

Grid Code Review Panel Meeting - FINAL

Minutes and Actions Arising from Meeting No. 43 Held on 20th May 2010 at National Grid House, Warwick

Present:

David Smith	DS	Panel Chairman
Stewart Whyte	SW	Panel Secretary

National Grid

John Greasley	JG	Member
Steve Curtis	SC	Member
Tom Ireland	TI	Member
Tom Derry	TD	Presenter (Item 13 – KPIs)
Steve Bath	SB	Presenter (Item 11 – BESC)
Ian Pashley	IP	Presenter (Item 5 – EDL)

Generators with Large Power Stations with total Reg. Cap.> 3GW

John Norbury	JN	Alternate Member
Claire Maxim	CM	Member
Campbell McDonald	CMc	Member
John Morris	JM	Member
Jim Barrett	JB	Alternate Member
Guy Phillips	GP	Observer

Generators with Large Power Stations with total Reg. Cap.< 3GW

David Ward	DW	Member
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Generators with Small and Medium Power Stations Only

Barbara Vest	BV	Member
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Network Operators in England and Wales

Alan Creighton	AC	Member
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Network Operators in Scotland

Dave Carson	DC	Alternate Member
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Relevant Transmission Licensees

Graeme Vincent	GV	Alternate Member
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Generators with Novel Units

Guy Nicholson	GN	Member
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Ofgem Representative

Richard Coates	RC	Alternate Member
Siobhan Carty	SCar	Presenter (Item 14 – Third Package)

Non Embedded Customers

Alan Barlow	AB	Member
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BSC Panel Representative

John Lucas	JL	Member
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1. Introductions/Apologies for Absence

1358. Apologies for absence were received from Mike Kay, Sigrid Bolik, Chandra Trikha, Neil Sandison, James Anderson, Alan Michie and Bridget Morgan.
1359. David Smith confirmed some new attendees and regrettably informed the panel of some of those moving to pastures new.
- Leaving – Claire Maxim and Bridget Morgan
 - New – Guy Phillips, Richard Coates and Stewart Whyte

2. Minutes of Previous Meeting

GCRP – 04/02/2010

1360. TI updated the panel on two comments received by National Grid on the February minutes. One from Mike Kay on 1345 regarding OFTO representation on the DCRP and the Panel agreed the proposed revised wording.
1361. The other comment was received by GN on 1346 regarding the naming of one group of members “Generators with Novel Units”. GN feels there was not enough support at the last meeting to warrant a name change but he did pick up in the Grid Code one reference to “Novel Units” which he believed should be changed, in PC.A.3.2.2 (h). TI acknowledged this and believed it could be done as a house keeping change. GN did acknowledge that novel units were afforded a particular concession for the GCRP in that they are the only generation type present.
- Action: National Grid(TI)**
1362. The minutes were approved as an accurate representation of the February GCRP meeting by the panel.

3. Review of Actions (pp10/09)

1363. The majority of the actions from the previous meetings were the subject of agenda items, except for:

- (Minute 1270) Black Start/Fuel Security

The joint BSC/Grid Code working group placed an action on National Grid and Elexon to produce a paper on this issue for the next GCRP. There was significant discussions around what a partial black start was however it was decided at the meeting that this should not be addressed in this working group but put on the GCRP issues list.

Action: National Grid(TI) and Elexon (JL)
Action: National Grid(TI)

- (Minute 1289) Simultaneous Tap Changing

A one page guidance document shall be circulated to GCRP members, initially in draft form for comments before being issued to GCRP members for forwarding to their power station sites. A presentation may be an option at a future Ops Forum.

Action: National Grid(SC)

- (Minute 1292) Harmonics

It was pointed out at the last GCRP by Mike Kay that G5/4 governance was the responsibility of the DCRP. JG confirmed that as a result of this National Grid had redressed their position and the letter originally sent to the ENA has now been sent to DCRP. National Grid has written a paper that has been sent to both Mike Kay and the ENA; the paper shall be considered at the DCRP of 3rd June 2010. It is anticipated that this may result in a joint GCRP/DCRP working group. Mike Kay has circulated this round the relevant DNOs. To date many of the DNOs have been in support of the

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paper. The GCRP felt it would be of benefit for the panel to receive this paper.

