

Grid Code Review Panel Meeting

Minutes and Actions Arising from Meeting No. 39 Held on 17th September 2009 at the National Grid House, Warwick

Present:

David Smith	DS	Panel Chairman
Richard Dunn	RD	Panel Secretary

National Grid

John Greasley	JG	Member
Brian Taylor	BT	Member
Tom Ireland	TI	Alternate Member
Kabir Ali	KA	Future Panel Secretary
Shafqat Ali	SA	Presenter (Item 13 – BM Replacement)

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

John Norbury	JN	Alternate Member
Yvonne Ryan	YR	Member
Claire Maxim	CM	Member
Jim Barrett	JB	Alternate Member
Campbell McDonald	CMc	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

Barbara Vest	BV	Member
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Network Operators in England and Wales

Alan Creighton	AC	Member
Mike Kay	MK	Member (via teleconference) Items 1-4, 6 (part), 11 and 14 only

Network Operators in Scotland

Dave Carson	DC	Member
Neil Sandison	NS	Alternate Member

Relevant Transmission Licensees

Graeme Vincent	GV	Alternate for Alan Michie
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Generators with Novel Units

Guy Nicholson	GN	Member
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Ofgem Representative

Bridget Morgan	BM	Member
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Non Embedded Customers

Alan Barlow	AB	Member
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BSC Panel Representative

John Lucas	JL	Member
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1. Introductions/Apologies for Absence

1230. Apologies for absence were received from John Morris (Alternate - Generators with Large Power Stations with total Reg. Cap.> 3GW), Chandra Trikha and Alan Michie (Relevant Transmission Licensees) and Sigrid Bolik (Generators with Novel Units. Graham Vincent was deputising for Alan Michie.

2. Minutes of Previous Meeting

1231. The draft minutes of the 37th Grid Code Review Panel meeting held on 21st May 2009 were APPROVED, subject to minor amendments and will be available on the Grid Code Website.

Action: Panel Secretary

1232. The draft minutes of the extraordinary Grid Code Review Panel meeting held on 2nd September 2009 were APPROVED subject to resolution of further comments by MK in particular and others and will be available on the Grid Code website in due course.

Action: Panel Secretary

3. Review of Actions (pp09/30)

1233. 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 a meeting has been arranged on the 7th October with Steve Bath who is responsible for BESC implementation within National Grid to discuss whether a more simplified approach which acknowledges an individual's existing safety accreditation could be considered. National Grid would report back to the Panel in November to inform the members of the outcome of the meeting.

Action: National Grid (DS)

- Minute 988 (Delegations of Authority - DOAs)

RD informed Panel members that only one comment had been received (from JN) following circulation of the revised draft DOAs to Panel Members after the May Panel meeting. JN supported codification of the content of the DOAs into the Grid Code and other Generators agreed with him. RD noted that there were some Companies that did not want to enter into these agreements so that trying to incorporate the DOAs into the Grid Code would be very difficult. National Grid's legal advice was also that the contractual approach was a better route than the codification approach. Panel Members requested whether the advantages and disadvantages of both approaches could be presented more clearly to them. It was agreed that National Grid should arrange for Richard Wood of the NOC within National Grid to attend the next panel meeting to provide a presentation on the arguments against codification of DOAs in the Grid Code.

Action: National Grid (RD)

- Minute 1049 & 1050 (Protection – Fault Clearance Times and Back-Up Protection)

RD reminded Panel Members that wording to clarify the Grid Code in the context of fault clearance times and back-up protection had been developed by National Grid last year. The Panel requested that National Grid discuss the adequacy of the proposed wording with a Group of protection specialists representing the Generators and the Network Operators. A meeting had been held at National

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Grid's offices at Thorpe Park on 20th March 2009 to discuss the wording. This Group had decided that Generators in particular would need to carry out a survey of the current back-up protection arrangements in place at their sites to decide if the proposed wording was fit for purpose. Several Panel Members and Alternates indicated that they would like a copy of the survey to be clear on what was being requested. National Grid agreed to provide a copy of the survey to Panel Members and Alternates.

