National Grid ESO Faraday House Gallows Hill Warwick CV34 6DA

Kyle Martin

Kyle.Martin1@nationalgrideso.com www.nationalgrideso.com

14 November 2022

Balancing Reserve Terms and Conditions

Dear Industry and Colleagues,

In accordance with Commission Regulation (EU) 2017/2195 of 23 November 2017 (as converted into retained EU law) (EBR), National Grid ESO is proposing to amend its terms and conditions relating to balancing specifically to introduce terms and conditions for a new Balancing Reserve (BR) service.

BR has been developed to enable NGESO to procure regulating reserve on a firm basis at day ahead stage for reserve that is often not accessible to the ESO in real time. The new BR service will help ensure NGESO has sufficient reserve capacity.

The regulating reserve we currently procure in real time is mainly from synchronised generators able to respond within standard Bid Offer Acceptance (BOA) timescales (2 minutes). Our requirements are set so that the risk of a loss of load event due to a reserve shortfall is uniform across all settlement periods in the year.

NGESO currently uses optional bids and offers for available headroom and footroom in the Balancing Mechanism (BM) to create scheduled reserve in real time. Sometimes this may require synchronising or desynchronising plant to be able to create sufficient margin. The cost of bids and offers has risen significantly. During periods of scarcity there can be insufficient margin to meet our positive or negative reserve requirements and procuring extra capacity can be extremely expensive in real time.

The new BR service will help reduce balancing costs and improve system security as the unit headroom and footroom is guaranteed for the Control Room to access in real time when needed. By procuring the service ahead of the day, reserve volume is locked in advance of the day ahead energy market which will mean that contracted energy is not available to be sold into other continental markets over the interconnectors and available to NGESO in real time.

Following feedback from stakeholders at our industry webinar held on October 20th we have reviewed and changed some of our design elements as a direct result of that feedback received. For ease, these are summarised in the table below:

| Design Element | Initial Proposal | Revised Proposal |
|----------------------|----------------------------------|---|
| Provider eligibility | RM Units and Large Power Station | BM Units with control telephony and mandatory frequency response capability during all contracted windows |

| I IMA TO TIIII AAIIVATV | As specified by Providers with minimum ramp of at least 15MW/min | Minimum ramp rate to be at least 10MW/min | |
|---|---|--|--|
| | Minimum ramp-up and ramp-down rate to be at least 15 MW/min, Maximum ramp rate as covered in Grid Code. | | |
| Service Windows | 1 hour | 30 minutes (Settlement Periods) | |
| Multiple Bids per unit per service window | Allowed | Not allowed | |

A further industry webinar is scheduled for Tuesday 22 November 11:00-12:30 – see link here to sign up. At this webinar we'll provide a playback to industry of these changes made as a result of the feedback, outline the consultation documents and timeline, have Q&A and discuss next steps.

In accordance with EBR, the ESO is now consulting on the new terms and conditions for BR, and the consultation will be undertaken from 14 November 2022 to 14 December 2022. The documents can be found on our website link here.

Please respond by 17:00 on 14 December 2022 using the proforma available on our website to box.futureofbalancingservices@nationalgrideso.com

If you have any queries regarding this proposal, please contact us using the above email address.

Yours sincerely,

Kyle Martin

Kyle Martin

Electricity Market Change Delivery Manager

Annex 1

Amendment of EBR Article 18 mapping to update for Balancing Reserve Terms and Conditions

Please note: This table cross references the terms and conditions related to balancing described in EBR Article 18 against the corresponding parts of the GB codes and relevant contractual provisions, with particular reference to the new Balancing Reserve service. This cross referencing includes the terms and conditions for balancing service providers and the terms and conditions for balance responsible parties.

Nothing in this table shall prejudice or otherwise affect the operation of the GB codes and relevant contractual provisions, and in the event of any conflict or inconsistency between this table and EBR Article 18 the latter shall prevail.

Table 1

Below is the mapping of EBR Article 18 with references to the relevant Balancing Reserve terms and conditions.