Action: National Grid (JG)

- (Minute 1312) E3C LFDD

There was an outstanding action on National Grid to contact all the DNO representatives who had been previously contacted on behalf of the E3C Low Frequency Demand Disconnection Scheme Working Group, and requested to consider implementing several best practice processes. TI reported that all DNOs had been recently contacted and four of the seven had responded. AC agreed to raise the topic at the ITCG meeting before the DCRP on the 3rd June. TI agreed to report back on the findings at the September Panel meeting.

Action: National Grid (TI) and Alan Creighton

- (Minute 1313) - Completed
- (Minute 1315) – Completed
- (Minute 1317) – A/10 Compliance

TI informed the panel that all consequential changes have been raised with exception of DCUSA. JG informed the Panel that an industry information day was held on the 24th March and the consultation has been extended to 18th June.

- (Minute 1319) – Frequency response

National Grid's opinion is that small and medium power stations do not come under the ToR of the frequency response WG as they are not obligated to provide the mandatory service FR by the Grid Code.

- (Minute 1339&40) – Special Actions

Special Actions communications shall now be made by email. SC informed the group that an update was given on Special Actions communication in the February Transmission Operational Forum Update.

- (Minute 1336 – Constant Terminal Voltage

JG stated that National Grid has on a number of occasions at the GCRP stated their understanding of constant terminal voltage as required by the Grid Code. In the absence of any opinion from the GCRP National Grid shall continue to interpret the Grid Code as they understand it. JN stated his understanding that this is not a pressing issue currently as the manufacturers have a work around but this may not be a permanent arrangement. DW suggested that if National Grid wishes reactive power instructions to be achieved by tap changers this should be put in the Connection Conditions of the Grid Code. DW does not regard it as acceptable that National Grid can claim a Connection Condition exists because it is implied indirectly by some wording related to operation in an Appendix to BC2. SW informed the panel that National Grid does specify that Reactive Despatch Instructions should be achieved by tap changing this is specified in BC2.A.2.6. This Grid Code matter will be placed on the Outstanding Issues list.

Action: National Grid (TI)

- (Minute 1346) – Completed
- (Minute 1348) – Completed
- (Minute 1350) – Completed
- (Minute 1355) – Completed

4. Grid Code Development Issues

Grid Code Consultation Update

1364. TI gave a summary of the current status of Consultation Papers. The major highlights were: G/09 SCR report to the authority was published on 19/05/10; H/09 Submission of DPD is being drafted currently; A/10 Generator compliance revision v1.2 has been published and B/10 RISSP, National Grid is currently considering the consultation responses.

Grid Code Outstanding Issues

▪ **Protection Fault Clearance Times and back-up protection**

1365. TI updated the Panel on the issue. Previously National Grid had presented a paper on protection to the Panel, making several proposals to change the Grid Code. The Panel concluded that an informal working group of industry protection experts should be established to assess the proposals. The Group met, revised the proposals and National Grid requested an industry survey of current protection settings. Data was consequently fed back to National Grid during the summer of 2009. TI reported that he had recently written to the Protection experts proposing that as it appeared the Working Group had performed its designated task that the revised proposals should go out to broader industry consultation. Responses were being collated and considered. It was agreed that the draft legal text would be circulated to panel members before being issued as a public consultation.

Action: National Grid (TI)

▪ **Grid Code Structure Review**

1366. This issue centres around producing summary tables for obligations for different classes of generation where appropriate. This is still an outstanding issue and assigned a priority of 'low'.

1367. In November 2008, regional differences were included to this issue. CMC suggested this issue was now particularly pertinent as we got closer to Offshore Go-live.

▪ **Time Tagging of Dynamic Parameters and NTO/NTB**

1368. TI informed the panel this outstanding item should be captured by the BM replacement project. TI let the panel know that they will shortly have an opportunity to feed any comments on what future functionality the BM replacement should have as National Grid are proposing to consult the industry on this matter.

