P443 'To Cap NGESO Interconnector Trades at the Value of Lost Load (VoLL)'

Response Form

The National Electricity Transmission System Operator (NETSO) is requested to complete an impact assessment for P443. In particular, we ask for your responses to the following questions and your reasons for those responses.

Your Details

Respondent	
Name	Louise Trodden
Organisation	Electricity System Operator (ESO)
Contact telephone number	07866 165538

Your response

You are requested to respond to the questions in this form.

How to return your response

Please send responses, entitled 'P443 NETSO Analysis', to bsc.change@elexon.co.uk by **5pm** on **Wednesday 1 March 2023**.

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NETSO Analysis Questions

Question 1
Please describe the impact(s) of P443 on your ability as the NETSO to discharge your obligations efficiently under the Transmission Licence and to operate an efficient, economical and co-ordinated transmission system. Where applicable, please state any difference in impacts between the Workgroup's proposed solutions.
Proposed Solution 1a – NGESO apply the cap. This solution allows the ESO to continue to trade with all parties above and below VoLL, however, this does present the ESO with conflicts in relation to its obligations to comply with Retained European Law.
Proposed Solution 1b – Elexon apply the cap This solution allows the ESO to continue to trade with all parties above and below VoLL, however, this does present the ESO with conflicts in relation to its obligations to comply with Retained European Law.
Potential Alternative Solution 1a – NGESO apply the cap This solution allows the ESO to continue to trade with all parties above and below VoLL, however, this does present the ESO with conflicts in relation to its obligations to comply with Retained European Law.
Potential Alternative Solution 1b – Elexon apply the cap This solution allows the ESO to continue to trade with all parties above and below VoLL, however, this does present the ESO with conflicts in relation to its obligations to comply with Retained European Law.
Potential Alternative Solution 2 - The obligations placed on the ESO to fulfil requirements of its Transmission Licence require the ESO to operate in an efficient and economical coordinated way to maintain demand. The ESO has a licence condition to ensure non-discriminatory participation in the provision of balancing services. This solution prevents trades over a certain value, therefore implementation of this solution could be seen as discriminatory if there was a restriction on trades above VoLL only on interconnectors. There is the risk that the ESO may not be able to preserve demand if the option to trade on the Interconnector over the Value of Lost Load (VoLL) is removed. There is an additional risk that the cost of alternative actions could be even higher, e.g. volume procured through a Bid Offer Acceptance (BOA) in the Balancing Mechanism may be priced greater than VoLL (due to scarcity in the market) which would result in an overall higher cost incurred.

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Question 2
Please outline the impact of P443 on the computer systems and processes of the NETSO. Include details of any changes needed as a result of implementing P443, and the lead time required for those changes. Where applicable, please state any difference in impacts between the Workgroup's proposed solutions.
Proposed Solution 1a – NGESO apply the cap If the ESO is to apply the cap before the data is sent to Elexon, then there will be changes to the BSAD file and related internal systems. This process could take 6-9 months or more depending on the complexities of implementation.
Proposed Solution 1b– Elexon apply the cap There are no impacts to the ESO computer systems and process should Elexon apply the cap to the BM and NBM data supplied. .
Potential Alternative Solution 2a– NGESO apply the cap If the ESO is to apply the cap before the data is sent to Elexon, then there will be changes to the BSAD file and related internal systems. This process could take 6-9 months or more depending on the complexities of implementation
Potential Alternative Solution 2b – Elexon apply the cap There are no impacts to the ESO computer systems and process should Elexon apply the cap to data supplied for BM and NBM units
Potential Alternative Solution 2
If this solution is adopted by the workgroup as an alternate to the proposed, then a more in-depth impact assessment on the ESO system and processes will be completed as per the consultation document. At a high level (and not exhaustive) this will require changes to systems and processes that are used in the trading team and the control room.

