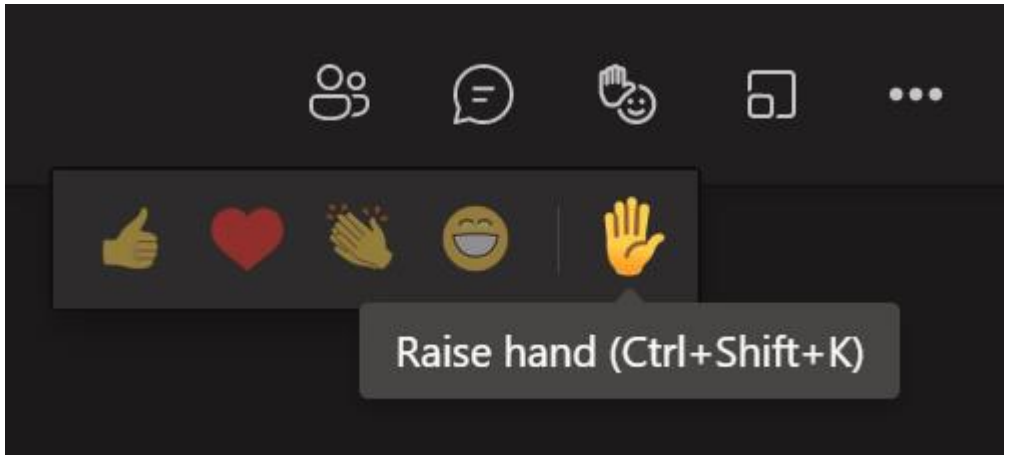
P443 Digital Meeting Etiquette

- Welcome to **P443 'To Cap NGESO Interconnector Trades at the Value of Lost Load (VoLL)'** Workgroup Meeting 5 – we'll start shortly
- No video please to conserve bandwidth
- Please stay on mute unless you need to talk – use the **Raise hand** feature in the menu bar in Microsoft Teams if you want to speak, or use the **Meeting chat**



- Lots of us are working remotely – be mindful of background noise and connection speeds

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P443 Workgroup 5

To Cap NGESO Interconnector Trades at the Value of Lost Load (VoLL)

20 January 2023

Meeting Agenda & Objectives

- Gather Workgroup's initial views on the Alternative solution(s)
- Agree additional consultation questions for the Assessment Procedure Consultation

Agenda Item	Lead
1. Welcome and Meeting objectives	Keren Kelly (Chair)
2. Workgroup views on the Applicable BSC Objectives for the Alternative solutions(s)	Keren Kelly
3. Consultation questions	Paul Wheeler
4. Progression Plan & Next steps	Paul Wheeler
5. AOB & Meeting close	Keren Kelly

SUMMARY OF WORKGROUP 3 AND ACTIONS

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Summary of Workgroup 3 (1 of 6)

- P443 Workgroup 3 was held on 7 December 2022

- The table on the next few slides summarises the current situation from Workgroup discussions in the three meetings so far on the Proposed solution and a potential Alternative solution

Summary of Workgroup 3 (2 of 6)

Item/Term of Reference	Proposed	Alternative
Solution	NGESO trades with Interconnector Users, but is capped at Value of Lost Load (VoLL) for use in the cashout price calculation	NGESO unable to execute trades with Interconnector Users above VoLL or NGESO unable to execute trades with all Parties above VoLL
Emergency Instructions / Assistance	At the second meeting it was provisionally agreed that EI are out of scope and EA are in scope. This is subject to further information from NGESO and consideration at the fourth meeting	As per Proposed
Buying or selling power?	Only NGESO buying [over Interconnectors]	As per Proposed

Summary of Workgroup 3 (3 of 6)

Item/Term of Reference	Proposed	Alternative
Appropriate value of VoLL to be used?	Proposer is currently minded to set at VoLL, which is currently set at £6,000/MWh in BSC Section T 1.12. Workgroup believe this value should be reviewed, but this is outside the scope of P443. Alternatives would be £17,000/MWh as set in the Capacity Market or ~£8k, which is the average used in Europe	As per Proposed

Summary of Workgroup 3 (4 of 6)

Item/Term of Reference	Proposed	Alternative
System impacts	1a) NGESO amend trade value for Interconnector User trades above VoLL to VoLL before sending Balancing Services Adjustment Data (BSAD) file to BSCCo or 1b) BSCCo amend trade value in BSAD file for Interconnector User trades above VoLL to VoLL (~£20k-£50k, 6-10 weeks to deliver)	2) NGESO unable to trade with Interconnector Users above VoLL therefore no BSC system changes required. NGESO to confirm system and process impacts 3) NGESO unable to trade with all Parties above VoLL, therefore no BSC system changes required. NGESO to confirm system and process impacts
Document impacts	BSCCo to draft redlined changes to BSC for both options	Elexon - BSC Consequential Code change - NGESO - C16 Statements, Balancing Principles Statement. NGESO to draft redlined changes

Summary of Workgroup 3 (5 of 6)

Item/Term of Reference	Proposed	Alternative
Should the solution only apply to Interconnectors?	Current thinking is yes, as Interconnector Users are not directly regulated by Ofgem Workgroup to confirm if Emergency trades with Interconnector Users are out of scope	As per Proposed or All Parties
Assurance and validation	To be considered as part of BSCCo/NGESO impact assessment – could check original trade value against amended value in BSAD file. Assurance requirement would depend on whether NGESO (1a) or BSSCo (1b) amend the BSAD file	Solution would prevent NGESO trading with Interconnector Users or all Parties above cap. BSCCo to consider as part of impact assessment, dependent on scope

Summary of Workgroup 3 (6 of 6)

Item/Term of Reference	Proposed	Alternative
Applicable BSC Objectives	Proposer view – better facilitates (b), (c) and (f) - aiming to collect Workgroup initial views at fourth meeting prior to industry consultation	TBD
Self Governance	No	No
EBGL impacts	Yes – under Proposed 1a)	Very likely – depends whether draft redlining impacts EBGL Article 18 Terms and Conditions in the BSC, to be assessed

Workgroup 3 Actions (1 of 2)

1. Elexon to consider what could be the impacts on particular market participants and share with the Workgroup

2. Workgroup to consider whether they would want capped and uncapped trade value in the SAA-I014 (Settlement Report)?

3. Proposer/Workgroup to consider whether to include Emergency Actions in the scope of the Proposed solution

4. Assurance and validation – Elexon (and NGESO) to consider and present options

5. EBGL – Elexon to provide rationale for each impacted objective or a statement to cover all

Workgroup 3 Actions (2 of 2)

6. Elexon to research on the rationale of Ofgem setting BSC VoLL, what's the purpose in the BSC and CM?

7. Settlement Risks – Elexon (Assurance) to confirm whether P443 impacts on BSC Settlement Risks (or is a risk to Settlement)

8. Elexon to collate additional consultation questions for the next WG meeting

9. NGESO to check if this Mod would prevent them taking Emergency Actions (context – if there was an action they could have taken but didn't due to price cap does that prevent them from calling on Emergency Actions?)

10. NGESO to consider market security impact from P443, would it increase the likelihood of rolling blackouts?

11. NGESO to check if Emergency Assistance and Emergency Instructions end up in cashout? Would it be included in the BSAD file? Have Emergency Actions ever been called?