▪ **Power Park Module extensions**

1369. The Grid Code places technical obligations on all large PPM modules in Great Britain. Some of these technical requirements are size dependent. At a previous GCRP an issue was raised where there was a feeling of uncertainty where an existing generator was increasing its registered capacity and therefore moving through these thresholds. National Grid shall publish a paper on this in the summer. JN stated this had been an issue for certain plant looking to extend and being unsure of the potential for new compliance issues.

Action: National Grid

▪ **Codification of Generic Requirements currently included in the Bilateral Agreement**

1370. At a 2006 GCRP meeting, this issue was raised by a user as there was a feeling there were many requirements in the Appendix F5s that were not in fact site specific but generic and therefore could be codified. The original proposer agreed that in the meantime many of the specific requirements had been addressed although some were believed to remain and also others had been added, such as those relating to generating unit compliance. JG agreed for that National Grid to look in to

the original list of issues make an assessment.

Action: National Grid (JG)

- **System-to-generator inter-tripping schemes**

1371. This issue is a direct consequential action of F/08 and effects offshore generation only. The Grid Code is quite clear that the breaker to be tripped for an intertrip should be the PPM CB. There is a belief that many offshore intertrip schemes will in actual fact trip the OFTO/ONTO breaker. There will be an update of this issue at the September Panel.

Action: National Grid

- **Delegation of Authority for busbar switching contracts**

1372. National Grid provided an update of the current DOAs. All but one DNO contract has been signed to date. National Grid intends to commence discussions with generator companies once the DNO parties are complete. CMc commented that the new, draft DOA document is workable. JN stated that the DOA could be considered as a workaround to a deficiency in the Grid Code and that as the use of DOAs is a generic operational requirement it should be possible to codify it in the Grid Code. Some GCRP member stated that the new DOAs and SRS should be sent to generators, now to allow time to consider. CMax stated that Richard Wood at the National Grid Network Operations (NOC) had already been given some contact details. TI reminded the Panel that the new draft for the DOA had already been circulated to the Panel, last year.

Action: National Grid

- **Control Telephony Electrical Standard (Scotland)**

1373. TI discussed the Outstanding Issue relating to Control Telephony in Scotland and whether the Panel thought such a Standard should be developed. GV stated that the STCP has a standard for Control Telephony and suggested National Grid shall look at this to see if it was broadly of the same form as a standard.

Action: National Grid (TI)

- **System Telephony Electrical Standard (Scotland)**

1374. The Panel agreed that this issue could be closed as System Telephony did not warrant the development of a standard.

5. New Grid Code Amendments

- **Grid Code requirement for electronic communication facilities between NGET and BM Participants (Presenter – Ian Pashley, National Grid)**

1375. This paper proposed changes to the Grid Code to ensure NGET has continued ability to instruct load changes and ancillary services in the Balancing Mechanism in an efficient and co-ordinated manner. The proposed change relates to the process by which the requirement to install an automatic logging device is determined and the means by which ancillary services instructions are issued. National Grids concern is that with the increasing penetration of wind and the reluctance for this type of generation to participate in the BM there will be too great an amount of generation on the transmission system without an efficient means of co-ordinated instruction.

1376. IP pointed out that National Grid principal method of accessing balancing services is via the automatic logging device Electronic Dispatch Logging (EDL). Further to this IP made the panel aware that the Grid Code (CC.6.5.8) currently obligates generators to have Electronic Data Transfer (EDT) but not EDL and that this appears at odds with the BCs which discuss instructing ancillary services by

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automatic logging devices (or by phone in the event of an EDL failure). DW was surprised to learn that it is not a GC requirement for all large power stations to participate in the BM.

1377. The changes being proposed by this paper is that it should become mandatory for an automatic logging device (EDL) to be installed between NGET and Control Points where the Registered Capacity managed by a single control point is 100MW or greater.

