

Grid Code Review Panel

Thursday 27 October 2021

Online Meeting via Teams



WELCOME

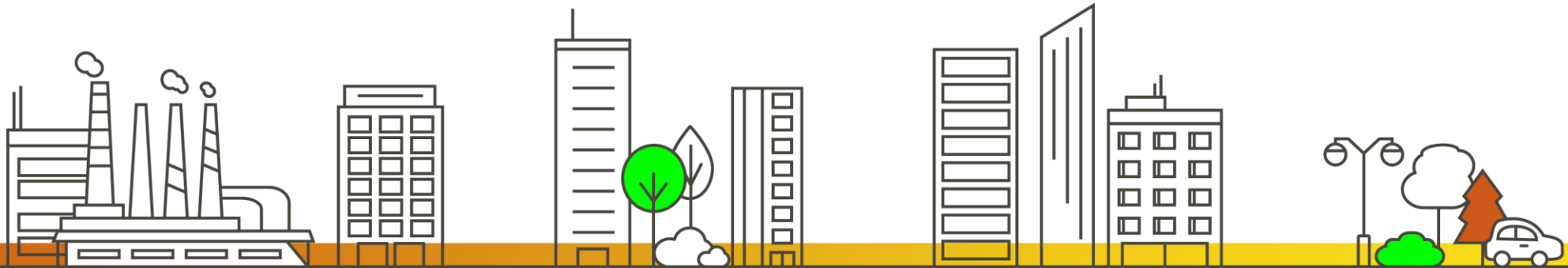
As we continue to operate in these uncertain times and following best practice from other businesses, we want to adapt to be able to facilitate the governance process in the best possible way. Since moving to virtual Panel meetings, we have found it harder to accurately capture minutes and attribute comments correctly to attendees. We are also conscious of the impact of short periods of poor sound quality. With your consent, we wish to use WebEx to record all Panel meetings to help us accurately document minutes. We want to assure you that the recordings will be explicitly used to document minutes only and the same protocol for Panel meetings still applies in terms of strict confidentiality. As has always been the case, the draft minutes will be sent to Panel and the Chair for approval each month. Once the minutes are approved, the recording will be deleted. A reminder of this and consent will be sought at the beginning of each meeting, to be noted in the minutes.

As the independent Panel Chair, we have tested the appropriateness of recording Panel meetings with Trisha McAuley who is supportive of the approach. We welcome any comments or feedback on this.

Approval of Panel Minutes

Approval of Panel Minutes from the Meeting held
30 September 2021

Approval of Special Panel Minutes from the meetings held
07 October 2021



Actions Log

Review of the actions log



Chair's Update

Update from the Chair

Authority Decisions and Update



Update:

The Authority's publication on decisions can be found on their website below:

<https://www.ofgem.gov.uk/publications/code-modificationmodification-proposals-ofgem-decision-expected-publication-dates-timetable>

New modifications submitted

No new Modifications





Inflight Modification Updates

Nisar Ahmed, Code Administrator

GC0151 update

Grid Code Compliance with Fault Ride Through Requirements

- Special Panel meeting held 07 October 2021 at 3:30pm to present and review the DFMR. Panel recommendation was held.
- Final Modification Report submitted to the Authority on 11 October 2021.
- Awaiting Authority decision.

GC0139 update

Enhanced Planning-Data Exchange to Facilitate Whole System Planning

Meeting with workgroup members held on 06 October 2021 to define a plan for the modification.

Plan Agreed as follows:-

- 1) Proposer to draft terms of reference for CIM Subgroup
- 2) Proposer to set up meeting with Dan Clarke (ENA) and Paul Hayes (Leader on CIM subgroup) to look at scope
- 3) ESO Technical Codes Team has re-circulated the draft legal text
- 4) Group of 4 experts from Workgroup to look at producing another version of the legal text by mid November (Alan C, Proposer, & ESO)
- 5) Workgroup is currently targeting a mid-March 2022 date to conclude the workgroup and finalise the report for review by Panel.
- 6) Develop the gaps in the timeline for Panel update between now and mid-march 2022.

