Grid Code Modification Proposal Form	At what stage is this document in the process?

GC0145:

Mod Title: Updating the Grid Code to include the Manually Activated Reserve Initiative (MARI)

01	Proposal Form
02	Workgroup Consultation
03	Workgroup Report
04	Code Administrator Consultation
05	Draft Grid Code Modification Report
06	Final Grid Code Modification Report

Purpose of Modification: Article 20 of European Balancing Guidelines (EBGL-Commission Regulation (EU) 2017/2195), states that Transmission System Operators (TSO's) are required to introduce a platform to facilitate balancing manually activated frequency restoration reserves (mFRR) by July 2022.

Manually Activated Reserve Initiative (MARI) was launched by the European Network of System Operators (ENTSO-E) as part of the European implementation project of the European mFRR platform. This modification seeks to provide the requirements for the Grid Code so that participants of this standard European Union (EU) Balancing Product can be clear of the specifications required.

	The Proposer recommends that this modification should be: • Assessed by a Workgroup This modification was raised on 12 May 2020 and will be presented by the Proposer to the Panel on 28 May 2020**.** The Panel will consider the Proposer's recommendation and determine the appropriate route.
	High Impact: Existing and potential providers of balancing services in Great Britain including but not limited to Interconnectors and the Transmission System Operator.
	Medium Impact Distribution Network Operators
	Low Impact

Contents

Timetable

The Code Administrator will update the timetable.

The Code Administrator recommends the following timetable:	
Initial consideration by Workgroup	22 June 2020 – 02 Oct 2020
Workgroup Consultation issued to the Industry	12 Oct 2020 – 30 Oct 2020
Modification concluded by Workgroup	Dec 2020
Workgroup Report presented to Panel	28 Jan 2021
Code Administration Consultation Report issued to the Industry	Feb 2021
Draft Final Modification Report presented to Panel	25 Mar 2021
Modification Panel decision	25 Mar 2021
Final Modification Report issued the Authority	Mar/April 2021
Decision implemented in Grid Code	July 2022

Any questions?

Contact:
Code Administrator
Jennifer Groome

email address
Jennifer.Groome@nationalgrideso.com

telephone
07966 130854

Proposer:
Louise Trodden

email address
louise.trodden@nationalgrideso.com

telephone
07866 165538

National Grid Representative:
Louise Trodden

email address.
louise.trodden@nationalgrideso.com

telephone
07966 130854

Proposer Details

Details of Proposer: (Organisation Name)	National Grid ESO
Capacity in which the Grid Code Modification Proposal is being proposed: (e.g. CUSC Party)	The Company
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	 Louise Trodden National Grid ESO 07866 165538 Louise.trodden@nationalgrideso.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	 Tony Johnson National Grid ESO 07966 734856 Anthony.johnson@nationalgrideso.com
Attachments (Yes/No) **If Yes, Title and No. of pages of each Attachment:**	

Impact on Core Industry Documentation.

Please mark the relevant boxes with an "x" and provide any supporting information

BSC	x
CUSC	x
STC	
Other	

The principle documents to be changed as a result of this modification are the Grid Code and BSC. BSC modification P407 (Project MARI) was raised at the May 2020 panel, with the objective to run cross code workgroups. MARI will require changes to the Grid Code to set out the requirements for participation. There may also be potential consequential changes to the CUSC and the BSC to review. Should any changes be required to other industry codes, then these will be dealt with appropriately.

1 Summary

Defect

MARI is a new product for Great Britain (GB), therefore specifications for mFRR are not included within the Grid Code.

To comply with the utilisation of mFRR in accordance with Article 20 of EBGL, the Grid Code will need to be updated with these requirements. This EU-wide project is directed by Article 20 EBGL, with a deadline of July 2022.

Failure to comply will result in non-compliance of the legal requirement of EU legislation and affected parties may be subject to penalties. This could also result in market participants being disadvantaged as the same market opportunities available in EU Member States would not be available in GB.

What

In order to allow participants to understand the requirements placed upon them, the Proposer suggests that two new sections are introduced to the Grid Code – namely Balancing Code 6 (BC6) and Balancing Code 7 (BC7). This will allow participants to comply with the requirements for participation, submission of data and the prequalification criteria. These new sections of the Grid Code will be based upon the principles developed for Trans-European Replacement Reserve Exchange (TERRE). These are captured in Balancing Code 4 and 5 (BC4 and BC5), ensuring compliance of the requirements in the European Network Codes (ENCs). In order to comply with the ENCs, the Grid Code legal text will refer to the System Operator Guidelines (SOGL). Article 159 states the guidelines for pre-qualification, whereas Article 158 sets the criteria for minimum technical requirements for those who wish to be participants of manually activated reserve products.

It is worth noting that MARI is similar to TERRE but operates in shorter timescales.

The scope of this modification will include:

- Registration process
- Qualification and testing
- Data submission and acceptance
- Dispatch and delivery process
- Reporting

Why

MARI is a requirement of EBGL Article 20 to support the sharing of energy reserves across the EU Internal Electricity Balancing Market (IEM). This in turn helps to support the introduction of potential new participants to the market with the objective of increasing security of supply and reducing costs to consumers.

