

## Minutes

<b>Meeting name</b>	Grid Code Review Panel
<b>Meeting number</b>	81
<b>Date of meeting</b>	21 <sup>st</sup> September 2016
<b>Time</b>	10:00am – 3:00pm
<b>Location</b>	National Grid House, Warwick.

## Attendees

Name	Role	Initials	Company
John Martin	Chair	JM	National Grid
Ellen Bishop	Technical Secretary	EB	National Grid
Gurpal Singh	Authority Representative Member	GSH	Ofgem
Andy Vaudin	Large Generator (>3GW) Member	AV	EDF Energy
Campbell McDonald	Large Generator (>3GW) Member	CMD	SSE
Steve Cox	Network Operator (E&W) Member	SC	ENW
Alan Creighton	Network Operator (E&W) Member	AC	Northern Powergrid
Roddy Wilson	Transmission Licensee (SHE Transmission) Alternate	RoW	SHE Transmission
Graeme Vincent	Transmission Licensee (SP Transmission) Member	GV	Scottish Power
Nick Rubin	BSC Panel Member	NR	ELEXON
Ryan Place	Code Administrator Representative	RP	National Grid
Xiaoyao Zhou	NGET Member	XZ	National Grid
Rob Wilson	NGET Member	RW	National Grid
Tim Truscott	NGET Member	TKT	National Grid
Le Fu	NGET Member	LF	National Grid
Richard Woodward	NGET Presenter	RJW	National Grid
Antonio Del Castillo	NGET Presenter	ADC	National Grid
<b>Alternates</b>			
Shilen Shah	Authority Representative Alternate	SSSSS S	Ofgem
Alastair Frew	Large Generator (>3GW) Alternate	AF	Scottish Power
John Norbury	Large Generator (>3GW) Alternate	JN	RWE
Gordon Kelly	Network Operator (Scotland) Alternate	GK	Scottish Power
Sigrid Bolik	Generators with Novel Units Alternate	SB	Repower
Robert Longden	Suppliers	RLo	Cornwall Energy

## Apologies

Name	Role	Initials	Company
Tom McCartan	Externally Interconnected System Operators Member	TM	SONI
Philip Jenner	Large Generator (<3GW) Member	PJ	Horizon Nuclear Power
Guy Nicholson	Generators with Novel Units Member	GN	Element Power
Jim Barber	Network Operator (Scotland) Member	JB	SSE
Richard Lowe	Transmission Licensee (SHE Transmission) Member	RL	SHE Transmission
Craig McTaggart	Transmission Licensee (SP Transmission) Alternate	CMt	Scottish Power
Guy Phillips	Large Generator (>3GW) Member	GP	Uniper
Lisa Water	Generator (Small and/or Medium) Alternate	LW	Waters Wye

## 1. Introductions & Apologies

4526. Apologies were received from: TM, PJ, GN JB RL CMt LW

4527. JM informed the Panel that he will be taking up the role of Chair for the next 3-4 meetings until an independent Chair is appointed. EB is the new Technical Secretary taking over from RP.

2

### a) July 2016 GCRP Minutes

4528. Comments were received from JN, CMD and GP. The minutes were approved by the Panel once the following amendments have been made.

**ACTION – EB to update the website with approved July minutes.**

## 3 Review of Actions

### a) Summary of Actions

## 4 Introductions & Apologies

4529. Apologies were received from: TM, PJ, GN JB RLO CMt LW

4530. JM informed the Panel that he will be taking up the role of Chair for the next 3-4 meetings until an independent Chair is appointed. EB is the new Technical Secretary taking over from RP.

## 3 Approval of Minutes

### b) July 2016 GCRP Minutes

4531 Comments were received from JN, CMD and GP. The minutes were approved by the Panel once the following amendments have been made.

**ACTION – EB to update the website with approved July minutes.**

## 3 Review of Actions

### b) Summary of Actions

4532 **Action Log Minute Number: 4196, 4312 and 4315: RES Review and Actions.** An update was provided by LF that National Grid is working on finalising two of the remaining four outstanding documents and will circulate these ahead of the November 2016 panel meeting. The two finalised RES documents (NGTS 3.2.05 on VT and NGTS 3.2.12 on voltage divider) will be posted to the website. This action will be discussed at the next panel.

