

Public

Grid Code Modification Proposal Form		
GC0185: Introducing Dynamic Regulation into the Grid Code as an alternative to Mandatory Frequency Response (Primary / Secondary / High) Overview: NESO is proposing Real-time Dynamic Regulation as an alternative to Mandatory Frequency Response (MFR) to overcome entry barriers, reduce costs, and enable faster response times.		Modification process & timetable <div> <div>1</div> <div>Proposal Form 07 January 2026</div> </div> <div> <div>2</div> <div>Workgroup Consultation 27 July 2026 – 24 August 2026</div> </div> <div> <div>3</div> <div>Workgroup Report 21 October 2026</div> </div> <div> <div>4</div> <div>Code Administrator Consultation 04 November – 04 December 2026</div> </div> <div> <div>5</div> <div>Draft Final Modification Report 20 January 2027</div> </div> <div> <div>6</div> <div>Final Modification Report 10 February 2027</div> </div> <div> <div>7</div> <div>Implementation 10 Business Days after Decision</div> </div>
Status summary: The Proposer has raised a modification and is seeking a decision from the Panel on the governance route to be taken.		
This modification is expected to have a: Medium impact on NESO; Market participants, Transmission System Operator		
Modification drivers: System operability, system security, efficiency		
Proposer's recommendation of governance route	Standard Governance modification with assessment by a Workgroup	
Who can I talk to about the change?	Proposer: Thomas Goss thomas.goss@neso.energy 07522 998 916	Code Administrator Contact: grid.code@neso.energy

Public

Contents

What is the defect you are trying to resolve?	3
Why change?	4
What is the Proposer's solution?	5
What is in and out of scope?	5
Draft legal text	6
What is the impact of this change?	6
Proposer's assessment against Grid Code Objectives.....	7
Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories	8
When will this change take place?	9
Date decision required by.....	9
Implementation approach:	9
Proposer's justification for governance route.....	9
Interactions	9
Industry engagement and feedback	10
Acronyms, key terms and reference material	11
Reference material	12
Annexes.....	12

Public

What is the defect you are trying to resolve?

Certain Balancing Mechanism Units (BMUs)¹ have an obligation under the Grid Code to be technically capable of providing frequency response when instructed to do so. The requirements for this technical capability are contained in CC.8 / ECC.8 and the corresponding Appendix 3. Currently, Mandatory Frequency Response (MFR) is the commercial mechanism for providing the minimum obligations for frequency response. It is referred to as Primary / Secondary / High (PSH) in the Grid Code.

There are several issues with MFR. Some new technologies (namely Battery Energy Storage Systems or BESS) find it difficult to deliver MFR;. The MFR High service is required to deliver the service indefinitely.² This is clearly not possible for energy-limited assets.

NESO is planning to launch an alternative product to MFR in 2027, called Real-Time Dynamic Regulation (RT-DR), which would address this if users are allowed to meet their frequency response obligations in the Grid Code through RT-DR as an alternative to MFR.

An additional benefit of RT-DR is that it is a faster reacting service, making it a more efficient mechanism for providing pre-fault frequency response, which will improve system security. The decreases in system inertia rates in recent years are producing greater volatility in system frequency changes. Under the existing frequency control response service (MFR) it is becoming increasingly difficult to control the faster changes of frequency.

NESO also anticipates that RT-DR will be cheaper to procure response per MW than MFR; introducing RT-DR as an alternative to MFR has the potential to bring significant consumer benefits in terms of improved value for money.

¹ Specified in CC.8.1, which includes Large and Medium Power Stations and DC Converter Stations, and in ECC.8.1, which includes Type C and Type D Power Generating Modules, HVDC System Owners and Medium Power Stations.

² As per the definition of High Frequency Response in the G&D of the Grid Code.

Public

On top of the above barriers and shortfalls, MFR is not compliant with retained EU regulation. Ofgem has approved an extension to the derogation until 2029, but this comes with an obligation to significantly reduce our utilisation of MFR. However, the replacement of MFR will be considered under a later Grid Code modification (likely to be raised in 2027/28). NESO is planning to engage with stakeholders significantly in the development of a full alternative to MFR.

The Grid Code and CUSC obligate parties to have the capability to provide MFR and respond to an instruction to enter response mode if issued. This means that if we are unable to secure adequate response through voluntary markets or in a system restoration scenario, we can always access response capability via the MFR service. This “response of last resort” is an essential component of our strategy to operate a safe and secure system. We cannot replicate this through our Dynamic Services because if response providers do not want to enter these markets, they have no obligation to make their capability available to us.

Mandatory and Commercial Frequency Response (MFR/CFR).

