

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:	Lewis Morgan
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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> <p>Original <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E</p> <p><u>A – Negative</u> The changes to OC2 / Data Registration code will impact network planning and outage coordination for and across network users. This has potential to make system access more challenging in respect to development and maintenance of assets.</p> <p>The perceived efficiency under OC9 of multiple network operators simultaneously enacting restoration zones must be balanced with the increased complexity in coordination and utilisation of available resources.</p> <p>The additional assurance activities outlined in OC5 will result in increased transmission network and generator outages.</p> <p><u>B – POSITIVE</u> We support the view that the modification facilitates increased accessibility for providers and satisfies an improvement to this objective.</p> <p>It should be noted that specific regions and networks pose unique operability challenges which may necessitate the attributes of certain restoration strategies / providers.</p> <p><u>C – POSITIVE</u> Fundamentally we believe the proposal improves performance against the objective ; although the level of prescription is not always clearly derived or evidenced with qualitative data. The proposals, specifically those in CC/ECC align to a more secure and efficient system.</p> <p><u>D - POSITIVE</u> We agree that a Grid Code modification is required to implement the ESRS directive.</p> <p><u>E – NEGATIVE</u> The current STCPs do not satisfy the new requirements outlined in GC0156. Whilst future STCP modifications are implied we would like to see STCP changes implemented concurrently with the Grid Code modification.</p>

2	Do you support the proposed implementation approach?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>We do not believe that the approach provides sufficient time to comply with the consequential industry and code changes required from the GC0156 modification.</p> <p>It would be advantageous for other code changes, inclusive of the STCP modifications to run in parallel with this change. We believe this would enable us to better establish work scopes and funding requirements at the earliest opportunity.</p>
3	Do you have any other comments?	No additional comments beyond the responses stated.
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Click or tap here to enter text.</p>

Specific Workgroup Consultation questions

5	Do you believe that a cost benefit analysis should be undertaken by the Workgroup and if yes what factors should be considered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p>The ESRS is based on an E3C workgroup which conducted a CBA to establish the balance of cost against various restoration standards. As a result, if a specific modification is critical to maintain compliance with the ESRS objectives we see no perceived benefit in an additional CBA.</p> <p>In instances where the contribution of the modification is not clearly quantified against the ESRS objective we would support a CBA and criticality analysis.</p> <p>Some of the GC0156 modifications align with ENA recommendations which incorporate a CBA we see no requirement for an additional CBA.</p>
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>We support the view that all parties should have cost recovery mechanisms and our response is detailed in Q8. In respect to cost recovery for CUSC participants this response will be captured in the CUSC modification CMP398.</p>
7	Do you think that the proposals are sufficient and cost effective to ensure that NGESO can meet its ESRS licence obligations? Please provide a rationale for your answer	<input type="checkbox"/> Yes <input type="checkbox"/> No <p>We agree that the draft legal text has clear alignment with the ESRS license obligations. There is limited quantitative data available on the proposals, so it is not possible to comment on cost effectiveness at this stage. For this reason, we have not provided a Yes/No answer to Q7.</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>This is outlined in Special Licence Condition 3.14.6 of National Grid Transmission License. This states that the licensee may apply to the Authority for a modification to associated allowances for an Electricity System Restoration project following implementation of an ESRS.</p>

9	<p>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?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>The consultation refers regularly to Transmission Demand and Total Demand, neither of which are defined terms as per the Grid Code Glossary and Definitions.</p> <p>The Grid Code makes two definitions in relation to demand, these are as follows.</p> <ul style="list-style-type: none"> • “National Demand” • “National Electricity Transmission Demand” <p>The consultation documentation does not provide clarity in it’s separation of these two definitions as it refers interchangeably to NETS Demand and National Demand.</p> <p>The ESRS definition of peak regional demand provides clarity (See Q10).</p>
10	<p>Do you think that there is a common understanding between stakeholders of the demand to be restored in GB required by ESRS?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>The draft legal text of OC1 offers a clear and unambiguous definition of Electricity System Demand under ESRS.</p> <p>It is noted that NGESO currently publish daily forecast of Peak National Demand. The proposed changes to OC1 as part of this proposal will stipulate NGESO to provide continual provision of regional ESRS Demand figures which will ensure a common understanding.</p> <p>Further clarification is required to denote the regional categorisation, particularly where significant LV interconnections occurs at the boundaries of these regions.</p>

