

# Urgent Modification Consultation Responses



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

This Urgent Modification Consultation was issued on 7 October 2022, with responses invited by 12 October 2022.

### Phase

Initial Written Assessment

Definition Procedure

Urgent Consultation

EBGL Consultation

Implementation

### Consultation Respondents

Respondent	Role(s) Represented
Conrad Energy Limited	Generator, Supplier
West Burton Energy	Generator
AMP Clean Energy	Generator
Welsh Power	Virtual Lead Party
VPI	Generator
RWE	Generator, Non Physical Trader
Forsa Energy Gas Holdings Ltd.	Generator
NGESO	NETSO
Keadby Generation Ltd	Generator
Flexitricity Limited	Virtual Lead Party, Supplier
Sembcorp Energy UK	Generator, Supplier
Centrica	Virtual Lead Party
ESB	Generator
Drax	Generator, Supplier, ECVNA, MVRNA
Uniper UK Ltd	Generator, Interconnector User, ECVNA, MVRNA
EDF	Generator, Supplier
Statkraft	Supplier
EP UK Investments Ltd	Generator
Association for Decentralised Energy (ADE)	Trade Body

P448  
Assessment Consultation  
Responses

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Version 1.0

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Question 1: Do you agree with the Workgroup’s initial majority view that P448 does better facilitate the Applicable BSC Objectives than the current baseline?

## Summary

Yes	No	Neutral/No Comment	Other
12	6	1	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	<p>a) Protecting gas fired generation from cash-out and Elexon credit defaults during a GDE will ensure the ESO can balance the system in an efficient way both pre and post any stage 2 GDE</p> <p>b) Same answer as for (a) above</p> <p>c) The wholesale market needs CCGT’s to remain liquid and functioning</p> <p>d) The BSC Panel needs to be clear on how any claims process will work if this modification is approved</p> <p>e) No comment</p> <p>f) No comment</p> <p>g) No comment</p>
West Burton Energy	No	<p>The stated purpose of the mod is to address the risks around Gas Generators becoming insolvent as a result of high imbalance costs and credit cover requirements. However, the mod as proposed only gives cover to those Gas Generators who already have firm capacity booked. There are several Gas Generators who only procure Exit Capacity at the Day-Ahead or intraday Exit Capacity auctions. It is likely that in the event of a Gas Supply emergency that the DA Exit Capacity auctions may be suspended giving Gas Generators no protection to the Imbalance costs and insolvency risk as presented as the reason for the mod. This bestows an unfair competitive advantage on those gas generators who have procured enduring or Annual firm capacity (last available in July) which is contrary to BSC Objective (c).</p> <p>There is a significant proportion of the GB gas generation fleet – particularly those with lower load factors but which provide critical peak demand -</p>

Respondent	Response	Rationale
		which will have no protection under this modification so we do not see that there is a benefit above the baseline. It certainly does not achieve the stated objective without amendment.
AMP Clean Energy	Yes	<p>Yes, for the reasons set out in the consultation document; however, we are concerned that the proposal could fail to protect significant capacity of smaller scale generators and the suppliers that provide their offtake from the imbalance risks presented because of its focus on BMUs and FPNs as we have set out below.</p> <p>As such, we would urge the workgroup to amend its proposals whereby affected units would submit Physical Notifications (PNs) OR evidence of contractual commitments 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.</p> <p>This information would then be assessed by the proposed Network Gas Supply Emergency Settlement Validation Data Committee (NGSESVDC) to verify the data used in Settlement (and amend if necessary).</p> <p>We would also propose that the aims of the proposal could, potentially, be better met through the suspension of the market in the event of a Network Gas Supply Emergency of Stage 2 or higher.</p>
Welsh Power	Yes	We agree with the Proposer that a Gas Supply Emergency poses a material threat to gas generators this winter and that absent this modification the only mitigation measures that generators can take would be to limit forward trading or include appropriate risk premia into forward pricing either of which could lead to a further decline in market liquidity and increased price.
VPI	No	No. The Modification as proposed does not achieve its aim of protecting the electricity system in the event of a shortage of gas on the National Transmission, but does confer a competitive advantage on a limited number of generators participating in the GB electricity market (using gas exit point booked capacity we estimate that only three large generation market participants will be protected by the current Proposed solution, in

Respondent	Response	Rationale
		<p>addition to three participants with single small assets).</p> <p>In particular, the P448 proposed only allows gas burning generators who hold Enduring or have purchased Annual Firm Exit Capacity for 2022/2023 to trade into the market knowing they are protected from imbalance charges in the event of a Gas Network Supply Emergency. This decision can only be made in July each year, based on prevailing information, or at month +7.</p> <p>However, generators who have not booked Annual/Enduring Firm Exit Capacity (including 3GW of VPI capacity, and using gas exit point booked capacity we estimate at least 10.6GW capacity in total) are still unprotected in the event of an GNSE. Booking Annual/Enduring Firm Exit Capacity is generally inefficient for CCGTs, and we believe the majority of GB gas generating market participants are booking daily capacity. This decision was made in response to a change in gas capacity regime, where exit capacity charges increased up to 20,000% for some users (in October 2020), with the intent that gas generators would be incentivised to book Daily instead of Annual or Enduring Exit Capacity (per Ofgem’s decision on UNC Modification 6782 , extract below).</p> <p><small>When comparing CWD and PS methodologies in our MTD, we considered that signals introduced by CWD are unlikely to reflect, and result in significant savings to, system costs given spare system capacity. We concluded that both proposed RPMs, in combination with the introduction of floating payable prices and removal of firm capacity discounts, should remove the incentive to overbook capacity that the current arrangements tend to produce and encourage users to make more efficient use of the network.</small></p> <p>Failure to offer imbalance risk protection to these generators means that a significant proportion of gas generation still faces insolvency risk in the event of curtailment due to an actual or forecast GNSE. Insolvencies in the gas generation fleet will likely result in continued capacity shortfalls in the electricity market for the remainder of Winter increasing prices and the occurrence of demand disconnections, causing significant hardship to GB consumers. Generator insolvency would result in immediate credit and payment shortfalls across the industry, risking the trigger of cascade bankruptcies across the system.</p> <p>Those generators who would no longer face this insolvency risk as a result of the P448 proposed solution would have a significant commercial advantage over generators who are not protected.</p>

Respondent	Response	Rationale
		<p>This advantage would be conferred as a result of an ex-post change to the effect of an unrelated decision made in July, and is therefore inherently unfair (as well as contrary to the objectives of Ofgem’s UNC678 decision). The protected generators would be able to participate in the wholesale market without pricing in the insolvency risk. This means they would be able to undercut their competitors, resulting in market distortions. This is a material negative impact on BSC Objective (c).</p> <p>As the negative effects that the P448 Proposed solution seeks to mitigate are no less likely if P448 is implemented as proposed (i.e. potential insolvency of a material proportion of GB generation capacity in the event of a GNSE), the P448 Proposed solution does not provide any advantages in respect of Applicable BSC Objectives (a) or (b).</p> <p>These distortions are easily rectified by the application of all elements of the Alternative Modification.</p>
RWE	Yes	<p>P448 addresses a material issue that is likely to be impacting liquidity in forward markets and hence is likely to be beneficial to the market in general and to consumers. Currently, one way of managing the risk of gas interruptions is to offer capacity in the Balancing Mechanism rather than forward markets. By mitigating the risk, P448 is likely to reduce this effect and thereby reduce the need for NGSO to take balancing actions in the BM which supports objectives a) and b).</p> <p>By encouraging forward trading, this should also support objective c) as more liquidity in forward markets would encourage competition.</p>
Forsa Energy Gas Holdings Ltd	Partially	<p>The change better fulfils the following objectives:</p> <p>a) The ESO will be more likely to efficiently balance the system in an economic and efficient manner if it has access to as many power stations pre and post a stage 2 GDE event, however, this will only be the case if there is an equitable treatment under it of all gas fuelled power stations and the amendment does not lead to protection of all gas fuelled generation</p>

Respondent	Response	Rationale
		<p>connected to the gas transmission networks &amp; the leaves the gas fuelled generators connected to the gas distribution networks to go to the wall and, likewise, equitable treatment of gas fuelled generators that are transmission or distribution connected;</p> <p>b) The TO's system will also work more efficiently if the GDE does not unnecessarily put parties out of business in extraordinary circumstances. Having all of the gas plant more likely to remain in business will mean the TO will operate more efficiently to transit energy to customers after a GDE event;</p> <p>c) There will be a higher degree of competition if the gas plants have not gone out of business in the GDE, providing that parties are kept financially whole whilst settlement processes take place – otherwise ensuing cashflow problems could cause significant issues;</p> <p>The change does not benefit the following objective:</p> <p>d) The settlement process will be quite difficult after a GDE under this mod. Forsa would therefore recommend that the BSC Panel agrees some guidance on how the claims process will work if this mod is implemented.</p> <p>The change has little/no impact on the following objectives: e), f) and g).</p>
NGESO	Yes	NGESO supports the intent of the original proposal.
Keadby Generation Ltd	Yes	As the Proposer of P448 we concur with the Workgroup's initial majority view that P448 does better facilitate Applicable BSC Objectives (a), (b) and (c) whilst being neutral with respect to (d), (e), (f) and (g). Our rationale is as per what we set out on page 7 of the proposal form which, for the sake of brevity, we refrain from repeating here (please refer to the proposal form).
Sembcorp Energy UK	Yes	The modification is positive against objective a) as it is addressing a defect that could adversely affect security of supply. It is positive against objective b), as it should allow generating plants to start generating against as soon as possible after the instruction has been lifted, meaning the ESO will be able to balance the system better. For objective c), while it is not clear that it will improve liquidity against the 'normal behaviour', it does limit the

Respondent	Response	Rationale
		incentive for generators to reduce trading if they believe a gas emergency is likely and is therefore positive against objective c). The modification is positive against objective d, as it allows the balancing settlement arrangements to reflect circumstances outside of parties' control.
Flexible Generation Group	Yes	<p>The change better fulfils the following objectives:</p> <p>a) The ESO will be more likely to efficiently balance the system in an economic and efficient manner if it has access to as many power station pre and post a stage 2 GDE event.</p> <p>b) The TO's system will also work more efficiently if the GDE does not unnecessarily put parties out of business in extraordinary circumstances. Having all of the gas plant more likely to remain in business will mean the TO will operate more efficiently to transmit energy to customers after a GDE event.</p> <p>c) There will be a higher degree of competition if the gas plants have not gone out of business in the GDE. There should also be more competition and liquidity prior to a GDE stage 2 event if parties are less worried about being held whole in an emergency scenario.</p> <p>d) No – the settlement process will be quite difficult after a GDE under this mod. FGG would therefore recommend that the BSC Panel agrees some guidance on how the claims process will work if this mod is implemented.</p> <p>e), f) and g) – n/a</p>
Centrica	No	<p>Given the shorter than normal timescales for responding to this modification we have been unable to fully review all the questions in the consultation. The potential for this issue to occur is not new and previous projects/workgroups were intended to make recommendations to provide potential solutions. However, these have not been taken forward. The solution proposed has not gone through the usual review cycles and may have unintended consequences.</p> <p>Centrica believe that the BSC in its existing form can address concerns of the impact on the power market from a Gas Supply Emergency.</p>

Respondent	Response	Rationale
		<p>Within the BSC, Section G "Contingencies", Part 4 "Civil Emergencies and Fuel Security Periods" describes how, for any period after the "Secretary of State gives a direction under Section 34(4)(b) of the Act", limits on Balancing Mechanism submitted prices would be set based on the median submitted prices for the BMU over the last 30 days (Section G : 4.3, Section Q: 5.5), and a revised Credit Assessment Price would be determined (Clause 4.4) during each relevant Settlement Period.</p> <p>The restrictions imposed on price levels for submitted Offer and Bid prices would therefore limit cash-outs to levels that could be more reasonably expected based on recent BOD submission.</p> <p>Under a Gas Supply Emergency, gas fired power stations with a Gas Operations Margin contract with NG GSO would have already been instructed by NG GSO to reduce or cease their gas offtakes. The payment rates that NG GSO makes to the gas fired power station for doing so will have been agreed a long time before the current market turmoil. As the gas fired power station would be in imbalance for the power it cannot produce, the likely that cost of buying replacement power or of power imbalance in the current market will exceed the Gas Ops Margin contract receipts by some way.</p> <p>The Modification Proposal seeks to assist those gas fired power stations impacted by NG GSO's actions after other gas commercial actions have been exhausted. In any previous time, if a gas fired power stations were to be interrupted by NG GSO outside of commercial agreements the expectation would be long gas (actuals offtakes&lt;contract volumes bought), be short power (actuals generated&lt;contract volumes sold) and to have needed to source the power short In the market or to carry volumes in to (power) energy imbalance.</p> <p>For those gas fired power stations with an alternative fuel supply, e.g. distillate back-up, the Modification proposal could be seen as preferable</p>

Respondent	Response	Rationale
		to switching to the alternative fuel supply and remaining generating.
ESB	No	<p>As proposed, the Modification does not achieve its aim of protecting the electricity system in the event of a shortage of gas on the National Transmission System. However, it does confer a competitive advantage on a limited number of generators participating in the GB electricity market – we believe that only 3 generation market participants will be protected by the current proposal. This is because the P448 proposal as drafted, only allows gas burning generators who hold Enduring or have purchased Annual Firm Exit Capacity for 2022/2023 to trade into the market with protection from imbalance charges in the event of a Gas Supply Emergency (GSE). This decision can only be made in July each year, based on prevailing information, or at month +7.</p> <p>Generators that have not booked Annual Firm Exit Capacity (including c.1.3GW of ESB capacity) are still unprotected in the event of an GSE. Booking Annual Firm Exit Capacity is generally inefficient for CCGTs, and we believe the majority of GB gas generating market participants are booking daily capacity. This decision was made in response to a change in gas capacity regime in October 2020, where exit capacity charges increased significantly for some users – this incentivised gas generators to book Daily instead of Annual or Enduring Exit Capacity. If imbalance risk protection is not offered to these generators will mean that a significant proportion of gas generation will still face insolvency risk in the event of curtailment due to an actual or forecast GSE. Insolvencies in the gas generation fleet will likely result in continued capacity shortfalls in the electricity market for the remainder of winter, leading to higher prices and demand disconnections. Generator insolvency would result in immediate credit and payment shortfalls across the industry, risking a cascade of bankruptcies across the system.</p> <p>Those generators who would no longer face this insolvency risk as a result of the P448 proposed solution would have a significant commercial advantage over generators who are not protected. This advantage would be conferred as a result of</p>

Respondent	Response	Rationale
		<p>an ex-post change to the effect of an unrelated decision made in July and is therefore inherently unfair The protected generators would be able to participate in the wholesale market without pricing in the insolvency risk, meaning that they could undercut their competitors, resulting in market distortions. This is a material negative impact on BSC Objective (c).</p> <p>As the negative effects that the P448 Proposed solution seeks to mitigate are no less likely if P448 is implemented as proposed (i.e. potential insolvency of a material proportion of GB generation capacity in the event of a GSE), the P448 Proposed solution does not provide any advantages in respect of Applicable BSC Objectives (a) or (b). These distortions can be rectified by the <b>application of all elements of the Alternative Modification.</b></p>
Drax	Yes	<p>We believe the proposal would have a beneficial impact on the security of the electricity system if there is Network Gas Supply Emergency (NGSE) Stage 2 firm load shedding of gas fuelled power stations. The proposal addresses the commercial impact on the electricity market of the gas firm load shedding instruction by keeping those gas generators commercially whole and providing temporary relief from full application of the BSC credit requirements. This should ensure that detrimental impacts on the electricity market are at least partially mitigated. Compared to the current arrangements the proposal is beneficial with respect to BSC applicable objective (b) The efficient, economic and co-ordinated operation of the National Electricity System. Against the other BSC applicable objectives we believe the proposal is neutral.</p>
Uniper UK Ltd	Yes	<p>This modification should promote security of supply and also competition in the wholesale market by removing a barrier to liquidity in more forward timescales.</p>
EDF	No	<p>EDF notes the interaction between gas fired power stations and the significant imbalance charges they might face in the electricity market in the event they have their gas supplies curtailed during a Stage 2 of a Network Gas Supply Emergency. We agree that given the threat to gas supplies this winter from</p>

