

Public

Power Responsive Challenge Group

30 June 2026

Agenda

1. Welcome and admin	James Kerr, NESO	5 minutes
2. Updated Terms of Reference	James Kerr, NESO	5 minutes
3. Elexon – Flexibility Markets Asset Register (FMAR) update & Q&A	Ewan Cameron, Elexon	30 minutes
3. Route to Market (RtM) programme & Enabling Demand Side Flexibility (EDSF) update & Q&A	Pravnick Heer & Ridwan Ibrahim, NESO	15 minutes
4. Power Responsive update & Q&A	Nicolas Manea, NESO	10 minutes
6. Any other business and close	James Kerr, NESO	5 mins

The Power Responsive Challenge Group

Aim: To provide expert challenge and discussion to drive participation in NESO flexibility markets



Meeting frequency

Provisionally, every 3 months



Topics

Enabling flexibility (EDSF, RTM barriers)
Service/product updates
Emerging/new topics



Input from members

Active participation
Bring us topics to discuss



Membership

SMEs from Trade Bodies, Flex Providers, Tech providers, DSOs, Suppliers
Attendance – 1 per organisation
Nominate an alternate



Meeting admin

Power Responsive Chair
Agenda and pre-reading sent in advance
Chatham House rules
Time for discussion
Meeting notes published

**Updated Terms of Reference shared in meeting invite
– feedback welcome**

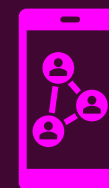
Flexibility is our hidden power

Power Responsive helps businesses understand, access, and benefit from flexibility services that reward them for changing how and when they use electricity.

NESO 
power
responsive



Sign up to our
[newsletter](#)

