

Workgroup Consultation Response Proforma**GC0156: Facilitating the Implementation of the Electricity System Restoration Standard**

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 21 December 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 Banke John-Okwesa banke.john-okwesa@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details
Respondent name:	Simon Lord
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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 using the tick boxes and text box spaces provided in the right-hand side of the table below.

Standard Workgroup Consultation questions								
1	Do you believe that the Original Proposal better facilitates the Applicable Objectives?	<p>Mark the Objectives which you believe each solution better facilitates:</p> <table border="1"> <tr> <td>Original</td> <td><input type="checkbox"/>A</td> <td><input type="checkbox"/>B</td> <td><input type="checkbox"/>C</td> <td><input checked="" type="checkbox"/>D</td> <td><input type="checkbox"/>E</td> </tr> </table> <p>Yes but further clarification, acceptance and understanding of the proposal is required prior to it being presented to the Authority. Retrospective imposition of obligations without compensation is in general a bad idea. This will potentially result in a significant number of derogations being sought from the authority which will undermine the intent of the change.</p>	Original	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input checked="" type="checkbox"/> D	<input type="checkbox"/> E
Original	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input checked="" type="checkbox"/> D	<input type="checkbox"/> E			
2	Do you support the proposed implementation approach?	<p><input type="checkbox"/>Yes <input checked="" type="checkbox"/>No</p> <p>The impact on various classes of generation has not been established we suggest a “survey” of all existing transmission connected generation should be performed via a simple questionnaire to establish the practicality of this proposal this should drive the implementation approach.</p>						
3	Do you have any other comments?	<p>Given the importance of the issue we think the workgroup should consider if the various changes should be consolidated into a separate sub code of the Grid Code in a similar way to the Connections Conditions. This would be a new “ESR Conditions”; some of the conditions would apply to all parties whilst the majority of the conditions would apply only to active participants in System Restoration.</p> <p>Consideration needs to be given as to the funding of the retrospective obligation. Funding should be set at an appropriate level and should relate to average class funding rather than on an individual cost plus basis.</p> <p>The obligation for 72 hrs is a “shall” obligation as such it is absolute. Retrofitting this could be a major task for some existing generators; thus we suggest a “reasonable endeavours” for existing generators and a “shall” for new generation.</p> <p>It is expected that some types of generation the cost to achieve the 72 hours will be prohibitive as such it is expected that these types (see Q13) will likely seek derogations from the requirement and Ofgem should establish a fast track route for this.</p>						
4	Do you wish to raise a Workgroup	<p><input type="checkbox"/>Yes <input checked="" type="checkbox"/>No</p>						

Consultation Alternative Request for the Workgroup to consider?	Click or tap here to enter text.
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Specific Workgroup Consultation questions