Respondent	Response	Rationale
		<p>Russia's war in Ukraine there is a risk of gas supply interruptions which will exponentially increase already high gas and electricity prices and this could leave gas-fired generation facing significant imbalance charges (as high as £267m/d for a 1.2GW CCGT written in the proposal) leaving them at financial risk. Accordingly, we agree with the proposer that the current arrangements have the potential to have a detrimental impact on electricity market and consumers in three specific ways:</p> <ol style="list-style-type: none"> <li>1. Lower liquidity from CCGTs not selling forward for fear of being left financially exposed on the day in such event (but this will be limited to the extent that CCGTs have not already sold forward)</li> <li>2. Higher power prices as a result</li> <li>3. Disorderly market exit from bankruptcy.</li> </ol> <p>However, we have four specific concerns with this proposal:</p> <ol style="list-style-type: none"> <li>1) It only considers gas-fired generation being disconnected during a Stage 2 Gas supply emergency when actually there are many actions beforehand which could equally see them curtailed. For instance, it is likely that the GSO would pause the NTS Exit Capacity auctions or reduce the Firm Exit capacity made available in such auctions under para. 165 of the Exit Capacity Release Methodology Statement (ExCR). Given c.50% of all CCGTs rely on this service to access firm Exit capacity rights to be able to run their stations then the modification only seeks to address part of the issue, and, in doing so, creates material discriminatory effect: <ol style="list-style-type: none"> <li>A) We understand gas modification UNC0805 Introduction of weekly Exit Capacity auctions is currently with Ofgem for a decision. If implemented EDF believes it may make a difference in providing confidence to CCGTs that they can access firm Exit capacity further ahead in time than just day-ahead. This could help to mitigate this concern.</li> </ol> </li> <li>2) The effect of this proposal is to fully protect a subset of CCGTs in the event of a gas emergency and this insurance [will be?] effectively provided by consumers. Consumers arguably gain from providing this insurance for</li> </ol>

Respondent	Response	Rationale
		<p>the reasons set out above. However, it is not clear that this is the most cost effective means of addressing the issue and by providing full protection this could lead to unintended consequences/behaviours. E.g perverse behaviours day-ahead knowing that they are fully protected. We believe it is better value for consumers to have a premium paid for this protection or have a cap on the extent of cover the CCGTs could potentially get.</p> <p>3) Type of Network Gas Supply Emergencies – the proposal appears to go beyond the defect by including events completely unrelated to a gas shortage. Specifically, it applies to 3 types of Gas Emergencies including Critical Transportation Constraints which could happen at any time of the year, not just winter when gas supplies could run out. This is potentially discriminatory and unjustified.</p> <p>4) The Claim Validation process – this proposal has not set out how this role will be performed, raising concerns about how robustly and fairly such protection could be adequately determined for each CCGT impacted.</p> <p>As such we cannot support this modification proposal as it is given it could have a detrimental impact on both competition (RO “c”) and could worsen the efficient, economic coordinated operation of the NETS (RO “b”) with the rest of the Relevant Objectives being neutral.</p> <p>We prefer option 2 of the alternatives being developed as this would eliminate the key risk no.1 we identify above.</p>
Statkraft	Yes	<p>While the proposal is generally an improvement relative to the current baseline, it is crucial (in particular relative to objective (c) of the Applicable BSC Objectives) that P448, or an alternate Mod, consider the impact of gas curtailment for smaller sites and ensures that they receive comparable protections to those being offered to larger gas generators if P448 were to be adopted. The use of FPNs for balancing mechanism units provides some</p>

Respondent	Response	Rationale
		<p>support to such affected units however we would ask that the alternate solution is broadened such that there is a means by which smaller units, who will also be affected by the stage 2 or higher Network Gas Supply Emergency events, are able to submit their delivered position in a FPN type format ahead of the Load Shedding instruction similar to their BM counterparts. This will provide a fair basis for their imbalance risk to also be considered as a result of adherence to the gas event.</p>
EP UK Investments Ltd	Yes	<p>The change better fulfils the following objectives:</p> <ul style="list-style-type: none"> <li>a) The ESO should be able to more efficiently balance the system in an economic and efficient manner with more power station availability if they have not gone out of business as a result of a stage 2 GDE event.</li> <li>b) Transmission networks should operate more efficiently if the GDE does not unnecessarily put gas plant owners out of business. The TOs and ESO need to bigger plants to maintain system stability and would therefore want them back after a GDE.</li> <li>c) The design of the mod will support liquidity. If parties are not protected they will not trade except in the very short term. There will be a higher degree of competition with greater liquidity and by keeping parties from defaulting.</li> <li>d) The settlement process looks rather long and difficult after a GDE under this mod. Parties may be helped in the BSC Panel could issue some guidance on how the claims process will work if this mod is implemented.</li> </ul> <p>e), f) and g) – are not relevant.</p>
ADE	No	<p>We agree with the workgroup that the intention behind the proposal better facilitates BSC Objectives. However, for reasons explored further below, those objectives will only be achieved if both the devised workgroup Options 1 and 2 are incorporated. Therefore, as it stands, P448 does not.</p>

Question 2: Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P448?

## Summary

Yes	No	Neutral/No Comment	Other
11	2	2	3

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	<p>The P448 modification as proposed is for transmission connected gas assets that are BMU's</p> <p>The P448 modification therefore discriminates against gas assets that are:</p> <ul style="list-style-type: none"> <li>a) BMU's but not connected to the transmission system</li> <li>b) Not BMU's</li> </ul> <p>The commercial rationale for P448 i.e. to protect gas assets from cash-out and Elexon credit default and also to protect liquidity in wholesale market are the same for a gas asset regardless of whether it's a transmission connected BMU or not.</p> <p>Additionally Ofgem and BEIS have talked about a level playing field in the markets for some years – this mod doesn't feel like it ticks that box.</p> <p>The mod should be extended to include assets categorised in a) and b) above</p>
West Burton Energy	Yes	No rationale provided
AMP Clean Energy	Partially	The text delivers its intentions with regards to BMU sites which submit FPNs, but leaves a number of other types of parties exposed to the huge imbalance risks set out in the consultation. As such, the proposal and associated legal text only partially meets its aims.
Welsh Power	Yes	No rationale provided
VPI	Yes	The legal text would deliver the intent of P448
RWE	Yes	The changes needed to implement P448 are reasonably straight forward and are delivered by the drafting.

Respondent	Response	Rationale
Forsa Energy Gas Holdings Ltd	No	It is not clear what happens to MVRNs and it is essential that the mod adds clarity in this regard. Forsa believes that these should stand and be based on a PN submitted by the parties and backed by evidence of the contract and how the MVRN volumes are arrived at. This could be based on the time of day the previous day or week, or a preagreed schedule that existed at the start of a stage 2 GDE event
NGESO	Yes	A final check is needed to ensure the BSC and Grid code legal text is consistent (e.g. PN definition).
Keadby Generation Ltd	Yes	We agree that the draft legal text delivers the intention of P448. In terms of the Network Gas Supply Emergency it would be helpful in the legal text (in the definition?) to be clear that this includes all three relevant scenarios; namely (i) a Gas Deficit Emergency (ii) a Monitor Breach and (iii) a Critical Transportation Constraint; that could give rise to a Stage 2 (or higher) load shedding situation (to which P448 Original is only applicable)
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group		It is not clear what happens to MVRNs. FGG believes that these should stand and be based on a PN submitted by the parties and backed by evidence of the contract and how the MVRN volumes are arrived at. This could be based on the time of day the previous day or week, or a pre-agreed schedule that existed at the start of a stage 2 GDE event. However it should be clear that ALL contracted positions from gas fired generators who are interrupted in stage 2 of a GDE are effectively honoured in settlements.
Centrica	No comment	No rationale provided.
ESB	Yes	No rationale provided.
Drax	Yes	Yes, the legal text appears to deliver the intent of the original proposal and is limited to the instruction to Firm Load Shed a gas generator at stage two of an NGSE
Uniper UK Ltd	Almost	The drafting in Section M 1.2.1A should probably refer to the Subsidiary Party as well as the Lead Party of the affected BM Unit(s) for situations where Meter Volume Reallocation Notifications are in place. The Subsidiary Party may be most affected, as a

Respondent	Response	Rationale
		result of Metered Volumes that it was expecting not occurring.
EDF	Yes	Yes, however it doesn't cover how the Claims Committee will be set-up by the BSC panel nor how they will assess and decide upon the validity of each claim. Given the complex contractual nature of power generators output we believe some criteria around how to assess each claim is needed to ensure accuracy and equal treatment.
Statkraft	Partially	Partially yes – however it does not consider the impact of the imbalance risk on other parties not subject to the FPN/balancing mechanism solution that has been proposed but still subject to the Load Shedding instructions
EP UK Investments Ltd	Yes	As noted above, we would want some guidance around acceptable evidence.
ADE	Yes	No rationale provided.

Question 3: Do you agree with the Workgroup that the amendments to the Code Subsidiary Documents in Attachment A delivers the intention of P448?

### Summary

Yes	No	Neutral/No Comment	Other
13	0	5	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	<p>Implementation yes but the mod needs to be extended per my answer to question 2 above.</p> <p>There also needs to be guidance on the sort of evidence that is likely to be considered acceptable in the claims process.</p>
West Burton	Yes	No rationale provided
AMP Clean Energy	Partially	See answer to Question 2
Welsh Power	Yes	No rationale provided
VPI	Yes	The drafting would deliver the intent of P448.
RWE	Yes	We consider these amendments to be appropriate.
Forsa Energy Gas Holdings Ltd	Yes	<p>Largely yes, but there needs to be a broader approach taken to power generators supplied by natural gas through the gas distribution system. The Working Group has sought to exclude Local Gas Emergencies, and limit this to stage 2 of Network Gas Supply Emergencies.</p> <p>It is accepted that not all Local Gas Emergencies should be included (as not all Network Gas supply Emergencies are included), but it is not clear why you we would seek to exclude any curtailment by GDNOs during a Local Gas Emergency resulting from a GDNO's perception of a gas supply deficit in the local distribution network and the use of the GDNOs discretion to instruct curtailment under Local Gas Emergency procedures prior to a Stage 2 being declared nationally.</p> <p>We believe it is essential that all Gas Transporters (including GDNOs) are engaged with as part of the development of P448 to ensure agreement and engagement on how such events would play out, noting that to-date only the GSO has provided commentary and answers to questions. Qualification</p>

Respondent	Response	Rationale
		<p>for protection should be broad enough to cover instructions from a GDNO as well as the TO &amp; not restricted temporally limited to such instructions being issued after a Stage 2 emergency is declared/published.</p> <p>It is the reasoning for the issuance by a GDNO/TO of a curtailment instruction that should determine eligibility for protection, not the timing or whether its issued by one or the other. There also needs to be clear guidance around the evidence that is likely to be considered acceptable by the Committee in the claims process. We believe that this will be essential in informing decisions about the type of evidence that parties record about contractual positions going into the winter.</p> <p>Furthermore, it is clear further thought needs to be given to how instructions are provided for gas distribution connected assets, and what proof of instructions will be available/need to be provided as evidence; such as where instructions may go from Gas Transporter to Shipper to Generator.</p>
NGESO	N/A	The Code Subsidiary Documents have not been included in the consultation attachments. Therefore, NGESO cannot provide a response to this question.
Keadby Generation Ltd	Yes	We agree with the Workgroup.
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	There needs to be some guidance around the sort of evidence that is likely to be considered acceptable in the claims process. We believe that this will be important in informing decisions about the type evidence that parties record about contractual positions going into the winter.
Centrica	No comment	No rationale provided.
ESB	Yes	The drafting would deliver the intention of P448
Drax	Yes	No further comment.
Uniper UK Ltd	No comment	Changes to Code Subsidiary Documents were not included in Attachment A.
Statkraft	No comment	No rationale provided.
EDF	N/A	N/A

Respondent	Response	Rationale
EP UK Investments Ltd	Yes	Yes
ADE	Yes	No rationale provided.

## Question 4: Do you agree with the Workgroup's recommended Implementation Date?

### Summary

Yes	No	Neutral/No Comment	Other
18	0	1	0

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	Implementation yes but the mod needs to be extended per my answer to question 2 above.
West Burton	Yes	Implementation of this mod is important to reduce market uncertainty as soon as possible into the Winter period before the most likely timing of a Gas Supply Emergency.
AMP Clean Energy	Yes	No concerns to raise regarding the proposed implementation
Welsh Power	Yes	We agree that the modification, if approved, should be implemented at the earliest possible date.
VPI	Yes	It is important that P448 is implemented as soon as possible. Until implementation, uncertainty and risk prevails in the market.
RWE	Yes	The approach is appropriate.
Forsa Energy Gas Holdings Ltd	Yes	Yes.
NGESO	Yes	NGESO recognises the importance of reducing the risk of generator exposure to large volumes of electricity imbalance charges (plus the associated credit requirements). The implementation approach proposed supports the intent of the original proposal.
Keadby Generation Ltd	Yes	This concurs with what we have proposed, and we agree therefore with the recommended Implementation approach.
Sembcorp Energy UK	Yes	We agree with the reasons for Urgency and believe this modification should be in place as soon as possible this winter.
Flexible Generation Group	Yes	Yes.
Centrica	No comment	No rationale provided.

Respondent	Response	Rationale
ESB	Yes	It is important that P448 is implemented as soon as possible as uncertainty and risk will exist in the market until implementation.
Drax	Yes	No comment.
Uniper UK Ltd	Yes	The modification should be implemented as soon as possible in order to cover potential risks for this winter.
EDF	Yes	Yes, although we question whether it can be implemented in the 1 working day proposed.
Statkraft	Yes	Yes
EP UK Investments Ltd	Yes	Yes
ADE	Yes	The ADE agrees with this.

## Question 5: Do you agree with the Workgroup's assessment of the impact on the BSC Settlement Risks?

### Summary

Yes	No	Neutral/No Comment	Other
15	0	3	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	No rationale provided.
West Burton	Yes	Settlement risks have been reasonably covered.
AMP Clean Energy	Partially	Please see answer to Question 2
Welsh Power	Yes	No rationale provided.
VPI	Yes	The workgroup has adequately considered settlement risks.
RWE	No comment	No rationale provided.
Forsa Energy Gas Holdings Ltd	Yes	Forsa have not been fully able to validate the assessment in the time available; our assumed answer of "Yes" is based on the understanding that the default position for actions taken under this mod P448 would be to protect impacted parties from paying imbalance unless the panel committee finds reasons to overturn it, as opposed to being exposed to the risk until the committee agrees they have acted correctly – since the potential timescales for investigation could otherwise still leave parties open to crippling cashflow issues and negate the benefit of the mod.
NGESO	Yes	NGESO has identified an additional risk if the settlement deadline of 2 working days is not met. It is a small risk and the team within NGESO who will manage this settlement process will put additional steps in place to manage this to mitigate any BSC settlement risks
Keadby Generation Ltd	Yes	We agree with the Workgroup.
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	There must be some concerns about the length of the Panel's claims validation process, but we can

Respondent	Response	Rationale
		see no more efficient a way to do this at the current time. We would propose that the non-BM parties may need to have their positions evaluated early on in the process as they will not have had their physical positions adjusted in the same way as larger BMUs within the event itself, i.e. they don't have a PN to adjust from so need to make a post event claim.
Centrica	No comment	No rationale provided.
ESB	Yes	The workgroup has considered the settlement risks appropriately
Drax	Yes	We agree that the modification should not impact negatively on any BSC Settlement risks.
Uniper UK Ltd	Yes	No rationale provided.
EDF	Yes	Yes, this mod comes with some BSC settlement risk for the reasons stated above (no Claim Validation rules) along with unintended consequences given the speed it was developed and implemented
Statkraft	No comment	No rationale provided.
EP UK Investments Ltd	Yes	Elexon will need to careful on the credit side as a mixed portfolio could be defaulting irrelevant of the position of the gas plants.
ADE	Yes	The ADE agrees with this.

Question 6: 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?

