

The National Grid Company plc

**Minutes of the
Grid Code Review Panel
National Grid House, Coventry
23rd May 2002**

Members/Alternates

Andy Balkwill	National Grid (Chair)
David Payne	National Grid (Secretary)
Geoff Charter	National Grid
Patrick Hynes	National Grid
Nasser Tleis	National Grid

Advisors/Observers

Robert Lane,
CMS Cameron McKenna
Malcolm Arthur, National Grid

Ian Gray)	
Mike Kay)	Network Operators

Bridget Morgan	OFGEM
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John Norbury)	Generators with Large
Graham Trott)	Power Stations with
John France)	total Reg. Cap.> 5GW

David Ward	Generators with Large Power Stations with total Reg. Cap.< 5GW	Charlie Zhang, LPC
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Malcolm Taylor	Generators without Large Power Stations
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David Nicol	EISO (Alternate)
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Chris Rowell	BSC Panel
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Brian Sequeira	Suppliers
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(No Rep)	Non Embedded Customers
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1 APOLOGIES FOR ABSENCE

1155 Apologies were received from Mike Metcalfe (Chairman), Edgar Goddard (future Chairman), John Palmer (DNO's), Francois Boulet (EISO's - represented by David Nicol) and Jan DeVito (BSC Panel - represented by Chris Rowell).

1156 In Mike Metcalfe's absence, Andy Balkwill assumed the role of Chairman and explained that although Mike had been unable to attend the meeting, it would have been Mike's final meeting as Chairman anyway as he had now taken up other duties that did not include a specific Grid Code role. Andy also explained that Mike was disappointed that he had not had the opportunity to formally hand-over the role of chairman to his successor, who in the long term was expected to be Edgar Goddard (manager of Commercial Department within National Grid's Network Strategy Operating Unit).

2 APPROVAL OF MINUTES OF PREVIOUS MEETING

- 1157 With respect to minute 1125 Charlie Zhang asked for confirmation that the frequency range under consideration was 50-49Hz rather than 50–49.5Hz. Geoff Charter stated that the 50-49Hz range quoted was indeed the range initially under consideration and gave a brief explanation of the CC.6.3.3 and system operational requirements leading to the analysis of the 50-49Hz range.
- 1158 With respect to minutes 1150 and 1151, Charlie Zhang stated that he had put his concerns in writing to National Grid via e-mail (a copy of the e-mail had been previously circulated to GCRP members). Charlie Zhang felt that the Summary of his meeting with William Hung did not present his disagreement with William's view and asked that it should not be attached with the minutes. (*Post meeting note: The summary has been removed from the minutes*).

3 MATTERS ARISING FROM PREVIOUS MEETING (not covered below)

3.1 Summary of actions (GCRP 02/07)

Action 1102 – Report on the status of Time Tagging, NTO/NTB and QPN issues.

- 1159 Patrick Hynes reported that there had been no progress with these issues as National Grid's priorities had been focussed on implementation of One Hour Gate-Closure and resolving computing system resilience issues. Patrick further explained that it was expected that there would be other associated issues to deal with following implementation of One Hour Gate-Closure and the timetable for dealing with these issues was not clear at this stage.
- 1160 Panel members generally expressed discontent with the lack of progress on Time Tagging and NTO/NTB issues. David Nicol stated that the status report was insufficient and detail on the expected timescales for dealing with issues was required.
- 1161 John Norbury expressed disappointment at the lack of progress especially as some of the issues had originally been raised as long ago as 1996. John felt that National Grid had been given sufficient time to resolve the issues. With respect to NTO/NTB, John pointed out that following the implementation of NETA, National Grid had indicated that a six month period was required to assess the issue. Also the 2 minute NTO/NTB rule had been introduced for NETA and the industry had experienced no problems pre-NETA without the 2 minute rule. John further stated that he found it difficult to understand why National Grid could not at least obtain the views of generators on the 2 minute rule.
- 1162 Malcolm Taylor stated that National Grid seemed to be indicating that there would be substantial resource implications to consider these issues and there was clearly no progress due to the work associated with One Hour Gate-Closure implementation. Malcolm suggested that given the frustration of the GCRP members representing generators, National Grid should at least provide a full status report to the September GCRP meeting, outlining briefly the current position on each issue and the proposed way forward.
- 1163 Patrick explained that although it was expected that National Grid would be able to provide a report which explained it's views on the issues, it was not expected that solutions to the problems would be available by the September GCRP meeting.

