

## Grid Code Review Panel Meeting

### Minutes and Actions Arising from Meeting No. 29 Held on 20<sup>th</sup> September 2007 at National Grid House, Warwick

#### Present:

Duncan Burt	DB	Panel Chairman
Richard Dunn	RD	Panel Secretary

#### National Grid

Lilian MacLeod	LM	Member
Andy Balkwill	AB	Member
Brian Taylor	BT	Member
Helge Urgal	HU	Alternate Member

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

John Morris	JM	Member
Claire Maxim	CM	Member
Campbell McDonald	CMcD	Member
John Norbury	JN	Alternate Member
Richard Cook	RC	Alternate Member

#### 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

Malcolm Taylor	MT	Member
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#### Network Operators in England and Wales

Alan Creighton	AC	Member
Mike Kay	MK	Member (via teleconference for first two hours of meeting)

#### Network Operators in Scotland

Dave Carson	DC	Member
Neil Sandison	NS	Alternate Member

#### Relevant Transmission Licensees

Alan Michie	AM	Member
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#### Generators with Novel Units

Guy Nicholson	GN	Member
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#### Ofgem Representative

Steve Argent	SA	Alternate Member
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#### BSC Panel Representative

Chris Stewart	CS	Alternate Member
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#### In Attendance

Emma Carr	EC	National Grid (Item 8 – LVDD)
Jonny Hosford	JH	National Grid (Item 8 – Black Start WG)
Malcolm Arthur	MA	National Grid (Item 7)
Steve Bath	SB	National Grid (Item 5)

## 1. Introductions/Apologies for Absence

793. Apologies for absence were received from Chandra Trikha (Relevant Transmission Licensees), Nasser Tleis (National Grid), Bridget Morgan (Ofgem), Stuart Graudus (NEC) and Jean Pompee (EISO).
794. The Chairman welcomed Alan Creighton (Network Operator in England and Wales) to his first meeting of the GCRP.

## 2. Minutes of Last Meeting

795. The draft minutes of the 27<sup>th</sup> Grid Code Review Panel (GCRP) meeting held on 17<sup>th</sup> May 2007 and the minutes of the 28<sup>th</sup> extraordinary GCRP meeting held on 31<sup>st</sup> July 2007 were APPROVED, subject to minor amendments and will be accessible from the Grid Code Website.

## 3. Review of Actions

796. All the outstanding actions from the previous meetings have been completed or were the subject of agenda items, except for:

### *Minutes of the GCRP Meeting held on 17<sup>th</sup> May 2007*

- Minute 625 (Wind Farm Technology Patents)  
National Grid confirmed that legal proceedings were continuing regarding the issue of wind farm technology patents and their application by manufacturers to use technical solutions to ensure compliance with the Grid Code. HU also confirmed that there was nothing in the public domain yet on this issue.
- Minute 662 (Operational Metering and Data)  
BT reported that he had discussed the issue with MK and concluded that the current arrangements for National Grid/DNO data exchange for T-connected power stations where these could have a material impact on the DNO's system were broadly adequate. MK indicated that he would like to raise this issue informally with his colleagues in the DNOs and provide a considered view at the November GCRP.  
**Action: MK**
- Minute 679 & 682 (Multi Unit BMUs)  
National Grid confirmed that the opportunity to remind the industry at the Ops Forum on 6<sup>th</sup> June that there was an existing process which they could utilise to declare additional accessible capacity beyond that declared in the Balancing Mechanism had, in the event, not been taken. This would be taken up at the next Ops Forum. The Panel agreed that National Grid should provide an update on this issue to the November GCRP.  
**Action: National Grid (RS)**
- Minute 713 (New IT System for the Target Frequency System)  
National Grid reported on the proposed introduction of the new IT system currently being developed for the Target Frequency system. BT confirmed that there would be no complex interface with the industry to manage and that most communications would be via automatic fax to control points. The Panel NOTED this update.
- Minute 757(Capacity Terms)  
National Grid confirmed that a further paper on this issue would be provided to the November GCRP.  
**Action: National Grid (LM)**

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- Minute 787 (European Issues affecting the Grid Code)  
National Grid reported that the prospect of a European Grid Code in the future had receded due to lack of funding.
- Minutes 788-790 (AB07 - Introduction of Gas Insulated Switchgear (GIS))  
National Grid reported that no comments had been received from Panel Members on the potential issues in relation to the tendering process for maintenance requirements raised by the introduction of GIS by National Grid. JN agreed to present paper to November's GCRP outline potential issues.