### Summary

Yes	No	Neutral/No Comment	Other
16	0	3	0

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	No rationale provided.
West Burton Energy	Yes	No rationale provided
AMP Clean Energy	No comment	No view / concerns
Welsh Power	Yes	No rationale provided
VPI	Yes	N/A
RWE	Yes	The changes to the BSC appear to fall into sections relevant to EBGL.
Forsa Energy Gas Holdings Ltd	Yes	Yes
NGESO	Yes	NGESO agrees that the revisions to the BSC proposed by P448 impact Article 18 Terms and Conditions within the BSC
Keadby Generation Ltd	Yes	We agree with the Workgroup’s assessment that P448 does impact on the EBGL Article 18 terms and conditions related to balancing held within the BSC.
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	Yes.
Centrica	No comment	No rationale provided.
ESB	Yes	The proposal does impact the EBGL Article 18 terms and conditions held within the BSC.
Drax	Yes	Yes, we believe that the proposal does impact on EBGL as it changes the balancing arrangement

<b>Respondent</b>	<b>Response</b>	<b>Rationale</b>
Uniper UK Ltd	Yes	It affects sections of the BSC which have been identified as containing EBGL terms and conditions.
EDF	Yes	Yes
Statkraft	No comment	No rationale provided.
EP UK Investments Ltd	Yes	Yes
ADE	Yes	Yes

## Question 7: Do you have any comments on the impact of P448 on the EBGL objectives?

### Summary

Yes	No	Neutral/No Comment	Other
0	16	3	0

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	No rationale provided.
West Burton Energy	No	No rationale provided.
AMP Clean Energy	No Comment	No view / concerns.
Welsh Power	No	No rationale provided.
VPI	No	N/A
RWE	No	No rationale provided.
Forsa Energy Gas Holdings Ltd	No	No rationale provided.
NGESO	No	No rationale provided.
Keadby Generation Ltd	No	No rationale provided.
Sembcorp Energy UK	No	No rationale provided.
Flexible Generation Group	No	EBGL should be ignored!
Centrica	No comment	No rationale provided.
ESB	No	No rationale provided.
Drax	No	No rationale provided.
Uniper UK Ltd	No	No rationale provided.
EDF	No	No
Statkraft	No comment	No rationale provided.
EP UK Investments Ltd	No	We understand BEIS intends to remove EU legislation over the next 12 months and it should certainly not get the way of managing the energy market in an EU wide energy crisis.

Respondent	Response	Rationale
ADE	No	No

Question 8: The Workgroup is considering a potential Alternative Modification that they may better facilitate the Applicable BSC Objectives. Do you agree with any/all of the options and why?

## Summary

Both	One	Other/No comment
8	9	2

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	<p>Option 1</p> <p>This only applies to assets that are BMU's. The mod needs to be extended to those assets that are not.</p> <p>Option 2</p> <p>In principle Conrad fully supports protecting all plants impacted by a GDE as this would better facilitate objectives a), b) and c). However, we are concerned that the original mod was trying specifically target gas plant interrupted in a stage 2 GDE and these plants could come off in stage 1. Conrad therefore want a clear steer from Ofgem that they want this option as an alternative before it is progressed.</p> <p>It is a clear issue with the BSC change process that only one alternative can be proposed.</p>
West Burton Energy	Yes	<p>We agree with both Option 1 and Option 2.</p> <p>Option 1 is necessary to protect BMUs that do not submit PNs from the insolvency risk caused by exposure to likely massive imbalance prices.</p> <p>It is essential that Option 2 is implemented in full in order for generators who rely on DA Firm Exit Capacity to be given the same protection as those generators who have procured enduring or Annual Firm Capacity previously.</p>
AMP Clean Energy	Yes	<p>Yes, but we are concerned that neither of these proposals would provide any protection for smaller generators which are not BMUs, nor their PPA-providers.</p>

Respondent	Response	Rationale
		<p>We understand that if this is the case that this could leave some 5GW of smaller scale gas-fired generation exposed to the scale of imbalance risk set out in the consultation, which would force those same suppliers to reduce their forward and Day Ahead trading, reducing liquidity in electricity markets, and raising costs for electricity consumers.</p> <p>It is therefore essential that another alternative is formulated which addresses this issue.</p> <p>See our response to Question 11 to see how we believe this issue should be addressed.</p>
Welsh Power	Yes	<p>We believe that restricting the protection afforded by the proposed modification to only those plants submitting PNs in the Balancing Mechanism is discriminatory. All gas generators selling power forward are exposed to the same risks associated with a Network Gas Supply Emergency.</p> <p>Implementation of the 'original' modification would introduce a new defect whereby different plants would be exposed to different risks by virtue only of whether they are registered as BMUs. By way of an example we operate two plants located adjacent to each other, connected to the same local GDN. One is active in the BM and submits FPNs the second does not. A level 2 Network Gas Emergency were it to affect the gas distribution network would likely affect both plants. One would be protected under the 'original' proposed modification, the other would be exposed to imbalance prices of £3k/£6k or £9k. This appears discriminatory and we would support the progression of an alternate modification that protected all HH metered gas generators in a level 2 Network Gas Supply Emergency.</p>
VPI	Yes	<p>All elements of both options for the alternative are essential for the Modification to achieve its intended outcomes.</p> <p>Without Option 2, generators who do not hold Annual/Enduring Firm Exit Capacity or who are not connected directly to the gas transmission system remain exposed to insolvency risk if their ability to generate is curtailed by a shortfall of gas (or a perception of a shortfall of gas where decisions are still being made in commercial timescales) on the system. At the time of the Annual/Enduring Gas Capacity Exit auctions, the prevailing view was that booking Annual/Enduring or Daily gas capacity were commercially equivalent in respect of protections</p>

Respondent	Response	Rationale
		<p>from imbalance due to an actual or potential GNSE (i.e. that there were no protections), and that booking Daily Exit Capacity was the more efficient signal for gas system usage (per Ofgem UNC678 decision).</p> <p>Absent Option 2, there continues to be the potential for severe negative impacts on the operability of the electricity system in the event of a forecast or actual GNSE. Whatever the reason for auction suspension (Stage 2 or pre-emergency), the likely outcome is a severe impact on the operability of the electricity system as gas generators are not able to run, possibly leading to blackouts. If the affected generators are not protected from the impacts of imbalance pricing in this event, they face insolvency risk. In the event of insolvency, they will not return to the market post GNSE (whether forecast or actual) causing ongoing problems for electricity system operability, possibly leading to continuous blackouts until additional capacity can be secured or the generators return to operation. Generator insolvency would also result in immediate credit and payment shortfalls across the industry, risking the trigger of cascade bankruptcies across the system.</p> <p>Without Option 1, generators in BM Units which do not submit Physical Notifications remain exposed to insolvency risk if their ability to generate is curtailed by a shortfall of gas on the system.</p> <p>Absent Option 1, there is a severe negative impact on competition in the GB electricity market, as some participants are able to trade power into the future knowing they will be kept whole if left without fuel, whereas others are not and therefore will price in the potential costs to their position. This leads to a two-tier market, eliminating the level playing field resulting in inefficient market outcomes and severely undermining market integrity.</p> <p>All elements of both Options 1 and 2 are necessary for the P448 solution to result in positive outcomes against BSC objectives (a), (b) and (c), and without all of them the Proposed Modification is negative against the baseline.</p> <p>We note that all elements of the alternative solution are implemented in the same way as the Proposed, and there are no negative consequences of implementing it compared to the Proposed.</p>

Respondent	Response	Rationale
RWE	Yes	<p>We agree with the intent of Option 1, which is to ensure that types of generator that might otherwise not be covered by the changes are protected from extreme cash-out prices in circumstances outside their control.</p> <p>We consider that the range of alternatives under Option 2 are too wide. The changes should be confined to stage 2 and above Network Gas Supply Emergencies. We therefore do not agree with Option 2(ii) (or, therefore 2(iii)). There may be merit in further considering option 2(i), but care should be taken that incentives to manage disconnection risk through the forward securing of exit capacities in annual auctions are not lost. This would be a potential concern with Option 2(i).</p>
Forsa Energy Gas Holdings Ltd	Some	<p>Option 1 – this seems inline with the intent of the original mod where the PN should represent the contracted position. So if a plant were say 2 shifting we would expect the PN to come and go between its planned operating hours.</p> <p>Option 2 – In principle Forsa fully supports protecting all plants impacted by a GDE as this would better facilitate objectives a), b) and c) of the BSC. However, we are concerned that the original mod was trying specifically target gas plant interrupted in a stage 2 GDE specifically designed to capture gas transmission connected gas fuelled generators and there are elements of this that (a) extend it to plants who have not got firm transmission connections; and (b) does not adequately cover gas distribution connected gas fuelled plants. In the case of (ii) we do not believe the protections should be extended to those who have made commercial decisions to not fully contract firm gas exit capacity on the transmission system and, in the case of (iii) we believe there is a risk some gas distribution connected generators may be curtailed by GDNOs prior to Stage 2 being declared in anticipation of local gas deficits, and these plants could come off in stage 1, so the mod should clearly consider that &amp; should focus on an instruction from a Transporter (which includes GDNOs) and not have to follow the instruction of a TSO.</p>
NGESO	No	<p>NGESO supports the intent of the original proposal. Any alternatives or changes in scope need to be considered appropriately with the workgroup. The</p>

Respondent	Response	Rationale
		<p>ESO sees this modification as essential for this Winter. If there is a more robust enduring alternative, this should also be considered and discussed with the workgroup.</p> <p>Option 1 - Adjusting PNs as well as creating a PN for a BMU where there wasn't one before can only be done to reflect previously contracted positions. It should be done asap after stage 2 is declared and additional contracts should not be pursued.</p> <p>The evidence to support the need for adjusting PNs upwards is not clear to the ESO. It is expected that the contracted position would only reduce over time, therefore resulting in a PN reduction. This is not explicitly outlined in the proposal form or legal text, so may need to be an addition to the grid code and BSC legal text.</p> <p>Option 2 - This option expands the scope of the original proposal. It is unclear how the NGESO/Elexon settlement process could work under this option. A change in scope would need to be considered appropriately with the workgroup. This might be better considered after the necessary steps are in place for this Winter.</p>
Keadby Generation Ltd	No	<p>In respect of Option 1 we are mindful of the helpful advice that Ofgem provided to the 4th Workgroup meeting concerning REMIT reporting, namely:</p> <p>"REMIT requires (among other things) that market participants do not disseminate information which gives, or is likely to give, false or misleading signals as to the supply of, demand for, wholesale energy products. Where a generator is submitting physical notifications that are in line with its obligations under the Grid Code in the event of a gas emergency, this would not."</p> <p>This, when read in conjunction with the current GC0160 legal text, points to the relevant party needing to provide a correct PN in this situation (based on their contracted position). Given this we do not see the need for a submitted PN to be increased. The evidence (or lack thereof) provided</p>

Respondent	Response	Rationale
		<p>to the Validation Committee may warrant the PN being reduced.</p> <p>In respect of Option 2, likewise we are not persuaded of the need for the creation of a PN for a BMU where there wasn't one before.</p>
Sembcorp Energy UK	Option 1 – No Option 2 – Yes	<p>It is not clear from the consultation under what circumstances the committee would be able to create a new PM and so it is difficult to see how that would align with the objective of the modification. Under the original proposal, the generator may need to justify to the committee that the PN is reflective of the traded position before the gas emergency and it is difficult to see how a new PN created after the fact would improve that. Option 2 may be preferable to the original, as takes into account similar situations other than load shedding which are beyond a generating party's control and exposes them to similar excessive imbalance charges.</p>
Flexible Generation Group	Some	<p>Option 1 – The wording here is unclear. FGG believe that this seems in line with the intent of the original mod where the PN should represent the contracted position. So if a plant were say 2 shifting we would expect the PN to come and go between its planned operating hours. However, a party cannot trade after the start of a stage 2 emergency if instructed off. So any new or increase in PN must be inline with the pre-gas instruction contracted position.</p> <p>Option 2 – In principle the FGG fully supports protecting all plants impacted by a GDE as this would better facilitate objectives a), b) and c). However, we are concerned that the original mod was trying specifically target gas plant interrupted in a stage 2 GDE and these plants could come off in stage 1. The FGG would therefore want a clear steer from Ofgem that they want this option as an alternative before it is progressed.</p> <p>It is a clear issue with the BSC change process that only one alternative can be proposed.</p>
Centrica	No comment	No rationale provided.
ESB	Yes	All elements of both options for the Alternative are essential for the Modification to achieve its

intended outcomes. **Without Option 2, generators who do not hold Annual Firm Exit Capacity, or who are not connected directly to the gas transmission system, remain exposed to insolvency risk if their ability to generate is curtailed by a shortfall of gas, or a perception of a shortfall of gas** where decisions are still being made in commercial timescales. At the time of the Annual Gas Capacity Exit auctions, the prevailing view was that booking Annual or Daily gas capacity was commercially equivalent in respect of protection from imbalance due to an actual or potential GSE i.e. that there was no protection. Furthermore, it was perceived that booking Daily Exit Capacity was the more efficient signal for gas system usage as per the Ofgem UNC678 (*Amendments to Gas Transmission Regime*) decision.

Without Option 2, there is the potential for severe negative impacts on the operability of the electricity system in the event of a forecast or actual GSE. Whatever the reason for auction suspension (Stage 2 or pre-emergency), the likely outcome is a severe impact on the security of the electricity system as gas generators are unable to operate. If the affected generators are not protected from the impacts of imbalance pricing in this event, they face insolvency risk. **This would lead to ongoing security of supply issues as they will not return to the market post GSE (whether forecast or actual) due to insolvency.** Generator insolvency would also result in immediate credit and payment shortfalls across the industry, risking the trigger of cascade bankruptcies across the system.

Without Option 1, generators in BM Units which do not submit Physical Notifications remain exposed to insolvency risk if their ability to generate is curtailed by a shortfall of gas on the system. There is also the risk of a severe negative impact on competition in the GB electricity market, as some participants would be able to trade power into the future knowing they would be kept whole if left without fuel, whereas others would not and would need to price in the additional potential costs. This leads to a two-tier market, eliminating the level playing field and resulting in inefficient market outcomes.

Respondent	Response	Rationale
		<p><b>All elements of both Options 1 and 2 are necessary for the P448 solution to result in positive outcomes against BSC objectives (a), (b) and (c), and without all of them the Proposed Modification is negative against the baseline.</b></p> <p>We note that all elements of the alternative solution are implemented in the same way as the Proposed, and there are no negative consequences of implementing it compared to the Proposed.</p>
Drax	No	<p><b>Option one</b> – We do not think there are circumstances where this action by the committee to create PN should be applicable. The committee should be assessing if the imbalance claimed by the generator is justified and if not rectifying the position.</p> <p><b>Option two</b> – We see no merit in any of the proposals related to the normal operational management of Gas exit capacity. We believe it is the case that under normal operations that capacity and contractual rules are largely unconstrained. When there is an issue on the gas system the contractual parameters within the network exit agreement may be enforced by the gas transporter. We do not believe these are equivalent to the circumstances of an NGSE stage 2 firm load shedding instruction from the Network Emergency Co-ordinator.</p>
Uniper UK Ltd	Undecided	<p>At present the biggest risk comes from the potential for load shedding in Stage 2 of a gas emergency. Given the urgent timescales, we believe that modification should be as focussed as possible. Therefore, we would be concerned about extending the scope of the modification at this point. However, we believe that ultimately this risk should be removed for a broad a spectrum of parties as possible, even those who are less likely to be interrupted in as gas emergency and these additional options could form the basis of a different modification proposal, which could be considered over longer timescales.</p>
EDF	Yes	<p>As stated above we support Option 2 as an alternative were it to be raised as it would extend protection to all gas-fired generation and for all reasons of gas curtailment in or close to an</p>

Respondent	Response	Rationale
		emergency, not just Stage 2. This would therefore remove any potential discrimination highlighted above.
Statkraft	No	<p>These options are potentially not comprehensive enough and discriminate against smaller distributed generators as they do not ensure that their imbalance risks are covered. Given the market size of generation of this kind, this could lead to knock-on effects of rising end customer costs if these generators are forced to reduce their trading market commitments as a management mechanism therefore reducing market liquidity and increasing wholesale costs.</p> <p>The Workgroup should allow the use of ABSVD to adjust Suppliers trading positions where assets within their portfolio have been impacted by gas curtailment but are not participating in the Balancing Mechanism (and therefore do not have a PN or ability to accept a Bid).</p>
EP UK Investments Ltd	Some	<p>Option 1 – This seems to align with the intent of the original mod where the PN should represent the contracted position. So PNs could go up and down as the contracted position alters. We do not believe that a party cannot trade after the start of a stage 2 emergency if instructed off.</p> <p>Option 2 – In principle EPH supports protecting all plants impacted by a GDE as this would better facilitate objectives a), b) and c). However, we are concerned that the original mod was trying specifically target gas plant interrupted in a stage 2 GDE and these plants could come off in stage 1. What will be important will be to protect CCGTs who may be off before a GDE starts but are then contracted to run after the GDE starts, so cannot come back. Option 1 seems to deal with that.</p>
ADE	All	<p>The ADE supports both Options being adopted in tandem, for the following reasons:</p> <ul style="list-style-type: none"> <li>- Option 1 addresses the issue of protecting non-PN submitting BMUs from insolvency. Without this, there will be perverse impacts on competition by creating an unintended distinction between those generators who can forward trade without fear of loss in an emergency scenario and those who must</li> </ul>

Respondent	Response	Rationale
		<p>adjust their hedging strategy based on the potential financial exposure of a GDE.</p> <ul style="list-style-type: none"> <li>- Option 2 widens the effect of the modification to include the suspension of capacity as opposed to just load-shedding thereby encompassing more generators, as is the intention behind the modification. As currently drafted, only generators who have booked Annual Firm Exit Capacity or who hold Enduring Capacity will be covered whereas those who have booked daily capacity are at greater risk of the suspension of daily firm capacity auctions and more exposed to insolvency as a result.</li> </ul> <p>Both the insolvency issue and risks to competition could prove equally damaging to electricity markets and participants' faith in them, thereby exacerbating issues being faced this winter as opposed to alleviating them. Furthermore, the risk to non-dedicated electricity market participants who may use CHPs as a secondary source of income is extremely acute since they would face both production losses in a curtailment scenario and could then be exposed to massive imbalance charges.</p>

Question 9: Option 2 of the potential Alternative Modification considerations contains three elements. Do you agree with any/all of the options and why?

