

Summary of Meeting and Actions

Meeting Name	Black Start Working Group
Meeting No.	4
Date of Meeting	Wednesday, 27 th June 2007
Time	10:00am – 2:30pm
Venue	B1-1, National Grid House, Warwick

This note outlines the key action points from the fourth meeting of the Black Start Working Group.

1) Apologies for Absence

Apologies were received from Steve Cox (United Utilities), Nilton Green (National Grid), Allan Macleod (Scottish Power Transmission Ltd) John Morris (British Energy), Wayne Oxborough (Central Networks) and Malcolm Taylor (AEP).

2) Minutes of Last Meeting

The draft minutes of the first Grid Code Black Start Working Group meeting held on 2nd May 2007 were APPROVED, subject to minor amendments and will be accessible from the Grid Code Website.

3) Local Joint Restoration Plans (LJRP) Exercise Requirements

The Working Group noted and discussed revised SS's paper which has incorporated comments received from Working Group members. The paper outlined the objectives of the LJRP exercise and proposed wording for the associated code changes.

The Working Group reviewed the draft wording which would be incorporated within OC9.4 of the Grid Code. It was acknowledged that the usage of the 'effectiveness' may not be the most appropriate term when describing the objective of the LJRP Exercise, alternative wording would be used.

The Working Group agreed to the principles as described in the proposals. Draft legal text which is reflective of the Working Group discussions/agreement will be discussed at the next Working Group meeting.

Action: National Grid

National Grid gave an overview of the presentation utilised at the exercise at Kingsnorth. The Working Group noted that the presentation provided a useful explanation of what constitutes a Black Start event and how the associated recovery would be progressed, coordinated by the various parties involved. The presentation would be circulated to Working Group members for reference purposes. The Working Group noted that the presentation was not for general publication/circulation given the sensitivity of the information contained.

Action: National Grid

The Working Group noted that a significant proportion of the exercise was spent discussing the LRJP and the interaction between National Grid, the Generator and the DNO. The presentation material provided at the exercise described the various stages, and related these stages to the equivalent provisions specified within the LJRP. This approach was agreed to be beneficial.

The Working Group noted that LJRPs will contain information pertaining to the generic start up of at least one set, providing detail on expected timescales, maximum block sizing etc. The Working Group noted that relevant parties may have own internal more detail procedures which may specify preferred block sizing, site specific problems/issues and splitting networks to cover for the start up of more than one Generating Unit, for example.

The Working Group discussed whether or not it would be beneficial for some of this detailed information to be contained in the LJRPs, in particular the preferred block sizing

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(which may be dependant on condition of plant e.g. warm/cold). The Working Group agreed that there was a balance to be reached in the information contained in the LJRP and the internal company procedures.

The Working Group discussed the arrangements for updating/reviewing LJRPs. It was noted that the LJRP should be continually under review and there was an obligation on all parties to notify when changes were necessary to the document. The Working Group agreed that the LJRP training exercise would act as a trigger to formal review the document.

The Working Group discussed when the LJRP stage is superseded by the next stage of recovering i.e. Zonal Phase. It was noted that the LJRP would be utilised up to the point at which the power island is expanded to incorporate either a second DNO or a non-black start generator.

The Working Group noted that it would be useful if the Grid Code made reference to the Black Start Period. The Grid Code refers to 'Black Start' which is defined as the process used to recovery from a Total and Partial Shutdown on the GB Transmission System. The Working Group noted that there was a distinct difference between having an operational GB Transmission System and everything being back to normal. The Working Group accepted that the Black Start period should cover from when the Black Start process is invoked until such time that normal market operations resume.

4) Zonal Restoration Plans

National Grid will present the revised proposals regarding Zonal Restoration Plans with associated draft legal text for discussed at the next Working Group meeting.

Action: National Grid

5) Back to Normal Principles

The Working Group received an overview of the recent joint session with Elexon regarding the interaction between the Grid Code and the BSC in the event of a Black Start.

- The applicable section of the BSC is Section G (Contingencies), Paragraph 3
- The applicable section of the Grid Code is OC9, Paragraph 9.4

Informing Relevant Parties

National Grid is obligated to inform Users (as defined by OC9 of the Grid Code) of a Black Start. The current definition of Users does not cover Elexon/BSC Panel, National Grid to review the clause, with a view of placing an obligation on National Grid to inform Elexon/BSC Panel.

Action: National Grid

It was noted that Elexon is a 9 to 5 operation which does not have any backup facilities e.g. control telephony for their systems/building. This may cause difficulties when trying to communicate to Elexon during a Black Start and for Elexon informing their Users of a commencement of the event.

Black Start and the Market

It was noted that in the event of a Black Start being initiated by National Grid (either Total or Partial Shutdown of the GB Transmission System), the market would be suspended. It was noted that there would be no differences in timing between National Grid and BSC Panel regarding the commencement of a Black Start, apart from the BSC Panel referring to the start of the relevant Settlement Period. All trading parties would not be exposed to any imbalanced pricing. National Grid would instruct all generators (including non Black Start) via Emergency Instructions; generators would be paid single cash out price, for any energy generated during the Black Start. Any additional expenses incurred will be processed under the claim process (Section G, paragraph 3.3) after the event.

It was noted that in order to receive compensation, the User must have received an Emergency Instruction from National Grid.

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The Working Group was informed that the electronic system EDL/EDT may not be operational during a Black Start. It was noted that National Grid may be able to input information but other parties may not be able to receive the information. Therefore the default method for instructions during a black start would be by control telephony.