NGESO ACTIONS FROM WORKGROUP 3

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Question on DFS

Question: Arjan Geveke asked the for NG ESO colleagues to ask your colleague Jean Hamman in NG ESO he is developing the demand flexibility service - whether it can be triggered on a regional basis to address operational issues in a particular region

Answer: Local Constraint Market will do this when its available. Demand flexibility service (DFS) is national

More information can be found here: Local Constraint Market | National Grid ESO

EA and EI

Emergency Assistance-EA	Emergency Instruction -EI
• A commercial service which is mandatory (BC2.9.6) for NGESO & the IC Owner but not for the connecting SO, and can be used to increase or decrease flows of energy on the Interconnector with prior agreement from the connecting SO • This can only be used in order to prevent the SO requiring assistance from entering into an Emergency situation and is therefore not used as a normal operational action considered in cost order • The instructing SO will change to Alert/Emergency state in the EAS as soon as reasonably practicable, this may be after the request is made	• A non-commercial, mandatory service, enabling the instructing SO to immediately reduce the import/export flow. It can only be used to reduce the flow to 0MW and cannot change the flow direction • This can only be used in an Emergency situation and is therefore not used as a normal operational action considered in cost order • This is set out in Grid Code BC2 • The instructing SO will change to Emergency state in the EAS as soon as reasonably practicable, this may be after the instruction is given

Use of EA and EI do not have an impact on P443 as they are emergency actions only and can only be used for unforeseen issues, they cannot be a planned action ahead of real-time

P443 only concerns commercial order of actions taken in the normal markets to manage the system. EA & EI do not fall into these timescales so are not in scope

EA and EI

Emergency Assistance - Pricing	Emergency Assistance prices vary depending on the interconnector. The actual prices are commercially sensitive but the price paid for EA will be one of the following 3 options: 1. Fixed Prices agreed annually with the connected TSO. These could typically be around £400/MWh. 2. Price is equal to the agreed settlement period's cashout price in either of the TSO markets depending on the flow change direction i.e. buying or selling 3. Price is equal to the most expensive balancing action taken by the Assisting/Delivering TSO in the corresponding settlement period	The price of EA therefore could be above VoLL in options 2 & 3 if the market prices have risen above VoLL Whichever of these options is the case, this must be paid as well as keeping the IC owner whole with regards to the imbalance faced by the EA activation. This imbalance is either moved from the IC account to the requestor's account or the imbalance penalty value in the connected TSO's market is paid to the connected SO or the IC owner depending the IC's arrangements. The cost of imbalance could be above VoLL if the market prices have risen above this level
Emergency Instruction - Pricing	This consists solely of keeping the IC owner whole with regards to the imbalance faced by the EI activation. This imbalance is either moved from the IC account to the requestor's account or the imbalance penalty value in the connected TSO's market is paid to the connected SO or the IC owner depending on the IC's arrangements. The cost of imbalance could be above VoLL if the market prices have risen above this level.	Therefore, EI could be a cheaper option than using EA however for some interconnectors it could be more expensive depending on the agreed fixed prices. It does not take account of the impact on the Assisting/Delivering TSO's margins nor any rebalancing actions that must taken to counter the loss/gain of MW resulting from the EI, whereas EA does by using one of the 3 options above.

REVIEW PROPOSED/ALTER NATIVE SOLUTION

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Proposed/Alternative solution

Proposed

NGESO can trade with Interconnector Users above VoLL, but the value to be included in the cashout price calculation will be set at VoLL

If criteria met, then either:

1a) NGESO amend trade value in BSAD file before sending to BSSCo; or

1b) BSCCo amend trade value in BSAD file on receipt from NGESO.

Possible Alternative

2) NGESO unable to trade with Interconnector Users above VoLL

3) NGESO unable to trade with all Parties above VoLL

Questions for the Workgroup

1. What is the appropriate VoLL to be used?

2. Should Emergency Actions (Emergency Assistance and/or Emergency Instructions) be in scope of both the Proposed and Alternative solutions?

3. Should P443 be applied for both Energy and System constraints?

4. Implementation approach?
    1. When does the Workgroup want the proposed solution to be implemented?
    2. Should NGESO or BSCCo amend the BSAD file?
    3. What reporting of occurrences and also the capped and uncapped trade value would the Workgroup want to see?

Proposed legal drafting for 1a – NGESO caps price of Interconnector trades at VoLL

Section Q:

6.3.2(b)(ii) the Balancing Services Adjustment Cost (subject to paragraph 6.3.2D);

6.3.2D For any Balancing Services Adjustment Action provided using an Interconnector and with a Balancing Services Adjustment Volume greater than zero, the Balancing Services Adjustment Cost shall not be greater than VoLL * Balancing Services Adjustment Volume

Proposed legal drafting for 1b – BSCCo caps price of Interconnector trades at VoLL

1. Add a defined term "**Balancing Services Adjustment Interconnector Buy Action**" to X-2. This would be defined as a Balancing Services Adjustment Buy Action provided using an Interconnector. (Potentially there could be some additional subtleties, as the Workgroup needs to discuss whether P443 includes all Buy Actions over Interconnectors, or excludes some e.g. Emergency Assistance and/or Emergency Instructions.)

2. Amend paragraph 1.2(e) in Annex T-1 to reprice Balancing Services Adjustment Interconnector Buy Actions. Something like::

(e) in relation to a System Buy Action or a System Sell Action, the "System Action Price" (SAP wj) is:

(iii) in the case of an Balancing Services Adjustment Action that is not a STOR Action and not a Balancing Services Adjustment Interconnector Buy Action, the Balancing Services Adjustment Price (BSAPmj);

(ix) in the case of an accepted Offer that relates to a Winter Contingency BM Unit, the price shall be equal to £99,999/MWh; and

(x) in the case of a Balancing Services Adjustment Interconnector Buy Action, the price shall be the minimum of the Balancing Services Adjustment Price (BSAPmj) and VoLL; and

3. Amend T4.4.2(a) to clarify that the SBP is calculated using the capped price, not the original one. Effectively we need to replace BSAPmj by SAPwj:

SBPj = {ΣiΣnΣk {QAOknij * POnij * TLMij} + Σm {QBSABmj * SAPwj ~~BSAPmj~~} + Σt {QSIVtj * STAPtj} + {{QSDCj + QBDCj} * VoLL} + ΣJ {VGBJ * QHRRAPJ} + {RRAUSBj * 0}}
/ {ΣiΣnΣk {QAOknij * TLMij} + Σm QBSABmj + Σt QSIVtj + Σc QSDCcj + Σc QBDCcj + ΣJ VGBjJ + RRAUSBj}
+ {BPAj}

NGESO DRAFT IMPACT ASSESSMENT

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Impact Assessment –draft and still work in progress

Solutions	Impacts	Costs	Other
• ESO can take IC trades above VoLL just not include in cashout • Still recovered in BSUoS • **ESO updates the BSAD file**	• Costs are still recovered in BSUoS File to be updated in auction tool to notify when over £6k and other IC programmes in the ENCC • Volume and new price is included in the ISP file • How does this impact the market from a security perspective- PNs • Impacts of fixed BSUoS to be further reviewed	• IT changes expected to be c.£100K (based on information to date could therefore change) • Additional resource costs to be accounted for	• Unclear how the end consumer will benefit from this solution
• ESO can take IC trades above VoLL just not include in cashout • Still recovered in BSUoS • **Elexon updates the BSAD file**	• Costs are still recovered in BSUoS • Volume and price is included in the ISP file for Elexon to manage • File to be updated in auction tool to notify when over £6k and other IC programmes in the ENCC • This may impact the market from a security perspective- PNs • Impacts of fixed BSUoS to be further reviewed	• If no changes to ESO process at all then there could only be resourcing costs	• Unclear how the end consumer will benefit from this solution
• ESO can not take any actions above VoLL on IC	• Review Order of actions • Internal process to change in trading team and interconnector team • Relationships with EU Counterparts • Markets in GB and EU could be artificially inflated to raise BM prices (an IC trade could be cheaper) • Transmission licence would not be complied with in current form- policy change would be required • Breach of SQSS in current form- policy change would be required • Alternative action may not be available in GB markets if not able to use the IC • How will EA and EI be impacted?	• IT costs to prevent trades to be fully calculated depending on the actions in scope	• Not in scope of the BSC • Requires a significant change to policy which is not for a BSC workgroup

Proposed/Alternative solution – Legal analysis (1 of 2)

- Within the regulatory framework for electricity, the scope and purpose of the BSC is set out in the ESO licence - it is limited to balancing and settlement arrangements. Obligations and constraints on the ESO in respect of balancing actions and balancing services it can or must undertake sit within the Transmission Licence, and within relevant retained EU regulations. That is not really within scope of the BSC

  - If the P443 solution/alternative solution proposes a market intervention involving setting a price cap for certain trades and restricting ESO actions, the BSC is likely not the most appropriate vehicle, the ESO licence is likely a more appropriate place

- The Electricity Transmission Licence Standard Conditions contain primary obligations for the ESO to procure balancing services economically and efficiently, and not to discriminate as between any persons or classes of persons in its procurement or use of balancing services (taking into account pricing and technical differences)

  - If the P443 solution/alternative solution seeks to cut across those primary ESO licence obligations, again, the BSC is not necessarily the right place for that, given it is subsidiary to the Transmission licence. The licence would potentially be a better vehicle to reframe those obligations

Proposed/Alternative solution – Legal analysis (2 of 2)

- The UK-EU Trade and Cooperation Agreement (TCA) contains obligations in respect of wholesale electricity markets to:
  - ensure wholesale prices reflect actual supply and demand, and
  - ensure wholesale market rules: encourage free price formation, do not set technical limits on pricing that restrict trade, and enable the efficient dispatch of electricity generation assets, energy storage and demand response and the efficient use of the electricity system.

