

RNP: Balancing and Settlement Reforms

CBA and Implementation
assessment: Discussion

Pre-read

23 June 2026

Session Agenda

Item			Time	Pre-Read
All Together	Welcome, Intro & IEP 2 Recap	All	12:30 – 12:45	Slide 3 – 12
Topics	Lowering BM Threshold	All	12:45 – 13:00	Slide 13 – 16
		Breakout	13:00 – 13:25	
	Shorter Settlement Period	All	13:25 – 13:40	Slide 17 – 22
		Breakout	13:40 – 14:05	
	Break	All	14:05 – 14:15	N/A
	FPNs = Traded Position & Market Trading Deadline = Gate Closure	All	14:15 – 14:30	Slide 23 – 29
		Breakout	14:30 – 15:05	
	Unit Bidding	All	15:05 – 15:15	Slide 30 – 32
		Breakout	15:15 – 15:35	
	Break	All	15:35 – 15:45	N/A
	Assumptions	All	15:45 – 16:00	Slide 33 – 34
		Breakout	16:00 – 16:20	
All Together	Wrap-up and Next Steps	All	16:20 – 16:30	Slide 35 – 36

Welcome & Intro

What we require from the IEP

This is your opportunity to test and challenge key elements of the CBA and implementation assessment methodology.

This pack provides some detailed thinking on the implementation assessment and impacts of reforms on market participants to be informed through discussion with you.



Experience & Insight

Your industry knowledge and expertise will be used to represent key groups across industry, feeding into assumptions regarding how we model representative behaviour from those participant groups.



Data & Evidence

Several inputs and assumptions will be dependent on data and evidence provided by you – e.g. on operational behaviours. We will set out data requirements to support our modelling and assessment of cost impacts. We also welcome voluntary data and evidence submissions that support your perspectives.



Constructive Engagement

We will always value challenge and feedback on our proposed approach. We will consider and take into account your challenge in our modelling choices and implementation planning.

Please use this session to share experiences or real concerns that relate to the Balancing & Settlement reforms

Please refrain from side conversations, and respect others' opinions

Key principles to guide our session

Aligning on key principles to ensure we get the most out of today's session



Materiality

Focus effort on the most impactful drivers and changes, prioritising modelling, TOM analysis and assessment of impacts on areas with the greatest influence on decision-making, scale, complexity, and cross-participant impact.



Transparency

Use regular external stakeholder touchpoints to update on progress, and to seek challenge, evidence and data on our approach. We will share the CBA methodology and key notes from IEP discussions to wider industry.



Evidence-Based

Analysis will be grounded in data and subject matter expertise, incorporating inputs from stakeholders where relevant. We will weight perspectives more highly where supported by data and evidence to support arguments for certain modelling choices and implementation planning.

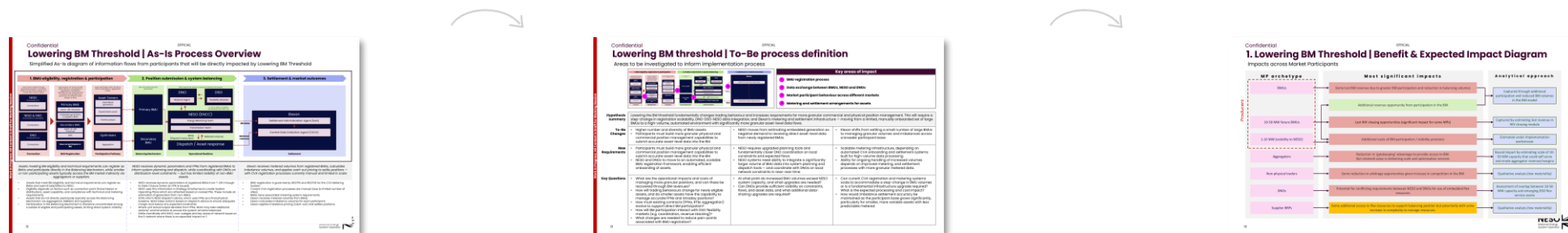


Managing Uncertainty

All modelling and TOM design has limitations and necessary abstractions/ assumptions. Confidence levels, sensitivities, etc will be used to inform assessment of key uncertainties

Navigating our Pre-Read

All participants are invited to pre-submit feedback on each item on our Mural board



1

REVIEW THE AS-IS PROCESS

Processes affected by the policy are shown in as-is form to validate the scope of the policy impact on current key information flows.

Your input: Is anything in the current-state flow materially missing or inaccurate that might be affected by the reform?

2

READ QUESTIONS SHAPING THE TO-BE PROCESS

We want to discuss the key questions that will help us validate the implementation and impacts across stakeholders.

Your input: Which questions matter most — and what would you add?

3

REVIEW CBA IMPACT DIAGRAMS

We want to gather feedback on the identified impacts of each option on market participants.

Your input: What do you disagree with? What's missing or misrepresented?

Establishing a common understanding and definition of current processes and collecting feedback on key areas to help further define the to-be process

Collecting feedback on the key considerations within the CBA methodology

Provide us your input to make the most of our session

All participants are invited to pre-submit feedback on each item on our Mural board

Mural Board to Capture Feedback/Questions



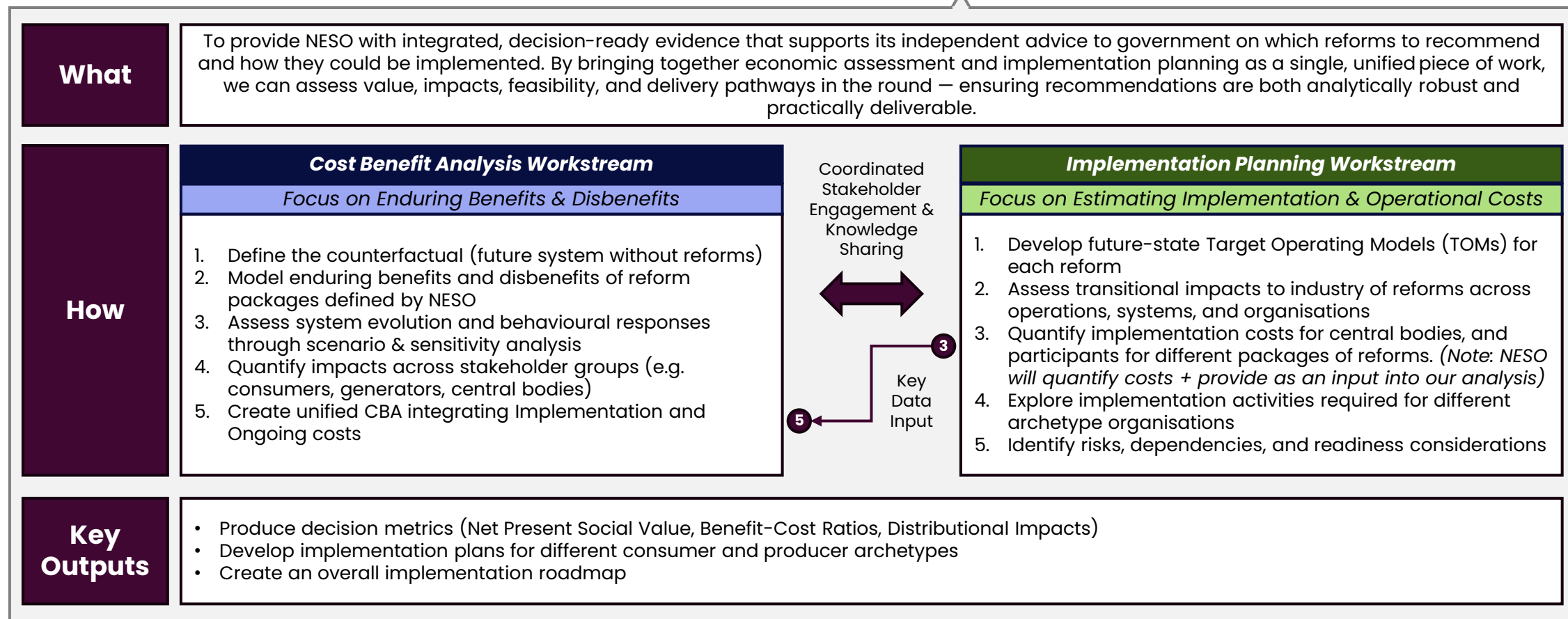
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- We invite participants to leave any comments, questions and feedback directly on the Mural pre-read board by scanning the QR code on the right or using the hyperlink [here](#)
- Once on the board, add post-it notes in the relevant sections to capture your comments and questions
- You can also “like” existing notes to highlight priority topics, rather than duplicating similar questions
- We strongly encourage participants to include their name on notes; however, anonymous feedback is also welcome
- All feedback submitted on the board will be considered for discussion within the break-out groups
- Whilst the Mural Boards will not be publicly published, anonymised content from them may be used

Look Back: 10 June IEP

How CBA and Implementation Planning Work Together

Sharing the scope and key interactions between both workstreams



Recap of last IEP

Sharing a summary of previous discussions and how we have acted on your feedback

	Theme	Concise summary	You Said... We did
CBA	Capturing market dynamics	Stakeholders highlighted that liquidity, behaviour change and trading strategies are likely to have the most material impacts within analysis but acknowledge the challenge to model this robustly	We are engaging with several stakeholders on the detailed methodology for liquidity and behavioural assumptions, including in today's session. We are open to follow up meetings with those who have further views to share on these points
		Participants raised the exclusion of policy changes such as P462 from the counterfactual and the need to reflect phased implementation of some reforms	We are engaging with Ofgem to discuss assumptions under the counterfactual. We will work with the Implementation team to develop appropriate assumptions for phased implementation
	Definition and scope of a "whole-system" CBA	Stakeholders support a whole-system approach to the CBA, however there were differing views on the exact scope	We are continuing to consider a wide range of impacts across the market, including through discussion of impacts on market participants today.
		Participants pushed for clarity with regards to distribution-level impacts, interactions with flexibility markets and implications for network investment	We are engaging with DNOs, Elexon and market participants to explore impacts at the Distribution level
	BM action efficiency	Several participants mentioned skip rates and associated lost revenue, particularly for smaller or newly participating assets. Concerns were raised that lowering BM thresholds without addressing skip rates could materially reduce revenues and distort incentives, with limited ability to recover losses through CM or CfD mechanisms. NESO noted the ongoing work it is performing to lower skip rates	Our current view is that by the time of implementation, improvements in NESO systems should mean that skip rates are not of a magnitude to materially impact on headline CBA outcomes. However some asset types may face more ongoing risk of exposure than others. We are considering how to assess the revenue exposure of such assets and welcome further discussions to explore this
	NESO's use of existing tooling	Participants highlighted that NESO may not be fully utilising existing tools and capabilities today and questioned how this could evolve in the future without implementation of reforms. This was identified as an important consideration when defining the counterfactual against which the reforms are assessed	Our counterfactual will consider programmes that NESO may undertake to enhance operations without reforms. However the scope of the CBA and implementation work is not to take a view on the merits of alternative proposals for improving system operation that have not yet been considered by NESO

