

SQSS Industry Consultation Response Proforma

GSR013 – Maximum Infeed Loss Risk

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 by **1 February 2013** to the SQSS Review Panel Secretary, James Cooper, at box.sqss@nationalgrid.com. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration by the SQSS Review Panel when it makes its recommendation to the Authority.

These responses will be published on the National Grid website and included in the Modification Report which is drafted by the SQSS Review Panel and submitted to the Authority for a decision.

Respondent:	Sarah Graham (01416140430, sgraham@ScottishPower.com)
Company Name:	ScottishPower Renewable Energy Ltd.

Industry Consultation Questions

Do you believe that the proposal better facilitates the proposed Applicable SQSS Objectives / existing SQSS Principles? Please include your reasoning.	ScottishPower agrees that the proposed modification (i.e. that no drafting changes to the SQSS are required) meets the principles and/or objectives of the SQSS. At this stage of development of the offshore wind industry and HVDC voltage source converter (VSC) technology there is limited information available regarding the reliability / failure rates of HVDC VSC converters and cable failure rates, particularly the likelihood of damage to multiple cables due to a single external event. We believe that using currently available information to place new requirements / restrictions on offshore network design may prevent the planning and development of an efficient and economical system of electricity transmission. The current requirements in the SQSS place sufficient requirements on offshore network design to ensure an appropriate level of security and quality of supply. It is only once operational experience of offshore wind farms and HVDC connections becomes available in the UK and throughout Europe that sufficient information will be available to complete an informed and quantitative assessment of the requirements stated in the SQSS.
Do you agree that the proposed modification meets the principles and/or objectives of the SQSS?	Yes, See answer above.

<p>HVDC converter fault – do you agree with the conclusion that HVDC converter faults are likely to occur at a frequency which should be covered by Normal Infeed Loss Risk and current SQSS remains valid in this area?</p>	<p>Yes. The only failure data currently available for HVDC converters is for current source converter (CSC) technology, which will not be utilised for offshore wind. Failure data for voltage source converter (VSC) will only become available once the systems have established operational experience. Therefore, at this time we agree that it can be assumed that HVDC converter faults are likely to occur at a frequency which should be covered by the Normal Infeed Loss Risk and that the current drafting of the SQSS remains valid.</p>
<p>Risk of multiple cable failure due to anchor damage – do you agree with the conclusion that there is no significant merit for SQSS to specify an offshore cable separation to mitigate the risk of multiple cable failure due to anchor damage?</p>	<p>Yes. ScottishPower agrees that there is no significant merit for the SQSS to specify an offshore cable separation to mitigate the risk of multiple cable failure due to anchor damage. As mentioned above, there is limited cable failure rate data available and most of the data obtained to date is from telecommunication cables, not HVDC power cables. There is also no experience of offshore networks and whether having multiple cables in close proximity increase the likelihood of multiple cable damage due to an external event such as anchor dragging. The scenarios and cable separation distances presented in the Working Group report are illustrative only and not based on actual experience / events therefore do not present an argument that is sufficiently robust to justify any changes to the SQSS. We agree that no drafting changes to the SQSS are required at this time.</p>