Minutes

Meeting name : GC0087: Frequency Response Provisions

Meeting number: 1

Date of meeting : Thursday 2 July

Time : 10:00 – 14:00

Location : National Grid House, Room: E3
Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

Attendees		
Graham Stein	GS	National Grid (Chair)
Antony Johnson	AJ	National Grid
Fiona Williams	FW	National Grid
Guy Nicholson	GN	Element Power
Isaac Gutierrez	IG	Scottish Power
Alistair Frew	AF	Scottish Power
Rui Rui	RR	Scottish Power
Niall Duncan	ND	Senvion
Herve Meljac	HM	EDF Energy
Simon Lord	SC	GDF Suez
Tom Derry	TD	Britned
Andy Vaudin	AV	EDF Energy
Andrejs Svalovs	AS	Alstom
Joe Duddy	JD	RES Ltd
Sridhar Sahukari	SS	DONG Energy
Christopher Proudfoot	CP	Centrica
Franklin Rodrick	FR	National Grid (secretary)
Charlotte Grant (part)	CG	National Grid

Minutes of Workshop of 3 March

The minutes of the workshop were accepted as a true record of what was discussed.

Points Raised and Discussed

1. The group discussed at length the need to align the work of GC0087 with RfG implementation (GC0048). There is scope to include the GC0087 work into the GC0048 RfG implementation work or to separate out all the frequency response issues from GC0048 and include them in the remit of GC0087. It was suggested this issue was raised at the GCRP.
2. It was noted that any change agreed through this Grid Code process was not anticipated to apply retrospectively to existing Generators.
3. It was agreed that more clearly defining delay and ramp rates will not solve the lack of system inertia or the large volumes of uninstructed micro generation.
4. RfG defines low frequency response in terms of t1 and t2 (Article 15(2)(d)), but does not distinguish between primary and secondary response.
5. The values of RfG t1 and t2 are based on a step test whereas the Grid Code obligations are based on a ramp test. This further complicates the process of ensuring that the Grid Code aligns with RfG.
6. Additional ancillary services to address system inertia issues should be excluded from this workgroup although may well be required in the future.
7. There is a need for better information regarding ramp rates to be provided to the control room from existing generators. This will enable control engineers to more accurately calculate response requirements.

8. Large volumes of embedded generation (solar and wind) are compounding the system controllability issues as they are generally too small to be required to meet the requirements of the Grid Code.
9. The need for a linear ramp rate response from new generators was discussed and generally agreed.
10. Possible Governor stability issues could result if all generators responded in the same manner (ie with a 2 second delay and then a linear increase in output over a 10 second period).
11. Linear response is generally more straightforward from wind turbines as the controllers are simple to programme.
12. There is lack of clarity in the GB Grid Code regarding secondary response.
13. It was noted that the frequency response requirements from HVDC Converters should be included in the remit of this workgroup but the actual requirements fall under the HVDC Code and fall outside the scope of the RfG.
14. National Grid to define the Grid Code frequency response issue in more detail, in particular, how this issue affects system operation.
15. The Terms of Reference require to be populated.

Actions

	Action	Date by
1	NGET to provide feedback on relevant study work in the System Operability Framework (SOF)	10/08/15
2	NGET to update the Terms of Reference and circulate to the workgroup	03/08/15
3	NGET to discuss the Grid Code Secondary Frequency Response defect with HM	10/08/15
4	NGET to confirm Authority Representative for this workgroup	10/08/15
5	GS to seek views from GCRP regarding extending the scope of GC0087 to include all frequency parameters included in the RfG implementation process. Separate arrangements may need to be made for the HVDC requirements as these requirements fall under the HVDC Code.	16/07/15
6	AJ to list the parameters relating to frequency response in the RfG (Article 15 (1) to (4))	10/08/15
7	FR to send out a doodle poll to set a date for a September meeting	31/07/15
8	NGET to define the Grid Code defect regarding ramp rates and delay	10/08/15

Next Meeting

The next meeting is scheduled for 10 August 2015 at Warwick.
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