		 Any questions?
1	Summary	4
2	Governance	5
3	Why Change?	5
4	Code Specific Matters	6
5	Solution	7
6	Impacts & Other Considerations	7
7	Relevant Objectives	7
8	Implementation	8
9	Legal Text	8
10	Recommendations	9
Timetable		 Shazia.akhtar2@national.grid.com  07787266972 Proposer: Drax Power LTD  paul.youngman@drax.com  01757 612757 National Grid Representative: Urmi Mistry  urmi.mistry@national.grid.com  07814 792971
<i>The Code Administrator will update the timetable.</i>		
<b>The Code Administrator will recommend a timetable to CUSC Panel once the Governance route is established</b>		
Initial consideration by Workgroup		dd month year
Workgroup Consultation issued to the Industry		dd month year
Modification concluded by Workgroup		dd month year
Workgroup Report presented to Panel		dd month year
Code Administration Consultation Report issued to the Industry		dd month year
Draft Final Modification Report presented to Panel		dd month year
Modification Panel decision		dd month year
Final Modification Report issued the Authority		dd month year
Decision implemented in CUSC		dd month year

**Proposer Details**

<b>Details of Proposer:</b> (Organisation Name)	Drax Power LTD
Capacity in which the CUSC Modification Proposal is being proposed: (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party
<b>Details of Proposer's Representative:</b> Name: Organisation: Telephone Number: Email Address:	Paul Youngman Drax Power LTD 01757 612757 paul.youngman@drax.com
<b>Details of Representative's Alternate:</b> Name: Organisation: Telephone Number: Email Address:	Joshua Logan Drax Power LTD 01757 612736 Joshua.logan@drax.com
<b>Attachments (Yes/No): No</b> <b>If Yes, Title and No. of pages of each Attachment:</b>	

**Impact on Core Industry Documentation.**

*Please mark the relevant boxes with an "x" and provide any supporting information*

<b>BSC</b>	<input type="checkbox"/>
<b>Grid Code</b>	<input type="checkbox"/>
<b>STC</b>	<input type="checkbox"/>
<b>Other</b>	<input type="checkbox"/>

## 1 Summary

### Defect

This modification is to improve the cost reflectivity of the Response Energy Payment (REP). The current methodology allows for the REP to be set by the Market Index Price (MIP) or at Zero for “Non-Fuel” BM units that have low or negative marginal costs. The current construction of the REP does not reflect the cost or avoided cost of energy production for all generators. BM Units with low or negative marginal costs, as a consequence of having a CfD FiT, are not managed the same as “non-fuel” BM Units that have equivalent low or negative marginal costs.

We believe this is an anomaly and should be corrected. The REP methodology should be cost reflective, not reflective of specific methods of energy production. Technologies not classified as “non-fuel” which have low, or zero, marginal costs due to having a CfD FiT, should be treated the same as other low, or zero marginal cost units and have a REP set to zero. This will make the REP more cost reflective, and alleviate any potential distortion of the Mandatory Frequency Response (MFR) market, as the MIP based REP is clearly not cost reflective for these providers.

### What

It is not only “Non-fuel” BM Units that can have low or negative marginal costs, in fact, other BM Units with a CfD FiT have similar marginal costs. The legal text should be amended to reflect this and ensure CfD BM Units receive a zero REP.

### Why

The REP was designed to be cost reflective. The REP payment does not accurately reflect the generator’s cost, or avoided cost for some technologies with a CfD FiT due to the low or negative marginal cost for these BM Units. This could be having a negative impact on competition within the MFR market where Generators submit holding priced (HP) tenders on a monthly basis, and the SO ranks these tender submissions in economic order.

### How

Currently, the Reference Price which feeds into the calculation of the Response Energy Payment is set to zero for “non-fuel” cost BM Units, we propose this should be set to zero for **both** “non-fuel” cost and **CfD BM Units**.

## 2 Governance

### Justification for Self-Governance Procedures

We consider that this modification should be considered for self-governance. Firstly, the modification is designed to ensure that unintended differences between CUSC parties with low or zero marginal costs is remedied. Under the proposal the REP will better reflect marginal costs rather than just specific technologies, alleviating an area of discrimination between CUSC parties. Secondly the proposed changes to the calculation of REP should have a **beneficial non-material** effect on competition due to the improvement of REP cost reflectivity. The proposal is unlikely to have a **material** effect on any of the five criteria listed below.

*Self-Governance - The modification is unlikely to discriminate between different classes of CUSC Parties and is unlikely to have a material effect on:*

- i) Existing or future electricity customers;*
- ii) Competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity,*
- iii) The operation of the National Electricity Transmission System*
- iv) Matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies*
- v) The CUSC's governance procedures or the CUSC's modification procedures*

### Requested Next Steps

This modification should:

- Be subject to self-governance and proceed to Code Administrator Consultation.

## 3 Why Change?

This change will improve competition in the MFR by ensuring that the REP is cost reflective and all generators with a low or negative marginal cost are treated equally.

Certain generators are required by the Grid Code to provide a Mandatory Frequency Response (MFR) service to assist the SO with keeping the electricity system frequency within a designated target of 50Hz and receive payments for doing so. These payments are designed to be cost reflective and are split between a Holding Payment (HP) for being capable of providing response, and a Response Energy Payment (REP), which is a cost reflective utilisation payment designed to cover the costs of actual response energy. Generators submit holding price (HP) tenders on a monthly basis to the SO. The SO then ranks these tender submissions in economic order. When generators are instructed to increase their output (Low Frequency Response), they receive a cost

reflective REP payment, where generators are instructed to reduce their output (High Frequency Response), they pay the SO to reflect the energy costs saved. The REP is based either on the Market Index Price (MIP) or Zero if the generator has low or negative marginal costs, and is classified “non-fuel”

The classification of “non-fuel” was introduced by “*CMP237 Response Energy Payment for Low Fuel Cost Generation*” to ensure the REP better reflected costs. This was approved on the 31<sup>st</sup> October 2016 to address an unintended consequence of the REP. The modification rectified an issue where generators with low or negative marginal costs were submitting HP’s which were typically the highest in the market. The primary driver of this behaviour was that the REP, which was then based solely on MIP, did not reflect the actual and opportunity costs incurred for providing this service to the SO.

