

All interested parties,
stakeholders in GB and beyond,
and other regulatory bodies

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Dear colleagues,

Decision to grant the Electricity System Operator a derogation from the requirements of Article 6(9) of the Electricity Regulation and an exemption from the requirements of Article 32(3) of the EBGL for Mandatory and Firm Frequency Response products

On 27 August 2021, we¹ received a request from the Electricity System Operator (“ESO”) for a derogation from the requirements of Article 6(9) of the Regulation (EU) 2019/943 (“Electricity Regulation”),² as amended by The Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020³ for two existing frequency response products: Mandatory Frequency Response (“MFR”) and Firm Frequency Response (“FFR”). On 14 December 2021, the ESO supplemented this with an addendum to that derogation request, and an additional request for an exemption under Article 32(3) of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (“EBGL”),⁴ as amended by The Electricity Network Codes and Guidelines (Markets and Trading) (Amendment) (EU Exit) Regulations 2019.⁵

The ESO have requested an exemption to allow the specific products MFR and FFR to continue to be procured with their upward and downward capacity bundled (ie, procured

¹ The terms “we”, “us”, “our”, “Ofgem” and “the Authority” are used interchangeably in this document and refer to the Gas and Electricity Markets Authority. Ofgem is the office of the Authority.

² Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, available here: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0943>

³ The UK SI amendment of the Electricity Regulation is accessible at: <https://www.legislation.gov.uk/ukxi/2020/1006/contents/made>

⁴ Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing. The EBGL came into force on 18 December 2017. Accessible at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R2195>

⁵ The UK SI amendment of the EBGL Regulation is accessible at: https://assets.publishing.service.gov.uk/media/5c17d6b440f0b60c8d601a2c/ENC_Markets_and_Trading_SI.pdf

together). This is based on the requirements of Article 6(9) of the Electricity Regulation and Article 32(3) of the EBGL, which state that the procurement of upward and downward balancing capacity must be carried out separately. Additionally, the ESO's request for a derogation under Article 6(9) of the Electricity Regulation asks to allow the MFR and FFR products to be procured at timescales earlier than day-ahead and have a contract period longer than one day (but not more than one month).

This letter sets out our decision to approve the request for derogation against Article 6(9) of the Electricity Regulation and the exemption request in accordance with Article 32(3) of the EBGL. It also outlines the necessary next steps that must be taken by the ESO.

Background

MFR and FFR are existing products used by the ESO to manage system frequency within operational and statutory limits.^{6,7} These products are currently procured monthly, with the ESO able to procure the upward and downward balancing capacity of these services together and apply monthly contracts. These three features of procurement are contrary to the requirements of Article 6(9) of the Electricity Regulation which requires that 'The procurement of upward and downward balancing capacity shall be carried out separately' and 'Contracts for balancing capacity shall not be concluded more than one day before the provision of the balancing capacity and the contracting period shall be no longer than one day'.

The ESO noted that MFR and FFR each comprise of three sub-products: primary, secondary, and high response. Secondary response is classed as a Frequency Restoration Reserve product. As such, MFR and FFR are subject to the requirements of Article 32(3) of the EBGL, which states 'The procurement of upward and downward balancing capacity for at least the frequency restoration reserves and the replacement reserves shall be carried out separately'.

Article 32(3) of the EBGL allows the ESO to request an exemption against the criteria to procure upward and downward capacity separately. Per the requirements set out in Article 32(3) of the EBGL, the ESO's submission must include:

- (a) the specific period during which the exemption would apply;
- (b) the specific volume of balancing capacity to which the exemption would apply;

⁶ Mandatory Frequency Response explanation document is accessible at: <https://www.nationalgrideso.com/document/92441/download#:~:text=Mandatory%20Frequency%20Response%20is%20an,49.8Hz%20%2D%2050.2Hz>).

⁷ Firm Frequency Response explanation document is accessible at: <https://www.nationalgrideso.com/document/103306/download>

- (c) an analysis of the impact of the exemption on the participation of balancing resources (including demand facility owners, third parties and owners of power generating facilities from renewable energy sources as well as owners of energy storage units); and
- (d) a justification for the exemption demonstrating that such an exemption would lead to lower costs to final customers.

