

| Minutes | |
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| Meeting name | Electricity Balancing System Group |
| Meeting number | 13 |
| Date of meeting | 26 Feb 2013 |
| Time | 10:00 - 15:00 |
| Location | Grandstand Room 7, Royal Windsor Racecourse |

| Attendees | | | | |
|-----------------------|----------|-------------------------------------|--|--|
| | | | | |
| Name | Initials | Company | | |
| Campbell McDonald | CM | SSE | | |
| Christopher Proudfoot | CP | Centrica | | |
| Damien McCluskey | DM | National Grid (dial in) | | |
| Dan Webb | DW | Seabank | | |
| Graham Bunt | GB | EDF Energy | | |
| Guy Phillips | GP | E.ON | | |
| John Norbury | JN | RWE | | |
| Lee Taylor | LT | GdF Suez | | |
| Lisa Waters | LW | Waters Wye | | |
| Nick Sargent | NS | National Grid (Technical Secretary) | | |
| Peter Knight | PK | Centrica | | |
| Robert Paterson | RP | National Grid | | |
| Sally Lewis | SL | National Grid | | |
| Shaf Ali | SA | National Grid (Chair) | | |

| Apologies | | |
|------------------|----------|----------------|
| Name | Initials | Company |
| Joe Warren | JW | Open Energi |
| John Lucas | JL | Elexon |
| Mari Toda | MT | EDF Energy |
| Simon Peter Reid | SR | Scottish Power |

Introduction

SA welcomed the attendees and thanked Centrica for hosting the meeting. SA introduced the agenda. No additional items were requested.

1 Approval of Minutes from the last meeting

JN requested clarification on the references to EDL*/EDT*, asking if these were the new interfaces to be introduced with EBS. This was confirmed as correct.

GB advised that using the * [star] was seen as confusing however, this is terminology user by the supplier (RP).

The * [star] interfaces will be offered to the generators some time after go live with users being required to migrate to the new systems between two and five years after this point (RP).



A simple guide to EBS would be extremely useful (LW) along with broadcasting the EBS status (CM), perhaps on the National Grid website which already contains EBS project presentations (RP).

Circulating the EBS newsletter would be also be useful (GB).

JN – page 5 of the last minutes refers to a Steve Curtis paper under the Dynamic Parameters discussion. The point of referring to the content of the Steve Curtis paper was to categorize actions as special instructions – creating a section for Ancillary Services but as this is confusing, this reference to the Steve Curtis paper should be removed.

ACTION – NS to delete reference to Steve Curtis paper.

An EN-coded emergency instruction has no target MW so a telephone call is needed to inform the station of the action required (RP). CM and RP discussed the content of these instructions.

Minutes agreed.

2 Review of Actions

| Action 11/05 | Ongoing action: Revision to timeline being discussed as agenda item #7. See also action 12/30 below. |
|-----------------|---|
| Action 11/11 | Low priority action : To be arranged when other EBS issues have been cleared off. Left as live. |
| Action 12/26 | See agenda item #5. CM and SR to deliver a small presentation at the February EBSG meeting. Completed and closed. |
| Action 12/28 | See agenda item #3. With reference: the Issues Paper covering Reactive Power and Frequency Response fax forms; RP to re-visit the section on the reactive capability form that deals with the AVR being in or out of service. Completed and closed. |
| Action 12/29 | See agenda item #4. With reference to the Dynamic Parameters issue paper, RP to remove the section on Emergency Run-Up and Run-Down Rates from the revised parameters and instructions issue paper. Removed and closed. |
| Action 12/30 | RP email to EBSG of Mon 25 Feb http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/workinggroups/EBS+IT+Subgroup/ See agenda item #7. With reference to the EBS project plan, RP/NS to send the link to the EBS project plan on the EBS IT website to EBSG participants following next update. Completed and closed. |



GCRP proposal paper & Industry Consultation on Grid Code BC2: Reactive & Frequency Response Fax Information

Modifications had been made to the draft fax forms at the back of the Issue Paper and the draft consultation following comments received at the last EBSG (RP). The draft consultation was due to be presented to the January GCRP but wasn't, following an email from RWE (JN).

The discussions around the fax forms are mainly as a means to agree the content of the electronic interface (RP).

JN discussed his concern regarding use of the terminology "Generating Unit" rather than "Module" as frequency response should be on a module basis, not generating unit basis. As this is being considered now, we should ensure the approach is consistent by being on a module basis. This is a new category of data invented for this fax form and does not exist anywhere else in the Grid Code (JN).

It's not strictly true that we don't hold data on a generating unit basis. OC2 TOGA Output Usable submissions are specified at generating unit level for example (RP). We need the option to submit whole module or one generating unit (CP). The starting point should be the BMU.

The solution should be optional therefore, module or generating unit (JN).