Action: National Grid (RD)

▪ Minute 1109 & 1111 Record of Inter System Safety Precautions (RISSP)

National Grid was still in the process of consulting relevant Transmission Licensees informally about whether the Grid Code could be made more flexible as part of the proposal to expand the number of unique RISSP reference numbers before going to formal Grid Code consultation. A variety of responses had been received and it was still unclear whether a fixed number could be accommodated within the IS systems of Transmission Licensees or whether the wording should be flexible to allow for the differences between the preferred approaches. AC had suggested that the formal Grid Code consultation on the proposed wording to expand the number of RISSP reference numbers could be used as an opportunity whether an impact of the IS systems would be beneficial. The panel agreed a time-scale of more than the usual 4 weeks would be appropriate for the formal Grid Code consultation.

Action: National Grid (RD)

▪ Minute 1194 (Reactive Power from Embedded Generation – Report from the Joint CUSC/Grid Code Working Group on CAP169)

TI confirmed that consultation paper E/09 on this issue had been circulated on 15th September following the extraordinary Panel meeting held on 2nd September. The consultation period would close on 7th October.

▪ Minute 1224 Multi Unit BMUs

BT confirmed that the BM replacement project would consider incorporating electronic arrangements for the notification of reduced output below SEL.

▪ Minute 1226 Target Voltage Instructions

BT confirmed that National Grid would provide a detailed report on the outcome of the exercise undertaken in 2008/09 on this issue at the November Panel meeting. JN requested that National Grid provide a note before the next Panel Meeting outlining its thinking on this issue and BT agreed to provide this.

Action: National Grid (BT)

4. Grid Code Development Issues (pp09/31)

Grid Code Consultation Update

1234. B/09 was sent to the Authority on the 25th March 2009. The Authority re issued the RIA for CAP170 for further comments by 28th August 2009.
1235. C/09 (Housekeeping Amendments) is awaiting further developments as to whether recently identified further housekeeping changes, introduced by Version 4 of the Grid Code (designated on 24th June 2009 to reflect “Go-Active” for the Offshore regime), could be rolled up with the earlier amendments.
1236. The Panel noted that National Grid had issued Consultation D/09 (Automatic LFDD) on 3rd September 2009 with a request for comments by 1st October 2009.
1237. In the context of the entry regarding Power Park Modules in Table 2 of pp09/31, CM

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noted that the Crown Estates were offering to extend the geographical area covered by round 1 and 2 offshore wind farms so that potentially significant number of additional turbines could be added in due course.

5. New Grid Code Amendments

1238. There were no new Grid Code Amendments.

6. Working Groups

▪ Compliance Working Group

1239. JG updated the panel on the progress of the working group. A further meeting of the Working Group was held on 6th July to try to resolve the outstanding issues as agreed at the May Panel meeting. The Chairman of the Working Group (Mark Perry of National Grid) was pleased that good progress had been made at the meeting in resolving the outstanding issues. The legal drafting for the consultation was currently being finalised by National Grid Legal Services. National Grid intended to give Panel Members a further opportunity to comment on the draft consultation paper before the formal Grid Code consultation commenced. The Panel had already agreed that the consultation period should be at least two months due to the complexity of the issues and the significant additional text that that would be added to the Grid Code as a result of codification of the Compliance process.

Action: National Grid (JG & MP)

▪ E3C Small Embedded Generators Frequency Obligations

1240. TI and AC explained that the Group had discussed at length how to approach the issue of achieving revised frequency trip settings both low for embedded generation to prevent a repeat of the 27th May 2008 incident when embedded generation was tripped by frequency sensitive relays as the system frequency fell. The Group had agreed that a letter from DNOs to owners of embedded power stations was necessary to request them to adjust the frequency settings so that there was lower risk of embedded generation tripping off or high should there be a frequency incident (high or low) in the future. The Group needs to understand the implications for the Generator arising from adjusting the settings and will request this information in the letter. The group has also considered requesting the views of embedded generators on the possible impacts of introducing a frequency performance requirement to the Distribution Code. The group has not agreed on the approach to take and the GCRP agreed that this issue should not be raised with embedded generators until greater consensus is reached. An interaction was identified relating to a future potential European-wide Grid Code.

