

ELEXION

**P462 'The removal of subsidies from Bid
Prices in the Balancing Mechanism'**

Meeting 1

16 January 2024

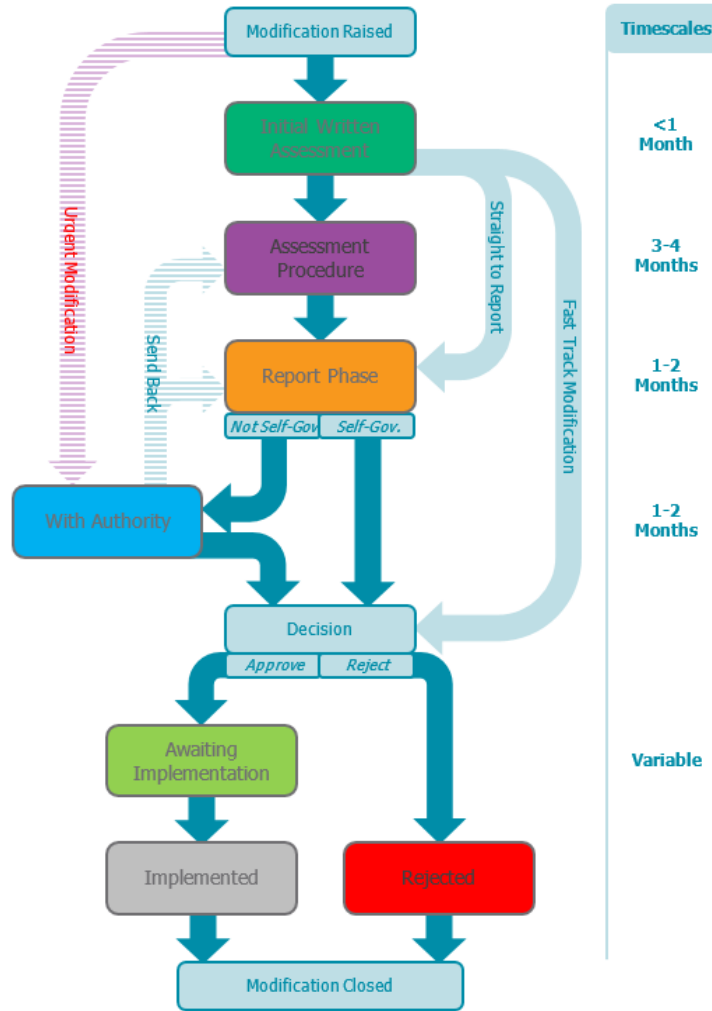
Meeting Agenda

Objectives for this meeting:

- Introduction and explanation of the BSC Modification process
- Explanation of the issue and proposed solution
- Review of ToR and Workgroup discussion

Agenda Item	Lead
1. Welcome and meeting objectives	Patrick Matthewson (Chair)
2. BSC Modification Process	Jacob Snowden (Lead Analyst)
3. What is the issue	NGESO (Proposer)
4. What is the proposed solution	NGESO
5. ToR review	Jacob Snowden
6. Workgroup discussion	Patrick Matthewson and Workgroup
7. Next Steps	Jacob Snowden
8. Meeting close	Patrick Matthewson

BSC Modification Process - Intro



- The flow diagram shows all iterations of the Modification Process
- P462 plans to follow the standard route for Modifications (i.e., not Urgent, Straight to Report or Fast Track)
- The timescales are based on average times – for P462, the Panel have agreed the Assessment Procedure to be 12 months
- P462 so far:
 - Modification Proposal raised by NGESO on 27 October 2023
 - Initial Written Assessment presented to the BSC Panel on 9 November 2023
 - Terms of Reference (ToR) agreed by the BSC Panel on 14 December 2023
 - First Workgroup meeting held on 16 January 2024
- P462 is currently in the Assessment Procedure
- A Cost-Benefit Analysis (CBA) will be required as part of the P462 Assessment Procedure [ToR d]

