

## Response to NETS SQSS Review Consultation

<b>Name</b>	Priyanka Mohapatra
<b>Job Title</b>	Grid and Regulation Manager
<b>Organisation</b>	SP Renewables
<b>Contact Details</b>	pmohapatra@scottishpower.com

**Q1. Please provide your comments/feedback and suggestions related to the topics raised in Section 3.1 Offshore Transmission System.**

SPR support the proposed review of the restriction on the loss of infeed risk of single offshore DC converter potentially to 1800 MW. We also support the prioritisation of this review in, 2022-2023.

To achieve an optimal outcome, SPR recommends consideration of offshore coordination work and resulting outcomes, as part of the same prioritised workgroup. The technical solutions required to achieve both changes and to ensure network security need to be conveyed to OEMs and developers well in advance.

The coordination piece of work may well lead to need for solutions which will enable better management of onshore network constraints and enable essential grid services. This In turn will support the increase in loss of infeed strategy and aid in scoping of NOA. Both workstreams will impact on developer's compliance not only at the time of connection, but during the whole project lifespan, and thus will directly impact developer's business cases.

The offshore and onshore requirements would be much different and should be discussed separately, as the nature of the technical and technological challenges for developing a reliable, coordinated offshore network.

**Q2. Please provide your comments/feedback and suggestions related to the topics raised in Section 3.2 Demand Connection Criteria.**

SPR support review of Demand Connection Criteria to remove discrepancies between NETS SQSS and EREC P2/7.

**Q3. Please provide your comments/feedback and suggestions related to the topics raised in Section 3.3 Generation Connection Requirements.**

SPR support consideration of appropriate restriction on the loss of outfeed risk for interconnectors and storage. However, this requires a great deal of investigation into operational characteristics of energy storage e.g. consideration of time requirements in reversal of operation modes of storage.

**Q4. Please provide your comments/feedback and suggestions related to the topics raised in Section 3.4 Main Interconnected Transmission System.**

SPR support all mentioned review points under main Interconnected transmission system. SPR agree Storage systems can have different impact on the transmission system based on the MWh output. We request NG ESO to consider an additional point under this review related to Grid Forming Converters. Currently, grid forming converters are only optional and mostly associated with ancillary services. In future grid forming control in converters could be critical to maintaining network security and resilience. An assessment and review are required to establish the role of grid forming control in NETS SQSS. SPR propose few additional points to be considered under this scope of work:

1. Minimum fault and inertia level and under N-1 condition including simultaneous faults and nearby apparatuses with older VSC or LCC technologies.
2. Boundary definitions, quality/type of data provision and requirements for interactions assessments, especially in converter-dominated areas
3. Planning and study techniques definition to avoid low voltage propagation issues, voltage-induced-frequency-instability issues that are already seen on the GB network
4. Set the basis for converter-based generation technology-agnostic requirements in terms of grid following or grid forming, or a combination of both.

<p><b>Q5. Please provide your comments/feedback and suggestions related to the topics raised in Section 3.5 Operational Standards in England and Wales.</b></p>
<p>No Comments</p>
<p><b>Q6. Please provide your comments/feedback and suggestions related to the topics raised in Sections 3.6 Introduction of CATO.</b></p>
<p>SPR would like to understand the impact on generators connected to CATO owned network in future. The considerations being management of competing connection requirements. Connection co-ordination for assets shared by TOs and CATO. It is our recommendation, to keep the Interfaces with CATOs and TOs as similar as possible to enable seamless integration.</p>
<p><b>Q7. Please provide your comments/feedback and suggestions related to the topics raised in Sections 3.7 Governance.</b></p>
<p>SPR supports the prospect of NETS SQSS governance to be more dynamic in future to enable necessary changes In the fast evolving power system to be reflected In NETS SQSS as required and in time.</p>
<p><b>Q8. Which of the proposed modifications will have the most significant impact on your operations/investment plan? To what extent would that impact be?</b></p>
<p>3.1,3.3 and 3.4 proposed modifications will have the most significant Impact on SPR's operations and investment plan. SPR currently has ~11GW of connected and contracted offshore projects. The proposed modifications in 3.1 will determine all aspects of offshore development, from planning, design to commissioning, type of technical solutions to be implemented and interaction with OEMS, TOs and OFTOs.</p> <p>Propose change 3.4 will affect the range and nature of ancillary services SPR will build into our investment case for existing and new assets. This will be critical to ensuring future security and resilience of the NETS.</p>
<p><b>Q9. Are there any other areas that require review and may act as a barrier for net zero in NETS SQSS?</b></p>
<p>See answer to Q4</p>
<p><b>Q10. Do you agree with the priorities and the delivery timescales described in Section 4? If not, please provide additional information that could allow us to revise the priorities.</b></p>
<p>SPR recommend same prioritisation of offshore transmission related themes 3.1 (a) and 3.1(b), as we believe they are interrelated and will have an impact on offshore network and converter design for pipeline projects.</p>

This consultation is available online here: [NETS SQSS Consultation](#)

Please return responses to [box.SQSS.Review@nationalgrideso.com](mailto:box.SQSS.Review@nationalgrideso.com) before 5pm on 9<sup>th</sup> March 2022.