Mandatory Elements

| Article | Text | Code or document | Section |
|---------|--|------------------|---------|
| | The terms and conditions pursuant to paragraph 1 shall also include the rules for suspension and restoration of | Grid Code | OC9.4 |
| 18.2 | market activities pursuant to Article 36 of Regulation (EU) 2017/2196 and rules for settlement in case of market | BSC | G3 |
| 18.4 | The terms and conditions for balancing service providers shall: | - | - |

| | | | BR Procurement Rules |
|--------|---|---|---|
| 18.4.a | Define reasonable and justified requirements for the provisions of balancing services; | BR Procurement Rules & Service Terms | 4 - Registration of Registered BR Participants 5 - Prequalification of BR Units 12 - Formation of BR Contracts 15 - Use of Designated Auction Platform BR Service Terms 5 - Service Availability 9 - Energy Utilisation Payments 10 - Payment Procedure 14 - Provision of Other Services |
| | | BSC | BSC Section A, H3, H4.2, H4.7, H4.8, H5.5, H6, H10, J3.3, J3.6, J3.7 and J3.8 |
| | | CUSC | Section 4.1.3 |
| | | BSC | K3.3, K8, S6.2, S6.3 and S11 |
| | | Grid Code | DRSC 4.2, BC1.4 |
| | | | BR Procurement Rules |
| 18.4.b | Allow the aggregation of demand facilities, energy storage facilities and power generating facilities in a | | 4 - Registration of Registered BR Participants |
| | scheduling area to offer balancing services subject to conditions referred to in paragraph 5 (c); | BR Procurement Rules & | 5 - Prequalification of BR Units |
| | | Service Terms | Schedule 2 – Registration and Pre-Qualification Procedure |
| | | | [note: aggregation not applicable] |
| 18.4.c | Allow demand facility owners, third parties and owners of power generating facilities from conventional and | BSC | K3.2, K3.3, K8 |

| | renewable energy sources as well as owners of energy storage units to become balancing service providers; | BR Procurement Rules & Service Terms | BR Procurement Rules 4 - Registration of Registered BR Participants 5 - Prequalification of BR Units Schedule 2 - Registration and Pre-Qualification Procedure |
|--------|--|---|--|
| 18.4.d | Require that each balancing energy bid from a balancing service provider is assigned to one or more balance responsible parties to enable the calculation of an imbalance adjustment pursuant to Article 49. | BSC | T4, Q7.2, Q6.4 |
| 18.5 | The terms and conditions for balancing service providers shall contain: | - | - |

| | | | BR Procurement Rules |
|--------|---|--|---|
| | | | 4 - Registration of Registered BR Units |
| | | | 5 - Prequalification of BR Units |
| | | BR Procurement Rules & Service Terms | Schedule 2 - Registration and Pre-Qualification Procedure |
| 18.5.a | become a balancing service provider pursuant to Article 16; | | DD Comitos Torres |
| | , | | BR Service Terms |
| | | | 14 - Provision of Other Services |
| | | Grid Code | BC5, BC4.4.2 |
| | | CUSC | Section 4.1 |
| | | BSC | J3.3, J3.6, J3.7, J3.8, K3.2, K3.3 and K8 |
| | | | BR Procurement Rules |
| | | | 6 - Buy Orders |
| | | | 7 - Sell Orders |
| | | | 9 - Market Clearing Rules |
| 18.5.b | the procurement and transfer of balancing | BR Procurement Rules & Service Terms | 12 – Formation of BR Contracts |
| 10.5.0 | | | BR Service Terms |
| | 34; | | 6 - Service Instruction |
| | | | 7 - Service Delivery |
| | | | 14 - Provision of Other |
| | | | Services 22 - Transfer of BR |
| | | | Contracts |
| | | | BR Procurement Rules |
| | | | 4 - Registration of Registered BR Units |
| | The rules and conditions for the | | 5 - Prequalification of BR Units |
| 18.5.c | storage facilities and power generating | BR Procurement Rules & Service Terms | 20 - Site Export and Import Limits |
| | balancing service provider; | | Schedule 2 - Registration and Pre-Qualification Procedure |
| | | | BR Service Terms |

| | | BSC Grid Code | 14 - Provision of Other Services [note: aggregation not applicable] K3.3 and K8 BC1.4 and BC1.A.10 |
|--------|--|--|---|
| 18.5.d | The requirements on data and information to be delivered to the connecting TSO and, where relevant, to the reserve connecting DSO during the prequalification process and operation of the balancing market; | BR Procurement Rules & Service Terms | BR Procurement Rules 4 - Registration of Registered BR Participants 5 - Prequalification of BR Units 11 - Daily Auction Reports 13 - Confidentiality 16 - Accuracy of information 17 - Intellectual Property Schedule 2 - Registration and Pre-qualification Procedure BR Service Terms 20 - Records and Audits 23 - Confidentiality 24 - Intellectual Property Rights BSC Section O |
| | | Grid Code | DRC, <i>BC5 BC1.4</i> , |