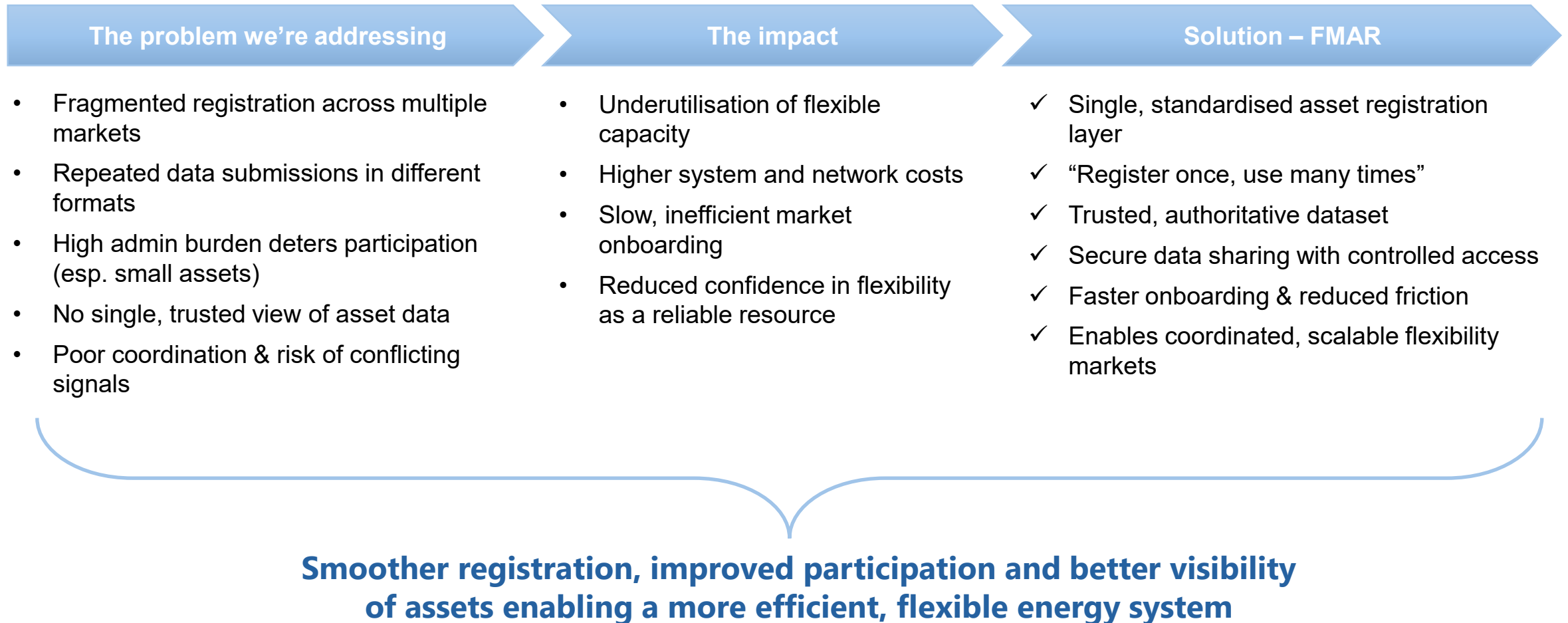


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Elexon's Flexibility Market Asset Registration (FMAR) Programme

Assessing the possible FMAR Implementation Approach options

Flexibility Markets Asset Register



Implementation Approach Strategy

Overview

FMAR will provide a common, trusted asset registration capability for flexibility markets. The Implementation Approach seeks to determine the most effective method of onboarding participants (FSPs, System Operators, and market platforms) and operationalising FMAR across industry ahead of September 2027.

Our Scope

- Define and assess implementation approaches for onboarding industry participants into FMAR.
- Evaluate implementation options against delivery feasibility, cost, participant readiness, interoperability maturity and value realisation.
- Develop a phased onboarding and rollout strategy aligned to the target FMAR design and functional outcomes.
- Gather industry feedback through the Information Request and September consultation to inform the recommended implementation approach.

Key Target and Outcomes

- Define a recommended implementation approach for FMAR, supported by evidence from industry engagement and option assessment.
- Establish a clear onboarding and rollout strategy for System Operators, FSPs and market platforms.
- Validate implementation assumptions, participant readiness and delivery timelines through industry engagement.
- Provide a clear route from FMAR Day 1 capability to full market adoption and functional outcome realisation.
- Support the September 2026 consultation with a robust implementation strategy and supporting evidence base.

Current progress

The FMAR Implementation Approach Team is responsible for defining and delivering a clear, consultable implementation approach that translates policy intent and detailed design into a structured industry delivery plan. The FMAR design will drive central FMAR capability at day 1 and we will define how industry onboards into the operational FMAR arrangements set by the design, supported by Market Rules and ensuring compliance with those Market Rules to align with the implementation approach.

Our Role



Working closely with the design and FMAR programme team, we are establishing the target end state for FMAR and determining how this will be delivered through phased onboarding to maximise early value while managing industry readiness and risk. We are engaging with Elexon and industry to understand the impact of potential implementation approach options, to define a preferred option for final consultation in September 2026.