  - If there is potential for the P443 solution/alternative to conflict with these requirements, BEIS should be consulted

IMPACTS ON MARKET PARTICIPANTS

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P443 PROPOSED: FINANCIAL IMPACT ON PARTIES

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Scenario to be modelled

There are countless scenarios we could model, but to give a sense of distributional impacts we have considered the ‘credible worst case’ scenario put forward by the Proposer in WG1:

- NGESO reverses 5.5 GW of Interconnector flows for energy reasons (insufficient generation due to cold, calm weather)
- Interconnector trades priced at £10,000/MWh (£55m per Settlement Period)

In this scenario, it seems likely that NGESO would know ahead of time that there was insufficient margin, and issue a Capacity Market Notice (as per CM Rule 8.4.6)

The scenario is therefore based on the premise that issuing a Capacity Market Notice would not change NGESO’s policy of buying power over the Interconnectors

Financial impact of P443 Proposed on Parties and Consumers

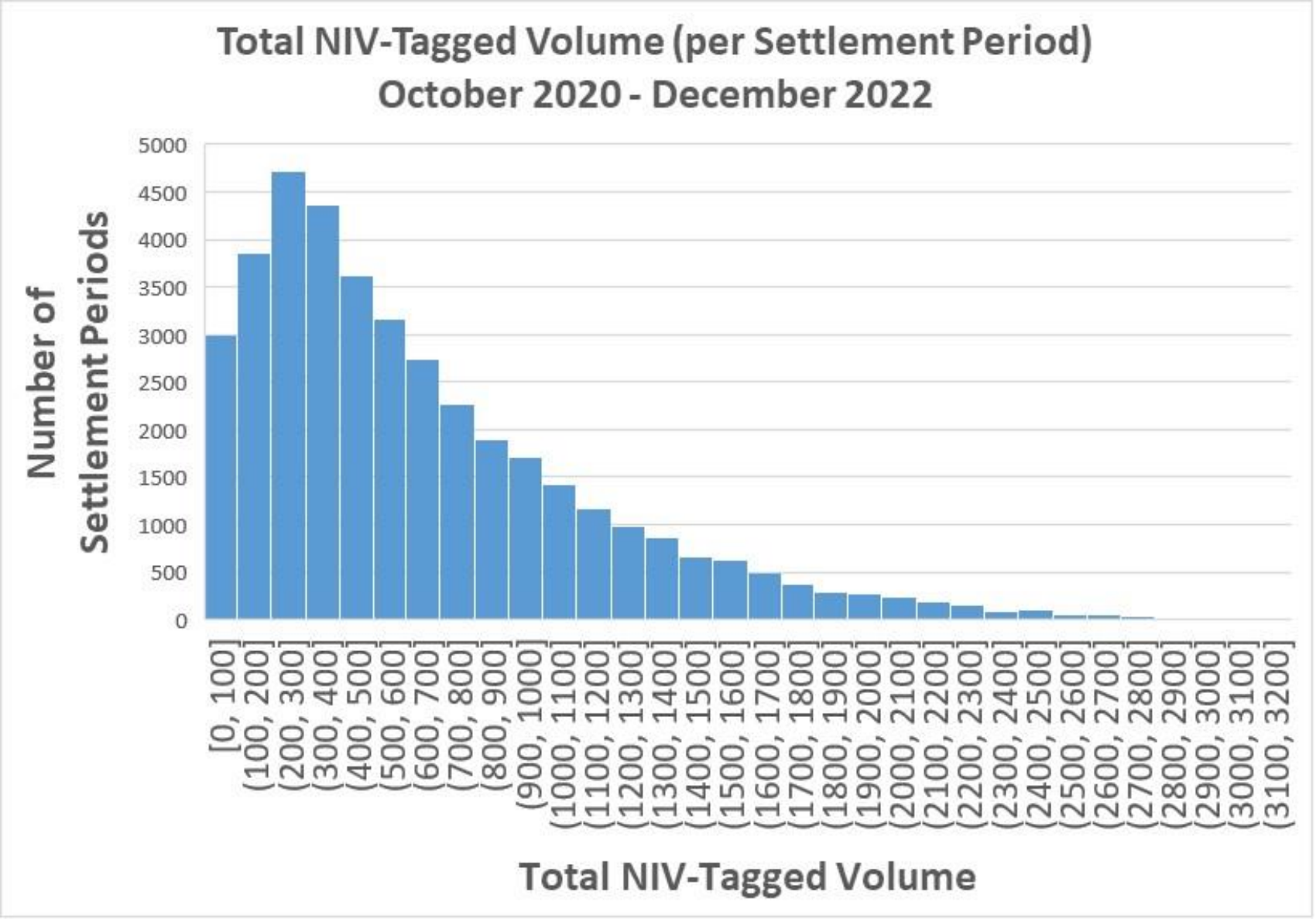
P443 Proposed does not change the actions taken by NGESO, just the way they are treated in the Imbalance Price calculation:

- Imbalance Price may be reduced (because Interconnector trades are re-priced to VoLL in the price stack)
- Little to no impact on BSUoS

As discussed art WG3, whether P443 Proposed would actually change the Imbalance Price depends on:

- Whether the market is ‘long’ (NIV < 0) or ‘short’ (NIV>0)
- Whether the Interconnector trades are NIV-tagged (removing them from the stack)
- Whether the Interconnector trades are System Flagged
- What other actions (if any) are in the Buy Stack at prices above VoLL

How much volume is NIV-tagged?