GC0117 update

Improving transparency and consistency of access arrangements across GB by the creation of a pan-GB commonality of PGM requirements

- Workgroup held 28 September 2021, MW thresholds to be applied in England, Wales & Scotland was reviewed.
- Alternative from Alan Creighton was formally voted on and adopted by the Workgroup – becomes WAGCM1.
 - It is a simple solution which seeks to maintain the existing arrangement in England & Wales.
 - The alternative is a straightforward change; it addresses the core of the defect of the Proposal by providing harmonised levels.
 - It holistically aligns with the Open Network' suggestions in relation to role of the DNOs
- All Workgroup Members to review Request For Information for visibility of distributed generation connected to Great Britain DNO networks and circulate any useful information found. This can be accessed via this link: <https://www.ofgem.gov.uk/publications-and-updates/callevidence-visibility-distributed-generation-connected-gb-distribution-networks>

GC0138 update

Compliance process technical improvements (EU and GB User)

- GC0138 has been de-coupled from GC0141.
- Workgroup Report was presented at last Panel on 30 September 2021.
- Panel agreed to approve the Workgroup Report to proceed to the Code Administrator Consultation by circulation after the updated report has been approved by the Workgroup.

GC0146 update

Solutions for frequency control of Power Park Modules

This modification was submitted by Orsted on 19 May 2020 and is trying to modify the current Grid Code to ensure developers can have a more flexible way to design frequency control and how this can be implemented in the wind farms. Currently, the Grid Code allows to control the frequency at PPM level and we are asking to consider controlling frequency at BMU level as well.

- Code Administrator has held a meeting with Orsted who have now confirmed that they would like to progress the modification.
- Orsted have confirmed that the defect is not changing and stands as was originally submitted.
- The Code Administrator has issued nominations for the Workgroup.
- The Code Administrator are in a position to start workgroup meetings in December 2021.
- Panel prioritisation required.

GC0126: Dynamic SIL/SEL Functionality update – Rob Wilson

- Dynamic SIL/SEL delivery was originally part of the EBS project – and was continued after this as it appeared to have a positive CBA
- Delivery was delayed due to other priorities within the balancing programme and then particularly due to COVID
- A more detailed impact assessment has now been carried out. Delivery is more complex than originally thought resulting in a significant increase in implementation costs from £700k to £3m+
- Notional benefits are no longer as tangible given that the '[Super SEL](#)' service, which has been running successfully since 2017, has enabled essentially provision of the same functionality but without any system changes being necessitated
- BSC 'issue' raised by EnergyUK in Oct 21; '[Review of current practice setting Dynamic Parameters within the Balancing Mechanism](#)'. Elexon are currently seeking members for an issue group which will consider this and may result in code mod proposals
- Propose to engage with this group and see what the result is before making any firm decisions. In the meantime delivery is paused



Prioritisation Stack

Panel Feedback sought on Prioritisation Process

- What is working well?
- What is not working well?
- How can this process be improved?
- What can be learnt from other Code Panels?

Dashboard – Grid Code (as at 19 October 2021)

Category	May	June	July	August	Sept	Oct
New Modifications	0	2 <i>GC0150 GC0151</i>	0	1 <i>GC0152</i>	0	0
In-flight Modifications	17	18	18	19	19	17
Modifications issued for workgroup consultation	0	0	0	0	1 <i>GC0151</i>	0
Modifications issued for Code Administrator Consultation	2 <i>GC0134 (7 May) GC0149 (14 May)</i>	0	1 <i>GC0150</i>	0	2 <i>GC0151 GC0137</i>	2 <i>GC0152 GC0138</i>
Workgroups held	3	3	7	4	2	4
Authority Decisions	0	0	1 <i>GC0109</i>	1	0	0
Implementations	2 <i>GC0144 – 26 May GC0147 – 17 May</i>	0	0	1 <i>GC0109 23 Aug</i>	1 <i>GC0134</i>	1 <i>GC0150</i>



Workgroup Reports

None to present

Draft Final Modification Reports (DFMR)

GC0137 – Minimum Specification Required for Provision of GB Grid Forming (GBGF) Capability (formerly Virtual Synchronous Machine/VSM Capability)

Nisar Ahmed, Code Administrator

GC0137 Background

The purpose of this modification is simply to develop the minimum Grid Code technical specification for a GB Grid Forming Capability (which was formerly referred to as a Virtual Synchronous Machine - “VSM”). The market arrangements will then be addressed as a separate piece of work once the specification and technical requirements are in place.

The specification will enable parties to offer an additional grid stability service. This will be fundamental to ensuring future Grid Stability, facilitating the target of zero carbon System operation by 2025.

