

GSR004

GB SQSS REVIEW REQUEST

DATE: 25th October 07

<p>1. Title of review request</p> <p>Review of Section SQSS Section 4 with regard to bus coupler security (No GSR004)</p>
<p>2. Name of Proposer</p> <p>Colin Bayfield, Network Development Manager, SP Transmission Limited.</p>
<p>3. Proposer Contact Details ⁱ</p> <p>Address: SP Energy Networks, New Alderston House, Dove Wynd, Strathclyde Business Park, Bellshill ML4 3FF</p> <p>Telephone: 01698 413169 (direct) 07753 624800 (mobile)</p> <p>e-mail: colin.bayfield@sppowersystems.com</p>
<p>4. Description of issue to be addressed by the request</p> <p>Section 2 of the SQSS (Design of Generation Connections) details the planning criteria for direct connection of one or more power stations to the GB Transmission system. Section 2.6 describes the events that have to be secured against the infrequent loss risk and these include a busbar-coupler or busbar-section switch.</p> <p>In Section 4 of the SQSS where the security criteria of the Main Interconnected Grid System are defined, busbar-couplers or section switches are omitted from all secured events.</p> <p>Note that section 1.8 of the SQSS refers to the “reach” of generation connections into the MITS and section 1.11 refers to occasions where parts of the transmission system where more than one set of criteria apply.</p>
<p>5. Description of the review request, its nature and purpose</p> <p>The major reinforcements taking place in Scotland to accommodate renewable energy have highlighted situations where a bus-coupler fault may cause system instability and lead to a loss of power infeed in excess of the infrequent loss risk. Note a bus-coupler fault at a substation with only two busbar sections, results in the complete loss of the substation.</p> <p>If busbar-couplers were included in secured events for the MITS, this may justify the provision of additional busbar sections at double busbar substations and hence the need for bus-section switchgear.</p>
<p>6 (a) Parts of the GB SQSS that require amendment to give effect to the request</p> <p>Section 4.6.4 would include bus-couplers and section switch faults as secured events which should not result in a loss of power infeed greater than the infrequent loss risk.</p>

<p>6 (b) Parts of the GB SQSS that would otherwise be affected by the request Section 5.3 and 5.4 are related None</p>
<p>6 (c) Nature and contents of amendments or effects Some additional investment in switchgear in Scotland. Effect in E&W unknown.</p>
<p>7. Justification of the request, giving the background thereofⁱⁱⁱ This request is raised against a background of increased interest within the industry of High Impact Low Probability (HILP) events, including the loss of substations from flooding, extreme weather events and terrorist action etc. A cost benefit is difficult to establish being the product of a very small number (probability), and a very large number (for the avoided cost of widespread disruption of supplies) .</p>
<p>8. Potential impact of the request on other Core Industry Documents^{iv} None</p>
<p>9. Potential impact of request on relevant computer systems^v None</p>

Guidance notes

- (i) Please include address, contact telephone/fax number and optionally, a contact email address.
- (ii) Impact on the GB SQSS - Where possible, give an indication of those parts of the GB SQSS which, in the opinion of the Proposer, would be likely to require amendment in order to give effect to (or would otherwise be affected by) the request and an indication of the nature and contents of those amendments or effects (including, where relevant, any need for the establishment of new, or removal of existing GB SQSS criteria and methodologies).
- (iii) Justification - Please give reasons why you believe that the request would better facilitate achievement of the GB SQSS objectives as compared with the then current version of the GB SQSS, together with background information in support thereof. If more space is needed you can use additional sheets of paper which should be attached to this form.
- (iv) Core Industry Documents include but not limited to The Grid Code, System Operator – Transmission Owner Code and the Connection and Use of System Code
- (v) Where possible, please give an indication of the potential impact of the request on relevant computer systems and processes used by the Transmission Licensees.
- (vi) Incomplete forms will not be processed. The Proposer may be asked to clarify any information that is not clear. The Proposer's attention is drawn to clause **Error! Reference source not found.** of the GB SQSS governance document.