ELEXON

Issue Report

Issue 105 ‘Further considerations following implementation of BSC Modification P448’

Contents

About This Document		1
1.	Summary	2
2.	Background	4
3.	Issue Group’s Discussions	6
4.	Conclusions	11
Appendix 1: Cash out price assumptions		13
Appendix 2: Issue Group Membership		14

Contact

Kayleigh Neal

020 7380 4175

BSC.change@elexon.co.uk

About This Document

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

- Have 5 mins? Read section 1
- Have 15 mins? Read sections 1 and 4
- Have 30 mins? Read all sections
- Have longer? Read all sections and the annexes and attachments
- *You can find the definitions of the terms and acronyms used in this document in the BSC Glossary*

This document is the Issue 105 Group’s Report to the BSC Panel. Elexon will table this report at the Panel’s meeting on 10 August 2023.

© Elexon 2023

1. Summary

Background

Issue 105[1] was raised by Elexon on 22 December 2022 following the implementation of Modification P448 'Protecting Generators subject to Firm Load Shedding during a Gas Supply Emergency from excessive Imbalance Charges'[2] on 7 December 2022.

The purpose of P448 was to protect Generators who are subject to Firm Load Shedding during a National Gas Supply Emergency (NGSE) from high Imbalance Charges which could cause them to become insolvent. The Authority agreed that P448 should be progressed on an urgent basis as the war in Ukraine and gas shortages across Europe at the time meant that a NGSE could occur during winter 2022/23 in Great Britain.

To address the risk of very high Imbalance Charges resulting from a NGSE, P448 placed a mechanism in the BSC that allows Load Shedding instructions to be treated as a type of Acceptance (a Network Gas Supply Emergency Acceptance; NGSEA) which would be settled as a Bid for affected BM Units.

The Urgent nature of P448 meant that there was not sufficient time to fully consider some of the consequential impacts of implementing P448. Issue 105 was therefore raised to consider the following:

- Unintended impacts to Imbalance (henceforth "cash out") Prices;
- Time limiting the P448 solution;
- Whether there is any increased risk of Generator behaviour not in line with 'Good Industry Practice' as a result of P448;
- How the P448 solution interacts with Gas Operating Margins (OM) contracts; and
- If further guidance documentation is required for P448.

Conclusions

The Issue 105 Workgroup recommend that:

- A Modification is raised to remove the P448 Bids from the cash out price calculation to ensure that the correct market signals are sent in all scenarios; and
- The NGSE Acceptances Guidance Note is updated to include information on the scope of the Network Gas Supply Emergency Settlement Validation Committee's (NGSESVC)'s review of NGSE Acceptances and other clarifications.

The Workgroup also recommended that a Change Proposal (CP) be raised to update BSCP18 'Corrections to Bid-Offer Acceptance Related Data'[3] to clarify when the Lead Party can and cannot update Physical Notifications (PNs) during a NGSE and to remove Appendix 2 'Draft Terms of Reference for the NGSESVC'. To take forward this recommendation, CP1581 'Recommendation to update BSCP18 following Issue 105'[4] was raised by Elexon. The ISG approved CP1581 at its meeting on 1 August 2023 for

[1] https://www.elexon.co.uk/smg-issue/issue-105/
[2] https://www.elexon.co.uk/mod-proposal/p448/
[3] https://bscdocs.elexon.co.uk/bsc-procedures/bscp-18-corrections-to-bid-offer-acceptance-related-data
[4] https://www.elexon.co.uk/change-proposal/cp1581/

© Elexon 2023

implementation on 2 November 2023 as part of the standard November release. This is subject to a 15 Working Day Housekeeping objection window which runs up to and including 21 August 2023.

The Workgroup agreed that no further action is required relating to OM contracts, Generator behaviour or time limiting the P448 solution.

© ELEXON Limited 2023

2. Background

P448 was approved by Ofgem on 6 December 2022 for implementation on 7 December 2022. Ofgem approved the Alternative Modification.

P448 was deemed to be an Urgent Modification Proposal by Ofgem (with the Authority accepting the rationale that P448 was related to an imminent or current issue that if not urgently addressed could have a significant commercial impact on parties, consumers or other stakeholders, and a significant impact on the safety and security of the electricity and/or gas systems) on 3 October 2022 and therefore followed an Urgent Modification timetable. This included six Workgroup meetings and two consultations with industry over a period of seven weeks. During the development of the solution, there was not sufficient time to fully consider some of the consequential impacts of implementing P448. The risk that P448 sought to mitigate was considered to be significant enough that it could progress with some consequential impacts being considered post implementation as part of a future BSC Issue.

