

Code Administrator Consultation Response Proforma**GC0163: GB Grid Forming (GBGF) - Removal of Virtual Impedance restriction**

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 **02 May 2024**. 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 Elana Byrne Elana.Byrne@nationalgrideso.com or grid.code@nationalgrideso.com.

Respondent details	Please enter your details	
Respondent name:	Antony Johnson	
Company name:	National Grid ESO	
Email address:	Antony.Johnson@nationalgrideso.com	
Phone number:	07966 734856	
Which best describes your organisation?	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input type="checkbox"/> Generator <input type="checkbox"/> Industry body <input type="checkbox"/> Interconnector	<input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input checked="" type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input type="checkbox"/> Other

I wish my response to be:

(Please mark the relevant box)

☒ **Non-Confidential** (this will be shared with industry and the Panel for further consideration)

☐ **Confidential** (this will be disclosed to the Authority in full but, unless specified, will not be shared with the Panel or the industry for further consideration)

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	Please provide your assessment for the proposed solution(s) against the Applicable Objectives?	<p>Mark the Objectives which you believe the proposed solution(s) better facilitates:</p> <p>Original <input checked="" type="checkbox"/>a) <input checked="" type="checkbox"/>b) <input checked="" type="checkbox"/>c) <input type="checkbox"/>d) <input type="checkbox"/>e)</p> <p>Yes – we support this modification. By removing the obligation to have a real impedance between the Internal Voltage Source of a Grid Forming Converter and the Grid Entry Point or User System Entry Point (if Embedded) we believe this provides greater flexibility and cost savings to developers and manufacturers.</p> <p>In this regard we believe this modification will provide greater efficiency which will deliver cost savings for end consumers, it will improve competition in providing flexibility for developers and it will help facilitate the volume of Grid Forming technology across GB which is an industry pre-requisite for promoting net zero.</p> <p>We believe this modification facilitates Grid Code objectives A, B and C.</p>
2	Do you have a preferred proposed solution?	<p><input checked="" type="checkbox"/>Original <input type="checkbox"/>Baseline <input type="checkbox"/>No preference</p> <p>We support the Original which we believe better supports the Grid Code objectives as outlined in our response to Question 1 above.</p>
3	Do you support the proposed implementation approach?	<p><input checked="" type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>We support the implementation approach.</p>
4	Do you have any other comments?	Yes – We believe a slight amendment should be made to the legal text. In the Glossary and Definitions in the

		definition of Internal Voltage Source, the comma should also be removed after the deleted words “ with only real physical values ...”
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