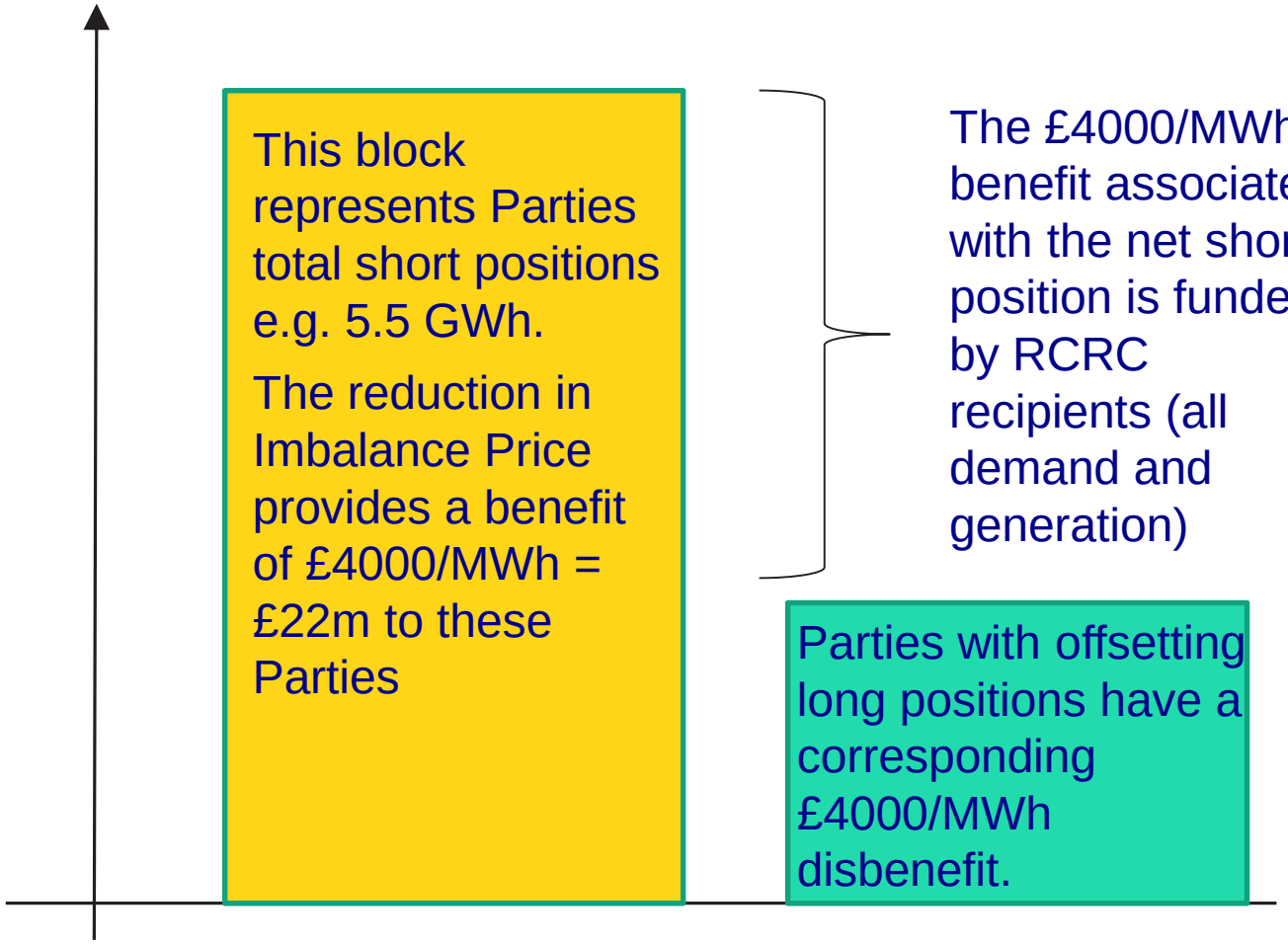


Impact on BSC Parties

In the ‘credible worst case’ scenario put forward by the Proposer, it is likely that (in the absence of P443 Proposed) the Interconnector trades would set the Imbalance Price, because:

- The market would be short
- The Interconnector trades would not be System Flagged (as they were bought for energy reasons)
- The volume of Interconnector trades would be too large for NIV Tagging to remove

Therefore, in this scenario, P443 Proposed would reduce the Imbalance Price from £10,000/MWh to £6,000/MWh.



Summary

Roughly speaking (if we ignore Parties with offsetting long positions), the effect of P443 Proposed is to partially socialise the costs of NGESO reversing the Interconnector flows.

Under the current baseline:

- Parties with short positions would pay the entire £10,000/MWh cost of reversing the Interconnector flows
- BSC Parties generally (as BSUoS payers + RCRC recipients) would be held neutral, as they would pay the cost through BSUoS and receive it back through RCRC
- In April 2023 the BSUoS payers and RCRC recipients become different (which is a separate issue)

.Under P443 Proposed:

- Parties with short positions are only required to pay VoLL (£6000/MWh)
- The remaining £4000/MWh is paid for by Parties collectively (through BSUoS charges with no corresponding RCRC redistribution)
- Some potential disbenefit to large Consumers, if Suppliers are passing through RCRC

P443 ALTERNATIVE: FINANCIAL IMPACT ON PARTIES & CONSUMERS

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Financial impact of P443 Alternative on Parties and Consumers

The potential Alternative prevents NGESO from buying power over Interconnectors at prices above VoLL

The impact on Imbalance Prices and BSUoS depends on what actions they take instead. Options include:

- Winter contingency service (but not necessarily available in future)
- Commercial actions from GB providers at prices above VoLL. But P443 Proposer contends that GB actions are less likely to be priced this high, due to GB regulation
- Emergency Assistance from Interconnectors – but there is a question over whether this would be available
- OC6 Demand Control

As the only option definitely available is OC6 Demand Control, we have modelled a credible worst case scenario in which the 11 GW of Interconnector Buy Actions is replaced by 11 GW of OC6 Demand Control (voltage reduction and/or Demand Disconnection)

The impacts of this can be summarised as:

- Financial and non-financial impact on Consumers affected by Demand Control
- Financial impact of Imbalance Price being reduced from £10,000/MWh to £6,000/MWh (same as Proposed)
- Financial impact of reduced BSUoS charges for Parties, and Consumers who have BSUoS charges passed through to them

Impact on BSC Parties and Consumers

The effect on **Imbalance Charges** and **RCRC** is exactly the same as the Proposed (because, in this scenario, the Imbalance Price becomes VoLL under both Proposed and Alternative).

BSUoS payers (i.e. Final Demand, post-April) are no longer funding £55m / Settlement Period of Interconnector costs.

If we assume 50 MW (25 MWh) of Final Demand, the saving in BSUoS charges (paid by Suppliers, and passed through to Consumers in some cases) would be £2,200 / MWh

But this is achieved at the expense of allowing 11 GW of OC6 Demand Control (with associated financial and non-financial costs for Consumers)

TERMS OF REFERENCE REVIEW INCLUDING APPLICABLE BSC OBJECTIVES

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Terms of Reference Summary

Item	Status
P443 Specific Terms of Reference	In progress
Costs and impacts	To be determined from Elexon internal impact assessment and industry consultation
EBGL Article 18 impacts	Yes – based on current proposed solution
Self-Governance?	Initial view – not SG due to EBGL impacts
Any Alternative Modifications?	Not formally raised yet
Views against Applicable BSC Objectives	Workgroup provided their initial views on the Proposed solution at Workgroup 4 and will provide their initial views on the Alternative solution(s) at this meeting

Terms of Reference – P443 Specific ToR

P443 Specific ToR

a) Should the solution only apply to interconnectors?

b) Assurance and validation – should Elexon validate that NGESO have not executed Interconnector Trades above VoLL?

c) Is this consistent with EBGL objectives and other retained EU law?

d) What is the appropriate value of VoLL that should be used?

e) What could be the unintended consequences of the proposed solution?

Terms of Reference – Standard ToR

Standard ToR

f) How will P443 impact the BSC Settlement Risks?

g) What changes are needed to BSC documents, systems and processes to support P443 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?

h) Are there any Alternative Modifications?

i) Should P443 be progressed as a Self-Governance Modification?

j) Does P443 better facilitate the Applicable BSC Objectives than the current baseline?

k) Does P443 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?

SPECIFIC TERMS OF REFERENCE

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Who should the solution apply to?

a) Should the solution only apply to interconnectors?

- The Proposer raised a question in the Solution section of the Proposal Form as to whether the cap should just apply to Interconnector trades
- The Proposer believes the cap should only apply to Interconnector trades because all GB Generators/Traders/Suppliers are regulated by Ofgem and can be investigated if prices are believed to no longer be cost reflective and/or go beyond scarcity pricing
- The Proposer is also keen that customers who offer Demand Side Response (DSR) are free to do so at a price that will reflect their own VoLL. For some industries that may be higher than £6,000/MWh
- The current thinking is yes, as Interconnector Users are not directly regulated by Ofgem
- Workgroup to confirm if Emergency Actions (Emergency Assistance and/or Emergency Instructions) with Interconnector Users are out of scope

OVERVIEW OF INTERCONNECTOR TRADING

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Trading update – Interconnector trading liquidity

- Additional tool in ESO system balancing portfolio – introduces more competition from connected countries and adds to the depth of the offers in the BM
- Results below from interconnector auction from 24/11 for 3 requirements, 2 system requirements (thermal constraints) and 1 energy requirement
- All interconnectors are able to participate in energy requirements as they are system wide but the constraints are location specific

