

Extraordinary Grid Code Review Panel Meeting

Grid Code Review Panel Draft Minutes and Actions Arising from Meeting No. 48 Extraordinary Meeting Held on 31st March 2011 at AEP offices, London

Present (*denotes attendance by teleconference):

David Smith	DS	Panel Chairman
Thomas Derry	TD	Panel Secretary

National Grid

Graham Stein	GS	Member
Steve Curtis*	SC	Member
Tom Ireland	TI	Member
Mark Duffield	MD	Presenter (Two Shift Limits)
Louise McGoldrick*	LMcG	Observer

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

Alastair Frew*	AF	Member
John Norbury	JN	Member
Campbell McDonald	CMD	Alternate Member
Jim Barrett*	JB	Alternate Member

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

Michelle Dixon*	MDx	Observer
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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

None

Relevant Transmission Licensees

None

Generators with Novel Units

Guy Nicholson	GN	Member
Andrew Jones	AJ	Observer (C and S Electric Europe)
Martin Lyster	ML	Observer (American Superconductors)

Ofgem Representative

Steve Brown*	SB	Member
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Non Embedded Customers

None

BSC Panel Representative

John Lucas*	JL	Member
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1. Introductions/Apologies for Absence

1581. The Chairman opened the meeting by introducing the two significant items of business, namely Two Shift Limits and Continuous Voltage Control.

1582. Apologies were received from Guy Phillips, Mike Kay, Neil Sandison,

2. Grid Code Development Issues

Two Shift Limits (pp11/20)

1583. MD presented the paper on the Grid Code planning parameter Two Shift Limit (TSL). This paper was a follow up to pp10/30 presented to the Panel at the November 2010 GCRP. Its intention was to clarify the purpose and use of this parameter, National Grid's interpretation and to propose a number of options.

1584. MD explained that National Grid does not refer to the TSL parameter when making scheduling and despatch decisions in BM timescales although it is permitted to under certain specific circumstances. Three options were presented; two of which clarified the use of the parameter either by i) removing the parameter from the Grid Code or to ii) look at the broader suite of associated parameters and review their application and use as a whole – this could effectively involve a codification of National Grid's associated operational policy. The third option is to accept that the use of TSL has now been clarified and to take no further actions. The paper does not recommend any specific option but opens the topic up for further debate and recommendation.

1585. BV thanked National Grid for making progress on this issue and questioned why National Grid's internal operational guidance had not been included in the paper so the industry can assess whether it had been applied consistently in the past. MD confirmed that the internal guidance is consistent with the principle that TSL should only effect the action of National Grid and not that of third parties.

1586. MD confirmed that the dynamic parameters such as MNZT and MZT can be used to communicate an inability to two shift within day. CMD responded that this would require the parameters to be constantly updated in order to avoid risk of damage to plant and that this presented an excessive burden on BM participants to cater for instances that could be very rare, but presented risks to participants when they did occur. Consequently, the option of "do nothing" was absolutely not acceptable as it gave the generators no practical way to avoid two shifting. BV suggested that the additional of a new tick box may be a solution.

1587. JN confirmed that the parties which he represents manage their generating units' operation in the Balancing Mechanism via the submission of BM Unit Data without relying on TSL. JN did have a concern that there may be knock on effect on transparency and the prices of the Balancing Mechanism in the event that BOAs were to be issued beyond the BM window to accommodate TSL requirements.

1588. JB stated that he would not consider any of the options presented until the Panel had the opportunity to understand National Grid's position further and explore other options. JB expressed concern that MD's paper only presented the view of National Grid and he was suspicious of National Grid's intention. JB suggested that a Working Group is probably required and the fundamental approach changed.

1589. CMD explained a scenario where the use of the current dynamic parameter would not work for PN extensions.

1590. JL commented that whilst a clear justification for National Grid's current interpretation has been given, there was no communication of why National Grid does not want to move away from this position.

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1591. MD confirmed that whilst National Grid is not dead set against changing the interpretation of TSL, there are several scenarios that would need to be carefully considered beforehand, to avoid unintended consequences or an unnecessary increase in complexity.
1592. The Panel agreed that this aspect should be added to the Terms of Reference of the EBSG Working Group. This will be sent round prior to May meeting so it can be agreed then.