## Summary

All	Not all	Neutral/No Comment
10	8	1

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Some	See above
West Burton Energy	Yes	<p>We agree with all three elements.</p> <p>(i) In the event of no daily firm exit capacity auctions those generators who did not previously have firm exit capacity procured would be exposed to the full imbalance risk around any forward positions leading to potential insolvency. This element would protect those generators.</p> <p>(ii) Equally, if the suspension of the auctions takes place as a pre-emergency action the same generators would be protected under this element</p> <p>(iii) Generators who receive an instruction from their shipper during a Gas Supply Emergency will be protected by this element</p> <p>In the absence of these 3 elements, there is a significant proportion of GB Gas generation which would not be protected. Implementing these elements is a positive outcome regarding BSC Objectives (a) and (b) and will prevent an unfair competition field with those Generators who would be protected by the original Proposal adversely impacting BSC Objective (c)</p>
AMP Clean Energy	Yes	Yes, but given that only one alternative can be put forward, we would urge the workgroup and panel to consult Ofgem on whether they would be comfortable with the proposals set out in order to ensure that the alternative is not ultimately rejected by the regulator.
Welsh Power	No	We do not support (i) or (ii) in Option 2. The choice whether or not to secure annual or daily firm gas

Respondent	Response	Rationale
		<p>capacity is a commercial decision. Whilst the risks associated with relying on daily gas capacity auctions may have increased due to the current geopolitical situation the risk of a capacity auction suspension has always existed. We are supportive of the proposers view that protection should be afforded to those generators that are explicitly prevented from taking gas due to an instruction from the GSO (or GDSO as a result of a level 2 Network Gas Supply Emergency and should not be extended to afford protection from previous commercial decisions. We also understand that the suspension of capacity auctions would not prevent the generator from consuming gas in the same way as a level 2 gas emergency, it would just make it more expensive. We have more sympathy for (iii) as an instruction from the GDSO would be analogous to an instruction from the GSO.</p>
VPI	Yes	<p>All three options are essential for the Modification to achieve its intended outcome.</p> <p>Absent option (i) and (ii), gas fired generators who rely on Daily Firm Capacity auctions (including 3.3GW of VPI capacity and we believe a further significant proportion of the market) will not be protected during a GNSE. This means that they still face insolvency risk, and the system will still face operability issues following curtailments as a result of a GNSE. There will be an unacceptable distortion to competition without both of these options being implemented, resulting in inefficient market outcomes and detriment to consumers.</p> <p>Absent option (iii), gas fired generators who will receive an instruction from their shipper and not from the GSO (acting as NEC) will not be protected during a GNSE. This means that they still face insolvency risk. This is less likely to result in electricity system operability issues (due to the relative size of the assets) but will result in an unacceptable distortion to competition.</p>
RWE	No	<p>We consider that the range of alternatives under Option 2 are too wide. The changes should be confined to stage 2 and above Network Gas Supply Emergencies. We therefore do not agree with Option 2(ii) (or, therefore 2(iii)). There may be merit in further considering option 2(i), but care should be taken that incentives to manage disconnection risk through the forward securing of</p>

Respondent	Response	Rationale
		exit capacities in annual auctions are not lost. This would be a potential concern with Option 2(i).
Forsa Energy Gas Holdings Ltd	Yes – i) No – ii) Yes – iii)	See above
NGESO	No	See response to question 8
Keadby Generation Ltd	No	Whilst we appreciate the situation described by the parties supportive of this potential alternative, as the proposer of the Original, we are not supportive of the alternative as, when compared to the Original, it is not (in our view) better in terms of the Applicable BSC Objectives.
Sembcorp Energy UK	Yes	Option 2 protects generating parties from imbalance charges caused by similar instructions to load shedding and therefore addresses the defect more completely
Flexible Generation Group	Yes	See above.
Centrica	No comment	No rationale provided.
ESB	Yes	<p>All three options are essential for the Modification to achieve its intended outcome. Without options (i) and (ii), gas fired generators who rely on Daily Firm Capacity auctions, including 1.3GW of ESB capacity and a further significant proportion of the market (possibly c. 9-10GW) will not be protected during a GSE. This means that they still face insolvency risk, and the system will still face operability issues following curtailments as a result of a GSE. There will be an unacceptable distortion to competition without both of these options being implemented, resulting in inefficient market outcomes and detriment to consumers.</p> <p>If option (iii) is not implemented, gas fired generators who would receive an instruction from their shipper and not from the Gas System Operator (GSO), acting as Network Emergency Coordinator (NEC), would not be protected during a GSE. This means that they would still face insolvency risk. This is less likely to result in electricity system operability issues (due to the relative size of the assets) but will result in an unacceptable distortion to competition.</p>

Respondent	Response	Rationale
Drax	No	As answered for question eight, we see no merit in any of the proposals under option two. These are related to the normal operational management of Gas exit capacity. We believe it is the case that under normal operations that capacity and contractual rules are largely unconstrained. When there is an issue on the gas system the contractual parameters within the network exit agreement may be enforced by the gas transporter at their discretion. These are normal BAU activities that should be under the risk management of the generator. We do not believe these are equivalent to the circumstances of an NGSE stage 2 firm load shedding instruction from the GSO / Network Emergency Co-ordinator.
Uniper UK Ltd	No	As we mention above, given the urgent timescales, we believe that modification should be as focussed as possible. Therefore, we do not believe that any of the above triggers should be considered at this point. However, they could form the basis of a different modification proposal which could be considered over longer timescales.
EDF	Yes	Yes, we agree that all three issues are real risks that need to be considered and mitigated under Option 2
Statkraft	Yes	Please provide your rationale and, if 'No', please provide full details of your Alternative Modification(s) and your rationale as to why it/they better facilitate the Applicable BSC Objectives.
EP UK Investments Ltd	Yes	Under (i) it is not clear that the generators in this position cannot run in stage 1 paying for gas overrun capacity. Under (ii) we are not clear if the reference is right. (iii) should be covered if the interruption is as a result of the GSO instruction.
ADE	Yes – All	The ADE agrees with all 3 elements.

## Question 10: Do you prefer the proposed modification or the options being considered for a potential alternative?

### Summary

Proposed Modification	Potential Alternative	Neutral/No Comment
4	14	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Potential Alternative	<p>Yes – as noted above, we believe option 1 is required to make the original intent of the mod work.</p> <p>On Option 2, we also believe this is sensible, but would not want to see it progress as an alternative unless Ofgem indicates that it believes (without fettering their discretion) that this is a reasonable option to consider. If Ofgem has any concerns that adding the proposed BSC protection to gas generators potentially in a stage 1 emergency then Conrad would not support this as part of an alternative.</p> <p>Any alternative raised must include the protection outline in our Option 3 alternative – see below.</p>
West Energy Limited	Potential Alternative	The Alternative as described above.
AMP Clean Energy	Potential Alternative	See Question 11 below
Welsh Power	Potential Alternative	We prefer the Option 1 (only) alternative for the reasons outlined above.
VPI	Potential Alternative	The options being considered for a potential alternative are the only acceptable solution to the problem posed to the electricity system by GNSEs. The proposed solution only extends a partial protection, placing some gas generators in an advantageous position against other market participants while still leaving the electricity system with serious operability issues if a GNSE causes insolvency events across gas generators.
RWE	Potential Alternative – Option 1	We consider that it is reasonable to extend the provisions of P448 to a wide range of potentially exposed generators, given the circumstances that are being considered. Option 1 provides a means by which the committee can make appropriate adjustments to parts that do not fall

Respondent	Response	Rationale
		straightforwardly into categories that normally submit PNs and Bid prices.
Forsa Energy Gas Holdings Ltd	Potential Alternative	<p>Yes – as noted above, we believe option 1 is required to make the original intent of the mod work.</p> <p>On Option 2, as above for parts i and iii (with qualification) we also believe this is sensible, but that it should be expanded as per Option 3 alternative – see below.</p>
NGESO	Proposed Modification	NGESO supports the intent of the original proposal.
Keadby Generation Ltd	Proposed Modification	We prefer the proposed Original modification.
Sembcorp Energy UK	Potential Alternative	Option 2 protects generating parties from imbalance charges caused by similar instructions to load shedding and therefore addresses the defect more completely.
Flexible Generation Group	Potential Alternative	<p>Yes – as noted above, we believe option 1 is required to make the original intent of the mod work.</p> <p>On Option 2, for point (i) we are not convinced that the first of these needs to be included. If the daily firm auctions are not held, and we are in a stage 1 emergency, there seems to be nothing under the UNC to stop the genco running and paying the gas capacity overrun charge. They are therefore protected at the same point as other plant, i.e. when instructed to stop taking gas in a stage 2 emergency.</p> <p>On point (ii) we are not sure what this reference is but it seems incorrect and may mean to refer to 162, which is also related to point (i) above, so seems unnecessary.</p> <p>FGG fully support point (iii) being included as we believe all stage 2 interruptions, when initiated by the Gas SO should be included.</p> <p>Any alternative raised must include the protection outline in our Option 3 alternative – see below.</p>
Centrica	No comment	No rationale provided.
ESB	Potential Alternative	We believe that a combination of Options 1 and 2 being considered for a potential alternative are the only acceptable solution to the problem posed to the electricity system by GSEs. The proposed

Respondent	Response	Rationale
		solution only extends a partial protection, placing some gas generators in an advantageous position against other market participants while still leaving the electricity system with serious operability issues if a GSE causes insolvency events across gas generators.
Drax	Proposed Modification	We prefer the original proposal. There may be merit in the future to widening out applicability to other generators and / or other circumstances. However, this should be included in a future modification that could consider other circumstances that may be analogous to a NGSE firm load shedding instruction where imbalance and credit arrangements may be adjusted to secure the functioning and stability of the electricity market.
Uniper UK Ltd	Proposed Modification	Purely in terms of being focussed for this urgent modification, we would prefer the original to be pursued in these timescales. However, there is definitely scope for additional modifications to be considered over longer timescales.
EDF	Potential Alternative – option 2	We prefer Option 2.
Statkraft	Potential Alternative	The alternative seems to better capture all types of gas generation, but it is unclear if this will also capture assets not participating in the BM.
EP UK Investments Ltd	Potential Alternative	We would support adding in Options 1 and 2 (iii), but are not convinced that the (i) and (ii) are actually necessary. It would be useful if the GSO can confirm our understanding of using capacity overruns and the reference in (ii) should be 162, which we note only refers to constraints and not a GDE. As a general principle we fully support protecting all gas plants impacted by stage 2 of a gas deficit emergency.
ADE	Potential Alternative	We prefer Options 1 & 2 being incorporated together since they address different risks.

Question 11: Do you believe that there are any other potential Alternative Modifications within the scope of P448 which would better facilitate the Applicable BSC Objectives?

### Summary

Yes	No	Neutral/No Comment	Other
8	9	2	0

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	<p>Option 3</p> <p>Sites that are not BMUs should be able to apply to the Panel Committee to have their position adjusted if they were also subject to a stage 2 GDE interruption. This would allow for all gas fired generators to be treated in an unduly discriminatory manner. We believe that there are a number of smaller, non-BM generators that may have sold, for example, winter peaks to a market counterparty.</p> <p>There is no reason that these parties should not be held whole in the same way that a transmission connected, BMU gas asset would be.</p> <p>Conrad appreciates that the BSC Panel would want evidence that the trade had occurred before the GDE starts and can evidence the volumes, or process for setting volumes, to account for missing energy and associated imbalances for the duration of the GDE event.</p> <p>Conrad believes that this alternative would be better than the original as it would treat all impacted gas generators in the same way.</p>
West Burton Energy	No	No rationale provided.
AMP Clean Energy	Yes	<p>We are concerned that the current proposal does not protect a significant capacity of smaller gas-fired generation and their PPA providers, which are just as exposed to the impacts of load shedding in a Network Gas Supply Emergency as larger CCGTs.</p> <p>Unless action is taken to extend the current proposal, suppliers contracted with embedded generation risk facing the 'massive Imbalance Charges and credit cover requirements' outlined in the consultation document, potentially causing them to become insolvent.</p>

Respondent	Response	Rationale
		<p>Even if such an emergency does not occur, the risk that it could occur is likely to force suppliers to reduce their forward and Day Ahead trading, reducing liquidity in electricity markets, and raising costs for electricity consumers.</p> <p>We believe that there is therefore an unequivocal case to protect suppliers from Imbalance Charges caused when Load Shedding, as a result of a Stage 2 or higher Network Gas Supply Emergency, prevents them from delivering power they sold prior to receiving the Load Shedding instruction.</p> <p><b>This could be achieved through allowing suppliers to provide submit PNs OR contractual evidence where PNs are not submitted to demonstrate 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.</b></p> <p>This would then be considered by the Network Gas Supply Emergency Settlement Validation Data Committee (NGSESVDC), Applicable Balancing Services Volume Data (ABSVD) could then be used to credit Base Trading BMUs where Bids can't be allocated.</p>
Welsh Power	No	We fully support an Alternative modification that would introduce Option 1 to extend protection to all HH metered gas generators in a level 2 emergency.
VPI	No	The alternative as discussed (provided all options are progressed) is the best solution against the Applicable BSC Objectives.
RWE	No	There may be other ways of achieving the aims of Option 1, but beyond achieving those objectives, we do not believe that there are other Alternatives that need to be considered.
Forsa Energy Gas Holdings Ltd	Yes	<p>Option 3 (incorporates acceptable parts of Option 1 &amp; 2 &amp; adds further provisions:</p> <p>A) The committee can adjust Physical Notifications up and down, including creating a PN for a Balancing Mechanism Unit (BMU) where there wasn't one before.</p> <p>B) 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 or (iii) an instruction from a GDSO to a</p>

Respondent	Response	Rationale
		<p>generator which has the same effect as the above (or the proposed).</p> <p>C) Sites that are not BMUs should be able to apply to the Panel Committee to have their position adjusted if they were also subject to Load Shedding. This would allow for all gas fired generators to be treated in a non-discriminatory manner. We believe there are a number of smaller, non-BM generators that may have sold, for example, winter peaks to a supplier. There is no reason that these parties should be exposed to imbalance prices when larger generators are not.</p> <p>Forsa appreciates that the BSC Panel would want evidence that the trade had occurred before the GDE starts, that they were curtailed and can evidence the volumes, or process for setting volumes, to account for missing energy and associated imbalances for the duration of the GDE event. Forsa would note that NGESO buys significant volumes of ancillary services from non-BM units and they also account for GW of capacity in the Capacity Market. It could therefore cause significant issues for system security if there are large volumes of smaller plant going out of business because they are not protected in the way larger plants are.</p> <p>Forsa believes that this alternative would be better than the original as it would treat all impacted gas generators equitably. It therefore provides greater benefit to the market. It also better facilitates objectives a), b) and c) to the benefit of more parties than the original.</p>
NGESO	No comment	No comment
Keadby Generation Ltd	No	The proposed Original is best.
Sembcorp Energy UK	Yes	Confidential
Flexible Generation Group	Yes	Option 3 – Sites that are not BMUs should be able to apply to the Panel Committee to have their position adjusted if they were also subject to a stage 2 GDE interruption. If these plants are excluded from the claims process the mod would be unduly discriminatory. It is vital that ALL impacted gas plant are treated in an equivalent manner.