Issue 105 was raised by Elexon on 22 December 2022 to consider the following consequential impacts of implementing P448. These topics made up the specific Terms of Reference (ToR) for Issue 105.

What is an Urgent Modification?

If the issue highlighted by the Modification needs to be resolved urgently, the Proposer, Elexon or NETSO can request that the Modification be an Urgent Modification. An Urgent Modification can be progressed by a different process and timetable to normal, to cater for the urgent nature of the Modification; this is determined and approved on a case-by-case basis.

Unintended impacts to cash out prices

Where a BM Unit includes Generation plant which has been notified of a Load Shedding instruction from the Gas System Operator (GSO) during a Stage 2 or 3 Network Gas Supply Emergency (a “gas curtailment”), it is likely that that the BM Unit will be unable to generate, and, if the Generator had already sold that power, the Lead Party (and associated Subsidiary Parties) of the BM Unit would be exposed to a potentially unmanageable Imbalance Charge, especially if the gas curtailment lasts for longer than just a few Settlement Periods.

To mitigate this risk, P448 placed a mechanism in the BSC that allows the Load Shedding instruction to be treated as a type of Acceptance (a Network Gas Supply Emergency Acceptance; NGSEA) which would be settled as a Bid for affected BM Units. The Bids may feed into the imbalance price calculation and will reflect the Generator’s contracted position at the point that the Load Shedding instruction was received.

In its P448 Decision Letter (available on the P448 webpage[2]), the Authority noted that where the Bids feed into the Imbalance Price calculation, this is likely to reduce the Imbalance Price which could weaken the cash out price signal presented to the market. The Issue 105 Workgroup was therefore tasked with considering the interactions between P448 and cash out.

What are Imbalance Prices?

The Imbalance Price is used to settle energy imbalance volumes. At the end of a Settlement Period, BSC Systems compare a Party’s contracted (traded) volume with the metered volume of energy used in the Settlement Period. If a Party is in imbalance of its contracted volume, then it will be subject to imbalance charges.

P448 Guidance

BSCP18 was updated to include the new process introduced by P448 and a new Guidance Note on NGSEAs was created as part of P448.

Feedback from respondents to both consultations carried out during the P448 Modification process suggested that it would be beneficial for more information to be provided on the new process, specifically on the role of the new NGSESVC and suggested types of evidence that Generators could submit to the committee.

© Elexon 2023

The Issue 105 Workgroup was tasked with reviewing both documents to determine whether these provide sufficient information to market participants.

Operating Margins (OM) Contracts

P448 Consultation responses and feedback from the P448 Workgroup highlighted the different tools that the Gas System Operator (GSO) could use to reduce gas demand to avoid a potential NGSE. OM contracts were noted as a commercial tool that the GSO could invoke before Load Shedding during a Stage 2+ NGSE[5]. Specifically, the GSO uses OM contracts to maintain gas pressure in the National Transmission System in exceptional circumstances such as system stress. The aim is to allow normal market operation to continue and avoid declaring an emergency.

The Issue 105 Workgroup was tasked with seeking clarity around how the GSO would treat OM contracts during a Stage 2+ NGSE and to ensure that P448 protections would not be restricted if gas Generators are offering OM services.

Time limiting the P448 solution

During the final stages of solution development, there was a suggestion that the implementation of P448 should be time limited. The P448 Workgroup acknowledged this suggestion but highlighted that industry could raise a Modification at any time in an effort remove the provisions introduced by P448. The Issue 105 Workgroup was tasked with considering this further.

Assurance and Generator behaviour

Elexon sought views from the BSC Panel about whether any further areas should be considered as part of Issue 105. A Panel member suggested that the Issue 105 Workgroup should investigate whether any further changes are required to provide assurance to industry that Generators would not be able to take advantage of the implementation of P448. It was noted that the role of the NGSESVC is to verify the data being entered into Settlement after the event and to correct this where necessary. The NGSESVC can:

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

The Issue 105 Workgroup was therefore tasked with considering whether the implementation of P448 increases the risk of Generators unfairly benefiting within the Settlement arrangements (e.g. by not attempting to trade out their positions) and whether further action over and above the NGSESVC is recommended.