Action: National Grid (TI)

1593. GN suggested that National Grid should consider producing a guide to how dynamic parameters can be used in the interim to communicate a wish not to two shift. MD agreed although he believed various organisations approach this in different ways, this could be done. BV also suggested that the internal guidance might be useful. DS suggested that the circulation of this paper to the operational forum may also be appropriate.

Action: National Grid (MD)

Continuous Voltage Control (pp11/21)

1594. GN presented the paper (developed by himself and others) on the Grid Code obligation relating to Continuous Voltage Control (CVC) from generation with hybrid voltage control systems. This paper further developed Panel discussions during various 2010 GCRP meetings. GN described how this issue has and is having a big impact on generator projects achieving their Final Operation Notifications.
1595. Martin Lister and Andrew Jones, representing themselves as suppliers of voltage control equipment, were also present.
1596. GN explained how the issue relates to continuous voltage control which is typically achieved with the use of variable and discrete reactive power components and how the static devices (e.g. capacitor banks) are switched for example approximately 65 times a year. It was explained how there has to be a delay of up to 15 minutes for second switching operations (e.g. to allow for capacitor discharge). GN believes the current Grid Code is not clear on this area and this has led to ambiguity of compliance for some existing connections.
1597. GN described how he had concerns on what had previously agreed at GCRP meetings and therefore clarification was being sought, today. The paper makes a number of recommendations...
1598. GS responded that National Grid's initial view was that the obligation is clear, recent projects have interpreted it various ways and therefore further clarity is needed. He restated that non continuous operation could have a major effect on system security and that National Grid has an obligation to secure the system under specific scenarios and this could be affected. Examples include trip and reclose situations or where there are multiple lightning strikes or other weather related events in the same location in quick succession. These are rare and local events but still certainly feasible.
1599. National Grid's current view is that the affected generation projects have connected so far are unlikely to have an adverse impact on system security, but there is a maximum volume or a limit to when this will not be the case. Therefore, a future cut off date after which new projects will need to be truly continuous is required. National Grid's favoured way forward would be to bring forward a Consultation on a solution which may also include interim criteria. The views of the Panel were sought on this.
1600. AJ reported that his company had experience with a wind farm where the FON has not issued due to National Grid's new interpretations. AJ does not believe that the

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potential second switching delay on distribution connected wind farms presents any issue for system security. Currently he is aware of eight projects that are stacked and waiting to go and believes National Grid's interpretation has become more onerous. AJ also referred to a SP paper that found that distribution sites were seeing less than one event per year.

1601. AJ also highlighted that no derogations have been issued yet, even though the process has gone back to 2008. GS believes that Ofgem can not conclude on the derogations until the Panel have concluded. SB was not aware of the total number but GS believed there were at least three.
1602. JN suggested that an alternative interpretation of the Grid Code obligation on PPMs is requiring a continuously acting voltage control system but not necessarily having to achieve the full reactive power range continuously. AJ pointed out that the type of reactive compensation equipment that has been installed in recent wind farm sites uses the same technology as National Grid uses on its network. GS agreed that National Grid does make use of static reactive equipment where appropriate, often under the assumption that users can provide continuous dynamic voltage control in the affected part of the network. However, National Grid also makes use of dynamic systems, most of which incorporate static elements. These systems are capable of switching repeatedly in timescales of a different order (within milliseconds) to those which it has highlighted concerns over.
1603. In confirmation of **recommendation A (1)**¹ the Panel agreed that GS and GN should discuss the issue further and draft a Consultation document, which would apply to future projects and if the necessary and justified be proposed to apply retrospectively. The Panel agreed that **Recommendations A (2)**² & **(3)**³ should be considered and used if appropriate.

Action: National Grid (GS)

1604. AC suggested and the Panel agreed, that as wind farm projects' original interpretation of CVC, as described under **Recommendation A (4a)**⁴ of the paper, has not caused an operational issue and has been acceptable to National Grid, that projects will not need to seek derogation and are deemed to be compliant and would be compliant (subject to future Grid Code changes). Therefore **Recommendation A (5)**⁵ was deemed unnecessary.
1605. GS suggested that the status of the relevant FONs could be reviewed with the National Grid Compliance team.

