

Grid Code Review Panel Meeting

Minutes and Actions Arising from Meeting No. 31 Held on 7th February 2008 at National Grid House, Warwick

Present:

Duncan Burt	DB	Panel Chairman
Lilian Macleod	LM	Panel Secretary

National Grid

Brian Taylor	BT	Member
Nasser Tleis	NT	Member

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

John Morris	JM	Member
Jim Barrett	JB	Alternative Member
John Norbury	JN	Member
Claire Maxim	CM	Alternate Member
Campbell McDonald	CMc	Member
Yvonne Wilkinson	YW	Alternative 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

Barbara Vest	BV	Member (by teleconference)
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Network Operators in England and Wales

Alan Creighton	AC	Member
Mike Kay	MK	Member (by teleconference)

Network Operators in Scotland

Neil Sandison	NS	Member
Dave Carson	DC	Alternate Member

Generators with Novel Units

Sigrid Bolik	SB	Alternate Member (by teleconference)
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Ofgem Representative

Bridget Morgan	BM	Member
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BSC Panel Representative

Kathryn Coffin	KC	Member (by teleconference)
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In Attendance

John Greasley	JG	National Grid (Item 10 – Offshore Transmission)
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1. Introductions/Apologies for Absence

892. Apologies for absence were received from Andy Balkwill (National Grid), Chandra Trikha (Relevant Transmission Licensees), Alan Michie (Relevant Transmission Licensees), Guy Nicholson (Novel Units), Steve Hale (NEC) and Jean Pompee (EISO).

2. Grid Code Review Panel Membership

893. The Panel were informed that in accordance with clause 5.5 of the Grid Code Constitution and Rules, the members of the previous Panel resigned and a new panel reappointment.

894. The Panel NOTED the following changes to the Grid Code Review Panel Membership:

Generators with Large Power Station with total Reg. Cap.> 3GW

- John Norbury has been appointed as Panel Member with Claire Maxim as his Alternate.
- John Morris has been appointed as Panel Member with Jim Barrett as his Alternative.
- Campbell McDonald has been appointed as Panel Member with Yvonne Wilkerson as his Alternate.

Generators with Small and Medium Power Station Only

- Barbara Vest has been appointed as Panel Member.

Network Operators in Scotland

- Neil Sandison has been appointed as Panel Member with Dave Carson appointed as his Alternate.

Non-Embedded Customers

- Steve Hale has been appointed as Panel Member.

895. The Panel NOTED that the position for a Suppliers' Representative remains vacant and were to inform the GCRP Chairperson if they were aware of anyone who would be prepared to act as a representative.

896. The 2008 Grid Code Review Panel Membership will be available on the Grid Code website.

Action: Committee Secretary

3. Minutes of Last Meeting

897. The draft minutes of the 30th Grid Code Review Panel (GCRP) meeting held on 15th November 2007 were APPROVED, subject to amendments and will be accessible from the Grid Code Website.

4. Review of Actions

898. All the outstanding actions from the previous meetings have been completed or were the subject of agenda items, except for:

- Minute 800 (Basic Electrical Safety Competence (BESC))
The Panel were informed that National Grid was reviewing the applicability of the BESC certification for external parties requiring access to National Grid substations. National Grid would keep the Panel informed of the outcome of the review and until further notice the mandatory requirement of attaining the qualification would not be applicable to external parties requiring access to National Grid substations.

Action: National Grid (LM)

- Minute 839 (Planning Data)

The Panel NOTED that the submission of detailed planning data (DPD) within 28 days of accepting a CUSC contract was proving problematic given the long lead time of projects i.e. procurement contracts not signed for a time period after signing a CUSC contract. JN queried whether the current wording was appropriate given the long lead time of future projects. The Panel discussed whether PC.4.4.2 of the Grid Code in terms of whether the 28 day period can be linked to the proposed connection date in the case of new developments.

National Grid informed the Panel that the data was required to enable it to assess generation connections against the contracted generation background. The Panel AGREED that it was important that the relevant data is submitted in a timely manner such that National Grid could fulfil its licence obligations. National Grid noted that the actual DPD may not be available for a considerable time period after the signing of a CUSC contract. However, National Grid noted that PC.4.4.2 allows a different timescale to be agreed between NGET and the User as well as the submission of estimated data. National Grid stated that the User should submit estimated data where actual data is not known.

National Grid AGREED to undertake a review of the current provisions outlining the existing obligations and highlighting any potential issues. National Grid and JN agreed to discuss in further detail his concerns regarding the current provision.

