

Great Britain Security and Quality of Supply Standard Fundamental Review

Planning and Operational Criteria Working Group Terms of Reference

Working Group: 4	Chairperson: Brian Punton Secretary: Bless Kuri
Title of Working Group: Planning and Operational Contingency Criteria (POCC)	
Background: <p>This Working Group has been formed by the GB SQSS Project Steering Group and forms part of the project for the Fundamental Review of the GB SQSS as detailed in the GBSQSS Fundamental Review Project Definition Document.</p> <p>The draft GB SQSS dated 29 April 2008¹ contains a co-ordinated set of criteria and methodologies that the relevant transmission licensees will be required to use in the planning, operation and maintenance of the GB transmission system (i.e. both the onshore transmission system and the offshore transmission systems).</p> <p>To ensure that unacceptable conditions on the GB transmission system do not occur under any circumstances would, of course, be cost prohibitive; both in planning and operational timescales. The GB SQSS, as the previous standards, recognises that some conditions are more likely than others and these are identified as 'secured events'. That is, events against which the GB transmission system is planned and operated such that, should those events occur, unacceptable conditions shall not arise as a result. Unacceptable conditions include: loss of power infeed in excess of stipulated limits; loss of supply capacity in excess of specified limits; unacceptable overloading; unacceptable voltage conditions; and system instability.</p> <p>There are a number of developments within the industry (e.g. anticipated large volumes of renewable generation expected to connect and the emergence of offshore networks connecting offshore power stations to the mainland) and reviews (e.g. the Transmission Access Review) which have the potential to impact on the GB SQSS. Given such developments, it is appropriate that a review of the GB SQSS is now conducted to ensure that secured events and unacceptable conditions used in planning and operating the onshore transmission system remain appropriate to current and forecast circumstances.</p>	

¹ A PDF copy of the 29 April 2008 draft GB SQSS can be accessed from the Ofgem website at the following link: [draft GB SQSS, dated 29 April 2008](#)

Scope:

The Working Group will review the planning and operational contingency criteria (Secured events and unacceptable conditions) of the GB SQSS in the light of current and forecast developments and make change proposals as necessary. All change proposals should be relative to the draft GB SQSS dated 29 April 2008 rather than relative to the existing GB SQSS dated 2004. Offshore planning and operational contingency criteria fall within the scope of the Offshore Transmission Systems work area (Working Group 5).

In developing change proposals, the Working Group shall include consideration of:

- N-1, N-2, N-D, N-3 etc. Any change proposals identified should be demonstrated as being appropriate and would include: the results of a survey of fault statistics; an assessment of the consequences of different types of event; identification of areas of the GB SQSS where there are currently regional differences; and consideration as to whether such differences are appropriate;
- The impact of changing the contingency criteria on demand security, constraint costs and infrastructure requirements from a MITS planning perspective;
- The impact of changing the contingency criteria on demand security and constraint costs from a MITS operational perspective;
- Take due account of the WG3 (MITS) views on the appropriate methodology for setting the generation and demand background conditions (recognising the contribution of different generation technologies) against which the need for additional transmission capacity is judged in planning timescales;
- Use of intertrip schemes (the current GB SQSS does not permit the use of generator and/or demand intertripping to create system capacity in planning timescales). The use of intertrip schemes to disconnect exports across interconnections with external systems is being considered by WG3 (MITS);
- The treatment of bus coupler and bus section switch faults under intact and outage conditions;
- Use of dynamic ratings;
- Voltage limits including: the differences (in percentage terms) between 400kV and 275kV voltage limits; the background and purpose of the 15min relaxation; the differences between planning and operational voltage limits; 90% reactive availability on generators; the 6% and 12% voltage step change limits; the interrelationship between voltage criteria for the MITS and voltage criteria for demand connections; a review of current methodology used for voltage analyses; and the use of manual and/or automatic facilities;
- Stability assessment criteria including; examine the rational for using the 3 phase close up fault criterion and failure of the fastest main protection; the increase in effective capacity available from the use of less onerous criteria;
- Criteria for assessing the consequences of any change proposal.

In addition, the Working Group shall take due account of:

- Interactions with the work of other Fundamental Review Working Groups;
- The potential impact of the findings of other relevant reviews (e.g. Transmission Access Review); and

- In the context of any change proposals to the GB SQSS arising, compatibility with other industry Codes (e.g. GB Grid Code).

Deliverables:

The Working Group deliverables include:

- Outline Principles Document (15 October 2008)
Written report to the Programme Manager on issues being addressed, new issues arising, approach adopted for addressing issues, progress to date and likely outcome (where reasonably known).
The Programme Manager will then consolidate the individual 'Outline Principles Documents' from each Working Group into a single document and submit for consideration by the Project Steering Group
- High Level Proposals (December 2008)
Written report to the Programme Manager on progress in the form of high level proposals to address issues.
The Programme Manager will then consolidate 'High Level Proposals' reports from all Working Groups into a single document and submit for consideration by the Project Steering Group (January 2009).
- Draft Change Proposals (May 2009)
Issue detailed proposals and assist the GB SQSS Drafting Working Group, as necessary, in developing draft change proposals to the GB SQSS in the form of additional and/or modified change proposals to the NGET change proposals dated 29 April 2008.
The Programme Manager, with the assistance of the GB SQSS Drafting Working Group, will consolidate the draft change proposals from all Working Groups into a single set of change proposals and submit for consideration by the Project Steering Group.
- Final Change Proposals (August 2009)
Issue final detailed proposals taking account of comments received on draft change proposals.
The Programme Manager, with the assistance of the GB SQSS Drafting Working Group, will prepare the consolidated set of change proposals to the GB SQSS (i.e. in the form of draft amendments to the draft GB SQSS dated 29 April 2008) and submit for consideration by the Project Steering Group.
- Final Change Proposals Consultation (First Consultation), (Sept to Oct 2009)
Assist the Project Steering Group, as required, to conduct a targeted consultation on the consolidated final change proposals with participants of the Industry Peer Review Group.
Following the First Consultation the GB SQSS Drafting Working Group will (with assistance of other Working Groups as necessary) amend the final change proposals to take due account of comments received. The revised final change proposals will be submitted to the Project Steering Group for onward submission to the GB SQSS Review Group for sign-off.
The Project Steering Group (on behalf of the GB SQSS Review Group) will then submit the final Change proposals to Ofgem.

In addition to the above, the Working Group shall:

- Prepare and maintain Working Group Risk and Assumptions Registers in accordance with the requirements set out in the Project Definition Document;
- Prepare and maintain a detailed plan covering the scope and deliverables contained within these Terms of Reference, again in accordance with the requirements set out in the Project Definition Document; and
- Liaise with other Working Groups; particularly on areas of interaction; and take due account of other reviews which are currently in progress (e.g. Transmission Access Review).

Programme:

The Working Group detailed program should align with the overall Project Plan.

Members:

Provisional Working Group membership:

- Brian Punton SHETL Chairperson
- Noel McGoldrick NGET
- Ian Gilbert NGET
- (Dave Coates NGET)
- (Jim Toal NGET)
- (Paul Plumtre NGET)
- Dave Adam SPT
- Bless Kuri SHETL
- Goran Strbac SEDG

Members in parenthesis () will provide input to specific areas.

Meetings:

The meetings for the Working Group will alternate between Scotland and England and consideration will be given to using technology to minimise travel requirements.

Approved by:

Project Manager: Andrew Hiorns

Working Group Chairman: Brian Punton

Date: 14 October 2008