

Modification proposal:	Grid Code Review Panel GC0148: Implementation of EU Emergency and Restoration Code Phase II (GC0148)		
Decision:	The Authority ¹ directs ² that the proposed modification to the Grid Code Review Panel be made		
Target audience:	National Grid Electricity System Operator (NGESO), the Grid Code Review Panel, Grid Code users and other interested parties		
Date of publication:	18 August 2023	Implementation date:	Ten working days after Authority decision

Background

Commission Regulation (EU) 2017/2196 establishing a network code on electricity emergency and restoration³ (“the NCER Regulation”) contains a number of obligations on member states regarding electricity system restoration and defensive measures to prevent system failure. Following the United Kingdom’s withdrawal from the European Union, most of the requirements of the NCER Regulation were retained for the Great Britain (“GB”) synchronous area through Statutory Instrument (“SI”) 533 2019⁴. Currently, the Grid Code is not fully compliant with requirements of the NCER Regulation – notably implementation of Articles 15(5), 41, 42(1), 42(2), and 42(5). Implementation of these articles had an original deadline of 18 December 2022, however this deadline was removed in SI 533 2019.

The Electricity System Operator (“ESO”) sought to rectify this through GC0148 and we received the first Final Modification Report (“FMR”) for this modification on 12 October 2022. On 16 November 2022, the ESO contacted us with new information to notify us that aggregators may not be able to satisfy some of the requirements placed on them by the proposal. On receipt of this information, we determined that we could not approve a modification containing obligations which could not be complied with by all relevant parties and decided to send back the modification⁵.

Following send back, we received a second FMR on 5 June 2023, which resolved the issue noted in the send back from the first FMR and ensures all relevant parties can comply with the obligations imposed by GC0148.

The modification proposal

The modification aims to rectify the compliance issue by updating a number of sections of the Grid Code to be compliant with the relevant obligations set out in the NCER Regulation. The System Defence Plan and System Restoration Plan required by the NCER

¹ References to the “Authority”, “Ofgem”, “we” and “our” are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

² This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

³ The NCER is accessible here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2196&from=EN>

⁴ SI “The Electricity Network Codes and Guidelines (System Operation and Connection) (Amendment etc.) (EU Exit) Regulations 2019” 533 2019 is accessible here: <https://www.legislation.gov.uk/ukSI/2019/533/contents>. All future references to the NCER Regulation in this document are as amended by Statutory Instrument 533 2019.

⁵ Our decision to send back the original GC0148 FMR is accessible here: <https://www.nationalgrideso.com/document/275096/download>

Regulation were also updated to align with the proposed changes. Alongside the submission of the second FMR by the ESO, detailed mapping was provided showing the compliance of the new and existing legal text with the requirements of the NCER Regulation.

The ESO (“the Proposer”) believes GC0148 (“the proposal”) will better facilitate Grid Code objectives (i)⁶, (ii)⁷, (iii)⁸, and (iv)⁹. For the first three objectives, this is because the proposal aims to provide greater robustness to the system through additional resilience and protection measures and provides additional measures to restore the system in the event of a partial or total shutdown. The Proposer also believes this modification gives participation opportunities to non-traditional defence and restoration service providers, therefore, providing greater competition in those markets. Finally, the Proposer believes this modification will better facilitate objective (iv) as the primary aim of this modification is to achieve compliance with the NCER Regulation.

As part of the modification process, two workgroup alternative grid code modifications (“WAGCM”) were raised. These alternative modifications have the exact same solution as the original, however they codify additional requirements regarding information exchange as detailed in Article 40 of the NCER Regulation.

WAGCM1 contains all the legal text of the original solution but additionally codifies the requirement for the ESO to notify regarding the GB transmission system state if the state is in the emergency, blackout, or restoration state to a number of actors noted in Article 40(2) of the NCER Regulation. Under this WAGCM, the ESO must also report any changes to the system state if the system is entering or leaving the emergency, blackout, or restoration system state. This reporting would be carried out using the Balancing Mechanism Reporting Service (“BMRS”)¹⁰.

WAGCM2 contains all the requirements of the original and WAGCM1 but extends the notification requirement to the alert and normal system states.

Grid Code Review Panel recommendation

The Grid Code Review Panel (“the Panel”) agreed that all three solutions were better than the baseline. WAGCM2 received unanimous support from the Panel, while the original and WAGCM1 were supported by majority.

For all three solutions, the Panel agreed, by majority, that the solution better facilitated Grid Code objectives (i), (iii), and (iv). The Panel were neutral, by majority, on all other Grid Code objectives. One panel member noted that it believed both WAGCMs were worse than the baseline for Grid Code objectives (iv) and (v).

