

Public

# GC0155

Workgroup 21, 25 March 2025

Online Meeting via Teams

# WELCOME



# Meeting Recording

## Public Expectations of a Workgroup Member

Contribute to the discussion

Be respectful of each other's opinions

Language and Conduct to be consistent with the values of equality and diversity

Do not share commercially sensitive information

Be prepared - Review Papers and Reports ahead of meetings

Complete actions in a timely manner

Keep to agreed scope

Email communications to/cc'ing the .box email

## Your Roles

Help refine/develop the solution(s)

Bring forward alternatives as early as possible

Vote on whether or not to proceed with requests for Alternatives

Vote on whether the solution(s) better facilitate the Code Objectives

# Agenda

| Topics to be discussed   | Lead     |
|--|----------|
| Welcome  | Chair    |
| Objectives and Timeline <ul style="list-style-type: none"><li>Action Log</li></ul> | Chair    |
| Update on GC0155/GC0178  | Proposer |
| Any Other Business   | Chair    |
| Next Steps   | Chair    |

# Objectives and Timeline

Teri Puddefoot – ESO Code Administrator



# Action log

| Action number | WG raised | Owner | Action   | Comment   | Due by | Status |
|---------------|-----------|-------|--|---|--------|--------|
| 45            | WG10      | Ofgem | Ofgem Check with Legal if CRM should be put in place if applying retrospectively.                        | Chair to chase email.   | WG20   | Open   |
| 49            | WG12      | All   | Consider TOV graph, what palatable limits might be.  | Requires further elaboration.   | WG20   | Open   |
| 61            | WG15      | All   | Workgroup members to provide feedback on why BCA doesn't work and how they feel they can better comply.  | To be provided during WG discussions and documented within the WG consultation document.  | WG20   | Open   |
| 65            | WG16      | All   | Provide challenge and provide feedback on risks re Operation During Temporary Overvoltages section.      | To be provided during WG discussions and documented within the WG consultation document. Include how the system is currently managed. WG need more data and when TOV occur and how this and Frequency is managed. | WG20   | Open   |
| 66            | WG16      | All   | Provide feedback on the Issues with the current requirements and validate that these points are correct. | To be provided during WG discussions and documented within the WG consultation document.  | WG20   | Open   |

# Action log

| Action number | WG raised | Owner | Action   | Comment  | Due by | Status |
|---------------|-----------|-------|--|--|--------|--------|
| 67            | WG18      | BA/AP | Consider the technical feasibility of different magnitudes and the overall impact this would have on the stability of the system.  | Ongoing discussions and considerations for consultant review.  | WG20   | Open   |
| 68            | WG18      | All   | Have further discussions with manufacturers with everyone present or obtain written documents from them to understand if TGN288/ RFG-2 figures can be met or if other levels need to be considered. Also carry out some case studies on specific plant to understand how the solution may be implemented in reality. | BA is currently conversing with a generator on conceptual ideas with further conversations to be arranged. | WG20   | Open   |
| 70            | WG19      | BA    | Include worked examples in the consultation document.  |  | WG20   | Open   |




# Update on GC0155/GC0178

Teri Puddefoot – Chair

Bieshoy Awad – Proposer

# Terms of Reference – GC0155

| Workgroup Term of Reference  | Location in Workgroup Report (to be completed at Workgroup Report stage)              |
|--|---|
| a) Implementation and costs;   |   |
| 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   |   |
| c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup. Demonstrate what has been done to cover this clearly in the report  |   |
| d) Consider EBR implications   |   |
| <p>e) Changes and clarifications to the existing Grid Code Fault Ride Through (FRT) requirements specifically but not limited to consideration of the following areas:</p> <ul style="list-style-type: none"> <li>i. Clarify instances where User plant is required to trip in order to clear transmission system faults</li> <li>ii. Amending requirements for generating maximum reactive current during faults where these may be unachievable for some generators</li> <li>iii. Amending post-fault active power requirements to consider whether generators at low load may have greater levels of oscillation than permitted</li> <li>iv. To consider clarifying and or defining requirements for over-voltage during a fault</li> </ul> |   |
| f) Consider and address any cross code impacts on other codes especially Distribution Code (e.g. G99 requirements)   |  |

# Timeline update for GC0155

|                   | Workgroup Report issued to Panel | DFMR issued to Panel | FMR issued to Ofgem | Decision Date | Implementation Date |
|-------------------|----------------------------------|----------------------|---------------------|---------------|---------------------|
| Previous timeline | 20 November 2024                 | 19 February 2025     | 12 March 2025       | TBC           | TBC                 |
| New timeline      | 17 September 2025                | 03 December 2025     | 22 December 2025    | TBC           | TBC                 |

- Workgroup 22 – 24 April 2025
- Workgroup 23 – 14 May 2025
- Workgroup Consultation – 04 June to 25 June

# GC0178 Temporary Overvoltage

## Issue:

The Grid Code does not include specific limits on temporary overvoltage and it does not explicitly specify requirements on how generation should respond during a temporary overvoltage event.

