

## FRCR Consultation Response

### FRCR Consultation

Respondent details	Please enter your details
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Overall Feedback		
5	which best describes your organisation?	Transmission Owner
6	I wish my response to be:	Non-Confidential (your responses will be shared with industry, the SQSS Panel and the Authority for further consideration)
7	Do you agree that the FRCR 2025 has been prepared appropriately? Please elaborate	We agree FRCR 2025 has been prepared appropriately for consultation and appreciate the nature of the consultation undertaken both on methodology and outcome. We would however note the following points- i) whilst we understand the process has been separately reviewed by Accenture, we note that there is a big difference between an independent repeat of the process and a critique and validation of the assumptions used within the process. We observe that the outcomes of the process are highly sensitive to the confidence of underpinning assumptions, their operational visibility to inform on the day decisions and their variance. in future years if independent review is to be repeated, we would suggest focus on these areas and the outcome of that review also made available within the consultation materials.
8	Do you believe there has been sufficient industry engagement in preparing FRCR 2025? Please specify further suggestions	We are aware of the consultation and associated webinar. We are unable to judge the level of engagement for the wider industry. We would suggest you measure this based on the number of responses to the consultation.

9	Overall, do you agree that the FRCR 2025 represents the appropriate level of development in determining the way that the NESO will balance cost and risk in maintaining frequency security while operating the system at a reduced inertia down to 102 GVA.s?	<p>We agree that the approach of quantifying risk and reward is the correct approach.</p> <p>Our view is that the report focuses on the central case in the statistical analysis and has some assumptions and unavailable data that will result in some uncertainty in the result. This may result in understating some risk. An understanding of the two standard deviation variance to assumptions would be helpful to understand this further</p> <p>Similarly, the report does not consider the regionality inertia which may result in different RoCoF values in different areas. This may impact the amount of minimum inertia requirement. As we note in our detailed comments within the RoCoF calculation are larger instantaneous effects which should also be examined to ensure that otherwise hidden converter protection/ control trip outcomes are being captured in the same way as residual RoCoF, vector shift and over voltage ones are as inertia falls.</p>
10	Do you agree with the recommendation to: Reduce minimum inertia requirement down to 102 GVA.s	<p>We agree with the principle of reducing the inertia requirement using a risk/ reward approach. However, we have not seen enough evidence that a value of 102 is striking the correct balance. As the requirement approaches a minimum it would be expected that the risk would be growing faster and the benefit growing smaller. This appears already implied by the historic savings captured under FRCR as quoted and compared to the intended saving from this next reduction. There is insufficient evidence in the report that the value of 102GVA.s is the optimal value. In absence of this, a slower reducing in the minimum requirement may be justified until more data is available.</p>
11	Do you agree with the recommendation to: Secure all BMU-only events (including consequential RoCoF)	<p>Yes, based on the risk and cost data presented we agree with this recommendation.</p> <p>We recommend that risk of VS event is also reviewed based on variations in regional levels of inertia.</p>
12	Do you agree with the recommendation to: Procure additional DC-Low service provision by 200 MW	<p>We agree with increasing the DC low value from 100MW.</p> <p>The recommendation of 200MW seems a bit arbitrary, as only 100, 200 and 300MW was considered. If a monetary value for risk could be defined, a more justifiable value of DC could be chosen.</p>
13	Do you have any other comments to the recommendations?	See specific comments as included on the commented report and methodology document (attached below).
14	In your view, what should the future FRCR focus on?	We agree that the approach of quantifying risk and reward is the correct approach and should be continued.

		<p>Our view is that the report focuses on the central case in the statistical analysis and has some assumptions and unavailable data that will result in some uncertainty in the result. This may result in understating some risk. We would suggest sensitivity analysis within the two standard deviation range be undertaken to understand which variances the analysis is most sensitive to. Further consideration of the operational confidence should be given. We would also suggest that under innovation projects, code changes, and new processes/ services- there is the potential to address or limit some of the uncertainties being discussed.</p> <p>Finally, we note the danger that risk assessing to the edge of national LFDD relay triggers leads through the potential for regional frequency differences and small differences in the underpinning assumptions above to a risk of cascading action. We believe that a number of technologies not armed for frequency response would naturally be operating with headroom that an LFSM-U provision could harness to create a further safety net below 49.5Hz which it would seem prudent to explore further.</p> <p>Similarly, the report does not consider the regionality inertia which may result in different RoCoF values in different areas. This may impact the amount of minimum inertia requirement. We suggest that investigation into the countering of inter-area difference at low inertias be instituting; considering both the spread of resources but also other measures such as POD control that could counter these effects. We further suggest that stand-alone simulations estimating current connected device tolerances to the expected transient frequency and phase angle jumps under low inertia conditions are used to anticipate the limits to next stage FRCR action.</p>
15	Do you foresee any issues that may arise from moving the obligation to produce the FRCR to a NESO Licence Condition rather than an Annex to the NETS SQSS?	No- but we have however noted that the SQSS would benefit from further definition of the FRCR process relating to the sensitivity and uncertainty of assumption- we suggest the definition of an “insufficient frequency containment margin” metric which defines required levels of sensitivity consideration (e.g. resilience to loss of single actor/ automatic system/ demand sensitivities; key methodology assumptions), aligning with the approach taken to voltage stability within the SQSS- and this should be adopted within whichever location the obligation is to be placed in the future.
16	If the obligation to produce the FRCR and	We believe there should be technical oversight and governance of the FRCR and that the NETS SQSS Panel

	the governance rules surrounding that process are moved to NESO's Licence, do you believe that the NETS SQSS Panel should continue to provide oversight?	is one possible appropriate approach. An alternative oversight panel could be justified also.
17	if your answer to Question 16 is "Yes", to what extent should this oversight be? For example, should it include technically assessing the recommendations and approving/rejecting it, or should it be limited to confirming that the governance process and methodology has been followed correctly?	Reviewing the technical content of the methodology and review that the methodology has been followed. Identifying necessary work to improve the accuracy/ effectiveness of FRCR process- for example the need to develop new tools/ insights to inform its future application. Ensuring FRCR is not just an annual update but has a strategic direction to ensure its effectiveness at key points of large transitional change to GB power system- for example those driven from policy for 2025 2030,2035, 2040, 2045,2050.

## Further comments



FRCR 2025  
document comments



Frequency Risk and  
Control Report Methc