Urgent Modification Consultation

P448 'Protecting Generators subject to Firm Load Shedding during a Gas Supply Emergency from excessive Imbalance Charges'

The war in Ukraine and resultant gas shortages in Europe significantly increases the risk of a Gas Supply Emergency this winter.

Generators subject to Load Shedding could be prevented from generating during a Gas Supply Emergency. If this happens, Generators could face an excessive Imbalance Charge, negatively impacting them financially. As a consequence, the security of electricity supply in Great Britain could be affected.

P448 seeks to address these risks by placing a mechanism in the BSC that allows Load Shedding instructions issued during a Stage 2+ Network Gas Supply Emergency to be treated as Accepted Bids for BSC purposes. The generator will be protected from BSC Imbalance Charges if the Load Shedding prevents them from delivering contracted positions agreed prior to receipt of the Load Shedding instruction. A Panel Committee will review the generator's Settlement data and contracted position after the event to verify that their Imbalance Charges are in accordance with this principle, and that their Bid Payment is reflective of Avoidable Costs.

The Workgroup is also considering the possibility of an Alternative that may extend the solution to BM Units not active in the BM and/or other events that prevent a Generator from generating during a Gas Supply Emergency.

This Urgent Modification Consultation for P448 closes:

5pm on **Wednesday 12 October 2022**

The Workgroup may not be able to consider late responses.

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Phase

- Proposal
- Joint Workgroup
- Urgent Mod Consultation
- Urgent EBGL Consultation
- Urgent Mod Report

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The P448 Workgroup initially recommends **approval** of P448

The P448 Workgroup initially recommends **approval** of the P448 Proposed Modification and is considering a number of options for a possible Alternative

The P448 Workgroup **does** believe P448 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- Generators
- Suppliers
- Trading Parties
- National Electricity Transmission System Operator (NETSO)
- Settlement Administration Agent (SAA)
- Balancing Mechanism Reporting Agent

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About This Document

Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read the summary section
- Have 15 mins? Read sections 1 and 7
- Have 30 mins? Read all except section 6
- Have longer? Read all sections and the annexes and attachments
- *You can find the definitions of the terms and acronyms used in this document in the BSC Glossary*

The purpose of this P448 Urgent Modification Consultation is to invite BSC Parties and other interested parties to provide their views on the merits of P448. The P448 Workgroup will then discuss the consultation responses, before consulting again on the Proposed Modification and potentially an Alternative, and making a recommendation to the BSC Panel at an urgent meeting by 18 November 2022 on whether or not to approve P448.

There are three parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the draft redlined changes to the BSC and the Code Subsidiary Documents for P448.
- Attachment B contains the specific questions on which the Workgroup seeks your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish the Workgroup to consider.

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1 Summary

Why Change?

The war in Ukraine and resultant gas shortages in Europe significantly increases the risk of Generators in Great Britain being prevented from generating this winter (due to Load Shedding during a Network Gas Supply Emergency). If that happens Generators are likely to incur massive Imbalance Charges and credit cover requirements, potentially causing them to become insolvent. Even if such an emergency does not occur, the risk that it could occur is likely to force Generators to reduce their forward and Day Ahead trading, reducing liquidity in electricity markets, and raising costs for electricity consumers.

Solution

P448 proposes to create a mechanism in the relevant BSC Sections that would protect Generators from excessive Imbalance Charges that they may incur as a result of Load Shedding under a Network Gas Supply Emergency (NGSE) at Stage 2 or higher. A new form of Acceptance is proposed which would be settled as a Bid for affected units. The affected units would submit Physical Notifications (PNs) for the impacted period to reflect how they would have operated to meet their contractual position in the absence of a gas emergency, based on their contractual position at the point of receiving the Load Shedding instruction.

A new Network Gas Supply Emergency Settlement Validation Data Committee (NGSESVDC) is proposed to be established to verify the data used in Settlement (and amend it if necessary).

Impacts & Costs

P448 is expected to impact Suppliers, Generators, Trading Parties, the Settlement Administration Agent (SAA), the Balancing Mechanism Reporting Agent (BMRA) and the NETSO. The NETSO will be expected to construct Acceptance Data for NGSE Acceptances. Generators will have a new obligation to retain and furnish (when required) records (in the event of a NGSE). Suppliers and Trading Parties who pay Balancing Services Use of System (BSUoS) Charges may face a different charge. P448 impacts the Credit Default process, which is administered by BSCCo (Elexon), and Elexon will be expected to support the proposed NGSESDVC (in the event of an NGSE).

Implementation

The Workgroup recommends P448 is implemented 1WD following Authority decision, as part of a special BSC Release. This will ensure the Modification is implemented as soon as possible.

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The case for Urgency

Ofgem decided[1] that P448 should be treated as an Urgent Modification Proposal on 30 September 2022 as they were satisfied it is related to a current issue, that if not urgently addressed, could have a significant commercial impact on parties, consumers or other stakeholders and a significant impact on safety and security of the electricity and/or gas systems.

P448 is being progressed jointly with Grid Code Modification GC0160[2]. GC0160 seeks to ensure that the actions of the affected party relating to Physical Notifications are aligned with the P448 proposed solution. In providing their decision on urgency, Ofgem noted the need for strong coordination between the Grid Code and BSC. Joint Workgroups have been held to date to refine and develop the solution collaboratively across both code bodies.

Recommendation

The Workgroup initially agrees, by majority, that P448 would better facilitate the achievement of the Applicable BSC Objectives than the current baseline. The Workgroup initially agreed that P448 should be approved. To note, the Workgroup is considering a number of options for a possible Alternative.

The Workgroup believes that P448 will impact the EBGL provisions in the BSC. They believe that P448 should be submitted to the Authority (Ofgem) for decision thus, should not be treated as a Self-Governance Modification.

[1] https://www.ofgem.gov.uk/publications/p448-decision-urgency
[2] https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0160-grid-code-changes-bsc-mod-p448

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2 Why Change?

What is the issue?

Russia's turning off of the Nord Stream 1 gas[3] supply to Western Europe as a result of the Ukraine War, and the post-covid demand for gas, has recently significantly increased the risk of gas shortages during winter 2022/23. Given the interconnected nature of the gas market, this in turn increases the risk of gas shortages in Great Britain.

There is therefore a credible risk that Great Britain could be subject to one or more gas emergency scenarios during this winter. If this happens then gas supplies to the largest gas consumers with firm rights to gas may be curtailed – i.e. prevented from taking gas - for reasons of safety on the gas system. Gas fired power stations are some of the largest consumers of gas in Great Britain and therefore would expect to be some of the first sites to have their gas curtailed.

