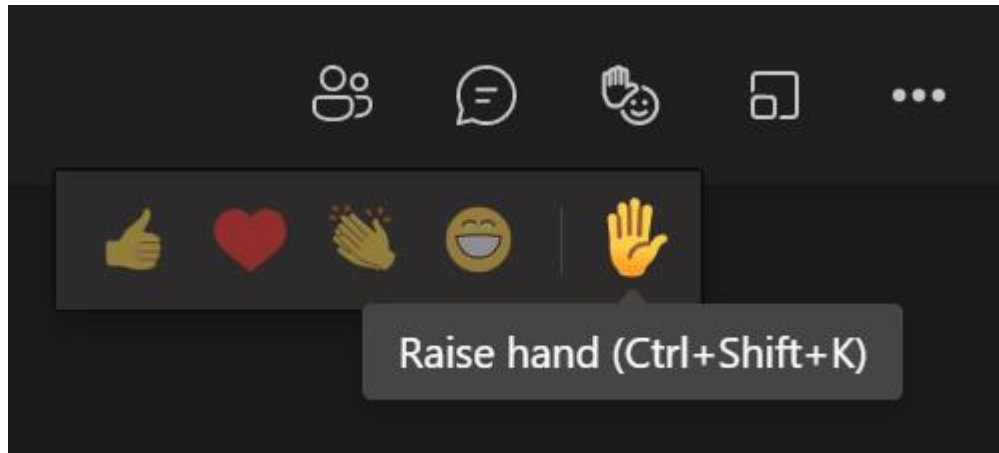


P443 Digital Meeting Etiquette

- Welcome to **P443 ‘To Cap NGENO Interconnector Trades at the Value of Lost Load (VoLL)’** Workgroup Meeting 3 – 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

ELELEXION

P443 Workgroup 3

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

7 December 2022

Meeting Agenda & Objectives

- Workgroup to agree whether to raise an Alternative solution
- Finalise solution(s) and gather Workgroup's initial views for the Assessment Procedure consultation

Agenda Item	Lead
1. Welcome and Meeting objectives	Lawrence Jones (Chair)
2. Summary of Workgroup 2 and Actions	Paul Wheeler (Lead Analyst)
3. NGENSO Actions from Workgroup 2	Louise Trodden (National Grid ESO)
4. Overview of Interconnector trading	NGESO
5. Emergency Actions taken by NGENSO	NGESO
6. Worked examples – impact on prices	John Lucas and Rashmi Radhakrishnan (Design Authority)
7. Review Proposed/Alternative Solution	Lawrence Jones
8. Terms of Reference review including Applicable BSC Objectives	Lawrence Jones
9. Progression Plan & Next steps	Paul Wheeler
10. AOB & Meeting close	Lawrence Jones



SUMMARY OF WORKGROUP 2 AND ACTIONS

Summary of Workgroup 2 (1 of 6)

- P443 Workgroup 2 was held on 22 November 2022
- The table on the next few slides summarises the current situation from Workgroup discussions in the two meetings so far on the Proposed solution and a potential Alternative solution
- The Workgroup worked up a potential Alternative solution at the second Workgroup meeting and will consider formally raising it at this meeting, subject to impact assessment and a number of actions taken

Summary of Workgroup 2 (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
Emergency Instructions / Assistance	At the 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 next meeting	As per Proposed
Buying or selling power?	Only NGESO buying [over Interconnectors]	As per Proposed

Summary of Workgroup 2 (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 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 as set in the Capacity Market or ~£8k, which is the average used in Europe	As per Proposed

Summary of Workgroup 2 (4 of 6)

Item/Term of Reference	Proposed	Alternative
System impacts	1a) NGENSO 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 NGESO to provide system impacts (cost and lead time) for these two options	2) NGENSO unable to trade with Interconnector Users above VoLL, therefore no BSC system changes required. NGENSO to confirm NGENSO system impacts
Document impacts	Insert new paragraph into BSC Section Q 6.3.2 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 2 (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
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 above cap. BSCCo to consider as part of impact assessment

Summary of Workgroup 2 (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 next meeting	TBD at next meeting
Self Governance	No	No
EBGL impacts	Yes – details to be brought to next meeting	Very likely – depends whether draft redlining impacts EBGL Article 18 Terms and Conditions in the BSC, to be assessed for next meeting

Workgroup 2 Actions (1 of 2)

1. NGESO to check whether the Demand Flexibility Service being developed can be triggered on a regional basis to address operational issues in a particular region
2. NGESO to check Code impacts of Alternative solution – to stop trades altogether what changes are required to other Codes and C16 Statements and/or Transmission Licence?
3. Elexon to work up and assess both the Proposed and Alternative options, working with NGESO on this, subject to Elexon confirming legality of the BSC placing any restrictions on NGESO's ability to trade
4. Ofgem and NGESO to check why prices for Emergency Assistance trades are not public?
5. NGESO to prepare slides for the next Workgroup meeting on the difference between Emergency Actions, Emergency Instructions and Emergency Assistance, so that the Workgroup can consider what should be in scope

