# Grid Code Compliance Working Group

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| Meeting Name | Grid Code Compliance Working Group |
| Meeting No. | 2 |
| Date of Meeting | 8th April 2008 |
| Time | 10:00am – 3:30pm |
| Venue | Room B2.3, National Grid Offices, Warwick |

This note outlines the key points from the second meeting of the Grid Code Compliance (Technical Performance) Working Group

| **Members Present:** | | |
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| Mark Perry | MP | Chairman |
| Richard Dunn | RD | Secretary |
| Mark Horley | MH | National Grid |
| Helge Urdal | HU | National Grid |
| Steve Hoar | SH | National Grid |
| Kathryn Sorrell | KS | National Grid |
| Chris Berry | CB | Scottish Power Networks |
| John Norbury | JN | RWE Trading |
| Mick Chowns | MC | RWE Trading |
| Claire Maxim | CM | E.On |
| John Morris | JM | British Energy |
| Damien McCool | DM | Scottish Power Renewables |
| Mike Kay | MK | Electricity North West |
| Bridget Morgan | BM | Ofgem |

**Apologies:**

None

## 1. Introductions/Apologies for Absence

1. There were no apologies for absence.

2. MP explained that the main purpose of the meeting was to:

   i) finalise if possible the revised paper by National Grid containing proposals to codify the Technical Performance Requirements currently contained in the Guidance Notes with a view to submitting a Working Group report on this phase 1 of the Group's work to the May GCRP;
   ii) Consider the proposals to codify the Compliance Process for directly connected and large power stations currently contained in the Guidance Notes in National Grid's paper Governance of the Compliance Process which begins phase 2 of the Group's work;
   iii) if time permitted to discuss MK's paper proposing an approach to codifying the division of responsibilities between National Grid and Users for LEEMPS compliance.

## 2. Draft Notes of the Working Group Meeting held on 15th January 2008

3. The change-marked draft notes of the first meeting of the Group held on 15th January were agreed.

## 3. Working Group Terms of Reference (TORs)

4. RD explained that the draft TORs had been revised to include minor points made at the first Group meeting and the GCRP's agreement at its February meeting that a review of LEEMPS responsibilities between National Grid and Users should become

part of the work of the Group. The Group discussed the estimated timescales for the completion for all four phases of the work identified in the TORs. The GCRP had specifically requested that the Group's estimate of these timescales should be incorporated into the TORs. MK and CB believed that it was important that the review of responsibilities for LEEMPS compliance was completed as soon as possible as part of the Group's work and this suggested the Group's work should be completed by Autumn 2008. HU indicated that the work on LEEMPS responsibilities would need take its place in the logical scheduling of issues that that the Group needed to consider. This had to begin with directly connected generation and then move on to the other issues such as LEEMPS responsibilities and lifetime compliance. There was a large body of work to get through and National Grid would need to resource that work appropriately. National Grid would progress the issues as quickly as possible but realistically he could not see the Group's work being completed in its entirety before February 2009.

5. BM commented that if there were proposals to improve the Grid Code in accordance with the Applicable Grid Code Objectives then these should be provided to the Authority as soon as possible and she supported the phased approach to the work of the Group. It might be helpful to have an outline project plan for the Group to consider at the next meeting. MP suggested that the Group might find it helpful to see proposals for how the whole of the four issues might be developed before committing to timescales for completion of the work. National Grid agreed to consider the timescales for the work of the Group and make proposals at the next meeting of the Working Group.

**Action: National Grid (HU & SH)**

## 4. Transfer of Performance Requirements from Compliance Process to Grid Code – Revised Paper by National Grid

6. MH explained that the revised paper took into account comments by WG Members at the first meeting of the Group and also comments subsequently from two Companies.

7. The main changes to the paper since the first meeting of the Group were:

   i) an amendment to the definition of "Droop" to refer to the per unit steady state change in power output which obviated the need to refer specifically to PPMs;
   ii) an amendment to Appendix B to indicate that this covered future work not work to existing plant;
   iii) new wording in Appendix C to recognise that stabilisers must be active

8. MC and JN raised the issue of the need for the generator to validate the manufacturer's own model for the plant on the basis of test results. For commercial reasons (intellectual property) manufacturers do not reveal all the parameters behind the model to the customer. The model was therefore something of a "black box" for generators and it was not possible for the generator to validate the model in the detail proposed by National Grid. National Grid should provide the eventual validation of the model as part of its overall power system analysis. DM agreed with MC and JN that it was inappropriate to place an obligation on a generator to validate volume production of a PPM when the details of the manufacturer's modelling were not known.

9. MH and HU indicated that National Grid believed that it was the responsibility of the generator to validate the model on the basis that it should be a mathematical representation of the performance of the plant. National Grid had been involved in abortive work to try to validate such models in the case of PPMs. National Grid therefore believed it was reasonable to require the generator to validate the model for its own plant on the basis of test results prior to final energisation and synchronisation. JN did not believe that a "mathematical representation" necessarily equated to a model. MK noted that the proposed wording would present similar problems for DNOs in the context of the validation of a manufacturer's models.