If these power stations have sold their power ahead of time through forward trading but are prevented from generating to deliver these volumes by a gas curtailment, then generators could be exposed to large volumes of electricity imbalance charges (plus the associated credit requirements). It is also likely that in these circumstances the NETSO would have to instruct other plant or demand side response to make up for the lost gas plant volumes, which could drive very high or indeed extreme levels of imbalance prices. The combination of high volumes of imbalance at extreme imbalance prices could be sufficient to cause generators to become insolvent, which would increase risks to security of supply.

In order to seek to manage this substantial risk, generators can only avoid putting themselves in the position of being exposed to such imbalances. The only way they can do this is to avoid contracting ahead of time either in forward timescales or even in day ahead markets. Indeed, the only way a generator can eliminate this substantial risk is to present their volume in the Balancing Mechanism (BM) so that any volumes generated are paid for on delivery and not open to imbalance risk. This inevitably reduces liquidity in traded markets to the disadvantage of all trading parties.

Background

A Gas Supply Emergency (GSE) refers to a situation where there's not enough gas available to meet expected demand, which could to lead to loss of pressure in the gas network. The Network Emergency Coordinator (NEC) or a gas network can declare a GSE and is required to coordinate the actions of all gas networks during a GSE.

The gas system operator (GSO) is National Grid Gas. In the event of an expected shortfall in available gas, that has a potentially detrimental effect on gas pressures within the pipelines in GB, then this will lead to the GSO, in close cooperation with the NEC, taking action in accordance with the Gas Safety Management Regulations[4] to address a significant (gas) safety concern which, at a high level, includes both a Stage 1 and a Stage 2 situation. It is only at Stage 2 that the gas load shedding would be applied to the

[3] For the avoidance of doubt, the references in this proposal to 'gas' is to natural gas.
[4] A guide to the Gas Safety (Management) Regulations 1996. Guidance on Regulations - L80 (hse.gov.uk) https://www.hse.gov.uk/pubns/priced/l80.pdf

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largest gas users which, in respect of this Modification, concerns gas fuelled generators in GB.

In order to demonstrate the possible size of the issue, and the potential threat to generators and system security, it is worth considering the approach that is likely to be taken when gas is curtailed under a gas emergency. The priority in such an emergency will be to prevent the disconnection of domestic customers' gas. Therefore, demand customers with lower priority will be taken off first. In order to maximise the effectiveness of these actions, customers are likely to be taken off in order of size.

Generators make up a large proportion of the largest gas customers in GB and will therefore likely be the first customers to be curtailed, again in order of size. By way of example, if we look at the 10 largest gas fired power stations[5] represent a total capacity of around 12.8GW of capacity, meaning that their average size is around 1.28GW. The largest of these is 2.2GW and the smallest around 900MW.

The table below shows the status quo situation and the potential sort of imbalance costs which could be incurred if these stations were to be fully contracted and then curtailed for 24 hours. It does so on the basis of three levels of imbalance price: £3,000/MWh, £6,000/MWh and £9,000/MWh. The first has been chosen as it is similar in size to the offer prices which were experienced on occasion last winter (2021/22), the second as it is the current level of the Value of Lost Load (VoLL) and the third as it is around the level of the price at which some actions were taken by the ESO on 20 July 2022, albeit in these circumstances for (electricity) system purposes. It would not be unrealistic to assume that, in a period when there is a significant shortage in the supply of gas leading to gas curtailment of Combined Cycle Gas Turbines (CCGTs) etc., that there could also be significant scarcity in the electricity market too, and that actions around these sorts of levels may be accepted and go on to set imbalance prices. This could particularly be the case if customers are curtailed at prices factoring in their particular values of lost load, or if system to system trades are taken over interconnectors.

		Imbalance Price		
	MW	£3,000/MWh	£6,000/MWh	£9,000/MWh
Max	2200	£158.40m	£316.80m	£475.20m
Average	1280	£92.16m	£184.32m	£276.48m
Min	900	£64.80m	£129.60m	£194.40m

Table 1: Illustrative Imbalance exposure for each 24 hours' curtailment at full output.

Although the above table may show the worst-case scenario for a single power station by assuming that all of its capacity is contracted for the whole day, in reality generators might have multiple stations curtailed and / or the gas emergency could run for several days, or indeed weeks, during which significant imbalance exposures could accrue. Therefore, it is

[5] Based on the NETSO's published Transmission Entry Capacity (TEC) Register.

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clear that gas fired generators in GB face a potentially significant risk associated with gas (safety) emergency actions.

In the event that an imbalance situation did arise for the generator, and noting the illustrative quantum(s) set out in the table above, this would also be expected to quickly result in a substantial credit call arising (absent this Modification) which could place the affected generator into default and thence to exit the market with the resulting market liquidity impacts noted above as, for example, has been seen with the Calon Energy market exit[6]. Furthermore, in the event that the affected generator went into payment default, then the resulting shortfall would rest with other BSC Parties, which would also be detrimental to those BSC Parties.

Desired outcomes

The Proposer intends to amend the BSC to ensure that the defect is rectified in a timely manner so that Generators are not exposed to excessive imbalance charges and / or Credit Cover charges in the event of Load Shedding being required as a result of a Stage 2 (or higher) Network Gas Supply Emergency occurring, and that the resulting curtailed electricity volume is settled as a Bid at an appropriate price in order not to disadvantage those parties.

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[6] Calon Energy's UK gas plants put in 'dormant state' by administrators - Energy Live News

3 Solution

Proposed solution

The proposed solution can be summarised as follows:

1. Load Shedding instructions issued to gas-fired generators during Stage 2 or higher of a Network Gas Supply Emergency shall be treated for BSC purposes as Bids.

2. Acceptance Data relating to these Bids will be constructed by the NETSO after the event, and entered into Settlement. The Acceptance Data will reflect the impact of the Load Shedding on the affected generators. For example, in the case of a Generating Unit with its own BM Unit that was instructed not to take any gas for a period of time, the Acceptance would show the BM Unit generating zero MW for the entirety of that period, and then ramping back up to its Final Physical Notification (in accordance with its Ramp Rates and other Dynamic Data).

3. As for any Acceptance, the 'baseline' used to calculate the Bid volume is the Final Physical Notification. The intention of the solution is that this baseline should reflect the contractual position the Generator had entered into prior to receiving the Load Shedding instruction. To facilitate this, Grid Code Modification GC0160 (which is being progressed in parallel to P448) amends the Grid Code rules relating to Physical Notifications, for BM Units subject to Load Shedding within Stage 2 or higher of a Network Gas Supply Emergency.

