

GRID CODE COMPLIANCE WORKING GROUP

Meeting Name	Grid Code Compliance Working Group
Meeting No.	5
Date of Meeting	3 rd November 2008
Time	10:00am – 300pm
Venue	G3 - National Grid House, Warwick

This note outlines the key points from the fifth meeting of the Grid Code Compliance Working Group

Members Present:

Mark Perry	MP	Chairman
Richard Dunn	RD	Secretary
Helge Urdal	HU	National Grid
Bridget Morgan	BM	Ofgem
John Norbury	JN	RWE Trading
Chris Berry	CB	Scottish Power Networks
Mick Chowns	MC	RWE Trading
Mike Kay	MK	North West Electricity
John Morris	JM	British Energy
Damien McCool	DM	Scottish Power Renewables

Apologies:

Claire Maxim	CM	E.on UK
Steve Hoar	SH	National Grid

1. Introductions/Apologies for Absence

1. Apologies for absence were received from Claire Maxim and Steve Hoar.

2. Draft Minutes of the Working Group Meeting held on 2nd September 2008

Accuracy

2. Amend paragraph 40 to read “MK preferred the second option but would consider the issue further”.

Matters Arising

3. **Minute 5** – Comments from BM had been incorporated into the minutes of the meeting held on 23rd June and the minutes were now available on the National Grid website.
4. **Minute 14** – no further proposals had been received from WG Members relating to type testing and registration for synchronous plant.
5. **Minute 24** – WG members would review whether the Grid Code contained inappropriate requirements on manufacturers when considering the new consolidated drafting.
6. **Minute 30** – WG Members comments on testing had been incorporated into CC.A. 13 & CC.A.14 of the consolidated drafting.
7. **Minute 38** – WG Members comments on the LON proposals had been incorporated into CC4.5 in the consolidated drafting.

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8. **Minute 40** – MK confirmed that he preferred the second option but that the DNO would still be the contractual link with the LEEMPS Generator.
9. **Minute 42** – All comments by the WG Members had been addressed in the consolidated drafting.
10. **Minute 43** – the consolidated drafting had been prepared for consideration at this WG meeting.

3. Principles behind new drafting

11. HU explained the principles behind the structure within the consolidated drafting for the Connection Conditions (CC).
12. The Introduction (CC1) described what was in the CCs and in particular described:
 - the Minimum Technical Requirements
 - the process to demonstrate compliance
 - the process when the plant is unable to comply fully
13. The Objectives (CC2) confirmed that by specification of the minimum technical, design and operational criteria for connection to the GB Transmission System there is similar treatment for all Users whilst ensuring that National Grid complied with its Transmission Licence.
14. The Scope (CC3) described the various Users and the obligations they had under the Grid Code. The Scope also contained the new drafting on LEEMPS/DCCS compliance arrangements set out in CC3.3.5 and the lifetime compliance arrangements for LEEMPS/DCCS.
15. The Procedures and Connection Process (CC.4) describes the initial assessment of compliance with the process set out in CC.A.9. The compliance process for a LEEMPS carried out by National Grid is set out in CC.A.10. CC.4.3 deals with the CUSC site issues and the EON process and also covered Modifications (same as new). CC.4.3.1-4.3.10 described the ION process including early risk management. The FON process is described in CC.4.4. CC.4.5 describes the process for Limited Operational Notification (LON) when the plant performance is not fully available. In the event of disagreement between National Grid and the User then the provisions of OC5 will be invoked to establish the facts relating to the plant. The process for restoration towards FON was described in CC.A.11. CC.4.6 described the arrangements regarding the concept of a Manufacturer's Data and Performance Report for Power Park Units with the emphasis on what submissions had already been "banked" and that the User could therefore take advantage of in the compliance process and what topics are appropriate for the Manufacturer's Data and Performance Reports.
16. CC.5 described what the User had to do to demonstrate compliance concentrating on submissions for the pre-EON, pre-ION and pre-FON stages. CC.A.8 described the arrangements for simulation studies ahead of the issue of an ION. CC.5 also described the tests that were required to be carried out prior to the issue of a FON. National Grid's preferred tests for synchronous plant are more fully described in CC.A.13, those for Power Park modules in CC.A.14. CC.5 also described the arrangements for Interim and Final User Self-Certification of overall compliance. Finally CC.5 required the compliance statement from the User to detail each clause of the Grid Code. The total documentation is collated in the User Date File structure.
17. CC.A.6 described the minimum technical requirements for excitation systems for synchronous plant and CC.A.7 did the same for Power Park Modules. Other parts

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of the Grid Code amended by the drafting were the Planning Code, the Glossary and Definitions and the Data Registration Code.

