

# DRAFT - Summary of Meeting and Actions

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Meeting Name	Frequency Response Technical Sub Group
Meeting No.	7
Date of Meeting	Monday 7 <sup>th</sup> November 2011
Time	10:00am – 13:00 pm
Venue	Teleconference call

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This note outlines the key action points from the eighth meeting of the Frequency Response Technical Sub Group.

## 1) Introductions, Minutes and Apologies

The Chair introduced the meeting and reiterated apologies from Mick Chowns, Chris Hastings, Stewart Whyte and Alan Mason. The Chair reiterated that the purpose of this meeting was to review and agree the final draft for the Technical Sub Group Report and to confirm that the Terms of Reference have been met.

## 2) Previous meeting's actions

The action from the previous meeting was for National Grid to incorporate comments into the final draft of the Technical Sub Group report for final consideration, which has been completed.

## 3) Technical Sub Group Report

Firstly GS introduced the additional sections that National Grid had added to the Report in response to comments made at the previous meeting. The TSG were asked to agree each additional in turn:

- At the last meeting there had been debate around the basis for the five second timescale for Faster Frequency Response obligations from asynchronous generators. Consequently, GS described how National Grid has performed further analysis and drafted the additional paragraph, 9.7. GS summarised how the conclusion had been reached. The simulations show that under a 25GW/ High Wind scenario, the maximum benefit is achieved when Fast Frequency Response is delivered within the first 4 or 5 seconds whereas under the 35GW scenario the maximum benefit is again at around the 5 second mark.. GS confirmed that the volume benefits associated with a 5 second response as compared to 10 seconds are quite substantial. The WG agreed with this conclusion and the addition of this section of the report.
- The new "Manufacturer Feedback" section was discussed. GS reported that around six responses had been submitted by manufacturers to National Grid's questionnaire. For confidentiality purposes this section only covers general trends rather than the specific response from each manufacturer.. One conclusion of note was that it was proposed that synthetic inertia should continue to be developed in the future. The WG agreed for the inclusion of this section. Gamesa asked whether the primary response requirement would be lowered if synthetic inertia was also provided simultaneously. National Grid responded that they had received feedback that providing both Synthetic Inertia and Primary Frequency Response simultaneously was problematic. Gamesa suggested that a medium term objective to examine the topic further may be prudent.
- Recommendations Section. TI explained that effectively the Report is to be submitted to the Frequency Response Working Group and therefore the recommendation section is for this audience, but it is anticipated that the Report would be circulated to other industry Panels for information. JD commented that the draft report stated that in simulations the Faster Frequency Response had only been assigned to asynchronous generators although other Users such as HVDC owners,

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or even perhaps synchronous generators may be able to provide such a capability and care should be taken for the report not to assign obligations but rather to inform the deliberations of the Frequency Response Working Group. GS agreed that the text would need revising. It was also suggested, and agreed, that the recommendation concerning Rate of Change of System Frequency should include the wider impact on the system and connected Users to make the issue clearer. One member proposed that the recommendation should be explicitly made that Synthetic Inertia should be continued to be developed although not all Members agreed with this. Finally, it was agreed that the recommendation should be more explicit that the Fast Frequency Response requirement would have a five second limit (ie that 10% primary response should be delivered in 5 seconds instead of the current 10 seconds. The Sub Grid agreed to the inclusion of this section.

- National Grid stated that the Report will be updated into the standard Grid Code format after the meeting.

The wider report was then discussed in order to achieve the final agreement from the Sub Group. The only comment made was that the previous “double dip” diagram, which illustrated the problem of power recovery, was very useful and that it should be included in the report. National Grid agreed to include this diagram. This point withstanding, the Technical Sub Group agreed for the Report to be published.

#### **4) Terms of Reference**

The group reviewed the terms of reference and agreed that they had been met.

#### **5) Final conclusions**

The Chair thanked the group for their efforts and confirmed that this would be the final meeting.

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## Appendix 1 – Working Group Attendance

### Members joining by teleconference call:

Tom Ireland	TI	Working Group Chair
Graham Stein	GS	National Grid
Antony Johnson	AJ	National Grid
Damien McCool	DM	EDP Renewables
Alastair Frew	AF	Scottish Power
Joe Duddy	JD	Renewable Energy Systems
Peter Wibæk Christensen	PWC	Vestas
Francisco Jimenez Buendia	FJB	Gamesa

### Apologies:

Mick Chowns	MCh	RWE Innogy
Alan Mason	AM	REpower
Bjorn Andresen	BA	Siemens Wind Power
Peter Thomas	PT	Nordex
Martyn Cunningham	MCu	Scottish Power
Tony Lakin	TL	Turbopowersystems
Simon Lord	SL	First Hydro
Chris Hastings	CH	SSE
Sohnke Schierloh	SS	Enercon
Ken Lennon	KL	SP Power Systems
Steve Curtis	SC	National Grid
Stewart Whyte	SW	National Grid