Further, any solutions were expected to involve substantial software changes with associated cost implications.

1164 **Action:** *National Grid to provide a full status report on the Time Tagging, NTO/NTB and QPN issues at the September GCRP meeting.*

1165 All other Actions were either completed, covered by other agenda items or were due to be reported on at future GCRP meetings.

OTHER MATTERS ARISING

Maximum Export Capacity - MEC

1166 With respect minute 1109, Malcolm Taylor asked for an explanation of the current position with the MEC issue.

1167 Andy Balkwill stated that a sub-group had been set as a result of discussion at the September 2001 GCRP meeting. This sub-group had made some initial progress but the issue was linked to the introduction of Transmission Access and was expected to be included in that debate. It was not known at this stage whether there would be CUSC or Grid Code changes associated with MEC, although Andy felt that it was more likely to affect the CUSC than the Grid Code.

1168 John Norbury stated that the MEC issue was raised initially in order to clarify an apparent anomaly between the Grid Code and CUSC and he believed the issue had been needlessly drawn into the debate on Transmission Access. He had expected that a simple change would have been required and the decision to consider changes to the CUSC had been National Grid's.

1169 Andy agreed that the position on MEC should be reviewed to see if a quick resolution was possible, but he remained concerned that it was relevant to the Transmission Access debate. Andy agreed to obtain a summary of the current position with MEC from the CUSC team so that a decision could be made on the way forward.

1170 **Action:** *National Grid to determine current position with MEC issue and determine the way forward.*

1171 With respect to minute 1116 Mike Kay asked for an update on progress with the Proximity issues which had originally been associated with Consultation Paper A/00 – Safety Co-ordination but subsequently postponed.

1172 Geoff explained that internal discussions were ongoing but had been delayed due to resource problems. However it was expected that a paper would be presented to the September GCRP meeting.

4 REPORT ON PROGRESS OF CONSULTATION PAPERS (GCRP 02/08)

D/01 – Provisions related to Embedded Large Power Stations

1173 Bridget Morgan reported that Ofgem continued to consider the issues associated with the Report to the Authority sent on 5th October 2001. Bridget recognised that the generator constituency was becoming impatient with progress and stated that she would continue to progress this issue.

G/01, H/01, J/01

- 1174 The associated changes had been made to the Grid Code as Revision 7 which had been implemented on 5th April 2002.

