

Stage 03: Assessment Consultation

P276 'Introduce an additional trigger/threshold for suspending the market in the event of a Partial Shutdown'

The BSC currently suspends normal market operations following any Partial Shutdown of the Transmission System under the Grid Code. The Proposer believes that this is disproportionate for small, localised shutdowns.

Under P276, the BSC will only suspend normal operations if the impact of the Partial Shutdown meets a Market Suspension Threshold. The intention of this threshold is to represent the point at which continuing the market causes greater disruption to BSC Parties' imbalance charges than suspending it.



The Workgroup initially recommends **approval** of P276.

This consultation closes at **5pm** on **Friday 20 April 2012**.

High Impact:



- BSC Trading Parties
- National Grid and ELEXON
- BSC Section G and BSC Procedure 201
- Grid Code



Medium Impact:

- Connection and Use of System Code



Low Impact:

- BSC Panel
- BSC Agent working practices and ECVA Service Description
- Notification Agents (ECVNs and MVRNs)

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

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Assessment Consultation

28 March 2012

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Any questions?

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About This Document:

This is the P276 Workgroup's Assessment Consultation. The Workgroup seeks your views on whether this change should be made, and on the other areas outlined in this document. The Workgroup will consider all responses before making its final recommendation to the BSC Panel on 10 May 2012.

There are 4 parts to this document:

- This is the main consultation document, which explains the solution, impacts, costs, benefits and implementation approach;
- Attachment A contains further details of the Workgroup's assessment, including its analysis of the appropriate P276 Market Suspension Threshold, its worked examples of the P276 solution, its membership and its full Terms of Reference;
- Attachment B contains the draft redlined changes to the BSC for P276; and
- Attachment C contains the specific Assessment Consultation questions on which the Workgroup seeks your views.

This consultation closes at 5pm on 20 April 2012.

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Recommendation

By majority, the Workgroup initially recommends approval of P276.

Why Change?

The BSC currently suspends normal market operations following any Partial Shutdown of the Transmission System (a type of Black Start) under the Grid Code. This involves the suspension of the Balancing Mechanism (BM) and contract/credit positions, central dispatch of all generators by National Grid, and the application of a single imbalance price to all Parties' Metered Volumes.

The Proposer believes that this is disproportionate for small/localised Partial Shutdowns, during which most Parties should be able to continue trading. You can find further details of the issue and background in Section 2.

Solution

Under P276, the BSC will only suspend normal operations if the impact of the Partial Shutdown meets a Market Suspension Threshold. The threshold aims to represent the point at which continuing the market causes greater disruption to BSC Parties' imbalance charges than suspending it.

P276 does not change the existing rules for Total Shutdowns of the Transmission System, during which the BSC will still suspend the market automatically.

P276 threshold level and monitoring process

The proposed Market Suspension Threshold is the loss of 5% or more of National Demand (equivalent to 5% of national BM generation) from the Transmission System. National Grid will monitor the threshold during the Partial Shutdown and will determine whether it has been met. If the threshold is met, the market will be suspended and the processes for handling and ending this suspension will be the same as currently.

The Market Suspension Threshold will also be met, and the market suspended, at the point where National Grid no longer has accurate pre-shutdown forecast data to determine accurately what demand has been lost. This will occur 1-2 days into the Partial Shutdown. The benefit of P276 is therefore limited to Partial Shutdowns of short duration in which less than 5% of National Demand is lost. For these types of Partial Shutdown, the market (including normal dual imbalance pricing) will continue and the BSC's contingency provisions will end when National Grid determines that the Total System has returned to normal.

Section 3 provides a detailed explanation of the proposed Market Suspension Threshold.

Some Workgroup members have suggested possible Alternative solutions for monitoring whether 5% of National Demand has been lost. These could extend the monitoring period (and therefore the potential for market continuation) further, but may be less accurate or appropriate. Section 3 explains why. The Group seeks your views on these possible Alternatives as part of this consultation.

P276 compensation arrangements

Any BM Unit which is given a specific black start instruction by National Grid during a Partial Shutdown will (as now) be eligible to submit a BSC claim for black start compensation. The intention of the compensation remains unchanged by P276; however, the exact definition of a black start instruction and the detail of the compensation calculation will be different where the market is not suspended.

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The Workgroup recommends that separate consideration is given to extending the CUSC's compensation provisions for loss of transmission access, to cover other Suppliers and/or generators who lose access to the Transmission System during a Partial Shutdown in which the market is not suspended.

The Group has ruled out any potential alternative BSC solutions in the area of compensation arrangements. Section 4 explains further.

Impacts & Costs

The main impacts of P276 are on:

- BSC Trading Parties;
- National Grid and ELEXON; and
- BSC Section G 'Contingencies' and BSC Procedure (BSCP) 201 'Black Start and Fuel Security Contingency Provisions and Claims Processes'.

There will also be a minor impact on the Energy Contract Volume Aggregation Agent (ECVAA) Service Description. BSC Agents, notification agents and the BSC Panel may need to update any local working instructions relating to contingency provisions.

Consequential changes will be needed to the Grid Code. No CUSC changes are required to reflect the revised BSC rules, but the Group recommends that separate consideration is given to extending the CUSC's compensation arrangements if P276 is approved.

You can find the full list of impacts in Section 5. The Workgroup is currently establishing the central (ELEXON and National Grid) costs. It invites other consultation respondents to detail any implementation costs.

Implementation

The BSC impacts of P276 are document-only. The chosen Implementation Date will depend on the lead time required by National Grid to put the threshold-monitoring solution in place, and may or may not align with a normal BSC Release. There may also be benefits in aligning the BSC implementation with the consequential changes to the Grid Code. The earliest feasible Implementation Date is likely to fall in late 2012. The Workgroup is currently establishing the required lead time.

You can find further details in Section 6. The Workgroup invites your views on the appropriate implementation approach.

The Case for Change

The majority of Workgroup members agree with the Proposer that P276 will better facilitate Applicable BSC Objectives (b), (c) and (d) by allowing Parties to keep trading during Partial Shutdowns where they are able to do so.

A minority of Workgroup members disagree. These members believe that it is unproven that Parties will be able to continue trading below the Market Suspension Threshold, whatever its level. They therefore do not believe that P276 better facilitates any of the Applicable BSC Objectives.

You can find the Group's full views in Section 7. The Group invites you to comment on its initial majority recommendation to approve P276.



What is a Black Start?

A **Black Start**, as defined in the Grid Code, is a recovery process for restoring electricity on the Transmission System and thereby on Distribution Systems.

The majority of Power Stations need electricity to start up and operate their generators. If the Transmission System shuts down, these Power Stations will be unable to keep their generators running and will stop producing electricity – resulting in blackouts as Distribution Systems lose power and Suppliers become unable to supply their customers. Certain Power Stations (defined in the Grid Code as 'Black Start Stations') are registered under their bilateral agreement with National Grid as having a **Black Start Capability**, meaning that they do not require an external source of electricity in order to generate. National Grid can therefore call on these Black Start Stations to initiate or assist a Black Start restoration if the Transmission System collapses. It can do this by invoking the Black Start Station's 'Local Joint Restoration Plan' to energise part of the Total System, meet complementary local Demand and thereby form a 'Power Island'. Each of the separate ('De-synchronised') Power Islands are gradually expanded and connected to each other ('Re-synchronised') until the Total System is fully energised and operating normally. As well as instructing Black Start Stations, National Grid may also issue Emergency Instructions to other generators and participants. Operating Code (OC) 9 of the Grid Code sets out this process, and explains each of the different terms, in more detail.

What is a Partial Shutdown?

Grid Code OC9 defines two types of Black Start situation:

- A **Total Shutdown** (where all generation has ceased across the **Total System**); or
- A **Partial Shutdown** (where generation has ceased in part of the Total System, and this shutdown part is islanded from the rest of the energised or 'healthy' system).

Not all shutdowns or 'islanding' of part of the Transmission System necessarily meet the definition of a Partial Shutdown and thereby of a Black Start. This is because the Grid Code's definition of a Partial Shutdown contains the additional criterion that it is not possible for the affected part of the system to be re-energised without National Grid issuing Black Start directions under the Grid Code.² The London blackout in 2003 represents one example of a shutdown where the affected part of the system was re-energised without National Grid issuing Black Start directions (there were no Black Start Stations in the shutdown area), and which therefore did not constitute a Partial Shutdown/Black Start under the Grid Code.

Since the BSC arrangements were introduced in 2001, there has never been a Partial Shutdown or Total Shutdown under the Grid Code. The Black Start provisions in the BSC, including those relating to market suspension, have therefore never been used in practice.

What is...?

A Black Start?

'The procedure necessary for a recovery from a Total Shutdown or Partial Shutdown.' (Grid Code Glossary & Definitions).

A Total Shutdown?

'The situation existing when all generation has ceased and there is no electricity supply from External Interconnections. Therefore, the Total System has shutdown with the result that it is not possible for the Total System to being to function again without NGET's¹ directions relating to a Black Start.' (Grid Code OC9.4.1).

A Partial Shutdown?

'The same as a Total Shutdown except that all generation has ceased in a separate part of the Total System and there is no electricity supply from External Interconnections or other parts of the Total System to that part of the Total System. Therefore, that part of the Total System is shutdown with the result that it is not possible for that part of the Total System to begin to function again without NGET's directions relating to a Black Start.' (Grid Code OC9.4.2).

A Black Start Capability?

'An ability in respect of a Black Start Station, for at least one of its Gensets to Start-Up from Shutdown and to energise a part of the System and be Synchronised to the System upon instruction from NGET, within two hours, without an external electrical power supply.' (Grid Code Glossary & Definitions).

¹ National Grid Electricity Transmission plc., who is the Transmission Company under the BSC and is referred to in this report as 'National Grid'.

² The BSC's Issue 42 Group discussed how to interpret this criterion. It noted National Grid's view that, where part of the system is shut down, it is always possible to re-energise it using the remaining 'healthy' system – it is just that this might take a long time. National Grid therefore interprets this criterion as meaning not possible *within a reasonable time*, noting that one of the overall objectives of OC9 is "To achieve, as far as possible, restoration of the Total System and associated Demand in the shortest possible time" (OC9.2.1). You can find further information about Issue 42 in the rest of this Section 2.