Whilst there are questions relating to the impact that the United Kingdom (UK) has left the European Union (EU), the terms of the European Union (Withdrawal Agreement) Act 2000 require that EU legislation is adhered to until the end of the transition period on 31 December 2020. This means that National Grid Electricity System Operator (NGESO), in its role as the TSO for Great Britain (GB) is required to implement the mFRR platform via its participation in MARI. Whether GB market participants will be able to participate in MARI from 1 January 2021 onwards is subject to on-going negotiations.

The benefits of products such as MARI could create competition in the market and potentially cheaper costs for the end consumer. Therefore, it is the view of the ESO to continue with the project as per EBGL Article 20 and to adopt an approach consistent with that proposed for TERRE.

How

The approved implementation framework from ACER (Found Here) will be used to map the required amendments to the Grid Code and the gaps will be filled by creating new chapters in the Grid Code. This will allow participants to be clear in the way they operate with this product. The new areas of the Grid Code are likely to be BC6 and BC7 (Balancing Code) with additional terms included in the Glossary and Definitions.

2 Governance

This proposal should follow a Standard Governance route through the modification process. It will be important that working group participation supports delivery of the modification.

The implementation of MARI into the codes will have wide industry impact. This will vary depending on the customer or stakeholder, however these changes will impact both current and future customers and the process that are undertaken to use the mFRR platform. As a result of this, these changes may therefore be seen as material.

Requested Next Steps

This modification should be assessed by Workgroups during 2020 to progress and ensure alignment of the Grid Code with MARI ahead of the July 2022 go-live date. This will allow for system and process development in 2021, with testing in early 2022 ahead of July 2022 go-live.

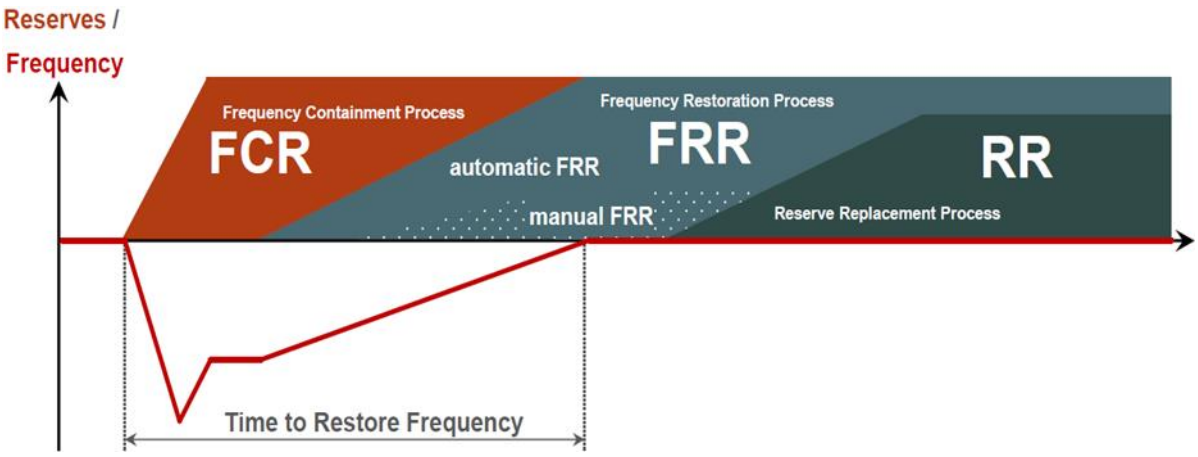
The workgroup phase needs to be completed by the end of 2020.

3 Why Change?

These changes are necessary to comply with EBGL Article 20. All TSOs are required to participate in the harmonisation of balancing across the EU energy market. As this is a new product for the GB energy market, this needs to fit into the Grid Codes to allow market participants to be clear on the specification and qualification process required. This change impacts all parties who wish to be participants of this balancing service.

EBGL Article 20 suggests that the MARI platform is to be used to submit bids for all standard products, and the exchange of all bids should be completed this way, except when blocked by TSOs due to congestion or any operational security measures. This will require NGESO to implement new processes in the control room. mFRR as an EU balancing product is manually activated in 12.5minutes and delivered in 15-minute windows of energy blocks. For comparison, TERRE is activated in 30 minutes and delivered in 15-minute blocks.

mFRR aims to restore frequency containment reserves similar to Bids, Offers and Acceptances (BOAs), Fast Reserve and Short Term Operating Reserve (STOR) that can be activated in less than 15 minutes. The additional feature of MARI is that it can be scheduled for a particular time or directly activated within the 15 minute energy block. There is the option to either have a scheduled activation over the 15 minute window, or a direct activation which is an agreed activation that takes place within the 15 minute block after the initial scheduled activation has taken place. The maximum generation capacity required to participate in mFRR is 1MW while maximum is 9,999 MW. There is a minimum delivery period of 5 minutes.



