

ASSESSMENT REPORT for Modification Proposal P231 'Black Start and FSC Procedures under the Balancing and Settlement Code (BSC)'

Prepared by: P231 Modification Group

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.¹

P231 aims to improve the transparency of the arrangements and obligations associated with a Black Start or Fuel Security Code (FSC) event, as the current detail in the BSC is only high level. The P231 solution outlines the processes for confirming the duration of a Black Start / FSC event and to enable normal market operations to resume. The Proposal also clarifies the responsibilities of relevant participants.

Another Assessment Report regarding the calculation of a Single Imbalance Price and the processes for Party compensation as a result of a Black Start or FSC event (P232) was issued in parallel with this document.

Modification Group's Recommendation

The P231 Modification Group invites the Panel to:

- **AGREE** a provisional recommendation that Proposed Modification P231 **should** be made;
- **AGREE** a provisional Implementation Date for the Proposed Modification, of the next planned BSC Systems Release which falls at least 4 months after an Authority Decision has been received;
- **AGREE** the draft legal text for Proposed Modification P231;
- **AGREE** that the Modification Proposal should be submitted to the Report Phase;
- **AGREE** that the draft Modification Report will be issued for consultation and submitted for consideration at the Panel's meeting in May 2009; and
- **NOTE** that there will be cost savings to be made if P231 and P232 are implemented together.

Contact	Sherwin Cotta		sherwin.cotta@elexon.co.uk		0207 380 4361
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¹ The current version of the Code can be found at <http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx>.

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1 SUMMARY

Background

P231 has been raised by National Grid and the P231 solution is based on the discussions from Issues 32 'Black Start' and 33 'Fuel Security Code'. P231 provides clearer processes for the industry to follow in the event of a Black Start or FSC direction, thereby allowing National Grid, BSCCo and BSC Parties to fulfil their BSC obligations.

Impacts:

- **BSC Parties:** The Transmission Company, Generators, Suppliers, Licence Exemptable Generators, Licensed Distribution System Operators, Interconnector Administrators, Interconnector Users and BSCCo.
- The Master Registration Agreement Service Company (MRASCo) as a Core Document Owner.
- The Grid Code.
- **BSC Agents:** All BSC Agents

Implementation Costs

Total costs:

- £17,670 (includes BSCCo and BSC Agent cost) if P231 is implemented outside a standard BSC release
- £7,770 (includes BSCCo and BSC Agent cost) if P231 is implemented as part of a standard BSC release

Operational costs (per year):

None, but if a Black Start/FSC event occurs, any costs would be absorbed under normal BSCCo operational costs.

Industry implementation costs:

Although no costs were provided, the costs are expected to be minimal.

Implementation Approach

The Group recommend an Implementation Date for the Proposed Modification for the next planned BSC Systems Release which falls at least 4 months after an Authority Decision has been received.

The Group's preference is that P231 be included in the November 2009 BSC release together with P232, so as to realise the benefits of these modifications as soon as possible.

Modification Group's Identified Benefits and Drawbacks under Applicable BSC Objectives (b), (c) and (d)

(Summary of the arguments in Section 8)

Benefits:

- The current lack of a clear process is untenable in the long term and does not facilitate an efficient market recovery following a Black Start / FSC event;
- The lack of a clear process would mean that there would be widespread confusion within the industry. This could prove to be expensive where participants make ill-informed decisions for example, where to look for the details of the process, understanding the activity and role of participant, whether or not contracts should be made, and other trading related issues;
- The process will also clarify to BSC Parties when they will be despatched by National Grid (under Emergency Instructions) and when BSC Parties will self despatch (as per normal BSC operation). This can be seen as Point K in the Black Start Recovery Diagram in Section 3,2;
- Although it was not possible to quantify the benefits in definite financial terms, it was agreed that there would be cost savings to participants in having a clear and transparent process. P231 puts in place a coherent process which would mean that an efficient return to normal market operation under the BSC. This facilitates a more competitive market. By virtue of having such a market, it can be assumed that this is more efficient than central despatch (which would occur under Black Start). By facilitating earlier return to market operation, P231 would, by definition, have cost savings by reducing the time under central despatch. It is expected that, in the event that Black Start occurred, this benefit would outweigh the cost for the implementation of P231;
- No drawbacks have been identified; and
- Although no definitive financial benefits were stated, the Group strongly believed that the benefits outweigh the costs for implementation of P231 (see points above).

Modification Group's Final Recommendation

The Modification Group unanimously recommends that the BSC Panel agrees that:

- **Proposed Modification SHOULD BE MADE.**

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2 WHY CHANGE

In the event of a Fuel Security Code or Black Start event Parties are expected to adhere to certain activities which are outlined within the Balancing and Settlement Code (BSC). [Issue 32 'Black Start'](#)² and [Issue 33 'Fuel Security Code \(FSC\)'](#)³ were raised to consider and develop requirements to enable the BSC Panel, BSC Parties, BSCCo and BSC Agents to fulfil their obligations in a transparent and timely manner.

P231 seeks to clarify the following:

- How to define the duration of a Black Start or FSC event for BSC purposes;
- How to return to normal market operations; and
- What are the obligations on relevant participants?

By providing clarity of the obligations and processes, affected stakeholders (in particular the BSC Panel, BSC Parties, BSCCo, BSC Agents and National Grid) can work together to ensure that normal market operations will 'go-live' in the shortest possible time.

A description of a Black Start and FSC event is included below in Sections 2.1 and 2.2 respectively.

The Issue Groups also discussed the details of the claims processes and the calculation of a single imbalance price) under a Black Start / FSC event. The changes from these discussions are being progressed as Modification Proposal [P232](#).

2.1 What is a Black Start?

A 'Black Start' is a recovery process for restoring electricity on the Transmission System. Power stations need electricity from the Transmission System to start up and maintain their generators. If the Transmission System collapses, power stations would be unable to keep their generators running and as a result power stations would stop producing electricity.

Certain power stations have contracts with the System Operator (National Grid) where they will be able to initiate a Black Start if the Transmission System collapses. These power stations do not require an external source of energy to produce electricity. In most instances, such power stations would use diesel generators (or aero engines) to start larger generators and start generating in small 'pockets' throughout the country. In turn these 'pockets' are gradually connected to each other until the Transmission System is fully energised.

2.2 What is a Fuel Security Code event?

A FSC event occurs when the Secretary of State exercises his powers under Sections 34 and 35 of the Electricity Act 1989, to direct power stations or Transmission Licensees (National Grid) to operate in specific ways (for example a power station could generate more or less energy in order to balance the electricity grid). A FSC 'direction' can be issued to one or multiple participants and a single FSC direction or several distinct FSC directions can be issued over the course of an event.

Unless specified by the Department for Energy and Climate Change (DECC), formerly the Department for Business Enterprise and Regulatory Reform (BERR), information regarding a security period will be declared by National Grid to all impacted parties e.g. Generators, Distributors and other stakeholders in accordance with the Fuel Security Code.

² Issue 32 Black Start Report – Please refer to the following Link: [Issue 32 Black Start Report](#)

³ Issue 33 Fuel Security Code – Please refer to the following Link: [Issue 33 Fuel Security code](#)

3 P231 SOLUTION

P231 deals with the:

- commencement of a Black Start Period;
- return of normal market operation following a Black Start Period; and
- clarification that complying with a Fuel Security direction would not lead to a breach of the BSC and that Parties would not incur Energy Indebtedness during a Black Start Period.

In clarifying these arrangements, P231 establishes the specific obligations during a Black Start or FSC event on:

- the BSC Panel;
- BSCCo;
- BSC Parties (Suppliers and Generators);
- BSC Agents;
- Interconnector Administrators and Users; and
- the Transmission Company.

3.1 Summary of Solution

For a full description of the original Modification Proposal as submitted by National Grid ('the Proposer'), please refer to the [P231 Initial Written Assessment](#) (IWA).

In summary, the P231 solution can be broken down into the following three areas:

3.1.1 Commencement of a Black Start Period

For a Black Start event, the BSC currently states that the Panel determines the Settlement Period where the Total / Partial Shutdown of the Transmission System commenced. In practice the Panel determination would simply be based on the Transmission Company's (National Grid) declaration. Therefore P231 proposes that the commencement of a Black Start Period is based on National Grid's declaration. National Grid will communicate this to BSCCo.

Following National Grid's declaration, BSCCo will be required to notify all BSC Parties of the beginning of the Black Start Period; BSCCo's notification will include details of the Settlement Day and Settlement Period that the Black Start Period commenced.