Reason	Q (MW)	From	To	Buy/Sell	Filled?	Clearing Price (£/MWh)	Best Price (£/MWh)	VWA Price (£/MWh)	Cleared Volume (MW)	Total Bid volume	Liquidity Factor	IFA1	BN	NEMO	IFA2	EL
SCOAST	100	13:00:00	14:00:00	Buy	Cleared	250.07	247.23	248.22	100	3477	34.8			100		
SCOAST	100	14:00:00	15:00:00	Buy	Cleared	264.84	264.37	264.53	100	2290	22.9			100		
SCOAST	650	15:00:00	16:00:00	Buy	Cleared	291.34	280.39	288.10	650	5211	8.0	16		519	115	
SCOAST	900	16:00:00	17:00:00	Buy	Cleared	303.09	235.33	281.31	900	10855	12.1	405		0	120	375
SCOAST	900	17:00:00	18:00:00	Buy	Cleared	297.00	288.80	291.52	900	11642	12.9	400		205		295
SCOAST	800	18:00:00	19:00:00	Buy	Cleared	286.92	278.30	283.98	800	10022	12.5	190		190		420
SCOAST	700	19:00:00	20:00:00	Buy	Cleared	261.02	251.27	258.11	700	9692	13.8	75		475		150
SCOAST	600	20:00:00	21:00:00	Buy	Cleared	233.53	225.99	230.04	600	9329	15.5	105		355	40	100
SCOAST	450	21:00:00	22:00:00	Buy	Cleared	219.04	202.41	208.94	450	8511	18.9	55		395		
FLOWSTH	300	18:00:00	19:00:00	Buy	Cleared	260.94	248.20	253.19	300	12916	43.1	0	300	0		0
FLOWSTH	500	21:00:00	22:00:00	Buy	Cleared	205.00	197.01	202.20	500	11655	23.3	0	500	0		
Margin	600	13:00:00	14:00:00	Buy	Cleared	246.46	231.35	241.09	600	5376	9.0		600	0		
Margin	1100	16:00:00	17:00:00	Buy	Cleared	307.00	270.50	299.14	1100	15424	14.0	0	610	100	0	390
Margin	1000	17:00:00	18:00:00	Buy	Cleared	278.50	261.01	272.27	1000	15811	15.8	0	1,000	0		0
Margin	400	19:00:00	20:00:00	Buy	Cleared	245.77	229.19	238.57	400	13186	33.0	0	400	0		0
Margin	600	20:00:00	21:00:00	Buy	Cleared	227.10	212.68	221.71	600	13153	21.9	0	600	0	0	0

EMERGENCY ACTIONS TAKEN BY NGESO

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Order of Action

Sometimes operational circumstances and rapidly evolving scenarios will mean that we take options out of this order

Sli.do code #OTF

Everyday Actions	Order	Comments
All deliverable Offer action on all available BM participants	#1 based on Cost	Scheduled at Day Ahead, action taken in real time – some offers may not be available due to network congestion
Issue warming instructions to cold BM participants	#1 based on Cost	Scheduled at Day Ahead, action taken in real time
Buy energy from the continental Europe	#1 based on Cost	Scheduled at Day Ahead, action taken from Day Ahead to 4hrs ahead of time by ESO Traders
Reconfigure CCGTs to increase available energy (e.g. sync additional GTs)	#1 based on Cost	Scheduled at Day Ahead, managed within the control timescales within day
SO-SO trade in cost order	#1 based on Cost	SO to SO trade with other SO in Europe/Ireland
Reconfigure Transmission Network to reduce network congestion, including: Change substation running arrangements, Tap Quad Boosters, to control flow of energy and Making use of enhanced ratings	Normal operating practice – no cost	Changing daily operating conditions can result in different network configurations to reduce congestion

Enhanced Actions (if everyday actions are insufficient)	Order	Comments
Recall TO assets from outage to increase network availability and increase available capacity	#2	Anytime through to control room timescales, depending on ERTS (Emergency Return to Service) time
Issue an Electricity Margin Notice (EMN)	#3	Request to market to increase available energy or reduce demand. Likely to be issued at Day Ahead. Updated regularly
Taking additional actions obtained through EMN	#4	Managed in real time
A Capacity Market Notice (CMN) is automatically triggered to alert CM participants	#5	Driven by calculation of Market data at 4 hours ahead of real time

Emergency Actions	Order	Comments
Issue a High Risk of Demand Reduction (HRDR) system warning	#6	Warning network operators of high likelihood of demand control. Further request to market to increase available energy or reduce demand. Closer to real-time than ENM
Emergency Assistance (EA) request to other SO	#7	Real-time action. Only applicable if capacity is available on interconnectors
Emergency Instruction (EI) to other SO	#8	
Issue Demand Control Imminent (DCI) system warning	#9	If possible, this system warning will be issued 30 minutes prior to demand control. Warning to network operators
OC6 demand control instructions to DNOs	#10	This could be via voltage control or demand control (disconnecting customers)

EA and EI

Emergency Assistance-EA	Emergency Instruction -EI
• A commercial service which is mandatory (BC2.9.6) for NGESO & the IC Owner but not for the connecting SO, and can be used to increase or decrease flows of energy on the Interconnector with prior agreement from the connecting SO • This can only be used in order to prevent the SO requiring assistance from entering an Emergency situation and is therefore not used as a normal operational action considered in cost order • The instructing SO will change to Alert/Emergency state in the EAS as soon as reasonably practicable, this may be after the request is made	• A non-commercial, mandatory service, enabling the instructing SO to immediately reduce the import/export flow. It can only be used to reduce the flow to 0MW and cannot change to flow direction • This can only be used in an Emergency situation and is therefore not used as a normal operational action considered in cost order • This is set out in Grid Code BC2 • The instructing SO will change to Emergency state in the EAS as soon as reasonably practicable, this may be after the instruction is given

Use of EA and EI do not have an impact on P443 as they are emergency actions only and can only be used for unforeseen issues, they cannot be a planned action ahead of real-time

P443 only concerns commercial order of actions taken in the normal markets to manage the system. EA & EI do not fall into these timescales

EA and EI

Emergency Assistance - Pricing	Emergency Assistance prices vary depending on the interconnector. The actual prices are commercially sensitive but the price paid for EA will be one of the following 3 options: • Fixed Prices agreed annually with the connected TSO. These could typically be around £400/MWh. • Price is equal to the agreed settlement period's cashout price in either of the TSO markets depending on the flow change direction i.e. buying or selling • Price is equal to the most expensive balancing action taken by the Assisting/Delivering TSO in the corresponding settlement period	The price of EA therefore could be above VoLL in options 2 & 3 if the market prices have risen above VoLL Whichever of these options is the case, this must be paid as well as keeping the IC owner whole with regards to the imbalance faced by the EA activation. This imbalance is either moved from the IC account to the requestor's account or the imbalance penalty value in the connected TSO's market is paid to the connected SO or the IC owner depending the IC's arrangements. The cost of imbalance could be above VoLL if the market prices have risen above this level
Emergency Instruction - Pricing	This consists solely of keeping the IC owner whole with regards to the imbalance faced by the EI activation. This imbalance is either moved from the IC account to the requestor's account or the imbalance penalty value in the connected TSO's market is paid to the connected SO or the IC owner depending on the IC's arrangements. The cost of imbalance could be above VoLL if the market prices have risen above this level.	Therefore EI could be a cheaper option than using EA however for some interconnectors it could be more expensive depending on the agreed fixed prices. It does not take account of the impact on the Assisting/Delivering TSO's margins nor any rebalancing actions that must taken to counter the loss/gain of MW resulting from the EI, whereas EA does by using one of the 3 options above.

Assurance and validation

b) Assurance and validation – should Elexon validate that NGESO have not executed Interconnector Trades above VoLL?

- We welcome the Workgroup's views on whether Elexon should validate that NGESO have not executed Interconnector Trades above VoLL in the Proposed solution, or at all in the Alternative solution?

- If yes, how often should the validation check be carried out? What would be the consequences and next steps?