Other topics

The Issue 105 Workgroup were also tasked with deciding whether any further topics should be considered beyond those mentioned above. An Issue 105 Workgroup member raised a further topic for consideration relating to the appropriate course of action for Generators when managing D+2 gas positions during an interruption. More information on this is provided below.

[5] More information on OMs can be found here.

© ELEXON Limited 2023

3. Issue Group's Discussions

The Issue 105 Workgroup met on 24 January, 16 February, 6 March, 11 April and 31 May 2023. This section details the discussions had by the Workgroup and outcomes of those discussions in relation to the topics outlined above.

Unintended impacts to cash out prices

The Workgroup considered this topic over the course of all five meetings. Discussion focused on whether the P448 Bids should be used when calculating the cash out price in the event of a Stage 2+ NGSE. To aid this discussion, the Workgroup requested that Elexon provide an assessment of how the cash out price might be impacted by different market scenarios depending on whether the P448 Bids were taken into account[6].

The table below outlines the possible scenarios which Elexon presented to the Workgroup. The impacts to the cash out price are based on a number of key assumptions which are outlined in Appendix 2. This includes an assumption that market participants would make economically rational decisions in each scenario.

Market scenario	P448 Bids included in the cash out price calculation	P448 Bids excluded from the cash out price calculation
Short market with sudden curtailment	The cash out price will not be impacted for the first 3 settlement periods as gate closure has passed and the P448 Bids will cancel out the more expensive actions of the National Grid Electricity System Operator (NGESO). After that the price will rise in line with parties' expectation of the price that NGESO will pay to keep the market going. The P448 Bids will have a limited effect and after a while parties should be aligned in their expectation of what NGESO will pay and therefore the P448 Bids will not have an impact on cash out.	Without the P448 Bids to counter the more expensive actions of NGESO, the cash out price will rise rapidly before finding a level where parties are aligned on the price that NGESO will pay to keep the market going.
Short market with rising curtailment	The cash out price will likely already be quite high as parties are anticipating a NGSE. When it happens, the cash out price will be steady for the first 3 settlement periods before rising with parties' expectation of the price that NGESO will pay to keep the market going. The P448 Bids will have a limited effect and after a while parties	Without the P448 Bids to counter the more expensive actions of NGESO, the cash out price will rise rapidly before finding a level where parties are aligned on the price that NGESO will pay to keep the market going.

[6] These are possible and plausible scenarios but not a determination of what Elexon or the Workgroup think is likely to happen.

© Elexon 2023

	should be aligned in their expectation of what NGESO will pay and therefore the P448 Bids will not have an impact on cash out.	
Long market which remains long	The P448 Bids suppress the cash out price at normal levels due to Net Imbalance Volume (NIV) tagging. If the cash out price is normal, there is little incentive for the market to react to the gas emergency. As a result, there may be a shortage of buyers as the cash out price appears to be at an acceptable level and generation may not come online. This may lead to the market being unable to correct itself and short parties may decide to pay the suppressed cash out price instead of trading out of their position as power prices increase. This will lead to the wrong market signals being sent.	While the market is long, the actions of NGESO will make it go short without the P448 Bids to counter the more expensive actions of NGESO. The cash out price will rise rapidly before finding a level where parties are aligned on the price that NGESO will pay to keep the market going.
Long market which becomes short as the NGSE progresses	The cash out price will be suppressed while the market is long, but when it goes short, we will see the cash out price rising rapidly to the price that parties expect NGESO to pay to keep the market going. The P448 Bids will not have much impact in the price.	While the market is long, the actions of NGESO will make it go short without the P448 Bids to counter the more expensive actions of NGESO. When it goes short, this will not impact the price and it will settle at the price that parties expect NGESO to pay to keep the market going.

What does it mean if a BSC Trading Party is long or short?

BSC Trading Parties accrue an Imbalance Volume in a Settlement Period when there is a difference in the volume of energy that they used, generated and traded during the Settlement Period.

We describe a Party as 'long' when the difference is positive and the Imbalance represents a surplus of energy. A Party is 'short' when the difference is negative and represents a deficit of energy.

Recommendation to raise a Modification

Having considered the scenarios provided by Elexon, the Issue 105 Workgroup recommend that a Modification be raised to keep the P448 Bids as they are, but not include them in the cash out price calculation. This will require a system change to remove the Bids from the stack. By using the P448 Bids as normal in the rest of Settlement, there will be no need to make any changes in the cash flow calculations allowing reasonable costs to be recovered from curtailed gas Generators. This will allow the cash out price to send accurate market signals for all possible scenarios without impacting anything else that was implemented as part of P448.