4. As for other Bids, the Accepted Bid volume will be calculated as the difference between the Acceptance Data and Final Physical Notification. The Lead Party (or Subsidiary Party, in the case of a BM Unit subject to a Metered Volume Reallocation Notification) will therefore be protected from Imbalance Charges on this volume. This has the effect of protecting generators from Imbalance Charges caused when Load Shedding prevents them from delivering power they sold prior to receiving the Load Shedding instruction.

5. The solution described above depends on Generators accurately submitting Physical Notifications that reflect their contracted positions at a certain point in time, and doing so quickly during potentially difficult circumstances on the gas and electricity systems. To mitigate the Settlement impact of any error in this data, a new Panel Committee (the "Network Gas Supply Emergency Settlement Validation Data Committee" or NGSESVDC) will meet after the event to verify the data used in Settlement (and amend it if necessary). In particular, this Committee could:

- Reduce the Final Physical Notifications, if they are not satisfied that they reflect the contractual position prior to receipt of the Load Shedding Instruction; or
- Amend the Bid Price, if they are not satisfied that it reflects the net saving in Avoidable Costs from not being able to generate.

6. Responsibility for establishing the Network Gas Supply Emergency Settlement Validation Data Committee will lie with the BSC Panel. The expectation is that the arrangements relating to this Committee will be closely modelled on the existing provisions for the Claims Committee (which looks at certain claims for costs arising from Section G Contingency arrangements).

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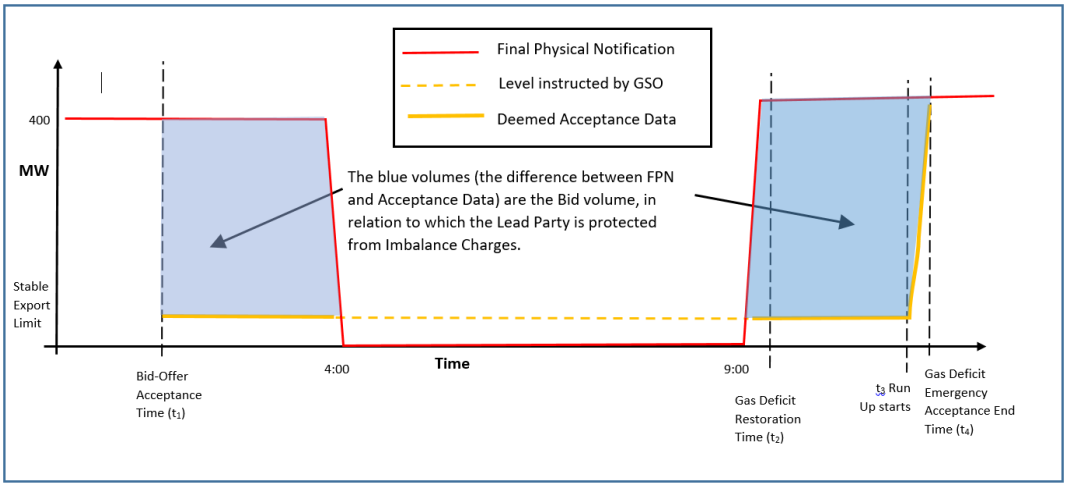
Urgent Modification Consultation Questions
P448 proposes that reductions in BM Unit Export caused by Load Shedding (during Stage 2 or higher of a Network Gas Supply Emergency) should be deemed (for BSC purposes only) to be Bids accepted by the NETSO under the Grid Code. Do you agree that this is an appropriate mechanism for protecting the affected gas-fired generations from electricity Imbalance Charges? If not, is there an alternative mechanism you believe would be better (and why)?
The Workgroup invites you to give your views using the response form in Attachment B

Constructing the Acceptance Data

Constructing Acceptance Data for Network Gas Supply Emergency Acceptances (NGSEA) is the responsibility of the NETSO. The trigger for this process will be the Lead Party informing the NETSO and BSCCo that their Generating Unit was subject to Load Shedding during Stage 2 or higher of a Network Gas Supply Emergency.

The NETSO will construct Acceptance Data that reflects the reductions in the BM Unit's Final Physical Notification arising from the Load Shedding. For example, the diagram below illustrates a BM Unit where the contracted position (as reflected in the FPNs) was to run at 400 MW for most of the day, but dropping down to zero between 4:00 and 9:00:



At time t_1, the Generator received a Load Shedding instruction. In this case, the Gas System Operator (GSO) informed the Generator that they were required to reduce their offtake gas, but were permitted to continue taking sufficient gas to operate at their Stable Export Limit (SEL). The GSO may give an instruction of this form when told by the Electricity System Operator that the station is needed to maintain stability on the electricity system.

The Acceptance Data (orange line) reflects this by dropping down to the level of SEL, rather than zero. However, the Acceptance Data should never drop below the FPN, as that would create an Offer Acceptance. For this reason, the Acceptance Data follows the FPN to zero between 4:00 and 9:00.

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Urgent Modification Consultation Questions
Do you agree with the proposed principle that affected generators should be protected from Imbalance Charges on their contracted position at the point they received the Load Shedding instruction; but not on additional Imbalance Charges related to increases in their contracted position made after that point?
The Workgroup invites you to give your views using the response form in Attachment B

Credit Cover Requirements

Although treating the NGSEA as a Bid has the effect of protecting the Lead Party from certain Imbalance Charges, details of the accepted Bid Volume will not be immediately available to the BSC Systems used to calculate credit cover requirements. It is therefore likely that, in the days following receipt of the Load Shedding instruction, these systems will report to Elexon that the Lead Party has insufficient credit cover. However, Elexon has discretion not to place the party into Credit Default, if they have reason to believe that the reported shortfall in credit does not reflect the true position. The proposed solution includes amendments to Section M of the BSC to clarify that this discretion should be applied (if appropriate) where an NGSEA has led to an apparent shortfall in credit cover.

The Workgroup has discussed two different forms of drafting to achieve this. One requires Elexon to use the existing provisions for material doubt. The other is modelled on the Credit Cover provisions for existing Section G Contingency Arrangements.

Urgent Modification Consultation Questions
The P448 Workgroup has identified two possible forms of drafting for the requirement on Elexon to consider the effect of Network Gas Supply Emergency Acceptances before authorising a credit default for an affected generator (one using material doubt provisions, one modelled on existing Contingency arrangements). Do you have a view on which is preferable (and why)?
The Workgroup invites you to give your views using the response form in Attachment B

Verifying the Final Physical Notifications

One of the key roles of the NGSESVDC will be to verify that Final Physical Notifications reflect the contracted position entered into at the point the Load Shedding instruction was received. In particular, GC0160 proposes that:

- The Lead Party should submit Physical Notifications that reflect the position the BM Unit had contracted to deliver at the point it received the Load Shedding instruction;
- The Lead Party should not reduce their Final Physical Notifications to reflect the impact of Load Shedding on the BM Unit; and
- The Lead Party may adjust the Physical Notifications to reflect any decreases in their contracted position after they receive the Load Shedding instruction (i.e. energy purchases); but may not adjust the Physical Notifications to reflect any increases in their contracted position after they receive the Load Shedding instruction (i.e. additional energy sales).

