

CUSC Working Group Update – Tom Ireland

CUSC Amendments Panel, 29th November 2009



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CUSC Working Group Update -

Gas Insulated Switchgear

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Summary of Terms of Reference

- ◆ Joint Grid Code and CUSC Working Group under Grid Code Governance
- ◆ Identify all current issues with Gas Insulated Switchgear (GIS)
- ◆ Identify all possible options to resolve issues for both generation and DNO connections
 - ◆ Consider Grid Code and CUSC consequences
 - ◆ Advantages and disadvantages
- ◆ Agree a preferred option(s), consider its implications and implementation and propose a solution

Nature of GIS

- ◆ GIS is inherently large ‘tubes’ containing multiple substation assets surrounded by an insulating gas
- ◆ Different manufacturers are not inter-compatible
- ◆ Therefore:
 - ◆ There is limited competition in the construction of generator GIS bay
 - ◆ it is difficult to identify a single standard construction and operational ownership boundary
 - ◆ Complicates the construction and operation procedures

History and Areas of Significant Discussion

- ◆ Under the original proposal, all currently generator owned GIS assets would be moved to Transmission Owner ownership
- ◆ Raised debate associated with:
 - ◆ The liabilities from a generator at TO asset single circuit risk
 - ◆ Discrimination between User connected by AIS and GIS
 - ◆ The level of competition in the maintenance of generation owned GIS

Where we are

- ◆ At the last WG meeting, four options were proposed:
 - ◆ No change
 - ◆ Move the standard boundary position for all
 - ◆ Allow User choice between two standard boundaries
 - ◆ Single party builds all GIS assets then transferred to current ownership boundary
- ◆ Will only apply to future projects (2012/13)
- ◆ Detailed procedures and drafting to be worked up for the options

NOTE GCRP have extended ToRs to February 2010

NOTE Will report back to GCRP and CUSC Panel in February

CUSC Working Group Update -

Future of Frequency Response

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Terms of Reference

- ◆ Joint Grid Code and BSSG Working Group established in May 2009 to assess the technical and commercial aspects of frequency response, for current generation mix and anticipated future generation technology. Any impact from the SQSS review should be considered. The WG will:
 - ◆ Examine the appropriateness of the existing Grid Code obligations
 - ◆ Identify and assess feasible options that take account of the next generation of power stations whilst maintaining system security
 - ◆ Agree and recommend a preferred option, drafting any required industry text modifications

History and significant discussion areas

- ◆ Frequency response is a mandatory generator provided service, where output is adjusted rapidly after a frequency excursion to regain system stability
 - ◆ Generation must be capable of a 10% increase within 10s
 - ◆ Many expected future technologies (supercritical coal, wind, next generation nuclear) state such obligations are very problematic
- ◆ Under 'Gone Green' scenario, without enhanced FR capabilities annual System Operation cost estimated to increase from around £0.2bn to £1.5bn p.a.
- ◆ Generator reps have been unable to quantify the costs (capital & operating) of meeting existing FR obligations

Where we are and next steps

- ◆ A number of high level options are being developed and assessed including:
 - ◆ Discharging obligations through procurement from others
 - ◆ Obligations summated at the portfolio level
 - ◆ Obligations differ by generating technology
 - ◆ Demand side response
 - ◆ Full market establishment
 - ◆ System Operator provision of response
- ◆ Working Group expected to report findings to the Feb/May 2010 GCRP

Issue with Future Interconnector response

- ◆ BritNed identified a number of issues with future interconnector FR provision
- ◆ Discussed on 28th October WG meeting
- ◆ BritNed confirmed they are technically capable of meeting FR obligations although identified issues with codes:
 - ◆ How are interconnectors dispatched for FR?
 - ◆ How are imbalance volumes to be calculated?
 - ◆ Currently, the interconnector holds risk for imbalance costs at remote end and compensation mechanism is not relevant
- ◆ **Propose to assign to BSSG for assessment**

Draft Terms of Reference Principles for BSSG

- ◆ Examine the barriers to the commercial mechanism for frequency response provision by existing and future interconnectors
- ◆ Identify and assess feasible options
- ◆ Agree and recommend a preferred option
- ◆ Draft and assess the impact of any CUSC text modifications necessary for the recommendation
- ◆ Consider any modifications to other industry codes
- ◆ Report back to the May 2010 CUSC Panel with recommendation

- ◆ **AGREE Draft Terms of Reference principles**
- ◆ **NOTE A full 'draft ToR' will be circulated for agreement**
- ◆ **AGREE Final 'draft ToR' to be submitted to BSSG**