Action: National Grid (NT/LM) and JN

- Minute 847 (Protection)

A review of CC.6.2.2.2(b) has indicated that the provisions do not provide for adequate discrimination between National Grid's and the Generator's protection systems where two Main Protections and one Back-Up protection has been installed on the Generator's system. Panel Members agreed to input the various policies of their Companies to National Grid so that an assessment could be made of the appropriateness of the proposed transitional arrangements with a view to bringing the issue back to a future Panel meeting.

Action: National Grid

Post Meeting Note

National Grid confirmed that would not be expecting any information from Panel Members until such time that the proposed amendments have been finalised.

- Minute 867 (System to Generator Operational Intertripping Scheme)

The Panel were INFORMED that National Grid continues to develop Grid Code changes regarding the System to Generator Operational Intertripping Schemes provisions. It is anticipated that the proposals will be presented at the May 2008 GCRP meeting.

Action: National Grid (LM)

- Minute 870 (Despatch of Reactive Power from Embedded Generation)

The Panel NOTED that National Grid and the relevant DNOs would work together via operational liaison regarding the despatch of reactive power from embedded generation.

It was NOTED that it was important that all relevant parties were aware of the Code provisions and working practices regarding the despatch of reactive power from embedded generation to alleviate Users' concerns regarding this matter and to minimise any detrimental affect on Users' Systems.

- Minute 876 (New Technologies)

The Panel NOTED that National Grid will provide an update on potential Grid Code issues regarding the utilisation of new generation technologies at the May 2008 GCRP meeting. It was noted that any information available to industry

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participants would be helpful for National Grid and the Panel to have when discussing the matters in detail.

Action: National Grid (NT) and Panel Members

▪ Minute 889 (Grid Code Structure)

The Panel NOTED that National Grid was currently reviewing the structure of the Grid Code given the potential complexity of the Grid Code in light of the proposed Grid Code offshore changes. National Grid was looking at a number of different possibilities and would report back to the GCRP in due course.

Action: National Grid (LM)

The Panel were INFORMED that National Grid had approached the Plain English Campaign for advice/assistance in making the Grid Code clearer more transparent.

5. Grid Code Development Issues

899. Grid Code Consultation Update

The Panel NOTED that the consultation period for F/07 (Grid Code Requirements for Current Sourced DC Links) closed on 18th January 2008; three consultation responses had been received.

The Panel NOTED that the consultation period for G/07 (Black Start) closed on 31st January 2008; eight consultation responses had been received.

The Panel NOTED that discussions were on-going regarding the proposed legal text for the consequential Grid Code changes which are required to enact the CAP144 proposals. It was anticipated that, subjected to finalising the legal text, the consultation document would be published in the next few weeks.

Action: National Grid (LM)

900. Outstanding Issues List

The Panel queried the latest status regarding the outstanding issue of delegation of authority for busbar switching contracts. National Grid agreed to investigate and provide an update at May 2008 GCRP.

Action: National Grid (LM)

6. Working Groups

▪ **Data Exchange**

901. The Panel NOTED that the Working Group had identified a potential solution which is being further developed by group members. The preferred solution will identify, within the body of the Grid Code, as to which data (specifying associated clauses) is being transferred to the Scottish Transmission Owners. The Panel NOTED that proposed Grid Code changes may necessitate a consequential STC Amendment, in particular Schedule 3 (Information and Data Exchange Specification). The Panel NOTED that it was the Working Group's view that it would be presenting its final recommendations to the May 2008 GCRP meeting.

Action: Grid Code Working Group

▪ **Low Voltage Demand Disconnection (LVDD) Working Group**

902. The Panel were INFORMED that the Report to the Authority had been submitted on 22nd November 2007. The Panel noted that the Working Group had been stood down until a decision had been received from Ofgem regarding next steps.

▪ **Rated MW**

903. The Panel were INFORMED that the Working Group continues to evaluate possible generic solutions, identifying the associated advantages and disadvantages for each. The Working Group noted that it may be possible to combine a technical and

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commercial solution which would be highlighted to the Balancing Services Standing Group (BSSG) for further investigation.

Action: National Grid

▪ Compliance

904. The Panel were INFORMED that the first meeting of the Working Group took place on 15th January 2008. The main focus on the meeting was the codification of the technical performance requirements currently specified in the relevant guidance notes. The recommendations from this aspect of the Working Group discussions will be presented to the May 2008 GCRP for review/approval.

Action: Grid Code Working Group

905. The Panel AGREED that the remit of the Working Group would be expanded to incorporate a review of National Grid's and Users' compliance responsibilities for Licence Exempt Embedded Medium Power Stations (LEEMPS).