10. National Grid agreed to re-consider the proposed Grid Code wording in Appendix B of the paper requiring the validation of the model against test results to achieve a result that would be acceptable to Generators, DNOs and National Grid. National Grid would also explain its thinking behind the requirement on the User to validate manufacturer's models. National Grid agreed to circulate this material to Working Group Members for comment within the next two weeks. If the wording could be agreed it was still the intention to present a Working Group report to the May GCRP on the proposals to codify the Technical Performance aspects of the Guidance Notes. If the wording could not be agreed then the issue would need to be discussed further in the Working Group and the Working Group report to the GCRP postponed.

**Action: National Grid (MH)**

## 5. Governance of the Compliance Process (Discussion Proposals by National Grid)

11. SH explained National Grid's approach for bringing the description to date contained in the Guidance Notes for Generators into the Grid Code which was described in the paper circulated to WG Members before the meeting. National Grid recognised that the process between a User signing a connection agreement with National Grid and finally energising and synchronising a power station involved certain key notifications between the User and National Grid accompanied by the submission of data and plant testing over a period which could take several years.

12. The process for construction, commissioning and energisation of National Grid's and the User's plant was generally described in CC4 and CC5 of the Grid Code. However, the process for managing the synchronisation of a new generating plant and demonstrating compliance with the requirements of the Grid Code were not currently codified. This process was generally referred to as the Generation Compliance Process. National Grid believed that it was appropriate to extend CC4 and CC5 to include the Generation Compliance Process.

13. The initial proposals encompass the issue of time limited notifications to manage the demonstration of compliance up to the issue of final notification acknowledging satisfactory demonstration of compliance with the Grid Code or a derogation from the Authority for any non-compliance. The notifications can be extended if good progress is being made.

14. A self-certification approach was proposed with compliance demonstrated by simulation and testing. The User Data Library (UDL) file structure for the deposit of al relevant data pertinent to the compliance process would be incorporated into the Grid Code.

15. Finally, the paper listed those areas needing further consideration after the basic compliance process for codification was agreed by the WG. These were:

    i) Lifetime Compliance for Modifications and Failures
    ii) LEEMPS and BELLA stations compliance
    iii) Specification of Simulations
    iv) Specification of Tests required and Performance Acceptance Criteria
    v) Relationship with OC5
    vi) Power Park Unit Type Testing and Registration
    vii) Other Type Testing and incorporation into the process

16. HU then explained the changes proposed to the Glossary and Definitions, the Connection Conditions and the DRC being proposed by National Grid. New definitions would be required for the various stages of Operation Notification – Energisation, Interim and Final. The function of the further document Notification of User's Intention to Synchronise was also described. There was also a need for definition of the 3 documents used in compliance process and described in the

Guidance Document. These are Compliance Statement, User Self-Certification of Compliance and the UDL file structure. NGET believed these documents had been designed to be straightforward. The self certification is on except report in which the Generator defines any areas where they believe evidence for compliance is outstanding. There was also a definition for Unresolved Compliance Issues. These are the issues attached to the Operational Notification and defines the GC clauses, the responsibilities for progressing resolution (Generator & NGET persons) as well as the target dates for completion for each item.

**Detailed Discussion on the Glossary and Definitions**

17. JN asked why National Grid believed there was a need for two documents in the process – the Compliance Statement and the User Self Certification of Compliance. The two seemed potentially to duplicate the confirmation of compliance especially as the User Self Certification of Compliance also requested supporting evidence in the form. HU responded that there was no duplication, but levels of summary. National Grid would like the User self Certification form signed by a responsible officer from the User Company connecting to the transmission system. In contrast NGET is comfortable with the User Data Library and the Compliance Statements being provided by someone (e.g. Consultant) on behalf of the Generator.The approach was designed to give National Grid comfort that Compliance was signed off by the Company but that it was also User-friendly and able to re-use existing data where appropriate (under Generic Compliance associated with type testing, to be discussed later) rather than ask the Company to carry out new tests..

18. JN was unhappy with the wording in the Self-Certification of Compliance that began "The User herby certifies that ….". This was too strong and could be softened with inclusion of wording on the lines "The User Certifies that, to the best of their knowledge, ….". JN also queried the need for a definition of "Unresolved Compliance Issues" and whether it would be used in practice. National Grid agreed to re-consider the need for such a definition. Alternatively, if this did not get used in practice it could be deleted in due course.

**Detailed Discussion on the Legal Drafting for Connection Conditions and DRC**

19. HU highlighted the fact that CC.1.2 would need to be further adapted in the light of the outcome of the discussion on LEEMPS responsibilities. On CC.4.2 JN noted there were various references to testing and asked if "Testing" would be defined in due course. HU confirmed that this would be covered in future work as indicated in Paragraph 8 of the Governance of the Compliance Process paper. CM suggested that the sentence beginning "In addition CC.5 specifies …" in CC4.2 might best go in CC.5 itself. BM suggested that the references to "CUSC Contracts" in the drafting might need to be clearer. JN and CM requested that all references to "CUSC Contracts" should be reviewed in the drafting to ensure there was no consequential drafting required to the CUSC. HU commented that although no CUSC changes had yet been identified, CUSC changes are expected to be defined at the next stages. BM also noted that the drafting appeared to be aimed at Users other than directly connected generators e.g. DC Converter Stations. If so this should be recognised and those Users invited to comment on this drafting.