What happens under the BSC if there is a Black Start?

The BSC's Black Start provisions in Section G3 suspend normal BSC market operations automatically in the event of a Black Start situation. This includes:

- Suspending the operation of the Balancing Mechanism (including the submission and acceptance of Bids and Offers);
- Suspending the notification of contract volumes (Energy Contract Volume Notifications and Metered Volume Reallocation Notifications);
- Suspending the calculation of energy indebtedness, and thereby Parties' credit positions; and
- Applying a single imbalance cash-out price (i.e. a System Buy Price and System Sell Price which have identical values), calculated in accordance with a methodology determined by the BSC Panel under BSC Section T1.7. This is normally the average of SBP and SSP over the 30 days prior to the shutdown.

The BSC's current trigger for suspending the market is the notification by National Grid to Grid Code Users and ELEXON under OC9 that either a Total Shutdown or a Partial Shutdown, as defined in the Grid Code, exists. National Grid determines the time and date from which the Total Shutdown or Partial Shutdown began, and informs ELEXON. ELEXON then determines the corresponding Settlement Period and informs BSC Parties. This Settlement Period represents the beginning of the BSC's Black Start Period and market suspension. Once National Grid has informed Grid Code Users and ELEXON of the time that the Total System could return to normal operation, the BSC Panel determines the Settlement Period from which normal market operations shall resume (which is likely to be some time after the re-energisation of the Total System). ELEXON then informs BSC Parties, and National Grid informs Grid Code Users under OC9, of this Settlement Period. The Settlement Period immediately before that determined by the Panel marks the end of the BSC's Black Start Period and the Grid Code's Black Start provisions.

The Lead Parties of any BM Units, whether or not relating to Black Start Stations, to which National Grid has given '**black start instructions**' (as defined in BSC G3.3) during the Black Start Period are entitled to claim a '**black start compensation amount**' under the BSC. Note that the BSC's definition of 'black start instruction' is different from the Grid Code's concept of a 'Black Start direction'. Parties submit these claims to ELEXON for determination by the BSC Panel, who in practice delegates this responsibility to a Claims Committee under BSCP201.

Attachment A provides more information about the BSCP201 processes and the working practices which support the BSC's Black Start provisions.



What is...?

The Total System?

The Grid Code and BSC Black Start provisions use the Grid Code's definition, which is '*The National Electricity Transmission System and all User Systems in the National Electricity Transmission System Operator Area*'.

A black start instruction?

Any instruction given by the Transmission Company under OC9.4.7.4, BC2.7 or BC2.9 of the Grid Code. (BSC G3.3.1).

The black start compensation amount?

For each eligible BM Unit/Settlement Period, this is determined as **A-B**, where:

A is the Lead Party's Avoidable Costs; and

B is the imbalance charges received (or reduction in imbalance charges paid) by the Lead Party for its 'black start compensation volume'.

(BSC G3.3.2).

The black start compensation volume?

The net change in the BM Unit's Exports or Imports which the BSC Panel determines resulted from the Lead Party's compliance with the black start instruction.

(BSC G3.3.2).

Avoidable Costs?

The amount of net costs of operating the BM Unit which the Panel determines would not have been incurred but for the black start instruction.

(BSC G3.2.2).

BSC G2.1.4 sets out what is included in, and excluded from, Avoidable Costs.

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What is the issue?

Background – P231 discussions

In 2008, the BSC's Black Start provisions were reviewed under Modification Proposals [P231](#)³ and [P232](#)⁴ in order to improve their clarity and transparency. The P231 and P232 revisions were subsequently implemented in 2009.

The P231 Workgroup noted that the Grid Code's definition of a Partial Shutdown could include small/localised shutdowns for which suspending the market could be a disproportionate response. This issue fell outside the scope of P231, but was noted by the BSC Panel and Grid Code Review Panel. The Workgroup and Panels agreed that it should be considered separately at an opportune time.

Background – Issue 42 discussions

In 2011, National Grid raised BSC [Standing Issue 42](#)⁵ to enable further industry discussion of this issue. The Issue 42 Group agreed that there is a defect in the BSC's Black Start provisions, in that they suspend the market automatically following a Partial Shutdown regardless of the shutdown's size/impact.

The Issue 42 Group believed that this is an issue for two reasons:

- It could lead to the market being suspended for small/localised Partial Shutdowns, even if the disruption of this to Parties is greater than that of allowing the market to continue; and
- It could lead to National Grid being reluctant to issue Black Start directions under the Grid Code following small/localised shutdowns, even if this is the quickest way of restoring supply, because National Grid would know that by doing so it would trigger suspension of the market.

The Issue 42 Group concluded that an additional threshold should be introduced to the BSC, so that the market will only be suspended following a Partial Shutdown where this threshold is also met. It discussed various potential thresholds, but did not have a strong preference between them and recommended raising a BSC Modification Proposal to consider these further.

The Issue 42 Group also agreed that:

- The threshold should be agreed under BSC governance, as it is BSC Parties who will be directly affected by any decision whether or not to suspend the market;
- Any threshold must be based on information which is available to National Grid's Control Room in real time (as only National Grid is guaranteed to be operational during a Partial Shutdown⁶);
- The threshold should be 'hard-wired' in the BSC so that Parties have certainty of the rules in advance (noting that ELEXON's ability to communicate may be limited if it is in the shutdown area);⁷

³ 'Black Start and Fuel Security Code Procedures under the Balancing and Settlement Code'.

⁴ 'Black Start and Fuel Security Compensation and Single Imbalance Price Derivation'.

⁵ 'Black Start Generator – Defining a "Local Shutdown"'.

⁶ ELEXON's office does not have back-up generation, and so its operations will be restricted if a Partial Shutdown affects London. BSC Agents do have back-up generation, but may be unavailable for a short period following a local blackout while disaster recovery procedures are invoked.

⁷ The Group agreed that a solution whereby the BSC Panel meets immediately following a Partial Shutdown to decide whether to suspend the market would not give certainty (and may not be practical if Panel Members are in an area of the country without power).



Further background

You can find the P231 Workgroup's Assessment Report [here](#), the P232 Workgroup's Assessment Report [here](#) and the Issue 42 Group's report [here](#).

The P231 Group's discussion of the P276 issue is on pages 33 and 36 of its report.



Modification Proposal

You can find a copy of the P276 Modification Proposal, as submitted by the Proposer, on ELEXON's [website](#).

- Once the threshold has been met, and market suspension triggered, the market should (as now) remain suspended until the BSC Panel decides to resume it using the existing BSC/BSCP201 process;
- Any decision to suspend or continue the market must apply to the whole of GB (i.e. it is not possible practically to suspend the market in the shutdown area but continue it outside that area);
- The key area for further assessment is deciding how to determine the point at which a Partial Shutdown is significant enough to require market suspension (the Group suggested that this could include analysing the cash-flow disruption of suspending, versus continuing, the market);
- Parties given black start instructions during a Partial Shutdown should (as now) be able to claim black start compensation under the BSC, regardless of whether the market is suspended; and
- Consideration should be given to what, if any, compensation arrangements should apply to Suppliers and/or generators who lose access to the Transmission System during a Partial Shutdown in which the market is not suspended.

Modification Proposal P276

National Grid has raised P276 to progress the Issue 42 Group's recommendations.

P276 only applies where National Grid notifies Grid Code Users/ELEXON that a Partial Shutdown, as defined in the Grid Code, exists. The BSC does not currently contain provisions for any shutdowns of part of the Transmission System which do not meet the Grid Code's definition of a Partial Shutdown. It is outside the scope of P276 to consider whether the market should be suspended in such situations.



Why base the threshold on the % of National Demand lost?

The Workgroup notes that the aim of the P276 Market Suspension Threshold is to suspend the market at the point at which continuing it would cause greater disruption to Parties' imbalance charges.

The majority of Group members agree that the most relevant basis for the Market Suspension Threshold is therefore how much of the market has been lost (i.e. the extent to which Parties are able to keep trading under dual imbalance prices during the Partial Shutdown) and not the exact physical events occurring on the Transmission System.

These members agree that the simplest and most appropriate way for National Grid to establish this in real time is to compare the Initial National Demand Out-Turn (INDO) during the Partial Shutdown with its original pre-shutdown National Demand forecast, in order to establish how much National Demand has been lost. For the reasons explained below, this will also represent how much national BM generation has been lost. National Grid's Control Room already has access to this data, and so this approach will help to minimise any administrative burden on National Grid at a time when its priority is restoring the Total System under the Grid Code.⁸

The initial cause of the Partial Shutdown may be asymmetrical, depending on its geographic location. For example, the shutdown area may primarily contain demand (e.g. London) or generation (e.g. North Scotland). However, the overall instantaneous effect on the total level of national generation and demand will be symmetrical. This is because it is not physically possible for demand to draw more energy from the Transmission System than is delivered onto it by generation. A sudden generation loss due to a system fault will therefore instantaneously lead to a loss of demand. Similarly, if a geographic area of demand is suddenly lost, an equivalent amount of generation will need to be constrained off to balance the Transmission System and ensure its stability. Some of the mechanisms for achieving this under the Grid Code may be automatic, such as the activation of circuit breakers. Others may require National Grid to issue Emergency Instructions to participants. Use of these mechanisms may also result in the loss of additional energy from the system (for example, automatic tripping of some generators could mean that extra demand is lost). However, the level of total national demand will always match the level of total national BM generation, such that the forecasted and out-turn National Demand can be used as a proxy for the forecasted and out-turn national BM generation.

Purpose of this section

The P276 Market Suspension Threshold (as put forward by the Proposer) will be met if National Grid notifies ELEXON that, at any point since the Partial Shutdown began, either of the following has occurred:

- 5% or more of National Demand has been lost (i.e. the Initial National Demand Out-Turn has become equal to or lower than 95% of National Grid's original pre-shutdown National Demand forecast); or
- National Grid no longer has sufficient pre-shutdown forecast data to accurately determine what percentage of National Demand has been lost.