906. The group's terms of reference would be amended accordingly with the Working Group providing a revised timeline for the completion of work to the May 2008 GCRP meeting. It was noted that the anticipated completion date, for the group's overall work, was February 2009. MK indicated that he was content with these timescales.

Action: Grid Code Working Group

907. The Panel NOTED that the current Working Group membership was sufficient to ensure that the discussions on the compliance responsibilities for LEEMPS would fully reflect Users' concerns regarding this matter.

▪ Gas Insulated Switchgear

908. The Panel were INFORMED that the first external meeting of the joint Grid Code/CUSC GIS Working Group was scheduled to take place on 26th February 2008. The Working Group terms of reference would be submitted for Panel approval at the May 2008 GCRP meeting.

Action: Grid Code Working Group

7. Pending Authority Decisions

909. The Panel NOTED that Ofgem had formally requested additional information on certain aspects of the Grid Code G/06 (Power Park Modules Synchronous Generating Units) proposals. The information which was requested from National Grid and Scottish Power Transmission would be used to assist the Authority in making a determination on the proposals.

910. The Panel NOTED that Ofgem had formally requested additional information on certain aspects of the Grid Code B/07 (Improved Planning Code Data Exchange for Compliance Assessments) proposals. The information which was requested from National Grid and the Distributed Network Operators (who had formally responded to the consultation) would be used to assist the Authority in making a determination on the proposals.

8. Authority Decisions

911. The Panel NOTED that the Authority had rejected the proposals in Grid Code consultation D/07 (Frequency Response Requirements) on 6th February 2008. The Panel were INFORMED that there was insufficient justification for the proposals.

912. The Panel NOTED that to assist the Authority in making a determination on proposed Grid Code proposals, it would be useful if the Report to the Authority (and associated documentation) provided information relating to cost/benefit analysis and the implications of the proposals on the GB Transmission System, Users Systems and Users.

9. Small Embedded Generation Loss Risk on System High Frequency Excursions

913. The Panel were INFORMED of a risk to the security of the total GB power system caused by the possible simultaneous tripping of an unknown amount of Small Embedded Generation Power Stations under a system high frequency excursion. The Panel NOTED that such plant is not subject to the Grid Code requirements of continuous operation up to 52Hz and may have been set to meet the 50.5Hz trip requirement of Engineering Recommendation G59/1.
914. Should a frequency excursion above 50.5 Hz occur, the amount of Small embedded generation that could trip at or just above 50.5 Hz is not known to National Grid. The impact on the security of the total system under such condition could be significant if the volume of plant disconnected is large. Excessive generation disconnection could lead to very low frequency conditions and cause automatic demand disconnection nationally by low frequency relays under the Low Frequency Demand Disconnection of Grid Code OC.6.6.
915. National Grid has requested assistance from the DNOs to provide the following information on the amount of small generation and its high frequency trip setting within their licensed area:

Small plant above 5 MW capacity

- Confirm the amount of such plant
- Confirm the high frequency trip setting and time delay
- Estimate the maximum simultaneous loss

Small plant at or below 5 MW capacity

- Confirm the amount of maximum simultaneous loss at 50.5 Hz trip setting

916. The information will allow National Grid to quantify, assess and manage the current level of risk to the security of the GB Transmission System should a frequency excursion above 50.5 Hz occur.
917. National Grid agreed to provide a table summarising the information required and provide additional clarification which will assist DNOs in how to quantify the maximum simultaneous loss and the submission of data.

Action: National Grid (NT)

918. The Panel NOTED that the DNOs proposed a two-stage approach; the first is to be based on the worst case scenario i.e. loss of generation, demand remains. This will be used as an initial filter to enable an initial assessment to be carried out by NGET. A second stage involving more detailed data may be required depending on the outcome of the first stage. The Panel noted the provision of the initial data to NGET is required by May GCRP meeting.

10. Offshore Transmission

919. National Grid gave a summarised update of the latest developments in the establishment of an Offshore Transmission regime. The presentation will be circulated to Panel Members for reference.