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Question 3
Please provide an estimate of development, capital and operating costs in appropriate detail which you as the NETSO anticipate that you would incur in implementing P443. Where applicable, please state any difference in costs between the Workgroup's proposed solutions.
Proposed Solution 1a – NGESO apply the cap The ESO believes that the costs to do this are as discussed in the workgroup and in excess of £125K. Costs are likely to exceed this estimated figure once the impact to teams (e.g. Settlement Teams, Control Room, Trading Team) and the level of complexity of introducing new systems and processes is fully understood. This cost would only be for ESO to make system changes to the BSAD file, not for any costs associated with the updates to ELEXON insights system or other ESO processes.
Proposed Solution 1b – Elexon apply the cap There are no impacts to the ESO computer systems and process should Elexon apply the cap to the BM and NBM data supplied.
Potential Alternative Solution 1a – NGESO apply the cap The ESO believes that the costs to do this are as discussed in the workgroup and in excess of £125K. Costs are likely to exceed this estimated figure once the impact to teams (e.g. Settlement Teams, Control Room, Trading Team) and the level of complexity of introducing new systems and processes is fully understood. This cost would only be for ESO to make system changes to the BSAD file, not for any costs associated with the updates to ELEXON insights system or other ESO processes.
Potential Alternative Solution 1b – Elexon apply the cap There are no impacts to the ESO computer systems and process should Elexon apply the cap to the BM and NBM data supplied
Potential Alternative Solution 2
If this solution is adopted by the workgroup as an alternate to the proposed, then a more in-depth impact assessment on the ESO system and process will be completed as per the consultation document. At a high level (and not exhaustive) this will require changes to systems and processes that are used in the trading team and the control room.

Question 4
Please provide details of any consequential changes to Core Industry Documents and/or the System Operator Transmission Owner Code that would be needed as a result of implementing P443, and the lead time required for those changes. Where applicable, please state any difference in impacts between the Workgroup's proposed solutions.
Proposed Solution 1a – NGESO apply the cap No impact expected
Proposed Solution 1b – Elexon apply the cap No impact expected
Potential Alternative Solution 1a – NGESO apply the cap No impact expected

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Question 4
Potential Alternative Solution 1b – Elexon apply the cap. No impact expected
Potential Alternative Solution 2 This would require changes to the ESO transmission licence and the C16 statements. The ESO transmission licence would be reviewed and updated by Ofgem- this timeline would need to be provided by the regulator. The C16 statements are consulted on annually as a requirement in the ESO transmission licence. However, there could be scope to conduct an ad hoc consultation if this was required.

Question 5
Please outline any potential issues relating to security of supply arising from P443.
Proposed Solution: As this solution limits exposure to parties who are short in a particular settlement run, there is the risk that this could de-incentivise parties to maintain their reported position (PN's) or pose a disbenefit to those parties who are long. This risk has possible implications of affecting system security forecasting.
Potential Alternative Solution 1. As above
Potential Alternate Solution 2: By removing an option to trade on the Interconnector over the Value of Lost Load (VoLL) there is the risk that the ESO may not be able to preserve demand. There are times where the ESO is not able to instruct domestic generation to meet demand as it is not available. This was the case on the 20th July 2022 when as a result of a system constraint, the ESO took a trade over the interconnector above VoLL. This increases the risk that the requirement of energy to meet demand may not be available in the GB Market. Not being able to preserve demand could then result in demand disconnection. By reducing the order of commercial actions that the ESO has to manage the system (by preventing trades over the interconnectors) above VoLL could present a situation that forces the need to take Enhanced or Emergency actions. Emergency actions are by their nature emergency actions and are not taken on a BAU basis. The action of trading on the Interconnector is a standard action in the commercial order of actions, as are Balancing Mechanism (BM) actions. Emergency Actions are only considered once all the BAU available actions have been exhausted and ESO has no other way of maintaining the system requirements. Therefore, Emergency Actions are only used when ESO has no alternative. basis and cannot be planned for. Where an Emergency Action is taken for system reasons this action is NIV tagged and removed from the cashout calculation (unless this is representative of the current costs for energy in that given settlement period where Elexon will remove the tag)

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Question 6

Please outline your views and rationale on whether P443 would help to achieve the Applicable BSC Objectives.

