

ESO response to Zenobe

The ESO would like to thank Zenobe for the participation in the consultation process. We appreciate your comments and feedback. Please find our response to your valuable input below.

No.	Question	Consultation Response	NGESO Response
1	Overall, do you agree that the FRCR 2024 represents appropriate development in determining the way that the ESO will balance cost and risk in maintaining security of supply while operating the system?	<p>It is difficult for us to provide a detailed opinion without understanding in detail how ESO have calculated cost/risk differentials involved in procuring dynamic containment instead of inertia. To assess any change or proposal, we expect more transparency, with supporting analysis and databooks. The consultation should be consistent with Data Best Practice as requested by Ofgem, but responders are left with more questions than answers.</p> <p>The assessment of minimum inertia requirements sets out that dropping inertia from 140GVAs to 120GVAs can save £132m. However, ESO have not shared their methodology for calculating this saving. We cannot agree that ESO’s proposed approach to FRCR will balance cost and risk well without understanding the methodology. ESO have also not set out how dropping the GVAs level will affect risk.</p>	<p>Thank you for your inquiry regarding the cost/risk differentials and transparency in our methodology for procuring dynamic containment. The detailed FRCR methodology was published along with the 1st edition of FRCR in 2021, please refer to the link to access - https://www.nationalgrideso.com/document/185856/download. Since FRCR 2021 the overall methodology in assessing system and cost benefits has not changed.</p> <p>The typical input dataset is described in FRCR 2024 Section 5.2. Other market information through daily auctions can be found on ESO data portal. We acknowledge Ofgem’s Data Best Practice, however we are unable to publish any more raw data or detailed model when consulting FRCR. This is in line with Section 3.15 in the Guidance which states “compliance with this guidance does not negatively impact its compliance with relevant regulations, legislation and Security, Privacy and Resilience (SPaR) requirements” under Principle 9.</p> <p>The minimum inertia requirements dropping from 140 GVA.s to 120 GVA.s policy is assessed by checking each settlement period whether we can secure the same level of largest loss with reasonable level of response services. If the largest loss at 140 GVA.s or 120 GVA.s can be contained, then the risk level stays the same. In other words, the risk posed by reducing inertia is</p>

			compensated by procuring additional response products. The cost saving can be worked out by comparing the response cost and inertia cost, with dataset defined in Section 5.2.
2	Do you agree that the FRCR 2024 has been prepared appropriately? Please elaborate.	We agree with the overall methodology set out in the flow chart, but it lacks detail. We cannot give detailed consideration to this question without understanding exactly how ESO has calculated the results provided. There is no analysis of how reducing inertia procurement will affect system stability.	<p>Thank you for your inquiry. In the FRCR model, our primary focus is on frequency security. If the question is about system stability, e.g. voltage stability, short-circuit level and system strength requirements, these are out of FRCR analysis and are managed by other workstreams in the ESO.</p> <p>System stability requirements are assessed and presented in Operability Strategy Report (OSR), where the impact of lower inertia levels on all operability workstreams is discussed.</p> <p>If the question is more about stability market development, please refer to https://www.nationalgrideso.com/industry-information/balancing-services/stability-market/mid-term-y-1-stability-market.</p>
3	Recommendation: Maintain minimum inertia requirement at 120 GVA.s	<p>We agree that minimum inertia should be maintained at 120GVAs from summer 2024. We would like to understand the rationale for further reducing inertia procurement in future, as proposed. ESO state that procuring further response, such as dynamic containment, can reduce the need for inertia at a lower cost. We would like ESO to communicate their thinking on the interactions between dynamic containment and inertia.</p> <p>At present, ESO are making statements on this subject without fully justifying them. We request that ESO share analysis of the impacts of reduced minimum inertia level on the</p>	<p>Thanks for the comment. The rationale is due to the fast response and cost efficiency presented by DC units, largest losses can be contained under low inertia conditions by having adequate volume of DC without sacrificing system security. This indicates huge cost saving for GB consumers.</p> <p>To assess the balance, the model considers existing risks based on logged historical trips, loss profiles, new connections and estimated larger losses based on operational experience. The model considers various sources of inertia and their costs, including generation inertia, demand inertia, Stability Pathfinder units, Stability Y-1 units and voltage machines. The model considers of all available response services including DC, DM, DR, mandatory services and their associated cost. The model varies system inertias to compare the saving vs residual risks after controls are implemented.</p>

		<p>requirement for stability markets. How does ESO expect that inertia will be provided in future – through stability markets, pathfinders, or the Balancing Mechanism? Have ESO considered how the cost of inertia could be reduced through emerging stability markets, instead of reduced minimum inertia level?</p> <p>We agree that ESO should develop more operational experience of operating with 120GVAs inertia before consulting on further reducing inertia procurement.</p>	<p>We publish all and updated information regarding Stability Y-1 market on https://www.nationalgrideso.com/industry-information/balancing-services/stability-market/mid-term-y-1-stability-market.</p>
4	<p>Recommendation: Consider additional DC-Low requirement</p>	<p>We agree that ESO should procure a further 100MW DC-Low in order to balance cost and risk.</p>	<p>Thank you for your feedback.</p>
5	<p>Do you agree ESO to propose lower minimum inertia requirement before FRCR 2025</p>	<p>We do not agree, as we think ESO should develop more operational experience before committing to consult on reducing their inertia procurement.</p> <p>In the interest of transparency, we request that ESO share the impact of Pathfinders and Stability Market procurement on the cost reduction from reduced inertia procurement.</p>	<p>Thank you for your feedback.</p> <p>We also agree that the ESO and industry shall gain more operational experience of running the system at 120 GVA.s, this is also the recommendation of FRCR 2024. We will continue monitoring the system performance and share with industry about our analysis and observations at 120 GVA.s. We will also run consultation and request approval from SQSS panel & Ofgem before we recommend/implement any further reductions.</p> <p>In the interest of transparency, we acknowledge your request for information on the impact of Pathfinders and Stability Market procurement on cost reduction from reduced inertia procurement. The future development and requirements of stability market will be accessed based on FRCR minimum inertia recommendation. The assessment and follow-up communication will be managed by the Stability Market Design Team.</p>

ESO

6	Do you have any other comments?	We have no further comments.	