The intended effect of this is that the relevant BSC Party should be protected from Imbalance Charges in relation to energy volumes that were reflected in their contracted position at the point the Load Shedding instruction was received. But what exactly

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constitutes a contracted position for this purpose? Under the draft legal text, the Lead Party will only be protected if their contracted position is reflected in Energy Contract Volume Notifications. The following scenarios illustrate this.

Scenario 1 – Bilateral Trade between Lead Party and another BSC Party

To illustrate this scenario, suppose that:

- The Lead Party had (prior to receiving the Load Shedding instruction) agreed a firm contract to sell a defined MWh volume of Active Energy to another BSC Party. This contract might (for example) be a forward trade, or the outcome of a Day Ahead power auction; and
- This volume was notified as an Energy Contract Volume Notification (ECVN).

Because this MWh volume was sold prior to receipt of the Load Shedding instruction, and was notified as an ECVN, the Lead Party is potentially protected from Imbalance Charges. Note that the ECVCN does not have to be notified prior to receipt of the Load Shedding instruction (provided that there is timestamped evidence to demonstrate that the agreement was reached prior to that point).

However, it should be noted that power contracts do not necessarily identify the BM Unit or generating unit to which they relate (and ECVNs never do). The Lead Party may therefore need additional evidence to show that the intention (prior to receiving the Load Shedding instruction) was to deliver the contracted volume using the generating unit affected by Load Shedding (and not some other generating unit). The nature of this evidence will depend on the specific circumstances relating to the Lead Party and their other BM Units. For example:

- **Scenario 1A**: The Lead Party is a generator with several BM Units, and they can demonstrate (from historical evidence) that they typically despatch these in a certain merit order. This should allow the NGSEVC to ascertain which BM Unit(s) would have been used to deliver the contracted volume.
- **Scenario 1B**: The Lead Party is a Supplier, and the BM Unit contains a number of power stations with which they have Power Purchase Agreements (PPAs). The Supplier sells power in the Day Ahead market based on specific instructions from the generators operating these power stations. Therefore, each Day Ahead trade can be linked with a specific timestamped instruction from the operator of a specific power station, allowing the NGSEVC to identify the contracted positions associated with each power station in the BM Unit.

Scenario 2 – Bilateral Trade between Subsidiary Party and another BSC Party

This is similar to scenario 1, except that the Lead Party uses a Metered Volume Reallocation Notification (MVRN) to transfer 100% of their Metered Volume to a Subsidiary Party, who trades the power. The legal drafting covers Subsidiary Parties as well as Lead Parties, so the existence of the MVRN should have no impact on which volumes are protected from Imbalance Charges.

Scenario 3 – Spill without a contract

In this scenario, the Generator decides (prior to receiving the Load Shedding instruction) that they will increase their output, without having sold the energy i.e. they intend to 'spill' and receive the Imbalance Charge. For example, they might do this because they expect the Imbalance Price to be high; or because they expect there to be a Capacity Market Stress Event, and would then need to spill in order to meet their Capacity obligations.

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P448 is intended to protect Generators from paying Imbalance Charges on electricity they were unable to generate; but not to pay them Imbalance Charges where Load Shedding deprived them of the opportunity to spill. As a result, the NGSESVDC would not allow the 'spill' to be included in their Final Physical Notification (for purposes of settling the Network Gas Supply Emergency Acceptance).

Scenario 4 – Supply to customers

This is similar to Scenario 1B, in that the Lead Party is a Supplier, and the BM Unit contains a number of power stations with which they have Power Purchase Agreements (PPAs). The generators inform the Supplier at Day Ahead how much energy they will be generating. However, the Supplier does not sell the energy into the market, but uses it to supply their own portfolio of customers.

From a BSC viewpoint, the day ahead notification is a matter between the Supplier and generator, and is not 'firm' for any BSC purpose (e.g. no-one will necessarily be subject to Imbalance Charges if it is not delivered). There is no notification of an ECVN, and for this reason the NGSESVDC would not allow the volumes to be included in the Final Physical Notification (for purposes of settling the Network Gas Supply Emergency Acceptance).

Urgent Modification Consultation Questions
The proposed drafting of the Network Gas Supply Emergency Adjustment Principles only protects Lead and Subsidiary Parties from Imbalance Charges related to contracted positions that have been notified as Energy Contract Volume Notifications (ECVNs). Do you agree with this, or do you think Lead and Subsidiary Parties should also be protected in relation to contracted positions that do not require ECVN notification (e.g. contracts to supply power to customers)?
The proposed drafting of the Network Gas Supply Emergency Adjustment Principles requires the Committee to verify that Bid payments from affected generators are consistent with the net Avoidable Costs saved or incurred as a direct result of the Load Shedding. Do you agree that this is appropriate (and, if not, what principle if any should the Committee follow when validating Bid payments)?
The proposed solution does not amend the rules for calculating Imbalance Prices. This means the volumes associated with Network Gas Supply Emergency Acceptances will enter the price calculation at their Bid Price (and may cause the Imbalance Price to be lower than it would have been, had these volumes not been treated as Bids). The Workgroup considers that it may be appropriate for the BSC Panel to refer this issue to a Workgroup for post-implementation review, in accordance with BSC Section F2.9.6. Do you agree that this would be appropriate?
The Workgroup invites you to give your views using the response form in Attachment B

Benefits

The Modification allows Generators subject to Load Shedding in a Stage 2+ Network Gas Supply Emergency some protection from Imbalance Charges, and in doing so reduces the risk that they will be forced into insolvency by events entirely outside their control. This benefits not just the affected generators but the electricity market and consumers as a whole, because:

- If generators do become insolvent their power stations are likely to be withdrawn from the market for a significant period, at a time when generation is already likely be in short supply. This would have an adverse effect on electricity markets, and increase costs for consumers.

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- Even if a Network Gas Supply Emergency does not occur this winter, the possibility that it could may force generators (in the absence of this Modification) to limit their trading in forward and Day Ahead markets, and instead trade close to real time (e.g. in the Balancing Mechanism). This Modification will reduce the need for gas-fired generators to do that, increasing liquidity in forward and Day Ahead markets.

