

Grid Code Review Panel Meeting

Minutes and Actions Arising from Meeting No.23 Held on 20th July 2006 at National Grid Office, Lakeside House, Northampton

Present:

Ben Graff	BG	Panel Chairman
Lilian Macleod	LM	Panel Secretary

National Grid

Mark Duffield	MD	Member
Brian Taylor	BT	Member
Nasser Tleis	NT	Member

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

John Morris	JM	Member
Charlie Zhang	CZ	Alternate Member
John Norbury	JN	Member

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

David Ward	DW	Member
------------	----	--------

Generators with Small and Medium Power Stations Only

Malcolm Taylor	MT	Member
----------------	----	--------

Network Operators in England and Wales

Mike Kay	MK	Member
Graeme Vincent	GV	Member

Network Operators in Scotland

Dave Carson	DC	Alternate Member
-------------	----	------------------

Relevant Transmission Licensees

Chandra Trikha	CT	Member
----------------	----	--------

Generators with Novel Units

Guy Nicholson	GH	Member
---------------	----	--------

Ofgem Representative

Bridget Morgan	BM	
----------------	----	--

BSC Panel Representative

Kathryn Coffin	KC	
----------------	----	--

Attendees:

William Hung	National Grid	
--------------	---------------	--

1. Introductions/Apologies for Absence

466. Apologies for absence were received from Robert Smith (National Grid), Claire Maxim (Gens >3GW), Campbell McDonald (Gens >3GW), Richard Cook (Gens >3GW), Neil Sandison (DNOs in Scotland), Stuart Graudus (NEC), Jean Pompee (EISO) and Alan Michie (RTL).

2. Minutes of Last Meeting

467. The draft minutes of the 22nd Grid Code Review Panel (GCRP) meeting held on 23rd February 2006 were APPROVED subject to a minor amendment and will be accessible from the Grid Code Website.

3. Review of Actions

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

- Minute 319 (Intertrips)

BT informed the Panel that there was no benefit in defining specific types of Intertrips due to the variety of system conditions. The speed of response required would be dependant on the type of Intertrip e.g. stability, thermal and the location of the generator on the transmission system as a consequence it would be site specific.

JN noted that, whilst the CUSC had been amended to cater for intertrips, the Grid Code was silent regarding their technical performance. In particular, it would be helpful if an indication of the required trip times for thermal and/or stability trips, which were being specified in bilateral agreements, was included in the Grid Code.

JN and DW indicated that it would be beneficial to the generators community and developers to understand the principles behind Intertrips.

MT agreed that it would be beneficial to the industry if there was a clearer understanding of the process behind Intertrips which would lead to better informed decisions by new connectees, for example

Panel Members agreed that Intertrips were an important element of safeguarding the Transmission System's stability and security and agreed that in many instances that a fast acting (~ 80ms) Intertrip would be a necessity for stability but in other instances e.g. thermal limits such fast response would not be necessary.

NT indicated that National Grid was more concerned with the timing of the Intertrip response rather than the manner in which the generator executes the Intertrip.

National Grid agreed to consider whether or not it would be possible to produce a generic guidance statement on types of Intertrip.

Action: National Grid (BT)

- Minute 362 ('Management of System Connections' & 'No System Connections')

The Panel were informed that National Grid, SHETL and SPT have agreed in principle to further develop the original proposals contained within GCRP 05/29 and GCRP 05/30:

- To define how RISSPs manage 'No System Connections' on an Implementing Safety Co-ordinators system.
- Defining the time when Users' responsibilities become effective, during the Site Responsibility Schedule issue process.

Grid Code Review Panel Meeting

The Panel NOTED that as a consequence the original papers will be amended in consultation between National Grid, SHETL and SPT before being brought back to the GCRP.

Action: National Grid (MD)

- Minute 418 (Low Frequency Relay Settings)
National Grid to bring forward proposals regarding introducing generic Low Frequency Relay Settings into the Grid Code to September's GCRP.