2 **Action Log Minute Number: 4196 and 4315: SPT update:** GV highlighted the issue of the differences between SHE Transmission, National Grid Transmission System (NGTS) and Scottish Power documents in creating a standard in line with the IEC. As noted in the above paragraph until all NGTS documents are finalised this action cannot be closed.

4533 CMD noted that regional differences are not a justification in themselves for differing Relevant Electrical Standards. JN asked the Code Administrator to clarify the current status of the circulated draft standards in relation to the process around via the GCRP. approving standards. RP noted that the Standards are not approved by the Authority, in the case a conclusion is not arrived at following a Consultation period the document will enter a Workgroup phase. but any are circulated for comment **Action Log Minute Number: 4352 from July 2016: TSOG Progress.** On the agenda for the meeting and is an action under General Conditions.

4534 **GC0086 Update:** RPRP confirmed that Ofgem wished to review the legal text prior to the Report to the Authority being submitted to ensure the changes captured the essence of

CGR3. RP also confirmed that he hoped to submit the revised final Report to the Panel for comment by the start of October. Furthermore, RP addressed the Panel that we are still looking for nominations for the Independent Chair and 2 representatives Panel members representatives to sit on the interview Panel. panel this position. As part of CGR3 and also reflecting CMA findings, materiality criteria have been significantly changed; a change considered non-material and therefore to be addressed using self-governance unless proven otherwise rather than other way round.

RfG Project Plan: Whilst this is not an active action it was agreed by RJW and the panel that the project plan for RfG would be circulated to the panel to ensure that the commitment to ensuring that IT systems are factored into the implementation is fully accounted for in the planned work.

4535 **GC0036 Update:** Agenda item. RWRW noted that harmonics are a local issue and are therefore not addressed by RfG. **AOB:** BM participation: Banding thresholds – important to retain awareness although no immediate action came from points made.

4536 **AOB: Relevant Electrical Standards (RES) 4382:** Included in the workshop National Grid is planning to hold to amend the general conditions

4537 **AOB:** Modification Templates: Noted from CMDCMD that the new template to raise an issue is not fully fit for as purpose as it requires too much detail when a Panel member only wishes to raise an issue to the Panel issue for discussion. Suggested that an additional template akin to a 'Discussion Paper' may be an option for the Panel to consider in order to raise agenda discussion agenda items in the future.

4538 **AOB:** EDT and EDL\*:\*: ADC to upload information to the RES section of the website.

4539 **Frequency Response:** RJW presented information to the Panel and asked the Panel to comment. RJW asked the Panel if there is an opportunity for the Balancing Services team to provide enhanced data in their reports to be better aligned rather than new work being done? RJW confirmed that he will circulate the data in order for Panel to feedback on how they would like the data to be cut before presenting back at the November Panel.

4540 **Interconnector PNs:** RJW confirmed he has done some research, however, he noted that much of the information requested is held in bilateral connection agreements and is therefore confidential. He confirmed that National Grid still need to clarify the owners of the information. JN noted that the request to clarify whether individual Interconnector Users actually submit PNs as per the Grid Code should not be a confidential matter. JN highlighted that it is important that clarity is achieved before decisions need to be made on TERRE and XBID.

4541 **Emergency Disconnection:** On the Agenda for the meeting.

**ACTION: Email Panel to request nominations for GCRP Independent Chair interview Panel.**

**ACTION: Share proposed project plan and dates prior to the November GCRP.**

**Discussion ACTION:** Research and develop **Discussion Point:** Develop an alternative type of paper enabling the panel to raise a 'discussion' item.