If you have a module part-capable of frequency response, it could make the difference between shutting down that module or not. Frequency Response is a scarce resource overnight for half the year and making broad-brush assumptions that a whole module could not do frequency response would increase BSUoS costs (RP). The RWE view is that the contractual responsibility would not be able to be met if submission was on a generating unit basis. From the Grid Code perspective, this data is being disclosed in isolation (JN).

This Grid Code fax form is primarily associated with data in the Ancillary Services Agreement, rather than in the rest of the Grid Code (RP) with the content being discussed between Ancillary Service parties ideally (JN).

The EBS system supplier has written code according to previous multiple reviews of these forms at previous meetings. It would be expensive to change this (RP).

We have never made declarations for generating units (JN) On the fax form, we can cross items out and replace them, we would like this functionality on the EBS system. The intention was that if it was a multi shaft module you would submit data at the generating unit level (RP).

Will the scheduling algorithm take account that a module is fully, partially, or not responsive? (CP) Yes (RP).

Not satisfied – there's a mismatch between generating unit and module. We need advice from Ancillary Service experts as to what data to capture and for consistency with the Grid Code, the data should be submitted on a module level. Has this been discussed with Ancillary Service colleagues? (JN) Yes (RP).

So why isn't National Grid capturing similar data in other parts of the Grid Code? (JN).

The RWE Contractual Manager would like to discuss this with someone within National Grid (JN).

Is this a wider issue or just a concern for RWE? (LT).

The text on the fax forms is complex and may not be easily understood (DW).



ACTION: RP to look at the wording relating to generating unit on the Frequency Response fax form.

Real time operations will not be familiar with the IDs. OC2 TOGA data is submitted by a back office function, not Operations (CM). At one of the first EBSG meetings, somebody from RWE asked that National Grid use the TOGA names for generating units, rather than creating another set of names for them (RP).

When using the online form, the unit ID will be known. (RP). Is the TOGA identifier the same as the BSCP15 identifier? (JN).

To clarify, the module is the parent and the generating units are the children in the registration of such units (RP).

The BSC is interested in module level data, i.e. - BMU level data (RP).

For wind farms, compliance is via the power park module which is linked to the BMU. It cannot be at generating unit level for this type of generation (CM).

No wind farm has been used in anger for Frequency Response to date (CP). If EBS can already handle this data, we're discussing over nothing (PK).

ACTION: National Grid to talk to their Contracts Section to check whether, if particular generator units are unavailable for frequency response, that declaring them as such is consistent with Ancillary Services contracts? (RP).

LW asked for National Grid support in asking Elexon if forms and data required by Ops staff will be available on public website as it appears that some forms and data have been moved to a portal. ie BMU IDs.

The website used to list the National Grid and BSC unit name but these have now moved.

An email was sent by LW to the ISG requesting National Grid support (LW).

SA suggested that the ISG is the more appropriate forum for this although it can be discussed at the next EBSG when Elexon representative may be able to respond.

4 Dynamic Parameters

SL gave a presentation on EBS interfaces and proposed changes to the supporting legal text, meeting the needs of the legacy and new interfaces.

Two Options were presented regarding structure: Option 1, to integrate parallel rules for legacy and new interfaces within a given dynamic parameter's definition; or Option 2, to distinctly separate legacy rules and new rules.

National Grid considered introducing two definitions into the glossary for Electronic Data Communication Facilities.

Validation Rules – logic of run up/run down rates could be expanded. Could be structured in line with Option 2 which makes sense. Current validations could otherwise be expanded up to 10 validations.

Stable Import/Export Limits will be considered in the same light as per the previous discussions (SA).

Following go-live, there will be no initial change to business users. From an IS perspective EBS is currently being tested against client systems (RP).

RP advised CP that from 2013, National Grid will be scheduling/despatching using



the new EBS system with no additional data required.

For transition, EDL being the less commercially important, less flexible system will have a single, all user transition.

EDT however, as suggested by market participants, will follow a schedule where participants will be asked individually at go-live to try submitting using the new system (RP).

EDF Energy is currently putting together designs to amend IT infrastructure (GB).

At what point will any slip in go-live schedule be advised? (CP). A view will be taken before the next IT subgroup meeting in March (RP).

RP raised discussion on the reconnection of generation that NG had previously BOAd off.

The consideration here is on how to word the Grid Code legal text without thinking of the impact on the software side (SA).

It could be simpler to amend the Grid Code to say "up to 10 rates" with detail referring to interface detail specification (JN).

Specifications are referred to within the Grid Code (RP).

Data can be submitted by phone or electronically. By phone, the detail surrounding legacy systems is irrelevant. Suggest that changes to parameter rules state 'subject to interface' and direct towards interface specification document. (JN).

Will time varying SEL data be different from what it was before? (GB).