**Action: JN**

### ***Minutes of the Extraordinary meeting of the GCRP held on 31<sup>st</sup> July 2007***

- Minute 11 (Grid Code and STC Data Exchange Working Group)  
National Grid confirmed that a Working Group had been established to take these issues forward and the first meeting was scheduled for 1<sup>st</sup> November 2007.

## **4. GCRP Membership**

797. The Panel NOTED the following changes to the GCRP representation:

- *Network Operators in England and Wales*  
Alan Creighton had replaced Graham Vincent as GCRP member.
- *Generators with Novel Units*  
Sigrid Bolik has replaced Simon Cowdroy as a GCRP alternative member.

## **5. Basic Electrical Safety Competence (BESC)**

798. National Grid gave the Panel a presentation on the safety requirements that all Users of National Grid transmission sites will be required to meet in the future. Non National Grid staff primarily affected were those of the Generators and DNOs who would need to access certain shared sites to undertake works on their own equipment.

799. Users will be required to ensure that their staff meet the minimum standard of BESC for continued/new access to National Grid sites. At the interface the BESC standard will be verified by use of the Energy and Utility Skills Register (EUSR). Implementation of these arrangements will be undertaken in cooperation with Companies that require access to National Grid sites.

800. Panel Members agreed to disseminate this information within their organisations as appropriate. However, it was also noted that there had been long standing concerns associated with access to National Grid sites for Generators to access their own equipment) and Generator Panel Members expressed disappointment at the lack of consultation to date in this area. It was agreed that the presentation plus Steve Bath's contact details should be provided to all Panel Members and Alternates to facilitate further discussions on the BESC standards.

**Action: Panel Members & Panel Secretary**

## **6. Grid Code Development Issues**

801. Grid Code Consultation Update

The Panel NOTED that responses had now been provided to the seven respondents to Consultation F/06 (Control and System Telephony) and that the Report to the Authority would be submitted shortly for determination.

National Grid reported that responses had now been provided to the sixteen replies received to Consultation G/06 (Power Park Modules and Synchronous Generating Units). A Report would be submitted to the Authority shortly for determination.

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The Panel NOTED that a second consultation document for B/07 (Improvement Planning Code Data Exchange) had been issued on 2<sup>nd</sup> August 2007 with a closing period of 30<sup>th</sup> August 2007; seven further responses had been received to this second consultation.

The Panel NOTED that the consultation period for C/07 (Timescales for Operational Metering) closed on 18<sup>th</sup> June 2007; four replies had been received. A Report to the Authority would be submitted shortly for determination.

The Panel NOTED that the Consultation period for D/07 (Frequency Response Requirements) closed on 31<sup>st</sup> August 2007: nine replies had been received.

The panel NOTED that a Consultation document for E/07 (Data Exchange Provisions) was circulated on 23<sup>rd</sup> August 2007 with a closing date of 20<sup>th</sup> September 2007.

### 802. Outstanding Issues List

- The Panel NOTED that no business case had been made to date to justify the extensive changes to IS systems necessary to accommodate Time Tagging.
- The Panel NOTED that National Grid was represented at the Working Group established by the DCRP to consider the revision of G59 and G75 which included consideration of the high/low frequency trip settings on small embedded plant.

### 7. **New Grid Code Amendments**

#### ▪ **Emergency Instruction to Deenergise**

803. National Grid explained the background to the consequential Grid Code changes that would be necessary consequent on any Authority decision to implement CAP144. CAP144 was designed to mitigate the risk associated with a controlled shut down of a generating station in anticipation of an impending removal of system access. It was designed to cater for any future incidents such as had occurred at Damhead Creek several years ago where the Generator was compensated for loss of access at the bid price. If CAP144 was approved compensation for loss of access would be similar to the CAP048 arrangements. The circumstances associated with a CAP144 event are tightly defined to ensure that the circumstances are limited to a particular type of incident i.e. the impending removal of access due to problems with National Grid equipment. The event is defined in the CUSC as an Emergency Deenergisation Instruction. The CUSC Panel supported implementation of CAP144 Working Group Alternative. Various other alternatives had also been put forward but all of them would involve the same changes to the Grid Code.