3.1.2 Return of Normal Market Operations following a Black Start Period

For a Black Start event, the BSC currently states that the Panel determines the Settlement Period where normal operations apply following a Black Start Period. However, several key steps (which are not described in the BSC) need to occur beforehand to ensure a prompt and orderly return to normal operation of the BSC arrangements. These steps are:

- Broadcasting of information by National Grid and BSCCo to BSC Parties, e.g. state of the relevant IT systems;
- The Panel determining the Single Imbalance Price (this is being considered by P232);
- The Panel determining the timeframe for the start of normal BSC market operation;

- BSCCo and BSC Agents to broadcast information and report to BSC Parties, including the ECVAAs sending reports to BSC Parties prior to normal market operations, informing BSC Parties of their contract positions. It should be noted that Volume Notifications relating to Settlement Periods prior to normal market resumption will be treated as null;
- BSC Parties sending Volume Notifications to ECVAAs in order to notify their contract position for Settlement Periods following the return to normal operations;
- BSC Parties submitting BM Unit data (e.g. Physical Notifications) to National Grid prior to normal market operations. Specifically BSC Parties should submit Physical Notifications relating to their required physical position for the Settlement Period following the return to normal market operations at least 10 hours prior to this Settlement Period. This would provide National Grid greater visibility of the state of the electricity grid and BSC Parties required physical positions at the point of return to normal market operations; and
- National Grid informing the Panel at least one hour before normal market operations are due to commence whether it believes normal operations can commence.

Sections 3.2 and 3.3 below provide further detail on the process steps required during the Black Start Period to enable an orderly return to normal operation.

3.1.3 Clarification Regarding BSC Defaults and FSC Events/ Black Start Periods

In an FSC event, the FSC provisions supersede those of the BSC. This means that a BSC Party will not be in breach of the BSC if the cause of that breach was from complying with a direction issued to them specifically under the provisions of the FSC.

The Group noted that if BSCCo was unaware of an FSC direction and a Party breached their Credit Default level as a direct result of taking action under an FSC direction, BSCCo would notify that default to industry in accordance with the BSC rules. It is therefore imperative that BSCCo is made aware of an FSC direction to avoid taking such action. However there is no obligation under the FSC for BSCCo to be informed of FSC directions. Therefore, the Group concluded that it is a Party's responsibility to provide details of such a notification to BSCCo if a Credit Default situation occurs. In addition, a statement will be included in the BSC to explicitly state that:

- a BSC Party will not be in breach of the BSC as a direct result of complying with an FSC direction; and
- BSCCo will not provide authorisation to place a Party in Credit Default if the reason for the breach of the Credit Default threshold is proved to be an FSC direction.

For a Black Start event, the BSC states that the value of Credit Assessment Energy Indebtedness shall be set to zero for all Trading Parties in relation to Settlement Periods which fall within a Black Start Period. However with the introduction of changes to the credit arrangements the Credit Assessment Energy Indebtedness is not the only component of the credit calculation. It is therefore proposed that the BSC be amended so that the value of Energy Indebtedness (to include Credit Assessment Energy Indebtedness, Metered Energy Indebtedness and Actual Energy Indebtedness) is set to zero. This would therefore ensure that Parties can not incur any indebtedness during the Black Start Period.

The draft legal text (Appendix 5) includes proposed amendments to sections G4 (FSC), G3 (Black Start), M (Credit Default) and H (Default) to give effect to this proposal.

3.2 Overview of the Proposed Modification during a Black Start Period

The Black Start aspects of the P231 solution is easily explained with reference to the 'Black Start Recovery' Diagram and accompanying explanations below. Section 3.3 details the P231 process as well as the requirements on each participant during a Black Start Period.

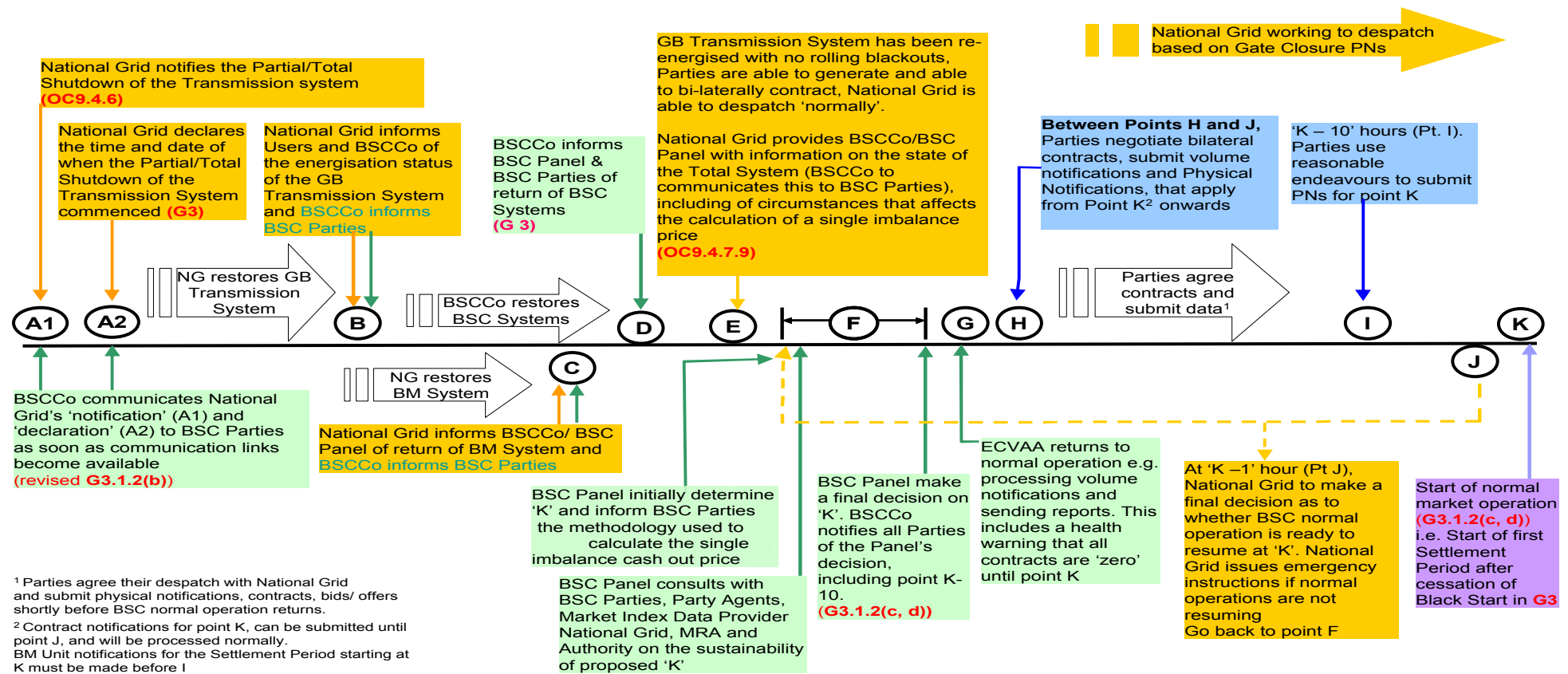


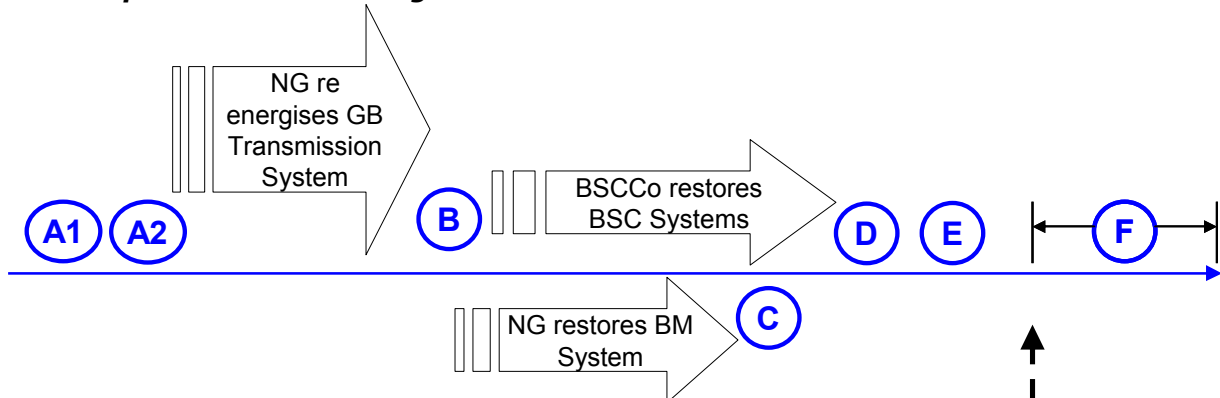
Figure 1: Black Start Recovery Diagram where: orange boxes are National Grid obligations/inputs, Green boxes are BSCCo / BSC Panel obligations/ inputs and Blue boxes are BSC Party obligations/ inputs. The purple box denotes the start of normal BSC market operations. P231 obligations on National Grid and BSCCo are shown in red.

3.3 Detailed Black Start Process

Areas which involve the restoration of the Transmission System fall under the Grid Code and not the BSC. These have been included for completeness.

