



NATIONAL GRID

MINUTES

Grid Code Review Panel Meeting 10

Tuesday 14th September 2004
09.15am - 11:30am
Yeats' Boardroom, McEniff Grand Canal Hotel,
Dublin 4

Panel Members

<u>Name</u>	<u>Present</u>	<u>Role</u>
Simon Grimes	Y	Chairperson
Pat Whelan	Y	CER Representative
Tom Wilson	N	Independent Generators >10MW Representative
Fergus Keane	Y	ESB National Grid Representative
	N	Independent Electricity Suppliers Alternate Representative
Anne Trotter	Y	ESB National Grid Representative
	N	Independent Generators <10MW Representative
Dave Byrne	Y	Transmission Asset Owner Representative
Paddy O'Kane	Y	Renewable Generators Representative
Mick Noone	Y	Public Electricity Supplier Representative
Christy Kelleher	Y	ESB National Grid Representative
Stephen Walsh	N	ESB Power Generation Representative
Pat O'Donnell	Y	Directly Connected Customers Representative
Tony Hearne	Y	Distribution System Operator Alternate Representative

Other Attendees

<u>Name</u>	<u>Present</u>	<u>Role</u>
Emma Fagan	Y	GCRP Secretary
Jane McArdle	Y	ESB National Grid
Margaret Riordan	Y	ESB National Grid
Paul Smith	Y	ESB National Grid
Cliona McNally	Y	CER Observer

1. Agenda

- i. Approval of minutes of last meeting
- ii. Review modification proposals
- iii. Update on further plans for modifying Planning Code
- iv. Arrangements for next meeting
- v. AOB

2. Introductions

2.1 Simon Grimes introduced Emma Fagan as the new GCRP secretary. All panel members introduced themselves.

3. Approval of minutes from previous meeting

3.1 There were no comments on the minutes from GCRP meeting 9 which took place on Tuesday 6th April 2004. The minutes were deemed approved by the Chairman.

4. Review of Modification Proposals - MP126 – Dynamic Modeling Requirements

4.1 Presentation

Margaret Riordan, TSO advisor, gave a presentation entitled “*To define the requirements of a suitable and accurate dynamic model for wind farm power stations*” This presentation:

- 4.1.1 discussed the background to this modification proposal;
- 4.1.2 outlined the CER direction which led to this modification proposal;
- 4.1.3 outlined the dynamic model requirements and their functionality;
- 4.1.4 discussed model validation; and
- 4.1.5 listed the wind farm data required for model construction.

4.2 Detailed discussion followed

The following points were raised and discussed.

- 4.2.1 Tony Hearne queried if the high-level requirements will be stipulated in both DSO and TSO Codes. The TSO responded that this would be the case.
- 4.2.2 Paul Smith advised that it was his opinion that the proposal was not an unattainable target.
- 4.2.3 Paul Smith outlined the comments received by ESBNG following circulation of the proposed wording to both wind turbine generator (WTG) manufacturers and the members of the (former) Wind Grid Code Consultation Group. The comments primarily related to **size of time step, source code provision, time-scale for implementation and validation**. The following points were raised:

4.2.4 TIME STEP SIZE:

- 4.2.4.1 Some models require a time step of 0.25 or 0.1 milliseconds. Jane McArdle commented that running a full system simulation with a time step of this degree is unmanageable. For example, a system *simulation that included just one WTG model was carried out using a time step of 0.25 ms and it took one hour to run the 15 second simulation*.
- 4.2.4.2 Manufacturers have attempted to model their WTG as accurately as possible and this has led to short time steps. Some degree of accuracy will be lost if the models are adapted to comply with the proposed minimum time step of 5ms. This degree of accuracy is not required for system stability investigations.

4.2.5 SOURCE CODE PROVISION

- 4.2.5.1 Some manufacturers have expressed concern in providing the source code.
- 4.2.5.2 Anne Trotter commented that TSO needs to understand fully the workings of new equipment connecting to the transmission system and the provision of source code would facilitate this.
- 4.2.5.3 In trying to understand the results that may arise in stability studies, it is essential for ESBNG to be able to understand exactly what processes are being modelled, at least to the level of a complete block diagram. Occasionally, in trying to troubleshoot ESBNG have found the need to have recourse to source code.
- 4.2.5.4 The question of data supplied under the Planning Code was discussed and ESBNG undertook to examine whether the confidentiality provisions should be amended to protect "trade secrets".

4.2.6 TIMESCALE FOR IMPLEMENTATION

As there are currently no models that meet the proposed requirements the following options exist:

- 4.2.6.1.1 Wind farms may seek a time-limited derogation;
- 4.2.6.1.2 Wind farms are automatically given a time-limited derogation;
- 4.2.6.1.3 The provisions do not come into effect until a certain, agreed date.

