nationalgrid

Minutes

Meeting name	Information on Small Embedded Power Stations and Impact on Demand
Meeting number	1
Date of meeting	4th December 2012
Time	10:00am – 14:00pm
Location	Conference Room 5, National Grid House, Warwick.

Attendees

Name	Initials	Company
Graham Stein	GS	National Grid
Damien McCluskey	DMc	National Grid
Vandad Hamidi	VH	National Grid
Brian Roberts	BR	National Grid
Djaved Rostom	DR	National Grid
Saeed Ahmed	SA	GTC
Andrew Akani	AA	Western Power
Diana Chklar	DC	RWE
Mark Draper	MD	Peak Gen Power Limited
Joe Duddy	JD	RES
Ian Fletcher	IF	Northern Power Grid
Mike Kay	MK	Electricity North West
Campbell McDonald	CMc	SSE Generation
Richard Smith	RS	Enphase Energy UK Ltd
Jeremy Taylor	JT	Green Frog Power
Lisa Waters (tele-con)	LW	Waters Wye
Sam Wither (tele-con)	SW	UK Power Reserve

Apologies

Name	Initials	Company
Tony Berndes	TB	Western Power

1 Introductions/Apologies for Absence

1. GS provided an introduction to the group and described the terms of reference set out for the Workgroup.

2 Main points of meeting

2. GS, VH and BR explained why National Grid required more information about Small Embedded Power Stations which have an impact on both the design and operations of the transmission system.
    - VH explained the impact of Small Embedded Power Stations (SEPS) on demand security assessment and wider boundary flows.
    - BR explained that demand forecasting is becoming harder because of the impact of SEPS, which cannot be evaluated accurately with the available information.

3. GS highlighted that the main deliverable of the Workgroup will be a report which will be submitted to the Grid Code Review Panel (GCRP) in May 2013. This will allow sufficient time for three additional meetings.

4. It was suggested by VH that the additional information to be requested from the Distribution Network Operators (DNOs) could be provided in the next week 24 data submission. Although GS mentioned that the process of modifying the Grid Code will take a number of months to complete, it was suggested that information exchanges could be made earlier if National Grid required additional information before the amendments to the Grid Code are made. BR mentioned that the current Grid Code (PC.A.3.1.4(b)) allows National Grid to request further information provided it can be justified.

5. MK suggested that National Grid reviews the information which is currently provided by DNOs and lists any additional information that is required. It could then be ascertained whether:

    - the additional information is already stated in the Grid Code but not provided
    - Or the additional information is not part of the Grid Code and should be added.

6. IF provided examples of the information that is typically provided by Northern Powergrid as part of the Week 24 data.

    - Net Demand is provided at the Grid Supply Point (GSP). The contribution of Small Embedded Power Stations at the time is also supplied. This information is obtained from metered data that is available on a 1/2 hourly basis for generators above a certain size.
    - AA confirmed the above statement and mentioned that metered data is only available for plants above 5MW.

7. BR confirmed the current obligations (as stated in PC.A.3.1.4(a) & PC.A.4.3.2(a)) on DNOs to provide the following information about Small Embedded Power Stations :

    - No of Small Power Stations
    - No of generating units within these power stations
    - Summated capacity of all generating units
    - Net Demand data at specific times (4 times were mentioned)
    - The contribution of small embedded power stations used to evaluate the net demand

8. Best practice sharing was also discussed at the meeting and it was highlighted that a consistent approach needs to be adopted by all network companies. BR suggested that a web-based information exchange could be adopted for the future.

9. It was generally agreed that a significant amount of information about Small Embedded Power Stations is available but is not currently provided to National Grid. AA suggested that National Grid identifies all the information that is required so that DNOs can assess whether they can reasonably provide it.

10. BR suggested that an open book policy is adopted i.e. that DNOs provide all the information currently held so that National Grid can filter for any useful data. BR claimed that if National Grid was to be too specific about the information required, the workload on DNOs would increase as they would have to spend time to process the data and get it in the right format before passing it to National Grid. BR also referred to the Distribution Code (DC) to explain about the information that DNOs could have about Small Embedded Power Stations. MK reminded the Workgroup out that the DC only **entitles** DNOs to request information from embedded generators and that it is **not an obligation** on the DNOs to ask for all the information in the DC if it is not efficient to do so (i.e. if the information is not necessary for planning networks or for other purposes).

11. Some examples of the information required were discussed by VH (from the design or planning perspective) and BR (from the operational perspective):

- In planning timescales and operational timescales, some examples of information required from the Small Embedded Power Stations (SEPS)_ would be
    - Unique name for each SEPS above 1MW
    - The fuel types of each SEPS (above 1MW)
    - The maximum capacity of each SEPS
    - An equivalent Power Station per node on the Single Line Diagram to represent an aggregation of all Photovoltaic (PV) generation
    - An equivalent Power Station per node on the Single Line Diagram to represent an aggregation of all other SEPS.
    - Short Circuit Current Contribution for single phase and three phase faults (with a reasonable attenuation factor applied).
    - All demand data to be supplied gross with no deduction made for the contribution from any generation.

12. MK and CMc suggested a review of the paper (PP12/02) presented to the GCRP in January 2012 as it contained similar information about information requested from Small Embedded Power Stations.
    - It was observed that while some overlap was present, additional information was required on top of the requirements listed in the PP12/02 document.
    - Examples of additional information required are (see section 11 above):
        - Short circuit contribution
        - A list of generators fitted with loss of mains protection (useful for assessing RoCoF issues). It will also be useful to know the type of loss of mains protection, down to the manufacturers type of relay as all of them behave differently.
        - The connection points of the aggregated SEPS on the single line diagram.
    - It was agreed that the requirements listed in the PP12/02 paper needed to be refined and clarified. There is an action on National Grid to do so (see section 3)

3 List of Actions

13. **National Grid** to refine the requirements listed in the PB1202 document and to add further items which are required by National Grid to effectively plan and operate the transmission network. In refining the requirements, National Grid should align with existing definitions where possible and considerations need to be made to align with other codes (e.g. Chapter 2 Article 9 of the European Code).

14. **National Grid** to provide reasonable justifications as to why each of the items listed above is required

15. **National Grid** to provide examples of the impact of Small Embedded Power Stations on the design and operation of the network

16. **National Grid** to update the terms of reference of the working group to reflect the additional information required

17. **National Grid** to involve more DNOs by sending the minutes of the first meeting and making further contact to encourage them to attend subsequent meetings

18. **Ian Fletcher** to send a link to National Grid about the information relating to "Licence condition 25"

4 Suggested ways forward

19. Actions will be dealt with by relevant parties prior to the next workgroup meeting.

5 Date of Next Meeting

20. Next meeting will be held towards the end of January and will take place at NG House Warwick. The exact date will be confirmed at a later stage.