11	Do you see any barriers for Network Operators and Users to deliver the changes proposed to implement the ESRS by December 2026?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>We envisage considerable STCP modifications will be required to facilitate the changes ; these have not yet been proposed.</p> <p>Some changes may be administrative and capable of implementation relatively quickly. Some areas of change may require extensive alterations to processes, systems and actual network configuration with a much longer implementation period and requirement for regulatory funding approval.</p> <p>For any modifications to the NETS, system access requirements must also be considered.</p> <p>Whilst we support testing and assurance activities, the required testing as outlined in OC5 must be balanced against the burden of workload, given the high number of participants.</p>
12	Do you believe there are further changes to the network i.e. NETS and/or Distribution Network required to implement ESRS obligations?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>From a NETS perspective, ESO are best placed to advise on network limitations in respect to specific LJRP's and skeleton networks.</p> <p>The WG proposals in relation to future network design would be best commented on once prescribed to a suitable level within the STCPs. We note the emphasis on no-load gains of networks and acknowledge this may require increased reactive compensation devices.</p> <p>DER trials have identified limitations in respect to a lack of power system synchronising relays on lower voltage circuit breakers and benefits of Point on Wave switching; particularly when using providers with low source impedance.</p> <p>Requirements for temporary switching of HV protection systems are included in GC0156 and dependant on the requirements may require modification to primary plant.</p>

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 type="checkbox"/> Scenario 2 In response to Q13, we believe both scenario's are realistic and therefore have not provided a response above. Our view of GC0156 is that its objectives in terms of resilience is aligned with Scenario 2. Scenario 1 does not follow a <i>total or partial shutdown</i> .
14	What are your views on the scope of the parties being impacted by the mandatory changes proposed as part of GC0156?	<input type="checkbox"/> Yes <input type="checkbox"/> No We have not provided a response above due to the nature of the question. We agree with the scope of the parties listed as impacted under the GC0156 consultation.
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?	<input type="checkbox"/> Yes <input type="checkbox"/> No We support the enhanced resilience of CUSC parties where its implementation is feasible and without gross disproportion. However further cost/benefit data is required to provide a response. The implementation of 72H resilience for critical substations is based on a CBA produced by the E3C and detailed in ENA ER G91. No such data or analysis has been shared for the extension of this resilience to all CUSC parties.
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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No We agree that the UK NIS and CAF framework is adequate to benchmark Cyber requirements against.
17	Do you agree that the draft legal text is appropriate and	<input type="checkbox"/> Yes

	sufficient to implement GC0156? If not please provide your suggestions?	<input checked="" type="checkbox"/> No <p>The draft legal text has clear alignment with the ESRS license obligations but does not make clear the effective implementation date of 2026. See Q27.</p>
18	Are there any barriers to new entrants to provide restoration services that are not covered in the GC0156 legal drafting?	We have no comment at this stage.
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?	Modifications to OC5 refers to computer simulations where network outages can not be facilitated. We believe that sharing results of dynamic simulations for all LJRPs / DZRPs, prior to DLC or remote synchronisation testing would be a useful assurance activity.
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 <p>We have not provided a response based on the reasons outlined below.</p> <ul style="list-style-type: none"> • We could not reference CC/ECC 6.4.6.3b in any of the annexes / draft legal text provided. • The updates to OC9 in respect to network design and operational capability requirements relate primarily to DRZPs. The impact and requirements of these are best assessed by the network operators. • The existing capabilities for transmission licensees remains largely unchanged in OC9. We expect the design / capability of transmission owners to be outlined in modifications to STCP06 at which point we can make further analysis.

21	<p>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?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>We agree that technical experts should be involved but it is unclear why these require a separate subgroup and can not be established within the existing working group.</p> <p>The RES applies to users connecting to the transmission system. The GC0156 modifications incorporate technical requirements which extend beyond that of the transmission network and therefore may be of relevance to members of the GC0156 working group.</p>
22	<p>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) / OC5.7.2.3(d)? If so, do you have a view on this test?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>These tests will interrupt system access and increase outage requirements across network operators.</p> <p>An increased volume of testing will also require offline assessments and operational resources to facilitate. There should be compensation mechanisms in place for network operators and restoration providers to recover these costs.</p> <p>In the event of an LJRP it is NGESO who define the requirement to conduct testing requirements of Anchor / Top Up providers, for DRZPs this is directed by the network operator (See 5.7.2.2 H , 5.7.2.3 H). Given that ESO lead on procuring restoration services, should ESO maintain overall accountability for the compliance of restoration providers.</p>
23	<p>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</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>We have not commented as we believe this is a decision between ESO, OFGEM and DNO's.</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>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>We have responded from the perspective of a transmission licensee and on the basis that these agreements are constructed in compliance with Standard Condition C15 of the Transmission License. This defines the interface of transmission owners with the distribution code.</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>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>See Q15.</p>

26	As a stakeholder, are there any implications of the proposed future requirements which are not clear?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No The prescriptive and granular details of the Future Requirement for Transmission Owners are not established at this stage.
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 Due to the fragmented nature of the changes to the legal text we believe that the modification should reach approval stage but should not be implemented until closer to the ESRS date of December 2026.
28	Do you agree with Ofgem's proposed approach to the DNO ESR re-opener?	<input type="checkbox"/> Yes <input type="checkbox"/> No We have no comment.