Workgroup 2 Actions (2 of 2)

6. NGENSO to confirm how Emergency Instructions/Actions/Assistance are priced, and whether they typically would be higher or lower than VoLL
7. Elexon to provide worked examples of how money would flow through imbalance settlement (including Residual Cashflow Reallocation Cashflow (RCRC)) and Balancing Services Use of System (BSUoS) for the Proposed and Alternative solutions
8. Elexon and NGENSO to carry out impact assessment on potential system changes, to provide the Workgroup with a view on costs and implementation timescales
9. Elexon and NGENSO to draft redlined changes required for the Proposed and Alternative solutions in the BSC, C16 Statements and Balancing Principles Statement
10. Implementation approach to be considered at the next meeting, given potential system impacts. The current proposed Implementation Date is +2 Working Days after Authority decision, which will need amending if system changes are required

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



NGESO ACTIONS FROM WORKGROUP 2

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](#)



OVERVIEW OF INTERCONNECTOR TRADING

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

EA and EI

Emergency Assistance-EA

- A commercial service which is mandatory (BC2.9.6) for NGENSO & 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

Emergency Instruction -EI

- 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.



WORKED EXAMPLES – IMPACT ON PRICES



IMPACT OF P443 ON CASH FLOWS (BSUOS & RCRC)

Balancing Services Use of System (BSUoS)

P443 Proposed: no impact on BSUoS (as NGENSO 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

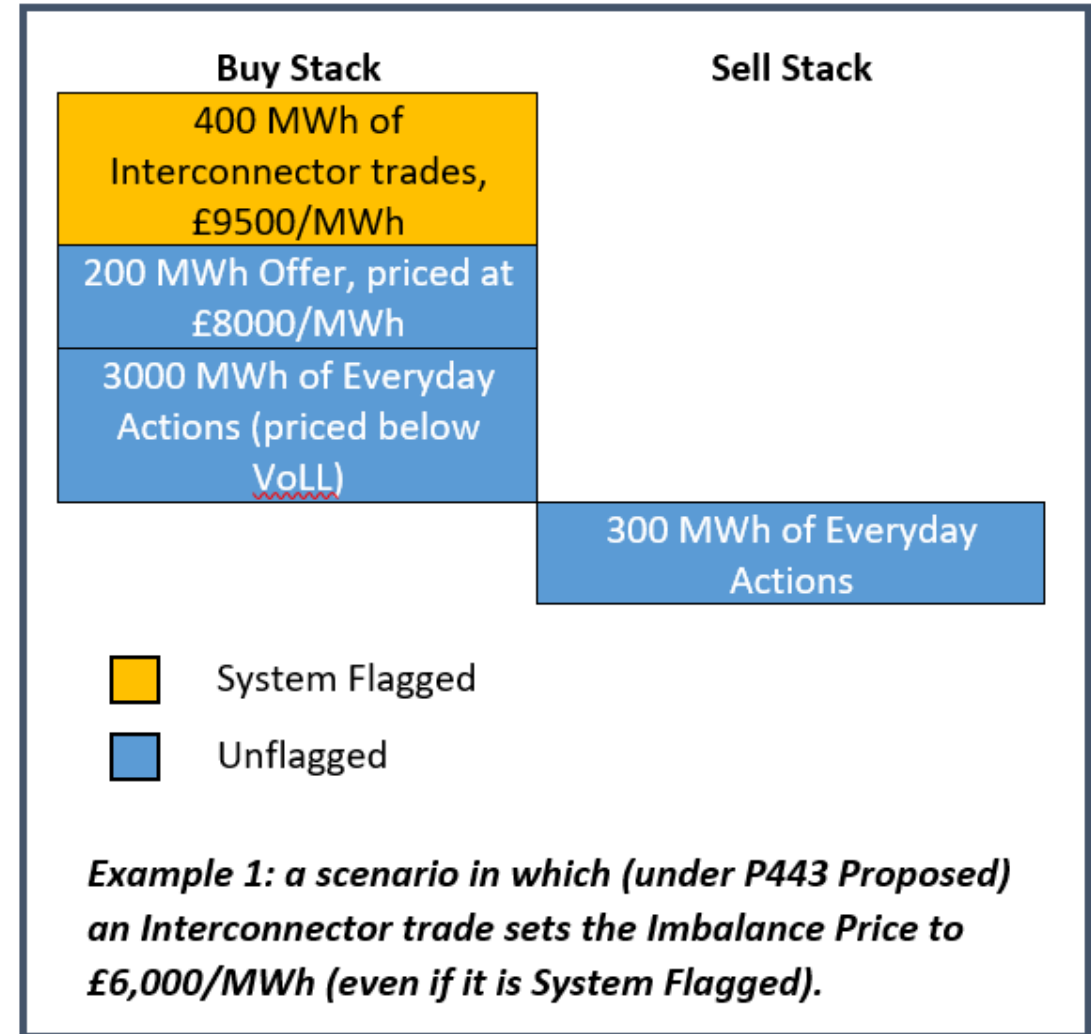
For purposes of calculating the Imbalance Price, **P443 Proposed** reduces the price of certain Interconnector trades to BSC-defined VoLL (currently £6,000/MWh)

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.