A/02 – Implications for the Grid Code of CUSC Amendment to clarify CUSC 6.5.1

- 1175 Geoff Charter reported that the closing date for responses to this Consultation Paper was 24th May (the day after the GCRP meeting) and to date only two responses had been received, although Geoff was expecting to receive further responses on or around the closing date. It was then proposed that any revisions to the original proposals, arising as a result of the responses to the Consultation Paper, would be circulated to Panel members prior to sending the final report to Ofgem. Geoff explained that the need for the consultation arose to enable the CUSC 6.5.1 Amendment to be progressed and it was then intended that the recently initiated GCRP working group would consider the wider Grid Code requirements associated with Embedded Generation.
- 1176 David Nicol asked if it was intended that further reports would be issued for discussion at the next GCRP meeting in September or would National Grid go ahead without further reference to the GCRP.
- 1177 Robert Lane explained that what happened next depended on the nature of the responses received as a result of the consultation. If many issues were raised then National Grid may decide to discuss these issues further with Panel members either at the next meeting or by correspondence. Robert pointed out that the Authority had the final say in whether change proposals should go ahead.
- 1178 Panel members expressed concern with the process employed for carrying out this consultation as at the last meeting Panel members had not agreed to Grid Code change proposals and had not seen the need for a consultation on those changes. However National Grid had proceeded to issue the consultation paper. Further the timing of the deadline for responses did not allow GCRP members to discuss any responses to the consultation.
- 1179 Geoff Charter explained that National Grid had recognised that the Panel was not happy for the consultation paper to be sent out in the form originally presented to the Panel. As a result the paper had been substantially amended and circulated to Panel members by e-mail asking for comments. As no further comments had been received the paper had been issued. Andy Balkwill pointed out that the Transmission Licence requires National Grid to consult with all Authorised Electricity Operators likely to be materially affected by proposed changes and National Grid is enabled to carry out such consultation without the need for agreement from the GCRP. Andy felt that this process has worked well in the past and reiterated the ultimate decision to implement proposed changes rests with the Authority.
- 1180 Panel members and David Nicol in particular remained concerned with the process and was also concerned that Panel members would not have the opportunity to discuss the paper and any responses from the consultation. David expressed his concern with the way in which GCRP business was carried out.

- 1181 There was also some discussion on the appropriateness of the proposed CUSC mod, with the generators appearing to support a transparent change to the Grid Code as opposed to the CUSC

5 PROGRESS ON CURRENT GRID CODE MODIFICATION PROPOSALS

5.1 OC5 Change Proposals (GCRP 02/09)

- 1182 David Payne described the Paper which represented the final report of the OC5 working group. The paper also proposed changes to OC5 in line with the agreed working group Terms of Reference.
- 1183 In response to a query from David Ward, David stated that the proposed text changes do not introduce any new Grid Code requirements and merely gather together in one place provisions located elsewhere in the Grid Code.
- 1184 With respect to the proposed Phase Unbalance text changes in OC5.5.3, Charlie Zhang pointed out that the requirement is for the maximum negative phase sequence component to remain below 1% but it was not clear what parameter this was being compared with. Nasser Tleis stated that he believed that the parameter would be the Positive Phase Sequence component and that this may be detailed elsewhere although it was agreed that further clarification would be helpful.
- 1185 **Action:** *National Grid to clarify what component is used for comparison to arrive at 1% limitation.*
- 1186 John Norbury asked if it was expected that this would be the final change to OC5, given that it has gone through extensive modification recently. David replied that there were no plans to make further modifications at the moment though it was not possible to foretell what future developments may arise.
- 1187 With the above clarifications National Grid will commence a formal consultation on the proposed OC5 changes.

5.2 CC.6.3.3 Review Working Group Update

- 1188 Geoff provided an update progress. The last working group meeting was held on 27th February and the next meeting is scheduled for 18th June. Initial analysis has been carried out to consider operation in the 50-49Hz frequency range, Further analysis is being carried out to consider operation down to 47Hz. Geoff reported that Baglan Bay has applied for a Generation Licence and also a derogation from the CC.6.3.3 provisions. As a result, Ofgem had formally requested a review of the CC.6.3.3. provisions against the Terms of Reference that the working group has already been working to unofficially.
- 1189 Geoff explained that the text of the draft derogation requires Baglan Bay to ...'procure to National Grid's reasonable satisfaction, response equivalent to the shortfall from CC.6.3.3.'
- 1190 John Norbury commented that although the working group was considering the technical issues associated with CC.6.3.3, would National Grid be able to comment on how Baglan Bay intended to procure response equivalent to any shortfall from

CC.6.3.3, would this information be in the Public Domain and would it be a time limited arrangement? Graham Trott asked if there would be any Industry involvement in the process.