The purpose of this section is to describe the overall Black Start recovery process in greater detail. The key requirements in relation to this process are included in Appendix 4 together with the high level impacts on the BSC and details that will be included within a new BSC Procedure (BSCP) relating to contingency arrangements.

Simplified Black Start diagram Points A – F



POINT A1 – Existence of a Black Start Period

- National Grid will contact power stations with the ability to 'Black Start', to begin the restoration of the Transmission System. This is not an instruction from National Grid, but rather part of general communication between National Grid and 'Black Start capable' power stations.
- National Grid will work towards restoring the GB Transmission System (period A1 to B).
- National Grid will inform BSCCo that a Total/Partial Shutdown is in existence and that the market has entered a Black Start Period (National Grid will subsequently inform BSCCo, in its reasonable opinion, of the time and date of the Shutdown, known as Point A2).
- After receipt of National Grid's notification, BSCCo will communicate this to all BSC Parties and BSC Agents as soon as normal communication channels⁴ become available.
- Where data is not available Settlement Runs will be delayed in accordance with Sections T1.4.2 and T1.4.5 of the BSC. The corresponding Payment Runs will also be delayed in accordance with Section N.6.6 of the BSC.

POINT A2 – National Grid declaration of time and date

- Based on their investigations, National Grid will declare the indicative start time and day of the Total/Partial Shutdown to users of the Grid Code and BSCCo.
- After receipt of National Grid's declaration, BSCCo will communicate this declaration as the start of the Black Start Period to all BSC Parties and BSC Agents.

POINT B – Energisation of the Transmission System

- When the GB Transmission System is energised, National Grid will inform BSCCo.

⁴ This is likely to be via email, ELEXON Circular or the posting of information on the BMRS website. Normal communication between BSCCo and the industry might be difficult at the start of the Black Start Period as the 'electricity grid' will begin to be re-energised and any available communication channels could suffer from congestion/unavailability. Therefore ELEXON may only be able to communicate the commencement of the Black Start Period once the electricity grid is totally/ almost re-energised.

- BSCCo will pass this information on to BSC Parties, via normal communication channels, with the caveat that the market is still suspended and individuals may not have power, hampering their ability to receive those communications.

POINT C⁵ (B to C) – Restoration of National Grid's BM system

- National Grid will work to restore its BM systems, which are capable of communications with Grid Code users. Grid Code users and BSCCo will be informed when the systems have been restored and are therefore available and capable of operation.
- BSCCo will pass this information onto BSC Parties.

POINT D⁵ (B to D) – Restoration of BSC Systems

- BSCCo will work with BSC Agents to restore the BSC systems. When the BSC systems are restored, BSCCo will inform the BSC Panel and BSC Parties that the BSC systems are available and capable of operating.

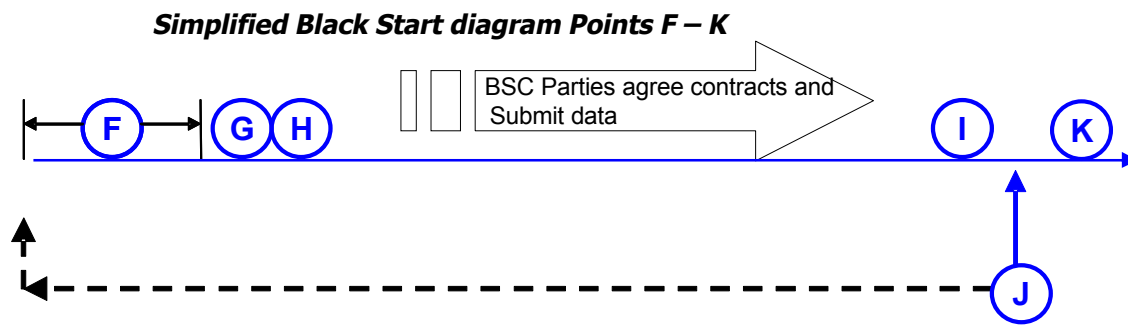
POINT E – Stabilisation of the Transmission System

- At this point, the GB Transmission System has been re-energised with no rolling black outs. Generators are able to generate sufficient electricity to meet demand and are under instructions of National Grid.
- National Grid will inform BSCCo and Grid Code users that, to the best of its knowledge, the events which gave rise to the Black Start no longer exist and the market is capable of operating normally. BSCCo will convey the information contained in these updates to the BSC Panel and BSC Parties via normal communication channels.

POINT F – Panel determination of the return to normal operations

- At the start of Point F, the BSC Panel will determine a proposed time and date for normal BSC market operations to resume. This is 'Point K' on the diagram.
- The BSC Panel will consult with BSC Parties, Party Agents, the Market Index Data Provider, National Grid, MRASCo and the Authority on the proposed timetable for the resumption of normal BSC market operations.
- Following feedback received during the consultation, the BSC Panel will make a final decision on when normal market operations will resume (Point K), subject to National Grid's 'Go-Live' confirmation.
- BSCCo will inform all BSC Parties of the time of return to normal operation under the BSC (Point K).

⁵ Note: Points C and D may occur before or after point E.



POINT G: ECVAAs return to normal operations

- The ECVAAs will return to normal operations. Therefore Volume Notifications submitted by Parties will be processed and reports issued to Parties. This will include the forward contract report (ECVAA-I022) which is issued daily to each Contract Trading Party summarising notifications received relating to that Contract Trading Party for the next seven days. This will therefore show Parties their contract position following point K at K – 7 days. A health warning will be placed on the BMRS to remind Parties that all contract positions are zero until normal market operations resume (at Point K).

POINTS H - J: Submission of Party data to National Grid and BSC Systems (Bids and Offers, Volume Notifications and Physical Notifications)

- It is expected that BSC Parties will begin negotiating bilateral contracts.
- Between Points H and J (K-1hr) Parties can submit Volume Notifications and Bid/ Offer data in relation to the first and subsequent Settlement Periods after Point K.
- Between Points H and I (K-10 hrs) Parties should submit Physical Notifications to reflect their required physical position at Point K.

POINT I: 10 hours to Point K

- This point is 10 hours before normal market operations resume. Parties should use reasonable endeavours to submit Physical Notifications for 'Point K', the restoration of normal BSC market operations. National Grid will then despatch plant to enable Parties to meet their required physical position at Point K. If a Party submits a revised Physical Notification after Point I, it may not be possible for National Grid to despatch the plant in order for the Party to meet this revised position.
- For subsequent Settlement Periods following the start of the normal market operation, the Parties should submit BMU data in accordance with BC1 of the Grid Code.

POINT J: Gate Closure for Point K and final decision

- National Grid will make a final decision as to whether it believes it is permissible to allow normal BSC operation to resume at 'Point K'.
- If National Grid does not believe it is permissible to restart normal market operations, it will need to submit a set of Emergency Instructions to every BM Unit informing them that BSC 'normal' operation will no longer be re-starting as envisaged, at 'Point K'. In this instance, the Black Start process moves back to 'Point F'. The Panel will propose a new start date and time for normal BSC market operations to resume.

POINT K: End of the Black Start/ restoration of normal market operations

- This is the point at which normal BSC market operations resume.
- At this point, Black Start provisions (Section G) no longer apply. The Balancing Mechanism and all BSC systems are operating normally.
- No specific rules are required for any subsequent Settlement Periods after 'Point K', e.g. Parties can submit revised Physical Notifications up to Gate Closure.

4 IMPLEMENTATION

Responses from the P231 impact assessment/consultation have indicated that there are minimal costs from both the industry and BSC Agents in implementing the P231 solution. Changes are confined to updating internal procedures/Local Working Instructions and processes (no system changes have been indicated). There will be a cost associated with the drafting and progression of the new BSCP (see below).

The P231 implementation approach is driven by the lead time for the documentation changes. Development of the new BSCP will take 4 months. **Therefore implementation is proposed to be included in the next planned BSC Systems Release which falls at least 4 months after an Authority Decision.** Although the Group prefers that P231 be implemented as soon as possible, there is a cost saving of approximately £10,000 if P231 is included in a standard BSC release.

This 4 month lead time includes internal drafting and review cycles for the BSCP, an industry consultation followed by the BSC Panel approval. The Panel would be responsible for agreeing any further amendments to this BSCP, although the Panel may wish to delegate this to a Panel Committee.

P231 and P232 are being progressed to identical timescales as there are potentially cost savings in progressing and implementing P231 and P232 together. The Group has suggested that ideally, a single BSCP will be developed for both the P231 and P232 solution (assuming Authority approval is granted for P231 and P232) containing the non BSC details regarding contingency arrangements.