804. The Panel agreed that National Grid should proceed to consultation on the proposed Grid Code change, in the expectation that the Authority would approve CAP144 or alternative, subject to further discussions with Grid Code Panel Members regarding the proposed legal text and inclusion of a definition of Emergency Instruction to Deenergise in the proposed Grid Code legal text.

**Action: National Grid (MA) & Panel Members**

### 8. **Working Groups**

#### ▪ **Black Start Working Group**

805. National Grid gave the Panel an update on the work of the Black Start Working Group. The Group was expected to provide its report inclusive of its recommendations at November's GCRP.

**Action: National Grid (JH)**

### ▪ Low Voltage Demand Disconnection (LVDD) Working Group

806. National Grid gave the Panel an update on the work of LVDD Working Group and circulated the final report of the Group at the meeting plus the proposed covering letter to the Authority. The covering letter sought a view on whether funding for further work identified by the Group would be forthcoming. The conclusion of the Group was that installing an LVDD scheme alone was not appropriate to prevent or mitigate against voltage collapse resulting from contingencies in the Midlands area. However, installing a LVDD scheme in London would be an effective counter-measure against voltage collapse brought about by most contingencies.
807. It was agreed that Panel Members should provide comments on the Working Group Report to National Grid and that the Report should be circulated to Panel Members and Alternates electronically. National Grid would provide guidance on the sensitivity of the report and the manner in which the report should be distributed within Panel Members' respective companies. National Grid would submit the Report to the Authority following any comments from Members and would also ensure that E3C are informed.

**Action: Panel Members & National Grid (EC)**

### ▪ Rated MW

808. National Grid gave the Panel a report of the first meeting of the Working Group held on 19<sup>th</sup> June 2007. National Grid was undertaking further analysis and would provide this to the Working Group for further discussion in due course.

## 9. Authority Decisions

809. The Panel NOTED that the Authority had approved the proposal in Grid Code consultation A/07 (Management of No System Connection) on 28<sup>th</sup> June 2007. The implementation date was 16<sup>th</sup> July 2007.
810. The Panel NOTED that the Authority had approved the proposal in Grid Code consultation C/06 (Control Telephony Electrical Standard) on 6<sup>th</sup> September 2007. The implementation date was 17<sup>th</sup> September 2007.

## 10. Process for the Report of Embedded Generation Loss as a Result of RoCoF or Significant System Incidents

811. The Panel NOTED National Grid reported on the arrangements agreed for reporting to DNOs when a RoCoF or significant System Incident occurs that may lead to the tripping of embedded generation.

## 11. Annual Summary Report for Significant System Events

812. National Grid presented the annual summary report for Significant System Incidents. No incidents had occurred since September 2006. The Panel NOTED this report.

## 12. Large Combustion Plant Directive

813. National Grid presented a paper on the potential impact of the LCPD on operating regimes for powers stations. These operating regimes could have implications for the Grid Code. The operating regimes identified in the paper were speculative as it was unclear how opted-out generation would be operated to employ its limited life of hours of operation (20,000) from 1<sup>st</sup> January 2008. Some 11.55GW of generation had elected to opt out from 1<sup>st</sup> January 2008.
814. The Panel agreed that Generators and National Grid should identify any impact that those operating regimes in place after 1<sup>st</sup> January 2008 for the opted-out plant may

have on the Grid Code.

**Action: National Grid (BT) & Generator Panel Members**

### 13. System to Generator Operational Intertipping Schemes

815. The Panel discussed, noted and agreed the latest revised paper relating to System to Generator Operational Intertipping schemes intended to provide greater clarity. This would be of benefit to manufacturers, developers and generators as the current Grid Code wording on such schemes provided insufficient detail.
816. The Panel agreed that National Grid should consider whether the information provided in the paper is appropriate to include in the Grid Code.

**Action: National Grid (LM)**

### 14. Despatch of Reactive Power from Embedded Generation

817. The Panel received a paper and presentation from Guy Nicholson of Econnect Consulting. GN examined issues surrounding use of reactive power from Generators connected to Distribution Networks. One issue was introduced in the context of a diagram. GN suggested voltage control in distribution networks could be adversely affected by the introduction of reactive contribution from embedded generation (e.g. wind farms). This applied particularly to weak parts of distribution networks, resulting in system voltages outside the statutory range and affecting other users. HU stated that this could be the case for power parks in either power factor or reactive power control mode. However, the Grid Code requires power parks to be capable of being used in voltage control mode with a voltage setpoint and slope. This arrangement is utilised to prevent the system voltage going outside its limits. The basic design of power park voltage control schemes secure the desired voltage, rather than operate to a fixed power factor. NS supported this view.

