

Grid Code Administrator Consultation Response Proforma

GC0096: Energy Storage

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

Please send your responses by **5:00pm** on **18 November 2019** to grid.code@nationalgrideso.com. Please note that any responses received after the deadline or sent to a different email address may not be included within the Draft Final Modification Report to the Grid Code Review Panel.

These responses will be included within the Final Modification Report which is submitted to the Grid Code Review Panel.

Respondent:	<i>Antony Johnson</i> <i>Telephone:- 01926 655466</i> <i>E-Mail:- Antony.Johnson@nationalgrideso.com</i>
Company Name:	<i>National Grid ESO</i>
Please express your views regarding the Code Administrator Consultation, including rationale. (Please include any issues, suggestions or queries)	<ul style="list-style-type: none">(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
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Code Administrator Consultation questions

Q	Question	Response
1	<p>Following the first Code Administrator Consultation amendment has been made to the definitions of Pumped Storage Plant and Existing Pump Storage Plant.</p> <p>Do you believe that GC0096 better facilitates the Applicable Grid Code objectives? Please include your reasoning.</p>	<p>Yes – We believe the GC0096 proposals better facilitate the Grid Code objectives, particularly in respect of enabling development (a) and facilitating competition (b) by providing clarity and transparency to industry and specifically developers of storage projects on the technical requirements that will be included in storage connection agreements.</p> <p>We also agree that the minor amendments introduced following the comments received in the first Code Administrator Consultation positively enhance the proposals and we support the approach adopted.</p>
2	Do you support the proposed implementation approach?	Yes
3	Do you have any other comments in relation to GC0096?	No, other than that completion of this modification has been long awaited and is a significant milestone in accommodating the development and integration into the system of storage technologies.

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Respondent:	<i>Please insert your name and contact details (phone number or email address)</i>
Company Name:	Ørsted
Please express your views regarding the Code Administrator Consultation, including rationale. (Please include any issues, suggestions or queries)	<ul style="list-style-type: none">(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

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Q	Question	Response
1	<p>Following the first Code Administrator Consultation amendment has been made to the definitions of Pumped Storage Plant and Existing Pump Storage Plant.</p> <p>Do you believe that GC0096 better facilitates the Applicable Grid Code objectives? Please include your reasoning.</p>	<p>Yes. The modification generally better facilitates the inclusion of storage to connect into the transmission system,</p> <p>However, it does not quite fully meet objective (c) in promoting overall system security as there is an omission to clarifying testing for Electricity Storage Modules within OC5.7. We explain this point more thoroughly in our answer to question 3.</p>
2	<p>Do you support the proposed implementation approach?</p>	<p>Yes</p>

Q	Question	Response
3	<p>Do you have any other comments in relation to GC0096?</p>	<p>Yes. Whilst we support the work done so far within GC0096, we have noted an omission to include references in OC5.7 to include Electricity Storage within Black Start testing if it to effectively promote overall system security and competition for provision of Black Start services.</p> <p>OC5.7 makes heavy reference to Gas and Diesel turbines, but given the alignments now made between Power Generating Modules and Electricity Storage Modules in ECC (the consultation points to this in Annex 3, which is missing in the consultation documents), testing of Electricity Storage Modules is not recognised, as only specific technologies are pointed out within OC5.7.</p> <p>More specifically, OC5.7.2.1 (d) points to Auxilliary Gas or Diesel as the required equipment to re-energise the Unit Board of the Generating Unit.</p> <p>A failure to reconcile OC5.7 to become more inclusive (and meet objectives (b) and (c) above) will result in the section becoming interpretative, whereby one party may interpret Electricity Storage Modules as not requiring a Black Start test, and another interpreting Electricity Storage Modules as not being able to provide Black Start as it is not a prescribed technology within that section of the Grid Code.</p>