Action: National Grid (NT)

- Minute 456 (EDL Statistics)
BT informed the Panel that there were no statistics available on EDL interruptions but in order to assist in the future monitoring of EDL interruptions Users should log all problems through the Helpline (0800 085 4806). The calls logged would be used for analysis purposed in understanding any problems. BT indicated that Cable and Wireless would be able to monitor the line if necessary.

MT confirmed that he would circulate the Helpline number to AEP members and remind Generators to log any problems.

Action: MT

- Minute 458 (Reactive Capability Survey)
BT informed the Panel that 60 responses (out of 225) were received to the Reactive Capability Survey, out of which there were 25 minor discrepancy and 3 re-declarations required. The information will be used to make sure that National Grid Reactive Capability database remains accurate. The Panel NOTED that Database had been originally been populated with OC2 Performance Chart information and that any temporary restrictions were to be redeclared via the BC2 – Appendix 3 Revised Mvar Data proforma.

JN suggested that the reason for some of the discrepancies might be due to the lack of clarity regarding the treatment of OC2 Performance Chart data and BC2 fax data. For example, NGET appeared to have indicated that submission of a revised Performance Chart would not supersede the last BC2 fax until a revised BC2 fax is also submitted. However, the Grid Code does not limit the application of Performance Chart data to planning purposes.

The Panel NOTED that OC2 Performance Chart data was used for long term planning studies. DW informed that Panel that Reactive Capability information was stated in the OC2 Performance Chart, Mandatory Ancillary Service Contract and BC2 – Appendix 3 Revised Mvar Data proforma.

The Panel NOTED that the redeclaration of Reactive Capability via BC2 Proforma should be time limited even although it was acknowledged that there was no expiry time on the form. The Panel NOTED that it may be useful to include an expiry time field on the BC2 Proforma.

It was acknowledged that Generators would have to submit another redeclaration in order to inform National Grid that the unit had returned back to full capability.

DW and JN agreed that it would be useful for the BC2 Proforma to have an extra field/box which would inform National Grid that Generating Unit had reverted back to full Reactive Capability as defined in the Performance Chart without having the to redeclare the actual figures. DW and JN indicated that this would be beneficial to Generators due to the fact that Operational Engineers may not have the actual figures to hand and would have to refer to the original agreements in order to obtain the relevant information which in some instances may not be very practicable.

Grid Code Review Panel Meeting

National Grid agreed to give further thought to the suggestions regarding the BC2 Proforma layout and data fields.

Action: National Grid (BT)

- Minute 459 (Delegated Authority for Switching)
The Panel were informed that an internal National Grid Working Group had been established to discuss the management of switching activities. The Panel NOTED:
 - OC8 concerns co-ordination of safety precautions across control boundaries.
 - The Grid Code Connection Conditions define arrangements for Site Responsibility Schedules (SRS) management and functional responsibilities of Users' roles.
 - National Grid looking to develop a policy which would enable the mutual switching of Users equipment and defining this in SRSs.
 - It would be National Grid intention to submit the proposals to the Electricity Networks Association to enable an industry wide solution.
 - In the event of agreement, local SRSs will need to be amended accordingly.
- Minute 460 (Generators Fuel Backup Status)
BT informed the Panel that generator's fuel backup status would be an annual request from National Grid as the information formed part of Winter Consultation Report which deals with Security of Supply and Generators Fuel Backup Status.

JN suggested that, if this is to be an ongoing requirement, in order to provide the necessary safeguards any such requirement should be specified in the Grid Code along with the existing obligation on Generators to provide alternative fuel data. MT stated that DTI were in the progress of reviewing the content of the Winter Consultation Report and it would be prudent to discuss the matter with the DTI prior to submitting any formal Grid Code changes regarding this issue.

BT to contact Nicola Kirkcup regarding obtaining DTI's viewpoint.

Action: National Grid (BT)

- Minute 461 (Desynchronising a Gas Turbine)
BT informed the Panel that the procedure for desynchronising a gas turbine with multi-unit BMUs would be more complex compared with bringing a new unit on line.

National Grid to report back to September GCRP on the matter.

Action: National Grid (BT)

469. Relevant Electrical Standards

To facilitate the implementation of the new standards and to provide additional assistance to Users regarding the applicability of the new standards, it was requested that National Grid provide guidance to a number of RES scenarios.