Compliance Consolidated Drafting

(i) Compliance Testing (CC.A.13 & CC.A.14)

18. During discussion of figure 1(Frequency Response Capability Tests) in CC.A.13.8 of the Consolidated drafting, HU confirmed that the Frequency Response requirements therein reflected the current Grid Code requirements including the pragmatic approach (e.g. in respect of the Grid Code requirements for a maximum initial delay of two seconds for provision of frequency response) described by National Grid to the Panel in Grid Code Review Panel paper 08/20 following the Authority's decision on Grid Code consultation D/07. This could in due course be affected by any necessary changes to the Grid Code identified as a result of the work of the Frequency Response Working Group.
19. CB asked who would be responsible for assessing whether the criteria set out in a test were met (e.g. CC.A.14.2). HU indicated that whoever is doing the compliance, NGET normally or the DNO for LEEMPS where the DNO has opted to look after compliance, would evaluate against the performance criteria. BM suggested that the drafting should be reviewed to ensure there was clarity on responsibilities for test assessment, what outputs were expected from the testing, and any dispute resolution arrangements concerning the outcome of the tests. HU agreed to review the drafting accordingly whilst emphasising that the aim was to ensure that the generator could demonstrate compliance in a timely manner.
Action: HU
20. DM was concerned that the testing described in CC.A.14.2 against the criteria listed in CC.A.14.5.2 in context of the 20% stage might be more onerous for Power Park Modules than for synchronous plant under CC.A.13.2 (open circuit tests). HU stated that they were both part of risk management during synchronising. HU agreed to review the drafting relating to the 20% and 70% testing in CC.A.14.2 and CC.A.14.3 and the extent of the tests arising from the onwards reference to CC.A.14.5. These stages of tests need only cover what is required for risk management. The testing to confirm the performance in detail to exact parameters is intended to be deferred to the final, full load PPM testing.
Action: HU
21. In response to questions from JN and MK regarding how CC.5.5.2 would work in practice, HU confirmed that with a Generator or DCCS where National Grid was responsible for the compliance process, National Grid would hold end of testing discussions with the developer and confirm the outcome in writing. If National Grid had not observed the testing, the test data should be made available to National Grid within two days and National Grid would respond thereafter in a timely manner. For LEEMPS where the DNO opted to take responsibility for the compliance process, National Grid would not detail the process and the DNO could choose the regime to employ. MC suggested that there should be references to arrangements in the instances where the DNO opts to take responsibility for the compliance process in CC.5.5.1 and CC.5.5.2 and HU agreed. BM commented that National Grid should satisfy itself that the Grid Code and the Transmission Licence were not being breached where other parties had responsibilities for compliance.
22. DM suggested that CC.A.14.1.3 and CC.A.14.1.7 went into too much detail and illustrated his concern that codification of the compliance arrangements could lose some of the flexibility of the current arrangements based on the guidelines. He requested that codification could do more to reflect the alternatives available to developers to demonstrate compliance. This was an important point for developers as the implications of failure to obtain Grid Code compliance were potentially very serious in the context of cost overruns, invalidation of warranties

etc. JN agreed and suggested that the purpose of the process was to demonstrate overall compliance with the technical requirements of the Grid Code rather than set down detailed technical parameters to be met. CB suggested that part of the problem was the use of the word “shall” for example in CC.A.14.1.3 and CC.A.14.1.5. JN agreed and indicated that the same issue applied in CC.4.3.7 which would also benefit from simple references to “tests” rather than “pre 20% voltage control tests”. However, apart from these drafting points JN indicated that he was generally content with the drafting related to testing. HU noted that CC.A.14.1.3 simply reflected the physics of the plant but agreed to take away the drafting concerns raised and consider amendments. **Action: HU**

(ii) Manufacture’s Data and Performance Report (C.4.6)

23. JN asked if the Manufacturer’s Data and Performance Report was intended to provide data to National Grid that could be “banked” in terms of the requirements of the DRC, whether the Report would be confidential and did it actually exist now or was it expected to come into general use in due course? HU responded that the Reports (potentially one for each of the allowable topics) were intended to meet partially the requirements of key difficult parts of the DRC, but were focused on PP Units rather than PP Modules, hence by definition cannot contain full information for the PPM. It was expected that the Reports would be confidential, at least the report covering the model of the wind turbine and its control systems. The reports did not formally exist at present as the documentation of the system is just coming together. The content of some of these future formalised reports already exist in a few cases. National Grid had been discussing the concept in 2004 with the GC WG dealing with wind and then introduced to manufacturers in 2005. This work is well advanced and agreements to proceed have been reached with some manufacturers, in terms of confidentiality agreements allowing non-project technical exchanges to take place directly from the manufacturers to NGET. Such Reports may also be a useful development as part of harmonisation within Europe.
24. In response to a question from DM, HU indicated that the Report would not contain a list of turbine manufacturers that were compliant with particular requirements of the Grid Code as that was akin to type registration which the Group had agreed was not desirable due to concerns over intellectual property. Advice of status would instead be available by contacting NGET. However, after discussion it was agreed that it would be useful for developers to have some transparency about manufacturers’ reports, the Developers preferring this to extend to defining the capability to meet Grid Code requirements. HU had reservations about what could be covered, but suggested that consideration could be given to providing something on the National Grid’s website. This may detail that manufacturer A had provided information about Grid Code compliance requirements x, y and z. The developer could then inquire to National Grid about the relevance of the information to their project and the extent of the information required already available (“banked”). National Grid agreed to consider this approach further and report back to the Working Group.