Proposed Solution

The ESO agrees that the proposed does not better facilitate the Applicable BSC Objectives and is not better than the current base line. There is the possibility that the exclusion of trades above VoLL over the interconnectors would impact the marginal price in a particular settlement period as this would not reflect the true cost of energy at that time impacting BSC Objective (b) and (d)

Whilst the proposal still allows trades at prices above and below VoLL to be accepted over the interconnector, it excludes them in the cashout calculation for that imbalance settlement period. These costs are still passed through to the consumer in the BSUoS recovery mechanism. Whilst this does limit exposure to parties who are short in a particular settlement run, there is the risk that this could de-incentivise parties to maintain their reported position (PN's) or pose a disbenefit to those parties who are long. This risk has possible implications of affecting system security forecasting and has an impact negatively on BSC Objective (c) There is not a clear benefit demonstrated to how this is positively impacting the end consumer.

Additionally, as part of retained EU law within the Electricity Balancing Guidelines (EBR), excluding trades from cashout over a certain value will impact the imbalance and settlement prices in a particular period. Therefore, not reflecting the true cost of energy at a particular period in time. This could impact EBR objective *(a) Fostering effective competition, non-discrimination and transparency in balancing markets; and (b) enhancing efficiency of balancing as well as efficiency of European and national balancing markets, and (e) 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;.*

Additionally, (Article 3 (a) and (b) Regulation (EU) 2019/943 of the Internal market for electricity)
(a)prices shall be formed on the basis of demand and supply;
b) market rules shall encourage free price formation and shall avoid actions which prevent price formation on the basis of demand and supply; are impacted as result of excluding trades from cashout over a certain value will impact the imbalance and settlement prices in a particular period. Therefore, not reflecting the true cost of energy at a particular period in time. Similarly, there are also references within The Trade and Cooperation Agreement provisions within Article 304 to require wholesale pricing to reflecting the actual price for supply and demand and also ensuing that the wholesale market encourages free price formation. Therefore, not reflecting the true cost of energy at a particular settlement period.

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Question 6
Potential Alternative Solution 1 The ESO agrees that the proposed does not better facilitate the Applicable BSC Objectives and is not better than the current base line as there is the possibility that the exclusion of trades above VoLL over all parties would impact the marginal price in a particular settlement period as this would not reflect the true cost of energy at that time impacting BSC Objective (b) and (d) Whilst this solution does reduce concerns regarding discrimination against parties, as with all Ancillary Services, costs are recovered through BSUoS (including Response, Reserve, Constraints, Intertrips, Black Start, Interconnectors) plus any Electricity trading costs and BOA;s- meaning the costs for any such trades over VoLL will still be recovered through BSUoS and in turn the end consumer so this is not positively impacting BSC Objective (c). This solution has the same EBR impacts as the Proposed above.
Potential Alternative Solution 2
This solution presents a change to the ESO licence conditions which the ESO believe is out of scope of the BSC. Whilst the BSC can drive change, any changes to the licence conditions or the way in which the ESO operates the system should be considered as a change in policy. This change in policy would be reviewed by the Regulator and would be in conflict to BSC Objective (a). BSC objective (b) stipulates 'the efficient, economic and co-ordinated operation of the national electricity transmission system', therefore by limiting the available actions for the ESO to operate the system in this manner means that the BSC would not be fulfilling its own conditions. It is for these reasons that the ESO does not feel that the potential alternate is in scope of the BSC. The current baseline allows the ESO to fulfil its licence obligations to operate in an efficient, economical and co-ordinated manner, using commercial actions in merit order to maintain demand. This can be through domestic actions or by trading via the interconnectors. Whilst this alternate to the proposed still allows actions above VoLL to be taken domestically, the BSC Objective (b) is still negatively impacted as this solution presents risk to the ESO. The consequence of not being able to trade at prices above VoLL means that some commercial actions available to the ESO (i.e. trading actions) are excluded from the total merit order of actions list, therefore conflicting with the principles of ESO's transmission licence. There is also the risk that setting a cap on prices for ESO instructed interconnector trades creates artificial and inflated prices for alternative actions, such as expensive alternative actions in the Balancing Mechanism, Emergency Instructions and/or demand control prices which could spike higher than the cap at VoLL of £6k/MWh. This could result in, for example, the ESO taking actions in the BM at a price greater than what is available through interconnector trading.