This Modification does not protect Generators from all Imbalance Charges arising from Load Shedding, only those that relate to contracted positions entered into in advance. This is intended to ensure that the Modification does not create perverse incentives for generators to continue trading while subject to Load Shedding even when they are unlikely to be able to deliver the traded volumes.

Urgent Modification Consultation Questions
Do you think P448 will improve market liquidity or not?
Do you agree or disagree with the quantum outlined in the P448 Modification Proposal Form and Consultation document, and will this lead to an increase in parties leaving the market?
The Workgroup invites you to give your views using the response form in Attachment B

Legal Text Changes

To give effect to P448, amendments are required to:

- BSC Section B 'The Panel'
- BSC Section G 'Contigencies'
- BSC Section M 'Credit Cover and Credit Default'
- BSC Section Q 'Balancing Mechanism Activities'
- BSC Section T 'Settlement and Trading Charges'
- BSC Section X Annex X-1 'General Glossary'
- BSC Section X Annex X-2 'Technical Glossary'
- BSCP18 'Corrections to Bid-Offer Acceptance Related Data'
- SAA Service Description
- NETA IDD Part 2 Document

These changes can be seen in the proposed redlining in Attachment A.

Urgent Modification Consultation Questions
Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P448?
Do you agree with the Workgroup that the amendments to the Code Subsidiary Documents in Attachment A deliver the intention of P448?
Do you agree with the Workgroup's assessment that P448 does impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?

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Do you have any comments on the impact of P448 on the EBGL objectives?
The Workgroup invites you to give your views using the response form in Attachment B

Alternative solution

No formal BSC Alternative has been suggested at this stage, however the Workgroup is considering the possibility of different options that may extend the scope of the solution to BM Units not active in the BM and/or other events that prevent a Generator from generating during a Network Gas Supply Emergency. Responses to the Urgent Modification Consultation will assist the Workgroup in determining the suitability of different options for an Alternative.

The options being considered by the Workgroup are as the original, but in addition:

Option 1

The Committee can adjust Physical Notifications (PNs) up and down, including creating a PN for a Balancing Mechanism Unit (BMU) where there wasn't one before.

Option 2

Valid reasons for creating an acceptance includes:

(i) the suspension of daily firm capacity auctions as a result of a stage 2 Network Gas Supply Emergency; and/or

(ii) a pre-emergency action pursuant to para 165 of the Exit Capacity Release Methodology Settlement; and/or

(iii) an instruction from a Gas Distribution System Operator (GDSO) to a generator following a GSO instruction which has the same effect as the above (or the proposed).

Urgent Modification Consultation Questions
Do you agree with any/all of the options and why?
Option 2 of the potential Alternative Modification contains three elements, do you agree or disagree with them and why?
Do you prefer the proposed modification or the options being considered for a potential alternative?
Do you believe that there are any other potential Alternative Modifications within the scope of P448 which would better facilitate the Applicable BSC Objectives?
The Workgroup invites you to give your views using the response form in Attachment B

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Estimated implementation costs of P448

BSCCo (Elexon)

No changes are required to BSC Systems, as P448 is a document only change. We therefore anticipate the central implementation cost to be less than £5k for the proposed document changes. Ongoing BSC Costs are likely to be low and associated with supporting the proposed Committee.

Industry

The costs for industry will be assessed during this consultation.

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Implementation cost estimates			
Organisation	Item	Implementation (£k)	Comment
Elexon	Systems	0	No impact identified. P448 is a document only change.
	Documents	<100	L - Costs associated with updating the relevant BSC documents.
	Other	<100	
NGESO	Systems & process	<0	No impact identified.
Industry	Systems & processes		Costs to Industry will be confirmed via the consultation.
	Total	<100	

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Estimated on-going costs of P448

On-going cost estimates		
Organisation	Implementation (£k)	Comment
Elexon	<1	Costs associated with supporting the proposed Validation Committee.
NGESO	<1	Costs associated with providing the Acceptance Data (for NGSE)
Industry		Costs to Industry will be confirmed via the consultation.
Total	<100	

Urgent Modification Consultation Questions
How much will it cost your organisation to implement P448?
What will the ongoing cost of P448 be to your organisation?
The Workgroup invites you to give your views using the response form in Attachment B

P448 impacts

Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
Supplier, Generators and Trading Parties	These Parties (who pay BSUoS and Residual Cashflow Reallocation Cashflow (RCRC) will face different charges (compared to P448 not being implemented) e.g. payers of RCRC may lose out on potential windfall from distressed generators	H

Impact on the NETSO	
Impact	Estimated cost
As needed, NGESO will be required to construct and provide Acceptance Data (for NGSE).	M

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Settlement and Insights	The S&I team will be required to reconcile defaults in the Credit Default process.	L
Assurance	The Assurance team may need to provide oversight for the new Panel Committee	L

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Impact on BSC Settlement Risks
P448 is not expected to impact on any BSC Settlement Risks.

Impact on BSC Systems and process	
BSC System/Process	Impact
None	No impact identified

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
SAA	Impacts will be determined via the consultation

Impact on Code	
Code Section	Impact
BSC Section B 'The Panel'	New Section C3.6 establishing the "Gas Deficit Validation Committee" (closely modelled on C3.5, which establishes the Claims Committee).
BSC Section G 'Contingencies'	New section G6 describing the process by which the Panel verifies that the Trading Charges calculated in relation to a Gas Deficit Emergency Acceptance were consistent with defined principles; and (if not) directs appropriate amendments to Settlement data relating to that Acceptance. As for existing Contingency Provisions, Section G allocates these powers to the Panel, although in practice they would be delegated to a Committee (as envisaged by Section C3 – see above).
BSC Section M 'Credit Cover and Credit Default'	Amended to clarify that a Gas Deficit Emergency may give rise to material doubt.
BSC Section Q 'Balancing Mechanism Activities'	Amended to define a Firm Load Shedding instruction (issued by a Gas Transporter during a Network Gas Deficit Emergency) as being a new type of Acceptance (a "**Network Gas Supply Emergency Acceptance**").
BSC Section T 'Settlement and Trading Charges'	Amended to explain the Section G process: • The "Gas Deficit Imbalance Adjustment Volume" i.e., the volume of Imbalance from which the Lead Party is protected, as a result of putting the Gas Deficit Emergency Acceptance into Settlement; and • The "Gas Deficit Bid Payment" i.e., the total Bid Payment in relation to the Gas Deficit Emergency Acceptance

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Impact on Code	
Code Section	Impact
BSC Section X-1 'General Glossary'	New definitions to support the above amendments
BSC Section X-2 'Technical Glossary'	New definitions to support the above amendments.