1241. Generators expressed concerns over the level of scrutiny of this approach. MK also had concerns over the governance arrangements surrounding this issue and reminded the Panel that this was a joint Grid Code/ Distribution Code Panels Working Group and therefore the Distribution Code Panel needed to be content with the arrangements. JG and DS pointed out that this was an important issue for the whole industry given the impact on security of supply and it would be entirely unacceptable should little progress be reported back to the E3C in November. It was agreed that National Grid would re-draft the letter urgently based on discussions at the working group and forward on to MK for discussion at the October DCRP. GN asked whether National Grid had changed its policy towards holding additional reserve in the light of the original 27th May incident and what the costs implications were of an increase in reserve. JG and TI confirmed that WH had provided some analysis on the cost implications of the risk of future system frequency incidents and the associated cost of holding higher level of Frequency Response. National Grid confirmed that there were only marginal changes to its response holding, although higher levels were held directly after the event.

1242. National Grid agreed to begin drafting the Working Group report to ensure that all

the discussion to date was adequately captured.

Action: National Grid (TI & MP)

▪ BSSG Frequency Response

1243. National Grid reported that the working group were looking at models of how much frequency response will cost in the future with regards to the introduction of new technology and its ability to meet current grid code obligations. In addition to this the working group was considering the prospect of demand side response in the future and whether there could be new markets emerging for Frequency Response providers. The Group were requesting additional time for the Working Group to meet all the objectives in its TORs, requiring an additional 3 to 6 months. The Panel agreed that the working group should report back on progress to date at the November GCRP where a decision about an extension beyond could be made then.

▪ Gas Insulated Switchgear (GIS)

1244. National Grid reported that two more meetings of the working group had been held since the May Panel meeting but progress had been slow. TI confirmed to the working group GIS was not defined in the CUSC or the Grid Code and that there were inconsistencies between boundaries identified in the CUSC compared with the Bilateral Connections Agreements. Panel Members who were not Members of the Working Group requested an explanation of the problems created by GIS. TI confirmed that in addition to the lack of adequate definition in the Grid Code and the CUSC, there were also very low levels of competition for procurement of and maintenance of GIS equipment compared to AIS. Consequently, the prices offered by the four main suppliers were far from transparent. These issues were of considerable concern to Generators and National Grid agreed that the issues needed to be addressed. JN added that the modular design of GIS made National Grid's decision to class GIS installation as unlicensed work unjustifiable in his view and he was therefore pressing for GIS work to be licensed work and for National Grid to take over ownership of generator circuit assets at the GIS boundary. DS noted that there were also implications for DNOs and OFTOs of GIS which the Working Group were also addressing. The Panel were informed that National Grid were currently working on a survey to test the competition for maintenance of GIS in the market as agreed at the Working Group. The survey is expected to be published in the next few weeks. The Panel agreed an extension to the Working Group's TORs such that the working group should report back to the February 2010 GCRP.

Action: National Grid (TI)

▪ E3C OC6.6 (Automatic LFDD Report) pp09/23

1245. National Grid had now published a consultation paper (D/09) on the proposed Grid Code changes on 3rd September 2009 with a request for comments by 1st October 2009.

▪ PNs from Intermittent Generation

1246. National Grid reported that the third meeting of the Working Group had been held on 2nd September 2009. The panel were informed that short term balance between supply and demand and power flows across critical system boundaries relies on forecasts of Generator output and the ability to vary that output through the acceptance of Bids and Offers in the Balancing Market. Uncontrollable energy sources such as wind makes it extremely difficult to forecast future generation output and this was hindering National Grid's ability to manage the Transmission System through the Balancing Market. DW identified whether any thought was given to how other countries were dealing with this and NS confirmed historical data would be good starting point in moving forward. The Panel were informed that National Grid was looking at what currently is being provided to determine the bench mark for future generation for wind.

7. Pending Authority Decisions

▪ B/09 – Grid Code Requirements for Category 5 Intertripping Schemes

1247. The Panel noted that the Report to the Authority for B/09 had been submitted to Ofgem for determination on 25th March 2009 at the same time as CAP170. BM confirmed that Ofgem had undertaken a second consultation on the RIA for CAP170 with a closing date of 28th August 2009.

