

# Summary of Meeting and Actions

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Meeting Name	Rated MW Working Group
Meeting No.	5
Date of Meeting	Tuesday, 6 <sup>th</sup> May 2008
Time	10:00am – 2:00pm
Venue	G1 & G2, National Grid House, Warwick

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This note outlines the key action points from the fifth meeting of the Rated MW Working Group.

## 1) Minutes from Previous Meeting

The draft minutes of the Grid Code Rated MW Working Group meeting held on 6<sup>th</sup> March 2008 were APPROVED, and will be accessible from the Grid Code Website.

## 2) Working Group's Scope

The Working Group noted that the Grid Code was currently silent on the Mvar provision of a Generating Unit, if that unit was operating above or below Rated MW. National Grid had expressed concerns regarding the potential implications on the GB Transmission System (planning and operational timescales) of Generating Units exceeding their Rated MW e.g. planning assumption incorrect, management of the GB Transmission System more complex within operational timescales.

National Grid believes that going forward the current wording in the Grid Code is not sufficiently robust given the uncertainty and complexity which it will introduce into the planning and operation of the GB Transmission System. The Working Group noted that they had been tasked with identifying a generic solution which could be codified within the Grid Code which addressed both National Grid and User's requirements regarding Generating Units exceeding their Rated MW

## 3) Transient Solution

The Working Group continued to discuss the feasibility of introducing different continuous and short term reactive power capabilities. In practice this would mean allowing the despatch of Mvars within a reduced capability (for example 0.90 power factor lagging) during normal operation of the Transmission System whilst ensuring that during post fault circumstances the Generating Unit would be capable of providing 0.85 lagging at their pre-fault MW output level for a limited period.

National Grid would have a limited period of time (1.5 hours - tbc) to re-configure the network to alleviate the effects of the fault. After this period of time the Generating Unit would return the unit's output to within its performance chart. It was noted that if National Grid had not rectified the problem within the specified time slot, it would take Bid Offer Acceptances to allow the reactive power output to be sustained whilst returning the unit to within its performance chart.

National Grid provided additional analysis, from a sample data set which was representative of the GB Transmission System, which illustrated that it was rare for Generating Units to be despatched outside the 0.90 lagging envelope during normal operational circumstances.

Working Group members indicated that from a Generators perspective it would be difficult to fulfil the obligations of 0.85 lagging at their pre-fault level for 1.5 hour due to the physical constraints of the equipment.

The Working Group discussed the time period for which the Generating Unit would have to maintain 0.85 lagging at the pre-fault MW output level. The group were informed that the time period would have to enable National Grid, acting as GB System Operator, sufficient time to secure the Transmission System after a fault. National Grid would be

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seeking to minimise the risk of slow voltage collapse on the Transmission System hence the indicative timeframe provided.

## 4) Reactive Markets and BSSG

The Working Group has previously acknowledged that the correct mix of technical requirements and commercial arrangements could provide the optimum solution for the mandatory provision of Reactive Power which is required for the security of the GB Transmission System.

The Working Group was informed that the Balancing Services Standing Group (BSSG) had been formally asked to evaluate the feasibility of introducing a more competitive, commercial arrangement for the provisions of Mvar such that the technical provisions may be relaxed.

The BSSG have indicated that it would be possible to develop commercial arrangements for the provision of MVar such that the technical provisions may be re-evaluated. The BSSG have asked for additional clarification regarding the size of the potential problem such that the optimum solution may be identified and developed accordingly.

The Working Group noted that quantification of the problem would be a significant piece of work which would require time to complete. The assessment would have to consider the cost of National Grid procuring the additional MVar e.g. compensation equipment against the cost to Generators of procuring larger Units which would be able to fulfil the reactive power requirements at all operating levels.

## 5) New Technologies Implications

The Working Group noted that National Grid would be presenting a paper to May 2008 GCRP which will identify potential Grid Code compliance issues for new technologies. The capability of new technology generation to comply with the existing reactive power provisions has been identified as a potential issue.

To address this issue, National Grid will be proposing the establishment of joint BSSG/Grid Code Working Group to discuss the reactive power issues. National Grid will therefore be recommending that this new Working Group complete the necessary analysis required to quantify the size of the issue and look more closely at the feasibility of modifying the existing technical performance obligations. It will be proposed that this work commences in Q4 2008 after the completion of the Rated MW Working Group.

## 6) Way Forward

Members agreed, given the pending review of appropriateness of the existing technical performance obligations for reactive power by a different Working Group that discussion should focus on identification of an interim solution which would address concerns regarding the existing provisions.

The Working Group agreed that existing arrangements specified in Bilateral Agreements would be honoured and would not be subjected to the new provisions.

The Working Group discussed whether it would be possible for National Grid and applicable Generators to agree on generic requirements which would be subject to operational changes agreed on a weekly basis. Group members also discussed whether it would be possible for National Grid to specify the MVar amount (and location) which would be required to secure the system and how that equated to a Generating Unit capability. National Grid identified the potential difficulty and increased workload in fulfilling such requirements.

The Working Group agreed that National Grid would develop legal text which would enable Generators to operate above Rated MW following their performance chart within a tolerance band (tbc e.g. 2%). Generators operating in excess of this tolerance limit would be subject to a Bilateral Agreement which would detail the specific provisions. National Grid would consider the development of legal text which would provide generic guidance

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to Users as to potential conditions which may be placed on them e.g. reactive power range, requirement to return to Rated MW at no cost if instructed to do so by National Grid. The Working Group noted that the net result of this solution would be additional clarity on the existing provisions.

**Action: National Grid**

The Working Group noted that National Grid data regarding a Generator Unit output was at the commercial boundary rather than at the Generator terminal. This differential would have to be assessed in order to determine an allowable tolerance bandwidth.

### 7) Next Steps

The following points will be discussed at the next Working Group meeting:

- draft legal text
- draft Working Group Report

The Working Group Report will incorporate:

- Cost/benefit analysis for each potential solution identified
- Identification of an interim solution which is assessed against the applicable objectives
- Implications on the GB Transmission System (inclusive of other relevant parties)
  - It was noted that the Scottish Transmission Owners had been kept informed of Working Group discussions and a request had been submitted for their input/evaluation on the potential solutions, highlighting any affects on their Transmission System. A formal reply was expected from the Joint Planning Committee (JPC).

The Working Group noted that the interim solution would have to ensure that it did not discriminate against different generation types and users (new and existing).

### 8) Next Meeting

The next Working Group meeting will be scheduled for 13th June 2008 at National Grid House, Warwick, commencing at 10am.

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## Appendix 1 – Working Group Attendance

### Members Present:

Lilian Macleod	LM	Working Group Chairperson
John Addy	JA	National Grid
Neil Carter	NC	National Grid
Mark Perry	MP	National Grid
Claire Maxim	CM	E.ON UK
Bridget Morgan	BM	Ofgem
John Morris	JM	British Energy
John Norbury	JN	RWE

### Apologies

Stuart Easterbrook	SE	National Grid
Andrew Morgan	AM	RWE
David Scott	DS	EDF Energy