- 1191 Geoff replied that any arrangement would be limited to the life of the derogation but specific details were currently unknown although it was expected that any arrangement would be the subject of a Bilateral Agreement and may be commercially confidential.
- 1192 Bridget Morgan also pointed out that the derogation was currently still in draft form and would ultimately be subject to Baglan Bay making arrangements to procure the shortfall.
- 1193 Charlie Zhang asked whether any changes arising out of the current working group analysis would have an impact on the OFFER ruling of 1999 (clarification of the extant CC.6.3.3 provisions). National Grid did not expect there to be any impact on that ruling.

5.3 Embedded Power Station Working Group Update

- 1194 Geoff explained that this working group had been set up, in addition to the Grid Code consultation associated with changes to CUSC 6.5.1, to consider the wider topic of Grid Code provisions related to Embedded Power Stations and how data is provided to National Grid.
- 1195 The first working group meeting had been held on 14th May and consisted of representatives of Generators, Network Operators and National Grid. Terms of Reference for the working group were discussed at the meeting and these were tabled for the GCRP to consider and approve (*attached with these minutes*). The working group would carry out a review in two stages. The first stage was to consider the current arrangements for the 'less than 100MW' Power Stations. The second stage would go on to consider Embedded Large Power Stations. The reason for this approach was that although the current focus was on licence exempt Power Stations it was recognised that there were many Grid Code provisions related to Embedded Large Power Stations. Mike Kay expressed the view that the date for formal reporting to the Panel of Feb 2003 was potentially a little late if there were issues that needed to be taken account of in the next Distribution Price Control Review.
- 1196 The Panel were asked to approve the working group Terms of Reference and Panel members were asked to provide any comments to the GCRP Secretary by Friday 7 June. Revised Terms of Reference would then be circulated as appropriate.
- 1197 **Action:** *Panel members to provide comments on the Embedded Generation working group Terms of Reference by Friday 7 June.*
- 1198 Malcolm Taylor suggested that the reference to 'renewable' should be removed from the first paragraph to avoid limiting the review.
- 1199 The next working group meeting was scheduled for 27th June 2002.

5.4 HVDC Interconnectors Working Group Update

- 1200 Geoff reported that the first meeting of this group was scheduled for 6th June 2002 and that meeting would discuss the Terms of Reference for the working group. The Terms of Reference would then be presented to the September GCRP for approval. The purpose of the working group would be to further develop the proposals related to the connection of future HVDC Interconnectors already presented to the Panel at the February 2002 GCRP meeting.
- 1201 **Action:** *Present HVDC Interconnectors Terms of Reference to September GCRP meeting.*
- 1202 David Ward suggested that given that there were already connection applications for HVDC Interconnectors, the outcome of the review would need to be determined as soon as possible to ensure that the connection conditions of these Interconnectors included any provisions that may be included in the Grid Code. Geoff thought that the Technical appendices of the relevant connection agreements would include the relevant connection conditions.

6 NEW GRID CODE RELATED ISSUES.

6.1 Clarification of requirements for hydro and renewable energy plant (GCRP 02/10)

- 1203 Geoff explained that this paper was seeking to clarify the text of CC.6.3.1 to ensure that it was clear that renewable energy plant may be required to be designed for frequency response and therefore meet the requirements of CC.6.3. The current text could possibly be misinterpreted to not apply to such plant. Geoff explained that change proposals were merely intended as a clarification without changing actual requirements. National Grid now planned to commence a consultation on the proposals.
- 1204 The paper also explains that National Grid is also considering proposed generic Grid Code provisions to be included for wind powered generation and such proposals would be brought to the Panel for further discussion in due course later this year.
- 1205 Panel members were generally uncomfortable with initiating any change to CC.6.3.1 at the moment given that the change may have a relatively short life as a review of generic wind farm provisions had been initiated. Malcolm Taylor and John Norbury felt that if the proposed changes were only intended as an interim measure then this should be stated within the new text. John also stated that CC6.3.1 was unambiguous in that it "does not apply to..... hydro units and renewable energy plant not designed for Frequency and voltage control" and it was therefore difficult to understand National Grid's interpretation.
- 1206 Geoff agreed that there was no overwhelming need to change the Grid Code text at the moment and agreed to withdraw the proposals for the time being, although as the possibility of misinterpretation existed then prospective generators would need to be made aware of the relevant Grid Code provisions at the appropriate time.
- 1207 Malcolm Taylor agreed to ensure that his constituents were aware of the possible misinterpretation of CC.6.3.1.