MD presented the RES Scenario document to the Panel, which was proposed to be made available on the Industry Information web site in the form of a guidance note to the main RES document.

BG indicated that the scenario document could not and did not provide a comprehensive list of all possible situations regarding the applicability of RES.

The Panel NOTED the RES Scenario document and AGREED that it would provide useful guidance to Users regarding the applicability of RES.

The Panel AGREED that the document should be made publicly available on the Industry Information website in to the form of a guidance note, subject to a minor amendment to point 4, subparagraph 3.

Grid Code Review Panel Meeting

JN asked about the applicability of RES when the original Bilateral Agreement had been terminated and consequential new a Bilateral Agreement entered at a future date at the same site.

MD indicated that in such circumstances National Grid would determine the applicable of RES on a case by case basis.

470. Significant Event Report

BT presented a paper which summarised the procedure for reporting the loss of embedded generation as a result of a sudden change in frequency or other significant incidents.

BT informed the Panel that the process had now been extended to include Scotland.

GH indicated that the report was useful, however suggested that it would be preferable if the report included National Grid's process for declaring Significant Events.

BT indicated that it would not be appropriate for the paper to include information on National Grid's process due to the variety and complexity of significant events.

The Panel NOTED that National Grid had an automatic system for recording similar events for Large Power Stations and that National Grid provides an annual report to the GCRP on such incidents.

MT asked about the possibility of informing the industry of Significant Events and sharing knowledge acquired through a web based system rather than the existing fax based system. MT indicated that a web based system may encourage more distributed generators to participate and hence provide a richer response to such events. National Grid agreed to reflect on the Panel discussions.

471. Grid Code Governance

MD presented to the Panel an overview of the current Grid Code governance process.

BG invited comments from the Panel on the governance process and to suggest possible improves the existing framework (where applicable).

Action: GCRP Members

BG informed the Panel that National Grid was thinking internally about the Grid Code Governance Framework. In particular the length of time it takes Grid Code Amendments to progress through the governance process and the current working practice for responding to consultation replies.

BG said that he did not want to diminish Grid Code governance in any way but was interested as to whether Panel Members believed that there was scope to improve Grid Code governance further,

JN indicated that in his opinion, the Grid Code governance process was very good and should be used as a baseline for other Industry Codes governance frameworks. JN noted that it was important due to the technical nature of the Grid Code that common understanding was reached amongst the relevant parties. Generators valued the lengths to which National Grid went to 'bottom out' issues and objections to proposals for change. Also JN supported the manner in which National Grid entered into the debate regarding consultation queries, aiming for consensus wherever possible.

NT informed that Panel that the length of time required to progress Grid Code amendment may delay other modifications, due to possible interaction and demands on resources.

Grid Code Review Panel Meeting

Panel Members noted NT concerns regarding the length of time required to progress Grid Code amendments. MT stated that it was in the remit of the GCRP to reprioritise the progressing of amendment, if it was to the benefit of the industry.

MT indicated that it may be prudent to review the frequency of GCRP meetings. MT indicated that he was not suggesting moving to monthly meeting but making more use of teleconference facilities.

National Grid agreed to keep the current programme of Grid Code work under review, with a view to reprioritising any work where appropriate.

BG also agreed to update September's GCRP with any further National Grid thinking in this area.

Action: BG

4. Membership of Grid Review Panel

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

National Grid Representation

- Robert Smith replaces Guy Phillips as National Grid Representative

Relevant Transmission Licensees

- Alan Michie replaces David Nicol as SP Transmission Ltd Representative

473. The Panel NOTED that National Grid had received queries from manufacturing suppliers regarding the vacant Suppliers' seat. It was acknowledged that manufacturers did not meet the essential criteria for being appointed into the vacant position i.e. Electricity Supplier's licence granted by the Authority.
474. The Panel AGREED that it would not be appropriate to have a manufacturing representative on the Panel as the Grid Code was principally concerned with the performance and output of the Transmission System.
475. It was acknowledged that there may be occasion when the GCRP requires expert advice from manufacturers and on such occasions the relevant parties would be invited to attend and/or present to the GCRP and/or Working Group.