For instance, if a renewable generator was instructed to provide High Frequency Response (reduce output), it would be required to pay NGET for the cost that was avoided in reducing its energy production when no costs would actually have been incurred. This generator also has to potentially sacrifice renewable subsidies (e.g. CfD FiT) as a result of reducing output. As such, it is not cost-reflective for them to have to pay the SO for avoided costs that don’t exist.

Ofgem addressed cost reflectivity of the REP within its decision document on CMP237, agreeing that low or negative marginal cost generators should have a REP set to zero. This was applied at the time to “non fuel” BM Units: Onshore wind, Offshore wind, Solar, Tidal and Wave. These BM Units reference price is set to zero when calculating the Response Energy Payment, to reflect their low or negative marginal cost.

The definition applied through “*CMP237 Response Energy Payment for Low Fuel Cost Generation*” has not reflected changes to the market with the effect that some BM Units with a low or negative marginal cost are not captured by the definition. We propose this should be rectified by extending a zero reference price to **both** “non-fuel” BM Units and BM Units with a CfD. This would be accomplished by defining a **CfD BM Unit** as “*a BM Unit which entered into a Contract for Difference (CfD) or investment contract each as designated in the Energy Act 2013*”

## 4 Code Specific Matters

### Technical Skillsets

Mandatory Frequency response.

Response Energy Payment.

### Reference Documents

CMP237 Final Modification Report

CMP237 Final Decision from Authority

## 5 Solution

For all BM Units with a low or negative marginal cost 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.

The response energy payment is currently calculated by multiplying the response energy by the reference price. Where the reference price is zero for “non-fuel” BM Units. We propose to amend this so that the reference price is zero **for both** “non-fuel” BM Units and CfD BM Units. We believe this would cover all BM Units with a low or negative marginal cost, and ensure that they do not get paid, or pay, the MIP based Response Energy Payment.

## 6 Impacts & Other Considerations

This modification will impact National Grid and providers of MFR since it changes how the REP is calculated for certain generators. This modification proposes changes to section 4.1.3.9A of the Connection and Use of System Code.

### Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No.

### Consumer Impacts

This modification will address an issue with the Response Energy Payment associated with providing MFR. By ensuring that the REP is more cost reflective for all MFR providers this will better facilitate competition for the provision of frequency response. This should consequently reduce the overall cost to the end consumer.

## 7 Relevant Objectives

**Mandatory for the Proposer to complete.** Please delete the CUSC Objectives that is not applicable.

### Impact of the modification on the Applicable CUSC Objectives (Charging):

Relevant Objective	Identified impact
(a) That compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;	None
(b) That compliance with the use of system charging methodology results in charges which reflect, as far as is	None

reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard licence condition C26 requirements of a connect and manage connection);	
(c) That, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses;	None
(d) 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 *; and	None
(e) Promoting efficiency in the implementation and administration of the CUSC arrangements.	None
*Objective (d) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

This modification proposal levels the playing field and removes a barrier to competition that the current Response Energy Payment methodology presents to generators that have low or negative marginal costs. These units aren't classified as "non-fuel", and consequentially are paid, or pay, a response energy payment that isn't reflective of actual costs. This modification will ensure that the REP is cost reflective for all MFR providers resulting in a more competitive and efficient outcome.

## 8 Implementation

This modification should be implemented at the earliest opportunity to ensure there is a level playing field for all generators providing MFR.

## 9 Legal Text

Where:  $RE_{ij}$  is positive then:

Reference Price =  $\max (\sum_s \{PXP_{sj} \times QXP_{sj}\} / \sum_s \{QXP_{sj}\} \times 1.25, 0 )$  except in the case of both non-fuel cost and CfD BM Unit where it = 0

where  $\sum_s$  represents the sum over all Market Index Data Providers.

Where  $RE_{ij}$  is negative then:

Reference Price =  $\max (\sum_s \{ \mathbf{PXP}_{sj} \times \mathbf{QXP}_{sj} \} / \sum_s \{ \mathbf{QXP}_{sj} \} \times 0.75, 0 )$  except in the case of **both** non-fuel cost **and CfD BM Unit** where it = 0

where  $\sum_s$  represents the sum overall **Market Index Data Providers**

Where for the purposes of this Paragraph:

a non-fuel cost **BM Unit** means a **BM Unit** [associated with] [registered in respect of] a non-fuel cost **Power Station**

a non-fuel cost **Power Station** means:

a **Power Station** of the following type which does not have the facility to store the energy produced)

Onshore wind  
Offshore wind  
Solar  
Tidal  
Wave

*a CfD BM Unit means a BM Unit which entered into a Contract for Difference (CfD) or investment contract each as designated in the Energy Act 2013*

## Text Commentary

Amended legal text specifying that the reference price is zero for both “non-fuel” and CfD BM Units with a definition of a CfD BM Unit.

## 10 Recommendations

### Proposer’s Recommendation to Panel

Panel is asked to:

- Agree that this modification be subject to self-governance and proceed to Code Administrator Consultation.