

# Extraordinary Grid Code Review Panel Meeting

## Minutes and Actions Arising from Meeting No. 41 Held on 20<sup>th</sup> January 2010 Via Conference Call

### Present:

John Greasley	JG	Panel Chairman
Tom Ireland	TI	Panel Secretary/ Member

### National Grid

William Hung	WH	Alternate Member
Brian Taylor	BT	Member
Mark Perry	MP	E3C Working Group Chairman/ Observer

### Generators with Large Power Stations with total Reg. Cap.> 3GW

John Norbury	JN	Alternate Member
Claire Maxim	CM	Member
Campbell McDonald	CMcD	Alternate Member
Jim Barrett	JB	Alternate Member (part)
Ham Hamzah	HH	Observer
John Morris	JM	Alternate Member
James Anderson	JA	Alternate Member

### Generators with Large Power Stations with total Reg. Cap.< 3GW

David Ward	DW	Member
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### Generators with Small and Medium Power Stations Only

Stephen Andrews	SA	Alternative Member
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### Network Operators in England and Wales

Alan Creighton	AC	Member
Mike Kay	MK	Member

### Network Operators in Scotland

### Relevant Transmission Licensees

### Generators with Novel Units

Sigrid Bolik	SB	Alternative Member
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### Ofgem Representative

Bridget Morgan	BM	Member
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### Non Embedded Customers

### BSC Panel Representative

## 1. Introductions/Apologies for Absence

1. Dave Smith (Chair) was unavailable and therefore John Greasley chaired the meeting.
2. Apologies for absence were received from John Lucas, Guy Nicholson, Alan Barlow, Barbara Vest, Dave Smith, Yvonne Ryan and Dave Carson.

## 2. Minutes of Previous Meeting

3. Minutes from the previous GCRP will be reviewed at the next regular GCRP meeting on the 4th February 2010.

## 3. Grid Code Working Group Reports

### Grid Code Working Group Reports

4. JG informed the Panel that an Extraordinary meeting had been convened so as to allow the assessment of whether the E3C Small Generator Frequency Obligations Working Group has met its Terms of Reference and that the Working Group Report could be approved. If this was the case then the working group could be stood down. In addition, the GCRP can be informed of the findings to date and of the proposed next steps. MP was introduced, as the Chairman of the Working Group.
5. MP provided a background summary, namely that a low system frequency incident had occurred in May 2008, when substantial generation had been lost which ultimately led to the operation of the first stage of the Low Frequency Demand Disconnection Scheme. Consequently a report was compiled by National Grid on the incident and was submitted to the Energy Emergency Executive Committee (E3C) which recommended the establishment of a joint DCRP and GCRP Working Group and placed an action on the chair of the GCRP to do so. The joint Working Group agreed to coordinate its work with a Distribution Code Working Group which had already established in reviewing and updating the Distribution Code and the associated Engineering Recommendation documents (i.e. G59/1 and G75/1). The E3C Small Generator Working Group met nine times during the last twelve months with the last meeting being held on 15<sup>th</sup> January 2010.
6. The Working Group produced and agreed a WG Report which had been previously circulated to Panel Members. MP explained that consensus had not been achieved on all elements of the Report although it had been clearly indicated where debate still existed and all views clearly represented in the report. At the final meeting the majority of the Working Group had supported the proposals in the Report and the views of the remaining minority had been included. Several minor points of clarification were requested, and made, to this final version of the Report although these do not alter the proposals.
7. The Working Group's proposal includes a change to the Distribution Code. No changes are proposed to the Grid Code. The proposal adopted the over-frequency and under-frequency settings recommended by the DCRP G59 Review WG and introduced a requirement for all new (and existing with a registered capacity >5MW) small embedded plant to stay connected, where possible, over a wider frequency range although caveats have been included to allow a generator to trip if there is a risk through physical damage such as vibration or over heating. In addition, the proposed changes have been worded so that a generator remains able to disconnect in order to meet pre-scheduled operational commitments. The Working Group believes resilience will be increased whilst concerns raised by generator parties, relating to additional

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physical risk and costs have been taken into account with this practical solution.