5. Grid Code Development Issues

476. Grid Code Consultation Papers

The Panel NOTED that B/06 (Regional Differences) had been submitted to the Authority for determination on 13th July 2006.

BM indicated that the Authority had received a query regarding the definition of Registered Capacity which should be quoted as an integer value and have queried whether a 4.9MW Power Station has to be declared as a 5MW Power Station and therefore classified as a Large Power Station.

MD indicated that there was already guidance in Grid Code's Glossary and Definitions to the treatment of data expressed in whole numbers:-

- '(xii) Where there is a reference to an item of data expressed in a whole number of MW, fractions of a MW below 0.5 shall be rounded down to the nearest whole MW and fractions of a MW of 0.5 and above shall be rounded up to the nearest whole MW.'

JN stated that it was the responsibility of the Generator to submit the Registered Capacity number and the issue of whole numbers was not a problem as long as the Generator did not breach their Bilateral Agreement and Grid Code obligations.

Grid Code Review Panel Meeting

BM indicated that the Authority would be raising this as a formal question to National Grid. BM welcomed the Panel's initial views on the matter.

National Grid agreed to review Regional Difference obligations and to provide an update to September's GCRP regarding any outstanding issues.

Action: National Grid (MD)

JN and MT stated that the issue highlighted the need for a review of the Grid Code capacity terms.

477. Grid Code Outstanding Issues

National Grid agreed that they would populate the 'Date of Next Review' for September's GCRP. The Panel agreed that this would be useful in prioritising Grid Code work.

Action: National Grid (MD)

CZ to submit e-mail regarding an additional issue concerning Multi BMU.

Action: CZ

MK informed the Panel that the DCRP Working Group on G59 and G75 would focus on what frequency settings to use. The issue of influencing the design of the frequency capability of small generators was outside the scope of the DCRP Working Group and therefore the issue remains outstanding.

6. Proposed Grid Code Changes

▪ New Appendix to General Provisions – Control Telephony

478. National Grid provided an overview of the proposed new Electrical Standard on Control Telephony and the consequential changes to CC.6.5.5.

479. The Panel were informed that the proposal codified the current National Grid standard for Control Telephony and that there should be no impact on existing Users.

480. The Panel NOTED that site specific details pertaining to Control Telephony will continue to be specified in the Bilateral Agreement in accordance with current practice.

481. The Panel NOTED that the Control Telephony standard was more akin to the EDL and EDT Standards rather than the Relevant Electrical Standards which applies to the zone of busbar protection as such was not appropriate for the new standard to be included within the RES.

482. The Panel AGREED that the minor modification required to the Grid Code should proceed directly to a short Industry Consultation, which will make specific reference to the new standard, in the form of an appendix to the consultation document, to assist in industry awareness of the new standard.

483. The Panel AGREED that were the proposed Grid Code change to CC.6.5.5 to be approved by the Authority; the associated Electricity Standard would be circulated to the GCRP by e-mail for sanctioning at that point. Clearly if objections were raised at that stage the Electrical Standard would subsequently be discussed at the full GCRP.

484. The Panel NOTED that the issue may have to be raised at the STC Committee as the new Electrical Standard would be applicable throughout the GB Transmission Network.

485. MD informed the Panel that there would be additional proposed amendments on the issue of Control Telephony which would be submitted to forthcoming GCRP meetings and would not interact with this current proposal.

486. MK informed the Panel that there was an on-going issue, currently being progressed by the DTI, regarding the provision of private lines by BT for all industry strategic locations.

7. Working Group Reports

▪ P2/5 Working Group

487. MD presented gave the Panel an update on the P2/5 Working Group.
488. The Panel NOTED that the legal text would be circulated to the Working Group in forthcoming weeks for comment.
489. A further meeting of the Working Group may be required, prior to Industry Consultation, to discuss the proposed legal text and obtain clarification and additional information from members on a number of issues.