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 NGENSO 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)



REVIEW PROPOSED/ALTER NATIVE SOLUTION

Review Proposed/Alternative Solution (1 of 2)

	Proposed	Alternative
Summary	<p>NGESO can trade with Interconnector Users above VoLL, but the value to be included in the cashout price calculation will be set at VoLL</p> <p>Either NGESO or BSCCo will amend the trade value in the BSAD file</p>	<p>NGESO would be unable to trade with Interconnector Users above VoLL</p>

Review Proposed/Alternative Solution (2 of 2)

	Proposed	Alternative
Document impacts	Insert new paragraph into BSC Section Q 6.3.2	BSC and Consequential Code change - NGESO - C16 Statements, Balancing Principles Statement
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	2) NGESO unable to trade with Interconnector Users above VoLL, therefore no BSC system changes required. NGESO to confirm NGESO system impacts



TERMS OF
REFERENCE
REVIEW
INCLUDING
APPLICABLE BSC
OBJECTIVES

P443: Views against the Applicable BSC Objectives

- The Proposer believes that this Modification Proposal will better facilitate the following Applicable BSC Objectives:

Applicable BSC Objective	Proposer's initial views
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	NGESO will not simply buy through all offers to meet demand, rather they will use other tools e.g. Capacity Market
(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 prices
(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	If electricity supplies are short and prices are above the level that customers are willing to pay, the System Operator can issue a Capacity Market Warning for Capacity Market Parties to respond to

- The Applicable BSC Objectives are on the second page of the Agenda for P443 Workgroup Meeting 3

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 to provide their initial views 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

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 with Interconnector Users are out of scope

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, CM - £17,000/MWh or another value) would go through to cash out prices and the residual would feed into Balancing Services Use of System (BSUoS) charges
- In the Alternative solution, NGESO would not be able to trade with Interconnector Users 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 3
- 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

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](#)

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

This was discussed at the first meeting and NGENSO presented the scenario on the next slides for discussion

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?

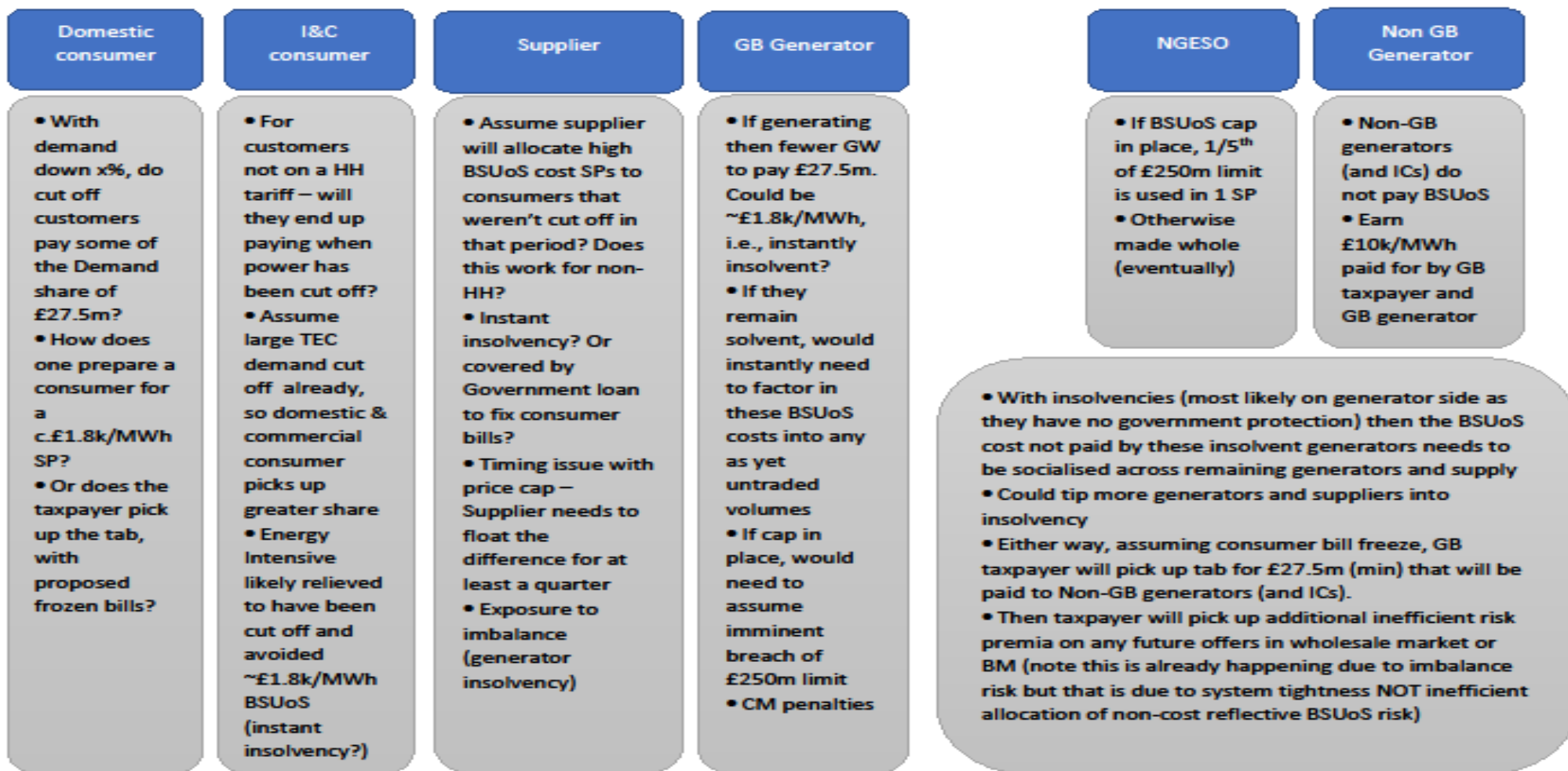
Discussion point : Are there any security of supply consequences and would this increase the likelihood of demand disconnection if we need to trade above VoLL (£6,000) to secure the imports to manage a system margin requirement?