1378. The panel was concerned by the requirement for installation is being suggested at a control point level, primarily because this may inadvertently capture a number of smaller generators/PPMs who all have one single control point. IP pointed out this was certainly not the intention. JN pointed out that a criteria based on the capacity of generation using a common control point appeared to be arbitrary and may distort the otherwise efficient utilisation of individual control points by different sizes of generating units and potentially different Generators. The Panel agreed that a working group should be established to consider the issue. National Grid will send round the ToR for the working group with a plan to provide an update at the September Panel meeting and to report back to the group in September.

Action: National Grid

- **BMU Configuration of Power Park Modules Offshore (Presenter – Steve Curtis, National Grid)**

1379. This paper was initially presented by Brian Taylor at November's GCRP (2009). SC has taken over this issue that is still outstanding. SC is currently putting together a consultation to be circulated round the panel, for comment

Action: National Grid (SC)

6. Working Groups – In Progress

- **PNs from intermittent Generation**

1380. SC gave an update on the PNs from Intermittent Generation working group some of the issues identified within the working groups were to do with the definition of MEL, satisfactory submission of PNs and the imbalance payments that may be incurred. Some thoughts were that Power Available could be made available to determine bid volumes. This is a signal that tracks the maximum output of the wind farm allowing for metrological conditions.

1381. JN said the changes should help facilitate efficient participation in the BM. CMc believes shortening gate closure would help windfarms a lot more as it would allow a more accurate forecast of the wind closer to real time.

1382. A final report on PNs from Intermittent generation shall be submitted in September 2010. This is an extension to the ToR, which the panel accepted.

Action: National Grid (SC)

- **Frequency Response**

1383. TI provided an overview of the progress to date. As was discussed at the previous GCRP an extension to their ToR is being sought until November 2010 for the main body of the work, although recommendation for the proposals on Simulated Inertia will be brought to the September 2010 Panel. These extensions were accepted by the panel. GN asked if the group was looking at demand obligations. TI said that under variations of the models being considered demand Users would be able to provide response, although there are no current proposals that obligate provision on demand users.

7. Working Group Reports

▪ Gas Insulated Switchgear (GIS)

1384. The working group reports recommendations were presented by the working group member TI. The working group recommendations are that a User connecting to the NETS at a GIS substation shall have 3 standard boundary and construction options: Generator standard boundary; DNO standard boundary – user builds all the GIS assets and DNO standard boundary – user builds their own assets only. In addition the user is also able to request a non standard boundary.

1385. JM enquired if the DNO option of build, own and operate would be available to Generators. TI stated that it would. The GCRP accepted the working group report. JB raised an issue that the maintenance responsibility and operational responsibility would not be aligned and therefore outages could impact on the generating companies' ability to generate. TI stated that the OC2 process and Clause 10 of the BCA will greatly minimise the risk of this from happening. CMax pointed out to the panel that generators could now in some instances be synchronising on via asset that they do not own. The GCRP agreed with the recommendations of the working group and agreed that once the draft legal text was developed and incorporated into the report it could be circulated as a Grid Code consultation, if amendments to the Grid Code are required.

▪ Frequency And Voltage Operating Range

1386. The Panel agreed for the working group to be disbanded as they have met their ToR. The report was issued on the 14th May. The group proposed two alternative options for the frequency operating range because of different views within the working group, although only one final proposal was recommended by the working group chairman. Some panel members believed that the alternative option may be better. The panel also noted that there was no legal drafting presented for the alternative option. National Grid will prepare the alternative drafting and circulate it to the working group members for inclusion. JM asked if the consultation was an either/or or is it simply seeking positives on option 1. JG confirmed both options would be consulted upon.

Action: National Grid (TI)

1387. DW commented that 2.5 in the report should be changed to read “on the MITS” as although there has only been one such event on the MITS where the grid frequency rose above 50.5Hz (Aug 5 1981) other parts of the network when islanded have experienced high frequencies many more times. DW gave the example of Wylfa which has experienced high frequency events 13 times when islanded.

8. Pending Authority Decisions

▪ B/09 – Grid Code Requirements for category 5 intertripping schemes

1388. This Grid Code amendment is dependant on CAP170. The current status of CAP170 is that it is currently sitting with OFGEM.