This section explains the reasons behind this threshold, which is supported by the majority of Workgroup members.

Some Workgroup members have suggested possible Alternative solutions which could extend the monitoring period (and therefore the potential for market continuation), but may be less accurate or appropriate measures. This section therefore also describes these potential Alternatives.

At this stage the Workgroup has not identified that any of these potential Alternatives would be better than the Proposer's solution; however it seeks your views through this consultation.

⁸ National Demand and INDO are already defined in BSC Annex X-2 (in the case of National Demand, by reference to the relevant Grid Code definition). The existing National Demand forecast and INDO data which National Grid provides under BSC Q6, and which is published on the Balancing Mechanism Reporting Service (BMRS) under BSC Section V-1 Table 1, are average Settlement Period values. The National Demand forecast and INDO data which National Grid will use in the P276 threshold monitoring will be more frequent spot values. The draft BSC legal text in Attachment B therefore refers to 'spot time National Demand forecast' and 'spot time Initial National Demand Out-Turn', and amends the existing definition of INDO, to reflect this.

The majority of Group members agree that, when establishing how much of the market remains functional, the important measure is the proportion (percentage) of national demand/generation which has been lost from the pre-shutdown 'business as usual' forecast across the entire Transmission System for the relevant time and date. These members agree that suspending or continuing normal BSC operations following a Partial Shutdown is a market decision which will not affect what physical actions are taken separately by the Transmission Company under the Grid Code to restore the system. The geographic location of the loss, its absolute MW level and what element relates to the initial event/shutdown area (rather than consequential losses) are relevant considerations for the Transmission Company in applying the Grid Code's OC9 provisions, but not in considering the disruption to Parties' BSC imbalance charges.

The majority of Workgroup members also agree that the Market Suspension Threshold should measure the cumulative loss over time, and not just the initial loss at the moment the Partial Shutdown first occurred. This is because it is possible that, even if the initial loss does not meet the threshold, the situation could subsequently worsen (for example, if another generator trips off during the process of re-energising the system). A minority of members disagree, and you can find more details in the Group's discussion of potential Alternatives later in this section.

By majority, the Workgroup has considered and ruled out basing the Market Suspension Threshold on the other factors shown in the following table.

Suggested basis for threshold	Majority reasons for not progressing further
Loss of a defined MW amount of generation and/or demand	Requires a baseline 'business as usual' level of generation and demand in order to determine what has been lost – this baseline may vary from day to day. Potentially requires a dual threshold with different demand and generation figures, as impact of losing 400MW of generation may be different to losing 400MW of demand. Better to measure % of national demand/generation lost from the pre-shutdown National Demand forecast.
Loss of a certain % or number of Grid Supply Point Groups	The amount of generation and demand in one GSP Group (and therefore the impact of losing it on Parties' imbalance charges) will be different that in another.
Loss of a certain % or number of customers	May not be apparent to National Grid in real time. Number of customers lost through blackouts is not necessarily a reason for market suspension. The decision to suspend or continue the market does not affect the speed with which customers' supply is restored, only the disruption to Parties' imbalance charges under the BSC. Difficult to establish a direct relationship between number/% of customers lost and disruption to Parties' imbalance charges, unless converted to a demand figure. Any conversion will be heavily based on assumptions about whether lost customers are domestic or non-domestic, and their average level of consumption. Better just to measure demand overall.
Loss of a certain % or number of Grid Supply Points	Link between this and disruption to Parties' imbalance charges not obvious, unless using as a proxy for lost generation/demand (in which case why not just measure that?)
Loss of a certain % or number of circuits from the Transmission System	

The minority view of some Group members is that a physical threshold definition, corresponding to actual events on the Transmission System (such as number/percentage of GSPs or circuits lost) is more appropriate because a Partial Shutdown is a physical system event.

These members believe that the specific physical characteristics of any shutdown, which depend in part on geographic location, will affect Parties' ability to keep trading. These members believe that it is unproven that Parties will be able to continue trading during a Partial Shutdown under P276, whatever the chosen Market Suspension Threshold, due to the uncertainty involved. These members believe that it would be better to create a new technical category of 'local shutdown' within the Grid Code, to which the BSC's Black Start provisions would not apply. They therefore do not support P276. You can find further details of these members' views throughout the rest of this Section 3.

Why set the threshold level at 5%?

Relative additional imbalance exposure of suspending v. continuing the market

The following table shows the relative additional imbalance exposures for Parties resulting from the decision whether to suspend or continue the market during a Partial Shutdown.

	Additional exposure within shutdown area	Additional exposure outside shutdown area
Partial Shutdown where market continues	SBP/SSP	Zero
Partial Shutdown where market suspended	Zero	Single imbalance price

In a Partial Shutdown where the market continues:

- Generators in the shutdown area will be 'short'; i.e. they will be unable to generate to meet their contracts and will be exposed to System Buy Price (SBP) for this imbalance until they can trade out their position.⁹
- Suppliers in the shutdown area will be 'long'; i.e. they will be unable to meet their contracts to supply their customers in the affected area and will be exposed to System Sell Price (SSP) for this imbalance until they can trade out their position.⁹
- Parties outside the shutdown area will face zero additional imbalance exposure, providing that they can continue to trade out their position in the normal way.

In a Partial Shutdown where the market is suspended:

- Generators and Suppliers in the shutdown area will face zero additional imbalance exposure, as contract positions and Bid-Offer Acceptances are suspended and their entire generation or supply volume will be settled at the single imbalance price until the market resumes. If their Metered Volumes are zero due to the shutdown, they will therefore have no BSC imbalance costs.

⁹ Note that even a Party who loses equal amounts of demand and generation in the Partial Shutdown may still be exposed to imbalance charges, as the BSC has dual imbalance prices (and requires separate Energy Accounts for licensed supply and licensed generation). Potentially the Party could resolve this by notifying an Energy Contract Volume Notification between their two Accounts (subject to Gate Closure, and the Party having enough information to estimate what volume to notify, and having an authorised Energy Contract Volume Notification Agent who is able to make the notification).

- Parties outside the shutdown area will be unable to submit contracts or Bids and Offers, and their entire Metered Volumes will be settled at the single imbalance price even though they may have been able to continue trading had the market not been suspended.¹⁰

The Workgroup notes that, of the Parties in the shutdown area, those who operate purely in that area will have a lesser ability to trade out their position than those who also operate outside it. However, it considers that this is an argument for having appropriate compensation arrangements in place (see Section 4) and that the decision to suspend the market should be based on the total disruption to the market rather than any Party's individual position. It notes that suspending the market is not a panacea, will itself cause individual Parties significant difficulties, and should be a last resort.

The two key questions which the Workgroup has considered are therefore:

- At what point does the additional exposure to SBP/SSP caused by continuing the market become greater than the additional exposure to a single imbalance price which is caused by suspending it?
- If the Partial Shutdown means that National Grid has to accept more expensive **Bids and Offers** than it would otherwise, how does this affect SBP/SSP and thereby the relative additional imbalance exposure of continuing the market?

Effect on imbalance prices if the market continues

Under the existing BSC Section G provisions, if a Partial Shutdown occurs then the market is suspended automatically, there are no **Bid-Offer Acceptances** (BOAs) and a single imbalance price applies. Using the methodology set out in BSC Section T1.7, the single imbalance price will be calculated as the average of SBP and SSP over the 30 days preceding the Partial Shutdown. This will continue to be the case under P276 for any Partial Shutdowns in which the market is suspended.

However, under P276 the normal dual imbalance pricing calculation will apply during any Partial Shutdown in which the market continues. The Workgroup has examined how this will be affected by National Grid's balancing actions within and outside the shutdown area.

Within the shutdown area:

- All instructions issued by National Grid will be Emergency Instructions under Grid Code BC2.9.1.2(e)(i), which refers to invoking the Black Start process or Re-Synchronisation of De-Synchronised Island process under Grid Code OC9; and
- In accordance with BSC Q5.1.3, these instructions will not be treated as BOAs and will therefore not feed into the calculation of SBP/SSP.

Outside the shutdown area, National Grid will still be issuing actions as follows:

- National Grid will flag any 'system-balancing' actions (BOAs and Balancing Services Adjustment Actions) in accordance with its existing **System Management Action Flagging Methodology Statement**, such that these will become unpriced volumes in the calculation of SBP/SSP if their price is higher than the most expensive unflagged (energy-balancing) action in the relevant price stack; and



What is...?

A Bid-Offer Acceptance (BOA)?

National Grid's Acceptance under the Grid Code of a Lead Party's **Bid** (the price that the Lead Party is prepared to pay to decrease its Export or increase its Import) or **Offer** (the price that the Lead Party is prepared to be paid to increase its Export or decrease its Import) for a BM Unit.

Bids and Offers are submitted in pairs (Bid-Offer Pairs). It is possible to have negatively-priced Bids.

See BSC Section Q.

A Balancing Services Adjustment Action?

A Balancing Action taken by National Grid outside the Balancing Mechanism.

The System Management Action Flagging Methodology Statement?

This methodology sets out how National Grid flags balancing actions which are taken for system-management reasons.

You can find a copy [here](#).

The normal imbalance pricing calculation?

You can find a plain English description of imbalance pricing, including the interaction with National Grid's flagging methodology, [here](#).

¹⁰ This explanation assumes that none of the Parties have been given any black start instructions. The additional imbalance exposure caused by complying with a black start instruction will be the single imbalance price where the market is suspended, and SBP and/or SSP as appropriate where the market continues. This is factored into the calculation of black start compensation claims (see Section 4 and Attachment A for more details). Black start instructions may be given to Parties inside or outside the shutdown area.

- The prices of any remaining energy-balancing actions (BOAs and Balancing Services Adjustment Actions) will feed into the calculation of SBP/SSP in the normal way.

National Grid has advised the Group that any actions which it issues to Parties in the 'healthy' part of the system to help re-energise the shutdown part will be flagged as system-balancing actions. The Group recommends that, if P276 is approved, National Grid reviews its System Management Action Flagging Methodology Statement to ensure that this is clear.