What we are doing

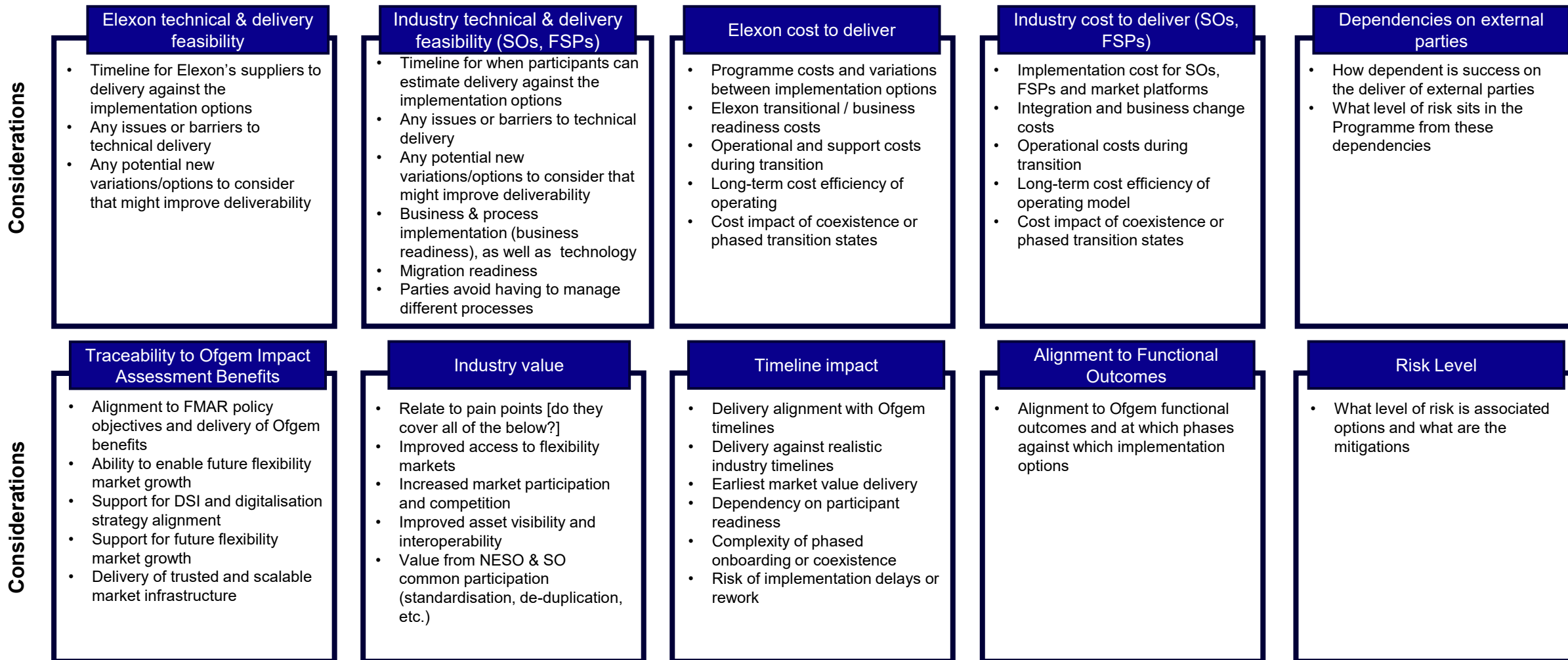


To date, we have:

- Considered how implementation options might support a staggered approach to implementation and developed a long list of implementation approach options
- Provided implementation approach input to the technical supplier RFP
- Evaluated the feasibility of approaches to create an IA option shortlist (x4)
- Developed a high-level plan to walkthrough key dates to share the implementation approach strategy internally and externally
- Established evaluation criteria for each of the implementation approaches to be measured against
- Drafted and issued Information Request to industry on 23rd June

Implementation approach, options evaluation criteria

Implementation options will be assessed against criteria including delivery feasibility, market readiness, cost, operational risk and alignment to FMAR policy outcomes.



Implementation Approach Options

Below are the implementation approach options that have been reviewed by the design team and considered to be technically feasible to progress.

Option	Description	Key Benefit	Key Risk
1 Big Bang 	All participants adopt FMAR simultaneously in a single coordinated go-live.	Immediate full value (full deduplication and market coordination)	High delivery risk due to dependency on full industry readiness
2 (x1 SO) 	FMAR capability is delivered in full, but onboarding starts with one SO and scales over time.	Reduced delivery risk through controlled onboarding and early testing	Limited early value (no cross-SO deduplication or full coordination)
2a (x1 Market platform) 	FMAR is deployed with one market platform (and associated SOs), before extending more widely.	Enables earlier delivery and platform-led scaling	May not represent full system behaviour and limits early value
3 (NESO + 1 DNO) 	Initial onboarding includes NESO and one DNO to enable early cross-SO functionality.	Earliest point of meaningful FMAR value (deduplication + data sharing)	Still requires integration complexity and onboarding coordination
4 (NESO +1 market Platform with associated DNOs) 	Initial deployment includes NESO and a market platform covering multiple DNOs.	Enables broader early value and aligns with platform-based rollout	Increased delivery complexity and dependency on multiple parties

- There may be other approach options from feedback or further development (e.g. from Industry Value Add option sent to Elexon's suppliers). We should note that the potential suppliers of the FMAR solution have been asked by Elexon what additional features or functions could be provided by the central FMAR supplier to reduce cost, decrease delivery effort and improve timeline to delivery for Industry/Market Participants.
- This may provide us with further options. We note that any change to the central design or incorporation of value-added features would have to be progressed through our development processes, but this is an opportunity to see how we might improve delivery.
- Option 4 has been shared with suppliers as an iteration of the proposed options sent in the RFP.

