



Grid Code Review Panel

Thursday 24 August 2023

Online Meeting via Teams

WELCOME



Purpose of Panel & Duties of Panel Members

The **Panel** shall be the standing body to carry out the **functions** referred to in the Governance Rules (**GR3.1.1**)

Functions (GR.3.2)

The **Panel** shall endeavour at all times to operate:

- in an **efficient, economical and expeditious manner**, taking account of the complexity, importance and urgency of particular Modification Proposals; and
- With a view to ensuring that the **Grid Code** facilitates **achievement of the Grid Code Objectives**.

Duties of Panel Members & Alternates (GR.3.3)

1. Shall act **impartially** and in accordance with the requirements of the **Grid Code**; and
2. Shall not have any **conflicts of interest**.

Shall not be representative of, and shall act without undue regard to the particular interests of the persons or body of persons by whom he/she was appointed as Panel Member and any Related Person from time to time.

Approval of Panel Minutes

Approval of Panel Minutes from the Meeting held

14 July 2023 and 27 July 2023



Action Log





Chair's Update

Authority Decisions and Update (as at 22 Aug 2023)



Decisions Pending

- ☐ [GC0156: Facilitating the Implementation of the Electricity System Restoration Standard](#)

Decisions Received since last Panel meeting

- ☐ [GC0148: Implementation of EU Emergency and Restoration Code Phase II](#)

Received Final Modification Reports since last Panel Meeting

- ☐ None

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>



Inflight Modification Updates

Jonathan Whitaker, Code Administrator

GC0103: The introduction of harmonised Applicable Electrical Standards in GB to ensure compliance with the EU Connection Timeline Update

Rationale: The sub-group of GC0103 met on 10 August 2023 to scope how to assess the technical feasibility of harmonising the Relevant Electrical Standards (RES), as requested by the GC0103 Workgroup.

Due to the specialist technical expertise required, together with the scale of the task, TOs highlighted concerns about being able to resource such a task in a timely manner. The Panel's request for a credible timeline is understood and this will be produced as soon as possible.

GC0117: Improving transparency and consistency of access arrangements across GB by the creation of a pan-GB commonality of Power Station requirements Timeline Update

	Workgroup Report issued to Panel	DFMR issued to Panel	FMR issued to Ofgem
Previous timeline	TBC	TBC	TBC
New timeline	18 October 2023	17 January 2024	06 February 2024

Rationale: Additional Workgroups added to finalise the solution, legal text and outstanding queries.

Workgroups Remaining: 2

Ask of Panel: Agree revised timeline

GC0139: Enhanced Planning-Data Exchange to Facilitate Whole System Planning Timeline Update

	Workgroup Report issued to Panel	DFMR issued to Panel	FMR issued to Ofgem
Previous timeline	TBC	TBC	TBC
New timeline	17 January 2024	13 March 2024	04 April 2024

Rationale: The Workgroup requires more time for the sub-group to finalise the legal text.

Workgroups Remaining: 4

Ask of Panel: Agree revised timeline

GC0155: Clarification of Fault Ride Through Technical Requirements

Timeline Update

	Workgroup Report issued to Panel	DFMR issued to Panel	FMR issued to Ofgem
Previous timeline	15 November 2023	17 January 2024	07 February 2024
New timeline	27 February 2024	17 April 2024	07 May 2024

Rationale: Additional Workgroups added to finalise the solution and produce the legal text.

Workgroups Remaining: 5

Ask of Panel: Agree revised timeline

GC0162: Changes to OC6 to amend the operational timings for the delivery of the additional demand reduction above 20%, with a focus between 20% and 40%

The Workgroup would like to amend the following within their Terms of Reference:

Workgroup Terms of Reference

- k) Undertake analysis to consider any adverse implications for the security of supplies to customer generally ~~arising from the protection of supplies to critical sites~~ due to the increased switching time.
- l) Undertake analysis to consider any adverse implications for the generator reserve and response requirement ~~arising from the protection of supplies to critical sites~~ due to the increased switching time.

The GC0162 Workgroup proposed amends to terms of reference k and l to make it clear to stakeholders that this modification focuses on switching times.