**ACTION: Ensure a RES interface document is created for EDT and EDL Star\*.**

**ACTION: refer the work on Interconnector PNs to XBID and Project TERRE.**

## 4 New Grid Code Development Issues

### a) Project TERRE Implementation

4542 Following the issue paper in July, RJW confirmed that National Grid have carried out an impact assessment. It has been identified that Project TERRE is likely to have a bigger impact on the Grid Code than first thought .as a result, the Code Administrator is working closely with

ELEXON to ensure that any cross code impacts are dealt with in the most efficient manner. Currently it not clear what impact that also have on Project TERRE and Grid Code. RJW also confirmed that at the next GCDFGCRPGCDF in October the main Agenda item will be Project TERRE focussing for industry to brainstorm possible Technical focussing on technical solutions in relation to how the market can interact with the European trading platform. RJW added that the current thinking behind the implementation is to use the current Balancing Mechanism already in place.

4543 RJW confirmed that now a proposed go live of TERRE in Q3 of 2018.

4544 JN noted that it would be beneficial to understand in layman's terms the activities TERRE will require and the benefits that it will provide. If this is understood then it will be easier to understand what physically happens on the system and the potential Grid Code changes needed... Further to this, he added that further information from the BSC P344 workgroup would be helpful whilst answering the Interconnector PN confusion would need to be answered question and prior to implementing any changes (if required).).

4545 RJW flagged to the Panel that he would welcome further GCRP participation in the Project TERRE discussions. RJW confirmed National are NG are running a session at GCDF on the 6<sup>th</sup> October where an overview of TERRE will be given, with a view of then utilising the session to consider which sections of the Grid Code are likely to be impacted and how..

#### **b) Emergency Disconnection of Embedded Generation**

4546 RJW presented slides summarising the issue as discussed at the previous GCRP in July.. In conclusion, while the issue had merit and does need to be addressed it is being placed on hold for now until the trials taking place on controllability of embedded generation with some DNOs are further progressed (this , however, this did not mean that the discussion does not have merit. SC is part of the TDI – Transmission-Distribution Interface work)SC noted that it would be good for the P to Panel to have led trialed in order to provide transparency and SC open discussion. SC noted he did held to RJW and SCSCSC to take the conversation offline and return to the Panel with updates on TDI coordinating constraints. .JN added that there is a concern that such workarounds are being put in place rather than using the Grid Code or CUSC processes, which consequently lead to inconsistent solutions across codes.

4547 GVSCGV added that the trials were being facilitated using amendments to BCA app G for certain sites. The intention was to optimise embedded generation connections making the best use of system capacity and finding the best value for consumers in allowing further connections in groups that are otherwise 'full' pending further reinforcement..

4548 SC noted that the GCRP want clarity on what the DNOs are being asked to do. RLo contributed that he is unclear where the process is going? What will be the point of the outcome? Following the trial where will the lessons learned be captured – where does the proposal for change go to – an existing forum or as part of a new process? JN noted that the focus appears to be managing emergency / post-emergency actions and that there should be greater emphasis on preventing the emergency from occurring in the first instance such as by including smaller generators in the BM . CMDCMD added that he wanted clarity over what was allowable. TT noted that keeping the network secure was paramount. JM confirmed that an update from TDI was necessary for the November Panel.

4549 SC added that everyone understands the activation of aa constraint and the potential for large losses due to non-transmission flow issues but what powers do National Grid employ to rectify such a situation and how do the DNOs respond? RW noted that the current Grid Code requirements for emergency instruction include a provision for DNOs to be instructed to disconnect 'plant or apparatus' but that this needs clarification which was what had been sought previously. Following this it was agreed that an update on the TDI group discussions with regards to Emergency Disconnection would be given at the next panel.

**NEW ACTION:** Update to be provided on TDI group discussions in relation to Emergency Disconnection of Embedded Generation.

## 6 Existing Grid Code Development Issues

### a) GC0096: Storage

4550 RJW confirmed that the plan is to set specific and proportionate technical requirements in the Grid Code for storage technologies. RJW presented slides and noted that he feels it is important to understand the technology better before jumping into solution mode. There is currently a lack of clarity and there is a defect around storage specific connection conditions. He confirmed at the workshop in August the majority of the group were industry representatives and not National Grid. At this meeting the commercial considerations were discussed as well as the technical, along with breakout sessions to discuss and form ideas on next steps. It was confirmed that there is a defect and that a workgroup is needed.