Rationale for inclusion of guidance in the new BSCP

This new BSCP would also contain guidance for market participants on the Black Start Recovery process, guidance on the FSC processes and include explanatory process diagrams. This type of guidance information has normally been contained in separate guidance notes published on the BSC Website and not in BSCPs (in accordance with the CSD Architectural Principles Statement). However, the Group believed that having all the relevant information in a single document is appropriate as in these extreme events it would be beneficial for market participants to obtain this information quickly and efficiently (alongside the BSCP structured processes). This is in contrast to having the same information attached to the Assessment Report or a stand alone guidance note, for which visibility could reduce over time. Therefore, the new BSCP should include the following:

- P231 Black Start Recovery Diagram;
- Guidance on the P231 Black Start Recovery process;
- P231 Black Start Recovery processes;
- Guidance on FSC events and directions;
- P232 Claims Application Process;
- P232 Black Start Period and Fuel Security Code Event Claims Forms;
- P232 Black Start Period and Fuel Security Code Event Request for Time extension form;
- P232 draft Claims Committee terms of Reference; and
- P232 Claims Committee guidance.

The Group also recommends the BSCP sits with the Panel, as a single document in a high-profile position will promote regular review and familiarity.

Both Modifications could be implemented as a stand alone Modification if the Authority were to reject either Modification or if it was recommended that P231 and P232 should be implemented separately. However, a more efficient route would be to implement P231 together with P232 and included as part of a standard BSC Systems release.

P231 IMPLEMENTATION COSTS⁶

		P231 implemented as a stand alone release	P231 implemented in a standard BSC release	Tolerance
BSC Agent Cost	Updating internal processes and documentation	£3,150	£3,150	-
Total Demand Led Implementation Cost		£3,150	£3,150	-
BSCCo Implementation Resource Cost		66 man days £14,520	21 man days £4,620	+/- 30%
Total Implementation Cost		£17,670	£7,770	+/- 30%

Note: There is an additional cost saving if both P231 and P232 are implemented together, whether or not both Modifications are implemented as part of a standard BSC release.

⁶ An explanation of the cost terms used in this section can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf

5 IMPACT ON BSC SYSTEMS DURING A BLACK START PERIOD

5.1 Proposed Impacts on BSC Systems during a Black Start Period

The Group noted that the Black Start Recovery Diagram did not provide details of the BSC Systems and when these would start up during a Black Start. When BSCCo receives notification from National Grid that a Partial/Total Shutdown has occurred they will inform the BSC Agents that a Black Start Period has commenced. The BSC Agent would then be responsible for ensuring that the BSC Systems work in the following way:

5.1.1 BMRS

BMRS should continue operating throughout the Black Start Period, where possible, as follows:

- The BMRS would be used to provide industry with updates regarding the status of the Transmission System and other relevant systems;
- Tibco messages would continue to be issued where possible;
- A notice placed on the website would highlight to BSC participants, that the prices for Settlement Periods during a Black Start Period may not be accurate. This warning would be removed once the BSC Panel decided the 'Single Imbalance Price'. Initially, it was proposed that the BMRS should ignore Black Start Periods. However, this would mean that the price calculation that the BMRS carries out will require amendment; resulting in system impacts and costs. The Group were keen to avoid such system changes and concluded that the BMRS should continue working as normal. Where possible, during a Black Start Period, data would be constructed for entry into the BMRS price calculation to reflect the Single Imbalance Price (details of the Single Imbalance Price are being considered under P232); and
- When the market returns to normal operation (i.e. Point K) the BMRS would continue calculating indicative prices based on actual data received from National Grid.

5.1.2 ECVA

ECVA would continue operating throughout the Black Start period, where possible, as follows:

- The Group agreed an approach where ECVA continues as normal i.e. if notifications are submitted then these will be processed and reports sent. A script would be run to nullify data for Settlement Periods within the Black Start Period before the data is sent to the SAA. This process would be required for Settlement Periods at the start of the Black Start when ECVA are not aware that the situation is a Black Start. A notice would be included on the BMRS stating that contract volumes for Settlement Periods during the Black Start Period would be set to zero;
- The credit default process would be switched off and the Energy Indebtedness for all Parties should be set to zero for all Settlement Periods within the Black Start Period;
- At Point G ECVA would process submitted Volume Notifications in relation to Settlement Periods following the return to normal market operations (Point K) and send all usual reports. A notice would remain on the BMRS stating that contract volumes for Settlement Periods during the Black Start Period would be set to zero; and
- After the return to normal operations (Point K) the credit default process would restart (although BSCCo may need to use material doubt provisions).

5.1.3 CDCA

CDCA should continue running throughout the Black Start Period where possible, as follows:

- CDCA should continue collecting data throughout the Black Start Period. Initially the CDCA may not be able to collect data from a large number of Metering Systems therefore data would be estimated. CDCA would continue to attempt to dial meters with actual data replacing these estimates over time; and
- CDCA Aggregations Runs would continue to run as normal but may need to be delayed until sufficient actual data is available.

5.1.4 SVAA

SVAA should continue running throughout the Black Start Period where possible, as follows:

- Calculation of Daily Profile Coefficients should continue as soon as possible; and
- SVAA Volume Allocation Runs would continue to run as normal but may need to be delayed until sufficient data is available.

5.1.5 SAA

The Settlement Runs would continue to run as normal but may need to be delayed until data is available in accordance with Sections T1.4.2 and T1.4.6 of the BSC.

5.1.6 FAA

The Payment Runs would continue to run as normal but may need to be postponed until data is available in accordance with Section N6.6 of the BSC.

5.1.7 Potential to delay Settlement Runs

The Group noted that it may be necessary to delay SVAA, CDCA, and FAA runs due to Black Start issues. Any delay would be notified to Parties. The legal text drafting in G3.1.4 provides the obligation to keep Parties informed.

5.1.8 Participant Testing during a Black Start Period

The Group noted that participants may want a testing period during a Black Start Period, to ensure that their systems are able to communicate with BSC Systems.

5.1.9 Credit Defaults

The Group felt that Parties should not be placed in Credit Default as a result of a Black Start event and considered how this should be achieved. The Group were keen to avoid any material BSC System changes. Three options were noted:

- **Option 1:** No change to the credit position within ECVA. This would come with a caveat that the calculation may not be accurate, as it would be based on potentially inaccurate data. Therefore a new clause would need to be inserted in the BSC which states that '*A Party will not be in credit default during a, or in relation to a Black Start event*'. BSCCo would then use its discretionary provisions to prevent Parties from going into Credit Default under a Black Start. The Group did not pursue this option further as it would add confusion to an uncertain event.

- **Option 2:** Parties' credit position would be determined with the exclusion of Settlement Periods within the Black Start Period. The Group initially concluded that in an ideal situation they would prefer the BSC systems to ignore the Black Start Period, i.e. the period before the shutdown commenced to the period after normal market operations resumed, as a continuous series of events. However, it was later agreed that this would be a significant change from the current drafting of the BSC which sought to ensure that a Party does not increase its indebtedness during a Black Start Period but does not exclude these periods from the 29 day credit checking period.
- **Option 3:** Setting Energy Indebtedness for a Party to zero, so that the Party cannot incur any indebtedness during a Black Start Period. The Group noted that the BSC currently states that Credit Assessment Energy Indebtedness would be set to zero for Settlement Periods during a Black Start Period. With the introduction of changes to the credit arrangements the Credit Assessment Energy Indebtedness is not the only component of the credit calculation. The Group noted that setting the Energy Indebtedness (to include Credit Assessment Energy Indebtedness, Metered Energy Indebtedness and Actual Energy Indebtedness) to zero would be consistent with the current drafting as it would ensure that Parties can not incur any indebtedness during the Black Start Period.

In conclusion, the Group believed that the current drafting of the BSC refers to Option 3. Option 3 would be cheaper and easier to implement than the other two options; Option 3 would not impact any systems, whereas Option 2 would. While Option 3 is the Groups' preferred solution, there is a risk that a Party's indebtedness could be understated, i.e. the risk that Parties may owe more money than the credit calculation indicates which could result in unsecured liabilities should a Party fail to pay its Trading Charges.

6 WHAT DID INDUSTRY THINK?

The P231 Group's initial views were issued as part of a simultaneous industry Impact Assessment and Consultation on 25 February 2009. The sections below highlight the opinions expressed by respondents:

6.1 Impact Assessment Responses

Two responses were received which are summarised below. For further details please see Appendix 8:

- **How will P231 impact your organisation?**

Respondents unanimously indicated that while P231 would impact their organisation, the impacts would be minimal and confined to updating internal working instructions and processes. One of the responses indicated that P231 would take 1 day to implement.

- **Are there any costs and impacts to participants for a testing period during a Black Start Period?**

Both the responses indicated that any costs and impacts were expected to be minimal. Some concerns were raised which are included in section 7.

6.2 Consultation Responses

Ten responses were received which are summarised below. Full responses are contained in Appendix 9:

- **Does P231 better facilitate the Applicable BSC Objectives?**

Respondents unanimously agreed with the Modification Groups view and rationale that P231 does better facilitate BSC Objectives (b) and (d). A number of respondents also believed that P231 better facilitates BSC Objective (c).