GC0162 - the asks of Panel




- **AGREE** the amended points within Terms of Reference



Panel Tracker

Jonathan Whitaker, Code Administrator

Prioritisation Stack

Grid Code - Prioritisation Stack   			
Mod Number	Previous Priority No:	Priority No	Title
GC0161	1	1	Changes to OC6 to allow for site protection and demand disconnect rotation
GC0162	2	2	Changes to OC6 to amend the operational timings for the delivery of the additional demand reduction above 20%, with a focus between 20% and 40%
GC0139	3	3	Enhanced Planning Data Exchange to Facilitate Whole System Planning
GC0117	5	4	Improving transparency and consistency of access arrangements across GB by the creation of a pan-GB commonality of PGM requirements
GC0154	6	5	Incorporation of interconnector ramping requirements into the Grid Code as per SOGL Article 119
GC0155	7	6	Clarification of Fault Ride Through Technical Requirements
GC0103	8	7	The introduction of harmonised Applicable Electrical Standards in GB to ensure compliance with the EU Connection Codes
GC0159	9	8	Introducing Competitively Appointed Transmission Owners
GC0140	10	9	Grid Code Sandbox: enabling derogation from certain obligations to support small-scale trials of innovative propositions



Draft Final Modification Report

[GC0161: Changes to OC6 to allow for site protection](#)

Jonathan Whitaker, Code Administrator

Solution

Solution summary :

- The solution will amend wording within Grid Code OC6.1.5 which, currently, obligates that no protection can be given to those specific sites that have, according to ESEC (Electricity Supply Emergency Code), been designated as 'protected'. The solution also proposes the addition of a clause in OC6.5.3 to refer to the pre-designation of protected sites via the ESEC.

OC6.1.5 The Electricity Supply Emergency Code as reviewed and published from time to time by the appropriate government department for energy emergencies provides that in certain circumstances consumers are given a certain degree of "protection" when rota disconnections are implemented pursuant to a direction under the Energy Act 1976. No such protection can be given in relation to Demand Control under the Grid Code. No such protection can be given in relation to Demand Control under the Grid Code, except in relation to those Demand Disconnection stages referred to in OC6.5.3(a) and where such protection is technically feasible, although, even in these situations, protection cannot be guaranteed.

To invoke the Electricity Supply Emergency Code the Secretary of State will issue direction(s) to all **Network Operators** affected, exercising emergency powers under the Electricity Act 1989 or by virtue of an Order in Council under the Energy Act 1976. Following the issuance of such direction, **The Company** will act to coordinate the implementation of an agreed schedule of rota disconnections across all affected **Network Operators'** licence area(s) and to disseminate any information as necessary throughout the period of the emergency in accordance with the instructions **The Company** receives from the Secretary of State or those authorised on their behalf for this purpose.

OC6.5.3 (a) Whether a **National Electricity Transmission System Warning - High Risk of Demand Reduction** or **National Electricity Transmission System Warning - Demand Control Imminent** has been issued or not:

(i) provided the instruction relates to not more than 20 per cent of its total **Demand** (measured at the time the **Demand** reduction is required); and

(ii) if the instruction relates to less than 20 per cent of its total **Demand**, is in

- two voltage reduction stages of between 2 and 4 percent, each of which can reasonably be expected to deliver around 1.5 percent **Demand** reduction; and
- up to three **Demand Disconnection** stages, each of which can reasonably be expected to deliver between four and six percent **Demand** reduction,

each **Network Operator** will abide by the instructions of **The Company**, which should specify whether a voltage reduction or **Demand Disconnection** stage is required; or

(iii) if the instruction relates to less than 20 per cent of its total **Demand**, is in four **Demand Disconnection** stages each of which can reasonably be expected to deliver between four and six per cent **Demand** reduction,

each **Network Operator** will abide by the instructions of **The Company** with regard to **Demand** reduction under OC6.5 without delay.

(b) The **Demand** reduction must be achieved within the **Network Operator's** **System** as far as possible uniformly across all **Grid Supply Points** (unless otherwise specified in the **National Electricity Transmission System Warning - High Risk of Demand Reduction**) either by **Customer** voltage reduction or by **Demand Disconnection**.

(c) **Demand Control** initiated by voltage reduction shall be initiated as soon as possible but in any event no longer than two minutes from the instruction being received from **The Company**, and completed within 10 minutes of the instruction being received from **The Company**.

(d) **Demand Control** initiated by **Demand Disconnection** shall be initiated as soon as possible but in any event no longer than two minutes from the instruction being received from **The Company**, and completed within five minutes of the instruction being received from **The Company**.

(e) Where **Demand Control** is initiated by **Demand Disconnection**, in relation to those **Demand Disconnection** stages referred to in OC6.5.3(a) protection may be given where technically feasible, to pre-designated protected sites in instances where **Demand Control** is implemented on the instructions of **The Company** in accordance with the provisions in OC6.5. The list of pre-designated protected sites is compiled and kept up to date by **Network Operators** in accordance with the terms set out in the **Electricity Supply Emergency Code**.