▪ Power Park Modules and Synchronous Generating Units Working Group

490. MD gave the Panel an update on the Power Park Modules and Synchronous Generating Units Working Group.
491. The Panel NOTED that the Working Group had discussed all items listed under the Terms of Reference, which has clarified many issues and agreement had been reached on the aims of modifying the Grid Code in most of the areas.
492. The Panel NOTED that there remained some outstanding issues for which group members felt that further clarification was required.
493. National Grid has agreed to circulate associated legal text by the end of August 2006 to group members for comment. Depending on the level of agreement with the proposals, a further meeting may be held in September.
494. DW noted that the issue of frequency response and how it is interpreted had not yet been discussed by the Working Group. NT replied that this topic was not part of the Working Group's Terms of Reference. NT indicated that the issue could be discussed at the Working Group as long as the issue did not delay the progress of the other proposals.
495. JN and GN indicated that National Grid was placing technical obligations within the Bilateral Agreements that should be specified in the Grid Code or RES e.g. 1320 MW limit ruling and Rated MWs.
496. NT replied that the Grid Code was a very important document within National Grid and agreed that wherever possible relevant generic specification should be included within the code and only site specific included being specified in the Bilateral Agreements.
497. MD indicated that the Grid Code would only be changed when it become apparent that a particular issue was being more common and affecting more Users. The Bilateral Agreement could continue to contain site specific information.
498. National Grid agreed to investigate further the issue regarding the 1320 MW rules.
Action: National Grid (NT)
499. MD informed the Panel that National Grid was conducting a review of the issues surrounding Rated MW.

Action: National Grid (MD)

Grid Code Review Panel Meeting

▪ Low Voltage Demand Disconnection Working Group

500. MD gave the Panel an update on the Low Voltage Demand Disconnection (LVDD) Working Group, on behalf of Emma Carr (Working Group Chairperson).
501. The Panel NOTED that a joint Working Group report will be produced and submitted to Ofgem which will discuss the impact, benefits and costs of introducing a LVDD scheme. The aim of this report is to obtain an indication of support from Ofgem before parties commit resources and time in developing a detailed design.
502. National Grid to submit report to E3C for reference purposes.

Action: National Grid (NT)

8. Authority Decisions

▪ A/06 – Grid Code Changes to Appendix 5 of the Connection Conditions: Technical Requirements for Low Frequency Relays

503. The Panel NOTED that the Authority had approved the proposed modification on 27th June 2006 for implementation on 1st January 2007.

9. Generating Plant Resilience Survey

504. WH gave the Panel an update on the results from the Plant Resilience Survey.
505. The Panel NOTED that there were four main issues arising from the results and agreed to assist National Grid as appropriate in obtaining additional clarification from power stations regarding their Variable Speed Drive (VSD) applications and to support Generations and their VSD suppliers in raising their awareness of the problems experienced in other stations and hence preventive measure could be taken to avoid the unnecessary tripping of their critical drives. These VSD related problems if not rectified could cause future wide spread system operational problems. WH and MT agreed to disseminate the results of the VSD study to as wide an audience as possible.

Action: National Grid (WH) & MT

506. For the critical drive motor overloading performance issue (i.e. associated with depressed system frequency and voltage conditions), National Grid will give a more detailed explanation of the problem at the next meeting. Since the issue is complex, modelling approach could be adopted to illustrate the problem.

10. Offshore Transmission Networks

507. MD gave the Panel an update on the latest developments regarding Offshore Transmission Networks which is currently an area of formal industry discussion via the Offshore Transmission Expert Group ('OTEG').
508. A paper outlining National Grid's initial high level thoughts on the consequential code changes necessary to facilitate the new regime was circulated to the Panel for reference purposes.
509. MT thanked MD for producing the paper which succinctly outlines the implication of Offshore Transmission Networks and the effects on the existing Transmission System and associated Industry Codes.
510. The Panel NOTED that the changes required to accommodate Offshore Transmission were significant.
511. MT stated that the availability of documentation on the relevant Ofgem and DTI regarding this issue has been slow. MT queried what website was the primary source of information i.e. Ofgem or DTI.