The implementation of this modification and the subsequent launch of a commercial market would result in the provision of additional stability services operated by the ESO. The primary aim being the ability to run the entire electricity transmission system on low carbon generation sources that include nuclear power, whilst at the same time ensuring a safe, secure and economic system.

For Generators, Interconnectors and other “Providers” it will provide them with a potential new revenue stream. In order to take part in such a market, Generators, Interconnectors and other “Providers” may wish to amend/modify their plant, or potentially amend or incorporate new software to enable them to satisfy the requirements of the specification if they wished to enter this future market.

GC0137 – Code Administrator Consultation

The Code Administrator Consultation ran from 3 September 2021 to 4 October 2021 with 7 non-confidential responses received. In summary:

- All 7 respondents supported the change with 3 of these respondents specifically noting this better facilitates Grid Code Objectives a, b and c than the current Grid Code.
- All 7 respondents either fully or partially supported the implementation approach. 3 of these respondents highlighted their support for this being non-mandatory as this would promote the use of market based arrangements. There were a number of general comments on some of the technical specifications that need to be developed further. We have since spoken to the Proposer and noted that there is a separate Expert Group, which would cover the more detailed aspects including testing, modelling, performance etc with the aim of which is to provide a Best Practice Guide as it is acknowledged that the Grid Code legal drafting is not a detailed functional specification.

GC0137 – Code Administrator Consultation

- 1 respondent requested that the ESO also consider other equipment such as synchronous condensers to mitigate any localised inertia or low fault level issues. The Proposer has since contacted the respondent directly on this and noted that GC0137 specification does include synchronous condensers (Dynamic Reactive Compensation Equipment) as they would be considered to provide a Grid Forming Capability.
- 1 respondent provided some personal thoughts on the conclusions of the Workgroup but has since been notified that the Workgroup phase has concluded and, except for clear typographical changes, these thoughts will not be added to the body of this document.
- Legal text changes were proposed though
- ESO Technical Codes have responded to all queries raised by respondents.

GC0137 – Code Administrator Consultation – Legal Text Changes

Section / Clauses(s)	Proposed Change to Legal Text
Glossary & Definitions - Network Frequency Perturbation Plot	Change “Apparent Power” to “ Active Power” – It is recognised this is an error and has been discussed as Part of the GB Grid Forming Best Practice Expert Group
Glossary and Definitions – Damping Factor	Last Paragraph incorrect references:- Alternatively, the Damping Factor refers to the damping of a specific oscillation mode that is associated with the second order system created by the power to angle transfer function as show in Figure PC.A.5.8.1(a) and PCA.5.8.1(b) ECC.6.3.19.3.2 .
DRC Schedule 19 Part 5: OTSDUW Data and Information (Page 2 of 2)	Change “aAnd” to “ and ”
ECP.A.1.10	Change “aGrid” to “ a Grid ”
ECC.6.3.19.5.3	Change reference at the bottom of the figure in section ECC.6.3.19.5 from “Figure ECC.16.3.19.5(b)” to “Figure ECC. 6.3.19.5(b) ”
Table PCA.5.8.2 and Table 2 of DRC Schedule 20	In the Glossary and Definitions, the definition of Grid Oscillation Value states “..... nominal System Frequency with an amplitude of 0.05 Hz peak to peak ...” This frequency appears as 0.5Hz in Table PC.A.5.8.2 and Table 2 of DRC Schedule 20. To align with the definition of Grid Oscillation Value, 0.5Hz in Table PC.A.5.8.2 and Table 2 of DRC Schedule 20 should be changed from 0.5Hz to 0. 05 Hz

Code Administrator Consultation – Legal Text Changes. What do the Grid Code Governance Rules say?

GR.22.4

A draft of the **Grid Code Modification Report** shall be tabled at a meeting of the **Grid Code Review Panel** prior to submission of that **Grid Code Modification Report** to the **Authority** as set in accordance with the timetable established pursuant to GR.19.1, and at which the **Panel** may consider any minor changes to the legal drafting, which may include

any issues identified through the **Code Administrator** consultation, and:

- (i) if the change required is a typographical error the **Grid Code Review Panel** may instruct the **Code Administrator** to make the appropriate change and the **Panel Chairman** will undertake the **Grid Code Review Panel Recommendation Vote**; or
- (ii) if the change required is not considered to be a typographical error then the **Grid Code Review Panel** may direct the **Workgroup** to review the change. If the **Workgroup** unanimously agree that the change is minor the **Grid Code Review Panel** may instruct the **Code Administrator** to make the appropriate change and the **Panel Chairman** will undertake the **Grid Code Review Panel Recommendation Vote**, otherwise for changes that are not considered to be minor the **Code Administrator** shall issue the **Grid Code Modification Proposal** for further **Code Administrator** consultation, after which the **Panel Chairman** will undertake the **Grid Code Review Panel Recommendation Vote**; or
- (iv) if a change is not required after consideration, the **Panel Chairman** will undertake the **Grid Code Review Panel Recommendation Vote**.