<https://www.neso.energy/industry-information/balancing-services/frequency-response-services/mandatory-and-commercial-frequency-response-mfrcfr>

For further background information on Commercial Real-time Dynamic Response (DC, DM & DR) and how it is intended to be used please visit the below website: Real-time Dynamic Response Detailed Service Design

Why change?

The introduction of RT-DR will introduce an alternative frequency response service that is within the capability of units that are currently not able to participate in MFR. Additionally, a faster frequency response service being available improves system security at a time when lower system inertia is creating more frequency volatility. Cost savings are also expected by the introduction of RT-DR.

Public

Modifications to the Grid Code and CUSC are required to allow for Dynamic Response to be an option for market participants to meet code obligations on frequency response, in parallel with MFR for a transition period.

Real-time Dynamic Regulation is due to go live in early 2027.

What is the Proposer's solution?

NESO is introducing a new real-time component to its Dynamic Regulation service (RT-DR). This modification intends to introduce RT-DR as an alternative frequency response service, to run in parallel with MFR. This will:

- Address issues with MFR barriers to entry;
- Bring about cost savings;
- Address issues with increased frequency volatility; and
- Allow NESO to offer support to providers wishing to transition to the new service, including identifying technical changes for providers, while MFR and RT-DR run in parallel.

There are no retrospective implications for technical requirements from this proposal, including to Frequency Sensitive Mode (FSM), as MFR will still be available. The technical requirements for meeting the new RT-DR service will be contained in the Dynamic Response Service Terms.

(See also: CC/ECC Appendix 3)

NESO will continue to support the transition to DR for all interested parties.

We are looking for providers of MFR to engage with us early to help us to identify and resolve any issues as early as possible.

What is in and out of scope?

All BMUs have an obligation under the Grid Code to provide frequency response when instructed to do so, which will not be changing. In this modification, it is proposed that the Grid Code is amended to allow RT-DR to run in parallel with MFR. An exhaustive list of the precise numbers and nature of changes in each is

Public

contained in a separate database. The codes, and areas within, which will be affected by this modification are as follows:

- Glossary & Definitions
- Connections Conditions
- European Connections Conditions
- Planning Code
- Data Registration Code
- Post Gate Closure Process (BC2)
- Frequency Control Process (BC3)
- Operational Planning & Data provision (OC2)

There will be a separate modification proposal in the future, which will seek to fully replace MFR by the end of the current derogation period.

Draft legal text

Due to the volume of proposed legal text changes, the changes to the Codes as described above are listed on a separate spreadsheet. However, there is a core change in wording which universally affects all of them. The aim for this modification is to allow DR as an alternative to MFR, therefore the modification will be to add the phrases:

“or **dynamic regulation low**” wherever “**primary**” and/or “**secondary**” response is mentioned;

And

“or **dynamic regulation high**” wherever “**high**” response is mentioned.

What is the impact of this change?

Allow users to provide minimum frequency response requirements by an alternative service to MFR, via RT-DR. This proposal will mean that a unit can opt to deliver their obligation either through MFR or through DR.

Opting out of both services will not be an option.

Public

Proposer's assessment against Grid Code Objectives	
Relevant Objective	Identified impact
(i) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;	Positive More economical as DR is cheaper and more efficient as less DR required to meet needs compared to MFR.
(ii) Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);	Positive Allowing DR as an alternative to MFR gives NESO a wider market and therefore greater competition. This is because energy-limited assets cannot sustain the High service indefinitely. This issue will be addressed through delivery of RT-DR.
(iii) Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole;	Positive Dynamic Regulation is, among other things, faster than MFR, which makes the element more efficient when it comes to maintaining system security.
(iv) To efficiently discharge the obligations imposed upon the licensee by this license* and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and	Neutral
(v) To promote efficiency in the implementation and administration of the Grid Code arrangements	Neutral

Public

* See Electricity System Operator Licence

Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories	
Stakeholder / consumer benefit categories	Identified impact
Improved safety and reliability of the system	Positive We can get more effective mandatory response from BESS through the into of DR than we can with MFR.
Lower bills than would otherwise be the case	Positive Currently, MFR is available in real-time, which is used as an alternative to over-procurement of Dynamic Response services (DC, DM, DR) day-ahead. However, those real-time services are more expensive per MW, and approximately half as effective as Real-time Dynamic Regulation. Any volumes of DR that replace MFR are expected to lead to cost reductions.
Benefits for society as a whole	Positive In addition to the reduction in consumer cost, using Real-time Dynamic Regulation is likely to provide access to lower carbon emitting units, e.g. batteries, compared to the legacy MFR service.
Reduced environmental damage	Positive Using Real-time Dynamic Regulation is likely to provide access to lower carbon units, such as batteries, compared to the legacy MFR service.
Improved quality of service	Positive Using Real-Time Dynamic Response will include better access for batteries and will be cheaper overall for NESO (and hence consumers as well)

Public

When will this change take place?

