

Summary of Meeting and Actions

Meeting Name	Rated MW Working Group
Meeting No.	1
Date of Meeting	Tuesday, 19 th June 2007
Time	11:00am – 2:00pm
Venue	B1-8, National Grid House, Warwick

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

1) Apologies for Absence

Apologies were received from Claire Maxim (E.ON).

2) Overview of GCRP Discussion

The Working Group noted that National Grid had presented a paper to February's 2007 GCRP regarding the issues surrounding Generating Units exceeding their Rated MW and the impact on the GB Transmission System in terms of the Reactive Power.

Rated MW refers to the rating plate of a Generating Unit and is a technical parameter against which the Reactive Power capability is assessed. National Grid expressed its concern that Generating Units operating at above Rated MW could have a detrimental impact on the GB Transmission System due to their reduced reactive power range at such levels affecting adversely the system voltage support and reducing the transient, dynamic and voltage stability margin.

The Working Group noted that the issue is currently being addressed via the Bilateral Agreements on an ad-hoc basis.

The GCRP agreed that a Working Group would be formed to discuss and review the issues raised by Generating Units operating above their Rated MW and consider an enduring solution to the matter.

3) Working Group Terms of Reference

The Working Group agreed to the following Terms of Reference:

- a) consider the drivers for the changes (from Generator's perspective) and the resulting impact on the performance of the associated Generating Unit(s)
- b) review the implications on the GB Transmission System of Generating Units operating above their Rated MW levels
- c) recommend changes that may be required to the Grid Code and related industry document

4) Working Group Discussions

The Working Group discussed the drivers for Generating Units exceeding Rated MW and the consequential implications on the GB Transmission System.

Reactive Power Provision

The Working Group noted that Reactive Power (MVar) was required to operate a power system due to the physical dynamics of the system i.e. lack of reactive power could lead to system voltages outside the levels set in the GBSQSS leading to possible voltage collapse. The Working Group accepted that MVar which support voltages are a localised issue, as transmission of MVar's degrades much more quickly than MW over distance. Therefore the provision of MVar capability on the GB Transmission System can be extremely critical in some areas of the system.

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The Working Group was informed that the GCRP had previously reviewed the provisions of Reactive Power capability. National Grid would review the relevance of information and circulate to the Working Group (if appropriate).

Action: National Grid

Rated MW and GB Transmission System

The Working Group noted that synchronous Generating Units can operate above Rated MW up to a level which is determined by the physical constraints of the unit. National Grid informed the Working Group that the design of the GB Transmission System was based upon Rated MW and therefore operation above this baseline would have an impact on National Grid obligation of designing and maintaining an efficient and economic system. It was noted that Generators exceeding their Rated MW, may result in additional investment being required on the system e.g. reactive compensation. This additional investment may not be the most efficient way of designing the system and could adversely affect historical design assumptions upon which the transmission system has been constructed.

The Working Group noted that Users are not permitted to exceed CEC unless otherwise specified by National Grid in the case of an emergency. These cases are subject to other provisions e.g. Maxgen contracts.

Potential Scale and Associated Effect

The Working Group agreed that it was important to gauge the scale and the consequential impact on the GB Transmission System. It was noted that historically it was assumed that Generators would not (or could not) exceed their Rated MW. If Generators were now operating differently it may require National Grid to design, operate and maintain the system in a different way.

The Working Group noted that it was mostly pre-vesting plant which had the greatest potential of operating above their Rated MW. It was noted that these Generators could be operating between 5% and 10% above their Rated MW. National Grid indicated that the cumulative effect of a sizable portion of the generation fleet exceeding their Rated MW by this amount could have an impact on the GB Transmission System in terms of the provision of Reactive Power on the system. National Grid will clarify the number of pre-vesting generators and provide analysis of the effect of these generators increasing output above Rated MW on the GB Transmission System especially at the system boundary points.

Action: National Grid

The Working Group agreed that it would be useful to obtain an indication, from the wider Generator community, as to how many generators would be interested in operating above Rated MW. National Grid will formulate a series of questions and will consider how best to engage with the industry – e.g. circulated to the industry via the AEP.

Action: National Grid

The Working Group did acknowledge that the extra MW produced by Generators exceeding their Rated MW may be beneficial under times of system stresses.

Potential Outcomes

The Working Group discussed three high level solutions:

- No restrictions imposed on Generator's output, National Grid will install additional reactive compensation
- Restriction imposed on Generator's output e.g. cannot exceed Rated MW
- Operational provisions specified in the Bilateral Agreement which would allow National Grid to 'pull back' generating units under certain circumstances to gain access to full range of reactive power at Rated MW

The Working Group discussed the ability of National Grid to pull back Generating Units to their Rated MW level within gate. National Grid informed the group that it would be

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difficult to analyse, process and inform the relevant Power Station of the necessary instruction within gate, more time would be required especially if there was a number of Power Stations operating above Rated MW.

It was noted that the ability to operate above Rated MW would probably necessitate a CUSC Modification Application to increase TEC, CEC or CEC Unit (were appropriate). National Grid informed the Working Group that such applications are currently analysis to assess the impact on the GB Transmission System. The results of the studies identify any reinforcement work associated to accommodate the request. The group discussed who should be liable for costs associated to an increase in MW output which would necessitate reactive power reinforcements on the system i.e. National Grid or the User or customers. The Working Group discussed whether this process would be transparent and fair to all Users.

The Working Group discussed whether the CUSC Modification Application could be subject to operational restrictions as specified within the Bilateral Agreement. National Grid would provide an indication as to the whether it was acceptable for Generating Unit to exceed their Rated MW subject to review after a specific period i.e. the right would not be evergreen. National Grid will provide a straw man of the CUSC Modification Application process.

Action: National Grid

Rated MW Definition

The Working Group noted that the current definition of Rated MW refers to the rating plate of the Generating Unit. The Working Group noted that it may be beneficial to review the current definition such that it is suitably robust and provides sufficient clarity to Users. The Working Group acknowledged that it would not be appropriate to permit Generators to declare a low Rated MW whilst operating (continuously) at a higher level.

Capacity Terms

The Working Group noted and accepted that there was no formal linkage between the CUSC and Grid Code capacity terms. It was acknowledged that it was possible for a Generator to have a TEC and CEC in excess of the combined Rated MW for that power station. The Working Group noted that there was no formal mechanism to detect this and impose operating restriction on the Generating Unit as and when necessary. It was acknowledged that this was an area that required further discussion and debate by the Working Group to determine how best to resolve this issue.

Action: All

5) Next Meeting

The next meeting of the Working Group scheduled for 27th July 2007 at National Grid House, Warwick will no longer take place.

Future Meetings

- The next Working Group meeting will be scheduled for September 2007, date, time and venue will be arranged (subject to everyone availability) in due course.

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Appendix 1 – Working Group Attendance

Members Present:

Lilian Macleod	LM	Working Group Chairperson
John Addy	JA	National Grid
Andy Balkwill	AB	National Grid
Neil Carter	NC	National Grid
Mark Perry	MP	National Grid
Bridget Morgan	BM	Ofgem
John Morris	JM	British Energy
John Norbury	JN	RWE
David Scott	DS	EDF Energy

Apologies:

Claire Maxim		E.ON UK
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