5	<p>Do you believe that a cost benefit analysis should be undertaken by the Workgroup and if yes what factors should be considered?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Whilst in principle a cost benefit analysis should be undertaken for any code change of this magnitude, it is self evident that the cost (loss of economic activity) of an event that leads to a wide spread loss of power will far exceed the cost associated with improving the resilience of the UK generation fleet. The key issue is establishing the level of cost imposed on the generation fleet and how these costs are recovered from consumers. At present the burden of costs imposed by the Grid Code on generation is effectively passed through to customers via traded markets. Costs associated with Grid Code compliant generation are significantly higher (per MW installed) than those imposed via distribution codes but market players access the same market. The cost benefit analysis should thus be limited to establishing the cost imposed on Grid Code compliant generation (per MW) and a payment mechanism should be designed to ensure that any class of generation that suffers disproportionate costs (taking account of costs imposed on distribution code compliant generation) should be held whole (effectively a System Restoration capacity payment).</p> <p>If all classes of generation (distribution and grid code) suffer a similar level of cost increase then this can be picked up via the existing energy market mechanisms.</p> <p>Indicative compliance costs has not been established we suggest a “survey” of all existing transmission connected generation should be performed via a simple questionnaire to establish the practicality and cost of this proposal.</p> <p>The distribution code ROCOF relay payment mechanism is an example of such a mechanism being put in place. Although this had some design problems as it was part funded by transmission connected generation via BSUoS. So, there was a cost increase on the class of compliant, Tx-connected generation. That is, there was effectively a cross subsidy from BSUoS paying</p>
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		generation to small non-compliant generation; this was economically inefficient.
6	Do you believe that parties obligated by GC0156 should have a cost recovery mechanism in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>See above. A cost recovery mechanism is appropriate only if a class or classes of generation suffer excess costs relative to the whole generation fleet (that is above a de minimis level [1 MW])</p> <p>Funding should be set at an appropriate level and should relate to average class funding rather than on an individual cost plus basis</p>
7	Do you think that the proposals are sufficient and cost effective to ensure that NGENSO can meet its ESRS licence obligations? Please provide a rationale for your answer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>The Grid Code change effectively just passes the NGENSO obligation on to generation subject to the Grid Code. Without a payment/derogation or less onerous obligation NGENSO is unlikely to meet its licence obligation. There is more work to be done to ensure a wider acceptance of the 72 hour issue and ensure it is universal across all generation above a de minimis level.</p>
8	Do you agree that all the costs associated with TO/DNO implementation of ESRS should be recovered through their respective price controls? If not, what funding mechanism do you favour?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>There is no other mechanism.</p>
9	The ESRS restoration target is expressed in terms of transmission demand rather than total demand (see Glossary and Definitions). Do you understand the implications of this, and are you happy with those implications?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>Whilst this will underestimate the total demand if this is measured on the same basis when 60% of transmission demand is restored it is likely that a similar amount of "hidden" or matched distribution demand will also be restored.</p>
10	Do you think that there is a common understanding between stakeholders of the demand to be restored in GB required by ESRS?	<input type="checkbox"/> Yes <input type="checkbox"/> No <p>Speculative question see response to q9.</p>

11	Do you see any barriers for Network Operators and Users to deliver the changes proposed to implement the ESRS by December 2026?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12	Do you believe there are further changes to the network i.e. NETS and/or Distribution Network required to implement ESRS obligations?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Licence change to generation licences to require generators to comply with ESRS direction from ESO.
13	The Annex (pages 29 – 32) in the Future Networks subgroup report covers 2 scenarios where site supplies are lost up to 72 hours. Which of these 2 scenarios is the most realistic? (The full details of these scenarios can be found on pages 29 – 34 of the Future Networks subgroup report in Annex 4)	<input type="checkbox"/> Scenario 1 <input checked="" type="checkbox"/> Scenario 2 There are three classes of generation effected by this proposal. Type A Generation that is Anchor or “anchor”-capable is likely to be relatively unaffected by the event and will have planned for such an event. Little or no modifications will be required Type B There is a class of site where local backup supplies will have been provided to allow for limited emergency supplies (lighting safety system barring gear etc) for a short period of time (perhaps up to 24 hrs). For this type limited modification will required principally additional fuel stores combined with addition on battery re-charge faciality typical small on site generators . Type C The vast majority of newer asynchronous sites will have limited backup supplies and will likely be dispersed (wind/solar/ recips). Whilst the control point may have backup supplies it is “unlikely” that the communications and power will be in place to allow the remote sites to be self-sustaining. Physically visiting remote sites could be challenging given the likely issues for road transport. For this type major reworking of systems will be required which in many cases will not be practical. As such this class will likely seek a derogation from the requirement

