National Grid ESO
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**Draft GB Pricing Proposal**

## Introduction

i) This Pricing Proposal (PP) has been developed for the GB market in order to provide clear guidance to the Transmission System Operator (TSO) of when marginal pricing (pay-as-cleared) should be used when a new balancing product is introduced.

ii) Article 6(4) of Regulation (EU) 2019/943[1] states that "*settlement of balancing energy for **standard balancing products and specific balancing products shall be based on marginal pricing (pay-as-cleared)** unless the regulatory authority approves an alternative pricing method on the basis of a joint proposal by all transmission system operators **following an analysis demonstrating that that alternative pricing method is more efficient***" (emphasis added).

iii) Article 6(14) of Regulation (EU) 2019/943 states that "*Transmission system operators may, where standard balancing products are not sufficient to ensure operational security or where some balancing resources cannot participate in the balancing market through standard balancing products, propose, and the regulatory authority may approve, derogations from paragraphs 2 and 4 for specific balancing products which are activated locally without exchanging them with other transmission system operators".*

iv) This Pricing Proposal has been developed in order for the GB TSO to ascertain when Marginal Pricing (Pay as Cleared) should be used for balancing products and highlights the process for when other payment mechanisms can be utilised if deemed to be more efficient.

**Scope**

**1.1** The Pricing Proposal is the proposal for GB in accordance with Article 6(4) of Regulation (EU) 2019/943.

**1.2** The Pricing Proposal defines the methodology to determine the pricing mechanism of Balancing Energy resulting from Frequency Restoration Reserves with manual activation (hereafter referred to as "mFRR"), Replacement Reserves (hereafter referred to as "RR") and Frequency Containment Reserves (FCR), also known as Specific balancing products. Capacity payments (i.e. Balancing Capacity) are out of scope of this Pricing Proposal.

**Definitions and Criteria**

**2.1** All definitions for Frequency Restoration Reserve, Reserve Replacement and Frequency Containment Reserve can be found in SOGL (EU Regulation 2017/1485) and The Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020[2] .

**2.2** Definitions for Balancing Energy, Balancing Capacity, Standard balancing products and Specific balancing products can be found in Regulation (EU) 2019/943 and SI 2020/1006. For clarity, definitions for Pay as Bid and Marginal Pricing (Pay as Cleared) are set out in the table below.

[1] Retained EU Regulation 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity
[2] SI 2020/1006

| Term | Definition |
|---|---|
| Marginal Pricing (Pay as Cleared) | Auction whereby a uniform price is given for all transactions. |
| Pay as Bid | Auction whereby participants are paid the amount bid or offered. |

**2.2** Pay as Cleared will be the payment mechanism used for all in scope products if the product meets the following criteria, subject to the conditions outlined in General Principles (Section 3).

| Criteria | Definition | Measures |
|---|---|---|
| Homogenous | The product cannot be distinguished from the same product offered by different providers by the consumer (TSO). | The range of offerings from providers may be determined by:<br><br>i) Degree of allowable variation of parameters (including but not limited to):<br><br>- Location<br>- Speed of Delivery<br>- Duration of Service<br>- Recovery Periods<br><br>ii) Range of Prices submitted by different technology types |
| Full Information | As much information as possible for the market in which the product is available is correct, transparent and available to all parties. | Types of information available to market prior to price being set.<br><br>This should include as a minimum (but not limited to):<br>volumetric information<br>timescales<br>operational impacts<br>prices<br><br>The information should be available in a suitable timescale. |
| Competition | The market in which the product is in has competition and is not distorted by a single or dominant participant. | Herfindahl-Hirschman Index[3]<br>i) Percentage of time that one unit/company/technology type (select where applicable) sets a |

[3] The HHI is calculated by squaring the market share of each provider competing in the market and then summing the resulting numbers. For example, for a market consisting of four providers with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ($30^2 + 30^2 + 20^2 + 20^2 = 2,600$). HHI below 100 indicates a highly competitive industry,
HHI between 100 and 1,500 indicates an industry with a low degree of concentration,
HHI between 1,500 to 2,500 indicates moderate market concentration,
HHI above 2,500 indicates high market concentration.

| | | | |
|---|---|---|---|
| | | | marginal price based on modelling and projections |
| | | ii) | If the market scores above 1500 as per the index, it will be deemed as competitive. |

**2.3** The TSO shall complete an assessment form against these three criteria upon development of a product. This assessment will determine whether the market criteria are present for Pay as Cleared to be more efficient or an alternative (e.g Pay as Bid) would be more efficient. If all 3 criteria are met, the ESO will conduct a Cost-Benefit Analysis (CBA) (including all implementation costs) to determine if implementing Pay as Cleared will result in a positive outcome for the market. If the CBA shows a positive outcome for consumers, then the product shall be settled on a Pay as Cleared basis. If these criteria are not met and/or the CBA shows a negative outcome, Pay as Bid may be utilised if it results in a more economically efficient outcome.

**2.4 I**f Pay as Cleared is not the outcome of the assessment, the TSO shall provide further details as outlined in Article 6(14) of Regulation (EU) 2019/943 covered within Article 3.6 of this document. This will enable alternative mechanisms to be used subject to economic efficiency.

**General Principles**

**3.1** All legacy products will remain on a Pay as Bid basis.

**3.2** By default, the settlement of balancing energy for all new Specific balancing products shall be based on Marginal Pricing.

**3.3** The TSO may evaluate any new products which are in scope of the outlined criteria. Alternative settlement methods may only be used when

i) the product is not homogenous and/or;
ii) the market is not competitive and/or;
iii) there is not perfect information available in the market

**3.4** Where standard products do not exist, i.e Frequency Containment Reserve, the TSO may apply the settlement methodology of their choice for that product.