- **What are the impacts of P231 on the industry?**

Respondents indicated that P231 had no or minimal impact on their respective organisations. Any impacts were confined to updating internal working instructions and processes.

- **Does the industry agree with the proposed P231 implementation approach?**

Respondents unanimously agreed with the implementation approach for P231.

- **Are there any alternative solutions not considered by the Modification Group?**

There were no alternative solutions proposed during the consultation. However, some concerns were raised which can be found below in Section 7 and Appendix 6.

- **Would a participant testing period during a Black Start Period be beneficial?**

The majority of respondents agreed that a testing period would enable concerned parties to ensure that their systems can communicate with BSC systems, thereby enabling a smoother transition to normal market operation; given the likely disruption to telecommunications. In contrast some respondents preferred to submit 'test notifications' to the live ECVA system, where the successful submission, acceptance and reporting of notifications would provide confirmation that participant systems could communicate with BSC systems as normal. The Black Start process and timescale should provide ample opportunity to deal with any communication issues that may arise.

- **Further comments made during the consultation**

One respondent highlighted that although P231 set out clearer processes, there was a probability that issues would still arise. Additionally one respondent believed it would be useful to have all the information associated with Black Start/FSC on a single webpage. BSCCo took an action to consider the

appropriateness of having this type of information in a specific area of its website (this will not form part of the P231 solution).

7 WHAT ARE THE GROUP'S CONCLUSIONS?

The Group agreed with the responses made during the P231 impact assessment and consultation, and did not change their views in light of the received responses.

Further details on the Group's discussions can be found in Appendix 6 of this document.

7.1 Implementation Dates

The Group unanimously supported the implementation approach as described in section 4. The Group also noted that there was a cost saving of approximately £10,000 if P231 was implemented in a standard release, as opposed to implementation outside a standard release. The Group also noted that there will be additional cost savings if implemented along with P232.

7.2 P231 Quantifying benefits in financial terms

The Group found it difficult to quantify the benefits for P231 in financial terms but made the following arguments in support:

- The current lack of a clear process is untenable in the long term and does not facilitate an efficient market recovery following a Black Start / FSC event;
- The lack of a clear process would mean that there would be widespread confusion within the industry. This could prove to be expensive where participants make ill-informed decisions for example, where to look for the details of the process, understanding the activity and role of participant, whether or not contracts should be made, and other trading related issues;
- The process will also clarify to BSC Parties when they will be despatched by National Grid (under Emergency Instructions) and when BSC Parties will self despatch (as per normal BSC operation). This can be seen as Point K in the Black Start Recovery Diagram in Section 3.2;
- Although it was not possible to quantify the benefits in definite financial terms, it was agreed that there would be cost savings to participants in having a clear and transparent process. P231 puts in place a coherent process which would mean that an efficient return to normal market operation under the BSC. This facilitates a more competitive market. By virtue of having such a market, it can be assumed that this is more efficient than central despatch (which would occur under Black Start). By facilitating earlier return to market operation, P231 would, by definition, have cost savings by reducing the time under central despatch. It is expected that, in the event that Black Start occurred, this benefit would outweigh the cost for the implementation of P231 (approx £7-9k if implemented in a BSC Release);
- The process would clarify the process for moving from central despatch via National Grid emergency instructions to BSC Parties self despatch. This can be seen as Point K in the Black Start Recovery Diagram in Section 3.2;
- No drawbacks have been identified; and
- Although no definitive financial benefits were stated, the Group strongly believed that the benefits outweigh the costs for implementation of P231 (see points above).

8 ASSESSMENT OF P231 AGAINST APPLICABLE BSC OBJECTIVES

The view of the Modification Group was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objective b, c and d when compared to the current BSC baseline for the reasons set out below:

BSC Objective (b): The efficient, economic and co-ordinated operation of the GB transmission system	
For	Against
<ul style="list-style-type: none"> P231 sets out a clear transparent process which will ensure that individual BSC participants have a better understanding of the Black Start and FSC procedures. This will assist the Transmission Company to operate in an efficient manner, for National Grid (and BSC Participants) to carry out their BSC obligations during a Black Start and therefore ensures that the GB Market is operating normally in the most efficient manner. P231 enables BSC Parties to interact effectively with the Transmission Company, which is required to operate the Transmission System efficiently and economically. 	<ul style="list-style-type: none"> None identified

BSC Objective (c): Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity	
For	Against
<ul style="list-style-type: none"> • P231 would improve competition, by the virtue of having clear transparent procedures for a Black Start recovery/FSC event. This would enable the market to restart in a more efficient manner, which was seen to enhance competition. • By ensuring that the market restarts in a manner where participants are clear on roles and activities, the potential for misinterpretation by some participants, resulting in inefficient or costly actions is avoided. 	<ul style="list-style-type: none"> • None identified

BSC Objective (d): Promoting efficiency in the implementation and administration of the balancing and settlement arrangements	
For	Against
<ul style="list-style-type: none"> • The administration of the balancing and settlement arrangements would be more efficient due to the detailed Black Start/FSC processes being documented; • The Panel, BSC Parties, BSC Agents and the wider industry would have the benefit of guidance and a structure in which to act; • BSC Parties will have comfort that, under exceptional market conditions, procedures are in place to ensure their commercial interests are considered; and • Clarifications/amendments to the Black Start and Fuel Security provisions would benefit the determination and financial Settlement of obligations between BSC Parties. 	<ul style="list-style-type: none"> • None identified

9 P231 LEGAL TEXT AND BSCP

BSCCo developed the draft legal text, guidance notes and draft BSCP for P231 which outlined the P231 processes. (This documentation was made available to industry during the P231 impact assessment and consultation).

At the final Modification Group meeting, the Group reviewed the draft legal text. Changes to the draft legal text were made to address industry comments and the Group unanimously agreed that the revised draft legal text delivered the intended solution.

Draft legal text for the Proposed Modification can be found in Appendix 5 whereas the draft BSCP can be found in Appendix 7.

10 RECOMMENDATIONS

The Group noted that there were no new arguments against the Applicable BSC Objectives made during the P231 consultation. Furthermore, the Group's views of the potential benefits of P231 overall remained

unchanged from those made prior to the P231 consultation. While no drawbacks have been identified, the Group are reasonably aware that a certain level of uncertainty exists during a Black Start and that it would be near impossible to have an exhaustive list to cover every eventuality in a Black Start Period.

10.1 Conclusions

Within the Group, there was therefore:

- A **UNANIMOUS** view that the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives when compared to the current market baseline. The Group agreed that the importance of P231 was the principle of having a clear transparent process for industry to follow, so as to attain normal market operation in the most efficient manner possible.

10.2 Final Recommendation to the Panel

Based on the above assessment, the Modification Group therefore agreed a **UNANIMOUS** final recommendation to the Panel that:

- The Proposed Modification **SHOULD** be made.

For details of the Group's recommended Implementation Dates and Legal text, please refer to Sections 4 and 9 respectively.

11 ESTIMATED IMPACT OF MODIFICATION ON SYSTEMS, PROCESSES AND DOCUMENTATION

An initial assessment has been undertaken by BSCCo in respect of all BSC systems, documentation and processes. The following impacts have been by P231.

a) Impact on BSC Systems and Processes

BSC System / Process	Potential Impact of Proposed Modification
ECVAA	ECVAA would be required to send reports to industry prior to normal market operations, informing Parties of their market positions. Any Volume Notifications in place during the Black Start Period would be nullified before being sent to the SAA.
BMRS	The BMRS would be required to operate normally where possible although indicative prices would not be accurate. The BMRS may be used to provide information to the industry in relation to the state of the Transmission System and various IT systems.
CDCA	The CDCA would operate normally, although Aggregation Runs may be delayed.
SVAA	The SVAA would operate normally, although Volume Allocation Runs may be delayed.
SAA	Settlement Runs could be delayed until data is available.
FAA	Payment Runs could be delayed until data is available.

b) Impact on BSC Parties and Party Agents

BSC Parties will be required to familiarise themselves with the solution and assess any changes to their working processes. Volume Notification Agents will need to ensure their processes allow for the resubmission of contracts for affected periods.

c) Impact on Transmission Company

The Transmission Company will need to ensure the solution is consistent with its processes and obligations under the BSC and other Codes. In particular the Grid Code may require revision.

d) Impact on BSCCo

Area of Business	Potential Impact of Proposed Modification
Operational Support	Support the operational processes during a Black Start and/or FSC period. This will require the update to, and potential creation of, new Local Working Instructions.
Change Delivery	Update to the BSC and the creation of a new BSCP.

e) Impact on Code

Code Section	Potential Impact of Proposed Modification
Section G	The BSC will need to be amended to include new obligations on: <ul style="list-style-type: none"> • The BSC Panel; • BSC Parties; • BSC Agents; • Interconnector Administrators and users; and • Transmission Company.
Section H	Amendments to state that a BSC Party complying with an FSC direction will not be in breach of the BSC.
Section M	Amendments to state that BSCCo will not provide authorisation to place a Party in Credit Default if the reason for breaching the Credit Default threshold was due to an FSC direction.

f) Impact on Code Subsidiary Documents

A new BSCP will be created to outline the procedures relating to the duration of a Black Start / FSC event, and the return to normal market operations. It is envisaged that P232 solution will utilise the same BSCP.

g) Impact on Core Industry Documents and Other Documents

Document	Potential Impact of Proposed Modification
Grid Code	Operating Code 9 may require amendments to reflect the solution.

h) Impact on Other Configurable Items

None

i) Impact on BSCCo Memorandum and Articles of Association

None

j) Impact on Governance and Regulatory Framework

None

12 TERMS USED IN THIS DOCUMENT

Other acronyms and defined terms take the meanings defined in Section X of the Code.