Grid Code Review Panel Meeting

512. BM indicated that the OTEG SQSS sub-group has been asked to approve the associated meeting minutes more quickly to enable more timely publication and acknowledge the concerns regarding communication. BM agreed to report the Panel concerns to the Offshore Transmission Expert Group.

Action: BM

513. MT noted that there were two methods through which changes to the relevant Industry Codes could be enacted:
- Modifying the Codes through the existing changes governance processes contained within each Code
 - Modifying the Code through changes that are consulted upon by Ofgem/DTI and then designated by the Secretary of State
514. MT informed that Panel that although no decision had been made regarding the governance process, indications were that changes would be designated by the Secretary of State.
515. BG stated that for large scale, significant changes to Industry Codes, this method of sanctioning amendments was in his view much more effective. It was clearly important that a thorough consultation was held irrespective of which approval mechanism was used.
516. MT acknowledged that from a practical point of view this approval method may be more effective but informed the Panel that any changes designated by the Secretary of State were not appealable.

11. Impact of Other Code Modifications

BSC

517. The Panel NOTED that P194 (Revised Derivation of the 'Main' Energy Imbalance Price) had been approved and was due for implementation on 2nd November 2006. The Panel were informed that P201 (Energy Imbalance Tolerance Band)/P202 (Energy Imbalance Incentive Band) would modify certain aspects of P194. P205 (Increase in PAR level from 100MWh to 500MWh) was identical to P194 except it would increase the PAR level to 500MWh and should P205 be approved it would supersede P194.

CUSC and STC

518. The Panel NOTED that CAP097 and CA016 were implemented on 14th July 2006.

12. Any Other Business

519. DW enquired as to whether National Grid knew anything about the introduction of a European Grid Code.
520. BG indicated that his understanding was that there would be no benefit in having a single European Grid Code due to the differences in countries' transmission networks, in the sense the Panel Members might understand it.
521. However there was potentially merit in considering a 'Grid Code' which assesses the technical rules between the main European regions e.g. Nordel etc. It was his understanding that this was what was being considered.
522. DW enquired whether the occurrences of frequency response going outside the stated ranges had risen and whether National Grid had altered the strategy for controlling frequency.
523. BT replied that he was not aware of any changes to the method by which National Grid calculate frequency and was not aware of any increase in the number of frequency excursions.
524. DW indicated that there was now nothing in writing that explained National Grid's

Grid Code Review Panel Meeting

strategy for controlling frequency and that it would be useful if this information was visible. DW stated that this information was previously available in the appendix to GBSC8 in the British Grid Systems Agreement which no longer exists. DW asked if this could be introduced into the Grid Code, as was being considered for the information on automatic low frequency demand disconnection.

525. National Grid agreed to look at appendix and will report back to the September's GCRP.

Action: National Grid (BT)

526. MK asked whether the 'Electric Time' provisions (BC3.4.3) had a financial cost of compliance. Given that time keeping has moved on from 'Electric Time', if there is a financial impact, National Grid should examine whether these provisions should be removed.

Action: National Grid (BT)

527. JN informed the Panel that Large Combustion Plant Directive (LCPD) would be implemented on 1st January 2008. The LCPD placed a restriction on the operating hours of power stations that had opted out, irrespective of the number of generating units actually operating at the time i.e. each opted out power station would have 20000 hours to be used between 2008 and 2015.

528. JN informed that Panel that as a result there would be little benefit in running just one generating unit at a power station and the Generator would be incentivised to operate the power station effectively as a single BMU.

529. JN enquired as to whether National Grid had given any thought to the operational implication of the directive.

530. National Grid to investigate the matter further and provide an update to September's GCRP.

Action: National Grid (BT)

531. JN noted that the Maxgen contracts had been put into practice for the first time on 18th July 2006 and enquired whether National Grid would provide any information on how effective the new provision were.

532. BG informed the Panel that National Grid would discuss the matter and any lessons learned at the appropriate forum.

13. Date of Next Meeting

533. The next meeting will be held on Thursday, 21st September 2006 at National Grid's Offices in Northampton. The meeting will commence at 10:00am.