Analysis of appropriate % threshold level

At the Workgroup's request, ELEXON has analysed how the Bids and Offers taken by National Grid outside the shutdown area could affect imbalance prices and thereby the relative additional imbalance exposure for Parties of continuing rather than suspending the market during a Partial Shutdown.

To do this, ELEXON has used historic Offer stacks and a hypothetical 'worst case' Partial Shutdown scenario to examine the impact of removing proportionally more and more generation from the system. As the proportion of generation affected by this hypothetical Partial Shutdown increases, National Grid has to take increasingly higher-priced Offers which in turn increases SBP values. Attachment A contains a detailed explanation of the analysis aims, approach and results.

The analysis suggests that the maximum percentage of national BM generation (and therefore National Demand) which can be lost during a Partial Shutdown before the market should be suspended is 5%. The analysis indicates that, beyond this level, the disruption to Parties' imbalance charges caused by continuing the market can become significantly greater than that caused by suspending the market and applying a single imbalance price.

The baseline for monitoring the Market Suspension Threshold is National Grid's pre-shutdown spot time National Demand forecast, made day-ahead for the day concerned. National Grid will compare the spot time Initial National Demand Out-Turn measured during the Partial Shutdown with this pre-shutdown forecast, to determine what percentage of National Demand has been lost. The Workgroup has considered National Grid's analysis of the accuracy of its day-ahead National Demand forecasts, which you can find in Attachment A. The analysis shows that the frequency of 'big' errors is low, and the Group agrees that the risk of a Partial Shutdown coinciding with one of these is very small.

The Workgroup notes that ELEXON's SBP analysis represents a 'worst case' scenario. However, it notes National Grid's analysis that forecasting errors can in either direction. It agrees that it is better to initially set a Market Suspension Threshold that is too low than too high (noting that, if a Partial Shutdown ever occurs, the continued appropriateness of this threshold for future events can be reviewed in light of experience¹¹).



Threshold analysis

ELEXON's analysis suggests that the maximum percentage of National Demand which can be lost during a Partial Shutdown before the market should be suspended is 5%.

National Grid's analysis of its forecasting accuracy suggests that the threshold should not be set lower than 5%, otherwise this risks the market being suspended inappropriately due to a forecasting error.

You can find both sets of analysis in Attachment A.

¹¹ The Group has ruled out allowing the Panel to amend the threshold percentage level in the future without needing a Modification Proposal, because this could result in a disjoint between the level shown in the BSC and the actual level agreed by the Panel. The Group agrees that, given the confusion that may exist during a Black Start event, it is important that the threshold is clear to Parties. It notes that the same analysis of, and consultation on, any potential change to the threshold level would need to be undertaken regardless of whether a Modification Proposal is required to implement that change.



Historic system events

The Group has considered whether any of the following events are relevant to its determination of the appropriate P276 Market Suspension Threshold:

- 1987 Great Storm;
- 2003 London blackout;
- 2003 Birmingham blackout; and
- 2008 exceptional generation loss.

It has concluded that no meaningful precedent can be drawn from these events.

Attachment A contains further information and the Group's comments on each event.

The Proposer and the majority of other Workgroup members therefore agree that the Market Suspension Threshold level should not be higher than 5%. The Proposer and the majority of members also agree that setting the Market Suspension Threshold lower than 5% is inappropriate, since National Grid's analysis shows that this could result in the market being suspended simply due to a forecasting error.

A minority of Workgroup members believe that it is unproven that Parties will be able to continue trading during a Partial Shutdown, whatever the chosen threshold level, due to the uncertainty involved. These members therefore do not support P276. You can find further details of these members' views in the rest of this section.

Are any historic system events relevant to P276?

A Partial Shutdown has never occurred since the BSC was introduced in 2001. However, the Workgroup notes that there have been other system events which did not meet the Grid Code's definition of a Partial Shutdown. The Group has therefore considered whether these can be used to indicate the level of disruption with which the market can cope during a Partial Shutdown. At the Group's request, ELEXON has researched the particular circumstances of various historic events (see Attachment A).

The Workgroup has concluded that these events do not offer any meaningful indication of the impact that a Partial Shutdown could have on Parties' imbalance charges. It therefore agrees that ELEXON's BOA/SBP analysis described above is the most meaningful way to analyse the relative imbalance exposures of continuing or suspending the market.

Why not also apply a time threshold?

Under the Proposer's P276 solution, the Market Suspension Threshold will be met if the National Demand drops below the pre-shutdown forecast by 5% or more at any single point, regardless of the duration of this drop in demand.

The Workgroup has considered whether to additionally apply a time element to the Market Suspension Threshold in one of the following two ways:

Should the Market Suspension Threshold only be met if the drop in demand lasts for more than a certain length of time?

The Group has discussed whether this ensures that the market is only suspended following a sustained loss of demand. It has considered whether suspending the market following an immediate loss ignores potential scenarios where demand is restored quickly.

However, it has decided against applying such a time threshold because:

- The declaration of a Partial Shutdown by National Grid already implies a sustained loss, as this means that part of the system is completely de-energised and islanded from the remaining 'healthy' system;
- The cumulative effect on Parties of a series of short-duration drops and rises in demand needs to be considered, and it could be difficult to define a threshold which takes account of this;
- It requires more effort to monitor at a time when National Grid's operational priority is restoring the system; and
- It adds complexity to the threshold rules, increasing any uncertainty faced by Parties during a Partial Shutdown.

Even if demand remains above 95%, should the Market Suspension Threshold be met if the Partial Shutdown lasts longer than a certain length of time?

Workgroup members have different views on this question.

Some members believe that the rules for suspending the market should take account of not just what proportion of the market is affected, but the duration of this effect. If the Market Suspension Threshold is not met unless 5% or more of National Demand is lost, but there is a 4% loss for a prolonged period, does this mean that it is appropriate or feasible to continue the market indefinitely at this level? These members suggest that the market should be suspended automatically if the Partial Shutdown lasts longer than 24 hours. Other members believe that the market should continue as long as possible.

The Group notes that the Proposer's solution will effectively suspend the market after 1-2 days when National Grid runs out of accurate pre-shutdown forecast data. See below for more details.

Why suspend the market when no more forecast data is available?

As noted above, the baseline for monitoring the Market Suspension Threshold is National Grid's day-ahead, pre-shutdown, spot time National Demand forecast for the day concerned. In practice, National Grid will use its spot time National Demand forecast made at 08:45 on the previous day (D-1).¹² This forecast represents an accurate 'business as usual' baseline for determining how much National Demand has been lost during the Partial Shutdown (see above analysis and Attachment A for details of the percentage accuracy of this forecast). Accurate forecasting is not possible earlier than D-1, because it relies on the short-term weather forecast.

An unavoidable consequence of using the D-1 pre-shutdown forecast as the baseline for the P276 threshold monitoring is that National Grid will run out of accurate baseline data after 1-2 days. National Grid's view is that, from this point, it will no longer be able to accurately determine how much National Demand has been lost.

National Grid as Proposer recommends that the market should be suspended once the pre-shutdown day-ahead forecast runs out. The majority of Workgroup members currently support this approach. However, the Group notes that there are other potential Alternative solutions as described below.

What potential Alternatives is the Workgroup considering?

The table on the following page shows the different options for deciding whether to continue or suspend the market once National Grid no longer has accurate pre-shutdown forecast data to use as the baseline for the P276 threshold monitoring.

Option 1 is the solution which National Grid has chosen as Proposer, and which a majority of Workgroup members currently support. By majority, the Group has initially ruled out Options 2 and 3. Option 4 has been suggested by one Workgroup member; however the other members have not currently identified that it is more accurate and/or appropriate than Option 1.

The table contains the Group's initial views on each option.



Duration of baseline forecast data

The exact length of time before National Grid's pre-shutdown National Demand forecast data runs out will depend on the time that the Partial Shutdown occurs.

Attachment A provides a diagram which illustrates this in more detail.

¹² This is because, although National Grid updates this with subsequent day-ahead forecasts, the accuracy of these updated forecasts does not significantly improve.

What should the BSC do when baseline forecast data runs out?	Potential pros	Potential cons
<p>Option 1:</p> <p>Suspend the market automatically.</p>	<p>Keeps the determination as purely mechanistic.</p> <p>May not be appropriate to allow market to continue beyond 1-2 days anyway.</p> <p>For example, if there is a 4% loss for a prolonged period, does this mean that it is appropriate or feasible to continue the market indefinitely at this level?</p>	<p>Means not possible to continue market under a Partial Shutdown for longer than a period of around 1-2 days, even if most Parties could keep trading.</p> <p>Market should be allowed to continue as long as possible.</p>
<p>Option 2:</p> <p>Require National Grid to make a more subjective judgement as to whether 5% or more of National Demand has been lost.</p>	<p>Gives potential for market to continue during a prolonged Partial Shutdown.</p> <p>5% threshold level would still be 'hard-wired' in BSC for transparency/certainty; just makes National Grid's determination less mechanistic.</p> <p>Need not be totally subjective – could try to refine a less accurate pre-shutdown forecast (e.g. made week-ahead) during the shutdown.</p> <p>Could also apply this throughout entire threshold-monitoring process (e.g. if National Grid identifies that its original pre-shutdown forecast was inaccurate) and not just when the pre-shutdown forecast data runs out.</p>	<p>Would put National Grid in a difficult position – would naturally err against market suspension.</p> <p>May increase Parties' uncertainty as to whether market will be suspended.</p> <p>Determination would be less accurate, increasing possibility of an inappropriate suspension or continuation of the market.</p> <p>Doesn't resolve the question of whether it's appropriate for the market to continue indefinitely under a prolonged Partial Shutdown.</p>
<p>Option 3:</p> <p>Require Ofgem and/or DECC to decide whether the market should be suspended.</p>	<p>Gives potential for market to continue during a prolonged Partial Shutdown.</p>	<p>What would be the basis for this decision? Potential lack of certainty/transparency.</p> <p>How would Ofgem/DECC know whether Parties can keep trading?</p> <p>Would Ofgem be operational if the London area is without power?</p> <p>Difficult for BSC to put obligations on the regulator/Government.</p> <p>Doesn't resolve the question of whether it's appropriate for the market to continue indefinitely under a prolonged Partial Shutdown.</p>
<p>Option 4:</p> <p>Use an alternative incident-based (rather than a cumulative-effect) approach to the entire threshold monitoring process.</p> <p>National Grid will still measure the initial impact of the Partial Shutdown as a snapshot in time (by comparing the actual National Demand to its original pre-shutdown forecast). The market will still be suspended if that initial demand loss =>5%.</p> <p>But National Grid will then not monitor the threshold again, unless a second separate system event occurs (in which case the market will be suspended automatically regardless of the cumulative impact).</p>	<p>Gives potential for market to continue during a prolonged Partial Shutdown.</p> <p>Works where the initial impact of a Partial Shutdown is stable.</p>	<p>Ignores possible scenarios where scope of original incident (and therefore cumulative effect on Parties) grows.</p> <p>Still gives uncertainty as to whether a second separate system event will occur, and therefore market will be suspended.</p> <p>What is included in the concept of 'second separate system event'?</p> <ul style="list-style-type: none"> A second Partial Shutdown (as defined in Grid Code)? Would require a second part of the system to become totally de-energised/islanded, ignoring other possible events which could cumulatively worsen Parties' imbalance exposure; or Some other type(s) of event (e.g. another generator tripping) which could be difficult to define in BSC?