Action: Panel Secretary

920. The Panel NOTED that the Grid Code Offshore Working Group had made a number of recommendation which may be summarised as follows:
- Small and Large Power Stations (10MW threshold)
 - String of wind turbines aggregated to one Offshore PPM and treated as a single BMU
 - Reactive capability to be met by TO
 - Unity pf at offshore GEP (LV)
 - Voltage control – requirement placed on TO

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- Voltage limits unchanged for offshore
 - Fault ride through – generic requirements at LV points on offshore platform
 - Response requirements to apply to all offshore generators and obligations on TOs when DC is used.
921. The Panel NOTED that the legal text to reflect the recommendations had been circulated amongst the Working Group members for comment which had been received and have been responded to. The Panel NOTED that the STC Offshore Working Group had been re-established and tasked with identifying and developing the necessary changes to the STC to reflect the new offshore regime.
922. The Panel NOTED that publication of the final policy proposals was due in April 2008 with the consultation paper on the full regime changes (inclusive of associated legal text changes in the Codes) due in June 2008.
923. The Panel NOTED that the proposed Go-Active (December 2008) and Go-Live (December 2009) dates for the Offshore Transmission regime would be reflective of the Energy Bill timetable and may be subject to change.
924. The Panel NOTED that National Grid was looking to establish an Offshore Transmission website which would be used, alongside the Ofgem website, to inform the industry of the latest developments and key milestones in respect of the Offshore Transmission regime.

11. GB SQSS Review Group

925. The Panel NOTED that there was currently six formal requests being reviewed by the GB SQSS Review Group:
- GSR001 (Review of need for Intermittent Generation specific parameters in the GB SQSS)
 - Currently out at consultation, with a closing date of 22nd February 2008. A further consultation would be issued confirming the final recommendation, inclusive of proposed changes to the GB SQSS.
 - GSR002 (Housekeeping)
 - GSR003 (Review of Section 2 of the GB SQSS)
 - GSR004 (Review of Section 4 with regard to bus coupler security)
 - GSR005 (Review of Stability Criteria)
 - GSR006 (Review of Voltage Criteria)
926. The Panel were INFORMED that Working Groups had been established for GSR001, GSR003 and GSR006. The Panel NOTED that further information relating to the reviews and the governance process was available on the GB SQSS website: <https://www.nationalgrid.com/uk/Electricity/Codes/gbsqsscode/>.
927. The Panel NOTED that the GB SQSS Review Group governance framework enabled external parties formally to request a GB SQSS reviewed; a copy of the review request form was available on the website.

12. Impact of Other Code Modifications

928. The Panel NOTED that CAP148 Working Group Report (Deemed Access Rights to the GB Transmission System for Renewable Generation) had been submitted to the Authority for determination on 14th December 2007. Significant changes to the Grid Code would be required should the Authority approve CAP148 or alternative.
929. The Panel NOTED that CAP149 (TEC Lite) was submitted to the Authority for determination on 4th February 2008. In the event of CAP149 being approved (and dependant on which opinion was selected), the proposal may necessitate consequential changes to the Grid Code.

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13. Any Other Business

AOB01

930. The Panel NOTED that the patent court case from a European wind turbine manufacturer (Enercon) against Vestas with respect to grid connection in England and Scotland had been rejected by a UK court; the decision was currently under appeal by the claimant.

931. The Panel NOTED that the remaining patent cases in the Netherlands, Canada and Ireland over grid connections are continuing. The Panel NOTED that a similar case had also been rejected by a court in Germany.

932. The Panel NOTED that it was important for the technology information utilised in the Grid Code to be sufficiently protected such that it did not enable any industry participants to gain financially from the information contained with the Code or use it in an anti-competitive manner.

AOB2

933. The Panel were INFORMED that National Grid would shortly be offering a subscription service for e-mail notifications of changes to the Codes on the National Grid website, similar to the service currently provided by Elexon for the BSC. Notification of the alerts service will be communicated to the Grid Code community.

AOB3

934. The Panel NOTED the proposed May 2008 implementation date for the MW Profile Interface application which would allow Users with a Bilateral Embedded Licence Exemptable Large Power Station Agreement (BELLA) to submit PNs. The Panel were informed that User testing for the new application would take place during March 2008 and that volunteers from the User community were being sought to facilitate the testing programme.

Action: Panel Members

AOB4

935. National Grid presented a paper outlining the Operational Metering System for LEEMPS. The Panel were invited to review the paper providing any comments to National Grid (BT). It was agreed that CC.6.4.4 and CC.6.5.6 should be reviewed in order to determine whether any consequential Grid Code changes would be required.

Action: National Grid (BT)

AOB5

936. The Panel requested that the Summary of Changes which accompanies the Grid Code Update Pack could be considerably improved to assist Users to understand the impact of revisions (particularly since the majority of User are Grid Code experts). DW will provide example text for illustrative purposes, National Grid agreed to attempt to provide additional information in the Summary of Changes.

Action: National Grid (LM) and DW

14. Date of Next Meeting

937. The next meeting will be held on 15th May 2008 at National Grid House, Warwick. The meeting will commence at 10:00am.