BSSG Notes & Actions

15 April 2008

1. Attendees:

Duncan Burt	Chair
Ben Sheehy	EoN
Clair Maxim	EoN
David Small	SSE
Graham Hathaway	National Grid
Kirsten Hall	Ofgem
Lilian MacLeod (part)	National Grid
Malcolm Arthur	National Grid
Raoul Thulin	RWE
Rob Rome	British Energy
Simon Lord	First Hydro

2. Frequency Response Discussion

Information Provision
GH to progress provision of grouped BOA costs to publish in the FFR market report.

Provision of information on excluded providers.
MA to progress issues and proposal internally.
May need to inform the compliance working group of our proposal.

Draft CUSC proposal
GH gave an outline of the draft proposal. The draft proposal looks to change the method for determining HF volumes for instances where units are operating close to SEL and have re-declared their MEL. During these circumstances, the method of calculating the capability can over-estimate the volumes. This can lead to under provision of HF response (compared to the calculated volumes). The proposal attempts to change the calculation methodology to better reflect the actual capability of the units during the above circumstances.

Current volume calculation methodology anchors the capability matrix of the unit at MEL. As the unit output moves towards SEL, the HF capability reduces to zero at SEL. However, as the capability calculation is achored to MEL, if MEL is reduced, the capability shifts beyond SEL, indicating that there is additional HF response beyond the units capability.

The proposal looks to anchor the HF response at SEL, making it independent of where MEL has been re-declared.

Overall, the BSSG agreed that the current method of determining capability was incorrect and agreed that in principle, a modification that better reflects the actual capability would better facilitate the CUSC objectives.

There were two main alternative methods discussed. The aim of these methods was to better reflect actual generator performance with either changes in MEL and / or changes in SEL.

Alternative 1
This anchors the capability to MEL but changes the calculation of the capability at SEL, limiting it to output (x) minus SEL (HF response is the lower of capability or

x-SEL). This assumes that the HF response to output is 1:1 near SEL. This is not true for all units. One potential solution is to use (x-SEL)/modifier. The modifier term would need to be determined to best fit the fleet of units capabilities near SEL.
GH to determine the best fit for the modifier.

Alternative 2
To better reflect the actual capability, each deload point could have a set of equations relating to SEL and MEL that would determine its output. This would be a more accurate solution, however, it would be considerable more complicated.
GH to consider the potential for developing the methodology for each deload point.

To determine which of the three methods best reflects the capability and does not overly complicate the calculation methodology, it would be beneficial to determine how the current units operate at or near SEL, and how the capabilities are changed with changes to MEL and SEL.
Generators to determine the current operating regime of their generators and potential implications of any changes.

MA to write a paper outlining the issue and potential solutions.

3. Reactive

The BSSG has been asked to consider a number of questions regarding the procurement of reactive power by the GCRP. They have asked the following:

The Grid Code Rated MW Working Group would therefore formally like to request that the Balancing Service Standing Group (BSSG) considers the following questions and would like to receive confirmation as to whether the BSSG will be able to instigate a formal review with any indicative timescales for the progress of such a review.

1. If there was a reduction in the technical requirements for the mandatory provision of Reactive Power, from 0.85 to 0.90 on the lagging side, could the market support the procurement of the 'shortfall' of MVArs via an appropriate 'commercial/market mechanism'?
    - A previous Grid Code Working Group identified that it would be possible to reduce the minimum technical requirement for the mandatory provision of Reactive Power specified in the Grid Code, if the shortfall in MVAr could be procured via market arrangements. The relevant Working Group report is attached for reference.

2. Could the market support the procurement of MVArs for a 0.85 lagging transient (post fault) requirement? If yes, what would be the market arrangements?

3. To consider any other commercial arrangements that would permit generating units to operate above Rated MW whilst not having an obligation to operate outside of the envelope defined by the current performance chart (e.g. MW de-load contract)

LM and DB provided an overview of the issue considered by the Grid Code Rated MW Working Group. Current Grid Code requirements state that generators need

to be capable of providing defined capability at rated MWs. However, recent developments indicate that generators can increase their output above rated MWs. For instances where generators have increased their output capability above rated MWs, they cannot provide reactive power at this increased MW output level to the limits defined in the Grid Code. The generator is technically compliant with the Grid Code as the rated MW level has not increased and provision of MVars at this level meets Grid code requirements.

The questions above considering the general relaxation of the Grid Code requirements from 0.85 to 0.9, with the 0.9 requirement being defined at maximum output level. Initial assessments have indicated that for steady state conditions, the relaxed levels do not create any system issues. The increased MVar range is required post fault to maintain and support voltage levels.

The BSSG concluded that for questions 1 & 2, there is a simple short term solution where the SO can reduce the MWs of a station if additional MVars are required (both pre- and post-fault MVars). In addition, over the longer term, a market mechanism could be developed to procure the additional MVars. What this market may look like was not discussed in detail.

However, whether a market option, static MVar devices or accessing additional MVars using BOAs is the best industry solution depends on the costs involved.

Therefore, the BSSG will request additional information from the Grid Code Rated MW Working Group regarding the indicative costs associated with National Grid or the generators investing to provide additional MVars to meet the 0.85 criteria.

DB to discuss with LM. LM to initiate additional work from the Grid Code Rated MW Working Group.

The overall view was that the BSSG was willing to initiate the work to consider a market solution.

4. Next meeting

To be arranged in prior to the next CUSC panel.