## Solution:

Our proposal is to:

- Introduce a limit, both in terms of magnitude and duration, on temporary overvoltage following secured events.
  - This limit would need to be maintained by TOs in design timescales and by NESO in operational timescales.
- Clarify the requirements on how plant needs to perform during temporary overvoltage:
  - Reactive support
  - Ride through
  - Any other considerations
- Ensure the requirements apply to all generation plant, including what is already connected, but provide a mechanism to minimise, or delay, the impact on existing generation fleet.
- Consider how compliance with temporary overvoltage requirements applicable to generation plant would be assessed.



# GC0178 Temporary Overvoltage

## Engagement:

- Originally, temporary overvoltage was being considered as part of GC0155: Fault Ride Through.
  - It was felt that the solution for temporary overvoltage requirements was moving beyond the initial intent of GC0155 and slowing down the progress of this modification.
  - It was agreed at Grid Code Review Panel on 27 February 2025 to split temporary overvoltage into a separate modification.
  - As such a lot of engagement has already been had through GC0155 Workgroups, and the starting point of the solution will be the work to date from this modification.
  - GC0155 Workgroup members will be asked to join this Workgroup with additional Workgroup members from other interested industry parties.

## Governance route:

- We believe the Standard Governance route to be appropriate for this modification:
  - The proposal has an impact on NESO, Generators, and TOs and needs to be refined with inputs from all affected parties.
  - Impact assessment and cost benefit analysis need to be informed by the industry.
  - The standard governance route is therefore appropriate to ensure the solution to this issue is properly thought out and assessed by industry.

# Terms of Reference – GC0178

| Workgroup Term of Reference  | Location in Workgroup Report (to be completed at Workgroup Report stage) |
|--|--|
| a) Implementation and costs;   |  |
| b) Review and develop draft legal text;  |  |
| c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup. Demonstrate what has been done to cover this clearly in the report; |  |
| d) Consider implications to sections linked to the Regulated Sections of the Grid Code;  |  |
| e) Define appropriate limits for temporary overvoltage, both in terms of magnitude and duration, to be guaranteed by design and complied with in operational timescales;   |  |
| f) Clarify the requirements on how plant need to perform during temporary overvoltage in terms of reactive support, ride through, and otherwise;   |  |
| g) Consider how compliance with temporary overvoltage requirements applicable to generation plant would be assessed;   |  |
| h) Where possible, ensure the proposal does not require unnecessary modifications to existing User plant.  |  |

# GC0178 Proposed Timeline

| Milestone   | Date  | Milestone   | Date                                      |
|---|---|---|---|
| Modification presented to Panel                                     | 27 March 2025   | Code Administrator Consultation   | 09 November 2026 to 09 December 2026      |
| Workgroup Nominations (20 business Days)                            | 01 April 2025 to 01 May 2025  | Draft Final Modification Report (DFMR) issued to Panel (5 business days)    | 20 January 2027                           |
| Workgroups 1-8  | 13 May 2025<br>25 June 2025<br>13 August 2025<br>23 September 2025<br>06 November 2025<br>15 December 2025<br>04 February 2026<br>18 March 2026 | Panel undertake DFMR recommendation vote                                    | 28 January 2027                           |
| Workgroup Consultation (20 business days)                           | 30 March 2026 to 29 April 2026  | Final Modification Report issued to Panel to check votes recorded correctly | 01 February 2027 to 08 February 2027      |
| Workgroups 9-12   | 19 May 2026<br>01 July 2026<br>12 August 2026<br>23 September 2026  | Final Modification Report issued to Ofgem                                   | 09 February 2027                          |
| Workgroup report issued to Panel (5 business days)                  | 21 October 2026   | Ofgem decision  | TBC                                       |
| Panel sign off that Workgroup Report has met its Terms of Reference | 29 October 2026   | Implementation Date   | 10 Business Days after Authority Decision |

# Any Other Business

Teri Puddefoot – NESO Code  
Administrator



# Next Steps

Teri Puddefoot – NESO Code Administrator