Compliance working group update

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Summary of terms of reference

Technical Performance

The Working Group to review, identify and resolve any disparity between the Grid Code and Compliance Guidance Notes regarding technical performance obligations.

Compliance Process

The Working Group will consider and make applicable recommendations regarding the codification of the compliance process (commissioning and lifetime phase) for directly connected and Large Power Stations into the Grid Code.

OC5 Review

The Working Group will consider the applicability of the current OC5 provisions in light of the possible codification of the compliance process.

Review of LEEMPS

The Working Group will re-evaluate the existing Licence Exempt Embedded Medium Power Stations provisions with particular reference to the respective responsibilities of Users and NGET and identify applicable recommendations.

Progress to date

- Proposals in respect of technical performance have been approved by OFGEM and are included in the Grid Code
- A working group report on the other areas was submitted to the February 2009 GCRP. This report highlighted a small number of significant unresolved issues
- The GCRP asked the group to consider these unresolved issues further
- Following further group meetings revised Grid Code text proposals are being developed by NGET
- It is expected that the revised text will be circulated to the group shortly

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

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

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 Update -

Future Interconnector Frequency Response

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Future Interconnector Frequency Response

- BritNed identified a number of commercial and code issues with future interconnector FR provision
- **NOTE:** CUSC panel sent to BSSG with draft ToR:
  - 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
  - Consider any modifications to other industry codes (BSC probable, Grid Code unlikely)
- Report back to the May 2010 CUSC Panel

Working Group Update -

Frequency Obligations for Small Embedded Generators (E3C)

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Summary of Terms of Reference

- Joint Grid Code and Distribution Code Working Group
- Review the resilience of small EG to frequency excursions (both HF and LF) and investigate options for improvement
- For existing small plant determine existing code obligations, current practice for protection settings, performance during May Incidence and what effect the small frequency range has on transmission system
- Where practicable and cost benefit exists;
  - Review potential to modify the frequency range on existing small embedded gen (June 09)
  - Review & align GC and DC to improve future resilience (December 09)

Discussions to date

- Limited information existed on the performance of small generators during May Incident
- Current frequency obligations on small generators not very clear
- Multi stage protection settings being debated
- Letter drafted by WG and issued by all DNOs to 5 – 50MW embedded generators:
  - Explained and justified rationale for change
  - Sought current protection frequency settings
  - Requested whether settings to be increased consistent to future Distribution Code requirements
  - If not, detailed justification was requested

Update from Working Group DNO Reps

ENW: 26 customers contacted

- 2 formal responses (total 8.5MW, CHP & Natural Gas) both have applied the single stage settings.
- 2 others are happy to do so but yet to locate resource
- Informal resource from remaining: resource concern is a common feature

CN: 21 letters sent out

- 4 – incorrect address (3 now found and contacted)
- 1 reply received yesterday – contact not viewed yet

CE - Written to 44 generators, responses from 7

- 3 positive (corresponds to 29MW from 930MW contacted
- 1 doesn't have frequency relays
- Remainder still to confirm position

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Current position & panel recommendations

- Last Working Group meeting held on 13th Nov
- Final Distribution Code drafting being finessed
  - 2 stage protection setting proposed
  - Under frequency: 47.0Hz (0.5s), 47.5Hz (90s)
  - Over frequency: 52.0Hz (0.5s), 51.5Hz (90s)
  - Proposed to be applied to all existing and future generator over a MW threshold (tbc 1-5MW), where possible
  - DNO representatives chasing responses from current embedded generators
- **Panel requested to note imminent deadlines and support process**