Action: National Grid (GS)

1606. The Panel also agreed that there was a future issue for anticipated, larger plant and therefore a future change to the Grid Code was likely to be needed to provide a clear and unambiguous obligation on such plant. Such an obligation would be applied to plant connecting after a certain date. Dates ranging from 2013 to 2015 had been discussed previously but this would be subject to consultation. If it is found to be necessary the Panel noted that this may also need to be applied retrospectively to all projects or some projects (e.g. above a certain size), but only subject to a clear cost benefit case.

¹ Ensure that NGET bring forward a Grid Code change proposal to remove the uncertainty of interpretation of "continuous" regarding voltage control and especially in relation to capacitor switching and discharge.

² Ensure that NGET perform a Cost Benefit Analysis for any changes proposed in (1) above.

³ Ensure that NGET assess the risk to the NETS of legacy plant and consider a retrospective application of the Grid Code change.

⁴ For existing projects or those under construction (pending the Grid Code change), define an interpretation of the current Grid Code "continuous" in relation to voltage as either:

a. In defining "continuous" - ignore the time delay in the second switching operation of a capacitor or reactor.

⁵ To assess any potential discrimination issues, ask NGET to provide a list of all projects which have switched voltage control equipment commissioned to date, clearly showing the capabilities and indicating where NGET has demanded a change to capabilities and where FONs have been issued or have not yet been issued.

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1607. The Panel strongly recommends that plant currently under development should be designed to meet the **Recommendation A (4c)**⁶ criteria.
1608. AJ suggested that to minimise the risk of retrospective changes under future Grid Code changes the above recommendation should be published to the developer community.
1609. **Recommendations B 6⁷ 7⁸ & 8⁹** of the paper related to proposals to improve the process for clarifying an interpretation of the Grid Code.
1610. The Panel agreed that **Recommendations B 7 and 8** should be progressed by National Grid but not **Recommendation B 6** as it would be a significant resource burden for National Grid and the industry and may not be workable.

Action: National Grid (TI/TD)

Other Business

3. Minutes from previous meetings

- **Minutes of Previous Panel meeting**

1611. TI explained that the minutes from the previous GCRP meeting, held in February 2011 would be discussed at the next standard GCRP meeting, to be held in May.

4. Review of Actions

Completed Actions

1612. Paper pp11_22, was presented providing an update of the actions which have been completed since the last Panel meeting. TI explained that the remaining actions would be reviewed at the May meeting. The Panel agreed that the paper was accurate and that all these actions could be closed.
1613. BV informed the Panel that there was an additional item to be added to the Grid Code Signatories Terms of Reference. The additional item related to providing the ability to terminate its work if a suitable substitute body was found. The Panel agreed for this to occur and the revised ToR will be circulated for information.

Action: National Grid (TD)

1614. JN asked whether National Grid intended to hold a further and final Compliance Working Group meeting following the closure of Further Consultation A/10, as there may still be some outstanding issues. TI responded that whilst such a meeting had not been required by the governance process and as such had not been scheduled, if the issues raised in the responses indicated this would be of value, it could be arranged.

⁶ For existing projects or those under construction (pending the Grid Code change), define an interpretation of the current Grid Code “continuous” in relation to voltage as either:
c. Define “continuous” in the current Grid Code to mean a minimum of 15 seconds (close-open-close) and 2 seconds (capacitor discharge) for second switching operation with no specified requirement for a third switching operation.

⁷ Ask NGET to bring forward a change to the General Conditions of the Grid Code to require NGET to bring to the Panel any issue of interpretation of the Grid Code where two or more Users are disputing NGET’s interpretation and for such a report to be a standing agenda item for Panel meetings.

⁸ Ask NGET to report under KPIs on the speed of resolution of matters of interpretation requested by Users.

⁹ To provide a Web based facility for Users to request such interpretations.

5. Proposed Working Group Schedule

1615. TI presented the paper pp11_23 which comprised a matrix of the expected scheduling for the current, ongoing grid Code Working Groups along with those that are due to imminently commence. It was shown that there are expected to be a large number of Working Group's running in parallel during the summer of 2011 and TI asked for the continued commitment from Panel Members to actively participant in the workstreams that affect them significantly.

6. A.O.B

1616. BV raised an item of AOB as described under section 4.

7. Date of Next Meeting

1617. The next scheduled GCRP meeting is for 19th May 2011.