- 1208 **Action:** *Malcolm Taylor to circulate explanatory note to constituents explaining CC.6.3.1 requirements.*

6.2 Proposed amendments to the Grid Code references to PES and Second Tier Supplier etc. (GCRP 01/11)

- 1209 David Payne introduced the paper which was seeking to update current Grid Code references to PES licences and Second Tier Supply licences to reflect the current Distribution Licence and Supply Licence requirements. In addition the paper identified some housekeeping changes to remove Glossary and Definition terms of Generator Licence and Tariff Customer which are no longer used within the main Grid Code text. Also some minor typographical errors had been identified for correction.
- 1210 Graham Trott also pointed out that he was aware of other minor housekeeping changes which could be incorporated and agreed to forward these to GCRP Secretary. (*Post meeting note: Graham has forwarded a list of minor changes*)
- 1211 Malcolm Taylor pointed out that a new term of Electricity Supply Licence was proposed but there was no indication that it was used in the main Grid Code text and so was possibly not required. David agreed to investigate further and correct the proposals accordingly.
- 1212 With above clarifications National Grid would initiate a Consultation on the proposed changes.

6.3 Proposals to clarify the Grid Code associated with 'Beyond the Wall', One Hour Gate-Closure and the use of Dynamic Data (GCRP 02/12)

- 1213 Malcolm Arthur gave a slide presentation explaining the current issues associated with Beyond the Wall and how implementation of One Hour Gate-Closure compounds the problems. The presentation also included details of a new type of Service known as Pre Gate BMU Transactions (PGBTs) used to help implement One Hour Gate-Closure. A draft consultation paper dealing with the associated proposed Grid Code changes was included with paper 02/12.
- 1214 Graham Trott asked if it was expected that there would be limitations on how far in advance of Gate Closure a PGBT could be called off. Malcolm replied that it was expected that PGBTs would be called off within 24 hours in advance of real time.
- 1215 John Norbury commented, referring back to the earlier discussion, that this was a good example of why Time Tagging of Dynamic parameters was important. John also suggested that for clarity the proposed text insertion in BC2.7.2 (b) should refer to 'relevant' submitted data although it was agreed that there could be some dispute over who decides what would be considered relevant. This point could be addressed by the use of more appropriate wording and further consideration would be given to the proposed text.
- 1216 John Norbury also asked for clarification on whether a PGBT within a GTMA (Grid Trade Master Agreement) would be defined as an Ancillary Services Agreement. Malcolm agreed that this needed further consideration by National Grid and its lawyers. John also asked who would be considered as the counter-party, as an Ancillary Service may be with a Third Party. Malcolm explained that an Agreement would only be made with the party with the physical ability to provide the service.

- 1217 John France suggested that the proposed text of BC1.4.2 (a) should be more specific to remove ambiguity with respect to instructing of Ancillary Services. Malcolm suggested that this paragraph could be removed. With reference to BC2.7.2 John also asked for clarification on what would happen in the event that a PGBT and a profile had been agreed but the BMU was unable to modify its Physical Notification due to a National Grid (computing) system outage. Malcolm explained that this situation was dealt with in BC2.9.7.2. and BC2.5.1.
- 1218 National Grid agreed to circulate the proposed Consultation Paper following redrafting to cover the concerns raised at the meeting.
- 1219 **Action:** *National Grid to redraft consultation paper and circulate to GCRP members.*

7 BSC/CUSC MODIFICATION PROPOSALS (GCRP 02/13)

- 1220 Update on modification proposals which may have an impact on the Grid Code:

BSC Modification Proposals

P59 – Acceptance of Bids and Offers to honour BM Units Dynamic Parameters beyond the wall. The BSC Panel was recommending rejection of this proposal although it was recognised that some Panel members may not necessarily agree with the rejection.