**Please note, NESO's Demand Flexibility Service (DFS) is currently still being assessed as a tactical solution; we hope to confirm it as in scope but require further input from NESO before final decision.*

Option 1: Big Bang

Description: The Big Bang approach would deliver the full FMAR capability through a single coordinated market-wide go-live, with all SOs, FSPs and market platforms implementing standardised onboarding, interoperability and registration functionality simultaneously by an agreed implementation date.

 **Approach attendees:** All market attendees (System Operators, Flexibility Service Providers, Market Platform Providers)

Approach Benefits



- ✓ Full FMAR capability and market value realised from go-live through immediate implementation of data standardisation, de-duplication and coordinated registration processes across participating markets.
- ✓ Maximum asset and participant visibility established from Day 1, enabling all registered assets and FSP relationships to be visible and reusable across connected platforms and services.
- ✓ Immediate market-wide consistency achieved through a single coordinated onboarding model, common APIs, shared identifiers and aligned registration standards.
- ✓ Simplified long-term operating model with no interim states, duplicate onboarding processes or phased transition complexity for market participants.

Approach challenges



- Significant delivery risk due to all SOs, FSPs and market platforms needing to implement and deploy FMAR functionality simultaneously to a single go-live date.
- High dependency on industry readiness and coordinated delivery across multiple organisations / platforms
- Increased risk of implementation delays due to differing levels of SO and platform maturity, with some market participants potentially unable to meet the same delivery timeline.
- Greater operational and market risk at go-live, where defects, integration failures or onboarding issues could impact multiple flexibility markets simultaneously.

Option 2: 1x System Operator

Description: In this approach, all FMAR functionality is ready, and a single SO is initially onboarded. The party can begin operational testing of FMAR functionality and controlled rollout for the remaining participants.



Approach attendees: 1x System Operator (*with associated market platform and linked FSPs*)

Approach Benefits



- ✓ Reduces the dependency on all programme participants being ready.
- ✓ Avoids immediate disruption to current ways of working in industry, whilst moving towards standardisation
- ✓ Enables a range of testing with FMAR functions.
- ✓ Early technical validation from go-live.
- ✓ As more participants are onboarded, benefits will increase. Value is progressively realised.
- ✓ Lower risk of delivery.
- ✓ Allows learning, iteration, and refinement before involving wider industry.

Approach challenges



- There is a risk of transitional complexity for FSPs, they may need to manage multiple interfaces and processes during onboarding.
- Full de-duplication will not be realised until all SOs / participants are onboarded.
- Co-ordination with participants to onboard in tranches.

Option 2a: 1x Market Platform

Description: In this approach, all FMAR functionality is ready, a single Market Platform (along with their SOs and FSPs) are initially onboarded. Participants can begin operational testing of FMAR functionality and controlled rollout for the remaining participants.



Approach attendees: 1x Market Platform (*including their SOs and linked FSPs*)

Approach Benefits



- ✓ Reduces the dependency on all programme participants being ready.
- ✓ Enables a range of testing with FMAR functions.
- ✓ Early technical validation from go-live.
- ✓ As more participants are onboarded, benefits will increase. Value is progressively realised.
- ✓ Lower risk of delivery.
- ✓ Allows learning, iteration, and refinement before involving wider industry.
- ✓ Improved confidence in cross-SO functionality (if SO>1)

Approach challenges



- Market platforms may not have multiple SOs to test all use cases
- Initial success is dependent on the selected platform
- Testing results in one platform may not translate to other platforms

Option 3: NESO + 1x DNO

Description: In this approach, the full FMAR capability is deployed from launch, with NESO (SMP & DFS*) and another DNO onboarded first to enable early interoperability, de-duplication and initial interoperability and operational validation before onboarding the wider market in controlled phases.



Approach attendees: NESO (SMP & DFS*) + 1x DNO (*with associated market platform and linked FSPs*)

Approach Benefits



- ✓ Enables the earliest meaningful FMAR market value through integration two SOs (NESO preferably), unlocking initial de-duplication and reusable registration capabilities.
- ✓ Reduces dependency on all SOs and market participants being implementation-ready simultaneously, lowering delivery and go-live risk.
- ✓ Enables phased onboarding and migration of participants while maintaining the integrity of the target FMAR capability and architecture.
- ✓ Allows onboarding, governance and operational support models to mature before wider market rollout.
- ✓ Progressive onboarding enables operational learning and issue resolution before full market adoption

Approach challenges



- Partial onboarding does not fully deliver Ofgem Functional Outcomes until wider market participation is achieved.
- Significant dependency remains on NESO readiness, as meaningful FMAR value is only realised once NESO interoperability and de-duplication capabilities are operational.
- FSPs may experience transitional complexity where FMAR-enabled and non-FMAR onboarding models coexist during phased rollout.
- Alignment between NESO and the initial DNO onboarding model is critical to avoid fragmented onboarding experiences and inconsistent interoperability patterns.