The Workgroup member who has suggested Option 4 believes that it is an accurate and appropriate approach because:

- The initial Partial Shutdown event will result in part of the system becoming totally de-energised and 'islanded' from the remaining healthy system. The member considers that this means it is unlikely that the size/impact of the shutdown area will grow (i.e. if the initial percentage of National Demand lost is 3%, then the loss will not increase beyond 3%) unless there is a second, separate system event; and
- They believe that basing the threshold monitoring on identifiable system events gives Parties greater certainty of the situation.

The other Workgroup members are not currently convinced because:

- They note National Grid's advice that it is feasible that the size/impact of the event could gradually creep;
- They note National Grid's concerns that Option 4 is therefore less accurate;
- They do not believe that Option 4 necessarily gives Parties any greater certainty than Option 1; and
- Some of these members are unsure that it is appropriate to continue the market indefinitely during a Partial Shutdown.

The Workgroup invites your views on the best approach.

What threshold communications will be issued under P276, and is it feasible for Parties to keep trading if the threshold isn't met?

Under the existing BSC and Grid Code provisions, the general principles regarding industry communications during a Black Start event are that:

- National Grid is responsible for updating Grid Code Users and ELEXON on the status of the Total System (and, to the extent that it is kept informed by National Grid, ELEXON is responsible for passing this information on to BSC Parties); and
- ELEXON is responsible for updating BSC Parties on the status of the market and BSC Systems (the only exception being that, in addition to ELEXON's notification to BSC Parties, National Grid must also notify Grid Code Users of the point from which the BSC Panel has determined that the market will resume).¹³

The existing BSC Section G and BSCP201 provisions recognise that ELEXON may have difficulty communicating with BSC Parties during a Black Start event. In a Partial Shutdown, even if ELEXON is not in the shutdown area, some Parties will be without power and may be unable to receive communications through normal channels such as email. The existing provisions also recognise that BSC Systems (including the Balancing Mechanism Reporting Service) may be unavailable for a time.

The BSC and BSCP201 provisions therefore require ELEXON to communicate the suspension of the market "as soon as practicable/possible", and recognise that this may be post-event once the Total System is re-energised.

¹³ Grid Code Users need to know this in order that they can start submitting physical notifications in preparation for resuming normal operations (as up to this point National Grid will still be dispatching all generators centrally). This information is also relevant to Grid Code Users because, currently, the Grid Code's Black Start provisions end at the point that normal BSC operations resume (i.e. this is the point from which the Grid Code currently deems the Total System to have returned to normal).

Similarly, BSCP201 notes that BSC Agents will implement the BSC's Black Start procedures (including those relating to market suspension) as soon as possible/practicable and that this may be post-event. Some Parties outside the shutdown area may be unaware initially that the BSC's market suspension provisions have been triggered, and may therefore continue to submit contracts and Bids/Offers. This does not matter because the rules are clear that these will be ignored or nullified, and that this will be carried out post-event if necessary. Parties therefore have certainty of, and confidence in, the existing rules. You can find further details of the existing BSC Agent processes in Attachment A.

By introducing a Market Suspension Threshold, P276 decouples the concepts of a **Black Start Period** and **Market Suspension Period** for Partial Shutdowns:

- The BSC's Black Start Period will, as now, begin from the start of the Settlement Period corresponding with the time and date from which National Grid determines that the Partial Shutdown began. As now, ELEXON will notify BSC Parties of this Settlement Period as soon as practicable.
- If the Market Suspension Threshold is met, then National Grid will notify ELEXON of the time and date that the threshold was met and:
 - The Market Suspension Period will begin from the start of the Settlement Period corresponding with the time and date that the threshold was met, and ELEXON will notify BSC Parties of this Settlement Period as soon as practicable; and
 - Both the Black Start Period and Market Suspension Period will finish at the end of the Settlement Period immediately before that from which the Panel determines (using the existing BSC/BSCP201 process) that normal BSC market operations shall resume. As now, this will be sometime after the re-energisation of the Total System and ELEXON will notify BSC Parties promptly of this Settlement Period following the Panel's determination.
- If the Market Suspension Threshold is not met, then:
 - There is no Market Suspension Period; and
 - The Black Start Period will finish at the end of the Settlement Period which corresponds with the time at which National Grid determines that the Total System returned to normal operation. ELEXON will notify BSC Parties promptly of this Settlement Period.¹⁴

P276 therefore creates an element of uncertainty for Parties as to whether or not the market will be suspended during a Partial Shutdown. Some members suggest that P276 therefore requires additional regular communications to Parties on the status of the market, for example how close the lost National Demand is to meeting the threshold.



BSC's Black Start Period and Market Suspension Period

These will still be one and the same for Total Shutdowns.

However, for Partial Shutdowns under P276, there may be a Market Suspension Period for all, some or none of the Black Start Period – depending on when/if the Market Suspension Threshold is met.

Attachment A provides a comparison of the key events for BSC market operations during a Partial Shutdown under the existing and P276 rules. It includes worked examples of the interaction between the Black Start Period and Market Suspension Period. It also describes the existing BSC Agent Black Start processes, which will continue to apply to any Market Suspension Period under P276.

Attachment B contains the draft P276 legal text.

¹⁴ The draft P276 legal text uses the Settlement Period during which the Total System returned to normal operation, and not the Settlement Period immediately before this, because Emergency Instructions can relate to part of a Settlement Period. This therefore ensures that, if the Total System returns to normal part-way through a Settlement Period, any BM Unit which receive black start instructions for the preceding part of that Settlement Period remain eligible to claim black start compensation under the BSC.

The Group notes that there are practical difficulties in providing such communications, if ELEXON is in the shutdown area. Although National Grid has methods for communicating with Grid Code Users which are resilient to blackouts (such as Control Telephony), the Grid Code only currently requires National Grid to notify the existence of a Partial Shutdown to those Users who in its opinion need to be informed (e.g. those in the shutdown area). A requirement to regularly contact all Users with updates on the market would therefore be an additional administrative burden on National Grid's Control Room during a period when its operational priority is re-energising the system. In addition, National Grid's resilient communication methods under the Grid Code are designed to communicate with Users' technical engineers/operators, who are not necessarily the relevant people to inform about the status of BSC market operations.

Notwithstanding these practical concerns, the majority of Workgroup members also agree with the Proposer that providing such regular communications would be inappropriate. These members believe that the only additional industry communications which are needed under P276 are those described above and which relate to the start of any Market Suspension Period and the end of the Black Start Period where there has been no Market Suspension Period.

A minority of members disagree and believe that Parties will not be able to keep trading during a Partial Shutdown if there is uncertainty over when or if the market will be suspended.

The table below shows the majority and minority views.

Is it appropriate/necessary to provide regular updates on how close the market is to being suspended?

Yes (minority)	No (majority – including Proposer)
<ul style="list-style-type: none"> Without these, Parties will not know how to trade. Will be worried about making things worse, or being accused of exploiting the situation and facing an inquiry. Believe they will not be able to keep trading. If have more information, Parties will be better able to help National Grid balance the system. 	<ul style="list-style-type: none"> Parties operating purely in the shutdown area may not be able to receive updates through email etc. (creating an information asymmetry, as other Parties can). Even if they can receive this information, they are unlikely to be able to use it to trade out their position until the area is re-energised. What would Parties outside the shutdown area do with the information? Changing behaviour could make the situation worse. National Grid will issue a Party with an Emergency Instruction or BOA if it needs it to take a specific action. Parties can't be accused of exploiting the situation if they don't have any information. Situation no different from now – under the current rules, Parties don't know in advance that the market will be suspended. If the market continues and Parties are unaware of the Partial Shutdown then this doesn't matter, because the intention of P276 is that they keep trading. If the market is suspended and Parties don't realise initially then, as now, this doesn't matter either as any contracts submitted will simply be nullified. Parties should have confidence in the rules – if they will simply stop trading before the Market Suspension Threshold is met, this means either the threshold level is too high or that P276 isn't workable. There's a difference between Parties making a commercial decision to stop trading and not being able to trade. It is always preferable to allow Parties to trade where they can.

Is a new Grid Code definition of 'Local Shutdown' needed?

The majority of Workgroup members agree with the Proposer that a new Grid Code definition of 'Local Shutdown' is not needed to support the P276 solution. These members note National Grid's advice that it would be extremely difficult to identify a definition of 'Local Shutdown' which is technically/physically different from the Grid Code's existing definition of Partial Shutdown because, in National Grid's view, the only difference is one of size/impact. The majority of members agree with the Proposer that whether to suspend or continue normal BSC operations is a market, not a technical, decision which relates to the effect of the shutdown on BSC Parties' imbalance charges. The Proposer believes that whether the Market Suspension Threshold sits in the BSC or the Grid Code, the basis of that threshold will be the same.

