

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

Where we are

- ◆ Further detailed work is being performed on the enhancement and improvement of three options, already available to a User:
 - ◆ Standard Boundary “I” - The existing boundary with CUSC definition changes to improve transparency. Potential improvements to transparency
 - ◆ Standard Boundary “II” - Majority substation owner owns GIS User bay assets (consistent with current approach within Scottish Power region and proposed RWE Model)
 - ◆ A single party constructs all GIS assets and transfer at completion
 - ◆ Recommendation to develop a standard exhibit for DNO Self Build agreements

NOTE Significant majority of code changes in CUSC (Charging Methodologies)

AGREE Confirm final proposals, take conclusions to CUSC Panel and Report back to May GCRP

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
 - ◆ Report back to May 2010 GCRP

Where we are and next steps

- ◆ The Working Group has discussed the background and appropriateness of the current Frequency Response products (primary, secondary and high) – suggestions for alternatives are being considered
- ◆ Potential developers of new nuclear and future wind farms have fed back that there is little incremental investment and operating costs associated with providing current FR provisions although there is increased risk of damage and wear that must be factored especially at high levels of frequency provision

NOTE Next meeting 15th Feb

NOTE Substantial work to be performed to report to GCRP in
May

Issue Update -

Back up Protection Specialists

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Back-up Protection

- ◆ An informal group set up to clarify the Grid Code in terms of fault clearance and back-up protection
- ◆ Following the last meeting on 30th March 2009 generators were requested to undertake a survey of current back-up protection arrangements
- ◆ National Grid has been subsequently been contacted to request additional fault level data in order to complete survey
- ◆ National Grid's protection experts have not been able to provide the requested data due to confidentiality and technical reasons
- ◆ **NOTE** - Propose to set up a bilateral meeting to discuss requirements and to progress issue - **Outstanding**

Working Group Update -

Frequency and Voltage Operating Range

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Terms of Reference

- ◆ Grid Code Working Group established in November 2009 to review the GC requirement for frequency and voltage variations on generation.
- ◆ The WG will:
 - ◆ Establish historic performance and consider how this is likely to change in the future
 - ◆ Establish generation design criteria/ standards and the impacts of operation at abnormal voltages/ frequencies
 - ◆ Consider whether current obligations are appropriate
 - ◆ If required, agree draft industry text proposals
 - ◆ Report back to May 2010 GCRP

Where we are and next steps

- ◆ Inaugural meeting held on 29th January 2010.
- ◆ Topics discussed:
 - ◆ Existing Grid Code obligations
 - ◆ Historic system performance
 - ◆ Expected future trends in frequency of system excursions
 - ◆ Generation design criteria/ plant procurement
 - ◆ Abnormal Voltage/ Frequency interactions

Note: On track to report to May GCRP