8. Authority Decisions

1248. The Panel noted that there had been no Authority decisions since the May Panel meeting.

9. Harmonic Tolerances (pp09/33)

1249. National Grid presented pp09/33 and explained that the paper was designed to be a “heads up” to Panel Members that transients and harmonics were becoming more of an issue as more and more different types of User were being connected to the transmission system. A recent connection of a new offshore windfarm to the system has given rise to a transient voltage issue occurring at a nearby existing generator which was identified as a cause for concern. At present there was little in the way of standards within the Grid Code (or the NETS SQSS) to set minimum and maximum standards as appropriate for these injections. Such standards could help Users to plan investment more systematically when connecting to the system. GN suggested that the existing levels of harmonics on the system should be described in the SYS. He also cautioned against the assumption that introducing standards into the Grid Code at this stage might help to solve the issue and suggested that the incidents to date should be analysed carefully before any commitment to introduce standards was made. Panel Members generally agreed with National Grid’s suggestion that it would be appropriate for a Working Group to consider these issues together as they were related and agreed that National Grid should present a more detailed paper to the November Grid Code Review Panel meeting exploring the issues and propose Terms of Reference (TORs) for a Working Group.

Action: National Grid (JG)

10. Short Circuit Ratio (pp09/32)

1250. National Grid reminded the Panel that a need to relax the SCR from its current level of 0.5 had been established with manufacturers and supported by generators so that very large machines expected to connect to the system in future could be transported to site. BM stated that sufficient justification would have to be shown to allow the relaxation of the SCR requirement for very large machines if it was to remain unchanged for all other generation. NG replied that at this point in time, insufficient analysis has been performed in this area to permit an across the board relaxation and if such work was required, substantial time and effort would be required to ensure it was appropriate. CM commented that this was an important change for developers and unless the Grid Code change was made quickly it could hold up development of very large plant connecting to the system in the future, which could limit other substation benefits they could provide relating to system stability. The Panel agreed that National Grid should proceed to industry consultation on this issue.

Action: National Grid (JG)

11. Planning Data – PC.4.4.2

1251. National Grid reported that the legal drafting for these changes agreed by the Panel were taking longer than expected. Final comments from the Panel on the draft

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consultation paper would be sought in due course before the paper was circulated to the industry as part of the formal Grid Code consultation.

Action: National Grid (JG)

12. Annual Summary Report for Significant System Events (pp09/34)

1252. National Grid presented pp09/34 and explained that ROCOF incidents had diminished to normal historical levels in 2009 from the large spike in 2008 mainly caused by the incident on 27th May 2008. National Grid did not intend to take any further action in relation to the minor incidents that were reported in pp09/34. BT indicated that National Grid would incorporate more information on system performance in the annual report in future.

Action: National Grid (BT)

13. BM Replacement

1253. SA provided a presentation to the Group on the BM replacement project which is available on the National Grid website at:

<http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/reviewpanelinfo/2009/1709>

1254. SA summarised the aim of the BM Replacement project which was to provide a flexible and fit for purpose system that was economic and efficient. There would be rigorous vendor assessment and system procurement process. National Grid were committed to ensure that the existing system continued to provide the highest standard of reliability before its replacement scheduled for the second half of 2012.
1255. In response to a question from JN, SA confirmed that BM replacement would be flexible enough to incorporate transactions currently carried out via fax. In response to a question from CMC, SA confirmed that BC1 and BC2 would need to be reviewed in tandem with the development of the BM replacement project. He envisaged that a Grid Code Working Group would be required in the future but not for the time being.

14. ENTSO - E Developments

1256. JG agreed to provide the Panel with a presentation on recent developments on ENTSO-E at the November Panel meeting.

Action: National Grid (JG)

15. Offshore Transmission

1257. It was agreed that this item could be removed from the agenda in future following the introduction of "Go-Active" for the Offshore regime on 24th June 2009.