Respondent	Response	Rationale
		<p>We know that there are a number of smaller, non-BM gas fired generators that may have sold, for example, winter peaks to a Supplier and be in the Supplier's BMU. There is no reason that these parties should not be held whole in the same way that a larger generators would be. (This could be along the lines of the scenario 4 outlined on page 13).</p> <p>FGG appreciates that the BSC Panel would want evidence that the trade had occurred before the GDE starts and can evidence the volumes, or process for setting volumes, to account for missing energy and associated imbalances for the duration of the GDE event. While the imbalance may be paid by the Supplier, they can often rebill this to a site who failed to deliver. The Supplier, on behalf of the generator, should be able to lodge a claim, or the generator lodge its own claim.</p> <p>FGG would note that NGENSO also buys significant volumes of ancillary services from non-BM units and they also account for GW of capacity in the Capacity Market. It could therefore cause significant issues for system security if there are large volumes of smaller plant going out of business because they are not protected in the way larger plants are.</p> <p>FGG believes that this alternative would be better than the original as it would treat all impacted gas generators in the same way. It therefore provides greater benefit to the market. It also better facilitates objectives a), b) and c) to the benefit of more parties than the original.</p>
Centrica	No comment	No rationale provided.
ESB	No	The combined alternatives as discussed, provided all options are accepted, is the best solution against the Applicable BSC Objectives.
Drax	No	As a renewable electricity generator and supplier, we are likely to be apportioned some of the costs to ensure that gas generation is kept 'whole' from an electricity market perspective, when gas flows are curtailed by the NEC. We would welcome analysis from Elexon, the ESO or Ofgem to determine the materiality and impact for non-gas generation and electricity suppliers of this cost. That aside we do

Respondent	Response	Rationale
		think that there is a need to clarify the electricity market arrangements that should apply in the event of gas firm load shedding.
Uniper UK Ltd	No	<i>We do not have an alternative solution at this point.</i>
EDF	Yes	In addition to the points we raise in Q1 which we believe should be considered, if Option 2 were to be implemented and extended to smaller non-BMU gas-fired power stations then a requirement might be for them to become BMUs so that their "Adjusted Bids" could be treated on an equal basis with the BMU bids from larger CCGTs that could be curtailed.
Statkraft	Yes	A method in which the contractual/traded position – likened to a FPN – should be considered for generators who operate outside of balancing mechanism but instead are considered as part of the Supplier Base Trading BMUs. This can be used as evidence to demonstrate their position ahead of the Load Shedding instruction causing the deviation from their contractual positions. ABSVD can then be used to adjust the position of Supplier Base Trading BMUs where generators within the BMU were not able to generate due to gas demand control instructions. This adjustment mechanism using ABSVD was used to adjust supplier positions where instructions to reduce generation were issued under Optional Downward Flexibility Management (ODFM) and provides a clear precedent for the application here as both forms of generation reduction were due to a System Operator instruction. This should create a similar outcome to the proposed use of bids for balancing mechanism units where the Supplier Base Trading BMUs – in which the small generators are contained – are credited as a result of the inability to deliver their contracted position.
EP UK Investments Ltd	Yes	<p>We would add to Option 2 that parties with OM gas contracts, that may be called before a GDE stage 2, once we hit the GDE would be Bid off as the OM would change to a "do not start" type instruction. We believe this could be covered under Option 1, but would like the working group to confirm this.</p> <p>We would welcome the Gas So confirming to the P448 workgroup that the OM instruction would end as the stage 2 firm load shedding started. It is not clear from these OM arrangements the point these plant go from being instructed under OM to being subject to firm load shedding. We cannot see it</p>

Respondent	Response	Rationale
		<p>would make sense for an OM instruction to end and a plant restart in a stage 2 emergency.</p> <p>Our view is that as a stage 2 starts the plant off under OM contracts should switch to being firm load shedding, as that would then align the treatment of all gas plant under both gas and power rules. The GSO would need to either clarify the rules or provide a clear instruction that stage 2 had started so that the impacted plant could evidence the change in position, put their PNs back to their contracted position and the get a "BOA" to maintain their contractual position and protect them from imbalance.</p>
ADE	No	No

## Question 12: Will P448 negatively or positively impact your organisation?

### Summary

High	Medium	Low	None	Other/No comment
12	2	2	0	3

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Low	If the mod is extended (as it should be) to cover gas assets that are a) BMU's but not transmission connected and b) Not BMU's then the mod would have an impact on our portfolio and therefore our organisation.
West Burton Energy	High	P448 would negatively impact West Burton Energy. It would not offer protection against Imbalance risk in the event of a Gas Supply Emergency and in addition it would allow an unfair competitive advantage for other generators given their capacity procurement strategy.
AMP Clean Energy	High	As currently proposed, P448 will leave our entire asset base exposed to huge imbalance price risk. Approximately 2/3 of our assets are not currently in the BM and for the 1/3 that are, their only route to BM participation currently is via a supplier lead 'synthetic' BMU. This is due to our assets all being individually small in size (2MW – 6MW) and falling individually below the BM participation threshold. Furthermore, as there are no additional BM slots being allocated until January 2023 even if P448 was tweaked to allow synthetic BMUs to be protected in the same way as asset BMUs, 2/3 of our portfolio would still be exposed. As outlined in the above responses, we believe all gas fired generators (whether BMUs or not) should be afforded the same level of imbalance protection given that all are exposed to the same imbalance price risk in the event of being cut off in a gas emergency. Without the desired protection, we will have no option but to reduce our forward and Day Ahead trading, which the consultation states will have the effect of 'reducing liquidity in electricity markets, and raising costs for electricity consumers'.
Welsh Power	High	Our gas generators currently face a material imbalance exposure if they were curtailed from drawing gas from the network under a gas

Respondent	Response	Rationale
		emergency. The likely imbalance sums involved are very large.
VPI	High	The proposed solution would have a negative impact on VPI. It would place VPI at a competitive disadvantage compared to the small number of market participants that hold Enduring or have booked Annual Firm Exit Capacity, and would not provide any protections if we were curtailed due to an actual or forecast GNSE.
RWE	High	We consider that this would have a high positive impact. We anticipate that P448 could facilitate greater forward liquidity and reduced requirements for NGESO to use the BM for energy balancing. This would be to the benefit of all parties and consumers.
Forsa Energy Gas Holdings Ltd	High	<p>If implemented in a way which properly considers gas distribution assets, P448 will have a positive impact and allow our business to continue providing needed electricity to NGESO at reduced business risk. If these are not considered, or implemented badly, we would sit on a risk our projects could have liquidity problems and make trading options this winter untenable.</p> <p>We would also expect many distribution connected generators to forego participation in the wholesale markets (DA &amp; ID) if it was anticipated there was an imminent risk of curtailment. With many GWs of generation provided at a GDSO level, this is a huge risk to GB security of supply.</p>
NGESO	Positively	<p>This modification will help reduce the risk of generator exposure to large volumes of electricity imbalance charges (plus the associated credit requirements). This modification is therefore important for market liquidity, particularly over the Winter period.</p> <p>If industry foresee a Stage 1 or Stage 2 event, generators may take pre-emptive action to mitigate their imbalance risk. Therefore, this solution protects generators from this imbalance risk and maintains market liquidity</p>
Keadby Generation Ltd	Low	There will, in the context of a Stage 2 (or higher) Network Gas Supply Emergency event; need to be new internal procedures to reflect the need to provide contracted positions etc., in terms of the PN(s) for the affected site(s).

Respondent	Response	Rationale
		This is expected to be a low negative impact which, for the avoidance of doubt, is more than offset by the high positive impact that this P448 Original proposal will have (for the reasons set out in the Original proposal).
Sembcorp Energy UK	Medium – Positive	Confidential
Flexible Generation Group	High – Positive	Potentially a high positive impact, depending on which policy option is progressed.
Centrica	No comment	No rationale provided.
ESB	High – negative	The proposed solution would have a negative impact on ESB. It would place ESB at a competitive disadvantage compared to the small number of market participants <b>that hold Enduring or have booked Annual Firm Exit Capacity</b> and would not provide any protection if we were curtailed due to an actual or forecast GSE.
Drax	Negative	As a renewable electricity generator and supplier, we are likely to be apportioned some of the costs to ensure that gas generation is kept 'whole' from an electricity market perspective, when gas flows are curtailed by the NEC. We would welcome analysis from Elexon, the ESO or Ofgem to determine the materiality and impact for non-gas generation and electricity suppliers of this cost. That aside we do think that there is a need to clarify the electricity market arrangements that should apply in the event of gas firm load shedding.
Uniper UK Ltd	High – Positive	As a generator with a large amount of gas fired capacity, this will help alleviate a significant risk should a gas supply emergency arise. Without this mechanism, the only way to minimise this risk is to contract close to real time or indeed just offer plant into the Balancing Mechanism. Therefore, CMP448 will remove a barrier to contracting in the market over longer timescales.
EDF	High	Yes, we believe the discrimination that could ensue between different types of gas-fired generation and the emergency actions where they could equally be curtailed could create a competitive disadvantage.
Statkraft	Medium	If implemented in a way which provides equal protection to all gas generators, P448 will be beneficial to our organisation.

Respondent	Response	Rationale
EP UK Investments Ltd	High – Positive	A high positive impact in a GDE stage 2.
ADE	High – Negative	As currently drafted, the Proposer’s modification will negatively impact the ADE’s membership. The alternative options proposed would mitigate these impacts.

Question 13: Considering the potential Alternative Modification, will your answer to question 12 change or remain the same?

## Summary

Changes	Unchanged	No comment
10	8	1

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Changes - Medium	If Conrads alternative were to be progressed that would have a far more beneficial impact to smaller generators.
West Burton Energy	Changes	The impact would change from being negative to positive should the Alternative Modification be implemented in full as described above
AMP Clean Energy	Unchanged	Yes, unless the alternative is reconfigured to offer the same protection to impacted suppliers as BMUs.
Welsh Power	Unchanged	We favour the Alternative Option 1 and this will also have a high impact on our business
VPI	Changes	The alternative solution, if all parts of it are accepted, would positively impact our organisation in two ways. The first is in providing protection from the imbalance risk in case of an actual or forecast GNSE. The second is in ensuring we are competing on a level playing field with all other gas fired generation, contributing towards efficient market outcomes.
RWE	Unchanged	We consider the potential introduction of Option 1 would somewhat improve forward liquidity and therefore have a neutral to slightly positive impact.
Forsa Energy Gas Holdings Ltd	Changes	Were Forsa's alternative to be progressed that would have far better risk mitigation for smaller generators and so fulfil OFGEMS aims of 'level playing field' between transmission and distribution connected generation.
NGESO	Changes	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

Respondent	Response	Rationale
		<p>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).</p> <p>NGESO can only construct Acceptance Data for BM Units that are actively participating in the BM and that have submitted PNs. This will be important for any alternative raised.</p>
Keadby Generation Ltd	Unchanged	As with the Original, if an Alternative along the lines of the potential alternative were to be approved that the impacts (positive and negative) would be broadly the same for both.
Sembcorp Energy UK	Unchanged	Confidential
Flexible Generation Group	Changes	Were FGG's alternative to be progressed that would have a far more beneficial impact to smaller generators.
Centrica	No comment	No rationale provided.
ESB	Changes	The alternative solutions, provided all parts of both Options 1 and 2 are accepted, would positively impact our organisation in two ways. Firstly, it would provide protection from imbalance risk in case of an actual or forecast GSE. Secondly, it would ensure that we would be competing on a level playing field with all other gas fired generation.
Drax	Unchanged	Our answer remains unchanged.
Uniper UK Ltd	Unchanged	The alternative solution would not change our perspective on the benefits of the modification, notwithstanding our response to the above questions regarding our preference for this particular urgent modification to be more focussed on its approach given the limited timescales to assess and implement it.
EDF	Changes	We believe some of the risks highlighted from this proposal would be minimised if the alternative modification under Option 2 were raised.
Statkraft	Changes	No rationale provided.

<b>Respondent</b>	<b>Response</b>	<b>Rationale</b>
EP UK Investments Ltd	Unchanged	Still high positive impact.
ADE	Changes	Options 1 & 2 would mitigate these impacts and mean that the ADE's membership is positively impacted.

## Question 14: How much will it cost your organisation to implement P448?

### Summary

High	Medium	Low	None	Other/No comment
0	0	12	6	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Low	If Conrads alternative were to be progressed the cost impact would not be material.
West Burton Energy	None	N/A
AMP Clean Energy	Low	The cost of administering P448 would be low to our organisation given the only additional activity required, as we understand it, would be the provision of additional data (i.e. trading logs) to Elexon. Were the P448 to cover all gas fired generators, depending on the mechanics of the imbalance immunity, P448 could create cashflow issues for our organisation and also our PPA provider, Statkraft. For example, if imbalance charges are levied and then claimed back from Elexon, we / our PPA provider would need to find a financing solution for this interim period depending on the observed imbalance level as this may be beyond our cash reserves.
Welsh Power	Low	No rationale provided.
VPI	None	No cost to implement.
RWE	None	We do not anticipate any costs for implementation beyond potential changes to procedures.
Forsa Energy Gas Holdings Ltd	Low	Forsa would predominantly need to make administrative changes for which the cost would be negligible compared to the risk management benefits.
NGESO	Low	The cost to the NGESO control room and settlements teams of adapting to this change is expected to be low.
Keadby Generation Ltd	Low	As noted in our answer to Q12 above, we'd expect there to be a small cost to prepare and apply new internal procedures. This we anticipate will be less than £100k.

Respondent	Response	Rationale
Sembcorp Energy UK	Low	There would need to updates to systems such as Quorum.
Flexible Generation Group	Low	FGG members would need to make some administrative changes to make sure that full records of contractual positions are maintained over the winter in case the claims process needed to be used. The estimate cost is low compared to the potential benefits.
Centrica	No comment	No rationale provided.
ESB	None	No rationale provided.
Drax	None	There will be no direct costs from implementation.
Uniper UK Ltd	Low	This is likely to be low in cost impact for us. We will need to put in place processes to ensure that we submit Physical Notifications and Bid Prices in the appropriate manner should we be affected by a Stage 2 emergency firm load shedding, to manage the credit cover position and the submission of information to the Committee to assess our PN and Bid Price submissions.
EDF	Low	The majority of the cost will be with the ESO and Elexon who will have to implement processes to administer it; we will have minimal cost to comply with new rules if implemented.
Statkraft	Low	No major costs anticipated.
EP UK Investments Ltd	Low	We will audit how we record traded positions, but the cost will be low unless we need to make a post event claim.
ADE	N/A	N/A – As a trade association, no direct cost

## Question 15: What will the ongoing cost of P448 be to your organisation?

### Summary

High	Medium	Low	None	Other
0	3	7	5	4

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Low	Cost not material as stated above.
West Burton Energy	None	N/A
AMP Clean Energy	Low	See response to question 14
Welsh Power	Low	No rationale provided.
VPI	None	No cost to operate.
RWE	None	We do not anticipate any ongoing costs.
Forsa Energy Gas Holdings Ltd	Low	As above – low administrative costs.
NGESO	Medium	<p>The required Acceptance, settled as Bids for affected units, will require ESO resources after the Stage is declared, at very short notice. There are no new systems to develop.</p> <p>In the event of a stage 2 being declared and throughout the duration of the event, there will be system flagged balancing actions to protect the electricity system using current process. Potential additional resources may be required.</p>
Keadby Generation Ltd	Low	As noted in our answer to Q14 above, we'd expect there to be a very small ongoing cost to maintain and apply new internal procedures. This we anticipate will be significantly less than £100k per annum.
Sembcorp Energy UK	Unknown	This will depend on the timelines between the event, billing/invoicing and any claims being paid out. A long wait between the SAA-IO14 settlement runs and final settlement using gas curtailment could cause cashflow liquidity issues for some parties.