| ļ | | I | |
|---------------|---|--|--|
| | | BSC | T4 |
| | | | BR Procurement Rules |
| | | | 7 - Sell Orders |
| | | | 9 - Market Clearing Rules |
| 18.5.e | The rules and conditions for the assignment of each balancing energy bid from a balancing service provider to one or | | 12 - Formation of BR Contracts |
| | more balance responsible parties pursuant | BR Procurement Rules & Service | BR Service Terms |
| | | Terms | 14 - Provision of Other Services |
| | | | 21 - Assignment |
| | | | 22 - Transfer of BR Contracts |
| | | | |
| | | | BR Procurement Rules |
| | where relevant, to the reserve connecting DSO to evaluate the provisions of balancing services pursuant to Article 154(1), Article 154(8), Article 158(1)(e), | BR Procurement Rules & Service Terms | 4 - Registration of Registered BR Participants |
| | | | 5 - Prequalification of BR Units |
| | | | 11 - Daily Auction Reports |
| | | | 13 - Confidentiality |
| 18.5. f | | | 16 - Accuracy of Information |
| | Article 158(4)(b), Article 161(1)(f) and Article 161(4)(b) of Regulation (EU) | | 17 - Intellectual Property |
| | 2017/1485; | | Schedule 2 - Registration and Prequalification Procedure |
| | | Grid Code | Grid Code BC1.4, BC1.A.10, |
| | | CUSC | 4.1.3.19 |
| 18.5. g | The definition of a location for each standard product and each specific product taking into account paragraph 5 (c); | Grid Code | BC1.4 |
| 18.5.h | The rules for the determination of the volume of balancing energy to be settled with the balancing service provider pursuant to Article 45; | BSC | BSC T3 |

| | | | BR Service Terms |
|---------|--|-----------------------------------|---|
| | | | 5 - Service Availability |
| | | | 8 - BR Availability Payments |
| | | BR Procurement Rules & Service | 9 - Energy Utilisation Payments |
| | | Terms | 10 - Payment Procedure |
| 18.5. i | The rules for the settlement of balancing service providers defined pursuant to Chapters 2 and 5 of Title V; | | Schedule 1 - BR Availability Payments |
| | 5.1.ap. 1 2 G | | Schedule 2 - Payment Provisions |
| | | BSC | T1.14, T3 and U |
| | | CUSC | Section 4.1.3.9 and 4.1.3.9A |
| | | | BR Service Terms |
| | | BR Service Terms | 8 - BR Availability Payments |
| | | | 9 - Energy Utilisation Payments |
| | | | 10 - Payment Procedure |
| 18.5. j | | | Schedule 1 - BR Availability Payments |
| | | | Schedule 2 - Payment Provisions |
| | | | |
| | | BSC | U2.2 |
| | | CUSC | Section 4.3.2.6 |
| | | | BR Procurement Rules |
| | | | 4 - Registration of Registered BR Participants |
| 18.5. k | compliance with the terms and conditions | BR Procurement Rules & Service | 5 - Prequalification of BR Units |
| | ' | Terms | Schedule 2 - Registration and Pre-Qualification Procedure |
| | | | BR Service Terms |

