

Planning and operating standards under BETTA: consultation response

1. National Grid Transco welcomes this opportunity to respond to the Ofgem/DTI consultation of July 2004 on "Planning and operating standards under BETTA"¹. Our response to the consultation is set out below and contains general comments, some points of detail with respect to the consultation document and the proposed GB Security and Quality of Supply Standard (SQSS), and some concluding remarks regarding governance of a GB SQSS and the overall suitability of the proposed Standard.

General comments

2. A single set of harmonised planning and operating standards has significant benefits in terms of the efficiency of planning and operational arrangements under BETTA, promoting equality of treatment of customers across GB in respect of system access and quality of supply, facilitating competition in generation, and in minimising the risks of service disruption as a consequence of BETTA.
3. We agree that the changes from the current standards in comparison with the proposed GB SQSS are those required for BETTA and to achieve harmonisation.
4. We believe that the regional differences in criteria in the proposed GB SQSS are an appropriate pragmatic response to the immediate requirements, though in due course when experience of planning and operation under BETTA has been gained, it may be useful to review these criteria to consider whether the regional differences have caused any problems and whether they remain necessary. The regional differences relate to a quite precise and limited set of circumstances, and represent a relatively minor part of the whole SQSS; the SQSS as a whole therefore dictates the same standards of security for all GB transmission users thus, in our view, making it unnecessary for there to be any different treatment in the development of connection and use of system charging methodology to apply under BETTA as a consequence of the SQSS.

Some points of detail regarding the consultation document

5. In paragraph 5.10 of the consultation document, a difference in the wording of present operational standards is cited, and is described as concerning so-called N'-1 security versus N'-D security. While there is this apparent difference, as paragraph 5.11 of the consultation implies, all the GB transmission licensees are nevertheless required to secure the 'supergrid' to N'-D under conditions that significantly increase the risk of system faults. However, we believe that it is important also to note the following:
 - a) the Scottish transmission licensees will seek to avoid the loss of large sections of the interconnected system or widespread disruption for double circuit fault outages under all conditions. (See the bottom of page 47 and top of page 48 of Volume 1 of the consultation document for further discussion);

¹ Ofgem document 156/04

- b) the Scottish licensees are understood by NGT to undertake operational planning ahead of the normal notice period of adverse weather on a basis of N'-D security on the 'supergrid';
 - c) NGT understands the Scottish 'supergrid' systems to be capable of being operated fully to N'-D with a notice period not greater than the normal notice of adverse weather either through the recall of planned outages or the constraining of generation.
6. In paragraph 5.27 of the consultation document, it is noted that high level review work was undertaken by National Grid Transco in respect of the maximum acceptable length of a generation circuit. While it was National Grid Transco's high level review that led to the suggestion of the particular criterion, it should also be noted that the judgement that the proposed criterion would not require additional investment in Scotland was one made by the Scottish transmission licensees.
 7. In respect of paragraph 5.42 of the consultation, we note that NSP366 does not explicitly require the transmission system to be secure for a fault outage when there is a prior outage (i.e. secure for N-2) for *system peak conditions* but rather it requires double circuit fault outages to be secured. The N-2 requirement *does* explicitly apply in NSP366 for off-peak demand conditions, and implicitly in respect of the requirement of paragraph 3.1 of NSP366 to consider operational standards. Paragraph 4.6.5 of the proposed GB SQSS is in recognition of the explicit requirement of NSP366 with respect to system peak conditions.
 8. In paragraph 5.43 of the consultation document, it is noted that paragraph 3.14 (iii) of the NGC SQSS sets out that in specific cases NGC may relax its operational criteria to consider only a single circuit risk. It should also be noted, however, that this 'relaxation' applies only in permitting an increase in the amount of supply capacity at risk of loss. (Unacceptable frequency conditions, unacceptable overloading, unacceptable voltage conditions and system instability are still to be avoided for a double circuit fault outage. This is further discussed on page 49 of Volume 1 of the consultation document).

Some points of detail regarding the proposed GB SQSS

9. We regard the formula included in Appendix C of the proposed GB SQSS as representing a suitable harmonisation of existing planning criteria. However, the wording of the definition of the term A_T gives rise to some ambiguity about the practice of applying the methodology. This risks different interpretation between the different licensees and inconsistency of results, in particular in respect of whether the factor is generally expected to be different for each individual generating unit, or the same for generators of the same type. We suggest that the following revised wording in defining A_T would be an appropriate reflection of present practice and would resolve the ambiguity:

an availability representative of that of generators of plant type T at the time of system peak demand.
10. Similarly, we suggest that the text in paragraph C.5 of the proposed GB SQSS should be amended so that instead of reading "...their output is calculated by applying a scaling factor to their *registered capacity* proportional to the expected availability of the generating plant type at the time of *ACS peak demand*...", it reads "...their output is calculated by applying a scaling factor to their *registered capacity*

proportional to an availability representative of that of the *generating plant type* at the time of *ACS peak demand...*”.

11. The phrasing of paragraphs 2.10.3 and 4.6.3 of the proposed GB SQSS does not seem to give quite the intended meaning. In the draft published in volume 2 of the consultation, these paragraphs both read “a *double circuit overhead line* where any part of either circuit is in England and Wales or the SHETL area”. We believe that this should read either “a *double circuit overhead line* where any part of either circuit is in the England and Wales area or the SHETL area” or “a *double circuit overhead line* where any part of either circuit is in England, Wales or the SHETL area”.
12. The phrasing of paragraph 5.4.1 of the proposed GB SQSS does not seem to give quite the intended meaning. We suggest that it would be better phrased either as “a *double circuit overhead line* where any part of either circuit is in the England and Wales area; or”, or “a *double circuit overhead line* where any part of either circuit is in the England or Wales; or”.
13. The phrasing of paragraph 5.4.2 of the proposed GB SQSS does not seem to give quite the intended meaning. We suggest that it would be better phrased either as “a section of *busbar* or mesh corner in the England and Wales area” or “a section of *busbar* or mesh corner in England or Wales”.
14. The definition of unacceptable overloading in section 7 of the proposed GB SQSS lacks a word, and should read

The overloading of any *Primary Transmission Equipment* beyond its specified time-related capability. Due allowance shall be made for specific conditions (e.g. ambient/seasonal temperature), pre-fault loading, agreed time-dependent loading cycles of equipment and any additional relevant procedures.
15. The term ‘interconnected’ is defined in section 7 of the proposed GB SQSS but not used elsewhere in the document except in the term ‘main interconnected system’ which is in any case defined. Thus, we suggest that the definition of ‘interconnected’ could be omitted from the final GB SQSS.

Governance and concluding remarks

16. We agree with Ofgem/DTI that arrangements should be made for governance of the GB SQSS and for its review, especially in light of experience in applying it and in particular in respect of the continuing need, or otherwise, for regional differences. We note the need for all three GB transmission licensees to be centrally involved in any such arrangements. To the extent that changes to the GB SQSS would affect the responsibilities of each transmission licensee, we believe that consensus between all the transmission licensees should be sought for any changes, although provision may need to be made for circumstances if or when consensus cannot be reached.
17. Subject to resolution of the above points of detail, we agree with Ofgem/DTI that the draft GB SQSS should be “the relevant standards” referred to in the proposed standard licence condition for each of the transmission licensees under BETTA. We also agree with Ofgem/DTI that there is value in the transmission licensees developing a common approach, expressed by a guidance note, to the application of the security and quality of supply standards that will apply under BETTA, and that the

guidance does not need to form part of the security and quality of supply standards that will be defined as conditions of the transmission licenses under BETTA.