Recap of last IEP

Sharing a summary of previous discussions and how we have acted on your feedback

Theme		Concise summary	You Said... We did
IMPLEMENTATION	Ambitious timeline	While the overall approach is supported, timelines were viewed as ambitious given overlapping industry initiatives, limited participant capacity, internal engagement requirements before responding externally, and challenges in data collection.	• Timelines to some extent are fixed to NESO's timeline for recommendation • To de-risk timelines IEP members invited to proactively submit evidence and to reach out for bilateral sessions
	TOM methodology	Target Operating Modal (TOM) approach broadly understood, but stakeholders raised concerns on the scale of operational and technical impacts and emphasised the need for careful sequencing, and consideration of interactions across reforms.	• Implementation planning will consider sequencing of reforms, aligned to the packages of options
		Suggestion that some implementation challenges stem from design choices, and stressed the importance of learning from past programmes, future proofing, and using phased or transitional arrangements to enable delivery.	• We will consider learning (timelines and costs) from other industry programmes (e.g. Smart Metering) where appropriate
		Noted that it would be helpful to see the As-is and To-be processes in future sessions.	• We have re-sequenced topics within the IEP to enable members to review the "As-Is" processes in this IEP and review "To-Be" processes alongside an assessment of impact update in the next IEP
	Stakeholder Segmentation	Segmentation generally accepted but required refinement (e.g. correction of applicability of two reforms on NPTs), expanded coverage of additional stakeholders, and greater clarity on applicability of reforms for certain groups (e.g. community groups in lowering BM threshold).	• We have enacted feedback to separate into two distinct groups NPTs and aggregators from the same overarching 'Assetless traders' grouping

Updated Modelling Option Sets

Reflecting your feedback from the IEP on Shorter Settlement Periods

"Better information & more visibility"

"Market behaviour change & more compliance"



Reforms	Counterfactual	Individual options	Package 1	Package 2
Lower BM threshold	-	Lower threshold to 10MW + 1MW visibility	Lower threshold to 10MW + 1MW visibility	Lower threshold to 10MW + 1MW visibility
Align MTD with Gate Closure	--	--	--	Align MTD with Gate Closure
FPNs = traded position	--	--	Visibility of traded positions	FPNs = TPs at portfolio-level
Shorter SP	We have changed to a 15-min base case with 5 min sensitivity	15-mins base case / 5-mins sensitivity	15-mins	15-mins
Unit bidding	Assessment of the potential scale of the problem/inefficiency from strategic behaviour (+ implementation costs and requirements)			

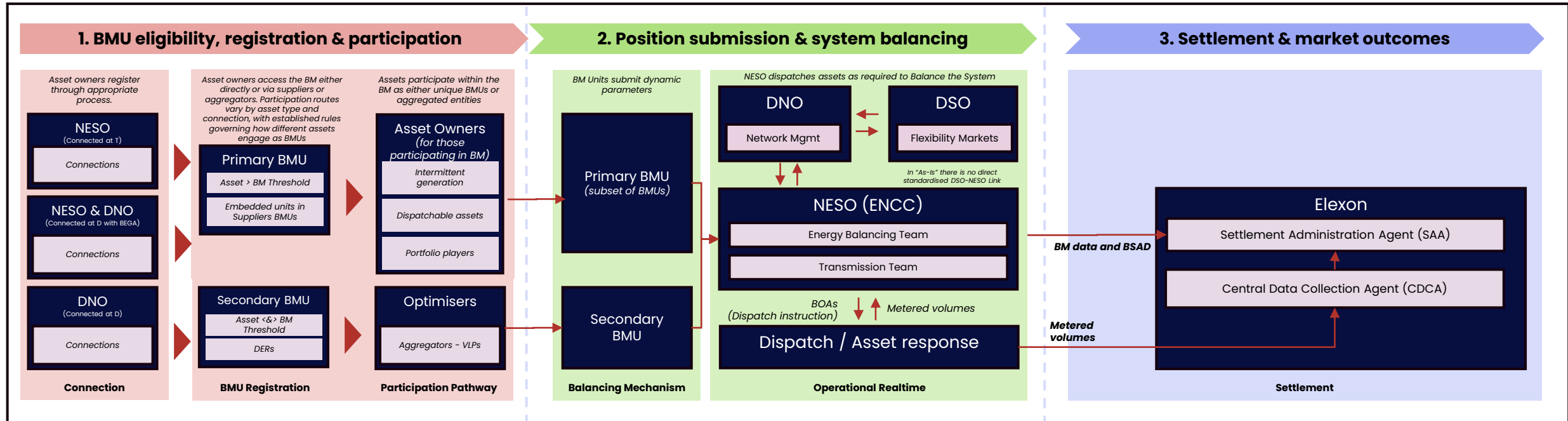
Lowering BM Threshold

Breakout discussion:

1. Are there any additional existing industry processes that are relevant to capture in the AS-IS/counterfactual process (either will be impacted or may influence implementation of the reforms)? (Slide 14)
2. What additional key areas for discussion should be considered regarding the TO-BE processes during stakeholder engagement to understand the impacts? (Slide 15)
3. What are your views on the first-order market participant impacts we have identified? What impacts have we missed / mis-characterised? (Slide 16)

Lowering BM Threshold | As-Is Process Overview

Simplified As-Is diagram of information flows from participants that will be directly impacted by Lowering BM Threshold



Assets meeting BM eligibility and technical requirements can register as BMUs and participate directly in the Balancing Mechanism, while smaller or non-participating assets typically access the BM market indirectly via aggregators or suppliers.

- Assets that meet BM eligibility and technical requirements can register as participating BMUs by a BSC Party and submit bids/offers to NESO.
- Eligibility to participate in the BM depends on factors such as connection point (transmission or distribution), asset capability, and compliance with technical and metering requirements.
- BMU registration is governed by BSCP15. Where applicable, Central Volume Allocation (CVA) Metering System (governed by BSCP20) for centrally metered assets, where some BMUs have SVA metering arrangements (e.g. Supplier BMUs).
- Elexon checks and processes BMU registration submissions, then stores and maintains the master register of BMU data.
- Current CVA registration processes are manual (due to limited number of sites).
- Assets that do not directly participate typically access the Balancing Mechanism via aggregators (Secondary BMUs) and suppliers.
- Participation in the Balancing Mechanism is therefore concentrated among a subset of eligible and participating assets.

NESO receives dynamic parameters and FPNs from registered BMUs to inform system planning and dispatch, while coordinating with DNOs on distribution-level constraints — but has limited visibility of non-BMU assets.

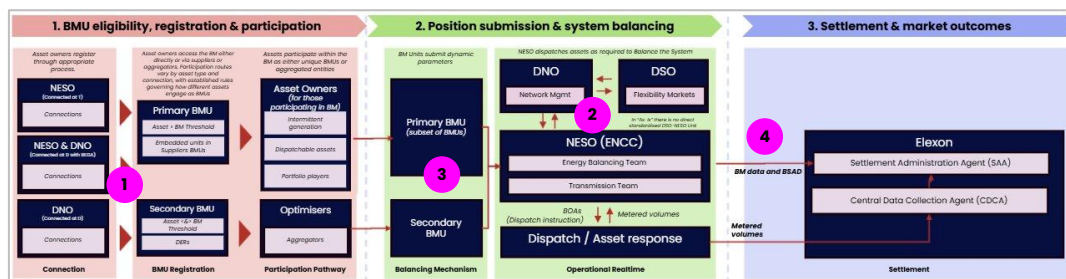
- NESO receives dynamic parameters of registered BMUs from T-24h through to Gate Closure (when an FPN is issued).
- NESO uses this information in Strategy timeframes to create System Operating Plans (SOPs) which are refreshed based on revised PNs. These include an estimation of generation from non-BMUs.
- SOPs inform NESO dispatch advice, which uses FPNs as a final physical baseline. NESO takes actions based on dispatch advice to ensure adequate margin and reduce any expected constraints.
- Where unit actual output deviates from FPNs, NESO may take additional actions/ unwind actions to ensure the system remains balanced.
- DNOs coordinate with ENCC over outages and key areas of network issues on the Distribution (D) network where there is an expected impact on Transmission (T).

Elexon receives metered volumes from registered BMUs, calculates imbalance volumes, and applies cash-out pricing to settle positions — with CVA registration processes currently manual and limited in scale.

- CDCA collects and aggregates metered data from BMUs via the CVA Metering Systems
- The SAA uses metered and contractual data to calculate imbalance volumes for each participant.
- SAA applies imbalance prices (cash-out) to calculate charges and settles positions.

Lowering BM threshold | To-Be process definition

Areas to be investigated to inform implementation process



Key areas of impact

- 1 **BMU registration process**
- 2 **Data exchange between BMUs, NESO and DNOs**
- 3 **Market participant BM strategy**
- 4 **Metering and settlement arrangements for assets**

Hypothesis summary

Lowering the BM threshold fundamentally changes trading behaviour and increases requirements for more granular commercial and physical position management. This will require a step-change in registration scalability, DNO-DSO-NESO data integration, and Elexon's metering and settlement infrastructure – moving from a limited, manually onboarded set of large BMUs to a high-volume, automated environment with significantly more granular asset-level data flows.