9. Multi Unit BMU Update

1389. The current process for the multi unit BMU information is that National Grid ask the panel if it is appropriate to send instructions to above MEL at the November panel meeting and below SEL in the May meeting. In line with this SC asked the panel if they are still happy for National Grid to continue with this arrangement. The panel agreed that National Grid can continue this practise.

1390. JN commented to SC that it is hard to draw up an efficient price for these reductions outside of the declared dynamic parameters as the generators do not know how many MW National Grid will instruct and questioned whether this information could

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be made available. SC stated that he can speak to the control room regarding JN's proposal.

Action: National Grid (SC)

10. Update on Authority letter for the Grain Derogation extension

1391. TI gave an update on the current position. As discussed by Julian Leslie at the last panel meeting National Grid has already taken preventative measures to stop this happening in the future. All process have been reviewed and a dedicated team has been set up to manage compliance issues. RC asked if National Grid shall be writing to OFGEM. DS replied that they will and a response is required by July.

11. BESC accreditation for Non-National Grid APs and SAPs (Presenter – Steve Bath, National Grid)

1392. SB presented this item on the appointment of Non National Grid staff to the requirements of NSI 30. National Grid had revised NSI 30 as a result of safety rules and NSI reviews conducted internally after an incident at Burwell. This change requires that all field based individuals appointed by National Grid under NSI 30 for safety and operational authorities are to be assessed to the BESC standard and entered onto the Energy and Utility Skills Register. To maintain their authorisation they must complete a NSI CBT reassessment every 12 months and a BESC reassessment every 3 years. National Grid considers this to be best safety practice.

1393. One of the main changes to NSI 30 is that the Authorised Person Refresher course now needs to be completed every year rather than every 3. JN pointed out the direct affects this will have on operations at power stations due to staff, who are already trained and authorised by their own employer, needing to be released more regularly. SB acknowledged this but stated that safety is paramount to National Grid. He also pointed out that while new APs and SAPs would need yearly training, existing safety trained personnel would be given a grace period until March 2012. CMax said this would only push the operational problem down the line. JN questioned why, just because National Grid is putting all of its SAPs on the BESC course yearly did Generators have to. SB said this was to ensure fair and equitable treatment of all personnel working on National Grid owned sites, whether contractor, Gen Co staff or National Grid employee.

1394. CMc asked SB if it was possible for NSI30 to recognise comparable safety schemes to BESC. JB stated that generators would like an equivalent safety training to be recognised. SB says he can look at this internally but he would need generators to prove the existence an equivalent to BESC. SB referred to the GE3 process by which users can opt out of NSI30 and operate under their own safety rules.

Action: National Grid (SB) and Generators All

1395. The availability of the mobile IS training facilities were discussed as an alternative to the current training facilities at 3 fixed locations: Littlebrook; Melksham and Norton. JN asked if remote training could be done at the powers stations local substation. SB advised that he expects regrettably it cannot due to the substation IS infrastructure not being robust enough, although this will be investigated.

1396. SB also made the group aware that as a result of a detailed review of National Grid safety procedures and processes a number of electronic access cards were found to be no longer in use and National Grid deactivated these cards. If users find some key cards they require have been inadvertently deactivated then they should contact the stations local National Grid Delivery Engineer to have them re-authorised. National Grid will make the wider industry aware of this at the Ops forum.

Action: National Grid (DS)

12. Transient workshop feedback

1397. The transient workshop feedback was brought to the group by JG. The conclusions

of the workshop were that Point on Wave switching did reduce transients and would therefore be a benefit to users however, JG did point out it was not a panacea. There is a CIGRE working group underway which should conclude in 2012 and this should benefit the panel.

1398. There are code arrangements in PC.A.6.2.1 to cater for detailed analysis and the Workshop agreed that including as an example connections involving long ac cables would help add clarity and that this could probably be included as a housekeeping change. JM informed the panel that BE have started to do this off-line where Nuclear and wind are connected close together.