We note that in the ESO's initial 27 August 2021 submission requesting a derogation from Article 6(9) of the Electricity Regulation, the ESO included additional products, 'Dynamic Low High' and 'Low Frequency Static', which were procured through a mechanism known as the Auction Trial. We understand procurement through the Auction Trial ceased in November 2021. We have therefore not included them as part of this decision. For the avoidance of doubt, if the ESO wish to restart procurement in this manner, a separate request and approval for derogation would be required for those products before doing so.

Ofgem assessment of ESO analysis and our decision rationale

We have reviewed the requests submitted to us in line with the requirements of the Electricity Regulation, the EBGL and our statutory duties. We have also engaged with the ESO to clarify our understanding of the rationale for their request for derogation and exemption. When assessing the ESO's request for derogation and exemption from these requirements, we considered the following aspects:

Derogation from requirements of Article 6(9) of the Electricity Regulation

- i. inefficiency of changing procurement of these processes to ensure separate procurement of upward and downward capacities*

The ESO provided three areas of reasoning to justify the continued bundling of FFR and MFR procurement:

Technical – The ESO believe that if frequency response was procured separately, it could create a geographical split between upward and downward capacity. This could potentially leave the system susceptible to large power swings requiring additional actions to secure the system. If such power swings were to occur it could result in an increase in balancing actions, which could in turn increase balancing costs.

We accept the ESO's theoretical argument related to the possible increase in large power swings due to separate procurement of upwards and downwards frequency response. We

understand that this is a stronger point for MFR due to its mandatory nature. However, the ESO did not provide sufficient evidence for us to conclude on the scale or likelihood of higher balancing costs.

Markets – Currently the ESO allows providers of FFR to bid into monthly tenders with the option of providing upward and downward capacity either separately or together. MFR has a manual submission process that allows providers to submit prices for primary, secondary, and high response together. Providers for both services are then awarded monthly contracts in order of economic merit. The ESO provided analysis to show that approximately 99% of FFR bids from June 2020 to May 2021, were bundled. While in September 2021 100% of submitted prices for MFR were bundled.

The high proportion of existing market participants that currently choose to bundle balancing capacity when participating in FFR and MFR procurement suggests that the status quo does not serve as a major barrier to market entry. Moreover, market participants retain the option to offer this balancing capacity separately (even though the ESO procures the services in a bundled manner).

New products – The ESO are due to phase out the procurement of FFR by 31 March 2023 as it plans to introduce a new suite of dynamic frequency response products. The ESO stated that it would be uneconomical to make changes to FFR procurement given its limited remaining lifespan. Similarly, the ESO also explained that changes to MFR would be uneconomical due to the diversion of focus and resource away from implementing the new suite of frequency response products. The ESO believe that these new products will better meet the system needs of the current and future electricity system and improve the efficiency of system balancing while also being compliant with Article 6(9) of the Electricity Regulation.

We agree with the ESO's argument on the need to prioritise implementation of the new frequency response products. Given the expected short lifetime of FFR the cost of this change would be disproportionate. We also understand the priority for the ESO to dedicate resource to implementing the suite of new products as these should meet system requirements better than legacy products and these are designed to be compliant with Article 6(9) of the Electricity Regulation.

ii. inefficiency of changing procurement of these processes to day-ahead timescales

The ESO stated that the costs and resource impacts of moving to day-ahead procurement for MFR and FFR are uneconomical. They stated that they are in the process of

implementing new frequency response products and highlighted that these products will be compliant with Article 6(9) of the Electricity Regulation. As a result, FFR is expected to be phased out by 31 March 2023 and the ESO stated that it would not be efficient or economic to halt the progress of these new products in order to change FFR to day-ahead procurement, especially as the new products are designed to be more efficient.

The ESO also stated that the cost to change the existing process for MFR does not represent good economic value at this moment. The ESO are underway with implementation of new products with processes which we expect to be compatible with day-ahead procurement and that meet new system needs better than FFR and MFR.