To-Be Changes

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> Higher number and diversity of BMU assets. Greater number of participants participating in the Balancing Mechanism directly. | <ul style="list-style-type: none"> NESO moves from estimating embedded generation as negative demand to receiving direct asset-level data from newly registered BMUs. | <ul style="list-style-type: none"> Elexon shifts from settling a small number of large BMUs to managing granular volumes across a broader participant base. |
| <ul style="list-style-type: none"> Participants must build more granular physical and commercial position management capabilities to submit accurate asset-level data into the BM. NESO and DNOs to move to an automated, scalable BMU registration framework, enabling efficient onboarding of assets. | <ul style="list-style-type: none"> NESO requires upgraded planning tools and fundamentally closer DNO coordination on local constraints and expected flows. NESO systems need ability to integrate a significantly larger volume of BMU data into system planning and dispatch tools – and coordinate with DNOs on local network constraints in near-real-time | <ul style="list-style-type: none"> Scalable metering infrastructure, potentially depending on automated CVA onboarding and settlement systems built for high-volume data processing Ability for ongoing handling of increased volumes depends on improved metering, and settlement processes with more granular metered data. |

New Requirements

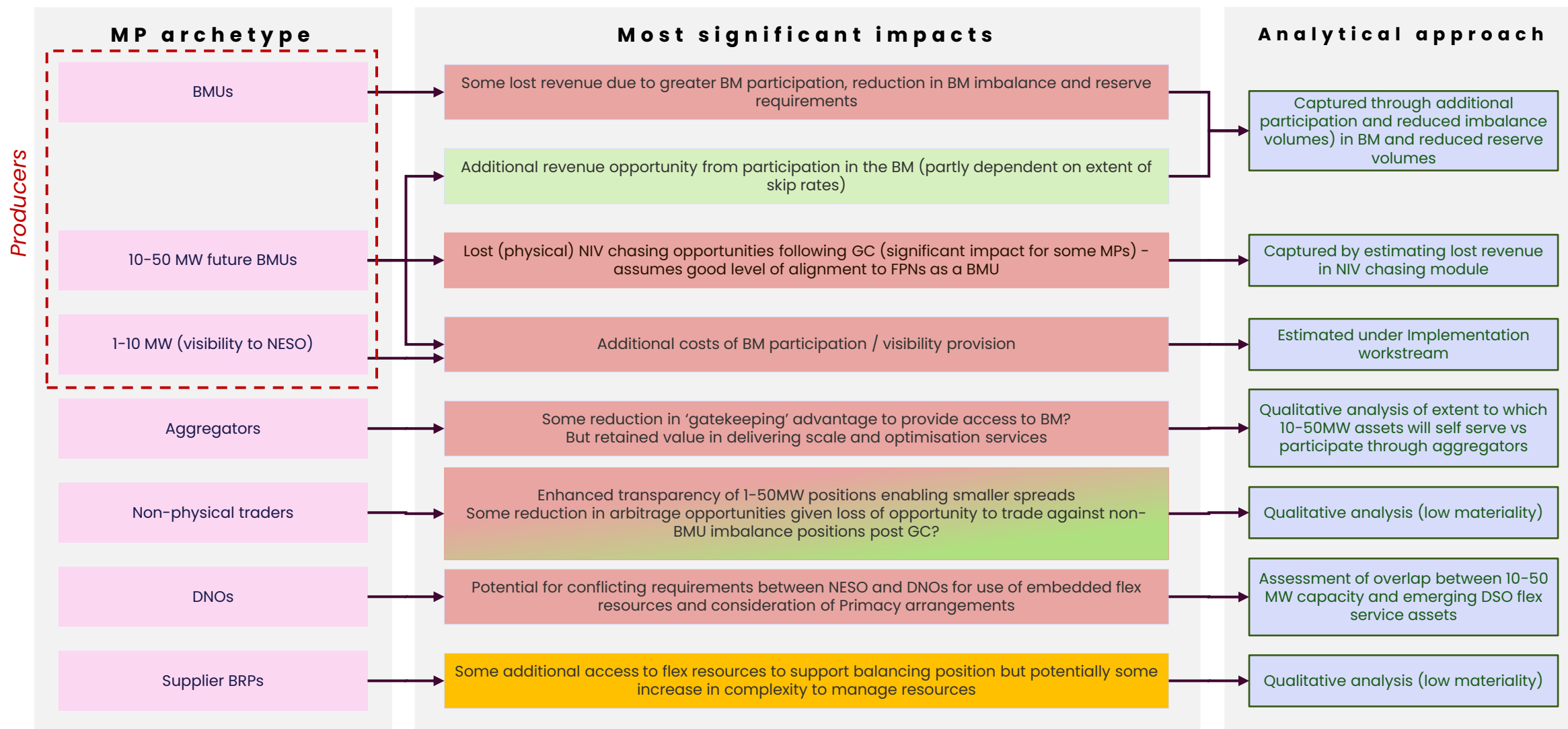
Key Areas for Discussions

- | Market Participants | NESO | Elexon |
|---|---|---|
| <ul style="list-style-type: none"> What is the operational overhead of managing physical and commercial positions at a more granular level? How do internal systems, trading processes, and roles need to change? Can costs (CAPEX to implement changes, OPEX to enable trading) be recovered through BM revenues at smaller asset sizes? What trading behaviour changes are expected for newly eligible assets? Do smaller or distribution-connected assets have the forecasting capability and commercial operations to submit accurate FPNs and manage intraday position changes? How must existing contracts (PPAs, RTM, aggregation) evolve to support direct BM participation? | <ul style="list-style-type: none"> At what point do increased BMU volumes exceed NESO system capacity, and what upgrades are needed? Can DNOs provide sufficient visibility on constraints, flows, and asset data, and what additional data-sharing upgrades are required? How will BM participation interact with DSO flexibility markets (e.g. coordination, revenue stacking)? What changes are needed to reduce pain-points associated with BMU registration? | <ul style="list-style-type: none"> Can current CVA registration and metering systems scale to accommodate a step-change in BMU volumes or is a fundamental infrastructure upgrade required? What is the expected processing and cost impact? How would imbalance settlement accuracy be maintained as the participant base grows significantly, particularly for smaller, more variable assets with less predictable metered? |

Lowering BM Threshold | Market Participant Impacts for the CBA

We welcome comments on our identification of impacts on MPs

=positive impact =neutral impact =negative impact



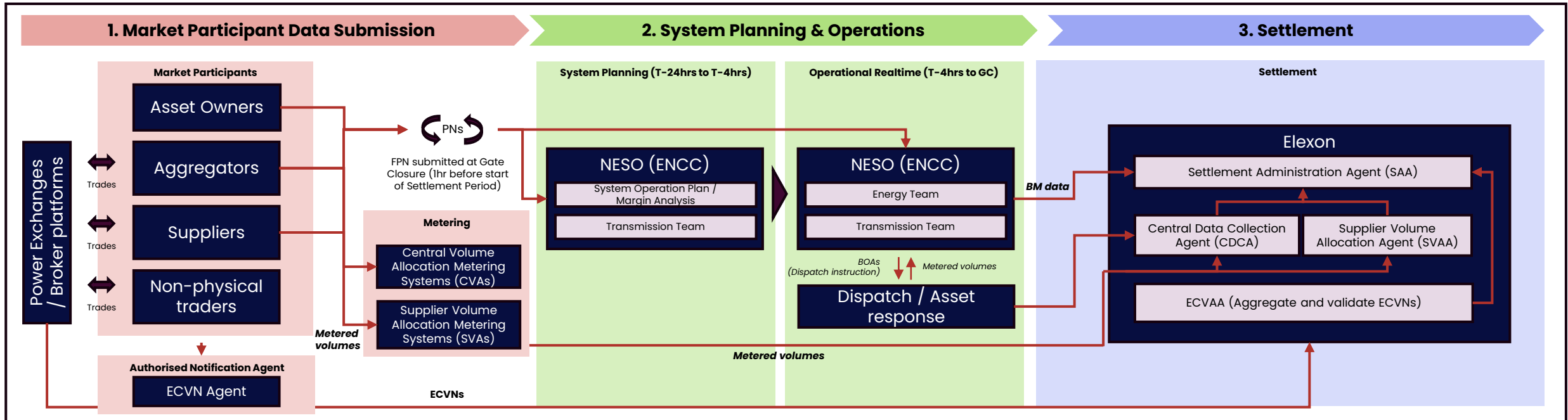
Shorter Settlement Period

Breakout discussion:

1. Are there any additional existing industry processes that are relevant to capture in the AS-IS/counterfactual process (either will be impacted or may influence implementation of the reforms)? (Slide 18)
2. What additional key areas for discussion should be considered regarding the TO-BE processes during stakeholder engagement to understand the impacts? (Slides 19-20)
3. What are your views on the first-order market participant impacts we have identified? What impacts have we missed / mis-characterised? (Slides 21-22)

Shorter Settlement Period | As-Is Process Overview

Simplified As-Is diagram of information flows from participants that will be directly impacted by Shorter Settlement Period



Positions and physical expectations are submitted at settlement period granularity (FPNs, bids/offers/ECVNs), establishing each party's commercial and physical baseline ahead of real time.

- Registered BMUs for the Balancing Mechanism (BM) submit dynamic parameters including physical notifications (PNs) for each BMU via NESO systems.
- Registered BMUs submit bid-offer pairs into the BM.
- Market participants that are not active in the BM are not required to submit a PN.
- Market participants can choose to bilaterally trade in the wholesale market.
- Market participants (or their agents) submit ECVNs to Elexon, notifying contracted energy volumes between counterparties for each settlement period, which form the basis for imbalance settlement.
- Metered volumes flow through either CVA or SVA: CVA covers centrally collected power station / GSP metering, while SVA covers Supplier and VLP / aggregator arrangements (via Supplier Agents).
- Traded products go down to Settlement Period granularity (30 mins) at day ahead and intra-day market.

NESO receives dynamic parameters and FPNs from registered BMUs to inform system planning and dispatch

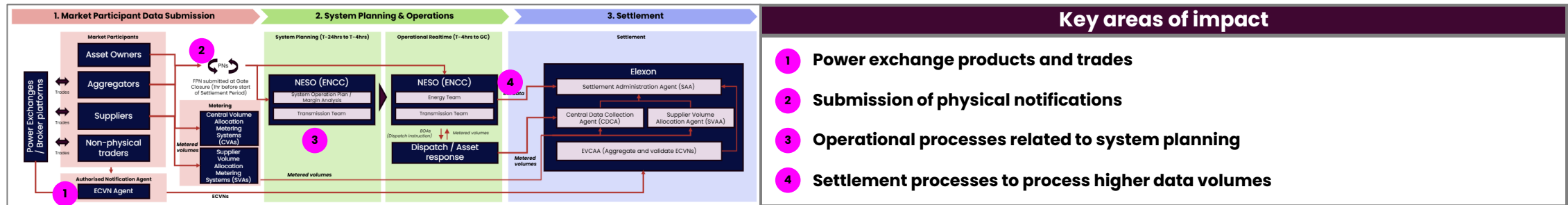
- NESO receives dynamic parameters of registered BMUs from T-24h through to Gate Closure (when an FPN is issued).
- NESO uses this information in Strategy timeframes to create System Operating Plans (SOPs) which are refreshed based on revised PNs. These include an estimation of generation from non-BMUs.
- SOPs inform NESO dispatch advice, which uses FPNs as a final physical baseline. NESO takes actions based on dispatch advice to ensure adequate margin and reduce any expected constraints.
- Where unit actual output deviates from FPNs, NESO may take additional actions/ unwind actions to ensure the system remains balanced.