A minority of Workgroup members disagree. These members believe that any solution which introduces a Market Suspension Threshold for Partial Shutdowns creates uncertainty for BSC Parties as to whether or not the market will be suspended. They believe that Parties will not be able to cope with this uncertainty and will therefore cease trading regardless of whether the Market Suspension Threshold (whatever its level) is met. These members believe that it is better to introduce a new definition of 'Local Shutdown' in the Grid Code which is technically/physically different from a Partial Shutdown, and to which the BSC's Black Start provisions do not apply. They believe that it will then be clear from the moment that National Grid declares the existence of a Local Shutdown or Partial Shutdown whether or not the market is suspended. However, this still leaves the question of what a technical definition of 'Local Shutdown' would be.

Consultation questions about the Market Suspension Threshold



Consultation questions

Please respond using the form in Attachment C.

Assessment Consultation Question 1

Do you agree that, in principle, it is better to allow Parties to keep trading where they can during a Partial Shutdown?

Please explain the reasons for your view.

Assessment Consultation Question 2

The proposed Market Suspension Threshold is based on analysis of the point at which continuing the market is likely to cause greater disruption to BSC Parties' imbalance charges than suspending it.

Do you agree that this is the best way to decide when to suspend the market?

Please explain the reasons for your view.

Assessment Consultation Question 3

Under the proposed solution, National Grid will mechanistically monitor the ongoing cumulative impact of the Partial Shutdown until either:

- This impact reaches a defined level (in which case the market is suspended);
- National Grid no longer has accurate baseline data to monitor the impact mechanistically (in which case the market is suspended); or
- The Total System returns to normal.

Under this solution, due to the limits of National Grid's baseline data, it will not be possible to continue the market under a Partial Shutdown for longer than 1-2 days.

A suggested Alternative approach would assume that the initial snapshot impact of the Partial Shutdown (as determined mechanistically by National Grid) remains unchanged until either:

- A second, separate system event occurs (in which case the market is suspended automatically regardless of the cumulative impact); or
- The Total System returns to normal.

Under this suggested Alternative, the market could potentially continue under a Partial Shutdown indefinitely.

Do you agree that the proposed solution is better than the suggested Alternative?

Please explain the reasons for your view.

Assessment Consultation Question 4

Do you agree that the determination of whether the Market Suspension Threshold has been met should be purely mechanistic, rather than a subjective judgement?

Please explain the reasons for your view.

Assessment Consultation Question 5

Do you agree that, overall, the practical implications for Parties of continuing the market during Partial Shutdowns in which the proposed Market Suspension Threshold is not met are preferable to those of suspending the market in these situations?

Please explain the reasons for your view.

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Why allow black start compensation claims if the market isn't suspended?

The BSC's existing black start compensation applies to Total and Partial Shutdowns in which the market is suspended automatically. It compensates for the costs which the Lead Party of a BM Unit incurs in complying with a black start instruction and which:

- Would not otherwise have been incurred;
- Fall within the definition of Avoidable Costs in BSC Section G; and
- Are not covered by the imbalance charges received, or any reduction in the imbalance charges paid, by the Lead Party as a result of complying with the black start instruction.¹⁵

The BSC's existing definition of 'black start instruction' includes not just Emergency Instructions issued under OC9.4.7.4/BC2.9 of the Grid Code but also normal BOAs made under BC2.7. This is because the market will be suspended, meaning that in reality there will be no BOAs or contract positions, all generators will be dispatched centrally by National Grid and all generation volumes will be settled at the single imbalance price. The intention of the BSC's definition is therefore that all generator BM Units which are dispatched by National Grid during a Black Start are eligible to claim black start compensation under the BSC. Under P276, this definition of 'black start instruction' will remain unchanged for any Settlement Periods which fall within both a Black Start Period and a Market Suspension Period.

However, if the market continues during a Partial Shutdown under P276, then National Grid will be using a combination of Emergency Instructions and normal BOAs to balance the system. For both, Parties will pay their Bid price or receive their Offer price as appropriate. The only Emergency Instructions which will not be treated as BOAs under BSC Q5.1.3 are those issued under BC2.9.1.2(e) of the Grid Code, which includes:

- The need to invoke the Black Start process or the Re-Synchronisation of De-Synchronised Island process in accordance with Grid Code OC9 (BC2.9.1.2(e)(i));
- The need to request provision of a Maximum Generation Service (BC2.9.1.2(e)(ii)); or
- The need to issue an Emergency Deenergisation Instruction (BC2.9.1.2(e)(iii)).

The Lead Party of any BM Unit which receives a **Maximum Generation Instruction** is paid the Maximum Generation Energy Fee set out in its Maximum Generation Service Agreement with National Grid, and these Maximum Generation Energy Payments are governed by Section 4.2 of the CUSC. **Emergency Deenergisation Instructions** are normally eligible for Interruption Payments (as 'Relevant Interruptions') under Sections 5.2 and 5.10 of the CUSC. However, the CUSC's definition of the 'Allowed Interruptions' which are currently excluded from eligibility for Interruption Payments includes any Interruptions resulting from Total or Partial Shutdowns; presumably on the assumption that these are covered by the BSC's existing black start compensation. The Workgroup recommends that, if P276 is approved, the CUSC's definition of 'Allowed Interruption' is amended to allow Parties to claim Interruption Payments for any Interruptions resulting from a Partial Shutdown in which the market continues (see below for the Group's full reasons).



Purpose of this section

This section explains the compensation arrangements which will apply under the Proposer's P276 solution, and which are supported by the majority of Workgroup members.

The Workgroup is not considering any potential Alternative solutions in this area.



What is...?

A Maximum Generation Instruction?

An instruction by National Grid to a BM Unit to provide Maximum Generation.

Maximum Generation?

A Balancing Service provided by certain BM Units by generating at a level above the Maximum Export Limit (MEL).

See full definition in CUSC Section 11.

An Emergency Deenergisation Instruction?

An instruction by National Grid to a User to de-energise, to a Distributor to de-energise a User's equipment, or to a User to redeclare its MEL as zero.

See full definition in CUSC Section 11.

An Interruption?

An Interruption to a User's access to the Transmission System.

See definitions of 'Interruption', 'Allowed Interruption', 'Relevant Interruption' and 'Interruption Payment' in CUSC Section 11.

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¹⁵ Depending on whether the black start instruction increases or decreases the BM Unit's Metered Volume.

P276 amends the BSC's definition of a 'black start instruction' for any Settlement Periods which fall within a Black Start Period but not within a Market Suspension Period, so that it refers only to instructions issued under BC2.9.1.2(e)(i). This therefore ensures that the only balancing actions which are eligible for black start compensation during a Partial Shutdown in which the market continues are:

- Those which are not treated as BOAs; and
- Those which are not eligible for other existing forms of compensation/payment.

The intention of the compensation which is applicable to these black start instructions remains unchanged by P276, and will still cover the costs which:

- Would not otherwise have been incurred;
- Fall within the definition of Avoidable Costs in BSC Section G; and
- Are not covered by the imbalance charges received, or any reduction in the imbalance charges paid, by the Lead Party as a result of complying with the black start instruction.

However, the calculation for determining the amount of imbalance charges to deduct from the Party's Avoidable Costs will be different depending on whether or not the market is suspended. As now, this will be based on the single imbalance price for a Settlement Period in which the market is suspended. For a Settlement Period in which the market and dual imbalance prices continue, the proposed calculation algebra takes into account the net effect on the Lead Party's overall Energy Account position resulting from all the black start instructions given to its different BM Units in that Settlement Period. Because compensation claims are submitted on a BM Unit/Settlement Period basis, and so that a delay in one compensation claim from a Party does not delay the processing of its other claims for the same Settlement Period, the proposed algebra works by taking into account the payments made under any previous claims for that Energy Account and Settlement Period.

Under the existing BSC rules, the market is suspended automatically and there are no Metered Volume Reallocation Notifications (MVRNs). However, during a Partial Shutdown in which the market continues under P276, normal MVRNs will continue to apply. Where an MVRN is in place for a BM Unit which is given a black start instruction, complying with that black start instruction will therefore affect the Subsidiary Party's imbalance position.¹⁶ The proposed compensation algebra takes this into account when calculating the Lead Party's compensation (i.e. it adjusts the Lead Party's compensation up or down accordingly), but leaves it to the contractual, bilateral MVRN arrangements to specify whether funds should be redistributed between the Lead and Subsidiary Parties.

You can find worked examples of the proposed compensation calculation in Attachment A, and the full calculation algebra in Attachment B. While the Workgroup has agreed that the compensation calculation should take overall imbalance positions into account during any Settlement Periods in which the market and dual imbalance prices continue, it has not yet reviewed the specific compensation algebra and worked examples.

¹⁶ Where the Lead Party has an MVRN to transfer 100% of a BM Unit's output, then only the Subsidiary Party will incur imbalance charges. If the MVRN is for a different percentage or a fixed volume of output, then both the Lead Party and Subsidiary Party will have an imbalance exposure as a result of the black start instruction.

Why not compensate other Suppliers or generators under the BSC?

Under the existing rules, generators and Suppliers in the shutdown area have no imbalance exposure for the period in which they lose access to the Transmission System and are unable to generate/supply (see Section 3 for a more detailed explanation).¹⁷ Once the area is re-energised then, like Parties outside the shutdown area, their entire Metered Volume will be settled at the single imbalance price until normal market operations resume. Like Parties outside the shutdown area, they are also eligible to claim black start compensation under the BSC for any instructions they receive from National Grid. This will still be the case under P276 for Total Shutdowns and for any period during a Partial Shutdown in which the market is suspended.

For any period during a Partial Shutdown in which the market continues under P276, then dual imbalance prices will continue to apply. Generators and Suppliers in the shutdown area will therefore be exposed to SBP or SSP respectively for the length of time that they are unable to generate/supply and cannot trade out their position. The Workgroup has considered whether Parties in this situation should be able to claim compensation under the BSC.

Note that, once the shutdown area begins to be re-energised, then these Parties will receive their Bid/Offer price (for BOAs, including non-black start Emergency Instructions), be paid their Maximum Generation Energy Payments (for any Maximum Generation Instructions) or be eligible for black start compensation (for any black start instructions) in the same way as Parties outside the affected area.