Implementation date:

March 2027.

Proposer's justification of Implementation date:

Timelines are dependent on NESO IT delivery. Real-time Dynamic Regulation will be available in early 2027.

Date decision required by

Early 2027

Implementation approach:

This modification will introduce Real-Time Dynamic Regulation into the Grid Code as an alternative to MFR. Given that MFR will still be available as an option to provide minimum frequency response requirements, NESO does not see an issue with the legal text changes being made as soon as RT-DR is available. NESO will work with and offer support to any provider wishing to transition to real-Time Dynamic Regulation.

Proposer's justification for governance route

Governance route: Standard Governance modification with assessment by a Workgroup

NESO believes the proposed changes will have a positive impact for users (remove barriers to entry to MFR for some technologies; faster response service with system security benefits; and reduced costs). However, we would recommend an assessment by workgroup, to ensure that all impacts have been considered.

Interactions

- | | | | |
|--|---|---|--------------------------------|
| <input checked="" type="checkbox"/> CUSC | <input type="checkbox"/> BSC | <input type="checkbox"/> STC | <input type="checkbox"/> SQSS |
| <input type="checkbox"/> European
Network Codes | <input checked="" type="checkbox"/> EBR Article 18
T&Cs ¹ | <input type="checkbox"/> Other
modifications | <input type="checkbox"/> Other |

Public

A consequential CUSC modification reflective of the Grid Code Legal Text solution will be raised downstream of this modification, with the intention of implementation into the CUSC, subject to Authority approval, simultaneously with the Grid Code implementation.

Industry engagement and feedback

NESO has held several industry-wide Webinars and given advanced notice of this modification at the Grid Code Development Forum (GCDF), from which feedback has been incorporated into our thinking whilst finalising this Proposal Form.

In October 2024 NESO introduced the basic concept represented in this Mod proposal in the form of a Webinar. The webinar covered the rationale for introducing Real-time Dynamic Regulation, including recent changes to overall inertia and decreased reaction time, and how these and other issues continue to affect balancing, as well as the benefits which could be gained by a move to Dynamic Response services.

This was followed up with several more industry events in January, March and June of 2025 where we engaged further regarding a potential timeline, maintaining MFR whilst Real-time Dynamic Regulation is introduced, and how payments will differ both during and after the transition. Each session went into more detail as stakeholders had the chance to query the proposed changes, which enabled the plan to be refined in a direction which was broadly supported, and in March of 2025 we launched the draft of the Service Terms for Real-Time Dynamic Regulation.

In addition, a joint C9 and Dynamic Response A18 Consultation was launched which introduced changes for Quick Reserve Phase 2 Launch, as well as C9 changes to Applicable Balancing Services Volume Data (ABSVD) for Response and an Article 18 consultation to facilitate the application of ABSVD to Non-Balancing mechanism Units (Non-BMUs) in the Dynamic Response Market. Following more feedback during several drop-in sessions we also published updated versions of the FAQ Document and more importantly the State of Energy

Public

(SOE) Guidance to include a technical explanation of the exceptional circumstances prescribed in the Dynamic Response Service Terms and advice on how to protect response capacity when participating in the Balancing Mechanism.

In addition, NESO have had discussions with several existing MFR providers highlighting challenges for certain asset types to provide the DR service. Therefore, NESO will work with industry to understand the challenges and make changes to the mandatory requirement that meet both the operability needs of the system and are also accessible to the capabilities of current MFR providers.

For more details on this stage of the process, the link below leads to the slide packs, FAQs and recordings of the Webinars: [Future Frequency Response Webinars](#).

Acronyms, key terms and reference material

Acronym / key term	Meaning
ABSVD	Applicable Balancing Services Volume Data
BSC	Balancing and Settlement Code
CFR	Commercial Frequency Response
CUSC	Connection and Use of System Code
DC	Dynamic Containment
DM	Dynamic Modulation
DR	Dynamic Regulation
EBR	Electricity Balancing Regulation
GC	Grid Code

Public

MFR	Mandatory Frequency Response
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions

Reference material

- [Obligation to provide MFR in the Grid Code \(CC 8.1/ECC 8.1\)](#)
- [Process for provision of MFR or CFR in the CUSC \(Section 4.1.3\)](#)
- [Decision to grant NESO a derogation and exemption for mandatory frequency response \(MFR\) | Ofgem](#)
- [Mandatory and Commercial Frequency Response \(MFR/CFR\)](#)
- [Future of response services](#)
- [Future of response services webinars](#)
- [Grid Code Development Forum \(GCDF\) – 3 December 2025](#)

Annexes

Annex	Information
Annex 01	GC0185 Proposed Legal Text Changes