

GB Pricing Proposal

Version Control

Date	Version Number	Comments
20/05/2022	v1.0	Initial version
15/03/2023	v1.1	Revision to initial version to correct the competitiveness HHI criteria, replacing “above” with “below”; clarification of review period; addition of new DFS product to Appendix B; correction to EFR product name in Appendix B; version control table added.

Introduction

- i) The GB Pricing Proposal (PP) has been developed for the GB market in order to provide clear guidance to the GB 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) 2019/943¹ 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) Article 6(14) of Regulation (EU) 2019/943 also states that “*Proposals for derogations shall include a description of measures proposed to minimise the use of specific products, subject to economic efficiency, a demonstration that the specific products do not create significant inefficiencies and distortions in the balancing market either inside or outside the scheduling area, as well as, where applicable, the rules and information for the process for converting*

¹ Retained EU Regulation 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity

the balancing energy bids from specific Balancing products into balancing energy bids from standard Balancing products.”

- v) This PP 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 Alternative Payment Mechanisms can be utilised if deemed to be more efficient.
- vi) All Balancing products extant prior to the initial approval of this PP by Ofgem are classed as legacy products and will be out of scope of the PP, as per Appendix B. These products will remain on their current payment mechanism and will not be subject to any reassessment. If market conditions significantly change then the ESO can decide to reassess them.

1 Scope

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

1.2 The PP 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 PP.

2 Definitions and Criteria

2.1 All definitions for mFRR, RR and FCR can be found in Commission Regulation (EU) 2017/1485².

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

Term	Definition
Marginal Pricing (Pay as Cleared)	Auction whereby a uniform price is given for all transactions.
Alternative Payment Mechanism	Any payment mechanism which is different to Marginal Pricing. For example, but not limited to, Pay as Bid or Market Indexing

2.3 Marginal Pricing (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
a) Homogeneity	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:

² Retained Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation

		<p>i) Degree of allowable variation of parameters (including but not limited to):</p> <ul style="list-style-type: none"> - Location - Speed of Delivery - Duration of Service - Recovery Periods <p>ii) Range of Prices submitted by different technology types</p>
b) Full Information	As much information as possible for the market in which the product is available is correct, transparent, and available to all parties.	<p>Types of information available to market prior to price being set.</p> <p>This should include as a minimum (but not limited to):</p> <ul style="list-style-type: none"> - Volumetric information - Timescales - Operational impacts - Prices <p>The information should be available in a suitable timescale.</p>
c) Competition	The market in which the product is in has competition and is not distorted by a single or dominant market participant.	<p>Herfindahl-Hirschman Index³</p> <p>i) Percentage of time that one unit/company (select where applicable) sets a marginal price based on modelling and projections</p> <p>ii) If the market scores below 1500 as per the index, it will be deemed as competitive.</p>

2.4 The TSO shall complete an assessment form (included in Annex A of this document) against the three criteria outlined in paragraph 2.3 upon development of a product. This assessment will determine whether the market criteria are present for Marginal Pricing to be more efficient or an Alternative Payment Mechanism (e.g., Pay as Bid, Market Indexing) would be more efficient. If all 3 criteria outlined in paragraph 2.3 are met, the ESO will conduct a Cost Benefit Analysis (CBA) (including all implementation costs) to determine if implementing Marginal Pricing will result in a positive outcome

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.

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, an Alternative Payment Mechanism may be utilised if it results in a more economically efficient outcome.

2.5 If Marginal Pricing 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 paragraph 3.5 of this document. This will enable Alternative Payment Mechanisms to be used subject to economic efficiency.

3 General Principles

3.1 All legacy products active prior to the approval of this PP will remain on their current Alternative Payment Mechanism.

3.2 The settlement of balancing energy for all new Specific Balancing products shall be based on Marginal Pricing if the criteria in paragraph 2.3 are met.

3.3 The TSO may evaluate any new products to determine whether they are in scope of the outlined criteria. Alternative settlement methods may be used when the criteria in paragraph 2.3 cannot be met.

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

3.5 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 (as highlighted in the aforementioned regulation), 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.
- c) Where applicable, the rules and information for the process for converting the balancing energy bids from Specific balancing products into balancing energy bids from standard balancing products are found at Article 6(14) of EU Regulation 943/2019.

3.6 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 EBR. The outcome of the assessment will also be shared publicly.

3.7 If that assessment concludes that it is more economically efficient to use an Alternative Pricing Method, the ESO may do so. If it does not, the ESO must undertake the CBA to see if Marginal Pricing is more applicable.

⁴ Retained Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing

3.8 Where the ESO launches a product that is developed after the PP has been approved, the ESO will perform a market assessment. This assessment will take place no more than 2 years after initial launch of the product (initial review) and thereafter at least once every 3 year(s) (periodic review).

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 settlement using Marginal Pricing. This assessment shall include a CBA of the impact Marginal Pricing will have on the market and include implementation costs. If the CBA does show a positive impact, the product will be suitable for settlement based on Marginal Pricing. If the CBA does not show a positive impact for consumers by implementing Marginal Pricing, the product may remain settled on its Alternative Payment Mechanism. This assessment will be sent to Ofgem for approval. Ofgem will have two months to respond.

3.9 Legacy products will not be assessed using this Pricing Proposal, as the ESO expect that many of these products will be phased out in the near future, or replaced with other products, as per introduction point vi) of this document.

3.10 Where Balancing Mechanism Units (BMUs) are providing a new reserve service, they will still be instructed under a Balancing Mechanism Bid Offer Acceptance (BM BOA). This means that either:

a) Some BM BOAs will need to be settled using Marginal Pricing; or

b) BMUs will continue to be settled using their current Alternative Payment Mechanism for the foreseeable future.