Generators

The Workgroup notes that generators who lose access to the Transmission System as a result of a system event can normally claim Interruption Payments under the CUSC, but that this CUSC compensation currently excludes any interruptions resulting from a Total or Partial Shutdown.

The majority of Workgroup members (including the Proposer) consider that it would be inconsistent for some Interruption compensation arrangements to sit in the BSC and others in the CUSC, and that it would be inappropriate for the calculation of this compensation to differ when the physical/imbalance effects on Parties of the Interruption are equivalent. They note that, while energy actions (such as BOAs and Emergency Instructions) are dealt with in the BSC, the rules and compensation regarding loss of transmission access fall under CUSC governance. These members therefore recommend that, rather than introducing alternative compensation arrangements into the BSC, the CUSC's existing Interruption compensation arrangements should be extended to cover any Settlement Periods during Partial Shutdowns in which the market continues. If the CUSC's compensation arrangements are extended in this way, then any generators given Emergency Deenergisation Instructions (whether inside or outside the shutdown area) will also be eligible for Interruption Payments. By majority, the Workgroup recommends that this area is given further consideration under CUSC governance if P276 is approved.



What is...?

Demand Control?

This term encompasses a variety of methods for achieving Demand reduction – some automatic and some manual.

See full definition in the Grid Code's Glossary & Definitions.

¹⁷ Generators in this context means those who are not capable of a black start, or who are capable but are not instructed by National Grid.



Further information

Attachment A contains further information about the proposed P276 compensation arrangements, including some worked examples.

Some members believe that the existing level of CUSC compensation is insufficient to cover the costs incurred by Parties. However, the Group agrees that this is an argument for reviewing the CUSC arrangements and not for placing alternative compensation arrangements in the BSC. It notes that the CUSC's [Balancing Services Standing Group](#) (BSSG) is already considering potential changes to the CUSC's calculation of Interruption Payments.

Some members do not support the majority Group recommendation. This is because they do not support the original reasons for including Interruption Payments in the CUSC rather than in the BSC. However, they note that it is consistent to keep all equivalent arrangements together.

Attachment A contains further information on the proposed P276 compensation arrangements for generators.

Suppliers

The Workgroup notes that the CUSC's existing provisions for Interruption Payments only cover generators, and not any Suppliers who lose access to the Transmission System as a result of a system event.

The Group has therefore considered whether P276 should include any compensation arrangements for Suppliers who lose access as a result of a Partial Shutdown in which the market continues. It notes that previous attempts to introduce Supplier compensation into the BSC (for example, under previous Modification Proposals relating to **Demand Control**) have been rejected by Ofgem, due in part to:

- The practical difficulties in determining the volume of load lost by each Supplier (Attachment A provides more details of these difficulties); and
- Ofgem's view that compensation for interrupted transmission access should sit in the CUSC rather than in the BSC.¹⁸

The Proposer's view is that the issue of Supplier compensation is broader than just Partial Shutdowns, as it includes consideration of whether Suppliers should also be compensated in other situations which are outside the scope of P276 – such as the application of Demand Control. The Proposer considers that it would be inconsistent to introduce compensation for Suppliers for one cause of lost access (Partial Shutdowns) but not others. They have therefore decided not to include any Supplier compensation in their P276 solution.

The Workgroup has therefore considered whether to develop an Alternative P276 solution in this area. However, by majority it has concluded against this. A majority of members believe that, regardless of whether the practical difficulties of calculating Supplier compensation can be overcome, this compensation should sit in the CUSC as an extension to the existing Interruption Payments and not in the BSC. This is because these members believe that all compensation arrangements for loss of transmission access should sit

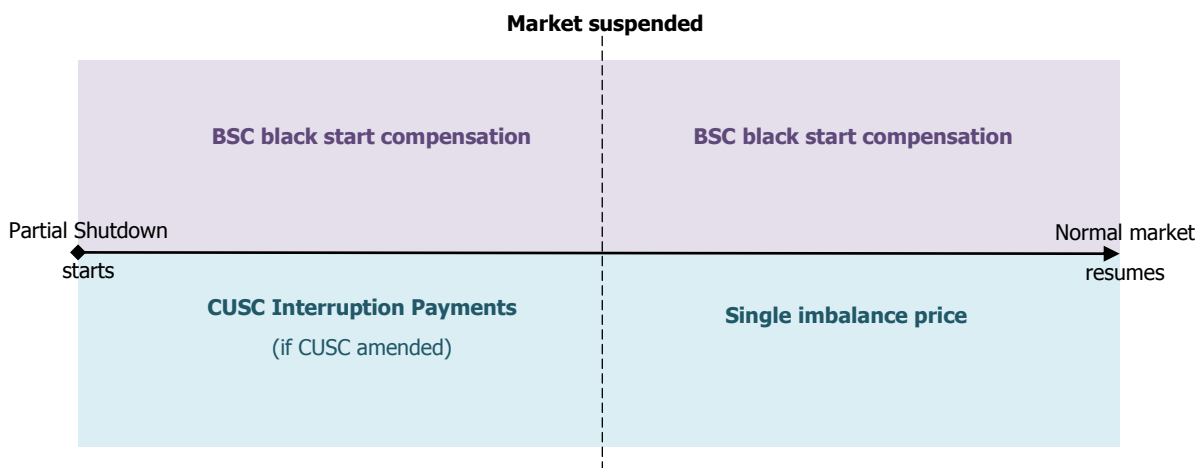
¹⁸ In its decision letter for [P199](#) 'Quantification of Demand Control in the BSC as instructed under OC6 (c), (d) and (e) of the Grid Code', Ofgem states that "as outlined in previous decision letters, Ofgem has concerns with the concept of the BSC Panel determining compensation claims". One of the previous decision letters referred to by Ofgem is for [P80](#) 'Deemed Bid/Offer Acceptance for Transmission System Faults'. In its P80 decision letter, Ofgem states that "In general, Ofgem considers that transmission related issues, such as access arrangements to the Transmission System and compensation following faults on the Transmission System, naturally belong within the governance structure of the CUSC and/or the transmission Charging Methodologies... It is Ofgem's view that compensation following disconnection from the Transmission System relates to NGC's transmission use of system arrangements and hence should be set out in the CUSC or NGC's Charging Methodologies and Statements rather than under the BSC".

together in the same industry code. By majority, the Group therefore recommends that the area of Supplier compensation is given broader consideration under CUSC governance.

Some members do not support the majority Group recommendation. As above, some do not support the original reasons for including Interruption Payments in the CUSC (but note that it is consistent to keep all equivalent arrangements together). Others believe that it is not inconsistent to include Supplier compensation in the BSC for Partial Shutdowns while leaving other types of Supplier compensation to be considered elsewhere. However, these members have not suggested how the practical difficulties of calculating Supplier compensation can be overcome.

Summary of P276 compensation arrangements

The diagram below summarises the proposed P276 compensation arrangements. The purple areas show the proposed compensation for BM Units given black start instructions, while the blue areas show the proposed compensation for other generators and Suppliers.



Consultation question about compensation arrangements

Assessment Consultation Question 6

Do you agree with the proposed BSC compensation arrangements for Partial Shutdowns in which the market is not suspended?

Please explain the reasons for your view.



Consultation questions

Please respond using the form in Attachment C.

Costs

The Workgroup is establishing the central (ELEXON / National Grid) costs in parallel with this consultation. It invites other participants to detail any implementation costs in their consultation responses.

Assessment Consultation Question 7

Would P276 give rise to any one-off implementation costs or ongoing operational costs for your organisation?

If yes, please provide details of these costs and explain why they would be incurred. ELEXON can keep this cost information confidential if requested.

The central implementation costs and the (non-confidential) costs identified by respondents will be provided in the Panel's subsequent Report Phase Consultation.

Impacts

Impact on BSC Agents

Balancing Mechanism Report Agent	BSC Agents may need to update their local working instructions to reflect that the market will not be suspended automatically following a Partial Shutdown. As existing practice is that BSC Agents will not invoke any of the BSC's market suspension provisions unless instructed by ELEXON, no significant process changes are anticipated. See Attachment A for more details.
Energy Contract Volume Aggregation Agent	
Settlement Administration Agent	
Funds Administration Agent	

Impact on BSC Parties and Party Agents

BSC Trading Parties will be directly affected by any decision to continue or suspend normal BSC market operations. The intention of P276 is that Parties continue trading unless/until the Market Suspension Threshold is met. Regardless of whether the market is suspended, any BM Unit which is given a black start instruction by National Grid will (as now) be eligible to claim compensation under the BSC. The Workgroup recommends that separate consideration is given to expanding the CUSC's Interruption Payments for loss of transmission access, to cover Suppliers and/or generators who lose access to the Transmission System during a Partial Shutdown in which the market is not suspended.

There is no direct impact on notification agents (ECVNAs and MVRNAs) because, as now, the Energy Contract Volume Aggregation Agent (ECVAA) will manually nullify any contract notifications (ECVNs and MVRNs) submitted during a Market Suspension Period (see Attachment A for more details). However, notification agents may wish to update their local working instructions to reflect that contract notifications will no longer be suspended automatically during a Partial Shutdown, but only where the Market Suspension Threshold is met.

Impact assessment

The impacts listed here are those which the Workgroup has identified to date, and may not be exhaustive.

The Workgroup is undertaking an impact assessment in parallel with this consultation.

An updated list of impacts will be included in the Panel's subsequent Report Phase Consultation.

Impact on Transmission Company

P276 will introduce two main additional BSC requirements on National Grid to:

- Monitor the Market Suspension Threshold following a Partial Shutdown and, if the threshold is met, notify ELEXON of the time and date at which it was met; and
- Where there has been no market suspension, notify ELEXON of the time that the Total System returned to normal operation.

Impact on ELEXON

Manage P276 implementation	If Ofgem approves P276, ELEXON will update the BSC and impacted Code Subsidiary Documents.
Black Start contingency procedures	<p>P276 will introduce two main additional BSC requirements on ELEXON to:</p> <ul style="list-style-type: none">• Notify BSC Parties of the Settlement Period from which any Market Suspension Period began; and• Where there has been no market suspension, notify BSC Parties of the Settlement Period from which the Total System returned to normal operation and which represents the end of the Black Start Period.