Elexon receives metered volumes from registered BMUs, calculates imbalance volumes, and applies cash-out pricing to settle positions for each settlement period

- BMUs have metering system requirements.
- Elexon receives metered volumes: CVA metered volumes are collected and processed by the CDCA, while SVA metered volumes are aggregated by the SVAA. Both feed into the SAA for Settlement calculations.
- Elexon calculates imbalance volumes for each participant for each settlement period.
- Elexon applies imbalance pricing (cash-out) and settles positions for each settlement period.

Shorter Settlement Period | To-Be process definition

Areas to be investigated to inform implementation process



Hypothesis summary

The reform fundamentally impacts the structure of the market by increasing the temporal granularity of all energy trading, balancing, and settlement processes — from 48 decision points per day to up to 288 (6x) under a 5-minute SP.

To-Be Changes

- Trading will need to operate at finer and potentially inconsistent time granularities across auctions and continuous markets, requiring exchanges to adapt products and participants to manage cross-market alignment and position reconciliation.
- Operational processes scale from 48 to up to 288 daily decision cycles, compressing the ENCC balancing window from ~90 to ~65 minutes
- Central settlement systems (ECVAA, SAA, CDCA) must process up to 6x more ECVNs, meter readings, and imbalance calculations per day.

New Requirements

- Codes, licences, and contractual arrangements must be comprehensively updated, alongside decisions on phased implementation, regulation, and cross-industry governance.
- Participants must build more granular physical and commercial position management capabilities to submit accurate asset-level data into the BM.
- Metering infrastructure must be reconfigured for finer granularity — with different approaches needed for I&C (COPI/2), smart meters (SME/residential), and traditional meters, aligned to the MHHS programme.
- NESO requires fundamental upgrades to dispatch tools and the Strategy-to-Operations handover.
- NESO systems need ability to integrate a significantly larger volume of BMU data into system planning and dispatch tools — and coordinate with DNOs on local network constraints in near-real-time.
- Elexon settlement and notification systems originally designed around 30-minute intervals, including ECVAA, would need to be replaced or substantially reengineered to operate at the required scale. Upgrades needed to ensure performance, resilience and data storage capacity.
- DNOs must align local flexibility services, metering, and constraint management to the new SP granularity — with direct implications for DSO transition programmes already underway

Shorter Settlement Period | To-Be process definition

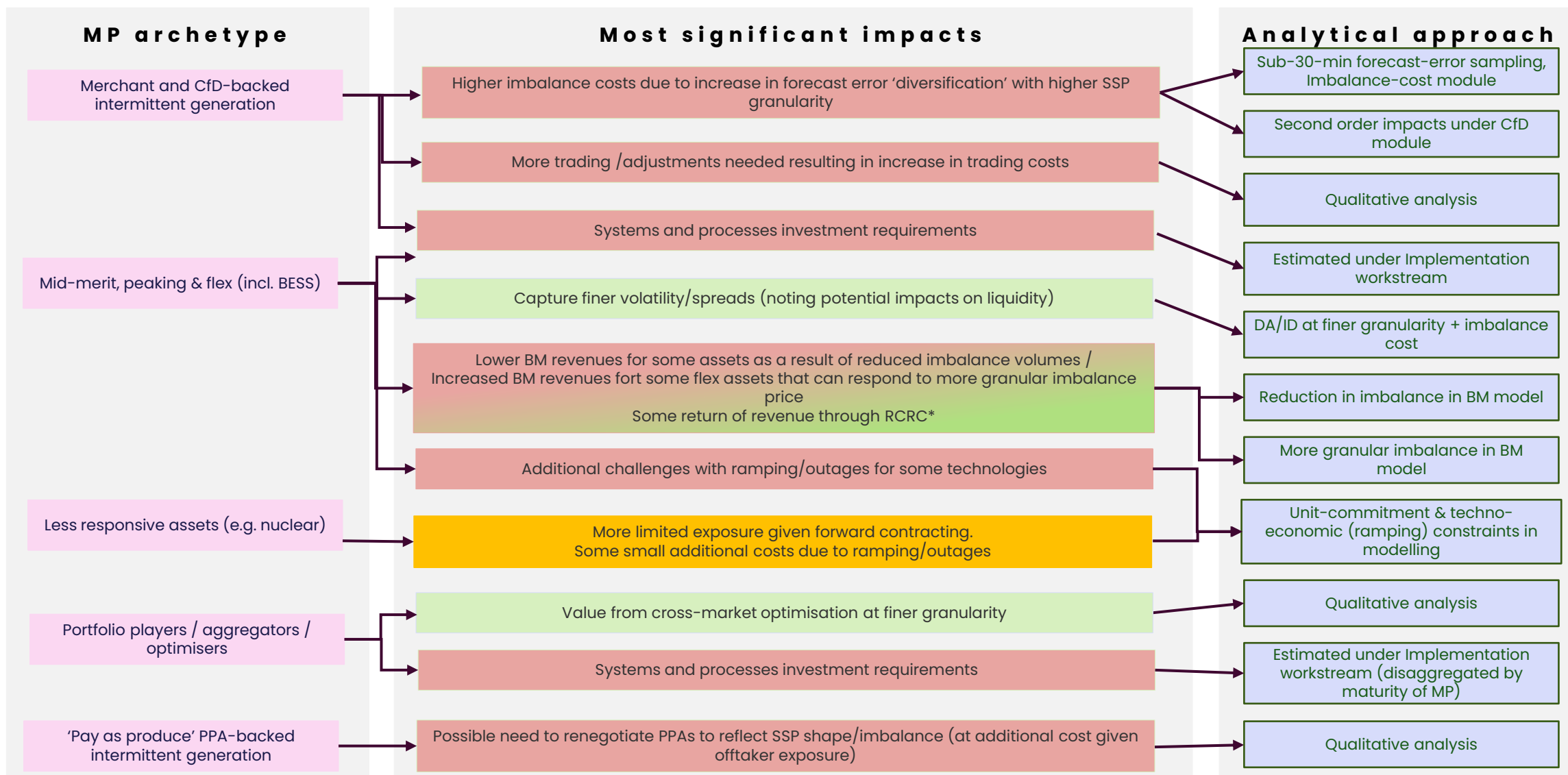
Areas to be investigated to inform implementation process

Key Areas for Discussions	Market participants	NESO	Elxon
	- What are the end-to-end process and trading IT architecture impacts of moving to shorter settlement periods (e.g. 30 → 15 or 5 minutes)? How do these differ across asset types (intermittent, dispatchable, BESS, portfolios)? - How does increased settlement frequency affect imbalance risk exposure and cost-to-serve? At what settlement granularity does the cost of participation outweigh the benefits? - What operational capabilities are required to manage positions and react at 5-minute granularity (e.g. forecasting, automation, dispatch)? Where are the key capability gaps today? - What level of flexibility can assets realistically provide at 5-minute resolution, and what are the limiting factors (e.g. asset constraints, system latency, decision lead times)? - For suppliers: How does shorter settlement affect the interaction between retail and wholesale positions, and what changes are required to manage this transition?	- What throughput and computational upgrades are needed across dispatch tools (SORT/OBP, ASDP/VIRGIL) and ENCC decision-making processes to operate at 96 or 288 daily decision cycles? - How does the compressed balancing window affect NESO's ability to manage system security – and what changes to the Strategy-to-Operations handover and reserve procurement processes are required? - At what settlement period length (15-min vs 5-min) does NESO's system position view begin to degrade rather than improve – given that intermittent assets may struggle to forecast accurately at sub-30-minute resolution?	- What are the limits of the current settlement infrastructure (ECVAA, SAA, CDCA) to scale to process up to 6x more ECVNs, meter readings, and imbalance calculations per day – which elements would require a replacement or substantial reengineering? - What is the expected cost and timeline for upgrading central settlement systems to support 15-minute and 5-minute granularity – and is a phased approach (wholesale-first, retail later) technically feasible?
Key Areas for Discussions	Metering	Power Exchanges	DNOs
	- What proportion of the current metering estate (COP1/2, smart meters, traditional meters) can support sub-30-minute granularity without hardware replacement – and what is the upgrade or retrofit cost for the remainder? - What technical standards need to be agreed for sub-30-minute metering before the broader rollout strategy can be finalised – and who is responsible for setting these? - How does the metering upgrade timeline align with the MHHS programme – and is there a risk of conflicting requirements or duplicated investment if the two programmes are not sequenced together?	- What changes to product design and market structure are required to support 15-minute or 5-minute granularity (e.g. MTU definition, auction scheduling, order book design, and clearing processes)? What lessons can be drawn from European markets that have already implemented sub-hourly products? - What is the expected cost and timeline for exchanges to implement sub-30-minute products – and are there dependencies on Elxon, NESO, or regulatory changes that must be resolved first?	- How does moving to 15-minute or 5-minute settlement periods affect local flexibility procurement, constraint management, and network planning processes – and what system changes are required to align distribution-level operations with the new granularity? - Can current distribution-level metering and data aggregation infrastructure support sub-30-minute data collection and reporting – and what is the upgrade cost and timeline across the 14 DNO licence areas? - How does the shorter SP reform interact with the ongoing DSO transition programme – and is there a risk of conflicting investment or duplicated capability build if the two are not coordinated?