Option 4: NESO + Market Platform, with associated DNOs

Description: In this approach, the full FMAR capability is deployed from launch, with NESO, a Market Platform and associated DNO(s) is onboarded first to enable early interoperability, de-duplication, and operational validation before onboarding the wider market in controlled phases.

 **Approach attendees:** NESO (SMP & DFS*) + Market Platform, with associated DNO(s) (*and linked FSPs*)

Approach Benefits



- ✓ Aligns to the underlying technical architecture and platform operating models.
- ✓ Avoids separation of SO and FSP onboarding by onboarding complete platform ecosystems together.
- ✓ Provides realistic end-to-end interoperability and operational testing across platforms, SOs and FSPs.
- ✓ Reduces onboarding fragmentation and transition complexity for participants.
- ✓ Delivers meaningful interoperability value earlier through platform-level adoption.
- ✓ Supports progressive market adoption while maintaining a stable FMAR capability model.

Approach challenges



- Platform readiness becomes a critical dependency for implementation success.
- Benefits are dependent on the market coverage and participant concentration of the selected platform.
- Uneven market adoption may occur if platforms onboard at different times.
- Delays to a major platform could materially impact overall FMAR adoption timelines.
- Additional governance may be required to manage platform onboarding waves and sequencing.
- Uncertainty remains regarding which platform should onboard first and how value scales as additional platforms are onboarded.

*Please note, NESO's Demand Flexibility Service (DFS) is currently still being assessed as a tactical solution; we hope to confirm it as in scope but require further input from NESO before final decision.

Question time!



Join at
slido.com
#3965 698

Stay up to date with Elexon's latest news



Please scan QR code above

By signing up to our newsletters and circulars, you can find out more about key Elexon events, upcoming consultations and latest publications.

Upcoming publications:

- 'Flexibility Market Coordination: Current State of the Market' - roadmap for market coordination report (published today)
- Reprioritised Market Facilitator Delivery Plan which will be published in the coming two weeks

Newscast



Weekly newsletter, which features key information that will keep you up to date with the industry, Elexon and Balancing and Settlement Code (BSC) activities.

Flexibility news



Regular updates on flexibility developments, events and consultations across the market.

Route to Market (RtM) Programme Q2 2026 update

Pravnick Heer & Ridwan Ibrahim

30 June 2026

Scope of the Route to Market Review at NESO

The Demand-Side Flexibility Routes to Market Review is NESO's project for **removing barriers** to NESO services for Demand-Side Flexibility, which were identified in collaboration with industry. It is a part of the **Enabling Demand-Side Flexibility in NESO Markets programme** that is seeking to deliver increased **competition**, **coordination** and **coherent** market arrangements for GB, in collaboration with DESNZ, Ofgem, Elexon, DNOs and industry.

By removing barriers, this work is:

- Unlocking participation from smaller and aggregated assets
- Increasing competition across NESO services
- Improving operational efficiency and predictability
- Enabling coordinated flexibility across GB markets

This supports delivery of Clean Power 2030 and the transition to a more flexible, low-carbon electricity system.

Realising the benefits of these changes will require market participants to evolve their participation and provide feedback to support ongoing improvements.

- Clean Power 2030 Sets out plans for a two to three-fold increase in clean flexibility capacity, to a range of 51GW to 66GW, by 2030.
- By 2030, demand flexibility from consumers in the Clean Power 2030 pathways reaches 10-12 GW (via both implicit and explicit markets).

**Clean Power 2030
(CP30)**

DESNZ



- The Clean Flexibility Roadmap sets out the government's vision for flexibility required for CP30.
- The roadmap includes actions for government, NESO and Ofgem to enable flexibility, including from demand-side participants.

**Clean Flexibility
Roadmap (CFR)**

**DESNZ, Ofgem,
NESO**



- This programme is NESO's organized effort to unlock participation from demand-side flexibility in NESO markets and achieve coherency, competition and coordination.