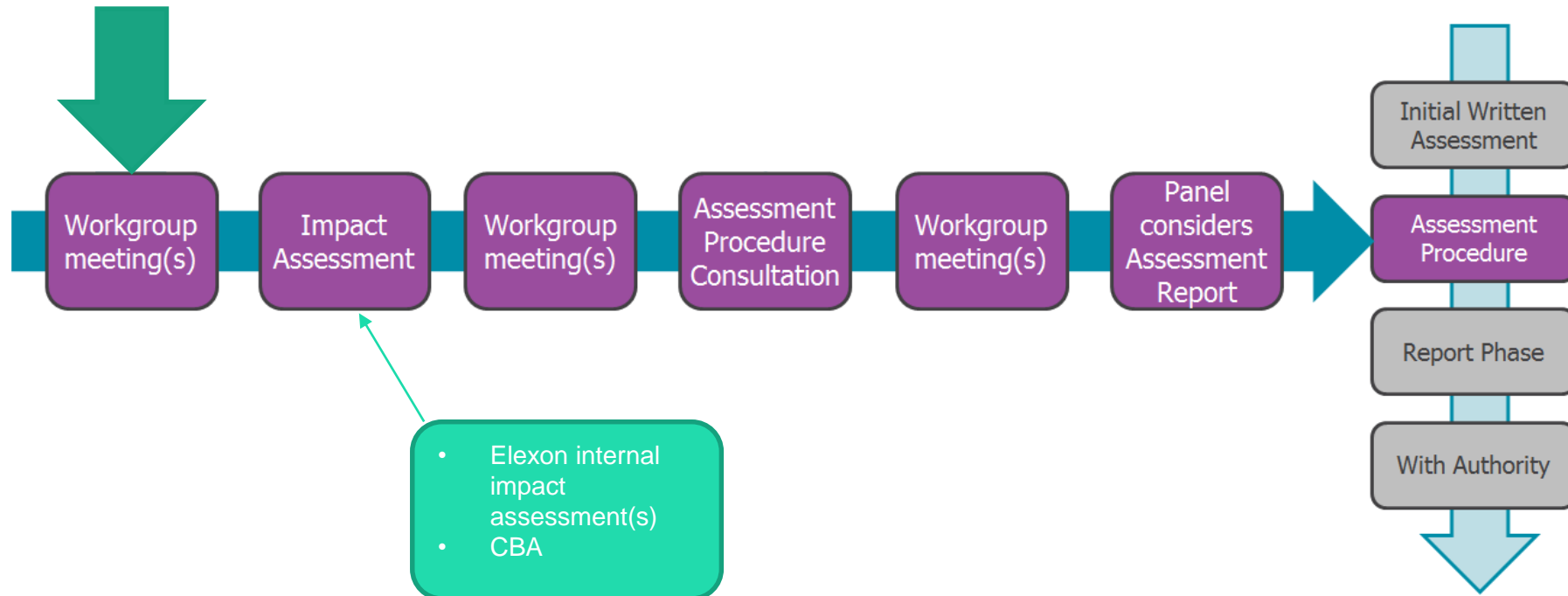
BSC Modification Process – Assessment Procedure

- In the Assessment Phase, the BSC Modification Proposal is considered and developed by a Workgroup
- The Workgroup will:
 - Assist the Proposer in developing the most appropriate solution
 - Answer the Terms of Reference (set by the BSC Panel)
 - Consider the costs and impacts of making the change
 - Provide a view on whether the Modification would better facilitate the Applicable BSC Objectives
 - Develop an Alternative Modification if it thinks there is an alternative solution to the issue that would better facilitate the Applicable BSC Objectives than the proposed solution
 - Consult with the industry on its views and recommendations
- The Modification proposal is consulted via the Assessment Procedure Consultation (APC), this will run for a minimum of 15 Working Days
- The Workgroup will consider the responses to the APC and Voting members shall vote on how the solution(s) impact the Applicable BSC Objectives
- If there is a unanimous or majority view that the BSC Objectives will be positively impacted, Elexon can report that the Workgroup believe the solution should be approved

*For more information on the BSC Change process please visit our Guidance Note page via: <https://bscdocs.elexon.co.uk/guidance-notes/bsc-change-process-guidance-note>. The Applicable BSC Objectives are found here: <https://www.elexon.co.uk/glossary/applicable-bsc-objectives/> .
If you have any questions please contact the BSC Change team via BSC.Change@elexon.co.uk

Where are we in the Assessment process?

- The role of the Workgroup is to assist the Proposer in developing the most appropriate solution, answer the Terms of Reference set by the BSC Panel and consider the costs and impacts of making the change.





P462 MODIFICATION PROPOSAL

What is the issue?

- It has been identified that there is a structural issue with the interaction between the BM and support mechanism arrangements.
- Generation units that hold support mechanisms need to price recover an expected subsidy in their Bid Prices which prevents them from pricing on equal terms with units who do not have a support mechanism.
- Many subsidies are currently based on metered output recovery, whilst a BM Bid Acceptance will reduce output and lead to the subsidies being lost.
- This means transactions taken in Bid Price order are not in line with consumer cost order leading to potentially more expensive actions are being taken.

