

SQSS Workgroup Consultation Response Proforma**GSR027: Review of the NETS SQSS Criteria for Frequency Control that drive reserve, response and inertia holding on the GB electricity system**

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 box.sqss@nationalgrideso.com by **5pm on 30 September 2020**. 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 Paul Mullen paul.j.mullen@nationalgrideso.com or box.sqss@nationalgrideso.com.

Respondent details	Please enter your details
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For reference the SQSS objectives for GSR027 are:

- i. facilitate the planning, development and maintenance of an efficient, coordinated and economical system of electricity transmission, and the operation of that system in an efficient, economic and coordinated manner;*
- ii. ensure an appropriate level of security and quality of supply and safe operation of the National Electricity Transmission System;*
- iii. facilitate effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity; and*
- iv. facilitate electricity Transmission Licensees to comply with their obligations under EU law.*

Please express your views regarding the Workgroup Consultation in the right-hand side of the table below, including your rationale.

GSR027

Standard Workgroup Consultation questions GSR027		
1	Do you believe that the GSR027 Original solution better facilitates the SQSS Objectives? Please explain your rationale.	<p>We welcome the review of the SQSS criteria for frequency control that drive reserve, reserve response and inertia holdings on the GB electricity system.</p> <p>The SQSS should set out the technical requirements that underpin the operation of the GB transmission system. Therefore, the NETS SQSS should comprise the following elements:</p> <ul style="list-style-type: none"> • the criteria that are applied to determine the required reserve response and inertia holdings; and • the methodology that is used to determine “<i>unacceptable frequency conditions</i>”; and • a definition of the supporting information that is required in the application of the methodology. <p>The GSR027 Original solution will better facilitate the SQSS objectives if the methodology for determining unacceptable frequency conditions forms part of the SQSS.</p> <p>The document entitled “<i>Frequency Risk and Control Report Methodology – 2020 v1</i>” appears to comprise both a “methodology” and a “report”. We believe that further clarity is required with respect to this document. It should establish a clear methodology that is used to determine “<i>unacceptable frequency conditions</i>” and that it forms an Appendix to the SQSS.</p>
2	Do you support the proposed implementation approach?	<p>The SQSS should set the technical requirements that underpin the operation of the GB transmission system.</p> <p>The SQSS must include the criteria used to establish frequency response holdings and the methodology used to determine the requirements for reserve, response and inertia.</p>

3	Do you have any other comments?	<p>The SQSS should take into account the reliability of Distributed Energy Resources (DER) providing reserve, response and inertia services to the ESO. This includes consideration of the following:</p> <ul style="list-style-type: none"> i) the geographical distribution of DER across DNOs, noting that concentration of DER in certain areas may impact on the provision of services; ii) the voltage to which DER is connected across the DNO network; iii) DNO network constraints; iv) the impact of curtailment contracts and Active Network Management; and v) impact of local flexibility markets and the transition from passive to active network management under a DSO model. <p>DER capacity could be de-rated in in specific circumstances related to network conditions (e.g., windy/sunny running patterns, day/night availability, active/inactive constraints). Different de-rating factors could apply across a day, a week or a season.</p> <p>The ESO should be required to report on the outcome of the application of the SQSS criteria and methodology. This report should be subject to appropriate governance with a requirement to publish on an ex ante basis by the ESO, with a transparent explanation of the frequency response holding requirements for the SQSS over defined periods.</p>
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	We do not wish to raise a consultation alternative.
Specific GSR027 Workgroup Consultation questions		
5	Do you agree with the proposed SQSS legal text?. Please provide the rationale for your response.	As currently drafted the status of the document entitled "Frequency Risk and Control Report Methodology – 2020 v1" is uncertain. The consultation seeks a view as to whether this is a transmission licence document, an SQSS related document or a Grid Code document.

It is our view that the SQSS must include the methodology associated with the assessment of “unacceptable frequency conditions” as an Appendix. The legal text should be amended to reflect this as follows:

- 5.8 NGESO shall ~~use the latest version of the Frequency Risk and Control Report as consulted on and approved by the Authority to~~ determine the events for which unacceptable frequency conditions shall not occur ~~as set out in Appendix [X].. This e Frequency Risk and Control Report assessment~~ includes consideration of any consequential loss of distributed energy resources associated with any such event; and
- Section 5.11.2 and Annex 4 should refer to the new **Appendix [X]** in the SQSS

The draft legal text under 5.11.2 refers to an “*economic assessment conducted in accordance with the Frequency Risk and Control Report [FRCR]*”. From our review of the document entitled “Frequency Risk and Control Report Methodology – 2020 v1 [FRCR]” it is unclear as to whether this document constitutes an “*economic assessment*” as required under the SQSS

The FRCR document refers to various elements “*which could be assessed in the FRCR*”. These include “*events*” under 3.1, “*infeed and outfeed losses*” in 4.2, “*impact*” in 4.3 and “*controls*” in 4.4. We think that these elements must (rather than “could be”) assessed as part of the methodology.