We agree with the ESO's assessment that changing the procurement process for FFR would be a disproportionate cost and that changing the MFR procurement process at this time would not be beneficial to the GB consumer when more effective products that will be procured at day-ahead timescales need to be implemented.

iii. the quantity of the ESO's products which are procured at day-ahead timescales

Article 6(9) of the Electricity Regulation states that where a derogation is granted, for at least 40% of standard balancing products and a minimum of 30% of all products used for balancing capacity, contracts for the balancing capacity shall be concluded for no more than one day before provision of the balancing capacity and the contracting period shall be no longer than one day.

Currently the ESO do not have access to any standard products, therefore the ESO must ensure that at least 30% of its products are procured not earlier than day-ahead. The ESO currently procure Dynamic Containment and Short-Term Operating Reserve at the day-ahead stage. From April to August 2021 this averaged at 60% of volume being procured at day-ahead with each month being above 50%, and hence above the 30% threshold. Moreover, we expect this percentage to increase following the ending of the ESO's Auction Trial, FFR phase out by 31 March 2023, and day-ahead procurement of the new products from the ESO's planned Response and Reserve Reform programmes.

Exemption from requirements of Article 32(3) of the EBGL

The ESO provided evidence against the four points laid out in Article 32(3)(c) of the EBGL. Below, we have summarised the ESO's analysis against these four points, and thereafter provided our assessment of the evidence the ESO provided.

a) the specific time period during which the exemption would apply

Article 32(3) of the EBGL requires a specific time period for an exemption allowing upward and downward balancing capacity to be procured together. We understand that FFR is due to be phased out by 31 March 2023 and thus the exemption for that product will be limited to that date.

We understand that the ESO expects a continued operational need for procurement and use of MFR beyond the date FFR is phased out. Therefore, we propose the exemption for MFR will expire on 31 March 2025.

b) the specific volume of balancing capacity for which the exemption would apply

The ESO highlighted that this exemption request for unbundled procurement relates only to the volumes of secondary response procured through FFR and MFR. The ESO provided analysis highlighting the volume of secondary response procured through FFR from April to June 2020 and from October to December 2020, and the volume of secondary response procured through MFR from April 2021 to September 2021.

As a result, the ESO requested the exemption based on **600MW** of secondary response from FFR and **350MW** of secondary response from MFR. From our own analysis, we note that the maximum volume the ESO required since April 2020 was 550MW for secondary response procured through FFR and the maximum volume of secondary response procured through MFR between April 2021 and September 2021 was 311MW. We agree that based on historical data the requirement stated by the ESO is acceptable. As we understand the ESO is phasing out FFR, and that the new suite of more efficient dynamic response products will displace and reduce required volumes, we do not expect the ESO to procure more than this volume during the period that the exemption stands.

c) analysis of the impacts of this decision on the participation of balancing resources pursuant to demand facility owners, third parties and owners of power generating facilities from renewable sources

The ESO explained that this exemption would be advantageous to demand side response ("DSR") units and third parties but that power generating facilities from renewable sources could be disadvantaged by this exemption. The ESO noted that they procure MFR from parties who are mandated to provide volume based on pre-arranged service agreements. They also noted that the FFR market is in the process of being phased out, to be replaced with more effective products. For potential new providers, where bundled procurement of

FFR could act as a barrier to current market entry, the ESO's new products are expected to be accessible as alternative future markets.

DSR – Currently this type of response bundles their provision for FFR. As a result these units would not be required to make any changes. The ESO noted that if procurement was to be separated these providers would need significant upgrades in order to participate in these markets. Large demand facilities hold mandatory service agreements with the ESO for provision of MFR. The ESO reported to us that to provide the service unbundled, these providers would also need to make modifications.

Aggregators (Third Parties) – The ESO stated that aggregators take several assets and use their technical capability to meet the technical requirements of the product. Therefore, in the absence of this exemption, the ESO explained that aggregators would have the potential to provide upward and downward balancing capacity separately. However, at present, the majority of aggregators that participate in these markets are set up to provide bundled capacity. As a consequence, the ESO noted that these assets would be advantaged if the exemption were to be in place. Similarly, the ESO noted that storage units and batteries (which often form part of an aggregator's portfolio) would likely require upgrades or reconfigurations if procurement of balancing capacity is separated.