SSP | Market Participant Impacts for the CBA (1/2)

We welcome comments on our identification of impacts on MPs

=positive impact
 =neutral impact
 =negative impact



*NB: May be some offsetting of impacts and benefits to some participants through RCRC, meaning those MPs who are better able to manage imbalance than average may end up as winners

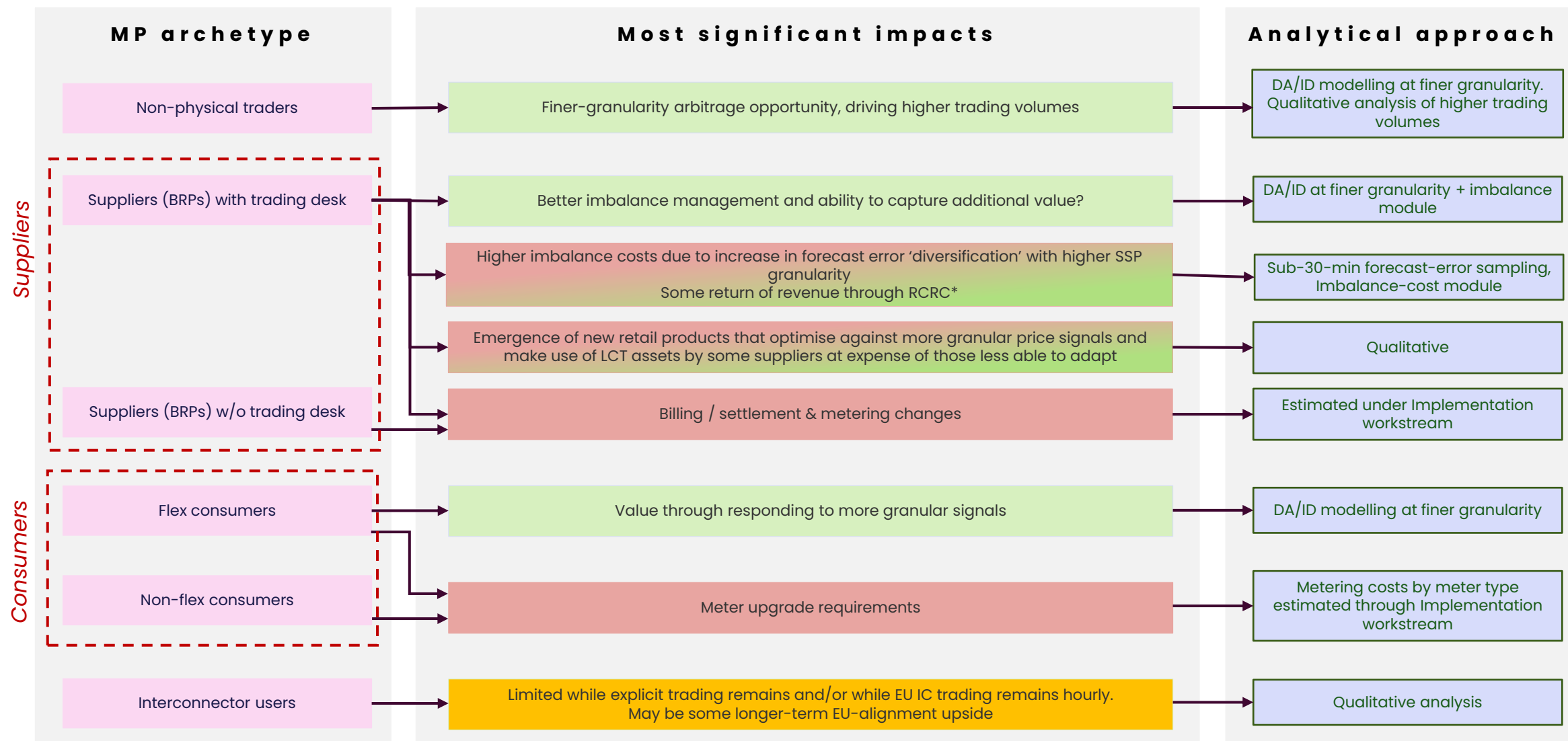
SSP | Market Participant Impacts for the CBA (2/2)

We welcome comments on our identification of impacts on MPs

 = positive impact

 = neutral impact

 = negative impact



*NB: May be some offsetting of impacts and benefits to some participants through RCRC, meaning those MPs who are better able to manage imbalance than average may end up as winners

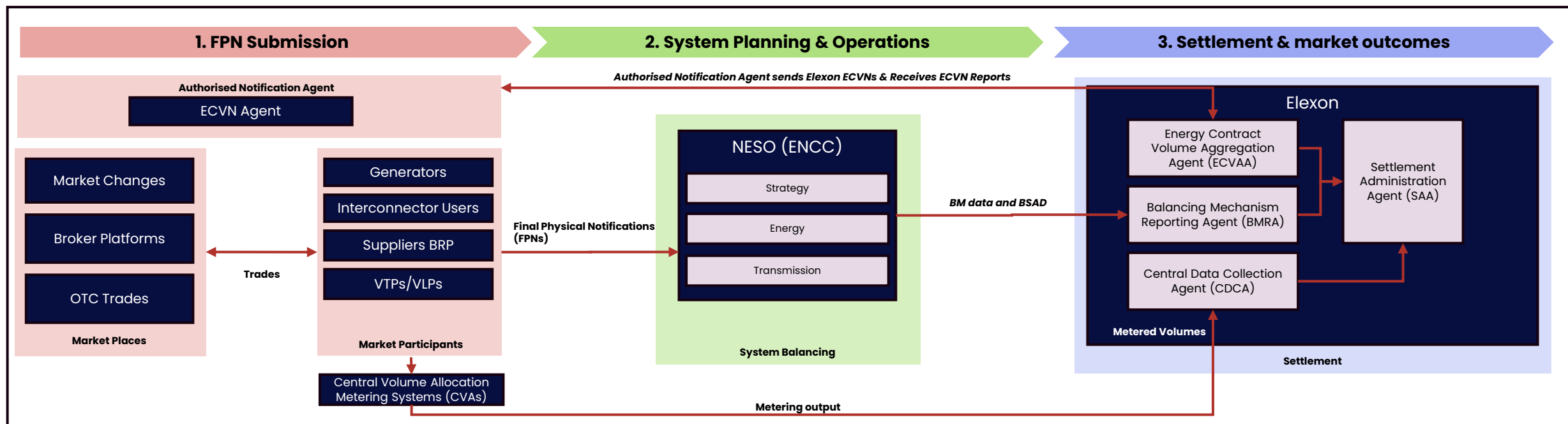
FPNs = TP & MTD=GC

Breakout discussion:

1. Are there any additional existing industry processes that are relevant to capture in the AS-IS/counterfactual process (either will be impacted or may influence implementation of the reforms)? (Slides 24 and 27)
2. What additional key areas for discussion should be considered regarding the TO-BE processes during stakeholder engagement to understand the impacts? (Slides 25 and 28)
3. What are your views on the first-order market participant impacts we have identified? What impacts have we missed / mis-characterised? (Slides 26 and 29)

FPNs equal to traded position | As-Is process overview

Simplified As-Is diagram of information flows from participants that will be directly impacted by FPN = TP



Market participants notify NESO and Elexon of their expected physical and commercial positions respectively, ahead of each settlement period.

- Market participants with Primary BM Units above a size threshold and/or participating in the Balancing Mechanism (BM) submit Physical Notifications (PNs) to NESO based on expected physical export or import. Final PNs must be submitted by gate closure for each Settlement period.
- Market participants and exchanges submit contracted positions (ECVNs) to Elexon for settlement
- The FPN and ECVN positions can be different.
- Elexon collects metered data via BSC settlement flows

NESO uses FPN data to build a view of expected system supply and demand, and takes balancing actions to maintain system security.

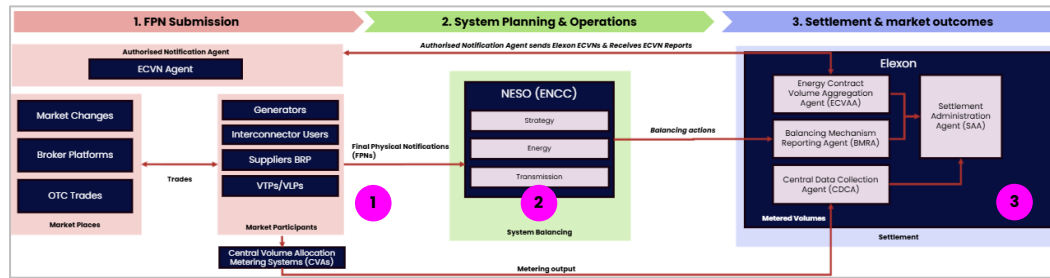
- NESO accesses PNs submitted by participants from T-24h through to Gate Closure (the last valid PN becomes the FPN).
- NESO uses this information in Strategy timeframes to create System Operating Plans (SOPs) which are refreshed based on revised PNs
- SOPs (through SPICE) inform NESO dispatch advice (through SORT/OBP), which uses FPNs as a final physical baseline. ENCC engineers take actions based on dispatch advice to ensure adequate margin and reduce any expected constraints.
- Where unit actual output deviates to FPNs, NESO may take additional actions or unwind actions to ensure the system remains balanced.

Elexon compares ECVNs against actual metered volumes to determine and settle any imbalance.

- ECVAAs aggregate ECVNs.
- CDCA collects and aggregates metered data (CVA).
- The SAA compares contracted positions (from ECVAAs) vs actual metered volumes (from CDCA) to determine imbalance.
- Differences are settled as imbalance (cash-out).
- Balancing actions influence the imbalance price.
- Elexon does not currently compare FPNs and ECVNs.
- NESO sends FPN data within 15 mins of Gate Closure to the BMRA for reporting purposes.

FPNs equal to traded position | To-Be process definition

Areas to be investigated to inform implementation process



Key areas of impact

- Content accuracy of physical notifications** and alignment to traded position (where applicable)
- Operational processes related to system planning**
- Potential new compliance monitoring activity**

Hypothesis summary

Participants submit FPNs based on their latest and most accurate view of their expected physical position, informed by their traded position at Gate Closure, reducing scope for deliberate imbalance position-taking. NESO gains improved visibility of system positions and the ability to reconcile FPNs against contracted positions, supporting more informed and potentially less conservative dispatch decisions.

To-Be Changes

- Market participants submit FPNs that reflect their latest traded position at Gate Closure, removing the ability to take a deliberate imbalance position.
- Internal position management processes must ensure alignment between physical and commercial positions prior to submission.
- NESO integrates additional market position data (e.g. aggregated ECVNs) provided from day-ahead up to Gate Closure into its system planning tools, enabling less conservative and more accurate dispatch decisions.
- Settlement continues through Elexon (ECVAA/SAA), but is now complemented by a compliance and reconciliation layer that uses ECVN data to identify and investigate instances where FPNs deviated from traded positions.