Respondent	Response	Rationale
Flexible Generation Group	Low	As above – low administrative costs.
Centrica	No comment	No rationale provided.
ESB	None	No rationale provided.
Drax	Unknown	There is likely to be no direct cost, however we would expect parties to adjust their assessment of risk and prices particularly when the gas system is constrained leading into a stage one NGSE. Market participants are likely to alter position/ prices to manage the risk of liability for balancing actions to keep Gas generation that has been firm load shed whole.
Uniper UK Ltd	Medium	We would expect our ongoing costs to be very low to zero if there is no gas emergency situation, and a medium cost associated with submitting information to the Committee should an emergency arise and we are required to use the new arrangements. We consider the potential cost of this to be well worth the reduction in risk that this would provide.
EDF	None	N/A
Statkraft	Medium	No major implementations would be required. Any protection sought under P448 would be done ad-hoc, so limited systems impact is anticipated. Changes would be required of trading systems to not close out positions in the Intraday market when a site becomes unable to generate.
EP UK Investments Ltd	Low	As above – low administrative costs.
ADE	N/A	N/A – As a trade association, no direct cost

Question 16: 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)?

## Summary

Yes	No	Neutral/No Comment	Other
13	4	2	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No comment	See Q11. While we support the mod, we do believe it needs to be widened/extended so that there is no undue discrimination between parties based on the size of their assets, BMU status or point of connection
West Burton Energy	Yes	Yes, we agree that using Bids are appropriate.
AMP Clean Energy	Yes	Please see the response to question 11
Welsh Power	Yes	No rationale provided.
VPI	No	This provision needs only a slight change to ensure it can appropriately cover impacts on gas-fired generation. Deeming the reductions in export or related increases in import to be bids provides adequate protection in the specific circumstance of Load Shedding instructions being issued. This covers the case where an imbalance is related to a Combined Heat and Power unit curtailment resulting in increased electricity import from the sites they were providing with electricity.
RWE	Yes	The approach appears to be a pragmatic one and one that we support. There may be alternatives, such as ABSVD, but the ability for the generator to indicate both its PN and Bid Price allows both visibility and scrutiny of those variables.
Forsa Energy Gas Holdings Ltd	Yes	See Q11. While we support the mod, we do believe it needs to be widened so that there is no undue discrimination between parties based on the size of their assets.

Respondent	Response	Rationale
NGESO	Yes	This is the ESO preferred option. It is our understanding that the gas emergency framework has its legal basis in the Gas Safety (Management) Regulations (linked to the Health and Safety at Work Act). The GSO will request approval from the Network Emergency Coordinator (an independent body) to declare a Network Gas Supply Emergency (NGSE). At Stage 2 of an NGSE the NEC has the power to instruct National Transmission System connected industrial and power generation demand to cease taking gas, as soon as safely possible. This is not an ESO instruction. Therefore, to protect the affected gas-fired generations from electricity Imbalance Charges, a secondary process between Elexon and NGESO needs to be created. The solution proposed enables this secondary process to take place.
Keadby Generation Ltd	Yes	Yes, we agree the mechanism is appropriate for the reasons we detailed in the Proposal.
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	See Q11. While we support the mod, we do believe it needs to be widened so that there is no undue discrimination between parties based on the size of their assets.
Centrica	No comment	No rationale provided.
ESB	No	This provision needs only a slight change to ensure it can appropriately cover impacts on gas-fired generation. Deeming the reductions in export or related increases in import to be bids provides adequate protection in the specific circumstance of Load Shedding instructions being issued.
Drax	Yes	No rationale provided.
Uniper UK Ltd	Yes	No rationale provided.
EDF	Yes	Yes, but effective scrutiny will need to be given as to the costs and facts considered in such a bid. In addition as we raise in Q1 other options could be considered such as charging a premium for this insurance or a cap in the amount being claimed for (such as 50%?)
Statkraft	No	The impact of not being able to generate.
EP UK Investments Ltd	Yes	Yes.

Respondent	Response	Rationale
ADE	No	The only issue is that the wording at present does not cover situations where an imbalance is related to a CHP unit curtailment resulting in increased electricity import from the sites they were providing with electricity. Therefore, the wording should be amended to read: "reductions in export or related increases in import"

Question 17: 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)?

## Summary

Yes	No	Neutral/No Comment	Other
6	7	6	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No comment	No rationale provided.
West Burton Energy	No	No preference
AMP Clean Energy	No comment	No preference
Welsh Power	No	We do not have a view on the preferred option and believe both would achieve the desired outcome.
VPI	No	Provided either solution achieves the desired effect we have no preference. We believe that the material doubt provisions are sufficiently discretionary and robust to handle the scenarios envisaged in this Mod.
RWE	No comment	No rationale provided.
Forsa Energy Gas Holdings Ltd	Yes	Forsa believes using the material doubt option is easy to administer in a timely manner.
NGESO	No comment	No comment
Keadby Generation Ltd	Yes	At this moment in time (absent considering responses to this consultation) Material Doubt seems to be a neater and tidier as these arrangements already exist within the BSC whereby ELEXON can reconsider Credit Default if the stated position(s) appear inaccurate, which is exactly the situation here. It would appear that the contingency arrangements are more suited to after the events and Trading Charges as opposed to Credit Defaults.

Respondent	Response	Rationale
Sembcorp Energy UK	Material doubt	Given that this will a highly uncertain, and unprecedented time, it seems sensible to allow Elexon some discretion to avoid further pressure on parties.
Flexible Generation Group	Material doubt	FGG believes using the material doubt option is easy to administer in a timely manner. However Elexon would need to consider a whole portfolio not just one plant. How that is achieved is not clear.
Centrica	No comment	No rationale provided.
ESB	No	We have no preference, provided that each solution achieves the desired effect. We believe that the material doubt provisions are sufficiently discretionary and robust to handle the scenarios envisaged in this modification.
Drax	Yes	The drafting based on the existing contingency arrangements appeared less open to interpretation than the material doubt provision.
Uniper UK Ltd	No	Either could form an appropriate basis for removing the credit cover risk. As long as the Material Doubt Guidance records that this is a valid circumstance then there may not need to be a change to Section M. However, please note our response to question 2. The guidance should make it clear that the Material Doubt provisions may need to be used in respect of the credit positions of the Subsidiary Party as well as the Lead Party where an MVRN arrangement is in place.
EDF	No	Not at this stage.
Statkraft	No	This protection should extend to Suppliers who are impacted by gas generators not being able to generate due to gas supply interruption.
EP UK Investments Ltd	Yes	Material doubt looks like an easy to administer option, but Elexon would need to consider if all of the party's asset were still solvent in events covering multiple assets with different fuels.
ADE	No comment	The ADE does not have a position as long as the solution achieves the desired effect.

Question 18: 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?

## Summary

Yes	No	Neutral/No Comment	Other
18	0	1	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	<p>This modification will result in costs being reallocated between BSC parties. It will therefore be important that is achieved in a fair manner and the BSC Panel will be critical in checking that is the case.</p> <p>Either we protect them from what is essentially a force majeure event or we don't.</p> <p>Limited protection could quickly unravel to be insufficient protection and then all of the issues the mod is seeking to address become issues again.</p>
West Burton Energy	Yes	<p>Yes, it is important that the imbalance charges and bid payments are appropriately verified to ensure that generators are not gaining an advantage for reasons other than a Gas Supply Emergency</p>
AMP Clean Energy	Yes	<p>Yes – we think it is appropriate that claims / charges are reviewed by a panel</p>
Welsh Power	Yes	<p>We believe it is important for the Panel Committee to verify the appropriate Bid payments to ensure there is no gaming of the system.</p>
VPI	Yes	<p>The P448 solution is designed to keep generators whole in the specific circumstance of NGSE and it is appropriate to implement a level of scrutiny to reduce the risk of generators seeking to gain an advantage or to avoid costs for other reasons. Without this verification, there could be distortions to efficient market outcomes.</p>
RWE	Yes	<p>The validation of both the price and volume sits appropriately with a Panel Committee. We do not see a viable alternative to achieve this with a reasonable level of efficiency.</p>

Respondent	Response	Rationale
Forsa Energy Gas Holdings Ltd	Yes	This modification will result in costs being reallocated between BSC parties. It will therefore be important that is achieved in a fair manner and the BSC Panel will be critical in checking that is the case.
NGESO	Yes	No rationale provided.
Keadby Generation Ltd	Yes	As we set out in the Proposal there is merit in having an independent body to validate the Imbalance Charges and Bid payment(s) associated with a Network Gas Supply Emergency (Stage 2 and higher) to ensure to stakeholders (including, in particular, BEIS and Ofgem on behalf of consumers) that the relevant parties have not received an undue advantage or an undue detriment as a result of the NGSE impacting gas supplies to their relevant site(s).
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	<p>This modification will result in costs being reallocated between BSC parties. It will therefore be important that is achieved in a fair manner and the BSC Panel will be critical in checking that is the case.</p> <p>For smaller, non-BM parties their imbalances volumes would not have been adjusted as they have no PNs. They would therefore need their positions adjusted more quickly to manage any cash-flow issues arising from a longer event. For other parties the process is a checking exercise, but for these sites they may need an energy imbalance adjustment to the Supplier's cash-out position.</p>
Centrica	No comment	No rationale provided.
ESB	Yes	<p>The P448 solution is designed to keep generators whole in the specific circumstance of a GSE and it is appropriate to implement a level of scrutiny to reduce the risk of generators gaining an advantage or avoiding costs for other reasons.</p> <p>Without this verification, there could be distortions to efficient market outcomes.</p>
Drax	Yes	No rationale provided.

Respondent	Response	Rationale
Uniper UK Ltd	Yes	It will ensure that any errors made at that time are rectified, so that affected generators are not overcompensated.
EDF	Yes	Yes, but more detail in terms of how it is set up and the criteria for robustly assessing claims is needed.
Statkraft	Yes	Given the unprecedented nature of such an event a Panel Committee should be empowered to look at all available evidence in order to ensure that any Affected Generators are treated fairly and equally.
EP UK Investments Ltd	Yes	Yes, but it will need to do so as quickly and efficiently as possible. We also note that the mod refers to this being post event. EPI suggests some interim process may be needed in an extended event.
ADE	Yes	Verification will be an important element in ensuring that this solution does not lead to market distortions or inefficiencies. However, as per Q.27 below, it will be essential to make information submission requirements easily accessible and comprehensible to all parties, not just large generators or those specialising in electricity market arrangements.

Question 19: 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?

## Summary

Yes	No	Neutral/No Comment	Other
14	4	1	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	<p>We support the principle.</p> <p>However we believe the contracted position as notified (even if going up or down) should all be protected. The aim of the mod is to get parties to on trading and not let the limited liquidity in the market dry up as parties become concerned about a GDE.</p> <p>Either we protect them from what is essentially a force majeure event or we don't.</p> <p>Limited protection could quickly unravel to be insufficient protection and then all of the issues the mod is seeking to address become issues again.</p>
West Burton Energy	Yes	<p>Agreed, there should be no protection conferred on generators after a load shedding instruction has been received. The purpose of P448 is to keep generators whole in the event of a Gas Supply emergency, not to incentivise them to continue to participate in the market.</p>
AMP Clean Energy	Yes	<p>Yes – we agree with this principle.</p>
Welsh Power	Yes	<p>The modification should not provide an incentive for generators to continue to trade in order to capitalise on the protection offered by the modification. The intent of the modification is clear that it is intended to protect a generator's position at the onset of a Gas Supply Emergency not to protect a generator from the opportunity cost of the Gas Supply Emergency.</p>
VPI	Yes	<p>The purpose of P448 is to protect generators from the worst effects of a GNSE, not to enable them to</p>

Respondent	Response	Rationale
		continue to participate in the market as if they hadn't been curtailed. Allowing them to do so would lead to further system operability problems, as they would be trading power they knew could not be delivered. It would not be appropriate for the BSC to facilitate this type of behaviour in this instance.
RWE	Yes	We believe that the intent of P448 is to protect parties from extreme cash-out as has the potential to lead to credit defaults and potential insolvencies. We do not think that it would be appropriate to then also protect parties from lost opportunities since these do not give rise to imbalance exposure.
Forsa Energy Gas Holdings Ltd	No	Forsa supports the principle, but we believe the contracted position as notified (even if going up or down) should all be protected. The aim of the mod is to get parties to on trading and not let the limited liquidity in the market dry up as parties become concerned about a GDE.
NGESO	Yes	No rationale provided.
Keadby Generation Ltd	Yes	As we set out in the Proposal it is important to ensure, with a Network Gas Supply Emergency (Stage 2 and higher), that the relevant parties have not received an undue advantage or an undue detriment as a result of the NGSE impacting gas supplies to their relevant site(s). To this end, allowing the party to be protected from Imbalance Charges based on their (credible) contracted position, going forward, at the moment of interruption is appropriate. However, to allow them to increase that contracted position after the NGSE (Stage 2 or higher) would, it seems to us (on the evidence to date) to be inappropriate.
Sembcorp Energy UK	Yes	No rationale provided
Flexible Generation Group	No	<p>FGG supports the principle, but we believe the contracted position as notified (even if going up or down) should all be protected.</p> <p>The aim of the mod is to get parties to on trading and not let the limited liquidity in the market dry up as parties become concerned about a GDE. Either we protect them from what is essentially a force majeure event or we don't. Limited protection could quickly unravel to be insufficient protection</p>

Respondent	Response	Rationale
		and then all of the issues the mod is seeking to address become issues again.
Centrica	No comment	No rationale provided.
ESB	Yes	The purpose of P448 is to protect generators from the worst effects of a GSE, not to enable them to continue to participate in the market as if they hadn't been curtailed. Allowing them to do so would lead to further system operability problems, as they would be trading power they knew could not be delivered.
Drax	Yes	No rationale provided.
Uniper UK Ltd	Yes	Generators should not take additional positions they know they are unable to meet due to the curtailment of gas to their plant.
EDF	Yes	Yes, impacted CCGTs should only be protected from their original contracted position at the time they were curtailed.
Statkraft	Yes	It is not equitable to protect generators who increase their contracted positions after they become aware that they cannot generate.
EP UK Investments Ltd	No	Yes, the protection should be from imbalance on your contracted position through a GDE stage 2 (or above) event. Parties should not be trading beyond the start of a GDE event in relation to any assets that have been given.
ADE	Yes	The ADE agrees.

Question 20: 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)?