Impact on EBGL Article 18 terms and conditions
The Workgroup believe that this Modification impacts the BSC Provisions that constitute EBGL Article 18 Terms and Conditions, as described in BSC Section F, Annex F-2.

Impact on Code Subsidiary Documents	
CSD	Impact
BSCP18 'Corrections to Bid-Offer Acceptance Related Data' Insert body copy here	Amended to provide guidance on how Network Gas Supply Emergency Acceptances are processed.
NETA IDD Part 2 Document	
SAA Service Description	
SAA User Requirements Specification	

Impact on Core Industry Documents and other documents	
Document	Impact
Grid Code	There is an interaction with the Grid Code GC0160 'Grid Code Changes for BSC Modification P448 "Protecting Generators subject to Firm Load Shedding during a Gas Supply Emergency from excessive Imbalance Charges". GC0160 seeks to facilitate the P448 solution.

Impact on a Significant Code Review (SCR) or other significant industry change projects
On Tuesday 4 October 2022, Ofgem confirmed that P448 is SCR exempt.

What are the consumer benefit areas?

1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?

2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?

3) Will this proposal support:

i)new providers and technologies?

ii) a move to hydrogen or lower greenhouse gases?

iii) the journey toward statutory net-zero targets?

iv) decarbonisation?

4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.

5) Are there any other identified changes to society, such as jobs or the economy.

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Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
1) Improved safety and reliability This Modification improves reliability and safety as it seeks to mitigate the risk to the security of supply in the electricity market, which could be caused by generators becoming insolvent due to extremely high imbalance charges and credit requirements.Add rationale and comments here	**Positive**
2) Lower bills than would otherwise be the case This Modification ensures that the risk of reduced market liquidity is mitigated, which would significantly increase wholesale electricity prices, which would be passed on to consumers, reflected in their bills.Add rationale and comments here	**Positive**
3) Reduced environmental damage The WG did not believe P448 impact this benefit.	Neutral
4) Improved quality of service The WG did not believe P448 impact this benefit.	Neutral
5) Benefits for society as a whole The combination of benefits realised from improved safety and lowering bills will ultimately create benefits for the society as a whole.Add rationale and comments here	**Positive**

Urgent Modification Consultation Questions
Will P448 negatively or positively impact your organisation?
How much will it cost your organisation to implement P448?
What will the ongoing cost for P448 be to your organisation?
Do you agree with the Workgroup's assessment of the impact on the BSC Settlement Risks?
The Workgroup invites you to give your views using the response form in Attachment B

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5 Implementation

Implementation approach

The Workgroup recommends P448 is implemented **1WD following Authority decision**, as part of a special BSC Release. This will ensure the Modification is implemented as soon as possible.

Urgent Modification Consultation Question
Do you agree with the Workgroup's recommended Implementation approach?
The Workgroup invites you to give your views using the response form in Attachment B

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Material Doubt

The material doubt provisions in Section M of the BSC give Elexon the discretion not to place a BSC Party in Credit Default, if Elexon believes there is evidence that their reported Credit Cover position does not accurately reflect their true position. Elexon can do this at the request of the Party, or on its own initiative.

Proposed P448 Solution and Draft Legal text

Elexon outlined an overview of the proposed solution, which explained how the Load Shedding (LS) instruction issued to a power station will be settled as an Acceptance, how the "material doubt" mechanism for credit cover will be used, and what records will be required to be furnished to the newly established Committee under this Modification.

Elexon explained that the proposed scope of the Solution relates to Load Shedding[7] in Stage 2 or higher, which involves the largest gas users, most likely gas-fired power stations that produce electricity being curtailed during an emergency. A member wanted to clarify how Physical Notification (PNs) will be defined in the new scenario. Another member responded, advising that the intent of G0160, the corresponding Grid Code Modification, is to define PN and provide clarity on what level of data is required from the Lead Party to the NETSO.

To expand on the details of the proposed Solution, Elexon presented the proposed Draft Legal text, outlining the changes made to each impacted BSC Section.

BSC Section Q 'Balancing Mechanism Activities'

Bid-Offer Acceptances and Types of Gas Supply Emergency

Elexon introduced the current definition of what an Acceptance is for BSC purposes and noted that P448 proposes to add a third types of Communications in Section Q 5.1.3 (c). Further, Elexon outlined the draft text which highlights the instruction from Gas Transporters (GTs) during the Gas Deficit Emergency (GDE). Elexon noted that draft relies on a reference to the Uniform Network Code (UNC).

Elexon presented the types of Gas Supply Emergency to the WG and noted the scope of P448 as being Load Shedding during Stage 2 of a GDE. Further, Elexon demonstrated an extract from the UNC, explaining the three Emergency stages and their respective process steps. The WG discussed the scope and a member suggested, in response to the scope of emergency covered by P448 that the terminology should be "network emergency" to avoid including "Local" in the terminology as proposed in Section Q3.5.1. There were no objection from other WG members and Proposer, so Elexon confirmed that it will include "Network Gas Supply Emergency" in the Section Q3.5.1 proposed draft redline text and that the reference would move from the UNC to the Procedure for Network Gas Supply Emergency[8] document.

Clarification questions for Gas System Operator (GSO)

Elexon presented some initial questions and asked the WG if there were any further clarification questions they wished to ask the GSO, to aid the creation of the P448 solution. Elexon noted that P448 applies to Load Shedding in a Stage 2 NGSE, thus the proposed

[7] Firm Load Shedding means the reduction or discontinuance of gas to a meter by a Transporter due to a Gas Deficit Emergency, in order to keep the gas transportation network safely pressurised.
[8] https://www.nationalgrid.com/gas-transmission/document/136281/download

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initial questions to GSO is seeking to determine what scenario accurately applies to Generators.

The WG agreed to the questions for the GSO, which included:

1. The WG sought to understand the information published by GSO or NEC, in relation to LS in a Stage 2+ Network Gas Supply Emergency (NGSE):

Question/Scenario	GSO's response
Will the fact that Stage 2 has started be published? To everyone, or only to certain gas parties (e.g. Shippers)?	The notice relating to Stage 2 of the NGSE will be published on the GSO's website, and also sent to Shippers.
Will the fact that Load Shedding has started be published? To everyone, or only to certain gas parties (e.g. Shippers)?	This notice will be sent to all Shippers, but will not be publicly available (on the website).
Will details of the power stations subject to Load Shedding be published? To everyone, or only to certain gas parties (e.g. Shippers)?	This information is not published by GSO. The affected power station will know (and will inform the market of what has happened through REMIT and MEL declarations).