(ef) Each **Network Operator** must notify **The Company** in writing by calendar week 24 each year, for the succeeding **Financial Year** onwards, whether **Demand Control** is to be implemented either:

i) by a combination of voltage reduction and **Demand Disconnection**; or

ii) **Demand Disconnection** alone;

together with the magnitude of the voltage reduction stages (where applicable) and for **Demand Disconnection** stages, the demand reduction anticipated. Thereafter, any changes must be notified in writing to **The Company** at least 10 **Business Days** prior to the change coming into effect.

Code Administrator Consultation Responses

Summary of Code Administrator Consultation Responses :

- Code Administrator Consultation was run from 17/07/2023 to 17/08/2023 and received 3 non-confidential responses and 0 confidential responses. Key points were:
 - All respondents were supportive of the implementation approach.
 - All respondents believed that the Original solution better facilitates applicable objectives a and d, with one respondent believing that the Original solution also better facilitates objectives b and c.
 - One respondent highlighted the need to use other tools from ESEC paragraph 3.1 to avoid a situation where Demand disconnection is required.
 - One respondent raised an issue with the word 'protection' in the legal text, as follows:
 - "Protection is a defined term, so it is not ideal to use it to mean something other than its defined meaning. Clearly this is a long standing mistake within OC6. Two obvious remedies present themselves – continue to put every usage of protection in inverted commas where it is used with a meaning other than the defined one, or replace protection and its derivatives with excluded and its derivatives.

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 Chairperson** 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 Chairperson** 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 Chairperson** will undertake the **Grid Code Review Panel Recommendation Vote**; or
- (iii) In the case of a modification that had been directed pursuant to GR.19.2(e) to proceed directly to wider consultation without the formation of a **Workgroup**, and if the change required is not considered to be a typographical error, then the **Grid Code Review Panel** may direct the **Code Administrator** in conjunction with the **Proposer** to review the change. If the **Grid Code Review Panel**, the **Code Administrator** and the **Proposer** agree that the change is minor the **Grid Code Review Panel** may instruct the **Code Administrator** to make the appropriate change and the **Panel Chairperson** 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 Chairperson** will undertake the **Grid Code Review Panel Recommendation Vote**. In the case of a change that is not considered to be minor, the **Grid Code Review Panel** may also consider whether to establish a **Workgroup** of the **Grid Code Review Panel**, to further consider the **Grid Code Modification Proposal**, in which case the procedures set out within GR.20 will be followed as required; or
- (iv) if a change is not required after consideration, the **Panel Chairperson** will undertake the **Grid Code Review Panel Recommendation Vote**.

Code Admin must present the proposed legal text changes

Panel have 3 choices:

- **Agree the change is typographical** and instruct Code Admin to make the change under GR.22.4(i). Then we **carry out Recommendation Vote**; or
- **Agree the change is not needed** under GR.22.4(iv). Then we **carry out Recommendation Vote**; or
- Under GR.22.4(ii), **Direct Code Admin and Proposer to review the change or agree to run a 2nd Code Administrator Consultation** (and agree how long this is to be run for) **or ask for a Workgroup to be formed. Then re—issue the Draft Final Modification Report to Panel for Recommendation Vote.**

GC0161 – the asks of Panel

- **AGREE** whether or not the proposed changes to the legal text are required
 - If so, whether these 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
- **NOTE** next steps

GC0161 – Next Steps

Milestone	Date
Final Modification Report issued to Panel to check votes recorded correctly	24 August 2023 (14:00 – 16:00)
Submission of Final Modification Report to Ofgem	24 August 2023 (17:00)
Ofgem decision date	TBC
Implementation Date	Mid-September 2023, 10 working days after the Authority Decision

Grid Code Development Forum – Previous and Next

2 August 2023

Parameters for Storage BM Units

A presentation was shared documenting options in relation to defining new parameters for Storage BM Units to enable more accurate data to be provided to the ESO.

Increase in the number of instructions to BMUs

An overview was provided in relation to the ESOs new Bulk Dispatch Optimiser which is due for release in December 2023, and an increase in the number of instructions sent to some BMUs as a result of this release.

Data collection from Dynamic System Monitoring (DSM) Systems

A presentation was shared in relation to potential options for future data collection from Dynamic System Monitoring (DSM) systems prior to questionnaire which will be sent to Industry to capture feedback.

6 September 2023 (Deadline for Agenda items - 30 August)

Final Agenda items TBC, but the current expectation is that a presentation will be shared in relation to the request for EMT Models from Generators and options to achieve this.