13. Key Performance Indicators (KPIs) for Grid Code Modifications and Processes

1399. TD presented National Grids view of what KPIs might look like for the Grid Code Review Panel. The KPIs will measure the efficiency in which papers and minutes are submitted to the Panel, as well as the current progress of Grid Code Issues, working groups and modifications.

1400. DW tells TD that the Grid Code update notification process has some flaws in it that can cause slight annoyance as some of those who are signed up are not receiving these notifications. DS tells DW that National Grid is aware of the deficiencies with the system and are looking into this currently.

1401. BV asked, as part of the KPIs, if OFGEM should have a target to have a decision in a set amount of time? To this, JN added that it would be useful if there was a measurement showing the time that Papers were with National Grid and OFGEM. DS commented that both would be looked at as part of the KPI work.

14. Europe

▪ Third Package

1402. Siobhan Carty gave a presentation on Third Package. Siobhan introduced the work the European regulators have been doing and touched on the work done by the TSOs. Siobhan stated that the requirements being put in the European Grid Code were at a very high level. JG told Siobhan that Helge Urdal of National Grid has been heavily involved in the writing of the new European Grid Code and that the assessment that the code was written at a high level was incorrect. JG encouraged panel members to view the consultation document. The panel believed it was important that as a collective they should be involved in reviewing the consultation. BV stated she would look into whether the AEP are preparing a response to this consultation.

Action: BV

▪ ENTSO-E

1403. Helge Urdal was meant to give a presentation on ENTSO-E however due to lack of time this item was removed from the agenda. The slides shall be sent round the panel members along with links to the publicly available consultation and general dates for information.

Action: National Grid (SW)

15. Impact of other Code Modifications or Developments

▪ BSC

1404. National Grid raised P259 on 4 May 2010. At its meeting on 13 May, the BSC Panel considered the Initial Written Assessment for P259 and agreed to submit it to a 3 months Assessment Procedure. All new interconnectors must be capable of providing frequency response because of the obligations in the Grid Code. When National Grid sends an instruction to an interconnector it will require to know for the purposes of ABSVD which BM Unit it is trading with otherwise the interconnector will

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be out of balance. Currently if National Grid were to send an ABSVD it may not know what BM Unit the data relates to. This Modification seeks to resolve this issue by ensuring that the ABSVD is assigned to the correct BM Unit. It also seeks to report useful associated Interconnector information on the Balancing Mechanism Reporting System.

1405. DS said that a CUSC proposal has also been raised (CAP182) to facilitate interconnectors providing frequency response as required by the Grid Code.

- **CUSC**

1406. No issues

- **Cross Code Forum**

1407. No issues

- **Operations Forum: System Incident Reporting**

1408. No issues

16. Any Other Business

1409. JN pointed out that in the latest Grid Code update the performance chart example within OC2 Appendix 1 has been reformatted as portrait instead of landscape and as a consequence the text was unreadable.

Action: National Grid (TI)

1410. JN requested clarification of the Grid Code wording in E/09 (which was implemented in early 2010) with respect the embedded restrictions did not appear to cover partial restrictions, in terms of either time periods or MVAR output. TI agreed to discuss this issue further bilaterally.

Action: National Grid (TI)

1411. GN highlighted an issue surrounding MSC forming part of voltage control system at a windfarm. National Grid has identified an issue with PPM voltage control systems that as a result of delays in the switching times with the static devices mean the control system as a whole is not continuous. GN was of the opinion National Grid have changed the code and are retrospectively going back to compliant PPMs and saying they were non-compliant. JG stated GN this is not the case the Grid Code has always been the same however during the compliance process of some earlier PPMs this issue was not identified. This issue is being dealt with on all generators going through the compliance process currently and National Grid have written out to already connected PPMs to identify if they are non-compliant. JG and GN agreed to convene a meeting to discuss the matter for all users as a generic meeting.

Action: National Grid (JG) and GN

17. Date of Next Meeting

1412. It was proposed that the next Panel meeting will be held at National Grid House in Warwick on the 23rd September 2010. A few Panel members informed National Grid that they were unable to make this date, TI agreed to consider alternative dates.

Action: National Grid (TI)