New Requirements

- Ability for market participants to submit PNs reflecting their latest traded position, removing deliberate imbalance position-taking
- Ability for NESO to ingest data and use it to better inform system decisions and reduce conservative dispatch driven by current uncertainty
- Ability to receive reports of non-compliance and investigate. [TBD - split of compliance monitoring responsibilities]
- Ability to close the information gap between participants' trading activity and PN submissions as these do not cover all traded volume.
- Ability to cross-check or reconcile FPN information against other available industry data (e.g. ECVNs) as a post-event validation and investigation tool.

Market participants

NESO

Elexon

Key Areas for Discussions

Areas to explore for visibility of traded position

- How does the accuracy of PN volumes evolve across trading time horizons (week-ahead, day-ahead, intraday) ahead of FPN submission? To what extent is this driven by forecasting accuracy versus commercial decision-making (e.g., trading position changes)?
- Are internal position management tools sufficient to provide accurate FPN data, and enable comparison against traded positions? What asset-specific forecasting considerations need to be factored in?
- What data is required to improve forecasting accuracy? At what level of granularity (unit vs. BMU level vs. party level)? Over what time horizon does the information need to be received in order to improve forecasting accuracy?
- What changes might be needed in FPN fields and content to ensure data received is both accurate and fit for purpose?
- Clarify the operational lag between trade execution and ECVN availability to Elexon – and whether this is compatible with NESO's objective of improved visibility?
- Confirm whether existing data flows provide enough information for NESO to have an improved view of intended position – at the required granularity and time horizon (Elexon deck indicates that this would need to be more than just ECVNs)?

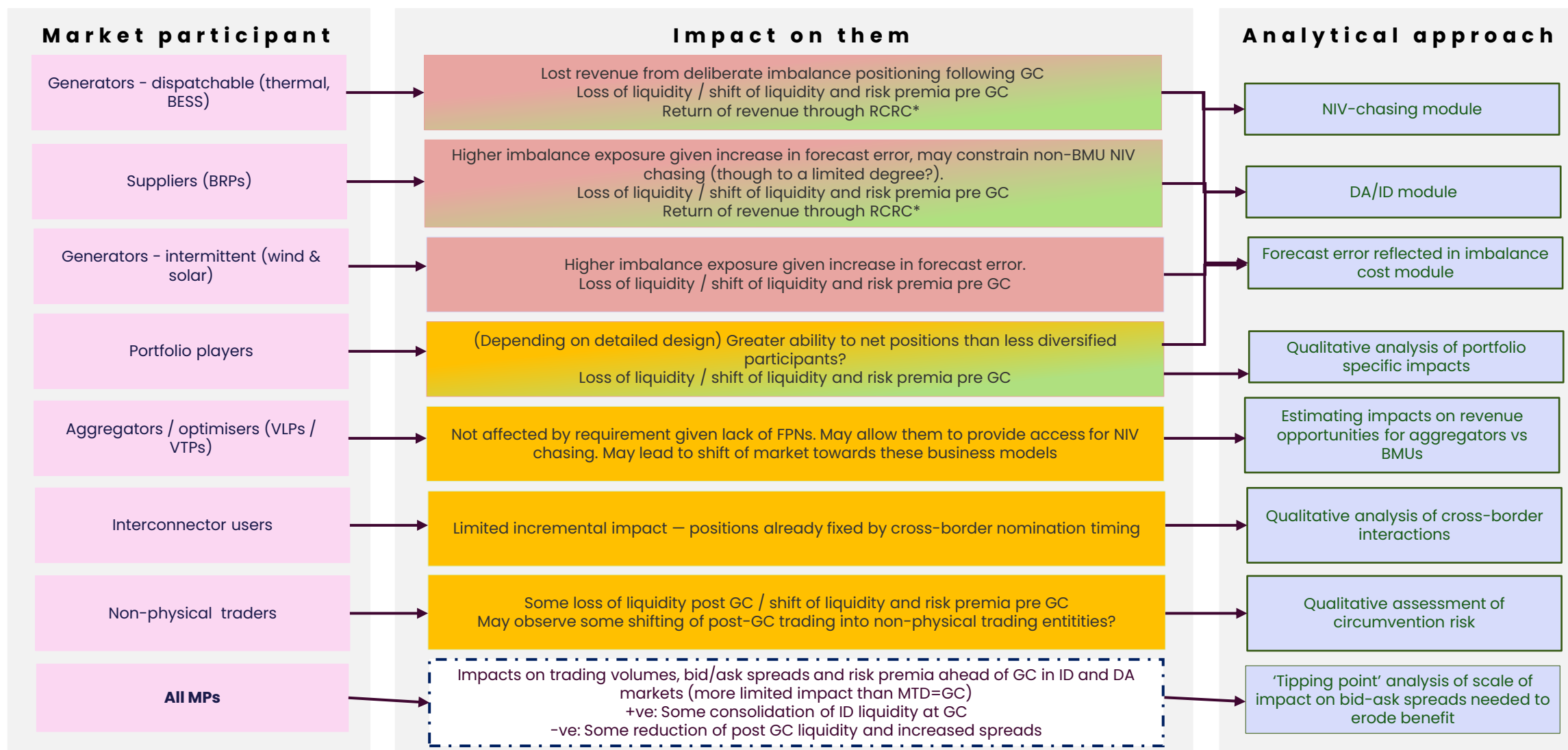
Additional areas to explore for matching PNs to traded position at portfolio level

- Can internal systems aggregate and reconcile traded positions across BMUs at portfolio level? What netting or offsetting rules are needed to ensure the aggregated FPN remains meaningful
- At what point are ECVNs for OTC trades submitted?
- Does portfolio-level matching provide sufficient granularity for dispatch decisions, or does netting across BMUs mask unit-level deviations that drive balancing actions?
- For portfolio-level matching, what modifications (if any) are needed to current ECVN/MVRN timing, completeness, and data flows to make account-level reconciliation with aggregated FPN-based positions workable?

FPNs=TPs | Market Participant Impacts for the CBA

We welcome comments on our identification of impacts on MPs

=positive impact
 =neutral impact
 =negative impact

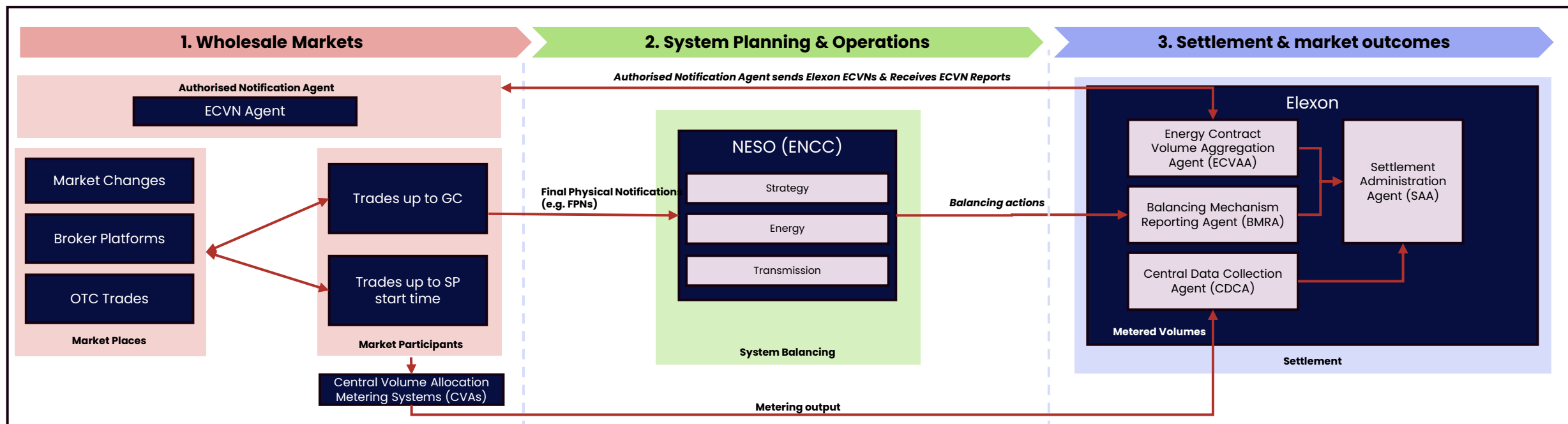


*NB: May be some offsetting of impacts and benefits to some participants through RCRC, meaning those MPs who are better able to manage imbalance than average may end up as winners



Align MTD to Gate Closure | As-Is process overview

Simplified As-Is diagram of information flows from participants that will be directly impacted by MTD = GC



Market participants can execute trades up to the start of the Settlement Period – one hour after Gate Closure – meaning wholesale trading continues while NESO is already managing the system through the Balancing Mechanism.

- Market participants trade on exchanges, broker platforms, and OTC up to the start of the Settlement Period (the current Market Trading Deadline)
- ECVNs reflecting these trades can be submitted to Elexon up to the same deadline
- This creates a one-hour overlap between Gate Closure (when FPNs are finalised and BM opens) and the point at which trading stops – during which wholesale positions can still change

NESO begins balancing at Gate Closure based on FPNs, but participants' traded positions can still change for up to an hour afterwards – creating uncertainty in system planning and potentially counterproductive market movements during the balancing window.

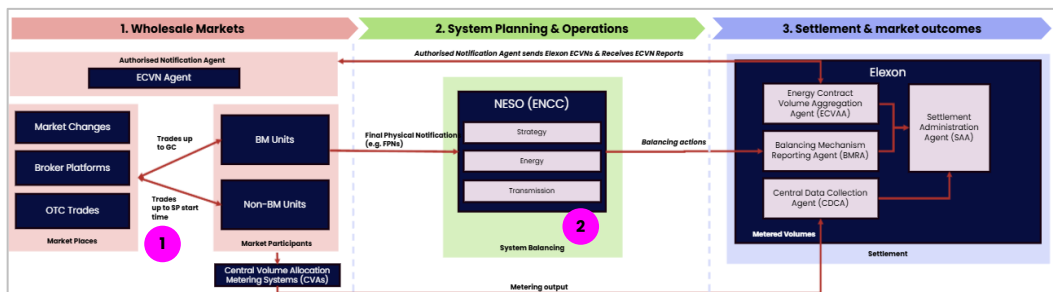
- NESO calculates dispatch advice based on FPNs issued at GC and last known traded positions
- However, post-GC trading can shift participants' actual positions after NESO has already committed balancing actions
- This can result in NESO needing to unwind or add BM actions to correct for position changes that occurred after GC – increasing balancing costs and system uncertainty

Elexon settles based on final contracted positions (ECVNs) and metered volumes, but the post-GC trading window means contracted positions can diverge from what NESO was balancing against – distorting price signals and imbalance outcomes.