Elexon noted that a system change would not be possible for winter 2023/24 and the Workgroup would either need to accept the P448 solution in place or use a manual workaround. The workaround that was considered uses Applicable Balancing Services Volume Data (ABSVD) instead of Bids and then the ad-hoc trading charge process to send the correct cash flows. Elexon will discuss the feasibility of this approach further with NGESO and Ofgem.

© ELEXON Limited 2023

P448 Guidance

At the first meeting, Elexon asked the Workgroup to review BSCP18 and the Guidance Note on NGSE Acceptances before the third meeting where they would be asked to provide feedback. The feedback provided meant that changes were required to both documents. Elexon drafted the changes (detailed below) and presented these to the Workgroup at the fourth meeting.

Recommended changes to BSCP18

During the period of Load Shedding resulting from a Stage 2+ NGSE, the Lead Party can continue to update Physical Notifications (PNs), Bid Offer Data and Dynamic Data in accordance with the provisions of the Grid Code. PNs that cover the period of Load Shedding should reflect the firm contracted position of the BM Unit immediately prior to the receipt of the Load Shedding instruction.

However, following Gate Closure (1 hour prior to the start of the Settlement Period), the Lead Party will no longer be able to send PNs as Gate Closure triggers a Final Physical Notification (FPN). At the point the Load Shedding instruction is received (working on the basis it requires immediate curtailment), the current and two following Settlement Periods will already have passed Gate Closure. If data for these Settlement Periods needs to be amended, this will need to be done by the NGSESVC rather than 'in real time' by Lead Parties.

The Issue 105 Workgroup recommended that a CP be raised by Elexon to amend BSCP18 to clarify when the Lead Party can and cannot update PNs in this scenario.

The Workgroup also agreed that the CP should remove Appendix 2 ‘Draft Terms of Reference for the NGSESVC’ from BSCP18 which was added by P448. This is on the basis that the BSC Panel has ownership of the terms of reference, so they should be able to make amendments without needing to raise a CP.

Recommended changes to the Guidance Note on NGSE Acceptances

The Issue 105 Workgroup recommend a number of additions to the NGSE Acceptances Guidance Note including information on the scope of the NGSESVC’s review of NGSE Acceptances.

As the Guidance Note is not classified as a Configurable Item on the BSC Baseline Statement it does not require consultation or Committee approval to implement the changes. Elexon will implement the updated Guidance Note once the Issue Report has been presented to the BSC Panel.

OM Contracts

To seek confirmation of how the GSO would treat OM contracts under a Stage 2+ NGSE, Elexon invited a representative from National Gas to attend the second meeting. The representative confirmed that once a Generator is instructed to reduce gas offtake (pre-Emergency and under their OM contract), if an emergency is declared and Load Shedding at Stage 2 or higher begins, the Generator will still receive a Load Shedding instruction, making them eligible for protection under P448. The Generator will not be told to return to take gas until a stage 4 NGSE (restoration) has been declared and the legal instruction to cease taking gas is revoked.

© ELEXON Limited 2023

The Workgroup asked whether there could be a scenario where a power station is being paid under their OM contract at same time as they are subject to Load Shedding. The GSO confirmed there would be no double payment as they would not invoke OM contracts during a Stage 2+ NGSE. Moreover, the quantity (which is multiplied by the relevant unit price) in the calculation of Firm Load Shedding payments is the Emergency Curtailment Quantity (ECQ). The ECQ methodology states that the quantity will be based on the prevailing Offtake Profile Notice (OPN). If the GSO calls a site to reduce/cease offtake for the purpose of OM it would be required to submit a revised OPN to reflect the reduced/curtailed offtake. Therefore, this reduced volume will not be reflected in the ECQ value.

In light of the above, the Workgroup agreed that no further action was required relating to P448 and OM Contracts.

Time limiting the P448 solution

The Workgroup discussed this topic at the first meeting. A Workgroup member made the case for the P448 solution to be active for winter 2023/24 (if it had to be time-limited at all) and referenced a new article[7] predicting that a gas crisis will continue for 2 to 3 years. Workgroup members generally agreed that the P448 solution should not be time-limited but decided to revisit this topic to confirm their view once all other topics had been considered).