Do Panel consider the changes to be typographical?

- **YES →** Instruct Code Admin to make the change under GR.22.4(i). Proceed to Recommendation Vote; or
- **NO →** Direct the Workgroup to review the changes and re-issue Code Admin Consultation for non-minor changes under GR.22.4(ii)
- **NO CHANGE →** Agree the changes are not needed under GR.22.4(iv). Then we carry out Recommendation Vote

GC0137 – the asks of Panel

- **AGREE** whether or not the proposed changes to the legal text are typographical
- **NOTE** that this Modification does not impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Grid Code?
- **VOTE** whether or not to recommend implementation
 - *Does the GC0137 Original proposal better facilitate the objectives than the current Grid Code arrangements?*
- **NOTE** next steps

EBR Article 3 Objectives

For reference, the Electricity Balancing Regulation (EBR) Article 3 (Objectives and regulatory aspects) are:

1. This Regulation aims at:
 - (a) Fostering effective competition, non-discrimination and transparency in balancing markets;
 - (b) enhancing efficiency of balancing as well as efficiency of national balancing markets;
 - (c) integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;
 - (d) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;
 - (e) ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue market distortions;
 - (f) facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;
 - (g) facilitating the participation of renewable energy sources and supporting the achievement of any target specified in an enactment for the share of energy from renewable sources.

GC0137 Timeline

Milestone	Date
DFMR presented to Panel for recommendation vote	27 October 2021
Final Modification Report issued to Panel to check votes recorded correctly (5 working days)	1 November 2021 – 5 November 2021
Final Modification Report issued to Ofgem	9 November 2021
Ofgem decision	TBC
Implementation	Within 10 working days following decision

Reports to Authority

GC0133 – Submitted to the Authority on 11 October 2021

GC0151 – Submitted to the Authority on 11 October 2021



Implementation Update

GC0150 Housekeeping change post- GC0147 implementation

Implemented into the Grid Code on 04 October 2021

The background features several abstract, flowing yellow lines. Some lines are curved and looped, while others are straight and diagonal, creating a sense of movement and energy.

Governance

None



Grid Code Development Forum and Workgroup Day(s)



Rob Wilson, NGESO

Grid Code Development Forum – Last and Next

6 October 2021

SQSS Review

The ESO are engaging with wider industry on a targeted set of issues with the SQSS to initiate a focused review as part of our RIIO-2 plan. Year 1 of this task in 2021/22 stated that the ESO would seek to engage with stakeholders and explore the scope of these activities. The presentation identified some of the key topics/issues for review and invited stakeholders to feedback on these identified issues and any other concerns on the application of SQSS in order for an update of the SQSS to reflect the current energy landscape and meet the net zero ambitions.

Whole System Technical Code

The digitalised Whole System Technical Code (WSTC) project has now issued its first consultation to industry which will run until 12 November 2021. The WSTC Team presented the high-level scope of the consultation paper and signposting attendees to additional opportunities to engage with the digitalised WSTC project.

3 November 2021

Interconnector Ramping

Update on progress; System Operator Guidelines (SOGL) requires the ESO to map approved operational methodology texts from Article 119 (1) (C) (Ramping restrictions for active power output) to the Grid Code. As it stands, the Grid Code does not specify interconnector ramping of which SOGL requires.

Minimum Short Circuit Level – Update

The Customer Technical Policy Team return to GCDF in November with an update, particularly with regards to progress on developing a proposal to include in the ESO System Operability Framework (SOF) document and in terms of the feedback received from the September presentation.

Standing Items

- **Distribution Code Panel update (Alan Creighton)**
- **JESG Update (information only)**

JESG Update

Joint European Stakeholder Group meeting for October was held 12 October 2021.

[Agenda](#)

[Presentation pack](#)

The next JESG meeting will be on 9 [November 2021](#) starting at 10am.