Acronym/Term	Definition
BERR	Department for Business Enterprise and Regulatory Reform
BMRS	Balancing Mechanism Reporting Service
BSCP	BSC Procedure
CDCA	Central Data Collection Agent
DECC	Department for Energy and Climate Change
DPC	Daily Profile Co-efficient
ECVAA	Energy Contract Volume Aggregation Agent
FAA	Funds Administration Agent
FSC	Fuel Security Code
GSMG	Governance Standing Modification Group
ISG	Imbalance Settlement Group
PTS	Participant Test Service
PN	Physical Notification
SSMG	Settlement Standing Modification Group
SAA	Settlement Administration Agent
SVAA	Supplier Volume Allocation Agent

13 REFERENCES

Ref.	Document Title	Owner	Issue Date	Version
1	Issue 32 Black Start Report	ELEXON	10/07/08	1.0
2	Issue 33 Fuel Security Code (FSC) Guidance	ELEXON		
3	P231 Initial Written Assessment	ELEXON	09/01/09	1.0
4	The Fuel Security Code	BERR	10/07	
5	Fuel Security Code Guidance	BERR	10/07	

APPENDIX 1: APPLICABLE BSC OBJECTIVES

For reference the Applicable BSC Objectives, as contained in the Transmission Licence, are:

- (a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence];
- (b) The efficient, economic and co-ordinated operation of the GB transmission system;
- (c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity;
- (d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

APPENDIX 2: COSTS AND PROCESS FOLLOWED

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL⁷

Meeting Cost	£ 1,750
Legal/Expert Cost	£ 0
Impact Assessment Cost	£ 5,000
BSCCo Resource	59 man days £ 17,705

Copies of all documents referred to in the table below can be found on the [P231 webpage](#)

PROCESS FOLLOWED

Date	Event
23/12/08	Modification Proposal raised by National Grid
15/01/09	IWA presented to the Panel
20/01/09	First Modification Group meeting held
28/01/09	Second Modification Group meeting held
13/02/09	Third Modification Group meeting held
25/02/09	P231 issued for simultaneous Industry Impact Assessment and Consultation (in parallel with P232)
10/03/09	Impact assessment and Consultation responses returned
16/03/09	Fourth Modification Group meeting held
09/04/09	Assessment Report Presented to the Panel

⁷ Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf.

APPENDIX 3: MODIFICATION GROUP MEMBERSHIP AND TERMS OF REFERENCE

MODIFICATION GROUP MEMBERSHIP

Member	Organisation	20/01	28/01	13/02	16/03
David Jones	ELEXON (Chairman)	√	√	√	√
Sherwin Cotta	ELEXON (Lead Analyst)	√	√	√	√
Shafqat Ali	National Grid (Proposer)	√	X	√	√
Garth Graham	Scottish and Southern	X	X	√	X
Gary Henderson	SAIC	√	√	√	X
Bill Reed	RWE	√	√	√	√
Chris Stewart	Centrica	√	√	√	√
Esther Sutton	E.ON UK	√	√	√	X
Hannah McKinney	EDF Energy	√	√	√	√
Martin Mate	British Energy	√	√	√	√
Attendee	Organisation				
Diane Mailer	ELEXON (Lawyer)	√	√	√	√
John Lucas	ELEXON	√	X	√	X
Sarah Jones	ELEXON	X	√	X	√
Justin Andrews	ELEXON	√	X	X	X
Claire Rozyn	Ofgem	√	√	√	√
Neil Sutton	National Grid	X	√	X	X
Lillian Macleod	National Grid	X	√	X	X
Jonathan Blott	Logica	X	√ (Part)	X	X
Mark Gribble	Logica	X	X	√	√ (Part)
Martin Wiles	Logica	X	X	X	√ (Part)
Nicholas Bradford	EDF Energy	X	X	√	√

MODIFICATION GROUP TERMS OF REFERENCE

Modification Proposal P231 will be considered by the P231 Modification Group; formed from the Settlement Standing Modification Group (SSMG) and Governance Standing Modification Group (GSMG), in accordance with the Standing Modification Group's respective Terms of Reference and this Appendix.

P231 'Black Start and Fuel Security Procedures under the Balancing and Settlement Code (BSC)'

Assessment Procedure

- 1.1 The Modification Group will carry out an Assessment Procedure in respect of Modification Proposal P231 in accordance with Section F2.6 of the Code.
- 1.2 The Modification Group will produce an Assessment Report for consideration at the BSC Panel Meeting on 09 April 2009.
- 1.3 The Modification Group shall consider and/or include in the Assessment Report as appropriate:
 - Consider the revised processes relating to:
 - Commencement and cessation of a Black Start/FSC event including the role of the BSC Panel;
 - BSCCo communication of Black Start/FSC events;
 - Issuing of information from ECVAAs;
 - Submission of BMU data to National Grid by 10 hours before market re-start;
 - Transmission Company decision as to whether market operations can resume one hour prior to market re-start; and
 - Whether there are any other requirements to ensure a smooth return to normal market operations.
 - Determine whether all the additional information introduced by P231 will be in the BSC or whether a (new) BSCP is required to detail certain procedures. ELEXON has drafted a legal requirements matrix of the anticipated changes (see Appendix 4);
 - Consider if further clarity is required for the communications processes. This will include notification of Black Start periods from the BSC Panel/BSCCo and National Grid to the wider industry;
 - Describe the benefits of P231;
 - Identify any impacts on ECVAAs and credit checking/ credit default processes;
 - Identify any consequential impacts on the Grid Code;
 - Establish if it is necessary to define what information ELEXON will provide to enable a decision to be made regarding market stability and re-starting market operations; and
 - The Group should also be mindful of the conclusions arising from P232.

APPENDIX 4: P231 REQUIREMENTS MATRIX

Areas which involve the restoration of the Transmission System fall under the Grid Code and not the BSC. These have been included for completeness.

This section outlines (via the table below) the P231 requirements on participants during a Black Start recovery period. The table below details whether the requirements would sit under the BSC, or under a BSC Procedure (BSCP). Where appropriate, references to the Black Start recovery Points (Points A to K) in section 2 have been highlighted. Any interactions with the Grid Code have also been included in the table below.

– Commencement of a Black Start Period

Req	Proposed Solution Requirement	Likely impacts on the Code	Grid Code	BSCPs
1.	Remove references to the Panel determining the Settlement Period with effect from which the Total Shutdown or Partial Shutdown of the Transmission System commenced.	Section G 3.1.2 b	OC9 – refers to BSCCo not Panel.	-
2.	National Grid will contact 'Black Start capable' power stations to inform them of the situation and to familiarise themselves with the Black Start process. No instructions would be sent out.	-	-	BSCP process
3.	Insert text to ensure that it shall be the responsibility of the Transmission Company to make a declaration of the start of a Total/Partial Shutdown. This declaration includes, in the Transmission Company's reasonable opinion, details of the time, date and whether it is a Partial or Total Shutdown. This will be based on the best estimate of when the Black Start was initiated (Point A2)	Section G 3.1.2 b	OC9.4.6	-
4.	Insert reference to BSCCo making reasonable endeavours to communicate National Grid's notification (of a Total/Partial Shutdown) via any normal means to all BSC Parties and BSC Agents (e.g. email, fax and telecommunications) as soon as those mechanisms become available.(Point A1 TO B)	Section G 3.1.2 c	-	Details regarding communication processes may be contained in a new BSCP.
5.	Insert reference to BSC Settlement and Payment Runs being delayed if data is not available.	-	-	Details of the activities to be carried out by each BSC Agent during a Black Start period to be included in

				a new BSCP.
6.	Insert text to explain that following the notification that a Black Start Period is in existence, National Grid will work towards restoring the GB Transmission System (Points A1 to B)	-	-	BSCP process
7.	Insert reference to National Grid informing BSCCo of the energisation of the GB Transmission System (Point B)	-	OC9.4.6	Details on communicating to BSCCo would be contained in a new BSCP.
8.	Insert reference to BSCCo passing any information received from National Grid on the energisation status of the GB Transmission System to BSC Parties and BSC Agents.	-	-	Details on communicating to Parties would be contained in a new BSCP.