Issue Update -

Back up Protection

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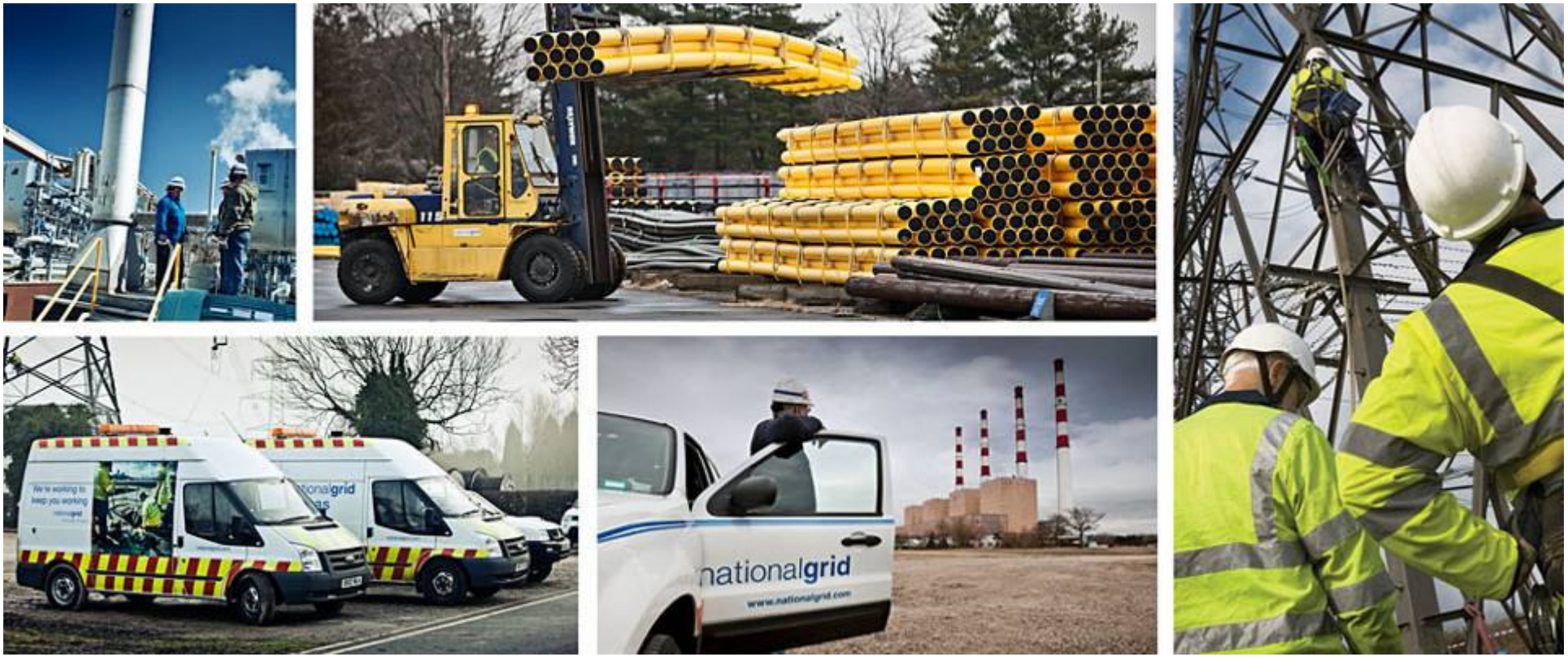
Back-up Protection

- 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
- Propose to set up a bilateral meeting to discuss requirements and to progress issue

GCRP Working Group Update

GCRP, 18th November 2009



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Working Group Update -

Provision of BM Data by Intermittent Generation

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Summary of Terms of Reference

- Consider how the current arrangements for the provision of BM and OC2 Data could be amended to facilitate provision and BM participation by intermittent generation
- Develop proposals to change the Grid Code to accommodate amendments
- Report to the Grid Code Panel by Feb 2010

Where we are

- 4 meetings have taken place with a 5th planned for Jan 2010.
- The Group is reviewing the current definitions for the data to ensure that assumptions on the availability of the power source are unambiguous.
- Should the required accuracy for PNs be defined or is the term 'best estimate' adequate.
  - Accuracies of recent PN submissions by PPMs have been analysed to establish current practice
  - Would defining the accuracy solely for intermittent generation be discriminatory
  - PN accuracy for non intermittent generation will be analysed for comparison
- Revised definitions will be developed as the issues associated with changes are resolved
- Inherent inaccuracies in PNs from intermittent generators could impose financial costs on the Generators if Bids/ Offers are accepted by NGET. This is an obstacle to BM participation.
- A number of potential solutions have been discussed including
  - Allowing PNs to be changed after Gate Closure
  - Use of MEL as proxy for PN (avoiding the need to change Gate Closure arrangements)
  - Use of a Power Available Data i.e. the output from the PPM and the Bid/Offer not been accepted.
- Power Available will be discussed further at the next meeting
- The Group is likely to ask for the deadline for reporting to the GCRP to be extended