

GC0155 Clarification of Fault Ride Through Technical Requirements

25 July 2023

Online Meeting via Teams

WELCOME



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

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

Members / Alternates & Observers

Role	Name	Representing
Chair	Milly Lewis	Code Administrator (ESO)
Technical Secretary	Teri Puddefoot	Code Administrator (ESO)
Proposer	Terry Baldwin	NGESO
Workgroup Member	Alan Mason	Oceanwinds
Workgroup Member	Alan Creighton	Northern Powergrid
Workgroup Member	Alastair Frew	Drax Power Station
Workgroup Member	Andrew Vaudin	EDF
Workgroup Member	Bieshoj Awad	NGESO
Observer	David Griffiths	RWE Generation UK, RWE Renewables
Observer	Fiona Williams	NGESO
Workgroup Member	Forooz Ghassemi	NGET
Workgroup Member	Frank Martin	Siemens
Workgroup Member	Fraser Norris	SSE
Workgroup Member	Garth Graham	SSE Generation
Workgroup Member	Isaac Gutierrez	Scottish Power
Workgroup Member	John Fradley	ESO
Observer	Mike Kay	Independent
Workgroup Member	Nicola Barberis Negra	Orsted
Observer	Owen Curran	Siemens
Workgroup Member	Priyanka Mohapatra	Scottish Power
Workgroup Member	Ryan Tumilty	SSE
Workgroup Member	Sean Gauton	Uniper Energy
Workgroup Member	Tim Ellingham	RWE Generation UK, RWE Renewables
Workgroup Member (Alternate)	Julie Richmond	Scottish Power
Workgroup Member (Alternate)	Martin Aten	Uniper
Workgroup Member (Alternate)	Sridhar Sahukari	Orsted
Workgroup Member (Alternate)	Tobias Siepker	Siemens
Authority Representative	Shilen Shah	Ofgem



Actions, Timeline and Terms of Reference

Milly Lewis –ESO Code Administrator

Actions

Action number	Workgroup Raised	Owner	Action	Due by	Status
29	WG7	SS/BC	To have a conversation offline on understand GEP parameters.	WG8	Open
30	WG7	CB	To share with the Workgroup to network design equipment requirements from SPN	WG9	Workgroup agreed to close in Workgroup 9
35	WG7	BA	To check with the compliance team what checks they do in a FRT scenario	WG9	Workgroup agreed to close in Workgroup 9
36	WG7	JF	To provide where the document for ENTSO-E and clause has come from	WG8	Workgroup agreed to close in Workgroup 9
37	WG8	JF	Arrange meeting with developers and manufacturers	WG9	Workgroup agreed to close in Workgroup 9
38	WG8	BA	Discuss WG3 Legal Text draft with AF	WG9	Workgroup agreed to close in Workgroup 9
39	WG8	BA	Discuss <u>CC.6.1.11</u> with TOs and manufactures and feedback to WG with strawman	WG9	Open
40	WG8	ALL	Provide feedback on <u>CC.6.3.15.1</u> on draft legal text	WG9	Workgroup agreed to close in Workgroup 9
41	WG9	BA	WG member questioned the defined terms and if voltage control was defined. Please consider	WG10	Propose to close as included in Original legal text
42	WG9	PM	Update WAGM and send to ML	WG10	Propose to close as included Workgroup 10 discussion
43	WG10	ML	Contact Ofgem Rep to gain Legal view	WG11	Open
44	WG10	ML	Query with ESO if this is STC or GC issue	WG11	Open
45	WG10	BA	Check with Legal if CRM should be put in place if applying retrospectively	WG11	Open

Objectives Timeline

Milestone	Date	Milestone	Date
Proposal Presented to Panel	16 December 2021	Workgroup 12 – Post Workgroup Consultation) – Review / assess Workgroup consultation responses and Workgroup Report	18 September 2023
Workgroup 1 – Understand / discuss proposal and solution, note the scope and identify any possible alternative solutions, agree timeline and review terms of reference, agree next steps.	10 February 2022	Workgroup 13 - Review Workgroup Report and legal text	16 October 2023
Workgroup 2 – Refresher: review and agree timeline and Terms of Reference, Review/Develop solution(s) and legal text, identify/assess possible alternatives.	07 June 2022	Workgroup 14 - Finalise solution(s) and legal text, agree that Terms of Reference have been met, Review Workgroup Report and hold Workgroup Vote	06 November 2023
Workgroup 3 – Develop Solution(s), review of legal text and alternatives	05 July 2022	Workgroup Report issued to Panel	15 November 2023
Workgroup 4 – ESO to present plan and next steps re Definition of Overvoltage Requirements following a Fault, agree on the proposed plan	25 July 2022	Panel sign off that Workgroup Report has met its Terms of Reference	23 November 2023
Workgroup 5 – Review / assess on-going work on Overvoltage requirements	23 August 2022	Code Administrator Consultation	28 November 2023 – 02 January 2024
Workgroup 6 – Review / assess ongoing work on Overvoltage requirements; consider HVRT findings	07 September 2022	Draft Final Modification Report (DFMR) issued to Panel	17 January 2024
Workgroup 7 – Review of ESO findings, look through of draft legal text, consideration of alternatives	19 January 2023	Panel undertake DFMR recommendation vote	25 January 2024
Workgroup 8 - Review draft legal text and any ESO updates,	5 April 2023	Final Modification Report issued to Panel to check votes recorded correctly (5 working days)	30 January 2024 – 06 February 2024
Workgroup 9 – Complete review of draft legal text and any ESO updates, consideration of alternatives	4 May 2023	Final Modification Report issued to Ofgem	07 February 2024
Workgroup 10 – Finalise draft legal text for WAGCM1, draft consultation overview	8 June 2023	Ofgem decision	TBC
Workgroup 11 Finalise draft consultation and draft consultation questions	25 July 2023	Implementation Date	10 working days after Ofgem decision
Workgroup Consultation (15 Working Days)	07 August 2023 – 29 August 2023		



Alternate Request and Alternative Vote

Terry Baldwin

- The purpose of GC0155 is to provide clarification of technical fault ride through requirements. This included a reference to consider clarifying and or defining requirements for over voltage during a fault.
- The alternative solution proposed is the original GC0155 solution which contains the fault ride through clarifications identified within the Terms of reference minus the Temporary Overvoltage requirements which are recommended to be resolved via its own new modification.
- Overvoltage has been thoroughly discussed through the workgroup and as such has been considered which meets the terms of reference.
- This alternate proposal will allow for the rest of the clarifications to be implemented should either of the overvoltage proposals not be approved.



Review Draft Workgroup Consultation

Milly Lewis

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Any Other Business

Milly Lewis –ESO Code Administrator



Next Steps

Milly Lewis –ESO Code Administrator