The CER stated that they are open to suggestion on this matter.

ESBNG re-iterated that it cannot allow a wind farm to connect onto the transmission system without an appropriate model being provided and fully studied for that wind farm.

4.2.7 VALIDATION

- 4.2.7.1 Paul Smith commented that the issue of validation was an evolving one and what ESBNG has done is set out certain principles on the basis that to attempt to formalise absolute standards now is premature and that ESBNG would be pragmatic in terms of the level of validation required.

4.3 Recommendation

The panel recommended the modification proposal for approval on the basis that it be submitted with comments.

5. Review of Modification Proposals - MP127 – MP130

5.1 MPID 127. Removal of words "*under the connection agreement*" from CC12.4.

This modification proposal was recommended for approval by the Panel.

5.2 MPID 128. Amend PC4.4.3 to capture "de-ratings" also.

This modification proposal was recommended for approval by the Panel. The ESB Power Generation representative was not present at the meeting, however, he subsequently asked for his following comments to be included in the minutes:

My apologies for missing this morning's meeting. I had some comments I intended to make on the issue of de-ratings.

There are three issues. Firstly there is more work involved in organising the shut-down of an entire plant than in de-rating its output following an incident or inspection. Secondly it has been many years since PG agreed the ratings of its plants. The gradual deterioration and accumulations of incidents has previously been recorded as an ongoing non-availability and it now needs to be formalised as de-ratings to better describe the contribution to system reliability. Thirdly, while it normally takes a long time to plan a plant closure, it is possible due to unforeseen incidents for plants to permanently shutdown following a very serious incident or where an inspection reveals a serious and previously unknown problem.

A reasonable and prudent operator will then generally give 2 years notice of a shutdown and give much less notice for a de-rating. However it is occasionally possible that a shutdown will be decided upon with less notice and the Grid Code should allow for this. Therefore I oppose the mod as proposed.

Stephen Walsh
Manager, Power Market Contracts
ESB Power Generation

5.3 MPID 129. Amend the GCRP Constitution to hold GCRP member elections every two years as opposed to annually. This modification proposal was recommended for approval by the Panel. The Secretary noted that no election was held in 2004 and that the next election would now take place in 2005.

5.4 MPID 130. This proposal to modify OC4.6.5.1.1 and OC4.6.5.2.1 was submitted by the ESB Power Generation representative. ESBNG proposed the following alternative text:

- *Wind power generation output forecasting uncertainties*
- *The effect of a single transmission event on multiple generators will be considered a single contingency. The magnitude of the contingency will be determined by ESBNG taking account of the total generation in a locality which may be disconnected following a single transmission event. The probability of such an event occurring will also be taken into account by ESBNG.*

The panel recommended this modification for approval on the grounds that it be submitted with any further comments from ESB Power Generation as their representative was not present at the meeting.

5.5 MPID 131. Change any references of “SCD” to “SDC”.

This modification proposal was recommended for approval by the Panel.

5.6 MPID 132. Change the unit for reactive power from “VA_r” to “var” as this is the SI unit and has been approved by the International Electrotechnical Commission.

Reference was made to the following website:

<http://dom2.iec.ch/terms/terms.nsf/0/AAB7206D830D30E5C1256D9B0043C446?OpenDocument>

The panel recommended this modification for approval

5.7 MPID 101. The background to this modification proposal was read out. The Panel amended the most recent text and the following was recommended for approval:

Where it is agreed between ESBNG and the User that signals are not available on the HV terminals, +/- MW and +/- Mvar shall be provided at the transformer low Voltage terminals.

5.8 MPID 121. The CER alternate representative explained that this modification proposal was on the agenda again as they would like to hear the views of the ESBPG representative on why it was not recommended for approval by ESBPG at a previous meeting.

6. Action Items

- 6.1** ESBNG to communicate requirements for dynamic model minimum time step and reasons behind this to relevant industry participants;
- 6.2** ESBNG to seek more information and discussion on MPID 126 and forward to CER;
- 6.3** Secretary to request information about MPID 121 from the ESBPG representative;
- 6.4** Secretary to send modifications recommended by the Panel for approval and any further comments to the CER.

7. Arrangements for next meeting

7.1 The next meeting shall tentatively take place in the third week of January 2005.

8. AOB

- 8.1** Tony Hearne mentioned that the issue of the complete separation of the DSO code from the TSO code should be considered.
- 8.2** Pat O'Donnell asked if subsequent meetings could be held at a later time to avoid rush hour traffic. 10.30am was agreed by the Panel.
- 8.3** Ideas for the next version of Grid Code:
 - 8.3.1** to have printed tabs for each section along the side of the pages; and
 - 8.3.2** to have unique page numbers for each page.

MINUTED BY : Emma Fagan, GCRP Secretary