– Appropriate arrangements, processes and timetables to successfully reinstate the market following a Black Start event

Req	Requirement	Impact on Code	Grid Code	BSCPs
1.	Insert text to explain that National Grid will inform BSCCo when the BM systems have been restored. (Point C)	None	-	Details on communicating to BSCCo would be contained in a new BSCP.
2.	Insert text to explain that BSCCo will inform BSC Parties that National Grid's BM systems have been restored (Point C)	None	-	Details on communicating to Parties would be contained in a new BSCP.
3.	Insert text to explain that BSCCo will work with BSC Agents to restore BSC systems as soon as is reasonably possible. Note that once the systems are restored they may not be actually be carrying out normal activities such carrying out Settlement Runs (Point B - D)	None	-	Details on the restoration process would be contained in a new BSCP.
4.	Insert obligation on BSCCo to inform BSC Parties and the BSC Panel of the restoration of BSC systems. (Point D)	Section G 3.1.4	-	Details on communicating to Parties would be contained in a new BSCP.
5.	Insert text to explain that there is a Grid Code obligation on National Grid to notify BSCCo that the events which gave rise to the Black Start no longer exist and the market is capable of operating normally. (Point E)	None	OC 9.4.7.9	Details on communicating to BSCCo would be contained in a new BSCP.
6.	Insert text to explain that BSCCo will inform BSC Parties and the BSC Panel that the market is capable of operating normally according to the National Grid notification (point above). (Point E)	None	-	Details on communicating to Parties would be contained in a new BSCP.
7.	Clarify text stating that the BSC Panel will propose a timeframe for the resumption of normal market operations (based on information	Section G 3.1.2 d	-	The process for consulting participants would be included in a

	received on the state of the market) and consultation with BSC Parties, the Market Index Data Provider, MRASCo and the Authority on the proposed date. (Point F)			new BSCP.
8.	Clarify text stating that BSCCo will notify all Parties of the final decision of the BSC Panel on the start date and time for normal market operations, earliest data submission time (for contracts, Bids and Offers, Physical Notifications), Gate Closure, and time of return to normal operation under the BSC. (Point F)	Section G 3.1.2 g	-	Details on communicating to Parties would be contained in a new BSCP.
9.	Insert text to explain that following the BSC Panel determination with regards to the start of normal market operations, BSC Parties will be able to submit Volume Notifications to ECVA and receive the related reports.(Point G)	-	-	Details regarding timescales and data flows may be contained in a new BSCP.
10.	Insert text to explain that Parties should use reasonable endeavours to submit Physical Notifications ten hours prior to the end of the Black Start Period in preparation for normal operations. (Points H – I)	-	The Grid Code may require amendment to reflect this	Details regarding timescales and data flows may be contained in a new BSCP.
11.	Insert a requirement for National Grid to decide whether it is appropriate to go ahead with normal market operations one hour prior to these operations coming into effect. The text should make it clear that, for subsequent Settlement Periods following the start of the normal market operation, the Parties should submit BMU data in accordance with BC1 of the Grid Code; (Point J)	Section G 3.1.2 d	-	Details regarding timescales and data flows may be contained in a new BSCP.
12.	Insert text to explain that following National Grid's Go- ahead at Point J, normal market operations resume and Section G provisions no longer apply. (Point K)	Section G.2.1 d	None	BSCP Guidance

– **Breach of the BSC due to a Fuel Security direction**

1.	Insert a paragraph ensuring it is clear that complying with the FSC will not cause a Party or Party Agent to be in breach of the BSC. (BSCCo will operationally manage any process that leads to Credit Default under a FSC direction)	Section H 3.1.3	-	-
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2.	Insert a paragraph ensuring it is clear that BSCCo will not provide authorisation to place a Party in Credit Default if the breach of the Credit Default threshold was a direct result of an FSC direction.	Section M 3.4.3	-	-
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APPENDIX 5: DRAFT LEGAL TEXT

This is included as Attachment A.

APPENDIX 6: MODIFICATION GROUP DISCUSSIONS (TERMS OF REFERENCE)

This appendix contains additional Modification Group discussions not recorded above that are relevant to the discharge of the Terms of Reference.

Communication of a FSC direction

In a FSC event, the Secretary of State issues FSC directions to Generators, who are required to comply with the direction regardless of whether it puts them in breach of other industry codes, such as the BSC. With this in mind, the Group agreed that the BSC should include a statement that the FSC provisions supersede that of the BSC, and a Party will not be in breach of the BSC for as a result of acting upon a FSC direction they receive.

The Group noted that the intention is that the Secretary of State issues FSC directions via National Grid, who then informs the relevant BSC Party. However, there is no means for BSCCo to be aware of FSC directions as the Secretary of State does not provide information on FSC directions to BSCCo. As National Grid informs relevant Generators of FSC directions, the Group initially believed that National Grid should additionally inform BSCCo; except in those circumstances where it was confidential or National Grid felt it inappropriate to inform BSCCo. Unless otherwise instructed, BSCCo would then publish FSC directions on the BMRS.

However at the final meeting the Group discussed exactly what form this notification would take. As there would be a limit on the information that National Grid could provide to BSCCo and any such data would be in the public domain, it was agreed that an obligation would not be placed on National Grid to provide information regarding FSC directions.

As BSCCo would not necessarily be aware of FSC directions it was agreed that Parties would be responsible for informing BSCCo of relevant FSC directions which led to a breach in the Credit Default threshold. The Group suggested the following type of wording in the P231 BSCP 'To avoid a Party being placed in default if they have defaulted as a direct consequence of a FSC direction, the BSC Party must notify BSCCo. BSCCo will not be liable for actions relating to any incomplete information'.

Additionally National Grid agreed that it would, where appropriate, inform BSCCo, that a FSC direction has been issued to a BSC Party.

Proposed Commencement of a Black Start Period

The Proposed Modification states that National Grid's declaration that a Partial or Total Shutdown of the Transmission System has occurred is taken as the start of a Black Start Period. National Grid explained that the declaration would include:

- Whether a Partial/Total Shutdown occurred; and
- The time and date when the Partial/Total Shutdown occurred.

National Grid stated that a Partial/ Total Shutdown, as defined in the Grid Code, would always result in a Black Start being initiated and that this was treated as the last option in restoring the Transmission System. This declaration would be communicated as soon as possible.

BSCCo would associate the details of the declaration (time and date) to the corresponding Settlement Period and communicate this to BSC Parties.

Amendments to the Commencement of the Black Start Period

National Grid stated that operationally it would prove difficult to estimate immediately when the Partial/Total Shutdown occurred. With this in mind, it was proposed that National Grid would initially notify BSCCo that a Shutdown had occurred although no start time would be provided (Point A1 on the Black Start Recovery diagram). This would be followed by a declaration, in National Grid's reasonable opinion, of the time and date of when the Shutdown occurred (Point A2 on the Black Start diagram).

The Group unanimously agreed to this concept and consequently the Black Start recovery diagram and walkthrough reflect this amendment.

BSC Panel Involvement in the Start of a Black Start

A suggestion was made that the BSC Panel should remain involved in the declaration of the start of a Black Start Period rather than depending on National Grid's declaration of a Total/Partial Shutdown. This would allow the BSC Panel to determine a different time for commencing a Black Start Period under the BSC based on when the 'market' had become inoperable.

For example, the Transmission System could gradually 'Black Out' and therefore it may be inefficient to stop normal market operations because of a Partial Shutdown that affected only a limited geographic area. In this instance, normal trading would ensue until a threshold was reached. Alternatively, in the build up to a Black Start Period, National Grid may use measures such as (Grid Code) Demand Control to balance the Transmission System. This would affect metered volumes within the industry and therefore it may be appropriate to suspend the market before the Total/Partial Shutdown occurs.

However, the Group noted that the BSC currently links the BSC Black Start Period to the declaration of a Total/Partial Shutdown of the Transmission System. Allowing the BSC Panel discretion to declare a different commencement period based on market conditions is a significant change from the current P231 drafting and the majority of the Group felt that this would only complicate the process. For example, where a Black Start was declared when part of the market was operating normal, any normal trading would have to be considered null and void. This is because the Black Start provisions apply, and therefore a Single Imbalance Price would have to be applied to any normal trading that occurred from the point a Black Start was declared. Additionally, this would complicate the Claims Process, as currently a BSC Party can not claim unless a Black Start instruction has been received.

The Group concluded that this Alternative (of involving the BSC Panel) proposal was out of the scope of P231, as P231 focused on improving the transparency of the process for declaring the start of a Black Start Period, and for resuming normal market operations.

