Code Administrator Consultation Response Proforma

GC0141: Compliance Processes and Modelling amendments following 9th August Power Disruption

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses to grid.code@nationalgrideso.com by **5pm 08 July 2022**. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration.

If you have any queries on the content of this consultation, please contact Jennifer Groome Jennifer.groome@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details
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I wish my response to be:
(Please mark the relevant box) ☒Non-Confidential ☐Confidential

Note: A confidential response will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

For reference the Applicable Grid Code Objectives are:

a) *To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity*
b) *Facilitating effective 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);*
c) *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;*
d) *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; and*
e) *To promote efficiency in the implementation and administration of the Grid Code arrangements*

Please express your views in the right-hand side of the table below, including your rationale.

Standard Code Administrator Consultation questions							
1	Do you believe that the Original Proposal and WAGCM1-14 better facilitates the Applicable Objectives?	Mark the Objectives which you believe each solution better facilitates:					
		Original	☒A	☒B	☒C	☒D	☒E
		WAGCM1	☐A	☐B	☐C	☐D	☐E
		WAGCM2	☐A	☐B	☐C	☐D	☐E
		WAGCM3	☒A	☒B	☒C	☒D	☒E
		WAGCM4	☐A	☐B	☐C	☐D	☐E
		WAGCM5	☐A	☐B	☐C	☐D	☐E
		WAGCM6	☐A	☐B	☐C	☐D	☐E
		WAGCM7	☐A	☐B	☐C	☐D	☐E
		WAGCM8	☐A	☐B	☐C	☐D	☐E
		WAGCM9	☒A	☒B	☒C	☒D	☒E
		WAGCM10	☐A	☐B	☐C	☐D	☐E
		WAGCM11	☐A	☐B	☐C	☐D	☐E
		WAGCM12	☐A	☐B	☐C	☐D	☐E
		WAGCM13	☐A	☐B	☐C	☐D	☐E
		WAGCM14	☐A	☐B	☐C	☐D	☐E
		Click or tap here to enter text.					
2	Do you support the proposed implementation approach?	☒Yes ☐No					
		We support the implementation approach for the Original Proposal, WACGM3 and WACGM09.					
3	Do you have any other comments?	Following the events of the 9th August 2019 major power disruption which was caused by generation losses and led to the interruption of electricity supplies to over one million customers, National Grid ESO raised a proposal for a number of changes to the Grid Code to support the BEIS/Ofgem actions identified in their reports into the incident in order to ensure the compliance and modelling processes for generation are more robust. In summary:					

		1. To improve the robustness of the modelling process – the proposal added requirements for Users to provide RMS and EMT models in the software used by the ESO/TO for dynamic simulations. This included scope, technical description, performance, validation, documentation and confidentiality. The proposal includes sharing modelling information with other relevant Users (e.g. HVDC Converter stations, large converter-based wind farms) to allow interaction studies to be completed prior to connection. 2. To improve Generator understanding of the Fault Ride Through obligations, the description of Fault Ride Through requirement is modified. 3. To improve the robustness of large wind farms during the commissioning process the scope of Fault Ride Through simulations carried out prior to connection for large/complex wind farms and HVDC is enhanced to include alternative running arrangements. 4. To improve the robustness of lifetime compliance of Users with older plant, a new section “Compliance Repeat Plan” is proposed to be added within the Grid Code for Users to confirm compliance with their obligations to National Grid ESO every 5 years. 5. To address concerns raised by Ofgem that there is insufficient independent involvement in the compliance process, add in a requirement that all simulation reports are reviewed by an independent engineer or independent test body prior to submission to National Grid ESO. The proposal explains the scope and extent of the independent engineer’s responsibilities. We believe that the Original Proposal addresses these areas and will ensure compliance and modelling processes are more robust, providing customer value, and reducing the risk of power supply disruption to customers in the future. The structure of the alternative proposals is such that each is formed from a ‘menu’ of the various options and parts of an overall solution as considered by the workgroup.

		Whilst we believe that WAGCMs 3 & 9 also address the above points, there are concerns with regards to the robustness of sharing of modelling information and the criteria for requirement for an independent engineer review respectively which form part of these alternatives. The other alternatives do not address all of the issues or achieve efficient solutions for the following reasons: • WACGMs 1, 2, 4, 5, 6, 7, 8, 13 & 14 do not address the concerns in relation to ensuring that there is the potential for sufficient independent engineer involvement in the compliance process. • WACGMs 6 & 10 do not improve the robustness of the modelling process by defining a specification for RMS & EMT models, and the process of sharing modelling information in order for interaction studies to completed respectively. • WACGMs 2, 5, 6 & 10 do not address the necessary requirements in relation to improving understanding and removing any ambiguity in the requirements for Fault Ride Through, a key feature of the 9 Aug 2019 events • WACGMs 2 & 8 do not introduce the requirement for a “Compliance Repeat Plan” to ensure that there is a robust process for older plant to continue to assure their ability to meet Grid Code obligations to the ESO at specified intervals. • WACGMs 4 & 12 do not require an agreement for additional studies to be agreed for complex connections during the commissioning process in relation to enhanced Fault Ride Through simulations which is again an omission that is pertinent to the findings of the 9 Aug 2019 event. • WACGMs 2, 4, 5, 8, 11, 12, 13 & 14 do not fully address the issues in relation to potential torsional interaction for older plant. We therefore feel that the original plus WAGCMs 3 & 9 can be assessed as positive against the Grid Code objectives, whilst the original is the ESO’s preference for the reasons stated above. The other alternatives do not

		fully address the GC0141 defect or the findings of the 9 Aug 2019 event and therefore do not fulfil the Grid Code objectives.