- The Proposed solution as drafted means that NGESO would not be prevented from executing trades above VoLL. They could effectively still execute trades above VoLL, but only include the trade at the cap in the Balancing Settlement Adjustment Data (BSAD) file sent by NGESO to BSCCo

- This would mean that the VoLL value (BSC – £6,000/MWh, Capacity Market – £17,000/MWh or another value) would go through to cashout prices and the residual would feed into Balancing Services Use of System (BSUoS) charges

- In the Alternative solutions, NGESO would not be able to trade 2) with Interconnector Users above VoLL or 3) above VoLL

EBGL objectives and other retained EU law (1 of 3)

c) Is this consistent with EBGL objectives and other retained EU law?

- The EBGL objectives are on the third page of the Agenda for P443 Workgroup Meeting 4 and on the next slide
- Elexon's initial legal analysis is set out on the next two slides. The objectives highlighted in yellow *might be* negatively impacted by P443
- We welcome the Workgroup's views

EBGL objectives and other retained EU law (2 of 3)

The Electricity Balancing Guideline (EBGL) Article 3 (Objectives and regulatory aspects)

1. This Regulation aims at:

1. Fostering effective competition, non-discrimination and transparency in balancing markets;
2. enhancing efficiency of balancing as well as efficiency of European and national balancing markets;
3. integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;
4. contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;
5. ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue distortions within the internal market in electricity;
6. facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;
7. facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation.

Key:

might be negatively impacted by P443

EBGL objectives and other retained EU law (3 of 3)

2. When applying this Regulation, Member States, relevant regulatory authorities, and system operators shall:

1. apply the principles of proportionality and non-discrimination;
2. ensure transparency;
3. apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
4. ensure that TSOs make use of market-based mechanisms, as far as possible, in order to ensure network security and stability;
5. ensure that the development of the forward, day-ahead and intraday markets is not compromised;
6. respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
7. consult with relevant DSOs and take account of potential impacts on their system;
8. take into consideration agreed European standards and technical specifications.

Key:

might be negatively impacted by P443

VoLL

d) What is the appropriate value of VoLL that should be used?

- Which value of VoLL should be used?

Source	Value
BSC	£6,000/MWh
Capacity Market	£17,000/MWh
Other?	£8,000/MWh?

- Proposer is currently minded to set at VoLL, which is currently set at £6,000/MWh in BSC Section T 1.12. Workgroup believe this value should be reviewed, but this is outside the scope of P443. Alternatives would be £17,000/MWh as set in the Capacity Market or ~£8k/MWh, which is the average used in Europe

What is VoLL?

- Value of Lost Load (VoLL) was introduced into the BSC by the implementation of P305 'Electricity Balancing Significant Code Review Developments' on 5 November 2015 as part of the standard November 2015 BSC Release

- The VoLL price is an assessment of the average value that electricity consumers attribute to the security of supply

- VoLL was set at **£3,000/MWh** on implementation, rising to **£6,000/MWh** on 1 November 2018 ahead of the winter 2018/19 season

- Further information on this price and how the proposed values were calculated can be found in the DECC-Ofgem study by London Economics (July 2013) – The Value of Lost Load for GB consumers

Unintended consequences

e) What could be the unintended consequences of the proposed solution?

- P443 was presented to the Panel on 18 August 2022

- The Panel were keen to ensure that the P443 Workgroup consider what may be the unintended consequences of the proposed solution

The following slides were presented at previous Workgroup meetings for discussion

Scenario : Insufficient generation due to cold weather, no wind and generator outages. NGESO reverses direction of 5.5GW of IC export @ £10,000/MWh. Total cost is £55 million in one Settlement Period. Despite this effort, load control is required, reducing demand by 30% from 45GW to 30GW.

Domestic consumer

- With demand down x%, do cut off customers pay some of the Demand share of £27.5m?
- How does one prepare a consumer for a c.£1.8k/MWh SP?
- Or does the taxpayer pick up the tab, with proposed frozen bills?

I&C consumer

- For customers not on a HH tariff – will they end up paying when power has been cut off?
- Assume large TEC demand cut off already, so domestic & commercial consumer picks up greater share
- Energy Intensive likely relieved to have been cut off and avoided ~£1.8k/MWh BSUoS (instant insolvency?)

Supplier

- Assume supplier will allocate high BSUoS cost SPs to consumers that weren't cut off in that period? Does this work for non-HH?
- Instant insolvency? Or covered by Government loan to fix consumer bills?
- Timing issue with price cap – Supplier needs to float the difference for at least a quarter
- Exposure to imbalance (generator insolvency)

GB Generator

- If generating then fewer GW to pay £27.5m. Could be ~£1.8k/MWh, i.e., instantly insolvent?
- If they remain solvent, would instantly need to factor in these BSUoS costs into any as yet untraded volumes
- If cap in place, would need to assume imminent breach of £250m limit
- CM penalties

NGESO

- If BSUoS cap in place, 1/5th of £250m limit is used in 1 SP
- Otherwise made whole (eventually)

Non GB Generator

- Non-GB generators (and ICs) do not pay BSUoS
- Earn £10k/MWh paid for by GB taxpayer and GB generator

- With insolvencies (most likely on generator side as they have no government protection) then the BSUoS cost not paid by these insolvent generators needs to be socialised across remaining generators and supply
- Could tip more generators and suppliers into insolvency
- Either way, assuming consumer bill freeze, GB taxpayer will pick up tab for £27.5m (min) that will be paid to Non-GB generators (and ICs).
- Then taxpayer will pick up additional inefficient risk premia on any future offers in wholesale market or BM (note this is already happening due to imbalance risk but that is due to system tightness NOT inefficient allocation of non-cost reflective BSUoS risk)

Impact on BSUoS cost – at 30GW demand

added BSUoS cost per MWh (at 30GW demand)

Total GW traded	£500	£3,000	£6,000	£10,000	£17,000	£20,000
1	£8	£50	£100	£167	£283	£333
2	£17	£100	£200	£333	£567	£667
3	£25	£150	£300	£500	£850	£1,000
4	£33	£200	£400	£667	£1,133	£1,333
5	£42	£250	£500	£833	£1,417	£1,667
6	£50	£300	£600	£1,000	£1,700	£2,000
7	£58	£350	£700	£1,167	£1,983	£2,333
8	£67	£400	£800	£1,333	£2,267	£2,667
9	£75	£450	£900	£1,500	£2,550	£3,000
10	£83	£500	£1,000	£1,667	£2,833	£3,333
11	£92	£550	£1,100	£1,833	£3,117	£3,667

Impact on BSUoS cost – at 45GW demand

added BSUoS cost per MWh (at 45GW demand)						
Total GW traded	£500	£3,000	£6,000	£10,000	£17,000	£20,000
1	£6	£33	£67	£111	£189	£222
2	£11	£67	£133	£222	£378	£444
3	£17	£100	£200	£333	£567	£667
4	£22	£133	£267	£444	£756	£889
5	£28	£167	£333	£556	£944	£1,111
6	£33	£200	£400	£667	£1,133	£1,333
7	£39	£233	£467	£778	£1,322	£1,556
8	£44	£267	£533	£889	£1,511	£1,778
9	£50	£300	£600	£1,000	£1,700	£2,000
10	£56	£333	£667	£1,111	£1,889	£2,222
11	£61	£367	£733	£1,222	£2,078	£2,444

Would this Modification Proposal lead to increased Demand Control Events or risk security of supply?

Winter outlook text

Interconnectors

We assume that interconnectors are able to provide 5.7 GW net imports at times when GB needs it. This is consistent with their Capacity Market obligations. Our Base Case assumes 2.7 GW additional interconnector capacity that was not available last winter. This includes Eleclink which is now operational, and both IFA and NSL operating at full capacity. There is uncertainty on the availability of the French nuclear fleet for winter. This could lead to more export flows from Great Britain to France when our system margins are not tight. We are continuing to monitor the outlook in France and will undertake further assessments ahead of the Winter Outlook Report in the autumn.

Discussion point: What would this mean for the ESO and how would it impact consumers?

Discussion point : Are there any security of supply consequences and would this increase the likelihood of demand disconnection if we need to trade above VoLL (£6,000) to secure the imports to manage a system margin requirement?

