

Workgroup 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 on **30 March 2021**. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration by the Workgroup.

If you have any queries on the content of this consultation, please contact Joseph Henry Joseph.henry@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details
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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 regarding the Workgroup Consultation in the right-hand side of the table below, including your rationale.

Standard Workgroup Consultation questions

1	Do you believe that the GC0141 Original Proposal better facilitates the Applicable Objectives?	Please see the comments on the Independent Engineer, System Studies and EMT Model requirements
2	Do you support the proposed implementation approach?	Please see the comments below
3	Do you have any other comments?	Please see the comments below
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	No. Please see the comments below
Modification Specific Workgroup Consultation questions		
5	What should the Independent Engineer's deliverables be with respect to the outcome of the compliance process?	Independent Engineer concept will add to the complexity, cost and slowing down the process and ambiguity in accountability without bringing more benefit to the compliance process. The User has responsibility to meet the technical requirements and ESO to do compliance assessment. Independent Engineer will not add more nor bring any further clarifications to the process. ESO should have resources to carry out these assessments.
6	Should there be specific requirements on the retention of data for the User and/or the ESO?	A sharable model both RMS and EMT model is required to be submitted to ESO. The User is responsible to maintain the submitted model and provide technical support in running and troubleshooting it throughout the life cycle of the equipment. This means if the version of the tool which model has been submitted in changes the User is required to provide updates and support any potential technical issue in utilising of the model. The ESO is required to maintain the most up to date models in GB system model.
7	Should the detailed design stage be more clearly identified within the Grid Code?	There should be a separate technical guidance document or technical standard which should be referenced in the Grid Code.
8	What stages of implementation would the industry believe are appropriate?	Click or tap here to enter text.

9	Should the ESO be required to undertake the responsibilities associated with an independent engineer? Please outline your rationale.	Yes, It will be more efficient if this role to be undertaken by the ESO. Independent Engineer concept will add to the complexity, cost and slowing down the process and ambiguity in accountability without bringing more benefit to the compliance process. The User has responsibility to meet the technical requirements and ESO to do compliance assessment. Independent Engineer will not add more nor bring any further clarifications to the process. ESO should have resources to carry out these assessments.
10	Should there be greater definition be given to “substantial modification” given that the self-certification process places the onerous on the User to make these decisions?	Yes, to provide clarity to the compliance process
11	Should there be a review of the effectiveness of GC0141 post implementation and after the industry has experience of implementing?	Yes, considering penetration of everyday emerging new technologies in the grid and transition to net zero operation, it is recommended that the GC0141 to be reviewed post implementation.
12	What are your thoughts on the workgroup’s discussions regarding compliance repeat plan? How would this work in regard to Independent Engineer Verification?	We agree there should be a compliance repeat plan to provide life time assurance of the compliance of the equipment connected to the NETS. Refer to our comments above on Independent Engineer.
13	Do you believe that screening processes should be applied ahead of detailed dynamic EMT simulation, and if so, do you believe data exchange should support that?	Yes, we think that this will bring efficiency to the process in order to reduce the scope of detailed study and data exchange should support that.

14	Do you agree that the roles and responsibilities associated with interaction studies should be detailed and clarified, and to what extent?	<p>Yes, we do believe that it is required to be clarified.</p> <p>Grid Code should provide high level definition of the roles and responsibilities but the details of the process should be defined in a separate technical guidance document or standard as mentioned above (see Section 7).</p>
15	Do you agree that improved definitions of the types of analysis and definitions suitable analysis environments ahead of the detailed design phase provides useful clarity and minimised project disruption in delivering the principles of this grid code change? Should these form part of legal text or made available with the modification as guidance that may be separately updated from time to time	<p>Yes, we believe that defining the type of analysis and study is helpful and need to be provided in high level in Grid Code but the detail of the studies should be provided in a separate guidance document or standard.</p>
16	Do you agree that clarifying roles and responsibility in the management of interaction studies assists more clearly defining the analysis needs of each party, minimising confusion, unnecessary overlap and cost in the design phase?	<p>Yes, Roles and responsibilities need to be clarified in Grid Code.</p>
17	Do you agree that small signal analysis supporting the screening of interaction cases should be clearly specified within this grid code change, to better focus the range	<p>This can be defined in detail in technical guidance document or standard.</p>

	of EMT studies being discussed, and within the context of existing SSTI and SSO analysis better inform assessment of risks and the need for detailed dynamic simulation which includes shaft data for SSTI?	
18	What is your view on the separation of the simplified RMS model and EMT model when it comes to confidentiality, distribution and the protection of IP?	<p>Yes, the requirements for these models should be separated.</p> <ol style="list-style-type: none"> 1. RMS model: The model need to be sharable between Users and it can be simplified but not fully encrypted. The level of encryption and technical requirements should be defined in Planning Code. 2. EMT model: This does not need to be open source. It can be encrypted as much as to allow it to be shared between Users and with agents working for ESO and TOs.
19	As it currently stands, what is your view on the process by which detailed manufacturer EMT-type models are exchanged for necessary studies as part of project delivery?	Currently these models cannot be exchanged which makes it impossible for the parties involved to fulfil their obligations with regards to Grid Code.
20	Are sections PCA.9.8 and PC.A.9.9 better suited to a guidance document and or should they be included, at least partly, within the legal text? Are there any specific concerns with respect to requirements set out within those sections?	<p>Yes, some of high level elements of the specifications should be defined in the legal text.</p> <p>Some of more detailed requirement can be specified in a separate document.</p>
21	In terms of the requirement for existing users to	In order to facilitate these studies these data should be provided.

	provide sub-synchronous torsional data for existing plant that may be provided, do you see any issues in regard to the provision of this data?	
22	Should responsibility for interoperability remain with the generator or the ESO, inclusive of interoperability studies such as control interactions and SSCI/SSTI studies? Please provide your reasoning.	<p>Please clarify “Interoperability” meaning?</p> <p>If it means “control interaction” which will be undertaken as part of connection process, then it is Users responsibility.</p> <p>If it means undertaking network wide dynamic studies to understand network performance, then that is the responsibility of ESO and/or TOs.</p> <p>In order to provide clarity, it is better to be clear and consistent with the terminology.</p> <p>SSCI needs to be changed to CI (control interaction) to cover all range of frequencies as the interaction can occur in all range of frequencies and it is not limited to sub fundamental frequencies. This modification need to apply in all documents to keep consistency.</p>