## Summary

Yes	No	Neutral/No Comment	Other
7	9	2	1

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	<p>The parties should be protected from any “contracted” position that creates the same risk, irrelevant of how it is notified.</p> <p>While the contract may not be notified, it could be evidenced to the BSC Panel’s Committee at a later date.</p>
West Burton Energy	No	Those parties who do not have an ECVN should also be protected in order to avoid uncompetitive advantage. The evidence of a contractual position should be looked at by the validation committee.
AMP Clean Energy	No	<p>We believe that it is essential that Lead and Subsidiary Parties are protected in relation to contracted positions that do not require ECVN notification, e.g. contracts to supply power to customers, and that failure to do so could leave some 5GW of smaller scale generation exposed to the imbalance risk identified in the consultation.</p> <p>We believe that this can be overcome through widening the proposal to also allow the use of trading logs and evidence of contractual positions as evidence of how lead and subsidiary parties 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.</p>
Welsh Power	No comment	No rationale provided.
VPI	Yes	In order to reduce competitive distortions (and therefore inefficient outcomes and poor value for consumers) in the wholesale electricity market the

Respondent	Response	Rationale
		solution should extend to covering any position which can be robustly evidenced as existing at the time of the relevant trigger condition being met, whether that evidence is ECVNs or some other contractual obligation to run. It is important that the contracted position is sufficiently evidenced that the validation committee can determine that there was a related imbalance as a result of the gas curtailment.
RWE	No	We believe that the principles of the protection afforded by P448 should be based on the risk of exposure arising from the interruption of firm capacity rights rather than being subject to particular trading arrangements that a generator may be party to.
Forsa Energy Gas Holdings Ltd	No	<p>The parties should be protected from any “contracted” position that creates the same risk, irrelevant of how it is notified. For example a gas fired generators within a Supplier’s BMU may have a contract with the Supplier, but it is not notified as an ECVN that is not necessary. That does not make it any less of a valid contract, not the party any less at risk, etc.</p> <p>While the contract may not be notified, it could be evidenced to the BSC Panel’s Committee at a later date. Likewise a MVRN needs to stand as well. If we force all contracts to be notified as ECVN can the systems handle such an increase in volumes?</p>
NGESO	Yes	Without ECVN notifications, the settlement process between NGESO and Elexon cannot take place.
Keadby Generation Ltd	Yes	Yes, we agree with the proposed drafting; however, as regards contracted positions that do not require ECVNs we are also open to considering the responses to the consultation as to the merits (or otherwise) of this possible approach.
Sembcorp Energy UK	No	All parties that may be at risk of excessive imbalance charges should be protected, regardless of the exact nature of the contracted position
Flexible Generation Group	No	The parties should be protected from any “contracted” position that creates the same risk, irrelevant of how it is notified. For example a gas fired generators within a Supplier’s BMU may have a contract with the Supplier, but it is not notified as an ECVN that is not necessary. That does not make it any less of a valid contract, not the party any less

Respondent	Response	Rationale
		<p>at risk, etc. Equitable treatment needs to be designed into the mod.</p> <p>While the contract may not be notified, it could be evidenced to the BSC Panel's Committee at a later date. Likewise a MVRN needs to stand as well.</p> <p>If we force all contracts to be notified as ECVN can the systems handle such an increase in volumes? Where a genco is not a BSC party are we asking Suppliers to notify volumes between itself as a proxy?</p>
Centrica	No comment	No rationale provided.
ESB	Yes	It is important that the contracted position is sufficiently evidenced so that the validation committee can determine that there was a related imbalance as a result of the gas curtailment. This is required to prevent competitive distortions in the wholesale electricity market.
Drax	Yes	It is our view that the adjustment principles should be limited in this modification.
Uniper UK Ltd	Yes	Although if other circumstances can be identified and catered for without disrupting the implementation timescales for P448, then we would not be opposed.
EDF	Yes	We believe Lead and Subsidiary parties should be protected where using MVRNs (as per scenario 2 in the consultation) where 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 for example.
Statkraft	No	There should be protection for volumes which are not notified by ECVN also.
EP UK Investments Ltd	No	<p>The parties should be protected from any contracted position if the GDE stage 2 leaves them with imbalance and unpaid unavoidable costs. It will be important to protect Suppliers and smaller generators.</p> <p>While the contract may not be notified, it could be evidenced to the BSC Panel's Committee at a later date. Likewise a MVRN needs to stand as well.</p>

Respondent	Response	Rationale
ADE	Should cover positions whether ECVN or not	As per Q.8 above, the need to mitigate risks of market distortion or unfair competition necessitates that this be extended to any party that can evidence to the Committee that imbalance to a contracted position was the result of the emergency situation. This is the case whether there are ECVNs or not.

Question 21: 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)?

## Summary

Yes	No	Neutral/No Comment	Other
18	0	1	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	Not all gas assets are BMU's and transmission connected – so some further thought needs to go into this to accommodate the extended modification alternative.
West Burton Energy	Yes	Yes as the purpose of P448 is to keep gas generators whole.
AMP Clean Energy	Yes	Yes – we consider this appropriate
Welsh Power	Yes	We believe it is important for the Committee to verify the appropriate Bid payments to ensure there is no gaming of the system.
VPI	Yes	The purpose of P448 is to prevent insolvency from imbalance, not to present a commercial opportunity from bid pricing. To that extent, it is appropriate for the committee to verify that bid payments are consistent with avoidable costs.
RWE	Yes	We consider that net Avoidable Costs are an appropriate measure. When interrupted, a generator will avoid a number of costs associated directly with that generation (most notably the cost of gas). It would not be appropriate to widen consideration to indirect costs or consequential losses, and therefore the committee should apply the principle of assessing the direct costs associated with the generation that would otherwise have taken place.
Forsa Energy Gas Holdings Ltd	Yes	This seems inline with the other post event claims processes in Section G of the BSC.
NGESO	Yes	Yes NGESO agrees that it is appropriate for the Committee to verify that Bid payments from affected generators are consistent with the net

Respondent	Response	Rationale
		Avoidable Costs saved or incurred as a direct result of the Load Shedding.
Keadby Generation Ltd	Yes	As we noted in Question 18 above and as we set out in the Proposal there is merit in having an independent body to verify that the Bid payments affected generators are consistent with the next Avoidable Costs saved or incurred as a direct result of the Stage 2 and higher Network Gas Supply Emergency Load Shedding to ensure to stakeholders (including, in particular, BEIS and Ofgem on behalf of consumers) that the relevant parties have not received an undue advantage or an undue detriment as a result of the NGSE impacting gas supplies to their relevant site(s).
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	This seems inline with the other post event claims processes in Section G of the BSC.
Centrica	No comment	No rationale provided.
ESB	Yes	The purpose of P448 is to prevent insolvency from imbalance, not to present a commercial opportunity from bid pricing. To that extent it is appropriate for the committee to verify that bid payments are consistent with avoidable costs.
Drax	Yes	Yes, we agree with the intent of the proposed drafting that avoidable costs saved, for instance by not purchasing the fuel required for generation, should be taken into account.
Uniper UK Ltd	Yes	No rationale provided.
EDF	Yes	Yes, this level of scrutiny of net-avoidable costs is necessary to ensure Bid payments are as robust and accurate as possible.
Statkraft	Yes	This is appropriate. Such consideration should also consider any benefit from unwinding gas positions.
EP UK Investments Ltd	Yes	This seems inline with the other post event claims processes in Section G of the BSC.
ADE	Yes	The ADE agrees.

Question 22: 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?

## Summary

Yes	No	Neutral/No Comment	Other
18	0	1	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	See answer to question 21.
West Burton Energy	Yes	Yes, agreed. The importance is that P448 is implemented as soon as possible and the Imbalance pricing is looked at in a post-implementation review.
AMP Clean Energy	Yes	Given the complexities of the proposal we consider, given our views above, that any implementation of P448 should be regularly reviewed post-implementation to ensure it remains fair & effective for all stakeholders.
Welsh Power	Yes	We are concerned that bid volumes entering the imbalance price calculation will lead to low imbalance prices in a very stressed short market, we consider this to be counterintuitive. Low imbalance prices during the duration a Network Gas Supply Emergency will fail to provide a market signal for generators with spare capacity to generate and may lead to a market signal to do the opposite. Whilst we believe that this is undesirable and should be addressed we nevertheless believe that the implementation of P448 leads to a better outcome than the status quo and do not believe that concerns regarding the imbalance price calculation outweigh the benefit of the proposed modification.
VPI	Yes	It is critical that P448 is implemented as soon as possible, and impacts on imbalance price are uncertain and hard to quantify. To that extend it is

Respondent	Response	Rationale
		appropriate to consider in a post-implementation review rather than in the workgroup.
RWE	Yes	We believe that there may be circumstances in which cash-out would be lower than appropriate. Consideration should therefore be given to resolving this issue.
Forsa Energy Gas Holdings Ltd	Yes	Forsa has had little time to work out if the NIV and thus prices could be impacted in such a manner as to result in perverse market signals. Some form of tagging out of the GDE related bids would be ideal, but this may not be possible in the time available. A review group could certainly look into such concerns.
NGESO	Yes	No rationale provided.
Keadby Generation Ltd	Yes	We agree with the Workgroup.
Sembcorp Energy UK	Yes	No rationale provided.
Flexible Generation Group	Yes	<p>The group has had little time to work out if the NIV and thus prices could be impacted in such a manner as to result in perverse market signals. If we assume that a GDE stage 2 calls of some demand and generation then we believe the NIV could be the “wrong way”. For example, we lost 5GW of generation and 200MW of demand, then the ESO is pulling back on 4.8GW of generation and the NIV says the system was long. Depending on the technologies now generating, there is a possibility the prices go lower as the system is more stressed, sending the wrong signal to the market.</p> <p>Some form of tagging out of the GDE related bids would be ideal, but this may not be possible in the time available. A review group could certainly look into such concerns.</p>
Centrica	No comment	No rationale provided.
ESB	Yes	P448 should be implemented as soon as possible to reduce risks for gas-fired generators. Therefore, it is appropriate to consider in a post-implementation review rather than in the workgroup.
Drax	Yes	Yes, we agree with the proposal to refer to an issue workgroup.

Respondent	Response	Rationale
Uniper UK Ltd	Yes	The imbalance price is not likely to be lower as a result of this modification than that which would have existed had the gas not been curtailed to affected generators. That is, the current proposal is to calculate the imbalance prices on the length of market that would have existed in the absence of the gas curtailment. However, there is scope to consider whether the imbalance price should instead be calculated on the basis of the shorter position implied by the gas plant being curtailed. This will need longer consideration.
EDF	Yes	Yes, makes sense to cover unintended consequences from this issue.
Statkraft	Yes	No rationale provided.
EP UK Investments Ltd	Yes	<p>EPH is concerned that the bid stack will be larger than the offer stack, as some demand will have come off as well, so the volume bought will be less than the volume "sold". This could result, at least in the short terms with some odd prices which could discourage self despatch by smaller plants.</p> <p>Has the group considered that in a stage 2 emergency when these bids exist they are either flagged and removed from the stack or the default is that the offer acceptances set the price irrelevant of the NIV?</p>
ADE	Yes	The ADE agrees.

Question 23: 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?

## Summary

Yes	No	Neutral/No Comment	Other
0	14	5	0

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	No rationale provided.
West Burton Energy	No	No rationale provided
AMP Clean Energy	No	All of our gas generation sites are only able to operate on natural gas
Welsh Power	No	No rationale provided.
VPI	No	None of our assets can export by utilising alternative fuels.
RWE	No	No rationale provided.
Forsa Energy Gas Holdings Ltd	No	Whilst this is something we continue to look at, at present all our generation operates solely on mains gas.
NGESO	N/A	N/A
Keadby Generation Ltd	No	No rationale provided.
Sembcorp Energy UK	No	No rationale provided.
Flexible Generation Group	No comment	No rationale provided.
Centrica	No comment	No rationale provided.
ESB	No	No rationale provided.
Drax	No	No rationale provided.
Uniper UK Ltd	No comment	No rationale provided.

Respondent	Response	Rationale
EDF	No	No but we believe that any gas-fired generation with back-up alternative supplies should not be allowed to claim for this level of protection.
Statkraft	No	No rationale provided.
EP UK Investments Ltd	No	No rationale provided.
ADE	N/A	N/A

## Question 24: Do you think there are any interactions between the P448 Solution and the Capacity Market?

### Summary

Yes	No	Neutral/No Comment	Other
14	3	1	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	Yes	<p>Conrad is concerned that the Bid adjusts the obligated output of the CMU. While this may not be the intent, in a large GDE event it may not be helpful to BEIS if a significant volume of CMUs hit their maximum CM exposure very quickly. It may therefore be better to add into the CM Rules a force majeure clause that covers this type of unforeseen, unavoidable risk. This was an issue that the industry raised when the CM was designed.</p> <p>If BEIS wants to manage the risk from a market wide gas supply disruption, then it should make a change to the CM Rules. If it does not want to offer this type of protection to generators then it should clarify that the CM rules so that it is clear that a Gas Deficit Bid does not adjust the obligation under the CM.</p> <p>It is vital the CM rules are clear as any new market entrant may otherwise take a different view to those in the market who could have been party to this debate and heard from BEIS the outcome they were expecting.</p> <p>Conrad would stress that smaller plants must be treated equitably in ALL parts of the market, including the CM.</p>
West Burton Energy	No	Capacity Market Rules do not appear to be impacted by the P448 solution.
AMP Clean Energy	Yes	<p>Yes – it would seem reasonable to us that any immunity / effective immunity against imbalance charges is also extended to Capacity Market penalties. We consider that a National Gas Emergency would be a force majeure event and do not consider that generators should be subject to CM penalties as a result of under performance during a National Gas Emergency, which is outside the generator's control.</p>

Respondent	Response	Rationale
Welsh Power	Yes	We are currently unsure whether the Bids to be constructed following a Network Gas Supply Emergency would affect a CM providers ALFCO. It would seem sensible that they are but we believe this is a matter for the CM Rule process rather than the BSC.
VPI	Yes	It is unclear whether the solution will result in unintended outcomes relating to the Capacity Market. We believe the current drafting of the P448 solutions enables clarification to be provided via guidance without any corresponding changes to Capacity Market Rules, and therefore this matter is easily resolved.
RWE	Yes	This is not a clear-cut interaction. The CM references instructions given by the ESO. However, the bids that would be constructed as a result of P448 are only deemed to be ESO instructions for the purposes of the BSC. As such, there is an argument that there is no interaction. However, the use of the term QBA would feed into the CM, whether or not that was the intent.
Forsa Energy Gas Holdings Ltd	Yes	Our understanding is that because the BOA actions would not be taken by NGESO, they would not adjust CM provider obligations. We believe this is an oversight in the CM rules which should be accounted for by a rule change e.g. to include force majeure measures in the CM rules.  Forsa are happy to discuss this with BEIS, but again would stress that smaller plants must be treated equitably in ALL parts of the market, including the CM.
NGESO	No	No. NGESO's current understanding is that the obligation to supply during a stress event is discrete from an obligation to not generate due to load shedding - i.e. in an emergency situation. BEIS will set the direction if changes to capacity market rules are required.
Keadby Generation Ltd	No	We note the discussion within the 3rd and 4th Workgroup meetings, namely that the Capacity Market Rules are what they are (and the BSC rules are what they are). If, as a result of P448, a change to the CM Rules is considered desirable, then such a (CM Rules) change should be taken forward on its merits. As was pointed out in the Workgroup deliberations changes can (and should) be progressed on their merits. If another code et al

Respondent	Response	Rationale
		takes something within (as in this case) the BSC for another purpose, then so be it – they should consider the BSC change in that light.
Sembcorp Energy UK	Yes	The Capacity Market has no force majeure clause and it seems likely that a Capacity Market event and gas emergency are likely to be co-incident, especially if gas generators in interconnected markets have already ceased to operate and so interconnectors cannot be relied on.
Flexible Generation Group	Yes	<p>FGG is concerned that the Bid adjusts the obligated output of the CMU under the CM rules. While this may not be the intent, in a large GDE event it may not be helpful to BEIS if a significant volume of CMUs hit their maximum CM exposure very quickly. It may therefore be better to add into the CM Rules a force majeure clauses that covers this type of unforeseen, unavoidable risk. This was an issue that the industry raised when the CM was designed.</p> <p>If BEIS wants to manage the risk from a market wide gas supply disruption, then it should make a change to the CM Rules. If it does not want to offer this type of protection to generators then it should clarify that the CM rules so that it is clear that a Gas Deficit Bid does not adjust the load following obligation under the CM. It is vital the CM rules are clear as any new market entrant may otherwise take a different view to those in the market who could have been party to this debate and heard from BEIS the outcome they were expecting.</p> <p>FGG are happy to discuss this with BEIS, but again would stress that smaller plants must be treated equitably in ALL parts of the market, including the CM.</p>
Centrica	No comment	No rationale provided.
ESB	Yes	It is unclear whether the solution will result in unintended outcomes relating to the Capacity Market – this should be considered by the workgroup.
Drax	Yes	This has not been discussed in detail in the workgroup however there may be implications for the algorithm that issues CM notifications. We believe that this is dependent on the physical

Respondent	Response	Rationale
		notifications provided by generators and will be impacted if PN's reflect the contracted position rather than forecast generation.
Uniper UK Ltd	Yes	We are aware that there is some uncertainty around this. We would like CM obligations to be suspended for CM Units affected by firm load shedding as a result of a gas supply emergency, and had originally thought that this modification might result in an adjustment to a unit's obligations under the CM Rules. However, as the instruction to reduce output effectively comes from a gas operator and not the ESO, then this may not be the case. Therefore, it is likely that a separate change to the CM Rules will be needed to cover this particular aspect.
EDF	Yes	Government policy has been not to provide relief for gas-fired generation through the CM Rules if they are unable to meet their capacity obligation because of a shortage of gas. We do not believe that there is a strong case for amending the CM Rules to provide such relief because, unlike electricity imbalance cashout, exposure to CM penalties is capped. (Total annual CM penalty liability cannot exceed annual CM revenue.) However, we believe that if P448 comes into operation, it would, in any event, provide protection for capacity providers from CM penalties through the operation of CM Rule 8.5.4, which adjusts the Load Following Capacity Obligation to account for Balancing Services, including output pursuant to negative Bid-Offer Acceptances.
Statkraft	Yes	Since gas interruptions are likely to cause a System Stress Event there is an interaction between P448 and the Capacity Market.
EP UK Investments Ltd	Yes	<p>It would appear that the Bid acceptance would reduce the obligated capacity in the CM. This could be a desirable outcome if substantial amount of CM capacity is affected. Depending on the timing of any event, the CMU could reach its penalty cap very quickly. It may therefore be useful to protect them in what is a force majeure event to encourage their participation in the CM for the rest of the Delivery Year. However, that protection would need to be afforded to all plants that are taken off in a GDE stage 2 or above.</p> <p>If that is not the intent of the mod, then EPH would like to see BEIS clarify the CM rules.</p>

Respondent	Response	Rationale
		EPH has always had concerns that there are no reasonable protections for force majeure events in the CM. It is slightly odd that losing a grid connection is protected, but losing gas is not, for example. We would propose that BEIS reviews the CM rules and considers this further.
ADE	Don't know	It appears that the solution as currently drafted will allow for clarifications to be issued should any conflicts arise thereby mitigating the risk of unintended outcomes.