4551 RJW asked for confirmation and endorsement for the following the approach: a workgroup to be set up, approval of suggested timescales, and, working on the assumption of four workgroup meetings to develop the changes for delivery by the end of 2016. RJW confirmed that he is not looking to create a bespoke set of requirements for the Grid Code; the work will look at what is formally and explicitly set out in the Grid Code with the risk that being too prescriptive could cause problems in the future. It was key given the other workgroups and discussions taking place that getting this piece of work wrapped up quickly was important – hence the ambitious timeline.

4552 RJW added that the outcomes from the workshops have been presented at the Distribution Code Review Panel (DCRP) and David Spillett from ENA has been engaged for a joint Workgroup to resolve issues relating to Technical Storage connections.

4553 AV questioned how far ahead this solution would look? Taking into consideration FES and 2020 will this be addressed by the workgroup? JN noted that a different approach could help and that a good starting point would be the current Grid Code provisions relating to demand and generation. AV added that he wants to ensure the scope of the workgroup is clear and that there is a defined timescale that is being used in the scoping of the work.

4554 The Panel members agreed that Terms of Reference would be useful to stipulate aspects such as timescales and how far into the future the work would look.

4555 SB raised the point that renewable generators are still awaiting settlement of what the commercial aspects. RJW responded that commercial considerations were being taken into account but this is solely focusing on the Technical requirements

4556 JM also stated that it would be important to highlight cross-code impacts and understand what workarounds were currently in place so that a coordinated response could be ensured.

### b) Relevant Electrical Standards

4557 Covered in actions update. .

**NEW ACTION:** Terms of Reference for Storage workgroup to be written by RJW and circulated to the panel.

## 7 Workgroups in Progress

a) **GC0036: Harmonics:** Covered in actions update.

b) **GC0079: Frequency Changes during large disturbances and their effect on the total system (ROCOF).**

**4558** XZ confirmed that phase 2 of this work covering generators smaller than 5 MW needed was progressing to establish changes to their RoCoF protection settings and that there will need to be an assessment carried out to look at the safety implications.

**4559** It is expected that by end of 2016 a proposal will be brought to the Panel and then a standard consultation will ensue.

**4560** CMDCMD commented that he was not clear on the Vector Shift aspect and that further work would need to be carried out.

**c) GC0087: Frequency Aspects of RfG.**

RJWRJW commented that a scheduled meeting for early September was not held due to a delay in receiving study data; this has now been postponed until October.

RJW confirmed the majority of requirements have been developed, and now there is work being done to look at RoCoF withstand for RfG. RfG entered into force (EIF) on the 17<sup>th</sup> May 2016. There is now 2 years to complete GB implementation and 3 years for equipment 'caught' by the code to prove compliance.

**d) GC0090: HVDC**

**4561** RJW confirmed that he expects GC0090 to EIF week commencing 26<sup>th</sup> September. It was initially expected to EIF in July 2016 so this has effectively extended the window to deliver modifications by two months.

**4562** It is likely that the HVDC workgroup will next meet in early 2017. Due to the interplay with RfG it has been held back to prioritise this and to address common issues such as fault ride through. It is expected that the initial focus for HVDC will be on frequency.

**e) GC0091: DCC**

**4563** RJW confirmed that DCC will EIF in mid-September.

**4564** Discussion noted that Demand Side Response (DSR) technical requirements are not particularly clear cut to provide a solution for as DSR provision is optional. Further work will need to be carried out to ascertain how to facilitate commercial requirements.

**4565** Further meetings are anticipated in mid-November.

**f) GC0095: TSOG**

**4566** RJW confirmed that TSOG is yet to EIF and also noted the additional complexity with TSOG that unlike the connection codes (RfG etc) TSOG has staggered dates for compliance with requirements (at EIF and then also 9, 16, 18 and 21 months later)

**4567** There are no changes anticipated to the Grid Code for TSOG at EIF. A further meeting is planned for mid-October to discuss impacts on existing users and data exchange.