| | | | 44 5 11 401 |
|---------|--|-----------|---|
| | | | 14 - Provision of Other Services |
| | | | 16 - Termination of BR Contracts |
| | | BSC | H3, Z7 and A5.2 |
| | | CUSC | Sections 4.1.3.9, 4.1.3.9A and 4.1.3.14 |
| 18.6 | The terms and conditions for balance responsible parties shall contain: | - | - |
| 18.6. a | The definition of balance responsibility for each connection in a way that avoids any gaps or overlaps in the balance responsibility of different market participants providing services to that connection; | BSC | K1.2, P3 and T4.5 |
| 18.6. b | The requirements for becoming a balance responsible party; | BSC | A, H3, H4.2, H4.7, H4.8, H5.5, H6, H10, J3.3, J3.6, J3.7, J3.8,, K2, K3.3 and K8 |
| 18.6.c | The requirement that all balance responsible parties shall be financially responsible for their imbalances, and that the imbalances shall be settled with the connecting TSO; | BSC | N2, N6, N8, N12, and T4, |
| 18.6. d | The requirements on data and information to be delivered to the connecting TSO to | BSC | BSC Section O, Q3, Q5.3, Q5.6, Q6.2, Q6.3, Q6.4 |
| 70.0. u | calculate the imbalances; | Grid Code | BC1.4.2,3,4, BC1 Appendix 1 BC2.5.1, |
| | The rules for balance responsible parties to change their schedules prior to and after | BSC | P2 |
| 18.6. e | the intraday energy gate closure time pursuant to paragraphs 3 and 4 of Article 17; | Grid Code | BC1.4.3,4, |
| 18.6.f | The rules for the settlement of balance responsible parties defined pursuant to Chapter 4 of Title V; | BSC | T4, U2 |
| 18.6.g | The delineation of an imbalance area pursuant to Article 54(2) and an imbalance price area; | | GB constitutes one imbalance area and imbalance price area and they are equal to the synchronous area |

| 18.6.h | A maximum period for the finalisation of the settlement of imbalances with balance responsible parties for any given imbalance settlement period pursuant to Article 54; | BSC | U2.2 |
|--------|--|---|----------------|
| 18.6.i | The consequences in case of non- compliance with the terms and conditions applicable to balance responsible parties; | BSC | H3,Z7 and A5.2 |
| 18.6.j | An obligation for balance responsible parties to submit to the connecting TSO any modifications of the position; | BSC | P2 |
| 18.6.k | The settlement rules pursuant to Articles 52, 53, 54 and 55; | BSC | T4, U2 |
| 18.6.1 | Where existing, the provisions for the exclusion of imbalances from the imbalance settlement when they are associated with the introduction of ramping restrictions for the alleviation of deterministic frequency deviations pursuant to Article 137(4) of Regulation (EU) 2017/1485. | Deterministic frequency deviation is a continental European concept and is not a characteristic of the GB system. Therefore, this requirement does not apply to GB. | N/A |

Non- Mandatory Elements

| Article | Text | Comment |
|---------|--|---|
| 18.7. a | | NG ESO does not expect to require this from |
| 18.7. b | energy bids or integrated scheduling process bids in the balancing markets after day ahead market gate closure time, without prejudice to the possibility of balancing service providers to change their | NG ESO does not expect to require this from Balancing Service Providers, except where balancing capacity or energy has been contracted. Although the BR defaulting rules apply if data is not updated, there is no legal requirement for parties to offer unused generation capacity or any other balancing resource. |

| 18.7.c | Where justified, a requirement for balancing service providers to offer the unused generation capacity or other balancing resources through balancing energy bids or integrated scheduling process bids in the balancing markets after intraday cross-zonal gate closure time; | NG ESO does not expect to require this from Balancing Service Providers, except where balancing capacity or energy has been contracted. Although the BR defaulting rules apply if data is not updated, there is no legal requirement for parties to offer unused generation capacity or any other balancing resource. |
|---------|---|---|
| 18.7. d | Specific requirements with regard to the position of balance responsible parties submitted after the day-ahead market timeframe to ensure that the sum of their internal and external commercial trade schedules equals the sum of the physical generation and consumption schedules, taking into account electrical losses compensation, where relevant; | NG ESO does not expect to require this from Balancing Service Providers. No BSC party is required to contract to match its Final Physical Notifications (FPNs). |
| 18.7. e | An exemption to publish information on offered prices of balancing energy or balancing capacity bids due to market abuse concerns pursuant to Article 12(4) | NG ESO does not expect to require this exemption. Such data is published on BRMS. |
| 18.7. f | An exemption for specific products defined in Article 26(3)(b) to predetermine the price of the balancing energy bids from a balancing capacity contract pursuant to Article 16(6) | NG ESO has not applied for this exemption and does not expect it to be necessary to do so. |
| 18.7. g | An application for the use of dual pricing for all imbalances based on the conditions established pursuant to Article 52(2)(d)(i) and the methodology for applying dual pricing pursuant to Article 52(2)(d)(ii). | NG ESO does not expect to apply for the use of dual pricing for all imbalances. A single imbalance price was adopted by the GB market in November 2015. |