P77 – Multiple BM Units for Interconnector Users. Awaiting further progress from the BSC modification process before deciding whether a Grid Code change was required.

P80 – Deemed BOA for Transmission System faults. The BSC Panel had directed that this should go into the 2 month Definition Phase followed by the Assessment Phase. Changes to BC2 would be considered towards the end of the Assessment Phase. It was expected to be able to form a view in time for the September GCRP.

CUSC Amendment Proposals

CAP002 – CUSC 6.5.1 clarification. This had been discussed under an earlier Agenda item. The Amendment Report was with the Authority.

CAP010 – Frequency Response Imbalance Exposure. The Amendment Report had now been submitted to the Authority.

8 ANY OTHER BUSINESS

- 1221 Mike Kay stated that considering the earlier debate on wind farm technology, Panel members may wish to be made aware of an IEE seminar to be held in June on the Principles and Modelling of Distributed Generators. Details could be obtained from IEE website at the following address:

www.iee.org/events

- 1222 Malcolm Taylor pointed out that a consultation on the proposed GB Distribution Code had been initiated. A GB Distribution Code Review Panel had been set up

and was meeting for the first time on June 6th 2002. A draft of the GB Distribution Code was available on the Ofgem website:

www.ofgem.gov.uk/dso/consultations.htm

- 1223 Andy Balkwill reported that with respect to the Ofgem consultation on BETTA, a conclusions paper with proposed next steps had now been issued. This referred to the formation of expert groups but it was not clear at this stage how Grid Code changes would be effected. However further progress was expected soon. Andy pointed out that it should be borne in mind that some current proposed Grid Code changes may be effectively frozen while BETTA is dealt with.
- 1224 Brian Sequeira stated that Ofgem had also recently issued a consultation paper on the Governance of Electrical Standards. Andy stated that this consultation was mainly concerned with EA standards and had a greater impact on the Distribution Code than the Grid Code.

9 DATE, TIME & VENUE OF NEXT MEETING

- 1225 Thursday **5th September 2002**, starting at **10:30 am**, at National Grid House

Grid Code Embedded Power Station Working Group

Nominations for Membership

National Grid

Geoff Charter	National Grid (Chair)
Emma Groves	National Grid (Secretary)
Peter Murphy	National Grid (Operations & Trading)
David Gray	National Grid (Network Strategy)

Generators

John France	Powergen
John Norbury	Innogy
Malcolm Taylor	Association of Electricity Producers
Steve Jackson	Centrica (Kings Lynn)

Network Operators

John Rossiter	East Midlands Electricity
Peter Lang	SEEBOARD Power Networks
Mark Williamson	United Utilities

Observers

Bridget Morgan	Ofgem
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Terms of Reference

Taking account of the potential growth in the amount of embedded generation and the steps already underway in respect of proposed amendments to licence exemptions, CUSC and Grid Codes, and the potential effect of development of Transmission Access and BETTA, undertake the following review:

Stage 1

To review and consider the need for all the existing provisions in industry codes applying to Embedded Medium or Small Power Stations relating to connection to the system, operational and outage co-ordination and data exchange. To identify any new provisions that may be required.

To assess the implications on industry codes resulting from a transfer of some obligations to Network Operators, consistent with the revision to CUSC 6.5.1.

To formulate proposals for changes to the Grid Code (possibly in conjunction with changes to the Distribution Code or other industry documents) taking account of a desire to minimise any duplication of work between National Grid, Network Operators and Power Stations.

Stage 2

To extend the Stage 1 work to include consideration of requirements on Embedded Large Power Stations with a view to minimising any duplication of work between National Grid, Network Operators and Power Stations.

Timescales

A report arising from the work of Stage 1 to be presented to the Grid Code Review Panel in February 2003, to be followed by a report on Stage 2 by September 2003.