The Workgroup agreed that no further action should be taken to time limit the P448 solution, noting that a Modification could be raised at some point in the future should the solution become immaterial.

Assurance and Generator behaviour

The Workgroup considered this topic at the second meeting. The majority of Workgroup members felt strongly that no further action was required. One member noted that the existing legal and regulatory framework, such as the Competition Act, covers this and adding further requirements to guidance would be problematic and unnecessary. Another member stated that this topic is based on an assumption that Generators need to be incentivised to act in a way that benefits customers. They disagreed with this assumption. It was also noted that the P448 solution permits Physical Notifications (PNs) to be changed if a Generator trades out their position.

D2+ Gas Positions

A Workgroup member presented a potential extension to the Issue 105 Terms of Reference at the third meeting. This related to the appropriate course of action for Generators when managing D+2 gas positions during an interruption.

The Emergency Curtailment Quantity (ECQ) is an amount a gas user's contracted position is reduced by for Settlement. The ECQ Methodology outlined in the gas industry's Uniform Network Code states that for the first Gas Day the estimate of the ECQ will be based on the Offtake Profile Notices (OPNs) prevailing at the time of the Emergency Curtailment. If OPNs are not available, the estimate will be based on historical allocations.

National Gas have confirmed that the historical allocation will be the previous week's gas offtake. However, OPNs can only be submitted day ahead and therefore an OPN prevailing

[7] https://www.thetimes.co.uk/article/prepare-for-a-gas-crisis-next-winter-warns-iea-pnct0j3ss

© ELEXON Limited 2023

at the time of the Emergency Curtailment will not be available for D+2 (or D+1 if the Emergency Curtailment occurred the day before an OPN was submitted).

The issue presented was that if a gas Generator has off taken more gas in the previous week than it has contracted for during the period of the interruption, there is a risk that if the interruption lasts beyond the period for which OPNs are available, it will be short of gas at the 30 day System Average Price. The member asked the Workgroup how this risk might be mitigated through a Code change.

The Workgroup agreed that this topic was outside of the scope of Issue 105 and that any potential solution to the issue sits within the gas market.

© ELEXON Limited 2023

4. Conclusions

The table below summarises the Issue 105 Workgroup's concluding recommendations.

Topic	Recommendation	Next Steps
Unintended Impact to cash out	A Modification should be raised to keep the P448 Bids as they are but remove them from the cash out price calculation. This will ensure that the correct signals are sent to the market during a NGSE in all scenarios.	NGESO has expressed an interest in being the Proposer and raising this Modification. Ideally, this will be implemented prior to Winter 2024/25.
P448 Guidance	A CP should be raised to update BSCP18 to clarify when a Lead Party can and cannot update PNs and to remove the Appendix 2 'Draft Terms of Reference for the NGSESVC'. Updates should also be made to the Guidance Note on NGSE Acceptances.	CP1581 'Recommendation to update BSCP18 following Issue 105' was raised by Elexon on 6 June 2023. The Assessment Report was presented to the Imbalance Settlement Group (ISG) on 1 August 2023 where the ISG approved the CP for implementation on 2 November 2023 as part of the standard November 2023 release. This is subject to a 15 Working Day Housekeeping objection window which runs up to and including 21 August 2023. The objection window allows Parties to object to the view that changes made to the BSCP18 redlining following the CP1581 Consultation, which amend the name of the Network Gas Supply Emergency Settlement Validation Committee (NGSESVC) to the Generation Curtailment Validation Committee (GCVC), are Housekeeping and do not require a second CP Consultation. If an objection is received, CP1581 will go out for a second consultation. Otherwise, it will be implemented on 2 November 2023. The updated Guidance Note on NGSE Acceptances will be published by Elexon prior to the implementation of CP1581.
OM Contracts	No further action is required relating to P448 and OM Contracts. The GSO confirmed that the treatment of OM contracts under a Stage 2+ NGSE	N/A

© Elexon 2023

	does not impact the intention of P448 solution.	
Time limiting the P448 solution	No further action is required. The P448 solution does not need to be time limited. Industry can raise a Modification at any time in an effort remove the provisions introduced by P448 should this be required.	N/A
Assurance and Generator behavior	No further action is required. There are existing legal and regulatory frameworks already in place which addresses these concerns.	N/A
D+2 Gas positions	This topic is outside of the scope of Issue 105 and that any potential solution to the issue sits within the gas market.	N/A