## **8 Workgroup Reports**

**4568** None

## **9 Industry Consultations**

**a) GC0048: RfG Implementation.**

**4569** RJW discussed a draft Report to the Authority. Scottish and Southern Networks raised concerns over some of the technical details of the proposals. The focus is on Type B generators which currently means that it may be a relaxation on some of the requirements on

for new generators connecting to the Scottish networks.,RJW confirmed that it needs to be clear this is not an issue ideally before the consultation is issued Report to Authority consultation is submitted issued.

4570 CMDCMD added he was concerned / confused why these responses were picked up at such a late stage in the process and why standard process is not being followed. Why had these views not come out in the workgroup report? CMDCMD also noted increasing frustration with email 'ping pong' which has ensued between an inconsistent distribution list. RJW commented that the Workgroup would gather again either via WebEx or teleconference to discuss the conclusions.

4571 RJW noted he is concerned that the consultation will get stuck if the current work is not carried out effectively.

## 10 Reports to the Authority

### a) GC0077 Subsynchronous Resonance:

RW noted that the report has been sent to the Authority.

4759 Ofgem are partway through their assessment but are questioning whether there has been a methodology used to arrive at the conclusions about user and licensee; they are considering whether they require more information prior to making a decision. The focus on consumer benefit for the Authority places a focus on them to ensure that a robust cost benefit analysis has been carried out.

4760 RW commented that it was important that the Authority balance the need to make a decision with not asking for information that simply does not exist.

### b) GC0086: Open Governance

4761 RP confirmed that GC0086 will be submitted once Ofgem have given their final view on the amended legal text taking into account CGR3 legal drafting.

4762 RPRP confirmed that there will be an update at the November Panel, with a detailed plan outlined on what the changes will mean for the Panel and proposed industry engagement and education plans.

4763 The materiality criteria have been changed significantly by the Authority. Open Governance works on a basis that unless proven to be otherwise everything is considered to be suitable for self-governance. SCRs is the other main change enabling Ofgem to utilise greater power where necessary.

4764 The changes are likely to come in towards the end of Q4 2016, if it is approved prior to the end of November. At the end of August the process was confirmed to seek an independent chair. This process is under way with 3-4 people being on the list of candidates. A request was made to the Panel by RP to consider if they know any suitable candidates who could be added to the list.

Code Governance team to consider sending Outlook calendar invites for future GCRP meetings

## 11 Pending Authority Decisions

a) **GC0092:** Left on to acknowledge the change has been agreed – can now be removed.

b) **GC0093 NISM Renaming: CONFIDENTIAL**

4765 RW requested that the GCRP were all ready and committed to communicating the change when a decision was confirmed..

## 12 Progress Tracker

4766 No comments from the Panel on the revised format.

### a) .CGR3/CMA Update

4767 ***There has been a fifth objective added by Ofgem that all future modifications / issues will have to consider during consultation. This has been added to the Housekeeping modifications register.*** There is also a move to a single live cross-code modifications register. Grid Code is fully compliant with these requirements. This also feeds into Ofgem's focus on forward work planning and strategy (BSC already do something similar).

4768 SC notes it is important to consider the visibility of the work plan and whether it is possible to have calendar / Outlook invites for GCRP rather than emailed details.

4769 Main aim is to remove 'survey fatigue' by having a single centralised survey carried out by a third party. it will be a qualitative survey and Ofgem are currently finalising the tender process. National Grid has been noted as the best placed administrator to act as the central collection agent.

4770 There is also a move to a single live cross-code modifications register. Grid Code is fully compliant with these requirements. This also feeds into Ofgem's focus on forward work planning and strategy (BSC already do something similar).