Why the BSC Change is Appropriate

- Recipients set bid prices to recover lost subsidy revenue from instructions to reduce output, the market does not provide a good mechanism to reflect a variable subsidy which can be negative.
- Units without a support mechanism are incentivised to reduce their bid prices to similar levels which results in increased total cost to the consumer, this reduces competition in the BM.
- Repayment of subsidies through bids does not lead to incremental consumer costs, thus BM bid merit order is not the same as consumer merit order.
- Changing this interaction will lead to improvement in transparency of costs for both subsidies and BM prices.
- Addressing the issue through any other identified mechanism either leads to reduced transparency of decision making or other significant market distortions ie. CfD wind being at the top of the bid price stack when Day ahead prices are high resulting in excess consumer cost.

Desired Outcomes

CBM_{ij}

=

ΣⁿCOⁿ_{ij}

+

ΣⁿCBⁿ_{ij}

+

NQB_{ij}

×

SRP_{ij}

BMU Cashflow

=

Offer Cashflow

+

Bid Cashflow

+

Net Accepted Bid Volume

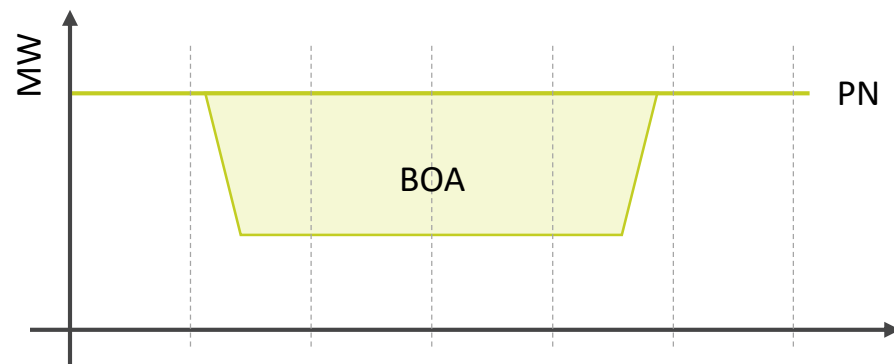
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Subsidy Replacement Price

- Principle Objective:** Align bid price merit order with consumer cost of the transaction and promote competition among units holding different subsidy regimes or those without subsidy to recover while keeping all subsidy holders whole for expected revenue
- Secondary Objective:** Enable transparency of subsidy recovery compared with marginal unit cost of bid transactions
- Secondary Objective:** Enable consumer cost of alternative curtailment options (or storage options) to be considered on consumer benefits case
- Secondary Objective:** Simplify compliance with rules such as transmission constraint licence condition for units holding subsidy

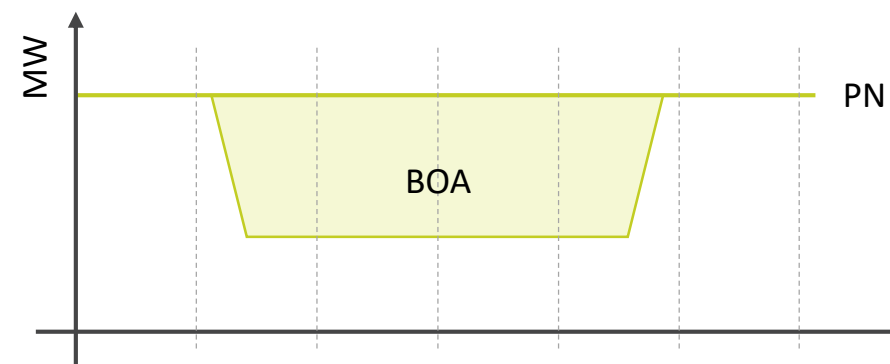
Worked Example

Current State



Settlement Period	1	2	3	4	5	6
PN (MWh)	100	100	100	100	100	100
Accepted Bids (MWh)	0	-45	-60	-60	-45	0
Bid Price (£/MWh)	-180	-180	-210	-210	-195	-195
BM Cashflow (£)	0	8100	12600	12600	8775	0

Proposed State



Settlement Period	1	2	3	4	5	6
PN (MWh)	100	100	100	100	100	100
Accepted Bids (MWh)	0	-45	-60	-60	-45	0
Bid Price (£/MWh)	-1	-1	-1	-1	-1	-1
Subsidy Rep. Price (£/MWh)	-179	-179	-209	-209	-194	-194
BM Cashflow (£)	0	8100	12600	12600	8775	0

$$SRP = - (CfD \text{ Strike Price} - \text{Intermittent MRP})$$

The Impact

Transactions taken in Bid Price order are not in line with consumer cost order leading to potentially more expensive actions are being taken. This creates excess costs and leads to distortive impacts on pricing behaviours.

