

Workgroup Reports

GC0151: Grid Code Compliance with Fault Ride Through Requirements

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GC0151 Background

The ESO's Head of Networks wrote to stakeholders on 7th May 2021 about "Grid Code Compliance with Fault Ride Through Requirements". In that letter it set out three actions and; in the Appendix to that letter; an interim process that the ESO was proposing be applied by them on Users and Network Operators.

The Fault Ride Through process was subsequently presented by the ESO at the May 2021 Panel meeting where concerns and queries were raised by Panel Members in relation to this process.

In the view of the Proposer, the ESO have, inadvertently, given rise to concerns, by stakeholders, that if they were to follow this uncodified 'voluntary' ESO interim process this would:

- 1) Be placing Users (and in particular Generators) in breach of a relevant **legal requirement**;
- 2) Have a significant **commercial impact** on Users and consumers;
- 3) Have a significant impact on the safety and **security of the electricity system**;
- 4) Apply an **unreasonable timing** obligation on some stakeholders;
- 5) Apply a **discriminatory process** to some stakeholders; and
- 6) Not ensure and **enhance transparency** of the Fault Ride Through situation in Great Britain.

GC0151 Background

Therefore, a codified process is required to ensure legal compliance and certainty whilst maintaining security of supply and minimising the significant commercial impact on stakeholders as well as providing a reasonably timed, non-discriminatory process and enhanced transparency for stakeholders.

Implementation date: This modification is to be implemented one working day, following the Authority decision.

GC0151 Workgroup Consultation Responses Summary

- The Workgroup held the Workgroup Consultation between 13 July and 16 August 2021 and received 17 responses including 1 confidential response which has been anonymised with the approval of the respondent to be shared with the Workgroup. A summary and the full detail of the responses can be found in the Annexes.
- There was a popular view that the same operational restrictions should be applied to all Network operators i.e. NGET should be subject to the same restrictions. Also, workgroup members agreed with a respondent's suggestion that additional modelling by the ESO that would provide a risk based assessment given prevailing conditions at the time and the "strength" of a particular part of the network will be useful in identifying constraint volume.
- Most respondents disagreed with the proposed ESO's ability to constrain a User over suspected of non FRT compliance. Respondents that agreed to such a constraint by the ESO did so with a caveat that if the ESO must do so they must hold sufficient evidence and where a User is proven innocent and had turned off at the ESO's request, the User must be duly compensated. The SQSS covers aspects of how the ESO should manage constraints in situations but it does not explicitly cover FRT failures. Hence SQSS Panel should be notified to consider examining FRT issues.
- With regards to whether the methodology should apply differently to projects in receipt of an ION or a FON, majority of Workgroup members were not in support. The ESO would make no distinction between plant suspected of failing to ride through a fault dependent on their ION/FON status claiming that the suspected failure will have the same system impact. Most Workgroup members disagreed with this ION/FON and that the treatment of some Users is different because HVDC and interconnectors have different licence requirements. The Proposer agreed to treat FON and ION the same and supported amending the legal text to add "network operator" where "User" is stated in relation to FRT.

GC0151 Workgroup Consultation Responses Summary

- Largest Infeed Loss information is already published via the ESO data portal and should continue to be published in the most easily accessible and user-friendly format. The ESO has no objection to this requirement being codified. Voltage Wave Form will be best presented in most basic format Excel/csv and shared via the ESO data portal. Noting that this is the only format the ESO currently accept. Also, this is cost effective for Users as they will not need to use a costly proprietary software to access the data. There was a popular view that codifying the required format will be limiting although a respondent expressed that it should be clearly stated either in the Grid Code, or in a separate Guidance Note on Voltage wave form data as high resolution milliseconds data prior to, and directly after fault
- For security reasons there was an agreement that commercially sensitive information or any other sensitive personal data should not be disclosed in the lessons learnt report. The onus to ensure that any manufacturer details that could cause breach of confidentiality needs to be removed by the party sharing information. The ESO will not carry this responsibility. All respondents agreed that ESO should share information on faults. The ESO also is in support as set out in their tabled Alternative
- Generators operational history may be considered when deciding the constraint level however some respondents expressed that other factors such as root cause of incident, plant details etc. should also be considered along with this, history should not be the only deciding factor.