- Elexon receives metered volumes from BMUs and contracted positions (ECVNs)
- ECVNs reflect trades executed up to the start of SP – including trades made after Gate Closure
- Imbalance pricing reflects BM actions that may have been taken against positions that subsequently changed – distorting wholesale price signals and incentivising strategic behaviour

Align MTD to Gate Closure | To-Be process definition

Areas to be investigated to inform implementation process



Key areas of impact

- 1 Changes to intraday markets
- 2 Operational processes related to system planning

Hypothesis summary

Aligning the Market Trading Deadline with Gate Closure removes the current one-hour overlap between wholesale trading and the Balancing Mechanism, requiring participants to finalise both physical (FPN) and commercial (ECVN) positions at a single pre-delivery decision point. This shifts the market from post-GC self-balancing towards greater reliance on pre-GC forecasting accuracy and centralised balancing

To-Be Changes

- All wholesale trading — including continuous intraday — must be finalised by Gate Closure rather than the start of the Settlement Period, removing the post-GC trading window.
- Participants must adapt trading strategies, forecasting processes, and internal risk management to commit to positions one hour earlier than today.
- NESO receives aligned physical (FPN) and commercial (ECVN) positions at Gate Closure, eliminating the current uncertainty from post-GC trading. This gives NESO a cleaner baseline for dispatch decisions but shifts balancing reliance from market-led corrective trading to centralised BM actions
- Elexon receives contracted positions (ECVNs) aligned to Gate Closure rather than the start of SP, removing the distortion caused by post-GC trades being included in settlement. Imbalance pricing more accurately reflects the system position at GC — but reduced intraday liquidity and earlier position lock-in may increase imbalance risk and costs for participants.

New Requirements

- Ability to finalise traded positions and submit accurate forecasts by Gate Closure — requiring upgraded forecasting, trading, and risk management systems
- Ability to close continuous intraday and auction markets at Gate Closure rather than the start of SP — requiring changes to market scheduling, order book cut-off times, and clearing processes (Exchanges)
- Ability to redesign operational timelines to fully leverage the aligned GC/MTD — and to manage increased BM reliance as post-GC corrective trading is removed
- Ability to ingest and utilise ECVN data in dispatch advice algorithms.
- Ability to process ECVNs submitted at GC rather than start of SP — and to adapt settlement and compliance monitoring systems to the earlier submission deadline.

Market participants

NESO

Elexon

Key Areas for Discussions

- Does aligning MTD to GC put pressure on lowering the BM threshold or shorter settlement periods? What are the knock-on effects to other reforms in terms of value and operational feasibility?
- What are the implications of reduced time between position finalisation and delivery on forecasting accuracy and position management processes? Are there additional operational, system, or data challenges envisaged?
- If post-GC trading is removed, how much additional reliance does this place on the BM for balancing — and can NESO's current dispatch tools and processes absorb the increase in BM actions without degrading response times?
- What is the interaction between MTD alignment and lowering the BM threshold — does bringing more assets into the BM partially offset the lost post-GC self-balancing, and should the two reforms be implemented together?
- What system changes are needed to move the ECVN submission deadline from start of SP to Gate Closure — and what is the expected cost and implementation timeline?
- Can Elexon provide data on the volume and value of trades executed in the post-GC window (between GC and start of SP) — to quantify the materiality of the trading activity that would be lost?

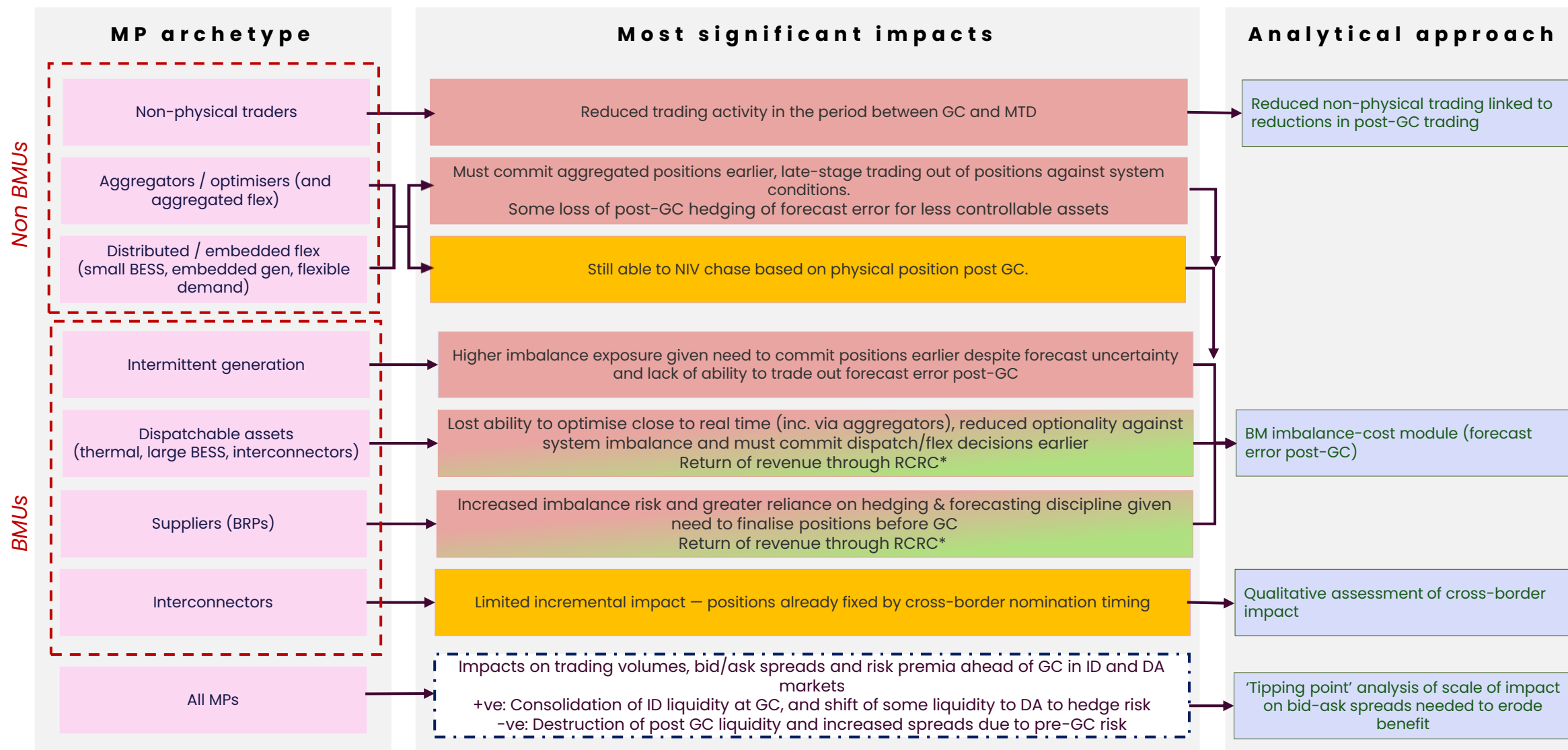
MTD=GC | Market Participant Impacts for the CBA

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=negative impact



*NB: May be some offsetting of impacts and benefits to some participants through RCRC, meaning those MPs who are better able to manage imbalance than average may benefit



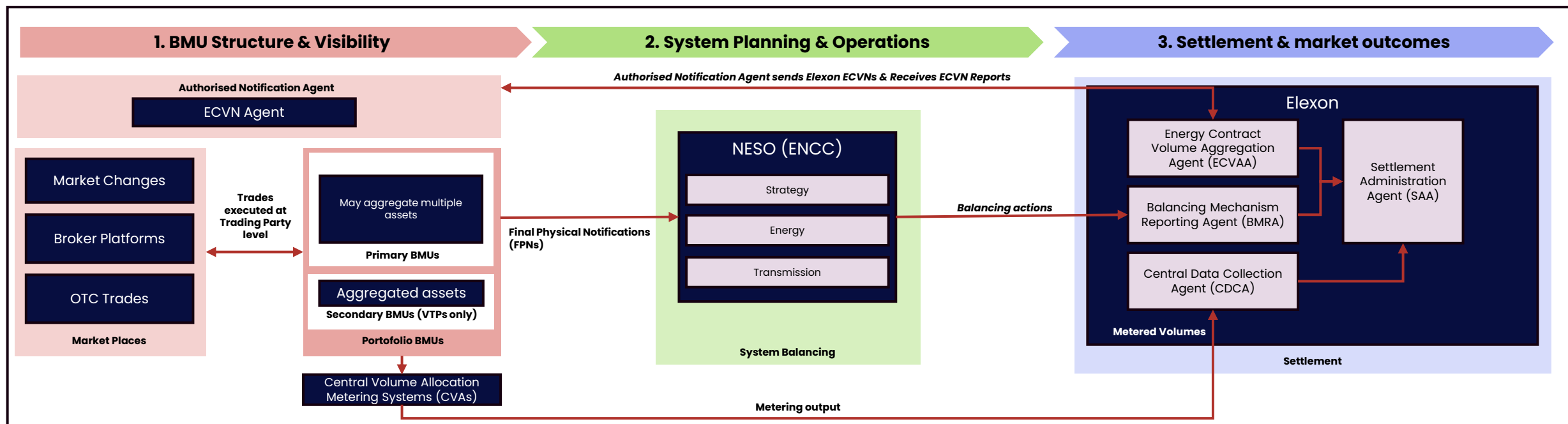
Unit Bidding

Breakout discussion:

1. Are there any additional existing industry processes that are relevant to capture in the AS-IS/counterfactual process (either will be impacted or may influence implementation of the reforms)? (Slide 31)
2. What additional key areas for discussion should be considered regarding the TO-BE processes during stakeholder engagement to understand the impacts? (Slide 32)
3. NB: We are not carrying out a full CBA on unit bidding at this stage so do not include consideration of market participant impacts of the reform

Unit Level Bidding | As-Is process overview

Simplified As-Is diagram of information flows from participants that will be directly impacted by Unit Level Bidding



Traders and asset owners operate at BMU/portfolio level with multiple assets aggregated into a single position, limiting NESO's visibility of individual unit behaviour and leaving smaller assets represented indirectly through aggregators or suppliers.