Action: National Grid (KA)

16. Impact of Other Code Modifications

▪ BSC

- Black Start & Fuel Security

1258. JL confirmed that the Black Start modifications P231 & P232 which clarify the BSC procedures will be implemented in November. There could be some knock-on effects to Grid Code procedures but work had been put on hold pending additional resources to consider the issues.

Action: National Grid (SA)

- Offshore Windfarms (P237, P238, P240 & P242)

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1259. P237 arose from discussions at the Issue 37 Group and sought to simplify the process for attaining standard BMU configuration for offshore windfarms. A draft modification report will be presented to the October BSC Panel. P238 also arose from discussions at the Issue 37 Group and aimed to remove the requirement to meter each boundary point for offshore windfarms. A draft modification would be presented to the October BSC Panel. P240 proposed to allow plant and apparatus to be switched between BM Units. P240 was in currently in the assessment phase and would be presented to the November BSC Panel. P242 proposes changes to ensure that offshore exemptable generators are treated in the same way as onshore exemptable generators. P242 was currently in the assessment phase and would be presented to the November BSC Panel.

- **CUSC**

- **Transmission Access Modifications – (CAP161-166 and CAP171-172)**

1260. These Amendment Reports are currently with Ofgem for their consideration and ultimately a decision by the Authority on whether the amendments will be made.

- **CAP170 – Category 5 Intertripping Schemes**

1261. As discussed in the context of Grid Code Consultation B/09, progress on this Amendment Proposal was awaiting responses to the issued RIA by Ofgem (the RIA was issued by Ofgem on 21st May and then re-issued with a deadline for responses of 28th August).

- **Industry Code Governance Review**

1262. It was noted that Ofgem were undertaking two consultation at present under the general heading of the Code Governance Review – one relating to major policy reviews and the other relating to the role of the Code Administrators. Although the Grid Code was not expected to be directly affected by the outcome of the Code Governance Review it was expected that all Codes would adopt generally identified best practice. It was agreed that a presentation should be given to the Panel in future relating to the expected Code of Practice for Code Administrators.

Action: National Grid (KA)

17. Any Other Business

- **AOB01 – Interconnector Capability and Outage Data**

1263. National Grid informed the Panel that it had identified a need for some consequential changes to the Grid Code arising from BSC Modification P243. P243 sought to improve the visibility of information about the future availability of plant/generation by publishing the national output useable data on the BMRS and data relating to 2-14 days and 2-52 weeks ahead. The proposal also sought to publish such data in the same 11 fuel type categories used for outturn data. There was need to ensure that Interconnectors provided the same information on outages under OC2 as the generators were required to provide to meet the requirements of P243. The Grid Code changes to require this outage data from Interconnectors should proceed in parallel with consideration of the BSC changes by the BSC Panel. National Grid proposed to provide a paper at the next Panel meeting to explain the issue in more detail and suggest Grid Code changes accordingly. (post meeting note: National Grid subsequently decided that it was important to deal with this issue quite urgently and therefore would circulate a consultation paper direct to the industry before the next Panel meeting).

Action: National Grid (BT)

- **AOB2 – System Incidents Reporting**

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1264. GN requested that National Grid provide a presentation to Panel Members in due course describing the processes in place for reporting a variety of system events such as ROCOF incidents, local harmonics levels, voltage transients etc. He believed there was a need for a consistent approach to such reporting. DS agreed that National Grid would make a presentation to a future Panel meeting on this issue.

Action: Panel member (DS)

▪ **AOB3 – Speaker system for the next meeting/Panel minutes**

1265. National Grid agreed to explore the use of additional speakers for telephone participants to improve the clarity of their participation and also process the draft minutes as early as possible for circulation to Members.

Action: National Grid (KA)

▪ **AOB4 – Circulation of Panel Papers**

1266. Several Panel Members noted that papers for this meeting had been circulated very close to the meeting date and requested earlier sight of the papers in future. National Grid agreed to endeavour to provide papers to Members earlier for future meetings.

Action: National Grid (TI)

18. Date of Next Meeting

1267. The next meeting will be held on 19th November 2009 at National Grid House, Warwick. The meeting will commence at 10:00am.