The above image shows how the Frequency Restoration Process fits into the current services available. Please note that automatic FRR is not an option in GB, we are implementing manual FRR. Reserve Replacement (RR) is the EU balancing product known as TERRE.

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4 Code Specific Matters

Technical Skillsets

Understand the wholesale Electricity Market, frequency response requirements, Project TERRE, The Grid Code, EU code requirements, EBGL, Balancing Services Products and the Clean Energy Package.

Reference Documents

Article 20 EGBL

TERRE- GC0097 Final Modification Report

Annexes to Decision of the Agency for the Cooperation of Energy Regulators No03-2020- mFRR Platform

5 Solution

A new section will be created within the Balancing Services Section of the Grid Code namely BC6 and BC7. This will follow the principles of BC4 and BC5 which details the technical requirements for participants of Project TERRE.

The development of MARI will build on the existing processes developed for Project TERRE but specifically within the context of the MARI product and MARI timelines for the efficient despatch and utilisation of mFRR.

Whilst we acknowledge that Project TERRE has not been fully implemented within the GB market at the time of writing, the sensible approach is to still build upon the Project TERRE model with development of the model through the design approval stage.

The Workgroup will consider the following categories to support development of the solution:

- Registration process
- Qualification and testing
- Data submission and acceptance
- Dispatch and delivery process
- Reporting

6 Impacts & Other Considerations

i. *which industry code is impacted;* Grid Code, CUSC parties and those participants of the Balancing Mechanism.

ii. *Which processes are impacted;* Control Room, Interconnectors

iii. *Systems impacted;* Control Room, Interconnectors

iv. *Industry costs associated with the changes;* This is likely to be similar to that for TERRE

v. *Any impact on the environment as a result of the changes.* More efficient use of reserve services across the EU could reduce our impact on the environment.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

No

Consumer Impacts

There is the possibility that by using products such as MARI our reserve requirements will allow consumers to be positively impacted by energy prices. This could be a result of an opportunity to procure energy at more competitive prices, especially in shorter timescales.

Risks and Opportunities

Participation in MARI should support a degree of consistency with Europe. This is not to say there could not be risks such as:

- TERRE is not fully implemented and has currently been delayed until October 2020
- Control room and industry engagement may not be high due to workload constraints and TERRE delays
- BREXIT and the unknown related to our involvement in the IEM from January 2021
- COVID-19 and the impact this will have upon all Stakeholders
- Derogations raised by other EU countries and hence limited ability to trade in the MARI product
- The short time frame to formulate and develop solutions - both for code changes and software and process changes.

We also need to consider all obligations which tie into the Clean Energy Package (CEP) and EBGL.

EBGL states that a TSO should use standard EU products for balancing services – Replacement Reserves (RR) (TERRE) and mFRR (MARI). Those who require the use of other balancing services which are not the EU standard, must inform the Regulator that they are required to do this. This must be done before go-live of the EU standard equivalent product or the product cannot be used. The CEP provides an opportunity to further align with EU requirements. This is because the CEP requires TSO's to follow a standard package of reserve products and guidelines to comply with. RR and mFRR products do comply with this particular element of the CEP. We are currently reviewing our reserve products to ensure compliance with the obligations of both EBGL and the CEP whilst maintaining the integrity of the products and services required for the operation of the system.

7 Relevant Objectives

Mandatory for the Proposer to complete.

Impact of the modification on the Applicable Grid Code Objectives:	
Relevant Objective	Identified impact
(a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity	Positive
(b) 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
(c) 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
(d) 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	Positive
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	Positive

This modification will impact the codes in a positive manner through the compliance with EU legislation, and cross code mapping. This allows those participants of MARI to be clear with the requirements they are to follow. MARI is designed to support a more efficient supply of reserves across synchronous areas, which will in turn result in a new product for GB and potentially open up the service to new participants to create further competition in the market.

8 Implementation

MARI has a deadline for implementation of July 2022. This is 30 months after the Implementation framework approval by ACER. To meet this requirement, it is critical to start workgroups and stakeholder interactions to support the development of this modification. The Workgroup phase must be completed and by the end of 2020 to allow for a period of software development, testing and implementation.

Key to success is learning from TERRE. It is beneficial for the local implementation work to start as soon as possible to allow for Balancing Service providers, interconnectors and NGESO to have the software and requirements tested and ready.

This modification is being run in conjunction with changes to the BSC through modification P407. The aim is to enable a single GB solution to participation in MARI. We will be seeking to develop this change through joint workgroups, engagement to industry, communications and interconnector participation. This approach should also support addressing what was learnt through Project TERRE.

9 Legal Text

The legal text will comprise of two new sections of the Grid Code. BC6 and BC7 in addition to updates to new terms which will be included in the Glossary and Definitions. In addition, any consequential Grid Code changes which are required to implement the MARI updates will also be included.

It is envisaged that this will be developed and added to throughout the workgroup process.

Text Commentary

As noted above the proposal is to develop a solution similar to that proposed for Project TERRE.

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Refer this proposal to a Workgroup for assessment.