The vast majority will follow Data Validation, Consistency, and Defaulting rules but would like to keep an element at Grid Code level so that the arrangements are clear without having to refer to other documents. (RP).

If this is going into the Grid Code, it might be worth hardwiring the grandfathering solutions (JN).

Appendix to BC1 is the main area of change (RP).

Legacy and new definitions might confuse some users but if you point them to interface specifications, this might be more suitable for them (LW).

Agreed that it should be put in interface specification but the proposed Option 2 is a cleaner solution. Could be also referred to as Interface 1 and Interface 2, rather than new and legacy (JN).

Option 2 is cleaner, it just requires correct legacy and new definitions (GP).

The intention would be to have a definition for legacy and also new, and in the future, a Grid Code change will remove the legacy wording. (RP).

The business only needs to know how many rates the system will support (JN).

For new users, references should be at a single point, i.e. SEL (CM).

Will this be dependent on the basis under which they're entering the market? (GP).

Change does not need to be made until go-live plus six months but for a new power station coming on stream during the six month delay, what system would it install? (LW).

We would employ a pragmatic approach to avoid the industry incurring unnecessary cost and having to throw away a system they've just installed. (RP).

The text changes might go live in Grid Code shortly after EBS go-live (RP) (LW).

Most software vendors would be aware of this in their roadmaps (GB).

We still need a regular public statement/newsletter as to status updates and so on, on the website, as discussed earlier in the meeting (JN).

As we had previously, a National Grid newsletter for senior management awareness would be ideal (GB).

We are planning to expand the Project Plan published every few weeks to cover the



new interfaces but a newsletter could include key dates around the core of the project (RP).

The reconnection proposal was presented by RP, taking into consideration points made above regarding wind generators. This proposal is trying to detail who tells who what and when (RP).

Discussion centred around the current use of parameters regarding wind generators. The parameters of NDZ and MZT are not suitable for wind generation with NDZ being a difficult parameter to manage for a wind generator in current gate closure timescales. We should be looking in a wider view for parameters that are fit for purpose (CM).

CM reiterated previous discussion in this meeting for the need for greater communication and the need to broadcast information with something like a newsletter.

ACTION: SL/RP to consider how we can minimize the effect on Grid Code whilst not confusing new users when drafting the new definitions for legacy and new interfaces.

ACTION: SL/RP to consider whether what the Grid Code calls automatic logging devices i.e. EDL clients, should be included in the definitions of new and legacy interfaces.

ACTION: RP to speak with Jane Oates regarding an industry newsletter.

ACTION: Regarding new connections, RP to engage with new control points/trading points to ensure they are aware of the implications of EBS on them.

ACTION: SL/RP to draft Grid Code text for managing the re-synchronisation of units following being bid off by National Grid.

5 Pump Storage Dynamic Parameters

CM gave a presentation on the topic, asking this group to consider taking the issue forward to the Multi Shaft Modelling sub group.

Re-declaring of dynamics creates an issue for Pump Storage, with mode changes in recent times being of the highest since the Foyers unit was commissioned.

The Multi Shaft Modelling subgroup has been looking at configuration modelling (RP).

At the moment, some of the parameters that are not covered by Dynamic Parameters are covered under Other Relevant Data (RP).

Spin modes are effectively Ancillary Service configurations (CM) created by effectively dropping the NDZ (CP).

As an external party, we would need to know which modes the unit was in at any one time for transparency reasons (CP).

CM asked if it was worth pursuing the issue, of formalising Pump Storage Dynamic Parameters in the Grid Code rather than them continuing as Other Relevant Data, through the Multi Shaft Modelling subgroup?

Balancing payments to Pump Storage are not insignificant. As such, and for the purposes of transparency and improving the flexibility for the operator, the issue should be addressed (CP).



The EBS will know the Balancing Mechanism parameters and Other Relevant Data applicable to Pump Storage and will provide Pump Storage instructions (RP).

There are distinct parallels with Multi Shaft Modelling. Cascade hydro's are part of the Multi Shaft Model (CP).

GdF Suez supports the current methods of operation and would prefer that parameters do not change (LT).

It has been considered that parameters for wind need to be reviewed, why not parameters for Pump Storage? (CM).

Rather than creating technology-specific data sets, it could be that certain units have multiple configurations – for a CCGT configuration two could be 1GT+ST, whereas for a pumped storage unit it might represent spin-gen. It might not say it was spin-gen, but the parameters values associated with the configuration would describe the capabilities of the unit in spin-gen (RP). Options for further discussion were then raised.

LW advised Ofgem however that Dynamic Parameters need to be reviewed (LW). Ideally, it would be beneficial to get into configurations and present how this applies to Pump Storage operations (PK).

This issue should be addressed by the Multi Shaft Modelling sub group (SA).