Unintended consequences

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

- The scenario on the next slide was presented by the Proposer at the first Workgroup meeting

Scenario : Insufficient generation due to cold weather, no wind and generator outages. NGENSO 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.





STANDARD TERMS OF REFERENCE

Settlement Risks

f) How will P443 impact the BSC Settlement Risks?

- It is not expected that P443 will 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

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	<p>Insert new paragraph into BSC Section Q 6.3.2</p> <p>Code Subsidiary Document impacts to be determined</p>	<p>BSC and Consequential Code change - NGENSO - C16 Statements, Balancing Principles Statement, Transmission Licence?</p>
System	<p>1a) NGENSO amend trade value for Interconnector User trades above VoLL to VoLL before sending Balancing Services Adjustment Data (BSAD) file to BSCCo</p> <p>1b) BSCCo amend trade value in BSAD file for Interconnector User trades above VoLL to VoLL</p>	<ul style="list-style-type: none"> • No BSC system impacts • NGENSO to confirm system impacts

Alternative Modifications

h) Are there any Alternative Modifications?

- At the last Workgroup meeting, an Alternative Modifications was proposed, but not formally raised
- The Alternative Modification would prevent NGESO executing trades with Interconnector Users above VoLL

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 to 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 cannot be greater than $VoLL * Balancing\ Services\ Adjustment\ Volume$**
- 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

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

The Proposer believes that this Modification Proposal will better facilitate the following Applicable BSC Objectives:

Applicable BSC Objective	Proposer's initial views
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	NGESO will not simply buy through all offers to meet demand, rather they will use other tools e.g. Capacity Market
(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 prices
(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	If electricity supplies are short and prices are above the level that customers are willing to pay, the System Operator can issue a Capacity Market Warning for Capacity Market Parties to respond to

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 cannot 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'](#))



NGESO CHANGES REQUIRED AND IMPACTS

NGESO changes and required impacts

Possible changes required – initial thoughts	Possible impacts- initial thoughts
<ul style="list-style-type: none">• C16/Balancing principles statement• Control room process• Trading team actions• Reporting on BSAD	<ul style="list-style-type: none">• Increases in pricing• Impacts to relationships with Interconnectors and EU TSOs if trades are capped• Security of supply?



PROGRESSION PLAN & NEXT STEPS

Progression Plan

Event	Date
Initial consideration by Workgroup	15 September 2022
Second Workgroup meeting	22 November 2022
Third Workgroup meeting	7 December 2022
Fourth Workgroup meeting	TBC – w/c 16 or w/c 23 January 2023
Assessment Consultation	15 Working Days
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

Next steps

- Workgroup Summary to be issued by 14 December 2022
- Post meeting actions to be addressed
- Workgroup 4 will be held w/c 16 or w/c 23 January 2023, prior to industry consultation on the proposed solution
- Any Other Business?

MEETING CLOSE

ELEXON

THANK YOU

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