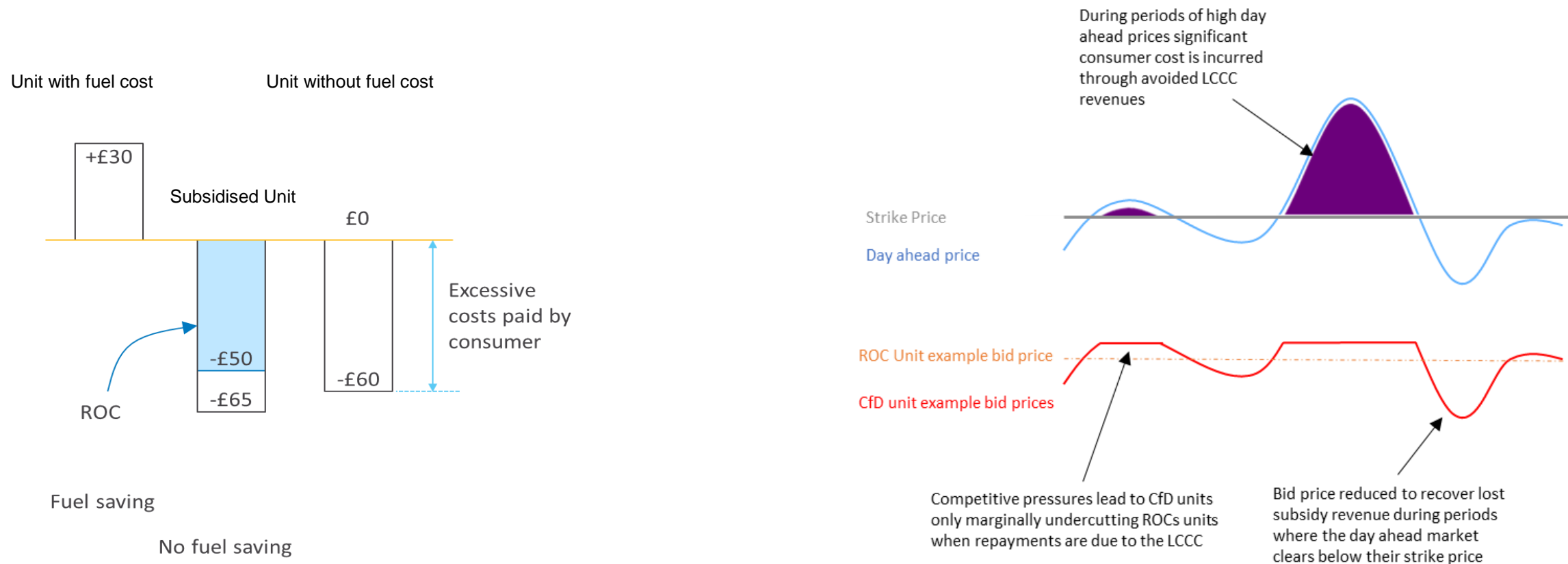


Figure 2: Illustration of structural BM issue between CfD units and ROCs units. Day Ahead Price (Blue), Bid Price (Red), approximate excess consumer cost when if a bid were accepted (Purple).

Cost model of an example issue

- Projections to 2030 show significant cumulative consumer impact under all cases modelled with multiple input variables considered.
- This is one input variable to be considered in a full cost benefit and needs to be adjusted to the assumed curtailed CfD volume.
- The current curtailed volume assumption is intended to represent the indirect values from other unquantified impacts.

Assumed Strike Price ¹	Day Ahead Price Scenario	Wind Constraint Scenario	Captured Day Ahead Revenue (£m)*	Lost Subsidy (£m)*	Direct BM curtailment payments (£m)*	Consumer cost impact (£m)*	Consumer effective cost (£/MWh)
£94.81/MWh	2021 – 2023	Falling short	£1,853M	-£297M	£2,568M	£4,124M	105.21
£94.81/MWh	2021 – 2023	Leading the Way	£7,647M	-£1,074M	£9,954M	£16,527M	106.02
£94.81/MWh	2017-2020	Falling short	£1M	-£2,643M	£6,790M	£4,148M	105.81
£94.81/MWh	2017-2020	Leading the Way	£3M	-£10,125M	£27,001M	£16,879M	108.28
£40/MWh	2021 – 2023	Falling Short	£4,078M	-£13M	£1,624M	£5,688M	145.11
£40/MWh	2021 – 2023	Leading the Way	£16,404M	-£49M	£6,439M	£22,793M	146.22
£40/MWh	2017-2020	Falling Short	£116M	-£250M	£5,187M	£5,053M	128.91
£40/MWh	2017-2020	Leading the way	£532M	-£873M	£19,624M	£19,283M	123.70
£187.4/MWh	2017-2020	Falling Short -		-£6,272M	£6,791M	£519M	13.24