4 Publication and review of the PP

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

4.2 The PP will be published on the TSO website in a timely fashion after approval is received, and industry informed via the Joint European Stakeholder Group (JESG) mailing list.

4.3 The TSO shall review the PP methodology every 3 years and advise the Authority of the outcome of any such review. The review will be sent to the Authority for approval.

4.4 If the ESO at any time identifies that changes to the PP are needed, the ESO would follow the relevant guidelines set out in the EBR⁵.

Appendix A – ESO Assessment

New Product Assessment Form – utilisation settlement mechanism

Context

Article 6(4) of Regulation 2019/943 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 as an Alternative Payment Mechanism. We have created a Pricing Proposal (PP),

⁵ Retained Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing

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 within the first two years of a product going live, then every 3 years, as outlined in the PP, subject to the market assessment outcome.**

Each new product that is put forwards must 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)	<p>The range of offerings from providers may be determined by:</p> <p>i. Degree of allowable variation of parameters (including but not limited to):</p> <p><input type="checkbox"/></p> <ul style="list-style-type: none"> • Location • Speed of delivery • Duration of service • Recovery Periods <p>ii. Range of Prices submitted by different technology types</p>
Full Information	As much information as possible for the market in which the product is available is correct, transparent, and available to all parties.	<p>Types of information available to market prior to price being set.</p> <p>This should (can include as a minimum: but not limited to</p> <ul style="list-style-type: none"> - Volumetric information - Timescales - Operational impacts - Prices of other participants <p>The information should be available in a suitable timescale.</p>
Competition	The market in which the product is in has competition and is not distorted by a single or dominant participant.	<p>Herfindahl-Hirschman Index</p> <p>i. Percentage of time that one unit/company (select where applicable) sets a marginal price based on modelling and projections</p> <p>ii. If the market scores below 1500 as per the index, it will be deemed as competitive.</p>

Please provide your assessment of each criterion in the below 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	<i>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.</i>
Full Information	<i>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.</i>
Competition	<i>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.</i>

Conclusion	Please insert your conclusion. Detail key points in support of this submission.
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If Pay as Cleared is not the outcome, further detail is required.

Overall Assessment	Marginal Pricing/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. EU Regulation 2019/943	
Date of scheduled review (Insert date 2 years from Go-Live date, to be followed by periodic review every 3 years)	

Appendix B – Product List

Product Type	Legacy or new?	In Scope of regulation ? (EU Regulation 2019/943, A6(4))	In scope of PP?	Current or Planned Payment Mechanism (Availability) Not Covered by Methodology	Current or Planned Payment Mechanism (Utilisation) Covered by methodology	Subject to reassessment? (Utilisation only)
BM BOA	Legacy	Yes	No - legacy	N/A	Pay Bid	No
STOR	Legacy	Yes	No - legacy	Pay as Clear	Pay as Bid	No
Fast Reserve	Legacy	Yes	No - legacy	Pay as Bid	Pay as Bid	No
Negative Slow Reserve (NSR)	New	Yes	Yes	Pay as Clear	Pay as Bid	Yes
Positive Slow Reserve (PSR)	New	Yes	Yes	Pay as Clear	Pay as Bid	Yes
Negative Quick Reserve (NQR)	New	Yes	Yes	Pay as Clear	Pay as Bid	Yes
Positive Quick Reserve (PQR)	New	Yes	Yes	Pay as Clear	Pay as Bid	Yes
Nuclear Deload	Legacy	Yes - Instructed by BM	No – Legacy	Pay as Bid	Pay as Bid	No
Super SEL	N/A	Yes - Instructed by BM	No	Pay as Bid	Pay as Bid	No
Dynamic Containment	Legacy	Yes	No - Legacy	Pay as Clear (Availability)	No utilisation payment – therefore meets criteria of Pay as Clear	No
Dynamic Moderation	Legacy	Yes	No - Legacy	Pay as Clear (Availability)	No utilisation payment – therefore meets criteria of Pay as Clear	No
Dynamic Regulation	Legacy	Yes	No - Legacy	Pay as Clear (Availability)	No utilisation payment – therefore meets criteria of Pay as Clear	No
Firm Frequency Response (Primary and High)	Legacy	No	No - Legacy	Pay as Bid	Index Linked Payment	No
Mandatory Frequency Response (Primary and High)	Legacy	No	No - FRR & legacy	Pay as Bid	Index Linked Payment	No
Firm Frequency Response (Secondary)	Legacy	Yes	No - FRR & legacy	Pay as Bid	Index Linked Payment	No
Mandatory Frequency Response (Secondary)	Legacy	Yes	No – FRR & Legacy	Pay as Bid	Index Linked Payment	No
Enhanced Frequency Response	Legacy	No	No - Legacy	N/A	N/A	No
Pathfinder (Voltage, Stability,	N/A	No	No	N/A	N/A	N/A

Constraint Management)						
Auction Trial	Legacy	No - no longer procuring	No	N/A	N/A	No
SpinGen	Legacy	No - no longer procuring	No	N/A	N/A	No
Fast Start/BM Start Up	Legacy	No - no longer procuring	No	N/A	N/A	No
Blackstart	N/A	No - - (Non-Frequency Ancillary Service)	No	N/A	N/A	N/A
Inertia Services	N/A	No - Non-Frequency Ancillary Service	No	N/A	N/A	N/A
SO to SO trades	N/A	No - Pre-Gate Closure, therefore not balancing	No	N/A	N/A	N/A
SO to SO Misc	N/A	No - Pre-Gate Closure, therefore not balancing	No	N/A	N/A	N/A
Capacity Market	N/A	No – Capacity Mechanism	No	N/A	N/A	N/A
Demand Flexibility Service (DFS)	New	Yes	Yes	N/A	Pay as Bid	Yes