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Question 6
The ESO has a licence condition to ensure non-discriminatory participation in the provision of balancing services. This solution prevents trades over a certain value, therefore implementation of this solution could be seen as discriminatory if there was a restriction on trades above VoLL only on interconnectors. The ESO also believes that there is an impact on the obligations within the retained European Network Codes (Regulation (EU) 2019/943 of the internal market for electricity). The obligations are in Article 3 (a) and (b) Regulation (EU) 2019/943 of the internal market for electricity- specifically; *3(a)prices shall be formed on the basis of demand and supply;* *b) market rules shall encourage free price formation and shall avoid actions which prevent price formation on the basis of demand and supply;* Proposed Alternative 2 could impact the Trade and Cooperation Agreement provisions within Article 304 to require wholesale pricing to reflecting the actual price for supply and demand and also ensuing that the wholesale market encourages free price formation whilst not introducing technical limits on pricing to restrict trade. Implementing this change would go against the above requirements, as NGESO would have to exclude trades from cashout over a certain value which will then impact the imbalance and settlement prices in a particular period, therefore, not reflecting the true cost of energy at a particular settlement period. This would therefore negatively impact BSC Objectives (c) and (e).

Does P443 have any interaction with the European Balancing Guidelines (EB GL)? Please provide any impacts and details, including whether it impacts the Terms and Conditions for balancing in Great Britain, as defined in Article 18 of the EB GL.
Proposed Solution
Potential Alternative Solution 1
Potential Alternative Solution 2 . The Proposed Alternate 2 could be perceived as discriminatory to interconnected parties. As part of retained EU law within the Electricity Balancing Guidelines (EBR), this impacts objectives (a) Fostering effective competition, non-discrimination and transparency in balancing markets; and (b) enhancing efficiency of balancing as well as efficiency of European and national balancing markets, and (e) 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;.

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Question 8
Please provide any other comments you may have on P443.
Proposed and the Proposed alternative 1 do not restrict the operational tools that the ESO has available, however, these both do not comply with the retained legislation. Alternate 2 is likely to see increases in costs either through ESO having to take more expensive actions to resolve system imbalances due to the providers being less incentivised to deliver as nominated (by reducing the imbalance charges to providers) or through ESO having to take more expensive actions through the BM or Emergency Actions when a cheaper alternative (Interconnector trades) were available. Also, alternative 2 risks ESO's ability to meet the GB system requirements resulting in the potential for increased demand disconnection and loss of consumer supplies. The industry should always be working to reduce costs to the consumer and increase the security and guarantee of supplies. ESO believes P443 will do the opposite of this.

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Further Information

To help us process your response, please:

- Email your completed response form to bsc.change@elexon.co.uk, entering "P443 NETSO Analysis" in the subject line
- Respond by **5pm** on **Wednesday 1 March 2023.**

Applicable BSC Objectives

The Applicable BSC Objectives are:

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

(b) The efficient, economic and co-ordinated operation of the National 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

EBGL Objectives

The EBGL Objectives are:

(a) Fostering effective competition, non-discrimination and transparency in balancing markets;

(b) enhancing efficiency of balancing as well as efficiency of European and national balancing markets;

(c) integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;

(d) 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;

(e) ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the

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liquidity of balancing markets while preventing undue distortions within the internal market in electricity;

(f) 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;

(g) facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation.

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