Scope:

- All NESO energy services. Voltage, stability and restoration are out of the scope this programme.
- The scope was updated in 2025 to incorporate all the

**Enabling Demand-
side Flexibility
(EDSF) Programme**

NESO



- Routes to Markets review is part of the EDSF programme and aims to increase competition. This initiative addresses the need to create a level playing field by identifying and removing barriers to NESO markets where feasible.

Scope

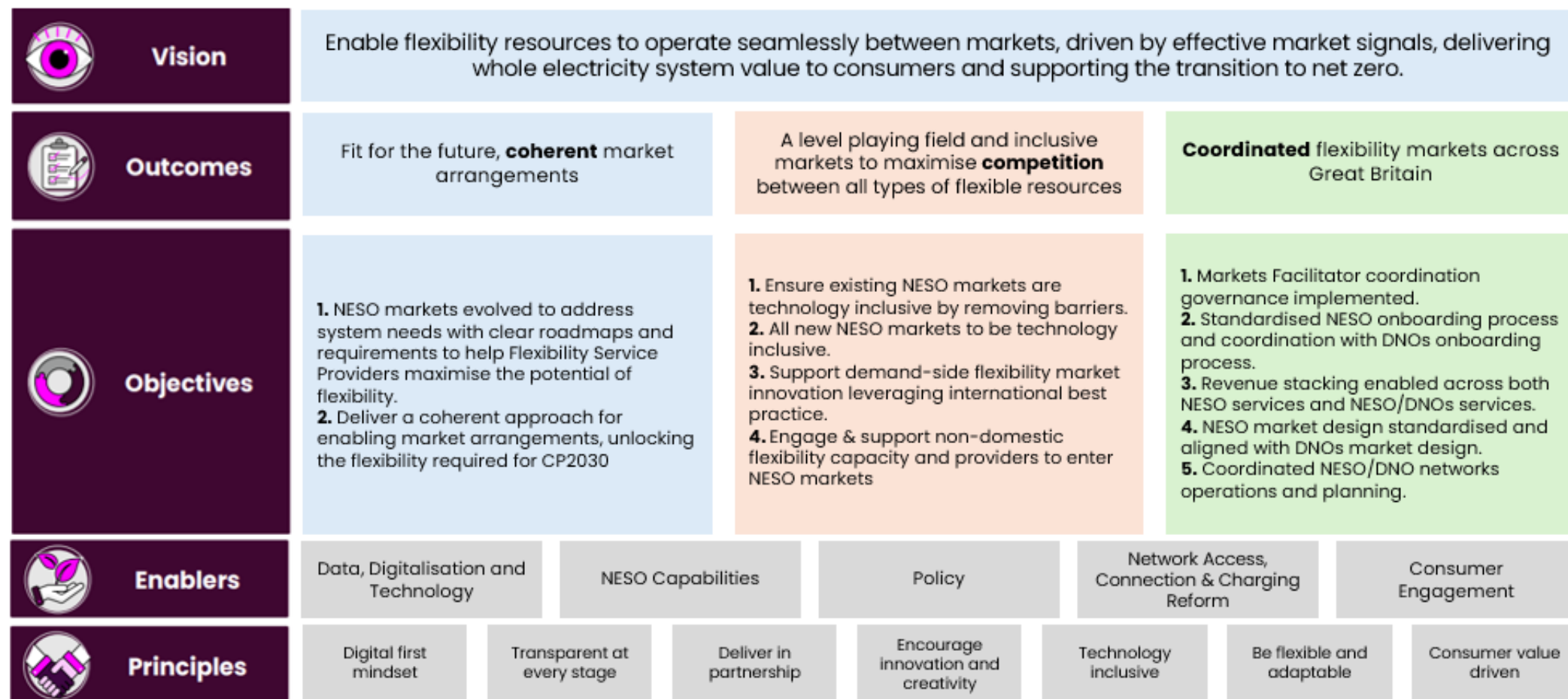
- Identified barriers
- Priorities of barriers
- Progress of removing barriers