**There has also been a fifth objective added by Ofgem that all future modifications / issues will have to consider during consultation. This has been added to the Housekeeping modifications register.**

*was P by RP*

## 13 Standing Items

### a) European Network Codes

4771 No comments from the panel.

### b) Joint European Stakeholder Group

4772 No comments from the panel.

### c) Grid Code Development Forum

4773 No comments from the panel.

4774 The next Meeting is on 06/10/2016.

### d) EBS Update

4775 ADCADC provided a detailed update on the progress of EBS. On the 15<sup>th</sup> August a parallel run with the current system started having had a five week testing phase . The parallel run is being carried out over the am and pm shifts, but due to control room feedback is not being carried onto over night shifts currently. The dual run is planned to continue for ten-weeks and has been extended due to feedback from the control room. The results of the test phase are consistent with the current tools; however there is a challenge around

alignment of data and interface issues as well as always being a period of adjustment and trial in getting people and processes transferred over to a new system.

- 4776 The 'Go Live' date has now been split into two phases. Scheduling go live has been planned for November / December 2016 and is the part that is being tested now. Dispatch go live has been pushed back to early 2017 with trials to take place before Christmas. Ultimately the industry will not experience any changes or differences at this point as the information will be fed into the current external facing interfaces using EBS and the outflowing information will be sent via the current tools. CADC highlighted that as expected risk reduction and security are paramount to the EBS team.
- 4777 JN noted that it would be helpful to have go live date(s) announced and added to the regular EBS briefings and updates.
- 4778 CMD highlighted that an additional six or so months of the programme running would incur significant cost; CADC acknowledged the cost increase but was unable to state where the additional funding would come from within the SO directorate. RW suggested that no further funding under RIIO would be available From the allowed spend as part of the RIIO deliverable.

#### **e) EBS Discussion Paper raised by CMD**

- 4779 CMD stated the purpose of the paper is to evaluate what happens beyond the implementation of EBS. A key point is the method by which prioritisation of issues is decided and in which forum. The paper is looking at the need for a forum that crosses codes to prioritise requirements.
- 4780 ADCCADC acknowledged and supported CMD's view that EBS go live is not the end as subsequent releases are already planned. However ADCCADC did note that there was a risk in trying to do too many things at once and focus should be given to current go live and implementation. Funding for future releases will potentially come from different sources, for example Project TERRE being associated with European work.
- 4781 CMD wanted to ensure that coordination needs to be clear and the objectives met; noting that this may be through the Grid Code, or may be BSC. JN supported the paper and noted the new focus interfaces and additional data fields is a potential area of concern. TT highlighted that the Grid Code and BSC impacts on EBS could specify more technical capabilities whilst the whilst the interface is captured in the RES. CMD added he wants EDL\* and EDT\* Star\* documents akin to those currently for EDT and EDL published on the RES section of the website.
- 4782 RW questioned whether the EBSITEBSIT group is an appropriate forum for these discussions on post-implementation prioritisation; widely held view that it is not since it has to focus on delivery of the immediate IT solution. Discussion then led to a consensus that an Industry User group is the best option. RW highlighted that with Ofgem's move to a more strategic focus and 'hands off' approach this would be 'pushing on an open door' as Ofgem would prefer the industry to make its own solutions. ADCADC highlighted that there would be a need for governance around this group.
- 4783 NR confirms that ELEXON would be open to a joint group and that he would inform the BSC Panel of the discussions.. There was discussion surrounding the Post Implementation group that would provide a platform to consider changes to EBS.

*Draft 'Terms of reference for the EBS Industry User Group*

4784 No comments from panel

## 15 Any Other Business

### b) Horizon Planning / Forward Work

4785 EB presented a blank template and updated the panel, supported by RP on the requirement from Ofgem to provide a more strategic view and look ahead at the work coming down the pipeline over the next 5 years. Noted that the ENA as secretariat for the DCRP will have a chance to review the draft before bringing it back to the next panel meeting.

### c) Housekeeping Modifications Register

4786 EB presented the new housekeeping mods tracker and raised to the panel for confirmation that these were mods that required no material change to Grid Code and would be implemented at the next suitable opportunity. No panel members commented.

## 16 Next Meeting

4787 The next meeting is planned for 16<sup>th</sup> November 2016 at National Grid House, Warwick.