

**Frequency Changes during Large System Disturbances Workgroup Meeting 18
22 May 2014
Electricity North West, Linley House, Manchester**

Attendees

Name	Initials	Company
Mike Kay	MK	Chairman
Graham Stein	GS	National Grid
Robyn Jenkins	RJ	Technical Secretary
Martin Lee	ML	SSEPD
Joe Duddy	JD	RES
Greg Middleton	GM	Deep Sea Electronics
John Ruddock	JR	Deep Sea Electronics

Apologies

Name	Initials	Company
Mick Walbank	MW	Northern Powergrid
Paul Newton	PN	EON
Gareth Evans	GE	Ofgem
John Turnbull	JT	EDF Energy
Campbell McDonald	CM	SSE Generation
Alastair Martin	Amar	Flexitricity
John Knott	JK	SP Energy Networks
Jane McArdle	JM	SSE Renewables
Andy Hood	AH	Western Power Distribution
Julian Wayne	JW	Ofgem
Adam Dyśko	AD	Strathclyde University

Introductions/Apologies for absence

MK welcomed the group and apologies were noted.

Minutes of the last meeting.

The Workgroup approved both the March and April Workgroup minutes.

Review of Proposals

GS explained that there were two packages of work which the ENA sought proposals for. The packages were kept distinct as they could be delivered separately however the output of the first will feed into the second. The first proposal is about information gathering for distributed generation, including a view of what is currently installed and the protection it deploys. JR asked whether such information is likely to be available. MK noted that the availability and accessibility of that information is the driver for paying someone to do the research. JR noted that his understanding is that DNOs do not visit LV connections so they will not have any information on what equipment is installed. MK suggested that each DNO has a different approach but agreed that some do not visit LV connections. ML explained that SSEPD will visit a site where there is a new installer but once they become a trusted installer they are unlikely to visit again. GS indicated that the intention is for whoever is awarded the tender to gather as much information as possible through a variety of means. In addition, for example, NGET have a distributed generation forecast and the DNOs have estimates of what is connected to their network meaning there are many information sources to be examined and compared.

JD noted that there are potential complications relating to the number of manufacturers, with some not based in the UK, and in determining a representative sample for testing unless attempting to test all equipment. Similarly, when engaging with the manufacturers, a decision will be needed on whether to engage with a sample or try to engage with all.

GS explained that the second package of work was scoped similarly to the phase 1 risk assessment. The second work package requests a risk assessment based on the information from work package 1.

GS presented a draft scoring matrix for discussion and agreement.

JD noted that he generally agreed with the weighting but suggested a little more weighting on price and confidence in delivery rather than people and resources. MK suggested that price may not need any more emphasis, but confidence in delivery is more important. GS suggested that; delivery plan and methodology, confidence in delivery, and quality and usefulness, are all related to delivery and could have been considered together therefore the delivery measures do have a higher rating overall. The Workgroup revised and agreed the weighting.

The Workgroup discussed the possibility of changing the way the work is split and the possibility of appointing two tenderers. GM queried whether the work is end to end, or whether the practical work can start before the desktop research concludes. MK suggested that the desktop research would need to take place first followed by any testing or simulation work.

MK suggested the Workgroup members in attendance complete the scoring individually then hold a teleconference to discuss and, if necessary, resolve any disagreements. The Workgroup agreed to complete the scoring by Friday 30 May then hold a teleconference to discuss the outcome on Monday 2 June at 13.00. GS agreed to circulate the revised scoring sheet.

MK suggested that, for scoring price cost, he would generally score the most expensive 0 and least expensive 4 any others in the middle. ML suggested that, for the other categories, score 4 for excelled the criteria, 3 for met the criteria, 2 for met some but not all of the requirements and 1 for hardly met any requirements.

Workgroup Workplan.

GS explained that for the next couple of weeks the priority is to score the tenders and assign contracts, once the tender is awarded, the Licencees will need to provide information to them. MK suggested forewarning the DNOs that we are about to let a contract for this work and they will need to provide some information and possibly have direct conversations about what is, or is estimated to be, connected to their networks. ML explained that SSE have done some studies comparing the FiT register to their connection records and are aware of a considerable difference with more generation on the FiT register than on their own records. MK added that this is common across the DNOs.

Authority questions.

GS noted that Ofgem have asked some questions of the Report to the Authority for Phase 1.

The first question is regarding the expected cost savings based on probable costs and benefits. GS opened the discussion by suggesting that one way of re-evaluating savings was to neutralise the bias towards lower savings within the cost benefit analysis. For costs there are two elements, firstly the volume of sites. Where an estimate has been made of the number of sites affected, the estimated number can be pro-rated in line with the known other sites rather than assuming that all sites might need work. JD noted that we have no further evidence of number of sites needing mitigation and we will not know the exact number until the risk assessments have been completed. MK suggested that, in his engineering judgement 40% is double the number of sites that will actually need mitigation. The Workgroup discussed the cost of making the protection setting change, noting that 1 consultation response suggested it would cost £1000 rather than the £10k provided as an upper estimate in the report. The Workgroup concluded that an average of £1.9k is a probable number for relay setting change, based on an assumption that 90% of relays could have new settings applied and 10% of relays needed replacing. For the risk assessment costs, there are a number of different layers and £25k is the worst case figure. ML suggested reducing the cost estimated if we are providing median figures. MK suggested that, as we believe 25k is worst case, and there are some efficiencies to be gained as the program continues then reducing to £20k for the median seems reasonable, but there was little scope to reduce further. The Workgroup determined that the mitigation costs, estimated at £100k for intertrip, may be more around £75k.

The Workgroup noted that changing the cost calculation may actually make the case for change stronger.

Question 2 asks how many sites may be unable to make the change. GS noted that the general view was that costs are not prohibitive. JD indicated that this may be a question of sensitivity to the original assumptions. MK queried whether there is a proportion of generation expected to retire so it may not be economic to implement the change. JD added that if it does not seem appropriate to apply to generators which are likely to retire with 2/3 years (or another agreed length of time) then the CBA could be revised to allow for that. MK suggested that if 5% of plant cannot apply then that could be turned into a MW total and the extra balancing costs to allow for that could be calculated.

GS explained that question 3 only National Grid can answer as it relates to 2013/14 balancing costs.

Question 4 asked why the change needs to be retrospective. The Workgroup concluded that the CBA is based on existing plant so there are no savings if it is not retrospective.

JR asked whether the workgroup have considered what happens if Ofgem do not accept the change. GS noted that they could send back the report requesting further work but if they do reject the proposal we will carry on with the below 5MW plant and then submit a revised proposal after that.

Date of Next Meeting.

RJ noted that the next meeting is scheduled for Thursday 25 June in Manchester.