**3.5** If any new products meet one or more of the criteria (i) to (iii), the ESO will perform an assessment to determine whether use of an alternative pricing method is more economically efficient.

**3.6** That assessment will include the elements outlined in Article 6(14) of Regulation (EU) 2019/943:

a) a description of measures proposed to minimise the use of the Specific balancing product, subject to economic efficiency and;

b) an evaluation of whether the product will create significant inefficiencies or distortions in the balancing market either inside or outside the scheduling area.

**3.7** The ESO will share its assessment with the Authority via the Electricity Balancing Regulation (EBR)[4] Article 18 submission. Timescales will be aligned with those set out in the Electricity Balancing Regulation (EBR).

**3.8** If that assessment concludes that it is more economically efficient to use an alternative pricing method, the ESO may use the respective pricing method.

**3.9** Where the ESO launches a product that is developed after the Pricing Proposal has been approved, the ESO will perform a market assessment. This assessment will take place at least once every [XX] year(s). If the market assessment shows a significant change in conditions, the ESO shall conduct a further assessment in accordance with paragraph 2.3 to determine whether the respective product is suitable for a Pay as Cleared pricing method. This assessment shall include a CBA of the impact Pay as Cleared will have on the market and consumers, and include implementation costs. If the CBA does not show a positive impact for consumers by implementing Pay as Cleared, the product may remain as is.

**3.10** Where Balancing Mechanism Units (BMU) are providing a new reserve service, they will still be instructed under a Balancing Mechanism Bids Offer and Acceptance (BM BOA). This means that either:
a) Some BM BOAs will need to be settled Pay as Cleared, or
b) BMUs will continue to be settled Pay as Bid for the foreseeable future.

**Publication of the PP**

**4.1** The TSO shall publish the PP without undue delay after the Authority has approved the proposal.

[4] REGULATION (EU) 2019/2195 of 23 November 2017 as retained and amended in UK Law by Statutory Instruments 2019 No.532

**Appendix A – ESO Assessment**

## New Product Assessment Form – utilisation settlement mechanism

### Context

Article 6(4) of the Clean Energy Package (CEP) obliges TSOs to settle balancing energy (utilisation) on a Pay as Cleared (PAC) basis for standard and specific balancing products. Currently most balancing products in GB use a Pay as Bid (PAB) settlement for balancing energy. We have created a pricing proposal (PP), which has been approved by Ofgem, to assess which payment mechanism is best for new products. Please see the PP for full detail, which is available here.

- **This assessment is to be submitted as part of the EBR Article 18 submission.**
- **This submission is to be revisited every XX years, as outlined in the PP, subject to the market assessment outcome.**

**Each new product that is put forwards but complete this assessment against the outlined criteria:**

| Criteria | Definition | Measures |
|---|---|---|
| Homogenous | The product cannot be distinguished from same product offered by different providers by the consumer (TSO) | The range of offerings from providers may be determined by:<br>i. Degree of allowable variation of parameters (including but not limited to):<br>• Location<br>• Speed of delivery<br>• Duration of service<br>• Recovery Periods<br>ii. Range of Prices submitted by different technology types |
| Full Information | As much information as possible for the market in which the product is available is correct, transparent and available to all parties. | Types of information available to market prior to price being set.<br>This should (can include as a minimum: but not limited to<br>- volumetric information<br>- timescales<br>- operational impacts<br>- (prices of other participants)<br>The information should be available in a suitable timescale. |
| Competition | The market in which the product is in has competition and is not distorted by a single or dominant participant. | Herfindahl-Hirschman Index<br>i. Percentage of time that one unit/company/technology type (select where applicable) sets a marginal price based on modelling and projections<br>ii. If the market scores above 1500 as per the index, it will be deemed as competitive. |

**Please provide your assessment of each criteria in the blow pro-forma:**

| | |
|---|---|
| **Product Name** | |
| **Product Description** | |
| **ESO Business Lead** | |
| **RAPID Complete (Please provide hyperlink)** | |
| **RACI Complete (Please provide hyperlink)** | |
| **Product Description** | |
| **Planned Go-Live Date** | |

| **Criteria** | **Assessment** |
|---|---|
| **Homogeneity** | *Please inset your assessment against the criteria highlighted in figure 1. Please provide as much detail as necessary to support your decision on payment mechanisms.* |
| **Full Information** | *Please inset your assessment against the criteria highlighted in figure 1. Please provide as much detail as necessary to support your decision on payment mechanisms.* |
| **Competition** | *Please inset your assessment against the criteria highlighted in figure 1. Please provide as much detail as necessary to support your decision on payment mechanisms.* |

| | |
|---|---|
| **Conclusion** | Please insert your conclusion. Detail key points in support of this submission. |

**If Pay as Cleared is not the outcome, further detail is required.**

| | |
|---|---|
| Overall Assessment | Pay as Cleared/Alternative method – provide details (Delete where applicable) |
| Description of measure proposed to minimise the use of the Specific product subject to economic efficiency | |
| A demonstration that the Specific balancing product does not create significant inefficiencies and distortions in the balancing market inside the scheduling area | |
| A demonstration that the Specific balancing product do not create significant inefficiencies and distortions in the balancing market outside the scheduling area | |
| Where applicable, the rules and information for the process for converting the balancing energy bids from Specific balancing product into balancing energy bids from standard balancing products. 14.6.2019 L 158/71 Official Journal of the European Union EN | |

| | |
|---|---|
| Date of scheduled review | Insert date XX years from Go-Live date |