Standing Items

- Distribution Code Panel update (Graeme Vincent)
- JESG Update (information only)
 - 08 August meeting cancelled
 - Next meeting – 12 September 2023



Updates on other industry codes

Challenges to Modification Progress

	May		June		July	
	Count	Mods affected	Count	Mods affected	Count	Mods affected
Legislation Delay	1	GC0159	0	0	1	GC0159
Analysis Delay	0	0	3	GC0117 GC0103 GC0154	2	GC0103 GC0117
Legal Text Delay	1	GC0139	1	GC0155	0	0

Horizon Scan

Codes Affected	Legislative, Regulatory or Industry Change Overview	Published Content	Key Contact	Proposed Modifications Expected	Within 1 Year	Within 2 Years
Grid Code, CUSC, and STC	The Offshore Coordination Project has been set up by the ESO with support from Ofgem and the Department for Business, Energy & Industrial Strategy. Offshore wind has been identified as a critical technology in achieving net zero greenhouse gas emissions by 2050. In order to help realise this target, a step-change in both the speed and scale of deployment of offshore wind is required.	ESO Offshore Coordination Project Page	box.OffshoreCoord@nationalgridESO.com	CUSC modifications have started		
Grid Code and Dcode	Digitalised Whole System Technical Code (dWSTC) will include 3 key workstreams; Alignment, Simplification & Rationalisation; Training and Guidance and the Digitalisation of Grid Code. Code Simplification & Rationalisation work will look at redrafting the Grid Code Operating Code No.2 (OC2) section as a trial and develop an updated replacement for OC2 achieving the same objectives but in a simpler way without unnecessary detail or legalese and removing outdated requirements.	dWSTC webpage	box.WholeSystemCode@nationalgrideso.com	October 2023		
Grid Code (CUSC for fax instructions)	The Balancing Programme was established to develop the balancing capabilities that the Electricity National Control Centre needs to deliver reliable and secure system operation, facilitate competition everywhere and meet the ESO's ambition for net-zero carbon operability. The following elements are expected to start to land from January BSC Issues Group (relating to Optimisers giving instruction recommendations); Storage and Batteries (MDV and MDP) and the use of Faxes to instruct.	Balancing Programme website		October 2023		
Grid Code	As Great Britain's (GB) power system moves towards net zero carbon operation, the number of Inverter-Based Resources (IBR) is expected to increase and the amount of synchronous generation in the grid to decline which will significantly change the characteristics of the GB network. These changes give rise to the potential control interactions between the devices across the network leading to risks of oscillations and inverter stability. Electromagnetic Transient (EMT) analysis is important for investigating the dynamics of converters, control interactions between the devices in the network, detecting system oscillations, commutation failure analysis, inverter stability analysis and identifying transient phenomena such as Transient Over Voltage (ToV). ESO is suggesting a Grid Code change that mandates generators to provide EMT models for their plants.		jay.ramachandran@nationalgrideso.com	September 2023		

Electricity System Restoration Standard

GCRP
GC0156 – Electrical Standards

August 2023

Current Status

- GC0156 was submitted to Ofgem for determination on 24 July 2023
- GC0148 has been submitted to Ofgem for determination and a response is expected on 18 August 2023
- CMP398/CMP412 were submitted to Ofgem for determination on 11 July 2023
- CM089/CM091 are subject to the Code Administrator Consultation which closes on 17 August 2023
- GSR032 is subject to a Code Administrator Consultation which closes on 29 August 2023

GC0156 – Related Documents

- System Defence Plan
 - System Restoration Plan
 - Test Plan
 - Control Telephony Standard
 - Communications Standard
 - Distribution Restoration Zone Control System (undergoing substantial overhaul)
-
- Under GC0148, a Governance Process was introduced for the System Defence Plan, System Restoration Plan and Test Plan similar to that adopted for the Relevant Electrical Standards
-
- The Control Telephony Standard, Communications Standard and Distribution Restoration Control System Standard are documents that fall under the Relevant Electrical Standards Procedure covered under the Grid Code General Conditions
-
- GC0156 is a joint GCRP/DCRP modification, and the Distribution Code is an associated document in this context.
-
- All the above documents were reviewed as part of Grid Code Modification GC0156

Request of Panel

- To review the documents on the previous slide in accordance with the provisions of the Grid Code General Conditions noting that GC0148 (whilst not approved at the time of writing) provides for a Governance Process for the System Defence Plan, System Restoration Plan and Test Plan



Any Other Business

Activities ahead of the next Panel Meeting

Grid Code Development Forum

06 September 2023

Modification Proposals to be submitted

13 September 2023

Papers Day

20 September 2023

Panel Meeting

28 September 2023
Teams Meeting

Close



Rob Marshall

Acting Independent Chair, Grid Code Review Panel