## Question 25: Do you think P448 will improve market liquidity or not?

### Summary

Yes	No	Neutral/No Comment	Other
14	2	2	1

### Responses

Respondent	Response	Rationale
Conrad Energy Limited	No	<p>The modification needs to be extended to all gas assets.</p> <p>This should ensure liquidity is maintained at current levels – Conrad do not believe it will be improved.</p>
West Burton Energy	Yes	<p>Yes, we believe market liquidity will be improved if P448 is implemented and it looks more likely that a Gas Supply Emergency will be called. Gas generators will not need to modify their behaviour to only trade in very short term as they will be able to trade further ahead knowing that they are protected against imbalance costs should a GSE occur.</p>
AMP Clean Energy	Yes	<p>Yes, but only partially unless it is amended in order to cover Lead and Subsidiary Parties are protected in relation to contracted positions that do not require ECVN notification, e.g. contracts to supply power to customers.</p>
Welsh Power	Yes	<p>We believe that absent the modification there could be a fall in liquidity due to the increased risk of extreme imbalance charges faced by generators. The modification should mitigate this risk and therefore lead to improved liquidity.</p>
VPI	Yes	<p>P448 is unlikely to improve market liquidity under prevailing market conditions, but the alternative would likely lead to a significant improvement in liquidity and the proposed would likely lead to a small improvement in liquidity if risk of a GNSE increases.</p> <p>This is because all (under the alternative) or some (under the proposed) generators will still be able to trade in the wholesale market whilst at risk of loss of gas supply without having to operate in a way to mitigate insolvency risk (for example by only participating on very short timescales). This should increase tradability of a number of products covering times of increased risk of GNSEs. Note that</p>

Respondent	Response	Rationale
		the alternative solution, if all options are implemented, would have a significantly greater positive effect on liquidity due to the increased number of generators within scope (without the concurrent negative competition impacts).
RWE	Yes	We believe that the risks that P448 seeks to address could be a contributing factor to reduced liquidity in forward markets. However, this is one of many given the highly volatile nature of the power and gas markets and therefore the direct effect of P448 would be difficult to quantify.
Forsa Energy Gas Holdings Ltd	Yes	By allowing parties to manage some of the risk of a market wide gas emergency should allow parties to trade slightly further in advance without fear of defaulting very quickly in a gas emergency.
NGESO	Yes	It will reduce insolvency risk for gas-fired generators, therefore enabling these companies to continue to access the electricity market and drive liquidity after any emergency has passed.
Keadby Generation Ltd	Yes	As we set out in the proposal, in our view absent the P448 solution then market liquidity before and after a Network Gas Supply Emergency Stage 2 and higher event will be significantly and adversely affected (in terms of a substantial diminution of liquidity in the market).
Sembcorp Energy UK	Yes	Impacts on liquidity as described by the proposer are related to parties' ability to predict/act on fears of a gas emergency and so it is difficult to say whether liquidity would be negatively impacted or not. This modification does remove that disincentive and so should protect liquidity, in the event that generators believe a gas emergency is imminent.
Flexible Generation Group	Yes	By allowing parties to manage some of the risk of a market wide gas emergency should allow parties to trade slightly further in advance without fear of defaulting very quickly in a gas emergency. FGG would note that this is not a perfect solution, liquidity remains an area of major concern, but the mod may stop things getting a lot worse if the gas market tightens further.
Centrica	No comment	No rationale provided.
ESB	Yes	P448 as currently proposed is unlikely to improve market liquidity under prevailing market conditions.

Respondent	Response	Rationale
		However, the alternative formulation including Options 1 and 2 would likely lead to a significant improvement in liquidity, while the initial proposal proposed would likely only lead to a small improvement in liquidity in situations where the risk of a GSE increases.
Drax	Neutral	There is insufficient evidence to assess the impact on liquidity of P448.
Uniper UK Ltd	Yes	There are a number of issues at present which undermine liquidity. The risk around gas curtailment is a significant one of these and needs to be removed. However, other issues will need to be addressed too in order to ensure that this leads to a tangible improvement, such as removing cashflow risk around providing trading security cover at times of extreme prices.
EDF	Not clear	This is not clear – it could but there are other issues impacting liquidity such as collateral requirements and general market risk at this current time.
Statkraft	Yes	No rationale provided.
EP UK Investments Ltd	Yes	It will certainly encourage parties such as EPH to keep selling forward rather than limit trading to close to real time when any form of gas emergency looks possible.
ADE	No	<p>While noting that current market liquidity is not positive, the only way to protect what liquidity is there is by employing Options 1 &amp; 2 so that all participants can trade on an equal footing with the same level of risk exposure.</p> <p>P448 as currently drafted would lead to an unequal playing field, allowing some generators to trade without fear of imbalance in the case of an emergency being called while forcing others to incorporate such a risk into their trading strategy</p>

Question 26: 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?

## Summary

Yes	No	Neutral/No Comment	Other
10	0	5	4

## Responses

Respondent	Response	Rationale
Conrad Energy Limited	N/a	No rationale provided.
West Burton Energy	Yes	We believe that the pricing scenarios described in the Consultation document are realistic and should they occur with P448 being implemented, there is a significant risk that parties will become insolvent and have to leave the market. Very few parties will have deep enough pockets to be able to absorb costs this high.
AMP Clean Energy	Yes	We believe that unless the scope of P448 is extended to include all gas fired generators (specifically to non-BMU gas fired generators) parties will leave the market. This is because gas fired generators, outside of the current P448 scope, will be exposed to significant imbalance risk which their BMU competitors will effectively be immune from thus creating a significant commercial disadvantage, all while said gas fired generators (non-BMU & BMU alike) are participating in the same Day Ahead, Intraday, Forward etc. markets (i.e. standing for the same commercial gain).
Welsh Power	Yes	We believe that absent the modification there could be a fall in liquidity due to the increased risk of extreme imbalance charged faced by generators. The modification should mitigate this risk and therefore lead to improved liquidity.
VPI	Yes	We believe that the scenarios the Modification is intending to cover would result in high prices in the electricity market.
RWE	Yes	The numbers provide a reasonable 'ball-park' estimate of potential impacts, but ultimately the exposure could be significantly higher. Were generators exposed to such imbalances, the impact would depend on the particular generator.

Respondent	Response	Rationale
Forsa Energy Gas Holdings Ltd	N/A	We have not tried to replicate this calculation, but we do agree a significant number of parties will be at risk in a GDE.
NGESO	No comment	NGESO agrees that this medication should reduce imbalance exposure for parties but has no comment on the quantum outlined in the proposal form.
Keadby Generation Ltd	Yes	As the Proposer, we agree with the quantum's outlined in Table 1 of the proposal. In our view if a Network Gas Supply Emergency Stage 2 and higher were (regrettably) to come to pass then yes this would lead to an increase in parties leaving the market for the reasons we set out in the proposal.
Sembcorp Energy UK	No comment	No comment
Flexible Generation Group	N/A	We agree a significant number of parties will be at risk of financial default in a GDE. The risks arise in both the BSC and the CM and policy makers must learn from the recent events and ensure better forward planning. For example, had the CM secured more capacity, or did not rely on interconnectors as generation, then the risks from some of the recent events would be lower.
Centrica	No comment	No rationale provided.
ESB	Yes	We believe that the scenarios considered in the Modification could result in high prices in the electricity market.
Drax		We agree that the effect of P448 should be to reduce the risk of parties leaving the market by giving greater certainty of the arrangements in place to address the consequences of a gas emergency. Table 1 in the document represents the proposer's assessment of the potential impact on a generator per day without any intervention. It is not clear if this would lead directly to insolvency for any party. We also note that the table does not include any actions a curtailed party could take to trade out their exposure to subsequent days of curtailment.
Uniper UK Ltd	Yes	The sorts of costs covered in the proposal are what we are concerned about. The examples in the proposal are of course not meant to reflect an actual day's exposure, but give an indication of the quantum of the issue, which could instead be accrued over a longer period. This sort of cost could have the potential to put an otherwise financially healthy, large generator out of business

Respondent	Response	Rationale
		which could cause further market disruption and threaten security of supply.
EDF		We agree with the quantum of financial impact but it's not clear to what extent this would lead to bankruptcy given some generators will be able to weather the storm compared to others. The other consideration is that if a large sum of CCGTs are curtailed in Stage 2 then it could lead to the partial or full suspension of the Electricity Market under the BSC where their exposure will be covered by the Administrative pricing rules under the BSC and Electricity Act. Therefore, there is already an amount of protection for all Generators, but we agree there will be a middle ground where some CCGTs could be curtailed without causing a market suspension protection to take effect.
Statkraft	Yes	It is imperative that all forms of gas generation are treated equally under P448. We are extremely concerned that embedded generation, in particular sites which are not participating in the Balancing Mechanism via Additional Supplier BMUs, could not be granted the same level of protection under P448 as Transmission Connected CCGTs. This outcome must be avoided.
EP UK Investments Ltd	Yes	While the exact numbers may not be correct, the scale of the issue is clear. Note that added to this could be CM termination fees. There will be nothing helpful in making large amounts of gas capacity go out of business in a gas emergency.
ADE		While market departure is difficult to predict, the risk to competition and heightened risk of insolvency necessitates that both options 1 & 2 are adopted, thereby creating the best mitigation to market departure.

## Question 27: Do you have any further comments on P448?

### Summary

Yes	No
6	12

### Responses

Respondent	Response
Conrad Energy Limited.	No
West Burton Energy	No
AMP Clean Energy	No
Welsh Power	No
VPI	<p>There was some discussion in the workgroup about the difference between annual/enduring and daily gas exit capacity, and about potential gas system operability impacts if pre-emergency are brought within scope of P448. It is worth being very clear about these two points;</p> <ul style="list-style-type: none"> <li>- There is no difference whatsoever in the actions available to the GSO/NEC nor in the impacts of taking those actions between the proposed or alternative Modifications. The only difference between the proposed and alternative Modifications is more generators benefit from protections under the alternative, meaning they are more likely to survive a GSNE and therefore return to operation after the event. This enhances protections for the electricity industry.</li> <li>- There is no difference between annual/enduring and daily firm exit capacity. They cost the same amount and confer the same rights and obligations on gas offtakers. Daily auctions are the only way for offtakers with variable load to efficiently match their offtake profiles. There was no anticipated difference in the effect or likelihood of curtailment due to a GSNE at the time of the auctions, as a Stage 2 suspension of daily auctions was anticipated to happen after Firm Load Shedding in any case.</li> </ul> <p>If this occurs, a GSNE may well be avoided at the cost of insolvency for generators and ongoing capacity shortfalls in the electricity market unless all three elements of Option 2 of the alternative are implemented.</p> <ul style="list-style-type: none"> <li>- If considering whole system outcomes, it would not be desirable to encourage gas generators to book annual/enduring instead of</li> </ul>

Respondent	Response
	daily capacity. This would result in overbooking of gas exit capacity, which introduces unnecessary costs on generators and also sends incorrect signals to National Grid about the use of capacity across their network, leading to inefficient investment in network assets. This is contrary to Ofgem's intent demonstrated in their decision on UNC678 (as noted above).
RWE	No
Forsa Energy Gas Holdings Ltd	<p>As raised above, whilst this mod deals with the BSC elements, Forsa have concerns that GDSO responsibilities during a GSE, and their interactions with the TSO, are currently lacking. A lot is assumed of NGENSO/TSOs ability to 'command and control' the situation. If not effectively carried out, this may leave a lack of auditable trail for parties who are gas distribution connected.</p> <p>We would therefore urge that NGENSO and TSO are pushed to consider more fully the impacts of embedded generation to avoid unintended consequences such as losing many GW's of flexible generation in the midst of an emergency situation.</p>
NGESO	The Grid Code Legal text and BSC legal text need to be compatible and consistent. Any changes to legal text need to consider knock on impacts across the codes.
Keadby Generation Ltd	No
Sembcorp Energy UK	No
Flexible Generation Group	No
Centrica	No
ESB	No
Drax	<p>There may be unintended consequences related to P448 that are either outside the scope of the modification or were not possible to discuss thoroughly in the time available. It may be appropriate for Ofgem to consider these in its decision assessment:</p> <ul style="list-style-type: none"> <li>- Potential impacts on the processes to issue system warnings where these have an interaction with physical notifications, including capacity market notifications.</li> <li>- Any negative impact on the GSO's ability to use commercial tools to avert a potential or actual NGSE developing.</li> <li>- As gas generators will not face an electricity imbalance from a GDE they may not be incentivised to reduce consumption ahead</li> </ul>

Respondent	Response
	<p>of a gas emergency or offer (gas) demand side response or locational actions.</p> <ul style="list-style-type: none"> <li>- The status of REMIT and market reporting requirements including the impact on central reporting services.</li> <li>- Legal certainty on the use of the PN to reflect the ongoing commercial position of a Firm Load shed generator and not the electricity to be produced</li> </ul>
Uniper UK Ltd	No
EDF	<p>It is not clear how these costs would be recovered from consumers. More detail on this and whether it could result in additional credit cover requirements for suppliers, would be needed if it were to be implemented.</p> <p>Also, we would question the longevity of this mod and whether it is needed for more than 1 or 2 years and in the scenarios where the high prices and risk of EU gas supply disruption decrease. Alternative solutions could come up in the meantime such as CCGTs building back-up supplies to ensure their stations can run in such events.</p>
Statkraft	<p>It is imperative that all forms of gas generation are treated equally under P448. We are extremely concerned that embedded generation, in particular sites, which are not participating in the Balancing Mechanism via Additional Supplier BMUs, could not be granted the same level of protection under P448 as Transmission Connected CCGTs. This outcome must be avoided.</p>
EP UK Investments Ltd	No
ADE	<p>It would be extremely helpful to have a separate guide for this modification, should Options 1 and 2 be progressed, that explains its implications for smaller actors who may be license exempt and merely import/export from their CHP as a secondary business activity. High imbalance charges could be catastrophic for such actors who are not dedicated electricity market participants and they should have access to a simplified version of both how they are protected and what is expected from them under P448.</p>