GC0151 Workgroup Alternative CUSC Modifications

4 Workgroup Alternative Grid Code Modifications were brought forward by the Workgroup for GC0151.

WAGCM 1 - This alternative submitted by the ESO differs from the original in the process described following a suspected FRT failure. It maintains the right of the ESO to manage the system by seeking to agree immediate restrictions with users and hence in the ESO's view allows a better and more immediate management of system risk and compliance.

WAGCM 2 - This proposed alternative (Drax stand alone alternative) solution clarifies the existing current fault ride text in the Grid Code and removes various discrepancies in the legal text which Generators cannot achieve. If these issues are not fixed then either the Original Proposal or ESO Alternative were to be introduced then technically Users would have to take action as there are currently non-compliances which could result in users being constrained.

WAGCM 3 - This proposed alternative solution combines the legal text changes of the Original and WAGCM2 (Drax stand-alone alternative).

WAGCM 4 - This proposed alternative solution combines the legal text changes of the WAGCM1 (ESO Alternative) and WAGCM2 (Drax stand alone alternative)

GC0151 Workgroup Vote

The workgroup met on 27 August 2021 to agree that the Terms of Reference had been met and conduct the workgroup vote.

GC0151 - Assessment of the Original and WAGCM1 to WAGCM4 vs Baseline

The Workgroup concluded by split vote that the Original, WAGCM1 and WAGCM3 better facilitated the Applicable Objectives than the Baseline.

11 Workgroup Members were eligible and present at the workgroup meeting to conduct the vote.

Option	Number of voters that voted this option is best
Original	3
WAGCM1	3
WAGCM2	0
WAGCM3	3
WAGCM4	1
Baseline	1

CMP368 & 369 Terms of Reference

- The Workgroup conclude that they have met their Terms of Reference and the references can be located below:

Workgroup Term of Reference	Location in Workgroup Report (to be completed at Workgroup Report stage)
a) Implementation and costs;	In the workgroup report – p.33
b) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text; and	Annex 13
c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders <u>have the opportunity to be represented in the Workgroup</u> . Demonstrate what has been done to cover this clearly in the report	Completed during nominations
d) Consider EBR implications	No implications on this modification as agreed by the Workgroup

CMP368 & 369 Terms of Reference

e) Consider if a requirement on the ESO to provide records of all faults of equipment including voltage waveforms	In the Workgroup Report – p.27
f) Consider if a requirement on the ESO to provide live 'largest infeed loss' information to be made publicly available	It is currently publicly available and has also been added to the Workgroup Report. It has also been codified in the Legal Text
g) Consider if a requirement on the ESO to share any 'lessons learned' including information received from users or DNOs	In the Workgroup Report – p.27 and in each of the solutions (Original and ESO Alternative).
h) Consider if a clear process to be followed after a potential FRT failure to be set out in the Grid Code	Has been considered in the solutions and legal text.
i) Consider if the existing disputes process is acceptable in these circumstances in terms of Fault Ride Through issue	In the Workgroup Report. It has been left out of the Legal Text as the process is to contact the Authority where there is a dispute which is an existing process already in place.
j) Review the existing Fault Ride Through and voltage requirements and clarify where required	This is in WAGCM2, WAGCM3 & WAGCM4.

GC0151 Timeline

Milestone	Date
Code Administrator Consultation	09 September 2021 – 23 September 2021
Draft Final Modification Report (DFMR) issued to Panel (Special Panel)	27 September 2021
Panel undertake DFMR recommendation vote (Special Panel)	05 October 2021
Final Modification Report issued to Panel to check votes recorded correctly (1 working day)	06 October 2021
Final Modification Report issued to Ofgem	07 October 2021
Ofgem decision	TBC
Implementation Date	One working day after Authority Decision

GC0151- the asks of Panel

- **AGREE** that the Workgroup have met their Terms of Reference
- **AGREE** that this Modification can proceed to Code Administrator Consultation
- **NOTE** that this Modification does not impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Grid Code
- **NOTE** the ongoing timeline