© ELEXON Limited 2023

Appendix 1: Cash out price assumptions

Sudden curtailment (short market)
After a catastrophe on the gas network, it will be almost immediate before a stage 2 emergency is triggered
After the load shedding instruction has been issued, within day gas prices will rise sharply and power prices will lag behind by 1-2 hours (until they can react to the gate closure) for wholesale and bid/offer prises
Gas generators will raise their within day power prices in line with gas prices regardless of the price they paid for the gas
Interconnectors will be available if the gas catastrophe is a GB issue only. They will be able to respond the GB need, but at a high price
SP1 will be classed as the SP during which the first load shedding occurs and subsequently where the bids first come into play
Gas curtailments are likely to last for several hours to days

Rising market curtailment
Prices may be high as gas prices rise pre stage 2, but we do not expect parties to plan for a curtailment. So power prices will reflect a high gas price but below VoLL. E.g. 3k (1 workgroup member questioned this, we welcome further feedback on the question of power prices rising above VoLL before the emergency)
Markets will be driven by high gas prices rather than preempting a stage 2 and the impact of P448. (This is not a unanimous assumption as 1 work group member questioned it)
Once a stage 2 curtailment is activated, the behavior of parties may be driven by the P448 solution (i.e. parties' expectations of whether cash-out prices will be suppressed by P448)
Most generation may already be bought as prices will become favorable to produce power, so therefore unavailable in the BM
SP1 will be classed as the SP during which the first load shedding occurs and subsequently where the bids first come into play
Demand control prices are set at 6k (VoLL), but it is possible to for NGESO to purchase at a higher price before enacting Demand Control
Demand control will not necessarily dominate the stack so the cash out price may still be higher
Suppliers will try to go long in the face of high cash out
Interconnectors will not be available to the ESO due to actions in Europe dealing with their own Gas shortage

Cash out price assumptions (Long market)
Renewable energy • Long Market will have plenty of renewable energy throughout • Long flipping to short will start with plenty of renewable energy, but this will then become more scarce as environmental conditions change
During a gas curtailment submitted Bid prices (non P448 bids) will be in line with normal bid prices
If P448 bids are not included in the stack, then the market will be short regardless due to the actions taken to cover the curtailed gas generators
Prior to curtailment NGESO will be using bids from renewable and others to manage the long market. They may also be accepting offers for system constraint reasons
NGESO may respond to gas curtailment by undoing or not taking bids, before moving to taking offers

© ELEXON Limited 2023

Appendix 2: Issue Group Membership

Issue Group membership and attendance

Issue 105 Group Attendance						
Name	**Organisation**	**24 Jan 23**	**16 Feb 23**	**6 Mar 23**	**11 Apr 23**	**31 May 23**
Members						
Keren Kelly	Elexon *(Chair)*	☎	☎	☎	☎	✘
Ivar Macsween	Elexon (Chair)	✘	✘	✘	✘	☎
Kayleigh Neal	Elexon *(Lead Analyst)*	☎	☎	☎	☎	☎
Simon Dickie	Elexon (Market Design)	☎	☎	☎	☎	☎
John Lucas	Elexon *(Proposer)*	☎	☎	☎	☎	☎
Alastair Lamond	Intergen	✘	✘	✘	✘	✘
Andrew Colley	SSE	☎	☎	☎	☎	☎
Christian Parsons	NGESO	☎	☎	☎	☎	☎
Claire Anderson	Flexitricity	✘	✘	✘	✘	☎
Emma Burns	Flexitricity	☎	✘	✘	✘	✘
Graz Macdonald	Waters Wye	☎	☎	☎	✘	☎
John Costa	EDF Energy	✘	✘	✘	✘	✘
Lauren Jauss	RWE	✘	☎	☎	✘	✘
Paul Jones	Uniper	☎	☎	☎	☎	☎
Paul Youngman	Drax	☎	☎	☎	☎	☎
Attendees						
Garth Graham	SSE	✘	✘	✘	✘	✘
Iestyn Jones	EDF Energy	☎	✘	☎	✘	✘
Luke McCartney	Ofgem	☎	☎	☎	☎	☎
Mark Field	Sembcorp	✘	✘	✘	✘	✘
Melanie Ellis	Shell	☎	☎	☎	✘	✘
Peter Frampton	VPI	☎	☎	☎	☎	✘

© ELEXON Limited 2023

Sarah Honan	The Association for Decentralised Energy	✗	✗	✗	✗	✗

© ELEXON Limited 2023