8. MP explained that one of the actions assigned by the E3C was to modify the frequency protection settings for existing generators in a short timescale, ahead of any Distribution Code changes. Consequently, the Working Group coordinated the issuing of a letter from each DNO to all Generators with Small Power Stations rated at 5 MW and above. The purpose of the letter is to ascertain what the current protection settings are for each generator, and to determine whether they can be altered in line with the proposed G59/2 WG recommendations. Members of the Working Group stated that substantial effort had been put into this information gathering exercise and it was important to ensure the remaining responses were chased and information considered. It was proposed that the DCRP may be the correct body to take this responsibility forward. MP highlighted that the output of such an exercise may determine whether further obligations or remedial action is required.
9. The Working Group Chair explained that a joint G/59 – E3C (small gens) Consultation is proposed, as there is a clear linkage between the two. That withstanding, the Consultation document intends to make it clear that there are two separate components and the rejection of one part should not automatically lead to the rejection of the other, although this will ultimately be an Authority decision.
10. A Panel Member identified a typographical error in the Working Group Report, where the Distribution Code changes in Appendix 2, are shown under the title of “Grid Code Changes”.
11. As the primary intention of meeting was to agree to the Consultation process and ensure that the WG has met its Terms of Reference (ToR), each individual ToR objective was discussed. In summary it was found that the ToR had all been met, subject to minor comments.
12. The first objective (1) was to gather available information from generators from during the May Incident and to assess whether enhanced operational data collection is required. It was concluded that no proposals are required to increase operational data provision from small generators at this time although in the future National Grid stated their intended to assess this further and report back to the industry. WH reported that no significant additional information on generator performance during the incident had been fed back when an information request was published via the Association of Electricity Producers (AEP). Two very high level emails had been received but with very limited details. CMcD suggested that such information, however vague, should be included in the Working Group report as effort had been invested in getting it. WH and MP agreed to report the findings.
13. Objectives 2, 3 and 4 require the determination and documentation of current practices and requirements of frequency obligations for small generations. It was agreed that the required information has been included in the report, via the duplication of a paper composed by a Working Group member.
14. The current frequency protection settings for existing small generators were to be determined (objective 5). The information was requested via the letter from the DNOs. CMcD commented that he believed that this letter had not been received by all the required generators. TI confirmed that following an action from the previous GCRP meeting, Dave Smith (Chair) wrote to all 5-50MW generators through the AEP to ensure all were aware of the information request. The question was raised as to how a generator would know who to contact about this information and SA reiterated that BV had offered to be the point of contact for affected generators. [post meeting note: Both the letter from the GCRP Chair and the original DNO letters contained contact details for the relevant DNO rep]

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15. An objective (6) required a cost benefit analysis to be performed for any proposals. The Working Group concluded that the cost of holding additional, required reserve would outweigh the one off cost of changing frequency protection settings. It was reported that there was some debate on the topic as the System Operator has not been holding additional reserve since the event. National Grid responded that this was only a temporary measure on the basis that system resilience would be increased in a short time. NGET included this policy in its report to the E3C and the E3C accepted this report. DW questioned how much reserve £150m pa covers (as this sounded very low to cover all the High Frequency risk). MP confirmed that was for an approximate doubling of cost of response that would not cover periods when a high level of embedded generation generated.
16. CMcD stated that usually a cost benefit analysis identifies which parties are exposed to the various elements of cost, which is not the case in the Working Group Report. SA questioned whether generators were expected to fund the protection setting changes or if there was a proposed cost recovery mechanism. MP confirmed that the generator was expected to fund the required protection setting changes. MP confirmed that no re-planting or additional equipment was expected to be needed to be installed by a generator but just the cost of changes to protection settings. Caveats are included in the draft text so that a generator can disconnect if there is risk of damage to its plant. The generator will need to agree settings with its DNO. SA questioned what would happen if agreement can not be found and MK confirmed that as it is currently drafted it would be the same as any other non compliance issue.
17. The Panel noted that, assuming approval is given for consultation, it would be particularly useful to hear from pre-1990 generation as this was when G/59 was first implemented.
18. Objectives 7&8 were related to improving system resilience and the WG concluded that the proposals achieve this. JN requested clarification whether the proportion of Embedded Generation was truly increasing. MP stated that although there is some debate, it was accepted that Embedded Generation is already at very substantial levels, which justified the proposals made and that in the future it is only likely to increase.
19. A Panel Member believed that further justification and cost benefit analysis for the proposal to change the obligations for future plant smaller than 5MW was required. WH confirmed that 6 manufacturers had attended a Working Group organised seminar to discuss the marginal cost implication for smaller generators. SA did not believe that enough evidence has been found for sub 5MW generators to show that these proposals are cost effective. WH agreed that the manufacturers meeting covered size of plant below 5MW and therefore it is felt that this was taken as far as possible. SB confirmed that the 5MW de-minimis limit was sensible for existing plant. SA suggested that the AEP could take the action to identify which manufacturers construct sub 5MW machines and ensure they feed into the Consultation. WH also confirmed that he and MK attended a meeting held by the Association of Manufacturers of Power generating Systems (AMPS) (which WH believed represented around 80 member companies) to discuss the feasibility and costs of the proposed settings for smaller generators. Both MK and WH could not recall any issues raised from the manufacturers, who only seemed supportive.
20. Objective 10 required regular progress reporting and a final report to be submitted to the E3C. JG confirmed that Phil Sheppard (National Grid) has been providing regular reporting and will provide a Report to DEC and the E3C on the Working Group's conclusions.
21. The Panel agreed that the ToR has been met and that the Working Group can be stood down. CM requested that the DCRP legal drafting will be fully replicated in the Working Group Report, which will be re-issued, as this was

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needed to give readers of complete understanding of the proposals. Via SA, Barbara Vest had suggested that specific questions should be included in the Consultation to aid the input from smaller generators.

22. The Chairman closed the meeting by highlighting how much effort that the Working Group has put towards this report and thanked all the Working Group members for their efforts.

#### **4. Any Other Business**

23. There was no other business.

#### **5. Date of Next Meeting**

24. The next meeting will be held on 4<sup>th</sup> February 2010 at National Grid House, Warwick. The meeting will commence at 10:00am.