Generation from Renewable Sources – The ESO highlighted that intermittent, renewable generation could be disadvantaged by this exemption due to these providers often only being able to provide upward and downward balancing capacity separately. We note that these parties can still enter the FFR and MFR markets and submit unbundled capacity. However, the ESO highlighted that due to Renewable Obligation Certificates, intermittent generators have historically elected not to take part in these markets.

We agree with the ESO's theoretical argument that if this exemption were not granted many units would most likely have to incur costs and be updated and reconfigured in order to participate in separate procurement of MFR/FFR.⁸ We also expect the impact of this exemption on the participation of demand facility owners, third parties and renewables generators to be minimal given MFR/FFR market arrangements permit all providers to offer balancing capacity separately (even though the ESO procures the services in a bundled manner). Moreover, any potential detriment ought to be transitory, lasting until implementation of the ESO's new products from the ESO's planned Response and Reserve Reform programmes.

⁸ This is based on qualitative information. The ESO did not provide quantitative analysis on the estimate costs of not granting the exemption. They also did not provide quantitative analysis of potential impacts on MFR/FFR markets of greater participation of renewable generators.

d) Justification for the exemption demonstrating that such an exemption would lead to higher economic efficiency

The ESO offered the same three evidence points (technical, market and new products) outlined earlier in this decision as used in the derogation request from Article 6(9) of the Electricity Regulation for separate procurement of high and low frequency.

Of the ESO's noted inefficiencies, we accept the ESO's theoretical argument of 'technical' inefficiencies, but again the ESO did not provide sufficient evidence for us to conclude on the scale or likelihood of these. We also understand that most (~99%) existing market participants choose to bundle their capacity in these markets. We agree with the ESO's argument on the need to prioritise implementation of the new response products that are more efficient and are also compliant with Article 32(3) of the EBGL. Given the expected limited lifespan of FFR, the cost of changing the existing procurement processes would not be efficient. Similarly, we expect higher economic efficiency to be achieved through the ESO focusing its resource on implementing the new response products rather than diverting these towards modifying the existing MFR procurement approach.

Decision and next steps

We agree with the ESO that developing new products which meet the system need is critical to ensuring the future operational security of the national electricity transmission system.

Based on our analysis of the information submitted to us by the ESO as required by Article 6(9) of the Electricity Regulation and Article 32(3) of the EBGL we hereby:

- grant the ESO a derogation from the requirements of Article 6(9) of the Electricity Regulation for MFR and FFR allowing the ESO to procure bundled upward and downward balancing capacity for MFR and FFR at greater than day-ahead timescales, contracted for longer than a single day (up to one month); and
- grant the ESO an exemption from the requirements of Article 32(3) of the EBGL for secondary response procured through MFR and FFR allowing the ESO to procure bundled upward and downward balancing capacity.

Our decision is effective immediately. We understand that FFR is due to be phased out by 31 March 2023. This derogation and exemption will apply to FFR for the duration of its expected remaining lifetime and will expire on 31 March 2023. While we do not anticipate delays to the phasing out of FFR, if the ESO did determine a need to procure it beyond 31

March 2023, a new request for derogation and exemption would be needed if procurement methods were not compliant with the relevant regulations.

We understand that the ESO expect to continue to procure MFR for the foreseeable future. This derogation and exemption for MFR will expire on 31 March 2025. The continued need for the derogation and exemption for MFR should therefore be revisited sufficiently before this date. In doing so, we expect the ESO to conduct a full cost benefit analysis that investigates whether MFR should have separate procurement of balancing capacity at the day-ahead stage for maximum single day contracted periods. In addition, we understand that the ESO are planning to move all balancing services procurement to the Single Market Platform ("SMP"). We expect the ESO to also consider whether MFR procurement should be added to the SMP.

We also note that the ESO must procure a minimum of 30% of all products used for balancing capacity for no more than one day before the provision of balancing capacity and the contracting period be no longer than one day. This must be monitored to ensure compliance with the derogation for Article 6(9) of the Electricity Regulation.

If you have any questions about the contents of this letter, please contact Luke McCartney (Luke.McCartney@Ofgem.gov.uk).

Yours sincerely,

Grendon Thompson
Head of ESO Regulation