- Traders and asset owners operate assets at BMU / portfolio level, with multiple assets aggregated into a single position
- NESO receives aggregated asset positions, limiting visibility of individual unit behaviour
- Smaller assets are represented indirectly via aggregators or suppliers, not as standalone units

Bids/offers and PNs are submitted at BMU (portfolio) level representing the net position across assets, with NESO using aggregated FPNs to manage system constraints and issuing BOAs at BMU level – without direct asset-level dispatch.

- Traders submit bids/offers and PNs at BMU (portfolio) level, representing net position across assets
- As part of System Planning, NESO determines whether any system constraints are violated or close to being violated and determines actions to take to mitigate any constraint issues using aggregated FPNs and flexibility signals
- NESO selects bids/offers and issues BOAs at BMU level, without direct asset-level dispatch

Elexon receives metered volumes and contracted positions (ECVNs) aggregated at BMU level, with imbalance calculated on net BMU position vs metered output – meaning settlement reflects portfolio-level deviations rather than individual asset performance.

- Elexon receives metered volumes aggregated at BMU level and contract positions (ECVNs)
- Imbalance calculated based on net BMU position vs metered output
- Settlement reflects portfolio-level deviations rather than asset-level performance

Unit Level Bidding | To-Be process definition

Areas to be investigated to inform implementation process



Key areas of impact

- 1 Changes to market participant trading systems
- 2 Changes to day-ahead and intraday markets
- 3 Operational processes related to system planning
- 4 Changes to Settlement systems and processes

Hypothesis summary

Unit-level bidding shifts wholesale trading from portfolio-based positions to individual asset-level representation, requiring market participants to manage and submit commercial and physical positions at unit level. This gives NESO significantly improved visibility of asset behaviour and constraint management, while requiring fundamental changes to trading systems, market monitoring frameworks, and settlement granularity — with two design options under consideration that differ in the degree of market structure reform required.

To-Be Changes

- Traders submit and manage commercial positions at individual asset level rather than aggregated portfolios
- Under Option 1, participants assign their aggregate traded position to specific units post Day-Ahead
- Under Option 2, a mandatory gross pool DAM clears at unit level, making it the sole route to a physical position.

- Bids/offers and PNs are submitted at a more granular, unit level, increasing visibility of asset-level positions for NESO and enabling more targeted dispatch decisions compared to current arrangements, subject to final design and data availability.

- Elexon receives metered volumes and contract positions at individual asset level, with imbalance calculated per unit rather than per portfolio — linking physical output directly to specific assets and increasing the granularity and accuracy of cash-out.

New Requirements

- Ability to manage and report traded positions at individual unit level — requiring upgraded internal trading, forecasting, and position management systems
- Under Option 1: ability to allocate aggregate traded positions to specific units post Day-Ahead and update for intraday trading
- Under Option 2: ability to participate in a mandatory gross pool DAM with unit-level bids/offers, with all forward trades outside the DAM treated as financial

- Ability to process unit-level bids/offers, PNs, and dynamic data within system planning and dispatch tools — enabling asset-level constraint calculation and BOA issuance
- Ability to monitor and enforce accuracy of unit-level submissions — noting that under Option 1 there is no inherent market incentive for accuracy (unlike Option 2's gross pool), requiring regulation-based compliance

- Ability to receive, process, and settle metered volumes and ECVNs at individual asset level — requiring settlement systems capable of unit-level imbalance calculation and cash-out

Market participants

NESO

Elexon

Key Areas for Discussions (Core questions applicable to both options)

- Can internal trading and position management systems allocate and report traded positions at individual unit level? What is the cost and complexity of upgrading from portfolio-level to asset-level representation?
- For vertically-integrated portfolios, what is the commercial impact of losing the ability to self-supply without exposure to competitive market clearing?

- What system and process changes are needed to receive, validate, and dispatch at individual unit level — including constraint calculation, BOA issuance, and dynamic data processing?
- What is the quantified dispatch efficiency gain from unit-level visibility — how many fewer BM actions and at what cost saving compared to portfolio-level dispatch?

- Can current settlement systems process metered volumes, ECVNs, and imbalance calculations at individual asset level — or is a fundamental infrastructure upgrade required?
- How would unit-level settlement interact with the existing ECVN structure — given ECVNs are currently submitted at energy account level, not per unit?

Questions specific to each option

- What additional processes and tools are needed to assign your aggregate traded position to specific units post Day-Ahead — and how would you handle reallocation as intraday trading changes positions? [Option 1]
- How would a mandatory gross pool DAM change trading strategy, hedging approach, and forward contracting, given all trades outside the DAM become financial only? [Option 2]

- How would NESO monitor and enforce accuracy of unit-level position assignments, given there is no inherent market incentive for participants to allocate accurately? [Option 1]
- What governance, systems, and regulatory framework would be required if NESO operates (or co-operates) the mandatory gross pool DAM — including clearing, pricing, and settlement interfaces? [Option 2]

- If forward trades become financial only, what changes are needed to the settlement framework to distinguish between physical (DAM-cleared) and financial positions? [Option 2]
- Would Ofgem's regulation of power exchanges as a licensable activity create new data-sharing or reporting requirements for Elexon? [Option 2]

Behavioural Assumptions (slide 31)

Breakout discussion:

1. What are your views on the ways in which market participants are likely to change behaviour (or not) in response to the reforms?
2. What data or evidence is available to help inform the assumptions that we make in the CBA regarding behavioural responses of market participants?

Key behaviour change assumptions

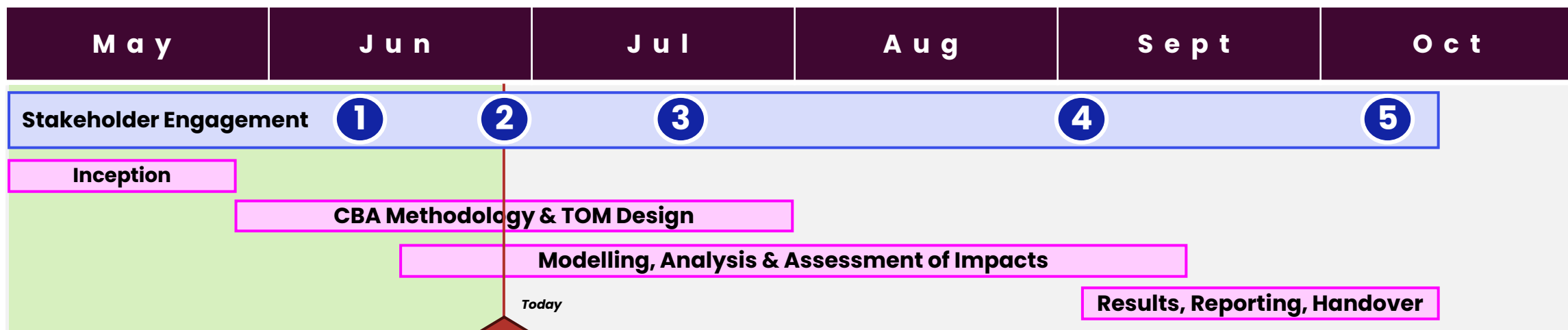
We seek your help in informing our assumptions regarding how market participants will respond to options through change in behaviour

Options affected	Questions for IEP – how would behaviour be affected? Do you have data/evidence that can help inform assumptions?	Impact
SSPs	Change in granularity: <i>Which MPs would shift trading, forecasting and dispatch to SSP timescales (15 & 5 mins) – e.g. through investment in trading systems? How will this change over time?</i>	MPs who do not change behaviour will lose value and face additional costs. Benefits in part dependent on extent of behaviour change observed from MPs.
SSP, MTD=GC, FPN=TPs	Trading out positions at ID vs BM / cashout: <i>How would each option change the approach of different MPs to self-balance and trade out positions in the ID market vs continuing to rely on the BM / cash-out? What will drive this decision making?</i>	Impacts on liquidity, market efficiency, allocation of risk and size of MP risk premiums under the options vs counterfactual.
MTD=GC, FPN=TPs, LBT	NIV chasing / Imbalance positioning: <i>To what extent would reforms stop NIV chasing / imbalance positioning vs pushing it into alternative routes (e.g. taking imbalance at GC, aggregators, non-physical trading arms)? How does this change if options are combined as a package?</i>	Informs extent to which potential benefits and disbenefits to society and individual MPs from NIV chasing would be impacted by options.
LBT	Real participation in BM at lower threshold: <i>How would participation in the BM through VLPs change going forwards under the counterfactual and under LBT? Which types of assets may not actively participate in the BM within the 10-50MW threshold?</i>	Impact on extent of benefit delivered from additional BM participation at lower threshold, further to participation through VLPs today.
All options	Enhanced [imbalance management]: <i>Would you expect MPs to invest in enhanced forecasting, optimisation or trading to better manage their positions? Which types of MP would and wouldn't, and over what timescales?</i>	Some of the benefits of the options are based on the assumption that MPs will invest in enhanced forecasting to manage imbalance more effectively and maximise value.

Next Steps

Timeframes and Engagement with the IEP (Updated)

IEP will have multiple opportunities to input into the approach and analysis, alongside more targeted opportunities for engagement



Stakeholder Engagement	② 30th June	③ 29th July	④ August / September	⑤ October
CBA	Detailed methodology, assumptions and data requirements, sensitivity choices Inc. market participant impacts	Outcomes from early model testing and finalisation of outstanding inputs and assumptions	Initial discussion of preliminary outputs	Presentation of final results
Implementation	Validate "as-Is" TOM outputs and have opportunity to provide input into outstanding key "to-be" questions	Validate future-state TOM, preliminary impact findings and test initial identified cost items	Share assessment of impact findings and discuss the pathway to implementation planning	Presentation of final results
Alignment with wider programme decisions	Final, detailed policy options and benefits mechanisms	Confirmation of key assumptions, option variants and required sensitivities. Cost data from Implementation workstream	N/A	N/A