¹The strike price is assumed to increase by £4/MWh on April each year when strike prices are revised

* Assumptions outlined in appendix, benchmark cumulative figures, actual will be lower proportional to the percentage of wind curtailment which is under CfD contracts

The Proposed BSC Change

We propose a high-level change to BSC T3.11, regarding BMU cashflow (per settlement period):

CBM_{ij}

=

$\sum^n CO^n_{ij}$

+

$\sum^n CB^n_{ij}$

+

NQB_{ij}

×

SRP_{ij}

with standard BSC sub-/super-scripts:
for each BMU, i
for each settlement period, j
for each bid-offer pair, n

BMU Cashflow = Offer Cashflow + Bid Cashflow + Net Accepted Bid Volume × Subsidy Replacement Price

Net Accepted Bid Volume Accepted bid volume in settlement period, net of any accepted offer volume, i.e., the actual volume curtailed	
Subsidy Replacement Price Calculated according to the relevant subsidy arrangements per BMU, per settlement period.	
<u>Renewables obligation</u> Calculated according to: <ul style="list-style-type: none">Unit's RO banding (e.g. 0.9 ROC/MWh)ROC buy-out price (revised annually)	<u>Contract for Difference</u> Calculated with reference to unit's strike price and relevant market reference price, as specified in their CfD agreement and calculated by EMR Settlement <ul style="list-style-type: none">Intermittent Market Reference Price, for technologies such as wind and solar (calculated hourly)Baseload Market Reference Price, for technologies such as biomass with CHP (calculated seasonally)



WORKGROUP TERMS OF REFERENCE

P462 specific ToR

ToR	Details
a)	What are the impacts of P462 on existing CfD contracts?
b)	Should the distribution of subsidy replacement costs go to intended cost centres? (E.g., not BSUoS?)
c)	What data should be reported on BMRS/IO14 to support this Modification?
d)	What is the scope for the CBA to ensure that wider impacts to industry and end consumers are considered? Is it appropriate that this these wider impacts are considered in the CBA?
e)	What are the wider impacts of this Modification? Are the Workgroup comfortable with the wider consequences from implementing this Modification?
f)	Consider actions already in place when cash-out goes negative. What happens when there are negative BM prices?
g)	Which subsidies are in scope of this Modification? What would be the appropriate pricing for each type of subsidy (assuming interaction with subsidy calculated on metered output
h)	Consider interaction with REMA.
i)	Consider the process and governance required for additional data requirements for settlement.
j)	Would the solution have the desired effect on bidding behaviour?
k)	How would this solution interact/deal with supplier BMUs?
l)	Consider the potential tax implications of P462 for the Electricity Generator Levy
m)	Is the BSC an appropriate route to amend the issue identified in P462?

P462 standard ToR

ToR	Details
n)	How will P462 impact the BSC Settlement Risks?
o)	What changes are needed to BSC documents, systems and processes to support P462 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?
p)	Are there any Alternative Modifications?
q)	Should P462 be progressed as a Self-Governance Modification?
r)	Does P462 better facilitate the Applicable BSC Objectives than the current baseline?
s)	Does P462 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?
t)	Does P462 impact on the consumer benefit criteria



NEXT STEPS

Next steps

- Summary of Workgroup meeting and actions by 19 January 2024
- To gather Workgroup meeting 2 dates (via Doodle poll)

Progression plan

Event	Date
Present IWA to Panel	9 November 2023
ToR agreed by Panel	14 December 2023
Workgroup meeting 1	16 January 2024
Workgroup meeting 2	W/C 12 February 2024
Workgroup meeting 3	W/C 11 March 2024
...	...
Assessment Procedure Consultation	15 December 2024 – 03 January 2025
Workgroup meeting	W/C 13 January 2025
Present Assessment Report to Panel	13 February 2025
Report Phase Consultation	17 February – 17 March 2025
Present Draft Modification Report to Panel	10 April 2025
Issue Final Modification Report to Authority	14 April 2025

MEETING CLOSE

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THANK YOU

Jacob Snowden

jacob.snowden@elexon.co.uk

bsc.change@elexon.co.uk

16 January 2024