		<p>based on the “harm” caused by the retrospective obligation which will undermine the intent of the change.</p> <p>The financial and practical impact on various classes of generation has not been established we suggest a “survey” of all existing transmission connected generation should be performed via a simple questionnaire to establish the practicality of this proposal</p>
14	What are your views on the scope of the parties being impacted by the mandatory changes proposed as part of GC0156?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>All parties should be impacted in the same way. Distribution and grid code generation should face the same cost. If only one group is impacted then they should be held whole by funding from the network companies.</p>
15	The GC0156 proposed solution 72 hrs resilience is expected to be applied retrospectively to existing CUSC parties. Do you agree with this retrospective application and if not, what is your rationale / view about this?	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Retrospective imposition of obligations without compensation is in general a bad idea. In this context it is only acceptable if distribution and grid code compliant generation are impacted to the same financial extent (above a de minimis level of [1MW]). See Q13</p>
16	Do you believe that cyber security requirements in accordance with the NIS standard are sufficient and as referenced in the proposed Grid Code drafting (available in Annex 6)?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
17	Do you agree that the draft legal text is appropriate and sufficient to implement GC0156? If not please provide your suggestions?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>The obligation for 72 hrs is a “shall” obligation as such it is absolute. Retrofitting this could be a major task for existing generators; thus we suggest a “reasonable endeavours” for existing and a “shall” for new generation.</p>
18	Are there any barriers to new entrants to provide restoration services that are not covered in the GC0156 legal drafting?	This is not an appropriate question for a technical consultation.

19	Do you believe there should be further assurance activities in addition to those described in the proposed legal text within OC5? If yes, please state the activity and explain why?	No, it looks OK.
20	Do you think the right requirements have been identified for Network Operators in terms of Network design and operational capability as summarised in the consultation document and annex and as detailed in the proposed legal text in CC/ECC.6.4.6.3b and OC9?	<input type="checkbox"/> Yes <input type="checkbox"/> No No comment.
21	Due to comments received from some Workgroup members on Appendix 9 (technical requirements associated with restoration services) of the ECC draft legal text, the ESO has proposed that a separate subgroup should be established under the umbrella of GC0156 to develop a set of technical requirements associated with restoration services for inclusion in the Relevant Electrical Standards which would include appropriate experts from across the industry. Do you believe this is an appropriate way forward if not why?	<input type="checkbox"/> Yes <input type="checkbox"/> No Could not find any Appendix 9 but in general including input from the widest possible audience is a good idea.
22	Are you aware that Anchor Plants may be expected to carry out a deadline line charge test and remote synchronisation test as described in OC5.7.2.2(h) /	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Eminently sensible

	OC5.7.2.3(d)? If so, do you have a view on this test?	
23	The distributed restart legal text has been drafted on the basis that ESO will lead on the procurement of restoration services. Do you think this should move to DNO led in future? If yes, please explain why	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>ESO is best placed to co-ordinate system restoration</p>
24	<p>The distributed restart legal text has been drafted on the basis that:</p> <p>i) there will be a connection agreement with the DNO that binds an embedded restoration service provider to the Distribution Code and</p> <p>ii) a tripartite agreement that binds the embedded restoration service provider to the relevant parts of the Grid and Distribution Codes.</p> <p>Do you see any difficulties with this proposed contractual arrangement?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>All parties should be bound by Grid Code requirements in this area.</p>
25	<p>Do you believe it is appropriate to have a mains independence minimum resilience period of 24 hours as required by the NCER or 72 hours as a general GB standard for existing black start purposes as proposed with the GC0156 solution for Grid Code parties, BM parties, VLPs and restoration service providers?</p> <p>Do you agree with a retrospective application of this and if not, what is your suggestion / views about this?</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>72 hours as a minimum for all BM parties. It just needs to be clear that this applies to systems on the “physical site” and does not relate to wider systems or Energy Management. In the context of distributed control plant its unclear what this actually means (solar arrays, wind turbines, reciprocating engines). If the national systems (internet, Openreach etc) are down it won't be possible to restart the generation until those systems return even if they are capable of restarting once communication is possible.</p> <p>Retrospective imposition of obligations without compensation is in general a bad idea. In this context it is only acceptable if distribution and grid code compliant</p>

		generation are impacted to the same financial extent (above a de minimis level of [1MW]). See Q13
26	As a stakeholder, are there any implications of the proposed future requirements which are not clear?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
27	Do you have any views on how the requirements should be implemented into the Grid Code bearing in mind the requirements of the ESRS are not enforceable until 31 December 2026?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Should be a separate self-contained section.
28	Do you agree with Ofgem's proposed approach to the DNO ESR re-opener?	<input type="checkbox"/> Yes <input type="checkbox"/> No Not sure what this is or if it is a relevant question for a technical code change.