ESO

Code Administrator Meeting Summary

Meeting name: GC0155 Clarification of Fault Ride Through Technical Requirements - Workgroup Meeting 10

Date: 08/06/2023

Contact Details

Chair: Milly Lewis, National Grid ESO Milly.Lewis@nationalgrideso.com

Proposer: Terry Baldwin, National Grid ESO Terry.Baldwin@nationalgrideso.com

Key areas of discussion

The Chair outlined the objectives of the workgroup.

Review of Actions Log

The Workgroup reviewed open actions and discussed the following:

- The Workgroup agreed that action 32 should be closed
- BA confirmed that action 39 is ongoing and would be discussed as part of the Workgroup
- It was agreed that Action 40 should remain open as more feedback is required

Review Timeline

- The Workgroup initially agreed that the timeline should remain as it is but were content to add further dates if required. Following further discussion during the meeting it was agreed that a further two workgroups were required before sending the Workgroup Report to Panel.

WAGCM1 Draft Legal Text

The Workgroup began discussions by going over questions circulated prior to the meeting.

- A workgroup member noted the NGET Internal consultation was not the view of some workgroup members but that there was no objection to this providing that there was no obligation placed upon TOs to guarantee a certain voltage performance. It was agreed that from a Developers point of view this was a fair point and noted that the requirement was to agree what the fault ride through was to be moving forwards (and not retrospectively). The proposer did not agree with this stance and felt that the consequences of not guaranteeing voltage performance may be an issue.
- Some workgroup members noted that there may be cost to consumers to not guarantee voltage performance and this would need to be explicitly stated in the Grid Code.
- The Proposer expressed concerns over WAGCM1.
- A workgroup member noted that there was nothing in the Grid Code for high voltage, only dips and it was felt to be unfair for developers to design something for high voltage capability when this was not required. It was felt that it would be useful to have Ofgem legal opinion on this. (**Action**: ML to contact the Ofgem Representative to get a view on this).
- It was questioned if ECC could be captured in both the Original and WAGCM1.

- The Chair reiterated the Modification Process with emphasis on raising alternatives, due to some queries and uncertainties within the workgroup.
- Workgroup members questioned STC requirements. ML agreed to look into this further (**Action**: ML to query this with ESO)
- The Proposer stated that turbine capabilities are not the only thing to consider and that thought should be given to the network. This may mean that the requirement to ride through may differ at entry point. A workgroup member noted that a present there was not a requirement In the Grid Code for this and that a turbines control system may not be capable of achieving the requested response.
- A workgroup member queried if a workgroup consultation question could be added to ask manufacturers what the ride through capabilities are of their plant. Others felt that manufactures build plant on requirements rather than due to capabilities.
- It was felt that to much emphasis has been placed on the retrospective element of this modification but should have been looked at going forwards from a certain date as this would be of more use to industry.

Review of Original

The Chair advised the workgroup that the proposer would like to run through the intent of the Original and how this is translated into the Draft Legal Text.

- The proposer confirmed that the requirement was not to have infinite capability but the ability to ride through whatever was happening to the system.
- A workgroup member felt that the Grid Code gave the minimum requirement and that users can tolerate more. The proposer felt that the minimum requirement was to ride through the fault rather then the voltage.
- A workgroup member was unhappy with the graph shown as it was created around under voltage and not over voltage. The proposer was happy to remove the graph if required but there is an indication that there will be over voltages. Another member expressed concern over showing the high voltage as infinitely high.
- The proposer highlighted that there are moving goal posts to the solution, making it difficult, but this needed to be addressed. The proposer noted that dealing with existing plant must also be addressed and that some plant may not be able to meet the requirement and rather than make them non-compliant the workgroup should look at how they can discharge their obligations. Instead, if they are unable to meet the 'worse-case cap' then there should not be a requirement to ride through it. A target should be given that allows the maximum plant design to improve capability.
- A workgroup member questioned the legality of introducing a new requirement retrospectively without introducing a Cost Recovery Mechanism (CRM) and asked for clarification. (**Action**: BA to check with Legal if a CRM should be put in place). Workgroup highlighted other modifications that have retrospectivity.
- The proposer highlighted the need to agree limits as part of the solution. As part of the solution the proposer suggested using current limits as these are acknowledged in England and Wales. It was questioned if this was acceptable as these were not ride through requirements.
- The proposer then discussed the second part of the requirement, which is what happens during TOV. This includes how to regulate the voltage. A workgroup member stated that it is not possible to regulate voltage. The proposers suggested instead to progressively absorb reactive power in order to reduce the magnitude of voltage. It was agreed that the wording would be reviewed.

Overview on alternate being considered

BA gave an overview of an alternative that will be bought to the next workgroup by ESO:

- This would split the work into two proposals - the first to address through the current workgroup and the second through a separate workgroup.
- The first workgroup will focus on the solution and revert to the original proposal
- The second will look at the details of the requirement relating to high voltage and TOV in the Grid Code

Next Steps

Workgroup 11 to take place on 25 July 2023

An additional Workgroup will be added to the timeline mid-August.

Actions

For the full action log, click here.

Action number	Workgroup Raised	Owner	Action	Due by	Status
27	WG7	BJO	To share with the Workgroup an email sent from FW	WG8	Closed
28	WG7	AF/BA	To have a conversation offline re documents that are within the GC appendix	WG8	Closed
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	Open
31	WG7	AM	To provide evidence of problem with low level injection requirements	WG8	Closed
32	WG7	BA	To check that whether the evidence from OEMs can be shared with the Workgroup	ASAP	Closed
33	WG7	BA	Comparison of international standards for HVRT	WG8	Closed
34	WG7	BA/TB	Provide a strawman/draft legal text on the requirements	WG8	Closed
35	WG7	BA	To check with the compliance team what checks they do in a FRT scenario	WG9	Open
36	WG7	JF	To provide where the document for ENTSO-E and clause has come from	WG8	Open
37	WG8	JF	Arrange meeting with developers and manufacturers	WG9	Closed
38	WG8	BA	Discuss WG3 Legal Text draft with AF	WG9	Open
39	WG8	BA	Discuss CC.6.1.11 with TOs and manufactures and feedback to WG with strawman	WG9	Open
40	WG8	ALL	Provide feedback on CC.6.3.15.1 on draft legal text	WG9	Open
41	WG9	BA	WG member questioned the defined terms and if voltage control was defined. Please consider	WG10	Open
42	WG9	PM	Update WAGM and send to ML	WG10	Open
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

Attendees

Name	Initial	Company	Role
Milly Lewis	ML	National Grid ESO	Chair
Terri Puddefoot	TP	National Grid ESO	Technical secretary
Bisheoy Awad	BA	National Grid ESO	Workgroup member
Alan Mason	AM	Oceanwinds	Workgroup member
Alastair Frew	AF	Drax	Workgroup member
Forooz Ghassemi	FG	NGET	Workgroup member
Fiona Williams	FW	National Grid ESO	
Fraser Norris	FN	SSE	Workgroup member

Isaac Gutierrez	IG	Scottish Power	Workgroup member
John Fradley	JF	ESO	Workgroup member
Martin Aten	MA	Uniper	Workgroup member
Nicola Barberis Negra	NBN	Orsted	Workgroup member
Ryan Tumilty	RT	SSE	Workgroup member
Sridhar Sahukari	SS	Orsted	
Tim Ellingham	TE	RWE	Workgroup member
Owen Curran	OC	Siemens	Observer
Cornel Brozio	CB	SP Energy Networks	Observer