2. The WG sought to understand the form of communication that is used for notifying a National Transmission and Gas Distribution Network (GDN) connected power station who is subject to LS in a Stage 2+ NGSE:

Question/Scenario	GSO's response
Will the communication always be from the GSO/NEC to the power station (as opposed to a communication via a third party, such as Shipper)?	Yes, the communication will always go from the GSO/GDN to the affected power station (not via the Shipper).
Is there a form of words used in the telephone call that will allow the power station to know that this is Load Shedding in a Stage 2+ Network Gas Supply Emergency (as opposed to something else, like a Stage 1 emergency, or a Local Gas Supply Emergency)?	Yes, the GSO and GDN follow defined call scripts, which are clear on the legal basis for the instruction, and the relevant Stage of the NGSE. The scripts are not exactly the same between GSO and different GDNs, but contain the same information.
Is there a specific template used for the follow-up call or email (receipt of which could be used as evidence that that power station was indeed subject to Load Shedding in a Stage 2+ Network Gas Supply Emergency)?	Yes, there are defined templates used when sending the follow-up paperwork, which will provide evidence that there was Load Shedding during a Stage 2+ NGSE. The GSO will always send a follow-up email or fax; GDNs may not in all cases (due to the potential higher volumes)

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3. The WG sought to understand if there was anything that can be done to prevent other power stations from increasing their gas offtake during a NGSE:

Question/Scenario	GSO's response
In the context of a Stage 2+ Network Gas Supply Emergency, when some power stations have been subject to Load Shedding, is there anything to prevent other power stations from increasing their gas offtake to compensate?	No, there is the potential for power stations not (yet) subject to Load Shedding during the NGSE to increase their output.

4. The WG sought to understand what happens when LS end:

Question/Scenario	GSO's response
When Load Shedding ends (i.e. power stations are allowed to start taking gas again), will they still be limited in how much they can take? Will they come back all at once, or separately? In any specific order?	The GSO and ESO have been working together to understand how restoration can take place in an orderly way, without causing further issues on the gas or electricity systems. This will involve bringing stations back in a phased way.

5. The WG sought to understand the speed at which sites subject to LS are taken off during the NGSE:

Question/Scenario	GSO's response
How 'hard and fast' is the order in which sites are subject to Firm Load Shedding (as set out in UNC TPD Q3.5.1)?	There is discretion to vary the order, and the extent to which this is likely to happen depends (among other things) on how much notice is available (to the GSO) ahead of the Emergency.

One member stated that the GSO or NEC notifying industry participants other than power stations and Gas shippers will promote greater market transparency, however, noting that a Modification might be required to amend the rules in the Gas market. Another suggested that in the absence of a Gas Modification, a minor redline text could be drafted and included in the consequential Grid Code. Some other members believed that the suggestion was out of P448's scope, thus, should be addressed by another Modification, to which no objection was received.

Urgent Modification Consultation Questions
Do you have any gas generation sites that are able to operate on an alternative fuel in the event of a Network Gas Supply Emergency, how long can you typically operate on alternative fuels, and what is the size and volume of the site?
The Workgroup invites you to give your views using the response form in Attachment B

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Information required by the Network Gas Supply Emergency Settlement Validation Committee

Elexon explained that the P448 solution proposed to establish a new Validation Committee, the Network Gas Supply Emergency Settlement Validation Committee (NGSESVC) who will validate and verify the information furnished by Generators. Further, the proposed NGSESVC will be modelled like the existing Claims Committee outlined in Section B. Elexon invited the Workgroup to provide their views.

The WG challenged whether the existing Claims Committee could be used but the Proposer felt this was not appropriate due to difference in knowledge and skills required.

The WG discussed the provision on contract notifications to the NGSESVC and how the generator/Lead Party is incentivised to provide them to the committee to ensure their financial position is adjusted accurately. The evidence provided by the generator may relate to its whole portfolio in some cases, and not just the affected unit if this demonstrated further evidence to the NGSESVC. These would be exceptional circumstances and it is in the generators interest to provide the information. The WG noted it would be helpful to amend the wording relating to the timing of provision of information to the NGSESVC to be specific.

The WG expressed a concern that the data shared with the committee will be extremely sensitive. One option could be for Elexon to act as an intermediary and share anonymised data with the committee. This was dismissed as an option as the Panel already have access to sensitive information and the generator is incentivised to share it. One WG member suggested that advice should be provided to parties to retain evidence and that on a regular basis they set out a profile on the basis of what they expect to sell/generate.

The WG invites you to provide your views on the Consultation question below

Urgent Modification Consultation Questions
Do you agree that, following a Network Gas Supply Emergency, a Panel Committee should be required to verify that the Imbalance Charges and Bid payments associated with a Network Gas Supply Emergency are appropriate?
The Workgroup invites you to give your views using the response form in Attachment B

Does P448 impact on or extend the Network Code on Electricity Emergency and Restoration (NCER) provisions in the BSC?

The Workgroup considered and agreed with Elexon's recommendation that P448 does not impact on or extend the NCER provision in the BSC, as P448 does not relate to System issues.

What communication from GSO/NEC is treated as a Gas Deficit Emergency Acceptance?

The Workgroup considered and noted the responses from the GSO in terms of the data and information that is treated as a NGSE Acceptance.

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Effect of Gas Deficit Emergency on Capacity Market and Ancillary Service payments

The Workgroup wanted to understand if the P448 solution interacts with the Capacity Market (CM) and Ancillary Services contracts, and what the impacts are

The Workgroup believe that, in the absence of this Modification, gas-fired generators would not be protected from Capacity Market penalties if a Network Gas Supply Emergency meant that they were unable to deliver their Capacity Obligations during a Stress Event. The Workgroup also discussed whether this Modification would offer any protection to Generators from Capacity Market penalties; and, were it do so, whether this would be desirable.

The Workgroup believe there is a potential for interaction between this Modification and Capacity Market penalties, because the Modification treats volumes arising from Load Shedding as Period BM Unit Total Accepted Bid Volumes (QAB^{kn}_{ij}), and the Capacity Market Rules do adjust Capacity Provider payments for these (in Rule 8.5.4(a)). Under BSC rules these volumes would also be applied as adjustments to Expected Metered Volumes (QMEij), which are also referenced in the Capacity Market Rules. However, to understand the full interaction between P448 and CM penalty payments is not necessarily straightforward. The Workgroup suggests that further investigation of this point may be required by bodies involved in Capacity Market delivery.

A number of Workgroup members felt that P448 is intended to protect Generators from Imbalance Charges rather than Capacity Market penalties, and that if there is such an interaction it is not the deliberate intention of this Modification.