Updates on other industry codes

The background features several decorative yellow lines. In the top left, there are several curved lines that sweep upwards and to the right. In the bottom right, there are several parallel diagonal lines that sweep upwards and to the right, creating a sense of movement and progress.

Blockers to Modification Progression

(February, May, August, November)



Horizon scan

(February, May, August, November)




Electrical Standards

**Proposed modifications to the NGESO NETA Despatch Instruction Guide
and NGESO EDL Instruction Interface valid Reason Codes documents**

Governance Rules – Electrical Standards

- Nisar Ahmed



Proposed modifications to NGESO NETA Despatch Instruction Guide & NGESO EDL Instruction Interface Valid Reason Codes

Angela Wilks

**National Control
Operational Manager**

Background

- The Pathfinder for the Long Term (LT) Mersey Static Reactive Tender 2022-31 included an award to Zenobe for 38 Mvar of reactive lead capability from battery storage BMUs.
- In order to differentiate between instructions sent to the BMUs for Obligatory Reactive Power Service (ORPS) reactive power and the LT contracted static reactive power service, two new reason codes are being proposed for your agreement.
- The introduction of the new reason codes requires the following documents to be updated and approved by the Panel:
 - NGESO NETA Despatch Instruction Guide
 - NGESO EDL Instruction Interface valid Reason Codes

Background

- As Pathfinder services are being contracted, some instructions to Pathfinder contracted services require open ended instructions to be logged that can apply to times outside the Balancing Mechanism window. For this reason there are now instruction types for contracted static reactive power services.

Proposed Changes

- Two new EDL reason codes are proposed:
 - one to start the static reactive power service, VQV and
 - one to cease the static reactive power service, VQO

NGESO NETA Despatch Instruction Guide added paragraph:

When static reactive power services are instructed to start, then the instruction logged is with reason code VQV to start the static reactive power service.

The START time is that calculated for a normal start to honour the submitted time to start for the static reactive power service. The TARGET MW is entered as zero. The Reason code will be VQV. For the static reactive power service contracts, the time to start a static reactive power service may not be equal to the NDZ, the time to start value is submitted by the provider. Where the GBMU static reactive power service time to start does not equal the GBMU submitted NDZ parameter the START time must be calculated for a normal static reactive power service start. The START time takes a two-minute station response time into account.

At the end of the requirement for static reactive power services the reason code shall be logged as VQO.

Any Questions?

Angela Wilks
National Control Operational Manager
12/10/21



Forward Plan Update/Customer Journey)

(Critical Friend Quarterly Update in Panel Pack – January, April, July and October.

Nisar Ahmed

Critical Friend Feedback

1 Grid Code Modification Proposal received from 15 July 2021 to 13 October 2021 inclusive

- This Modification had critical friend checks undertaken on it
- For this Modification, required communications were sent to Independent Chair, Panel and industry within agreed timescales (i.e. on the next working day after Modification Proposal Submission Date)
- Note there have been 2 CUSC Modification Proposals raised in the same period

General areas of feedback (across all CUSC and Grid Code Modifications)

- Continue to work with the Proposer ahead of Modification Proposal Submission Date (even if Urgency requested) to help ensure the best outcome at Panel
- Continue engagement with Proposers on possible Governance routes (and justification), timelines and possible challenges/questions

Feedback we will act on to further improve our service:

- Ensure there is clear justification why a Modification needs to be Standard Governance / cannot be Self-Governance
- Work with Proposers to split the Original solution into clear components to avoid it being lost in the narrative

Any thoughts from Panel?

- Are you seeing better quality Modification Proposals?
- Any further feedback?

AOB

- **Demo of the new improved online voting template – Nisar Ahmed**
- **Electricity System Restoration Standard (ESRS) - Working Groups – Rob Wilson**

Electricity System Restoration Standard (ESRS) - Working Groups

In order to implement the new ESRS, the ESO has identified seven areas that need development and we are seeking views from industry on those areas.

These are:

- Technologies and locational diversity
- Future networks
- Markets and funding mechanisms
- Regulatory frameworks
- Assurance
- Communication Infrastructure
- Modelling and Restoration Tool

To express interest to join any of the working groups listed above, please contact Sade Adenola, sade.adenola@nationalgrideso.com

Next Panel Meeting

**10am on 25 November 2021 via
Microsoft Teams**

Papers Day – 17 November 2021

**Modification Proposals to be
submitted by 10 November 2021**

Close



Trisha McAuley
Independent Chair, GCRP