

G5/4 Review Group

A Joint GCRP/DCRP Working Group

**Notes from 5th Working Group Meeting, 8 December 2011
Held at Honiley Court, Warwick**

Present

G Stein	National Grid Company (Chair)
E Partal	National Grid Company
S Scarbro	Western Power Distribution/Central Networks
D Jones	Electricity North West
J Morrell	CE Electric
D Crawley	ENA
L Mackay	UK Power Networks
H Dallachy	SP Transmission
J Smart	Scottish & Southern Energy
G Brown	ABB
C Forbes	Danfoss
A Mason	RE Power

1 Welcome and introductions

The Chairman welcomed Members, who introduced themselves.

2 Notes/actions from last meeting

- a. The notes of the previous meeting were reviewed and agreed
- b. Actions: covered by Agenda items.

3 Subgroup Update

3.a Proposed Review of Planning Levels

Lionel Mackay presented a paper proposing an investigation into the relationship between planning and compatibility levels. The paper had been reviewed following discussion at the previous meeting with the intention of proposing new levels if appropriate.

The paper outlined the derivation of the values currently set out in G5/4-1 and highlighted a number of issues, including an inconsistent relationship between planning and compatibility levels within network voltage bands and also between different voltages. The group discussed the issues raised by the paper and spent further time debating the value of compatibility levels where these were equal to planning levels, leaving no margin for variation. The group also asked that emphasis was placed within the **proposed work package** on evaluating the justification for any proposed change. Lionel agreed to circulate a re-drafted proposal and working group members agreed that the

work package could be taken forward through the ENA subject to their final comments.

Actions:

Lionel to re-draft and circulate "Review of Harmonic Levels" work package proposal.

All members to provide final comments to Lionel.

3b Proposal for the treatment of connection applications where existing network background levels are above Planning Levels but below Compatibility Level

Lionel Mackay presented a further proposal intended to set out a consistent approach to managing connections where harmonic levels are already high. The main feature of the proposal was that connections should be permitted providing that the new connection did not make the current situation measurably worse. Without this guidance the group felt there was a risk of connections being treated inconsistently and in some cases denied a connection.

The group agreed that the principles of the proposal should be incorporated within the draft text being assembled by the Sub-Group.

3c Fluctuating loads and short-term harmonic distortion

A further set of proposals were presented concerning the treatment of harmonic distortion from fluctuation loads. These proposals had been developed subsequent to discussion of recent measurements at sites where fluctuating loads had been connected within the current G5/4 criteria at the previous meeting.

There were 2 main aspects to the proposal:

- 1) Measurement – where distortion is significant but would not be captured by a 10 minute average, the proposals recommends 1 minute averages are used to establish background
- 2) Limits - Higher limits consistent with BS EN 61000-2-2 and BS EN 61000-2-12 where the duration of high distortion levels is short.

The group agreed that this proposal should be incorporated into revised drafting.

3d **Draft outline structure for G5/5**

The sub-group presented their latest draft of a proposed outline structure for a new engineering recommendation. The draft incorporates the outcome of discussions to date as well as a change in structure intended to improve the clarity and flow of the document.

The group agreed the this draft should be used as a basis of further work and that it would be useful to work the document up into a publishable form such that interested parties could get a better view of work to date.

4 **Review of Progress to Date**

The working group concluded discussions with a review of progress to date and a discussion of key milestones over the next few months. This included a recognition that key pieces of work were required to deliver early in the first half of 2012 months. Two IFI work packages (harmonics above the 50th and treatment of remote nodes) had now been initiated and were due to complete in early spring. The **third work package** as discussed under item 3a would not complete until summer at the earliest. The group therefore agreed that it was important to publish a draft document incorporating the results of discussions to date in early Spring 2012.

A review of the Terms of Reference also suggested that further work was required in the area of 'Roles and Responsibilities' and it was noted that the group had not considered issues relating to offshore transmission. This, along with the 'Allocation of Rights' topic would need to be addressed at the next working group meeting.

5. **Date of Next Meeting**

A date was set for the next meeting of Thursday 8th March with the venue tbc at Warwick.