The WG invites you to provide your view on the below consultation question

Urgent Consultation Questions
Do you think there are any interactions between the P448 Solution and the Capacity Market?
The Workgroup invites you to give your views using the response form in Attachment B

Does the P448 solution work for power stations in an aggregated BM unit

The Workgroup discussed different BM Unit set up scenarios and agreed that the solution would work for power stations in an aggregated BM Unit. However, the scope of the proposed solution would only include BM Units that are actively participating in the BM and that have submitted PNs. Details of possible Alternative solutions that are being considered by the WG, including expanding the scope of the solution to include BM Units where PNs were not submitted.

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7 Workgroup's Initial Conclusions

Applicable BSC Objectives

The **majority** of WG believe that P448 would better facilitate Applicable BSC Objectives (a) and (b) and so should be approved. The **majority** believed P448 would be negative against (d). The minority believe that P448 would be positive against (c). The Workgroup unanimously believes that P448 will be neutral against Objectives (e), (f) and (g).

Does P448 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[9]
(a)	• Positive	• Positive
(b)	• Positive	• Majority positive
(c)	• Positive	• Positive
(d)	• Neutral	• Majority negative
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

The initial views of the WG against the Applicable BSC Objectives considered whether the proposed solution was applicable to all sizes of gas fuelled generation. Some WG members felt that the scope of the proposed solution meant that the solution was negative against (c), in that it does not cover all parties that could face imbalance charges as a result of a gas curtailment. Other WG members considered (c) in the context of the probability that a gas curtailment would impact smaller generation sites. Others noted that it would be positive against (c) as it would encourage market liquidity, including in the longer term.

The initial views of the WG against (b) were in the majority positive, citing reasons such as more effective short term balancing. Views against (a) were positive across the group noting considerations such as security of supply and system stability.

There were a variety of initial views expressed against (d) with some WG members believing that the proposed solution complicates the existing arrangements, while others felt it could avoid parties entering default.

[9] Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.

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 [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

(g) Compliance with the Transmission Losses Principle

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Urgent Modification Consultation Questions
Do you agree with the Workgroup's initial majority view that P448 does better facilitate the Applicable BSC Objectives than the current baseline?
The Workgroup invites you to give your views using the response form in Attachment B

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P448 Terms of Reference	Conclusion
What information would the Gas Deficit Validation Committee (GDVC) require? If the GDVC is required and what expertise are needed to justify the Committee?	The WG agreed that a new Network Gas Supply Emergency Committee should be established. The data furnished to them to aid their validation will be determined by Panel.
Do the proposed legal text changes impact on or extend the Network Code on Electricity Emergency and Restoration (NCER) provisions in the BSC?	The WG agreed that P448 does not impact on or extend the NCER provisions, as P448 does not relate to System Issues.
What communication from GSO/NEC is treated as a Gas Deficit Emergency Acceptance?	The WG noted the GSO's summary on what data and communication is treated as a Network Gas Deficit Emergency Acceptance
Interaction with Partial Shutdown and Total Shutdown arrangements	The WG noted and agreed it was clear how the P448 proposed solution interacts with Partial and Total Shutdown arrangements.
Does the solution work for power stations that are in an aggregated (Supplier or Secondary) BM Unit, rather than their own BM Unit?	The WG agreed that the proposed Solution applies to power stations in aggregated BM Units.

Urgent timetable

P448 Urgent Timetable	
Event	Date
Panel submits P448 to Urgent process	29 Sept 22
Urgency letter sent to the Authority	29 Sept 22
Ofgem grants P448 urgency	30 Sept 22
Joint Workgroup meetings (Grid Code and BSC)	4 Oct 22 to 6 Oct 22
Urgent Modification Consultation	Issue by 7 Oct 22
Workgroup meeting	By 14 October 2022
Urgent Modification & EBGL Consultation (calendar month)	Issue by Oct 2022 to14 Nov 2022
Workgroup meeting	By 16 November 2022
Draft Modification Report presented to Panel	By 18 November 2022
Final Modification Report submitted to Authority	By 18 November 2022
Implementation	+1WD after Authority decision

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Workgroup membership and attendance

P448 Workgroup Attendance					
Name	Organisation	04 Oct 22	05 Oct 22	06 Oct 22	07 Oct 22
Members					
Keren Kelly	Elexon *(Chair)*	✓	✓	✓	✓
Stanley Dikeocha	Elexon *(Lead Analyst)*	✓	✓	✓	✓
John Lucas	Elexon (Design Authority)	✓	✓	✓	✓
Colin Berry	Elexon (Design Authority)	✓	✓	✓	✓
Tina Warth	Elexon (Legal)	✓	✓	✓	✓
Garth Graham	SSE *(Proposer)*	✓	✓	✓	✓
Emma Burns	Flexitricity	✓	✓	✓	✓
Phil Russell	Energy Consultant	✓	✓	✓	✓
Andrew Colley	SSE	✓	✓	✓	✓
Paul Jones	Uniper	✓	✓	✓	✓
Lisa Waters	Waters Wye	✓	✓	✓	✓
Matthew Tucker	Welsh Power	✓	✓	✓	✓
Paul Youngman	Drax	✓	✓	✓	✓
Peter Frampton	VPI	✓	✓	✓	✓
John Costa	EDF	✓	✓	✓	✓
Raoul Thulin	RWE	✓	✓	✓	✓
Camille Gilsenan	NGESO	✓	✓	✓	✗
Attendees					
Luke McCartney	Ofgem	✓	✓	✓	✓
Milly Lewis	NGESO	✓	✓	✓	✓
Shazia Akhtar	NGESO	✗	✓	✓	✓
Ruth Roberts	NGESO	✓	✓	✓	✓
Damian Clough	SSE	✗	✗	✗	✗
Chris Kukla	BEIS (Energy and security)	✗	✗	✗	✗
Sarah Howarth	BEIS (Energy and security)	✓	✓	✓	✓
Julie Cox	Energy UK	✓	✓	✓	✓
Iwan Hughes	VPI	✗	✗	✗	✗
Karl Maryon	Drax	✓	✗	✗	✗
Lee Priestley	Conrad Energy	✓	✓	✓	✗
Terry Baldwin	NGESO	✗	✗	✗	✓
Grant Griffiths	Energy Special Interest Group	✗	✗	✗	✗

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P448 Workgroup Attendance					
Name	Organisation	04 Oct 22	05 Oct 22	06 Oct 22	07 Oct 22
Gideon Miti	NGESO	✖	✖	✓	✓
Liang Wuxing	NGESO	✖	✓	✓	✓

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