



SQSS Review

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Objectives

- Introduce some of the topics that were identified for review.
- Receive feedback on the issues identified.
- Provide an opportunity for stakeholders to identify additional issues that need to be considered.

Questions

- **What do you think of the items of the list?**
- **What other topics that you think we need to consider?**
- **Which topic causes the most issues and needs to be prioritised?**

SQSS Review Deliverables Timeline

Deliverable	2021/2022 Milestones	2022/2023 Milestones
D12.1 SQSS updated to ensure it is designed to enable decarbonisation of the electricity system	<p>Publish prioritised list of issues to be addressed and action plan. Engage stakeholders.</p> <p>Publish plan for quick wins and initiate action if appropriate.</p>	<p>Milestones on delivery of quick wins and initiation of actions on broader topics.</p>

SQSS review topics

1. Main Interconnected Transmission System
 - a. Security and Economy Backgrounds
 - b. Interactions between NOA and SQSS section 4
 - c. Operational measures and commercial services as compliance
2. Offshore Transmission system
 - a. Loss of infeed risk
 - b. Facilitation of offshore coordination work
3. Operational Standards in E&W
4. Demand Connection Criteria
5. Generation connection requirements
6. Introducing CATOs
7. Governance

Main Interconnected Transmission System

What is the problem?

- a. Scaling factors/availability factors are due for a review
- b. Solar generation is not represented in the assumptions
- c. Low MWh capacity storage is treated using the same assumptions as large pumped hydro plants
- d. Interactions between NOA and SQSS section 4
- e. Operational measures and commercial services as compliance

Issues to be considered

- a. The review could be significantly resource intensive
- b. Potential need for a way to take into account off-peak background assumptions.
- c. Achieving balance between compliance requirements and scenario based Network Options Assessment
- d. Means of ensuring compliance where NOA recommendations do not align with the deterministic criteria.

Offshore transmission system

What is the problem?

- Review of offshore Loss of Infeed Risk criteria to assess the potential of removing the 1320MW restriction on offshore converters.
- Monitoring progress with offshore coordination work to ensure, where necessary, the SQSS is updated to facilitate offshore coordination.

Issues to be considered

- The removal of the 1320MW limit would potentially allow more economic designs. However, it would increase the potential for larger frequency deviation.
- The need to balance between the project specific nature of offshore projects and any generic recommendations that could be identified.
- Currently, Section 4 applies to any meshed offshore network. However, further clarification may be needed due to differences between Scotland and England and Wales.
- The implications of having a meshed, yet radially operated, offshore system.

Operational Standards in E&W

What is the problem?

- There may be some value in relaxing the operational standard in England and Wales (currently N-D) to match that in Scotland (N-1 under normal operating conditions provided that there is no widespread disturbance).

Issues to be considered

- Potential short to medium term savings in constraints costs.
- Impact on customers, risks NGET's plant, and interactions with NOA will need to be considered.
- Possible to take more outages for construction.

Demand Connection Criteria

What is the problem?

- The DNO demand connection standard (P2) has undergone some revisions and further revisions are planned. It will be necessary to revise the NETS SQSS demand connection criteria to ensure consistency at the point of interface.

Issues to be considered

- The use of “Gross Demand” instead of “Net Demand” is inline with SQSS Section 4.
- The use of DER and flexibility resources instead of circuits and transformers to provide the demand security required will allow these resources to be used to offset investment.
- There will be a need for a significant change to the Standard Planning Data to support this change.
- We need to ensure that both sets of standards continue to complement each other in an increasingly whole system world.

Generation connection requirements

What is the problem?

- Operating as generation, Interconnectors are not explicitly defined.
- Operating as demand, storage and interconnectors are not defined.
- The absence of a restriction on the loss of outfeed risk may increase the challenges associated with managing high frequency events.

Issues to be considered

- The limit on the loss of outfeed risk should reflect the asymmetry between the frequency control requirements, the plant capability, and the response available around the 50Hz line.
- Other design criteria are likely to reflect the existing practice of allowing maximum export and import under reasonable background conditions.

Introducing CATOs

What is the problem?

- Competitively Appointed TOs are not currently defined in the SQSS.

Issues to be considered

- Could be as simple as changing one or two definitions but could end up being a significant piece of work.
- Need to be coordinated with the work done elsewhere on developing the framework and legislation.

Governance

- Could be important to make the SQSS more dynamic and allow addressing issues as they arise. It is not necessarily an SQSS change and could be addressed by other means but we would like to keep it on the radar at this stage.

Questions

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- What other topics that you think we need to consider?
- Which topic causes the most issues and needs to be prioritised?