Action: HU

(iii) Simulation (CC.A.8)

25. HU and MP explained that the aim of CC.A.8 was to ensure that where models were submitted in support of the compliance process those models were credible in the context of demonstrating how plant would respond. National Grid were seeking to understand the functioning of the plant and their controls from the model, the expected performance, and also establish the mathematical model for the life time of the plant independent of NGET and the Network Owner’s (TO/DNO) current analysis tool (software). MC commented that developers were not normally in a position to expand upon the basis for manufacturers’ models. This reluctance of manufacturers to share through the contract chain their

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mathematical description of their products is a challenge. Members agreed to consider the drafting in CC.A.8 and provide comments.

(iv) LEEMPS/DCSS (CC.3.3, CC.A.10)

26. HU explained that the drafting now set out the obligations that a LEEMPS/DCCS must meet and who delivers them. The default position was for National Grid to carry out the compliance process although the DNO could opt to carry out the process itself. The drafting allowed for this decision to be made early in the process. MK indicated that there would need to be a check to make sure that any parallel drafting in the Distribution Code and the DCUSA was taken forward. JN requested a review of the use of the term “compliance” throughout CC.3.3 with a view to developing a clearer definition. MK suggested that the description “Lifetime Compliance” in the heading for CC.3.5 was not helpful and that “Ongoing Compliance” might be better. MK suggested that the structure of CC.4.5.2 appeared clumsy and could benefit from a review. JN requested that the references to non-compliance or potential non-compliance in CC.4.5 should be reviewed as they implied that a generator was in breach of its Generation Licence. MK also drew attention to the current drafting of OC5 and particularly OC5.8. He suggested that NGET need to review this drafting in the light of the new CC drafting, and that it would be hard for the D Code drafting to be undertaken before the intentions for OC5.8 were known. MP agreed to consider this and to contact MK with notice of NGET’s intentions so that MK could start to consider D Code drafting. MP and HU agreed to review the drafting in the light of all these comments.

Action: MP

27. MK agreed to consider the Distribution Code changes that could be required to mirror the provisions of CC.3.3 and CC.4 and any changes to OC5.

Action: MK

28. BM explained how the consolidated compliance drafting would need to progress to the Panel taking into account the offshore drafting. Essentially, all Code modifications put forward after December 2008 should include two sets of drafting – one with change drafting ignoring offshore changes and the other incorporating the offshore drafting as the baseline for the changes. As the Working Group would need to submit drafting with its report to the February Panel the Working Group would need to provide two sets of drafting. BM suggested that the issue of the Grid Code drafting for the Compliance Working Group Report should be discussed at the November Grid Code Review Panel and the Group agreed.

4. Overview of NGET involvement in DNO Generator Connection Process

29. CB explained that the process diagram that he had circulated to Group Members tried to describe the LEEMPS compliance process from National Grid’s and the DNO’s standpoint after the drafting changes to the Grid Code to clarify responsibilities had been promulgated. CB had included the application process as well as the compliance process in his diagram. CB agreed to comment on the existing diagram with the narrower focus in Appendix CC.A.11 (the option when leads on compliance) and to provide an equivalent diagram for the alternative of the DNO leading on compliance. Both these diagrams could then be included in the consolidated drafting.

Action: CB

5. Next Steps

30. It was agreed that comments on the Consolidated Compliance drafting including comments made at the meeting should be provided to National Grid within about three weeks of the meeting. RD would circulate a Word version of the Consolidated Compliance drafting to Group Members to facilitate provision of

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comments from Members and the 3 week period would commence from circulation of the Word version

Action: RD/WG Members

31. National Grid would raise the issue of the Consolidated Compliance drafting and the offshore drafting for discussion at the Grid Code Review Panel on 20th November and consider what drafting could be provided ahead of the next WG.

Action: MP

6. Next meeting

32. The next meeting will be held on Monday 22nd December at NGH commencing at 10am.