A further Alternative was considered where, in the case of a Partial Shutdown, the entire market would not be suspended. Therefore the Black Start provisions would only apply to certain BSC Parties directly impacted by the Transmission System Shutdown. The majority of the Group disagreed with this view as a simple process could not be developed for the GB market to support two different market arrangements; i.e. normal market operations and Black Start market operations; operating at the same time. This would mean that such a situation would prove to be 'more complex than required'. It was also believed that this would have an effect on market stability and would be unfair to BSC Parties not covered by the Black Start arrangement as these BSC Parties may have to face significant imbalance costs and risks.

Communication of the Commencement of a Black Start Period

The Group agreed that BSCCo/ National Grid would use all available communication channels, in accordance with the Black Start Recovery Diagram (Section 3.2).

BSCCo Communication during a Black Start Period

The Group agreed that BSCCo would post general messages on the progression of the Black Start event on the BMRS when they become available. In addition to the BMRS, BSCCo would also communicate to BSC Parties via Circulars or email.

Participant Testing during a Black Start Period

BSCCo explained that participant testing consisted of two aspects, the 'live BSC systems' and the 'Participant Test Service' (PTS).

BSC systems could be used for 'testing' during a Black Start period, for example if a Party wanted to ensure it could communicate with ECVA, it could submit a notification. On doing so an acknowledgment and reporting of this information would be received (note that all notifications are set to 'zero' for periods during a Black Start).

The PTS is a system that is available on an ad-hoc, first come first served basis. Normally there is a 7 day advance notice period, but the BSC Agent would endeavour to reduce waiting times if required during a Black Start Period. Participants may wish to use this system for specific testing, for example if a Party is implementing other system changes but note that the PTS system would not highlight issues with file sequence numbering of notifications made from Parties to BSC systems.

The Group noted that there is a charge associated with using the PTS and that the BSC Panel set the cost for BSC Parties using this system.

The Group concluded that all Parties could test their systems using the live ECVA System. In addition Parties could choose to pay for use of the PTS using normal processes.

Clarification on Submission of Physical Notifications (PNs)

Two respondents to the consultation queried the requirement for PNs to be submitted 10 hours before market restart (Point I). This step had been included, to ensure enough time for National Grid to despatch plant within the Black Start Period to meet each Party's required PN. This is for the benefit of both Parties and National Grid.

The Group noted that under a Black Start all plant is despatched by National Grid. For example if a Party wants to be in a position to generate 100MWh at Point K, then National Grid will have to issue Emergency Instructions in relation to that plant for the relevant Settlement Periods prior to point K in line with the plants physical dynamics e.g. ramp up rates.

If the plant takes five hours to ramp up from 0 to 100MWh and the plant is currently not generating, then National Grid will need to start issuing these Emergency Instructions 5 hours before point K. If the plant only informs National Grid that it's required PN for the first Settlement Period after point K is 100MWh three hours prior to point K then National Grid will not be able to despatch the plant to meet its required PN. Assuming the Generator has contracts in place to sell 100MWh, and therefore match its required physical position; it will be out of balance and incur Imbalance charges.

Providing National Grid with 10 hours notice of PNs will therefore protect Parties from potential Imbalance situations. These could occur if National Grid does not have sufficient time to despatch plant in order to meet each plants required PN.

It was noted that there are no new requirements or obligations on Parties to give effect to this step in the process. The Grid Code currently obliges Parties to submit PNs at various times prior to Gate Closure. However the Black Start situation differs from normal market operation in terms of what National Grid require the PNs for.

Under normal market operations Parties submit PNs to inform National Grid of their expected physical position for each Settlement Period. The Generator then despatches the plant in order to meet its commercial requirements, noting that this physical position should match the notified PN as closely as possible (note - there are not financial penalties for mismatches between PNs and actual physical positions because Information Imbalance charges are set to zero). National Grid uses the submitted PNs to determine the amount of generation/demand for each Settlement Period to assist in the overall balancing of the Transmission System. Whereas, as described above, under a Black Start scenario National Grid will use the PN for the Settlement Period after K to determine which plants to despatch in order to meet each plant's required physical position, as well as helping to balance the overall Transmission System.

The Group concluded that the desire to be at the submitted PN level at Point K provides a natural incentive on Parties to submit accurate PNs at K-10 and a disincentive to change these at a later time. However, there may be situations, such as a plant trip, where submitting updated PNs after K-10 would continue to be appropriate. Therefore no Black Start specific obligations would be placed on Parties to create a K-10 Gate Closure. However, there may be a change to the Grid Code, to remove any potential ambiguities regarding what National Grid expects Parties to submit in their PNs in advance of 10 hours before market restart.

Where a Party has difficulty in submitting a revised PN, the Party should be aware that National Grid would use the last valid PN for that Party, unless otherwise notified e.g. a Party could communicate its revised PN via other means to National Grid.

A member of the Group also queried what should be submitted in a PN for periods prior to point K. Should this be a Party's expected output, based on ramp up levels, or be based purely on the Emergency Instructions provided by National Grid. The Group noted that the requirements to provide accurate PNs in the Grid Code would remain and where applicable, the submitted PN would be an estimate of what a Party can generate.

Section H Defaults

The Group noted that there may be other 'Default' situations which arise during a Black Start Period. It was felt that the BSC Panel should use its discretion and judgement as to whether any default arrangements should apply in such circumstances.

Payment Runs and Settlement Runs

The Group discussed a scenario where a Shutdown impacted the FAA just as an invoice was issued to a BSC Party or as a BSC Party receives an invoice. In such a situation, BSC Parties would find it difficult to make payments. Three situations were proposed:

- A BSC Party cannot make a payment;
- A BSC Party can pay but BSC systems may not be functional; or
- A combination of the above two points.

However, it was concluded that a Black Start would cover numerous scenarios and trying to develop a list to deal with different eventualities would be 'false comfort', as it was probable that any list would not be 'complete'.

The Group noted that the BSC contains provisions for postponing Payment Runs and delaying Settlement Runs if sufficient data is not available. Therefore it may be necessary to utilise these provisions within a Black Start Period. For instances where the Payment Run has already taken place and invoices have been issued, it was noted that the Panel could use its discretion in determining the appropriate action to be taken to resolve any Payment Defaults.

However, there were concerns with the FAA normal processes and the invoices issued prior to a shutdown of the Transmission System, and the effect on payments. This could affect Parties that are due to receive payments but have not been paid.

There are also provisions in the BSC which would enable the use of 'reserve' cash to settle money. However, if cash flow was a problem across the industry, the FAA could delay invoices, delay the FAA runs (provisions exist in the Code) or ultimately increase the 'threshold' amount which triggers an invoice to be issued.

If Settlement and Payment Runs were delayed during a Black Start Period, it would be important to inform Parties of any revised Payment Dates. Where appropriate a 'catch up' timetable would be issued to industry to indicate how a catch up would be achieved.

End of a Black Start Period

The Group agreed that the BSC Panel would suggest an initial end point for the Black Start Period, based on the information provided from National Grid and BSCCo in accordance with the transition diagram. The BSC Panel would also consult with BSC Parties, BSC Agents, the MRASCo, the Market Index Data Provider and the Authority on the initial proposed date for the return to normal market operation (Point K).

Depending on the feedback received, the BSC Panel could either continue with the proposed date or schedule a new date for the return of normal BSC market operation.

Central source for Black Start/FSC documentation

The Group noted and agreed with the response made, that it would be useful to have all the information associated with Black Start/FSC on a single webpage. BSCCo took an action to consider this comment (this will not form part of the P231 solution/implementation).

Other issues highlighted but not considered under P231

The Group considered several issues but believed that these were not within the scope of the Modification. The Group believed that these may benefit from a separate cross code Working Group. These have been summarised in the points below:

1. Defining normal market operation: The Group agreed that this would be when the market is not under Black Start provisions. The Group initially suggested that broad criteria may be useful but later believed that since there are many uncertainties in a Black Start it would be impossible to define an exhaustive list; and
2. The Group considered the scenario where the Panel would have powers to state when a Black Start Period commenced for the purposes of the BSC arrangements, which may be different from what was determined by National Grid. However, this would mean that the BSC would require new criteria for a Partial/Total Shutdown e.g. a threshold for when a Shutdown should be declared or when a Black Start commenced. This may prove useful so as to prevent market suspension, especially if only a small region of the GB Transmission System shutdown. The overall market could continue to operate normally while separate compensation arrangements could be made to affected Parties. While the Group felt that there was merit in this suggestion, it was believed to be outside the scope of the Modification and may be better discussed under a separate Working Group/Modification.

APPENDIX 7: STRUCTURE OF THE PROPOSED P231 BSCP

This is included as Attachment B

APPENDIX 8: P231 IMPACT ASSESSMENT RESPONSES

This is included as Attachment C

APPENDIX 9: P231 CONSULTATION RESPONSES

This is included as Attachment D