A second issue raised by GN and covered in his paper was concerned with the despatch of reactive power. GN suggested that if the despatch is by the System Operator, who does not have the necessary local information, then the voltage on the distribution network would be affected, potentially giving rise to the loss of control of voltage by the DNO, customers experiencing voltage outside statutory limits and embedded generators tripping on voltage limits. BT and NS discussed this issue from GBSO and DNO points of view respectively. BT reminded the Panel that BC1.6.1 can be used by a DNO to restrict the reactive output of those embedded generators from which the GBSO is able to despatch reactive power.

818. National Grid agreed to build on the issues raised in the paper and the Panel discussion and bring a paper to November's GCRP clarifying:
- what the current requirements were for despatch of reactive power from embedded generation under the Grid Code and the Distribution Code;
  - what the current working practices were for despatch of reactive power from embedded generation and whether they differed from the Grid Code/ Distribution Code requirements;
  - how the despatch of reactive power for embedded Power Park Modules differed from despatch for embedded conventional plant-;
  - any potential inconsistencies in the Grid Code requirements in the obligations for the despatch of Active and Reactive Power for plant with a BELLA.

**Action: National Grid (BT & LM)**

819. The Panel confirmed the requirement for dynamic reactive capability. The possibility of having a reactive capability of only dynamic support without steady state support was raised by GN. This could arise in situations where restrictions on the DNO network did not allow full use of the steady state capability. Various concerns were raised, including equal treatment of generators. As no-one were aware of the existence of such reactive plant (it would need to cover at least 5 seconds, which is steady state for most power electronics), it was decided that this issue did not need to be dealt with further, at least not until plant with such capability has been

identified.

### 15. Governance of the Compliance Process

820. National Grid presented a paper to the Panel which concentrated on the Governance arrangements for Guidance Notes provided by National Grid to assist Generators in demonstrating compliance with the technical requirements of the Grid Code and Bilateral Agreements. In particular a second set of Guidance Notes had been created in recent years to cover the non-synchronous generation technologies employed in renewable generation. The advent of new technologies such as clean coal and new nuclear may lead to further refinement of the Guidance Notes.
821. The paper proposed coding of the parts of the Guidance Notes concerned with the requirements (the “what”) while leaving outside the Code the method of demonstration (the “how”). It was clarified that the “how” is optional and therefore not suitable for coding.
822. National Grid proposed that a review should also include OC5. National Grid recommended the establishment of a Working Group to undertake this review and invited nominations for Membership of the Group within 4 weeks of the Panel meeting with a view to the first meeting of the Group in December 2007.

**Action: Panel Members**

823. The Panel agreed to the recommendations made by National Grid and agreed that the Group should identify a target completion date at its first meeting and report this back to the Panel.

**Action: National Grid (NT)**

### 16. Review of Regional Differences

824. National Grid presented a paper to the Panel building on work undertaken in 2005 to identify the existence within the Grid Code of regional differences where technical or critical procedural variations meant that some differentiation became necessary between rights or obligations in Scotland and the equivalent rights or obligations in England and Wales. The work in 2005 resulted in Consultation Document B/06 (Regional Differences) and Consultation Document D/06 (Consequential changes from B/06 and Housekeeping Amendments) which were subsequently approved by the Authority and implemented on 1<sup>st</sup> September 2006 and 20<sup>th</sup> December 2006 respectively.
825. The consultation process for B/06 and D/06 highlighted further areas which would benefit from industry discussion – Demand BMU Classification and use of “England and Wales” and “Scotland” within the Grid Code. National Grid were proposing that:
- Demand BMU Classification should be referred to in terms of electrical rather than geographical area: and
  - the use of “England and Wales” and “Scotland” should be replaced with appropriate references to a licensee's transmission area/system.
825. In addition there were two areas originally identified for further analysis – certain technical requirements and relevant definitions and certain operational processes and interfaces (mainly the Operating Codes) and relevant definitions.
826. The Panel agreed that work on Demand BMU Classification and use of “England and Wales” and “Scotland” within the Grid Code should proceed on the basis proposed by National Grid and a consultation paper issued in due course. The Panel agreed that work on the two further areas originally identified should be considered subject to the resource available within National Grid.