Impact on BSC Panel

Determination of Black Start claims	<p>P276 will amend the calculation (but not the intention) of the BSC's black start compensation, to reflect the continuation of dual imbalance prices and contract positions during any Settlement Periods in which there is a Black Start Period but not a Market Suspension Period.</p> <p>P276 will also amend the definition of what is an eligible 'black start instruction' for compensation claims relating to these Settlement Periods.</p> <p>The Panel may wish to update any local working instructions or guidance relating to the determination of black start compensation claims.</p>
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Impact on Code

Section G 'Contingencies'	Changes will be required to reflect the P276 solution and, specifically, to separate the concepts of Black Start Period and Market Suspension Period through the use of the Market Suspension Threshold. The Workgroup invites your views on the draft redlining in Attachment B.
Section T 'Settlement and Trading Charges'	A minor cross-referencing change will be needed. See Attachment B.

Impact on Code	
Annex X-1 'General Glossary'	New definitions of Market Suspension Threshold and Market Suspension Period will be required. ELEXON has also taken the opportunity to define Black Start Period in Annex X-1, and to correct a housekeeping error in the BSC's definition of 'System Warning' where the corresponding Grid Code defined term has recently changed. See Attachment B.
Annex X-2 'Technical Glossary'	A change to the existing definition of Initial National Demand Out-Turn will be required. ELEXON has also taken the opportunity to address housekeeping errors in some other existing definitions, to correct typographical errors or reflect recent changes in the corresponding Grid Code defined terms. See Attachment B.

Impact on Code Subsidiary Documents	
BSCP201 'Black Start and Fuel Security Contingency Provisions and Claims Processes'	Changes will be required to reflect the P276 solution and, specifically, to separate the concepts of Black Start Period and Market Suspension Period through the use of the Market Suspension Threshold.
BSCP18 'Corrections to Bid-Offer Acceptance Related Data'	Very minor changes may be needed to Sections 3.3 and 3.4 relating to Emergency Instructions, to reference the amended BSC definition of black start instruction.
ECVAA Service Description	Minor changes will be needed to Section 20 'Contingency Provisions', to reflect that the market will only be suspended (and contract and credit positions set to zero) if there is either: <ul style="list-style-type: none"> • A Total Shutdown or; • A Partial Shutdown in the Market Suspension Threshold is met.
SAA Service Description	No changes are required to Section 7.1 'Single Imbalance Price'.

Impact on Core Industry Documents and other documents	
Grid Code	<p>OC9 currently:</p> <ul style="list-style-type: none"> • Assumes that the BM is always suspended following a Partial Shutdown; and • Uses the resumption of normal BSC market operations to deem the return to normal of the Total System and the end of the Grid Code's Black Start provisions. <p>It will therefore require consequential changes to:</p> <ul style="list-style-type: none"> • Reflect that the BM will not be suspended automatically following a Partial Shutdown; • Introduce provisions, where the market has not been suspended, for National Grid to determine and notify to Grid Code Users/ ELEXON the time that the Total System returned to normal operation; and

Impact on Core Industry Documents and other documents	
	<ul style="list-style-type: none"> Reflect that, where the market has not been suspended, the Settlement Period determined by ELEXON as corresponding with the time that the Total System returned to normal represents the end of the Grid Code's Black Start provisions.
CUSC	No CUSC changes are required to reflect the revised BSC rules. However, the Group recommends that (if P276 is approved) separate consideration is given to extending the CUSC's Interruption Payments to cover Suppliers and/or generators who lose access to the Transmission System during a Partial Shutdown in which the market is not suspended.
System Management Action Flagging Methodology Statement	The Workgroup recommends that (if P276 is approved) National Grid reviews this document to ensure that the rules for flagging system-balancing actions are clear in relation to Partial Shutdowns in which the market is not suspended.

Legal Text

You can find a copy of the draft BSC legal text in Attachment B.

Assessment Consultation Question 8

Do you agree that the draft BSC legal text delivers the intention of the Proposer's P276 solution?

If not, please explain the reasons for your view.

6 Implementation



Implementation approach

The earliest feasible Implementation Date for P276 is likely to fall in late 2012.

The Workgroup is establishing the required lead time in parallel with this consultation.

It invites you to provide any initial views on the appropriate approach.

The exact proposed Implementation Date will be the subject of a further consultation.

The BSC impacts of P276 are document-only. The chosen Implementation Date will depend on the lead time required by National Grid to put in place the necessary systems and/or processes to monitor the Market Suspension Threshold, and may or may not align with a normal BSC Release.

The Workgroup notes National Grid's advice that, in the long-term, it is desirable to automate the threshold-monitoring process within its Control Room systems in order to reduce the administrative effort involved. However, because National Grid is currently undertaking a major [project](#) to replace its existing Balancing Mechanism systems in 2013, it cannot deliver this automated functionality until the third quarter of 2013 at the earliest.

National Grid is therefore exploring the possibility of using a manual monitoring solution in the interim.¹⁹ The lead time needed to develop this means that the earliest feasible Implementation Date for P276 is likely to fall in late 2012.

There may also be benefit in aligning the implementation of P276 with the required consequential Grid Code changes. The Grid Code changes cannot be progressed until the P276 Workgroup has concluded its assessment of the appropriate BSC solution and legal drafting. This also makes it unlikely that P276 can be implemented before late 2012.

The Workgroup is currently establishing the required implementation lead time. It invites you to provide any views on the appropriate P276 implementation approach as part of this consultation.

Once the Workgroup has established a specific Implementation Date, you will have the opportunity to comment on this during the Panel's subsequent Report Phase Consultation.

Assessment Consultation Question 9

Do you have any views on the appropriate implementation approach for P276?

Please explain the reasons for your view.

¹⁹ The draft BSC legal text in Attachment B leaves National Grid the flexibility to use either a manual or automated process by requiring it to monitor the spot time INDO against its pre-shutdown, day-ahead spot time National Demand forecast "frequently... and at least once every 15 minutes".



The following table contains Workgroup members' initial views as to whether P276 better facilitates the achievement of the Applicable BSC Objectives.

Recommendation

By majority, the Workgroup initially recommends that P276 is approved.



What are the Applicable BSC Objectives?

- (a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence
- (b) The efficient, economic and co-ordinated operation of the National Electricity 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 of the balancing and settlement arrangements
- (e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency

Does P276 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
A	<ul style="list-style-type: none"> • Neutral – no impact. 	<ul style="list-style-type: none"> • Neutral (unanimous) – no impact.
B	<ul style="list-style-type: none"> • Yes - enables the Transmission Company to operate the Transmission System in the most efficient manner without being constrained by concerns about triggering market suspension. <p>Efficient in this context means the quickest or best technical method – this, and not which method is most economic, is the key consideration for National Grid in restoring the system.</p>	<ul style="list-style-type: none"> • Yes (majority) – for the reasons cited by the Proposer and because: <ul style="list-style-type: none"> ○ The issue currently is that the Transmission Company may be reluctant to use Black Start directions under the Grid Code because this automatically meets the Grid Code's definition of a Partial Shutdown and therefore automatically triggers market suspension under the BSC. Re-energising the shutdown area using the 'healthy' system instead could take longer and cause further damage to more of the system; ○ Once a Partial Shutdown exists, the decision whether or not to suspend the market under the BSC makes no difference to the method or speed in which the Total System is restored under the Grid Code; if the Transmission Company needs a Party to take a specific action it will issue an Emergency Instruction or BOA as appropriate. • No (minority) – concerned about the unintended consequences of keeping the market open, and of Parties not having enough information to know what to do and therefore taking actions which may not help the Transmission Company.
C	<ul style="list-style-type: none"> • Yes – ensures BSC Parties are not exposed to the disruption of market suspension in situations where this disruption would be greater than that caused by not suspending the market. 	<ul style="list-style-type: none"> • Yes (majority) – for the reasons cited by the Proposer, and because: <ul style="list-style-type: none"> ○ This issue has been known about, and has been a recognised matter of concern, for a number of years; ○ It is always preferable to allow the market to continue where it can; ○ The solution has to be based on assumptions and hypothetical analysis because there are no real-life examples of a Partial Shutdown; ○ The proposed threshold is sufficiently low that the risk of inappropriate market continuation is small; ○ The threshold can be reviewed again in light of experience if a Partial Shutdown ever occurs. • No (minority) – because: <ul style="list-style-type: none"> ○ Not sure keeping the market open is a good thing in these circumstances; ○ The proposed 5% threshold doesn't relate to a physical/technical system definition and is therefore slightly arbitrary; ○ P276 is based on the assumption that Parties can continue trading and it is not proven that this is the case.

Does P276 better facilitate the Applicable BSC Objectives?

Obj	Proposer's Views	Other Workgroup Members' Views
D	<ul style="list-style-type: none"> • Yes – avoids suspending the normal balancing and Settlement operations (and the effort incurred in restoring these operations post-event) except where justified by the materiality of the shutdown. 	<ul style="list-style-type: none"> • Yes (majority) – for the reasons cited by the Proposer. • No (minority) – the current arrangements have managed to avoid the issue identified by P276; if National Grid has been exercising its discretion to avoid market suspension then this is a good thing.
E	<ul style="list-style-type: none"> • Neutral – no impact. 	<ul style="list-style-type: none"> • Neutral (unanimous) – no impact.

Assessment Consultation Question 10

Do you agree that the Proposer's P276 solution better facilitates Applicable BSC Objectives (b), (c) and (d) and has no impact on Applicable BSC Objectives (a) and (e)?

Please explain the reasons for your view.

Assessment Consultation Question 11

Is there anything further that you believe the Workgroup should consider?

Please explain the reasons for your view.

8 Further Information

You can find more information in:

[Attachment A](#): Detailed Assessment

[Attachment B](#): Draft BSC Legal Text

[Attachment C](#): Assessment Consultation Questions

You can find further P276 documents on ELEXON's [website](#).