We note that “*reliability vs cost*” in Section 4.5 of the FRCR is a set of principles for assessing these factors rather than an assessment. It may be appropriate for these principles to be included in the SQSS.

Section 4.5.1 of the FRCR states that “*There is a whole spectrum of costs and likelihoods across each of the events, meaning a clearcut judgement of the balance between reliability and cost can be difficult to reach for one events in isolation. Instead,*

	<p><i>the assessment must look at the total risk and total cost across all events.</i>” It should be clarified that the “<i>total risk and total cost across all events</i>” will form the basis for the economic assessment envisaged under the SQSS.</p> <p>Section 4.5 in the FRCR methodology is unclear as to the assessment of certain parameters. For example:</p> <ul style="list-style-type: none"> • Section 4.5.3.1 suggests that “<i>The industry may choose to defined an upper limit or guide on the total cost of controls for managing frequency</i>”; • Section 4.5.3.2 states that “<i>The industry may choose to defined an upper limit or guide on how often each impact could be accepted to occur</i>”. • Section 4.5.3.3 refers to the “cost value per avoided occurrence”, but includes the statement that “<i>A new, specific VoLL could be used to set a cost value per avoided occurrence for the FRCR, in addition to or instead of the other example metrics above</i>”. <p>Clarification is required as to the process for setting these parameters as part of the methodology.</p> <p>The FRCR report appears to envisage a role for the Authority in determining the level of the response, reserve and inertia held by the ESO. For example:</p> <ul style="list-style-type: none"> • paragraph 3.1.4 states that “<i>consultation and ongoing engagement with industry stakeholders</i>”... “<i>enables the Authority to make an informed decision on the right balance between reliability of electricity supplies and cost to end consumers. NGESO can then update their operational policies and procurement of controls to implement the outcome.</i>” and • Paragraph 4.5.2 appears to requires that the impact of DER on the required level of security is determined by the Authority since the report states that “<i>This is achieved through the Frequency Risk and Control Report, which itself provides the appropriate channels for industry consultation and</i>
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		<p><i>transparency, and a decision by the Authority”.</i></p> <p>We are unclear as to the role of the Authority envisaged in the methodology. In our view the Authority should approve the SQSS which includes the methodology that the ESO will use this in an ongoing basis to determine the reserve, response and inertia requirements.</p>
6	Do you agree with the proposed Governance framework? Please provide the rationale for your response.	The SQSS should include the methodology used to establish the reserve response and inertia requirements. Future changes to this methodology would require a modification proposal under SQSS governance.
7	The vast majority of the Workgroup believe that the Governance framework should be housed within an annex or appendix to the SQSS. The Workgroup have also considered other options, namely Transmission Licence conditions or the Grid Code. Do you agree with the Workgroup's conclusions? Please provide the rationale for your response.	We support an approach based on SQSS Governance with the methodology housed within an annex or appendix to the SQSS. Changes to the annex or appendix should be subject to the SQSS modification process.
8	The ESO's illustrative FRCR methodology articulates the risks and impacts to be assessed in version 1 of the FRCR. Section 8 sets out what could be considered in future versions. Do you agree with the ESO's conclusions on what will covered in version 1 and future versions? Please provide the	<p>The SQSS should include both the criteria and the methodology used to establish reserve, response and inertia requirements.</p> <p>Changes to the criteria and methodology must be subject to SQSS governance and the SQSS modification process.</p>

	rationale for your response.	
9	Section 10 of the illustrative FRCR Methodology sets out the input data the ESO believe is required to produce the FRCR. Do you agree that this is suitable? Do you have any thoughts on how the data to remove ESO's working assumptions may be gathered?	<p>The SQSS should set out the data requirements for the ESO in establishing the frequency response criteria.</p> <p>The basis of any assumptions should be set out in the SQSS with respect to the establishment of the relevant criteria or in the application of the methodology under the SQSS.</p>
10	The Workgroup have proposed 2 options for which body the 'FRCR Approver' could be. Do you agree and which is your preference? Please provide the rationale for your response.	GSR0027 is subject to SQSS governance. There should not be a separate approvals process in relation to the FRCR methodology/report.