The last paragraph of Grid Code provision OC9.4.7(a) concerns the form of Bid/Offer Acceptances that would be given to non Black Start stations. This paragraph is incongruous with the fact that the market would actually be suspended, and National Grid would require to issue emergency instructions by control telephony to both black start and non-black start power stations. The submission of data between National Grid and the Generator would also be facilitated by control telephony. National Grid to review the clause, with the view of amending the provision such that it reflects what would happen during a Black Start.

Action: National Grid

Conclusion of Black Start Event

It was noted that National Grid and the BSC Panel have different considerations regarding the definition and timing of “back to normal” following a Black Start event. It was considered that National Grid would make its assessment of normal for the purposes of OC9.4.7.9 against technical/IS constraints e.g. when an intact transmission system is re-established and electronic despatch can be resume but no market mechanism in place.

It was noted that methods such as demand control (OC6) and rota disconnection (Electricity Supply Emergency Code) may still be required to meet peak demand. National Grid would wish to make use of the technical aspects of EDT/EDL to assist with the dispatching of generation. It was postulated whether a pseudo pricing number may have to be entered into the system to aid the transition to normal market operation.

BSC Panel would make its assessment, for the purposes of BSC G3.1.2(c), of when the market should resume, subsequent to National Grid’s earlier determination of normal operation. It was noted that the BSC Panel assessment would include commercial considerations. A notification period would be required between National Grid concluding normal operation and the market reconvening, as illustrated by figure 1. This would be to ensure that there was sufficient time to inform all BSC Trading Parties and for the contractual positions to be re-established prior to the start of trading and would be a minimum of 48 hours.

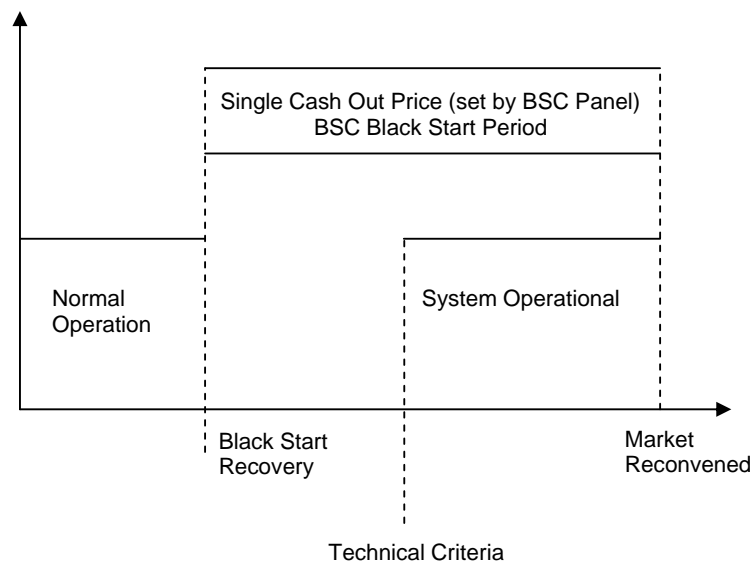


Figure 1

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The Working Group noted that it was important that all instructions issued whilst the market was suspended where deemed to be 'black start instructions' to ensure that Users where eligible for compensation and to avoid any unnecessary confusion regarding the status of instruction from National Grid and the DNO (during LJRP period).

The Working Group noted that the Black Start Period would have to include the following phases of a Black Start event:

- Power Islands Restoration (via LJRP)
- Zonal Restoration
- System Operational (Technical Criteria)
- Market Reconvened

6) Grid Code Revisions

The Working Group noted that the following sections of the Grid Code are likely to require review/amending to reflect the findings of the Working Group:

- OC9.1.1
- OC9.4.4
- OC9.4.7.4(a)
- OC9.4.7.9
- OC9.4.7.11
- BC2.9

It was agreed that the group should prepare and review potential grid code changes to give effect to the principles above. In summary these would include:

- Common definition of Black Start Period in Grid Code and BSC
- Clarification of 4 phases of recovery: LJRP, zonal, national, market
- Do away with BOA language during black start period.

Action: National Grid

7) Next Meeting

The next meeting of the Working Group will take place on Wednesday, 25th July 2007 at National Grid House, Warwick commencing at 10am.

8) Next Steps

The following points will be discussed at the next Working Group meeting:

- Circulation of Kingsnorth's presentation (LM)
- LJRP Exercise Requirements proposals, draft legal text to be proposed and circulated for discussion at next meeting (National Grid)
- Zonal Restoration Plan proposals to be amended to reflect Working Group members comments (NG), draft legal text to be proposed and circulated for comment and discussion at next meeting(National Grid)
- Draft Legal text for the proposed Grid Code back to normal changes to be circulated for comment and discussion at the next meeting(National Grid)

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Appendix 1 – Working Group Attendance

Members Present:

Jonny Hosford	JH	Chairman
Lilian Macleod	LM	Secretary
Steve Argent	SA	Ofgem
Campbell McDonald	CMcD	SSE Generation
Claire Maxim	CM	E.ON UK
Phil Nicholson	PN	Central Networks
John Norbury	JH	RWE
David Osborne	DO	Scottish Hydro-Electric Transmission Ltd
Steve Saunders	SS	EDF Energy
Paul Ward	PW	United Utilities

Apologies:

Steve Cox	SC	United Utilities
Nilton Green	NG	National Grid
Allan Macleod	AM	Scottish Power Transmission Ltd
John Morris	JM	British Energy
Wayne Oxborough	WO	Central Networks
Malcolm Taylor	MT	AEP