WORKED EXAMPLES – IMPACT ON PRICES

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IMPACT OF P443 ON CASH FLOWS (BSUOS & RCRC)

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Balancing Services Use of System (BSUoS)

P443 Proposed: no impact on BSUoS (as NGESO actions are unaffected)

P443 Alternative: costs recovered through BSUoS could increase or decrease:

- If Interconnector trades can be replaced with other commercial ('Everyday') actions, they will be more expensive, and BSUoS costs will increase
- If Interconnector trades are replaced with last resort ('Enhanced' or 'Emergency') actions, these are likely to be cheaper (i.e. priced at VoLL or less):
  - Emergency Assistance (from other SOs)
  - Demand Flexibility Product
  - Winter Contingency units
  - Emergency Instructions to other SOs
  - OC6 Demand Control (no cost recovered through BSUoS)
  - ESEC Rota Disconnections (no cost recovered through BSUoS)

Imbalance Price: P443 Proposed

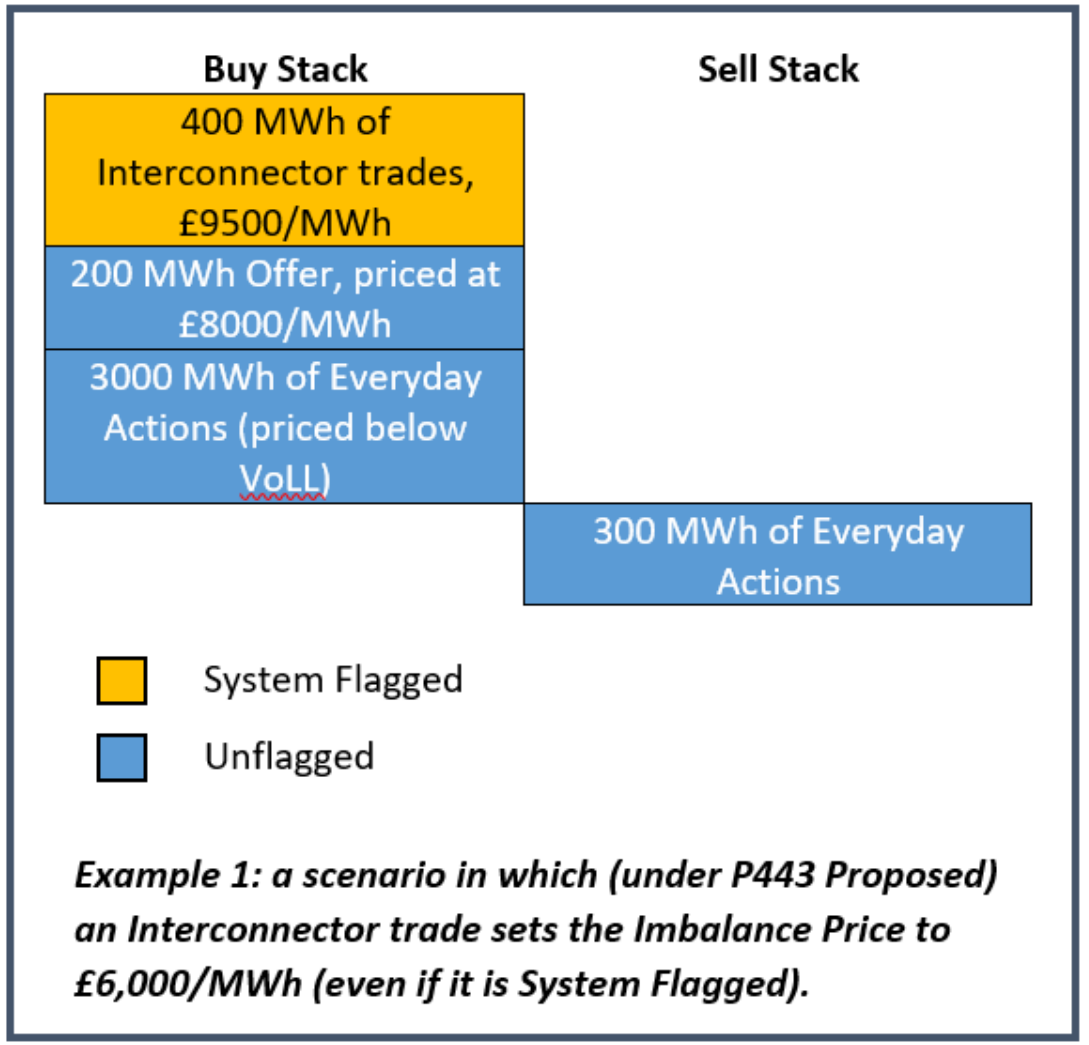
For purposes of calculating the Imbalance Price, **P443 Proposed** reduces the price of certain Interconnector trades to BSC-defined VoLL (currently £6,000/MWh)

The effect varies depending on whether those action were System Flagged (by the SO), and how they interact with NIV-tagging

Example 1 shows how a System Flagged action can still set the price:

- Currently, the Interconnector trade would 'protect' the £8,000/MWh Offer from NIV Tagging, allowing it to set the price.
- Under P443 Proposed, the £8000/MWh Offer would move to the top of the stack. The Interconnector trade would become Second Stage Unflagged (because of the higher-priced Unflagged Offer). The £8000/MWh Offer would be NIV Tagged, and the Interconnector trade would set the Imbalance Price to £6,000/MWh

In this particular example, P443 Proposed gives the same £6,000/MWh Imbalance Price whether the Interconnector trade is System Flagged or not.



Example 1: a scenario in which (under P443 Proposed) an Interconnector trade sets the Imbalance Price to £6,000/MWh (even if it is System Flagged).

Imbalance Price: P443 Alternative

Under P443 Alternative, Interconnector trades above VoLL would have to be replaced by another action, such as:

- An even higher-priced Offer (or other ‘Everyday Action’)
- Emergency Assistance (from other SOs) – typically priced at VoLL or below (see Richard Price note)
- Demand Flexibility Product
- Winter Contingency units – priced at £0/MWh in cashout
- Emergency Instructions to other SOs– typically priced at VoLL or below (see Richard Price note)
- OC6 Demand Control – priced at VoLL for cashout purposes
- ESEC Rota Disconnections – not included in cashout calculation at all?!

The potential effect on Imbalance Price is complex, depending on what type(s) of action (from the above list) replace the Interconnector trade, and the interaction with NIV-tagging.

But, as a broad generalization, replacing an Unflagged Interconnector trade (priced at £X/MWh > VoLL) with one of the above is most likely to reduce the Imbalance Price from £X/MWh to VoLL or below

A Simple Excel Model of P443 Impact on BSUoS + RCRC

As discussed in previous slides, the impact of P433 Proposed and Alternative depend on many factors, including:

- Whether the expensive Interconnector trades were System Flagged or not;
- What other actions NGESO took in that Settlement Period; and
- For P443 Alternative, what actions were taken instead of the prohibited Interconnector Trades

We can't model every possible variant, but for illustrative purposes we have produced a simple spreadsheet model of the following scenario:

- National Grid buys power over the Interconnectors (at a price above VoLL) for energy reasons (unless prohibited by P443 Alternative)
- Under the current baseline, these trades would set the Imbalance Price (i.e. wouldn't be entirely removed by NIV Tagging)
- Under P443 Proposed or Alternative, the Imbalance Price would be reduced (e.g. to VoLL or below)
- BSUoS is recovered from Final Demand (post 1 April 2023)
- RCRC is still recovered from all BSC Parties with physical positions (Credited Energy Volumes)

STANDARD TERMS OF REFERENCE

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Settlement Risks

f) How will P443 impact the BSC Settlement Risks?

- A Settlement Risk is a risk of any failure or error in a process required under the BSC that may impact (or has impacted) Settlement. These are recorded on the Risk Evaluation Register (RER)

- There are 34 Settlement Risks in total

- It is not expected that P443 will impact the BSC Settlement Risks

BSC document and system impacts

g) What changes are needed to BSC documents, systems and processes to support P443 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?