**Action: National Grid (LM)**

### 17. Offshore Developments

827. The Panel NOTED that work was proceeding on the Grid Code drafting following the recent Ofgem/DBERR consultation.

### 18. GCRP 2008 Meeting Dates

828. The Panel noted and agreed proposed dates for the GCRP meetings in 2008:

- 21<sup>st</sup> February 2008
- 15<sup>th</sup> May 2008
- 18<sup>th</sup> September 2008
- 20<sup>th</sup> November 2008

829. The Panel noted that the meeting will be held at National Grid's offices in Warwick.

### 19. Impact of Other Code Modifications

830. The Panel NOTED that the CUSC Panel had recommended against implementation of CAP143 (Interim TEC) and all alternatives. Should the Authority approve CAP143 a consequential amendment to the Grid Code would be required.
831. The Panel NOTED that CAP148 Working Group Report (Deemed Access Rights to the GB Transmission System for Renewable Generation) had been submitted to the CUSC Panel for consideration on 28<sup>th</sup> September and that it was expected that the industry consultation phase would commence shortly. Significant changes to the Grid Code would be required should the Authority approve CAP148 or alternative.
832. The Panel NOTED that P215 (Revised Credit Cover Methodology for Generating BM Units) involved altering the basis of credit cover for BSC Parties to one based on FPNs. P215 was currently at Working Group phase. Should P215 be approved it may necessitate a consequential change to the Grid Code.

### 20. Any Other Business

#### AOB01

833. The Panel NOTED that the Energy Emergency Executive Committee had asked National Grid and ENA to reflect on this year's flooding experience and identify potential lessons learnt. The Panel NOTED that contributions from the Generator Community could be required.

#### AOB02

834. The Panel discussed the need for an interface between the SQSS Working Group which was currently reviewing the standards and the GCRP. National Grid would consider this issue and report back to the November GCRP meeting.

**Action: National Grid (LM)**

#### AOB03

835. National Grid had undertaken a certain amount of work in association with manufacturers on the implications of new technologies for compliance arrangements and provision of frequency response in particular. National Grid would provide a paper on these issues to the November GCRP although the paper would necessarily be limited in its content due to commercial confidentiality considerations.

#### Post meeting note.

Definitive information on clean coal technologies and other new technologies is not expected to be available until after the November GCRP so National Grid will provide a presentation on this issue to the November GCRP with a view to provision of a paper to the February 2008 GCRP.



**Action: National Grid (NT)**

AOB04

836. National Grid indicated that CC 6.2.2.2 (b) of the Grid Code relating to Back-up protection required an amendment to the Code in order to clarify the provisions relating to fault clearance times. National Grid agreed to provide a paper to the November GCRP meeting on this issue.

**Action: National Grid (BT)**

AOB05

837. National Grid referred to the responses received to Grid Code Consultation paper D/07 (Frequency Response Requirements). In the light of the responses, National Grid would organise a meeting to explain its thinking behind the proposals in D/07 to respondents. The Panel agreed that Panel Members and Alternates should also be offered the opportunity to attend this meeting.

**Action: National Grid (HU & Panel Secretary)**

AOB06

838. The Panel NOTED the letter from Ofgem to the Chairman of the GCRP dated 24<sup>th</sup> May providing an interpretation of the CUSC objectives in the context of environmental issues in relation to CAP148 and Ofgem's advice that the GCRP should monitor the progress of this issue via the industry cross-working mechanisms it has developed.

AOB07

839. JN raised the issue of the planning data required by National Grid under PC.4.4.2. JN indicated that National Grid were requesting Detailed Planning Data and other compliance data within the 28 days stipulated in PC.4.4.2 for sites which in some cases were not due to energise for 7 or 8 years ahead. He considered this unreasonable and in some cases was outside SYS timescales. JN suggested that consideration could be given to an amendment to PC.4.4.2 of the Grid Code to make clear that the 28 day period was linked to the proposed connection date for the site in the case of new developments.

**Action: National Grid**

### **21. Date of Next Meeting**

840. The next meeting will be held on Thursday, 15<sup>th</sup> November 2007 at National Grid House, Warwick. The meeting will commence at 10:00am.