20. Several WG Members queried the need for the 28 day period referred to in CC.4.3.1 and asked National Grid to review this drafting. JN asked if there was a form for confirmation of the testing referred to in CC.4.3.2. HU indicated that a form existed and could easily be included in the GC if Users found this valuable. Users felt this would be helpful. BM suggested this was worth doing if it resulted in more certainty in the process particularly for new entrant generators. JN suggested that if the submission of data to National Grid for the same plant from different sources caused problems then the drafting could specify that the data should be accompanied by approval from an authorised signatory in the User's Company.

21. DM had difficulties with the drafting in CC.4.3.6 and CC.4.3.7.The 20% figure in CC.4.3.6 could prove problematic in Scotland where for a PPM this could be less than one turbine. In addition the voltage control and frequency control tests referred to in CC.4.3.7 should not be detrimental to site output. The flexibility currently contained in the Guidance Notes in this area appeared to be getting lost in the attempt to codify the requirements in line with National Grid's comments / concerns prior to the decision to code the process. CM also suggested that National Grid could give consideration to exemption from the 3 stage testing process for stations below a threshold MW size. National Grid agreed to review the drafting for CC.4.3.6 and CC.4.3.7 in the light of these points with a view to capturing more of the existing flexibility of the Guidance Notes. In CC4.3.8 HU confirmed that it may not be necessary for a National Grid witness to attend the testing. National Grid did not want to be an obstacle in this process and would not want to hold up testing arrangements. JN was concerned that the drafting in CC.4.3.11 was too legalistic and in particular asked for changes to the terms "final and binding".

22. JN indicated that he would prefer references to the UDL file structure in the drafting e.g. CC.5.2.5 rather than simply the UDL. DM commented that he had found the UDL a useful approach in practice for ensuring that the all the compliance documentation was easily accessible in one location. DM suggested that it should not be mandatory to provide the simulation study results listed in CC.5.3.1 (d) prior to the ION. Work pre-ION was at its peak and this would only add to the work load at the peak period. He suggested that this should be provided post-ION with a hard-wired timescale to ensure provision pre-FON. CM suggested that references to a "Testing Programme" rather than procedures for the tests to be carried out would improve the drafting in CC.5.3.1.HU commented that this would not be adequate. JN noted that CC.5.3.1 (e) seemed to suggest that a further stage in the process was required be referring to an "interim Compliance Statement". HU noted that this stage already existed in practice. BM also considered that CC.5.3.1 (e) would need to state clearly that a derogation was not required if compliance was not achieved by the ION stage.

23. In the context of the requirements in CC.5.5.1.1, JN indicated that he would like to see a test of reasonableness on the part of National Grid in the context of demonstration of compliance and in particular the requirement for any further tests. National Grid agreed to review the drafting for CC.5.5.1.1 and also CC.5.5.4 in the light of these comments.

24. National Grid agreed to review the proposed drafting in the light of all the comments made by WG Members on the Glossary and Definitions, the relevant draft statements and the Connection Conditions and also consult additional Users as appropriate.

**Action: National Grid (HU & SH)**

## 6. Next Steps

25. It was confirmed that a revised version of the paper "Transfer of Performance Requirements from Compliance Process to Grid Code" to take account of the points made in Paragraph 10 above should be re-circulated to WG Members for comment within two weeks of the WG meeting with a view to finalising a Working Group report on this aspect of the Group's work that could be presented to the May GCRP meeting.

**Action: National Grid (MH)**

26. WG Members agreed that the work that National Grid had undertaken to codify the Governance of the Compliance process was broadly in the right direction. It was agreed that all comments by WG Members on the principles described in the paper "Governance of the Compliance Process" and the associated legal drafting should be provided to National Grid by the end of April. National Grid would then issue revised drafting for further discussion by the WG at its next meeting.

**Action: WG Members and National Grid (HU and SH)**

27. NGET stated that the overall timescale for the WG extended up to Feb 2009 as agreed at the GCRP. HU indicated that National Grid would endeavour to provide initial proposals on the changes necessary for embedded generation including LEEMPS responsibilities to the next meeting of the Group. There had been insufficient time to discuss MK's paper on LEEMPS drafting at the meeting as well as the component describing life time compliance including plant modifications and in service failures. The remainder 4 items described in the paper would follow in two further later stages. MK indicated that he was satisfied with this commitment in the context of the earlier discussion on timescales for the various phases of the Group's work (paragraphs 4 & 5 above). MK indicated he would be happy to provide input on the drafting for LEEMPS responsibilities before the next WG meeting if invited by National Grid.

**Action: National Grid (HU & SH)**

## 7. Date of Next Meeting

28. The next meeting of the Group will be held on Monday 23rd June 2008 at NGH commencing at 10am.