RP asked the non-pumped storage generators present whether they would support developing the modelling of pumped storage units. The general view was that more information was required. In due course the Multi Shaft Modelling subgroup will complete their proposals in this area and bring them to this group for discussion (RP).

6 TSL Update

SA provided background and current status.

Report to Ofgem recommended removal of TSL. At the January GCRP, Ofgem said they were considering removing Two Shift Limit on condition that National Grid provided a guidance document for common understanding of what would happen if this parameter was removed, and which parameters could be used instead. Currently, National Grid is in the process of writing this guidance document. Ofgem then requires the report to be resubmitted. The intention is to produce a guidance document following discussion with Eggborough, and then sharing the document with EBSG and GCRP. A meeting with Eggborough is planned for 25th March with the guidance document being circulated to EBSG via email as part of the follow-up process (SA).

A guidance document is also required following discrepancies between the National Grid control room and Eggborough (LW).

If this goes ahead, TSL disappears and plant is managed with other Grid Code parameters (CP).

Key parameter changes are due within the Grid Code, including Pump Storage, as per discussion above. As more parameters are reviewed and formalised, data requirements under Other Relevant Data may ultimately be removed (RP).

We need guidelines for market parameters, especially for new entrants, and by technology. We have seen that these parameters don't fit for wind technology (CM). Dynamic Parameters are not just technical parameters affecting plant (JN).

As a matter of principle can we remove Other Relevant Data bit by bit ?(LW).

ACTION: RP to ask the National Grid control room to identify all the different types of Other Relevant Data that they take into account of and bring this information back to the next EBSG meeting.



7 Review of Project Plan

National Grid is currently completing initial type tests with generators' client system vendors. Some issues have been encountered as a result of the different operating system used by EBS compared to the BM Systems. These issues are being updated as a result of testing and fixed following configuration changes. (RP).

RP also explained further steps with reference to the project plan.

The next IT subgroup meeting is 21 March (RP).

Key milestones to be placed in the requested newsletter as per previous discussions during this meeting (GP).

ACTION: Key milestones to be included in the proposed newsletter

8 Next Meeting Proposed Dates

Thursday 17 April – National Grid Wokingham.

9 AOB

With reference to BC1.4.2.(e); JN raised the point that National Grid does not use day ahead dynamic data. As such can a change be developed or can National Grid make a public statement to say this data is no longer required? There's an obligation for generators to send it with no idea as to what National Grid does with it (JN).

Agreed, no one is submitting day ahead dynamic data so it would make sense to delete the requirement (LW).

Approx 30% of BMUs submit this data however (RP).

Will National Grid be ok if this data is not submitted? (JN).

It is an optional requirement. The Grid Code does not force parties to use the data (CP).

We should ask the GCRP to support and approve the need for removal of the data requirement (CM).

Agenda item #4 discussed taking this out (RP).

In the longer term, this requirement will be removed anyway (SA).

Slides and Issue Paper presented to the last GCRP said that we don't use this data (RP).

In the interests of efficiency, National Grid should broadcast to industry that this data is not needed (CM). An entry on the National Grid website would also help (JN).

Does National Grid have a mechanism to write to everyone and advise them? (LW)

We don't want to specify new systems without the capability if National Grid might change the data requirement in the future (JN)

The suggestion is to put an open letter on website, circulate the link to the Ops Forum and Grid Code distribution lists (GP).

ACTION: National Grid to e-mail Grid Code and Ops Forum e-mail lists stating that they no longer use Day Ahead Dynamic Parameters and therefore Generators may stop submitting them.

Simultaneous Tap Changing is currently operating on fax. Should it be incorporated within the Grid Code as being able to be done via electronic means? (JN).

We will look at incorporating revised Simultaneous Tap into the Grid Code as part of new and revised BC instructions (RP).



Has the feasibility of active power from wind, linking with the dynamic MEL, been discussed with EBS interested parties? Is it feasible, has there been any engagement? (CM)

National Grid would need a view on getting headroom under BOA from a wind farm and trying to get confidence from a MEL declaration through EDL.

To a lesser extent, this should also apply for CCGT (DW).

Transparency guidelines: there are currently two systems through which to notify the TSO of generator unavailability. These two systems will be out of step before too long and a recent paper from John Lucas was asking for harmonisation into one system only (CM). Cross refer to ISG minutes 142/04 2.2.

10 Next Steps

ACTION – NS to delete reference to Steve Curtis paper.

ACTION: RP to look at the wording relating to generating unit on the Frequency Response fax form.

ACTION: National Grid to talk to their Contracts Section to check whether, if particular generator units are unavailable for frequency response, that declaring them as such is consistent with Ancillary Services contracts? (RP)

ACTION: SL/RP to consider how we can minimize the effect on Grid Code whilst not confusing new users when drafting the new definitions for legacy and new interfaces.

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ACTION: Key milestones to be included in the proposed newsletter

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