⁶ to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission of electricity

⁷ to facilitate 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)

⁸ 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

⁹ 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.

¹⁰ The BMRS is the primary channel for providing operational data relating to the GB Electricity Balancing and Settlement arrangements. The BMRS is operated and maintained by Elexon, more information available at: <https://www.bmreports.com/bmrs/?q=help/about-us>

Overall, the Panel recommended that WAGCM1 was the best option.

Our decision

We have considered the issues raised by the modification proposal and in the Final Modification Report dated 5 June 2023. We have considered and taken into account the responses to the industry consultation on the modification proposal which are included in the Final Report¹¹. We have concluded that:

- implementation of the original solution of the proposal will better facilitate the achievement of the objectives of the Grid Code;¹² and
- approving the modification is consistent with the our principal objective and statutory duties.¹³

Reasons for our decision

We consider this modification proposal will better facilitate Grid Code objectives (i), (iii), and (iv) and has a neutral impact on the other objectives.

(i) to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission of electricity

We agree with the Panel that all three proposed solutions better facilitate Grid Code objective (i). This is because the proposed modification introduces a number of additional security measures contained within the NCER Regulation which will increase the robustness of the system and therefore reduce the risk of collapse. A more robust system, with additional measures in place to restore the system should it fail, better permits the development, maintenance and operation of the transmission system. We believe that all three proposed solutions better facilitate this objective equally.

(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

In agreement with the Panel, we consider that the original modification better facilitates this Grid Code objective because, as noted above, implementation of the outstanding requirements in the NCER Regulation will convey security benefits to the transmission system through increased robustness and additional measures to help restore the system in case of failure.

However, we disagree with the Panel that WAGCM1 and WAGCM2 better facilitate this objective. This is because we consider that the additional Grid Code obligations to report system state imposed on the system operator could result in market participants taking inefficient actions and, therefore, result in less efficient operation and security of the transmission system. By making this information public, market participants may want to respond to incidents on the transmission system, as signalled by the status. However, the ESO may not be able to provide specific reasons or context to this information and market participants could misinterpret the signal status and act in a way that would not be conducive to supporting the security and efficient operation of the system.

¹¹ Grid Code proposals, final reports and representations can be viewed on NGESO's website at: <https://www.nationalgrideso.com/industry-information/codes/grid-code/modifications>

¹² As set out in Standard Condition C14(1)(b) of the Electricity Transmission Licence, available at: <https://epr.ofgem.gov.uk/>

¹³ The Authority's statutory duties are wider than matters which the Grid Code Panel Review must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

This is especially pertinent in times of system failure and restoration, as efficient action from all defence and restoration services providers will be critical to restoring the system in a safe and timely manner. In times where defence or restoration service providers are called upon, market actors should be following the instructions and advice of the system operator. If signals are mixed, these service providers could potentially take inefficient actions at a time critical to system security. Any delays or inefficiencies in system defence and restoration could have large downstream impacts on the security of the system and could result in additional costs that will ultimately be borne by the consumer. As such, we do not believe that the additional transparency benefits provided by these WAGCMs, and noted by the Panel, counteract the potential risks to the system.

Nevertheless, we do note that under Article 40 of the NCER Regulation the ESO is obligated to inform certain users, in due time, regarding the state of the transmission system should it enter the emergency, restoration, or blackout state. However, we believe that codifying this requirement in the Grid Code in this manner removes the necessary flexibility the ESO requires to restore the system in as efficient a manner as possible.

This position reflects our position outlined in our rejection of modification GC0133: Timely informing of the GB NETS System State Condition¹⁴. Since our rejection of GC0133, we have seen no additional evidence that codifying the notification of system state would provide benefits that outweigh the potential risks to the security of the system.

(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.

We agree with the Panel that all three modifications better facilitate this Grid Code objective. Implementation of this proposal will rectify the defect of currently not being compliant with the relevant obligations of the NCER Regulation.

Decision notice

In accordance with Standard Condition C14 of the Transmission Licence, the Authority hereby directs that the original solution for Grid Code modification proposal Grid Code GC0148: 'Implementation of EU Emergency and Restoration Code Phase II' be made.

If you have any questions regarding the content of this decision letter, please contact Chris Statham (Christopher.Statham@ofgem.gov.uk).

Adam Gilham

System Operation Principal Policy Advisor - ESMS

Signed on behalf of the Authority and authorised for that purpose

¹⁴ Our decision to reject GC0133 is accessible here: <https://www.ofgem.gov.uk/sites/default/files/2022-02/GC0133%20Grid%20Code%20-%20Reject%20Decision.pdf>