

Workgroup Consultation Response Proforma**GC0151: Fault Ride through process**

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 16 August 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 **Nisar Ahmed**, Nisar.Ahmed@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details
Respondent name:	Julian Werrett
Company name:	Vattenfall
Email address:	Julian.werrett@vattenfall.com
Phone number:	

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 GC0151 Original Proposal better facilitates the Applicable Grid Code Objectives?	Yes
2	Do you support the proposed implementation approach?	Yes
3	Do you have any other comments?	No
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	No
Specific GC0151 Workgroup Consultation questions		
5	Do you have any comments on the Process to be followed after a suspected fault ride through failure?	No
6	Do you have any comments on the required sharing by the ESO of largest infeed loss information?	Sharing by the ESO of largest infeed loss information supports users in understanding, or pre-calculating the frequency change that could occur. This information would also be helpful during the design stage of a project.
7	Do you have any comments on the sharing of user lessons learned information (including any information from Fault Data/Recorders)?	It is important that ESO shares lessons learned information which could help users to improve their FRT response and tune the settings of the generator. However the sharing of the user's transient fault recorder data can be sensitive as this may inadvertently indicate the WTG/HVDC control algorithms and functionality. We would normally keep such events internal and would not wish to share all the details of our own/contractors solution. If the ESO shared transmission network transient fault recorder data with users that would be very helpful and support our design process.

8	Do you have any comments on the sharing of information by the ESO on faults (with or without identified FRT issues)?	<p>The sharing of information by the ESO of historic fault information will improve the user's design process since it would give a better understanding of fault waveforms and possible effects on the user's equipment.</p> <p>As part of the ESO sharing of information, it would be very helpful for users to know the location and status of all ESO [and TO] fault recorders. Can the location and status of all ESO [and TO] fault recorders be published on an annual basis?</p>
9	The proposal sets out the time to investigate by the User et al. Do you believe this time is appropriate or not? Please provide your rationale	We believe that three months to investigate is appropriate.
10	The proposal sets out the MW threshold. Do you believe this is appropriate or not? Please provide your rationale	We believe that 100MW threshold is appropriate, and also note the working group efforts to define the limits based on ION, FON and LON.
11	The proposal sets out the level of the forced constraint. Do you believe this is appropriate or not? Please provide your rationale	We believe the level of forced constraint of 70% of TEC is appropriate.
12	Do you believe that the methodology should apply differently to projects in receipt of an ION or a FON?	We believe that more restrictions on the output for ION (for reduced TEC) is acceptable, when compared to FON (full TEC).
13	Should the ESO have the ability to constrain a User suspected of FRT	All the users shall be given enough time to investigate the constraint requirements. The users' investigations should be accompanied by voltage wave form data outlining why ESO suspect a user of FRT failure.

	failure ahead of further investigation?	
14	In respect of the voltage wave form data, should the Grid Code prescribe or not the format in which that data is to be provided? Please provide your rationale.	<p>The format of the voltage wave form data needs to be clearly stated either in the Grid Code, or in a separate Guidance Note. The voltage wave form data shall be provided as high resolution milliseconds data prior to, and directly after fault.</p> <p>The ESO information on faults will need to be presented in a usable spreadsheet format, and synchronised to a unique clock, and UTC / GPS timestamped.</p> <p>Note to ensure the reliability of the data issued, the ESO may need to check the functionality of all existing ESO/NGET fault recorders, and replace any existing outdated fault recorders. Specific financial authorisation from OFGEM / BEIS may be required for this work.</p>
15	In respect of the constraint limitation to be applied to affected parties, should this be set within a range or a fixed value? If so, what do you believe that to be. Please provide your rationale.	We believe it is simpler to apply the constraint of 70% of TEC to all users suspected of FRT failure, within the affected area.
16	Would you agree that a generator should continue to operate if there was a derogation required?	No comments
17	Do you believe that generators operational history should be taken into account when deciding upon the constraint level whilst an investigation is taking place?	We believe that the constraint of 70% of TEC should be applied to all users suspected of FRT failure, within the affected area.

18	Do you have any comments on possible Alternative from the ESO as included in the consultation?	No
19	Do you have any comments on the Strawman document on the FRT process?	No
Legal Text		