Impact	Proposed	Alternative
Document	1a) Section Q 1b) Section T and X-2 No Code Subsidiary Document impacts identified	BSC and Consequential Code change - NGESO - C16 Statements, Balancing Principles Statement, Transmission Licence?
System	1a) NGESO amend trade value for Interconnector User trades above VoLL to VoLL before sending Balancing Services Adjustment Data (BSAD) file to BSCCo 1b) BSCCo amend trade value in BSAD file for Interconnector User trades above VoLL to VoLL	• No BSC system impacts • NGESO to confirm system and process impacts

Alternative Modifications

h) Are there any Alternative Modifications?

- The Workgroup are considering two Alternative Modifications, but neither have been formally raised
- Possible Alternative Modification One would prevent NGESO executing trades with Interconnector Users above VoLL
- Possible Alternative Modification Two would prevent NGESO executing trades above VoLL
- The Workgroup's current thinking from the last meeting is to seek industry views in the Assessment Procedure Consultation to help determine whether to formally raise an Alternative Modification

Self-Governance

i) Should P443 be progressed as a Self-Governance Modification?

- P443 cannot be Self-Governance as it is expected to impact the EBGL Article 18 terms and conditions
- The Proposed solution would be to alter BSC Section Q 'Balancing Mechanism Activities' to add in a new paragraph
- The Proposer believes that, even without Article 18 impact, P443 should go to Ofgem for decision as it materially impacts:
  - sustainable development, safety or security of supply, or management of market or network emergencies
  - competition
  - materially impacts existing or future electricity consumers
  - impacts the operation of national electricity Transmission System
- and is likely to discriminate between different classes of Parties

Applicable BSC Objectives

a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

b) The efficient, economic and co-ordinated operation of the national electricity transmission system

c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements

e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

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

g) Compliance with the Transmission Losses Principle

Applicable BSC Objectives

j) Does P443 better facilitate the Applicable BSC Objectives than the current baseline?

The Proposer's initial view is that this Modification Proposal will better facilitate the following Applicable BSC Objectives:

Applicable BSC Objective	Proposer's initial views
(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity	Will protect customers and also Generators and Suppliers who are short in a particular Settlement Period by offering protection from excessive cashout prices

Applicable BSC Objectives – initial views on Proposed solution prior to Assessment Procedure Consultation

Member	(c)	(d)	(e)
Lisa Waters (Proposer's representative)	**Positive**	**Positive**	**Neutral**
Andrew Colley	**Positive**	**Positive**	
Lauren Jauss	**Positive**	**Neutral**	
Leo Michelmore	**Neutral**	**Neutral**	**Negative**
Louise Trodden	**Neutral**		
Paul Jones	**Neutral**		
Peter Frampton	**Neutral**	**Positive**	**Negative**
Tom Edwards	**Positive**	**Positive**	
Vince Hammond	**Positive**	**Negative**	**Neutral**

EBGL

k) Does P443 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?

- The Proposed solution would alter BSC Section Q 'Balancing Mechanism Activities' to add in a new paragraph as follows:

- 6.3.2D For any Balancing Services Adjustment Action [provided using an Interconnector] and with a positive Balancing Services Adjustment Volume, the Balancing Services Adjustment Cost shall not be greater than VoLL * Balancing Services Adjustment Volume

- BSC Section Q6.3 forms part of the EBGL Article 18 Terms and Conditions (as mapped in BSC Section F 'Modification Procedures' Annex F-2')

CONSULTATION QUESTIONS

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Standard Consultation Questions (1 of 2)

1. Do you agree with the Workgroup's initial (unanimous/majority) view that P443 [does/does not] better facilitate the Applicable BSC Objectives than the current baseline?

2. Do you agree with the Workgroup that the draft legal text delivers the intention of P443?

3. Do you agree with the Workgroup's recommended Implementation Date?

4. Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P443 which would better facilitate the Applicable BSC Objectives?

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

6. Do you agree with the Workgroup's assessment that P443 does/does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?

7. Do you have any comments on the impact of P443 on the EBGL objectives?

Standard Consultation Questions (2 of 2)

8. Will P443 impact your organisation?

9. How much will it cost your organisation to implement P443?

10. What will the ongoing cost of P443 be to your organisation?

11. How long (from the point of approval) would you need to implement P443?

12. Do you have any further comments on P443?

Additional Consultation Questions

- What, if any, additional Assessment Consultation questions are needed?

13. Should the solution only apply to Interconnector Users?

14. What value of VoLL should be used?

15. Would you want to see both the capped and uncapped trade value in the I014 file?

- We invite the Workgroup to suggest any further Consultation Questions

NGESO CHANGES REQUIRED AND IMPACTS

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NGESO changes and required impacts

Possible changes required – initial thoughts	Possible impacts- initial thoughts
• C16/Balancing principles statement • Control room process • Trading team actions • Reporting on BSAD	• Increases in pricing • Impacts to relationships with Interconnectors and EU TSOs if trades are capped • Security of supply?

Impact Assessment –draft and still work in progress

Solutions	Impacts	Costs	Other
• ESO can take IC trades above VoLL just not include in cashout • Still recovered in BSUoS • **ESO updates the BSAD file**	• Costs are still recovered in BSUoS File to be updated in auction tool to notify when over £6k and other IC programmes in the ENCC • Volume and new price is included in the ISP file • How does this impact the market from a security perspective- PNs • Impacts of fixed BSUoS to be further reviewed	• IT changes expected to be c.£100K (based on information to date could therefore change) • Additional resource costs to be accounted for	• Unclear how the end consumer will benefit from this solution
• ESO can take IC trades above VoLL just not include in cashout • Still recovered in BSUoS • **Elexon updates the BSAD file**	• Costs are still recovered in BSUoS • Volume and price is included in the ISP file for Elexon to manage • File to be updated in auction tool to notify when over £6k and other IC programmes in the ENCC • This may impact the market from a security perspective- PNs • Impacts of fixed BSUoS to be further reviewed	• If no changes to ESO process at all then there could only be resourcing costs	• Unclear how the end consumer will benefit from this solution
• ESO can not take any actions above VoLL on IC	• Review Order of actions • Internal process to change in trading team and interconnector team • Relationships with EU Counterparts • Markets in GB and EU could be artificially inflated to raise BM prices (an IC trade could be cheaper) • Transmission licence would not be complied with in current form- policy change would be required • Breach of SQSS in current form- policy change would be required • Alternative action may not be available in GB markets if not able to use the IC • How will EA and EI be impacted?	• IT costs to prevent trades to be fully calculated depending on the actions in scope	• Not in scope of the BSC • Requires a significant change to policy which is not for a BSC workgroup

PROGRESSION PLAN & NEXT STEPS

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Progression Plan

Event	Date
Workgroup meeting 1	15 September 2022
Workgroup meeting 2	22 November 2022
Workgroup meeting 3	7 December 2022
Workgroup meeting 4	16 January 2023
Workgroup meeting 5	20 January 2023
Assessment Procedure Consultation	6 February 2023 – 24 February 2023
Workgroup meeting 6	28 February 2023 or 1/2 March 2023
Assessment Report presented to Panel	9 March 2023
Report Phase Consultation	13 March 2023 – 13 April 2023
Draft Modification Report presented to Panel	11 May 2023
Final Modification Report submitted to Authority	15 May 2023

At its November 2022 meeting, the BSC Panel agreed to a three month extension to the Assessment Procedure

Assessment Procedure Consultation timetable

Event	Date
Issue draft Assessment Procedure Consultation for Workgroup review	30 January 2023 (4 WDs)
Issue Assessment Procedure Consultation for 15 WDs	6 February 2023
End of Assessment Procedure Consultation period	24 February 2023
Workgroup meeting 6 - post Assessment Procedure Consultation	28 February 2023 or 1/2 March 2023
Assessment Report presented to Panel	9 March 2023

Next steps

- Post meeting actions to be addressed
- Assessment Procedure Consultation to be drafted and circulated for Workgroup review prior to issuing for 15 WD industry consultation
- Any Other Business?

MEETING CLOSE

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THANK YOU

Paul Wheeler

Paul.Wheeler@elexon.co.uk

bsc.change@elexon.co.uk

20 January 2023