**Route to Market
(RtM) Review**

NESO



NESO's EDSF Vision and Objectives

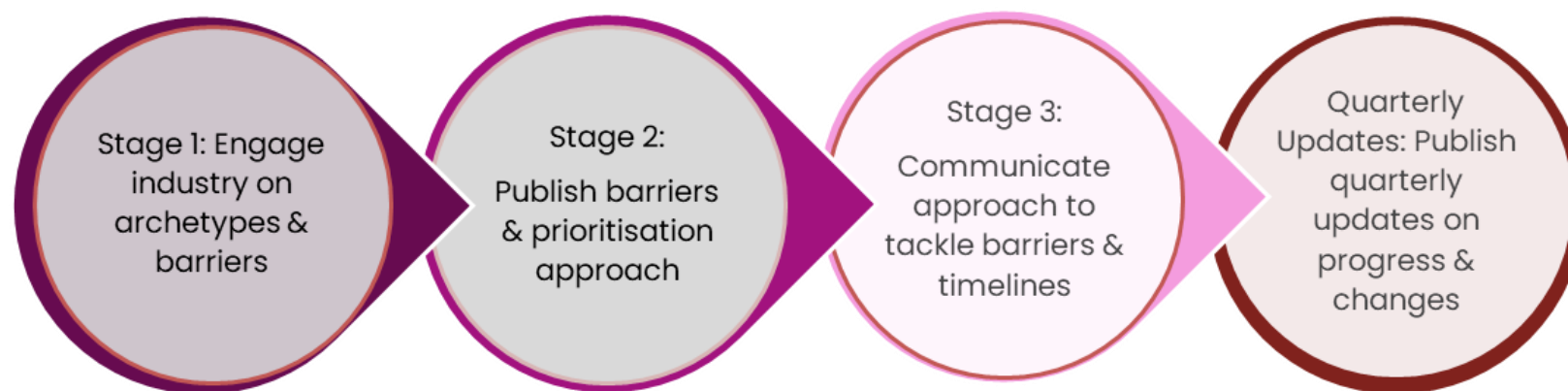


NESO's Power Responsive team works with energy intensive industrial consumers, asset owners, businesses and intermediaries to:

1. Identify flexible demand and distributed assets
2. Clarify routes into flexibility markets
3. Support organisations through the early stages of participation

Power Responsive helps translate flexibility potential into flexible megawatts in operation and is delivering on Clean Flex Roadmap actions.

Stages of the Route to Market Review



- [Stage 1](#) of the review was published in May 2024 and set out to identify barriers for a range of archetypes across NESO services.
- [Stage 2](#), published in December 2024, set out our barrier removal process and approach to prioritisation.
- [Stage 3](#), published in May 2025, included the barrier removal plan and set out our ongoing quarterly update engagement approach.
- The [Q4 2025 update](#) was published in December 2025 and the [Q1 2026 update](#) was published this March. This report [Q2 2026 update](#) published on 29 June 2026, is the third of our quarterly update reports. The quarterly updates include a description of the barriers, NESO's proposed work to remove them and the latest progress update.

Key Barrier Updates:

Sub-MW & Non-Integer

- **DFS:** Ofgem approved the [Sub-MW proposal](#) on in March with an effective from date of 9 April. This change is now live.
- **sFFR:** Ofgem approved the [Sub-MW/NI proposal](#) in May. Changes go live on 31 July.
- **BM, Response & Reserve:** Industry workshop took place in April.
- Sub-MW/NI technical internal recommendations report completed this June. As such, the NESO progress RAG rating has moved from amber to green.

Procurement in EFA blocks

- NESO held an industry workshop in April to present the early-stage options and is now gathering feedback.
- A decision on whether to progress to detailed design will be taken in July (delayed from June). As such, the NESO progress RAG rating has moved from green to amber.
- Following this, NESO will move into the detailed design phase.

Delivery certainty risk & penalties for not meeting 100%/no tolerances

- Moved from 'Identified & Backlog' to 'Options Assessment' stage.
- NESO progress RAG rated green as guidance documents set out the performance monitoring approach, including applicable tolerances. The new [onboarding flexibility webpage](#) directs users to each service page, where the relevant guidance documents can be accessed.
- NESO's performance monitoring approach, including tolerances, has been subject to industry consultation and approved by Ofgem as part of the service design process.

Registration & onboarding of assets

By **September 2027**, NESO will remove key barriers to enable Wider Access (WA) BM participants to join and operate more easily, by:

Establishing clear ownership and governance

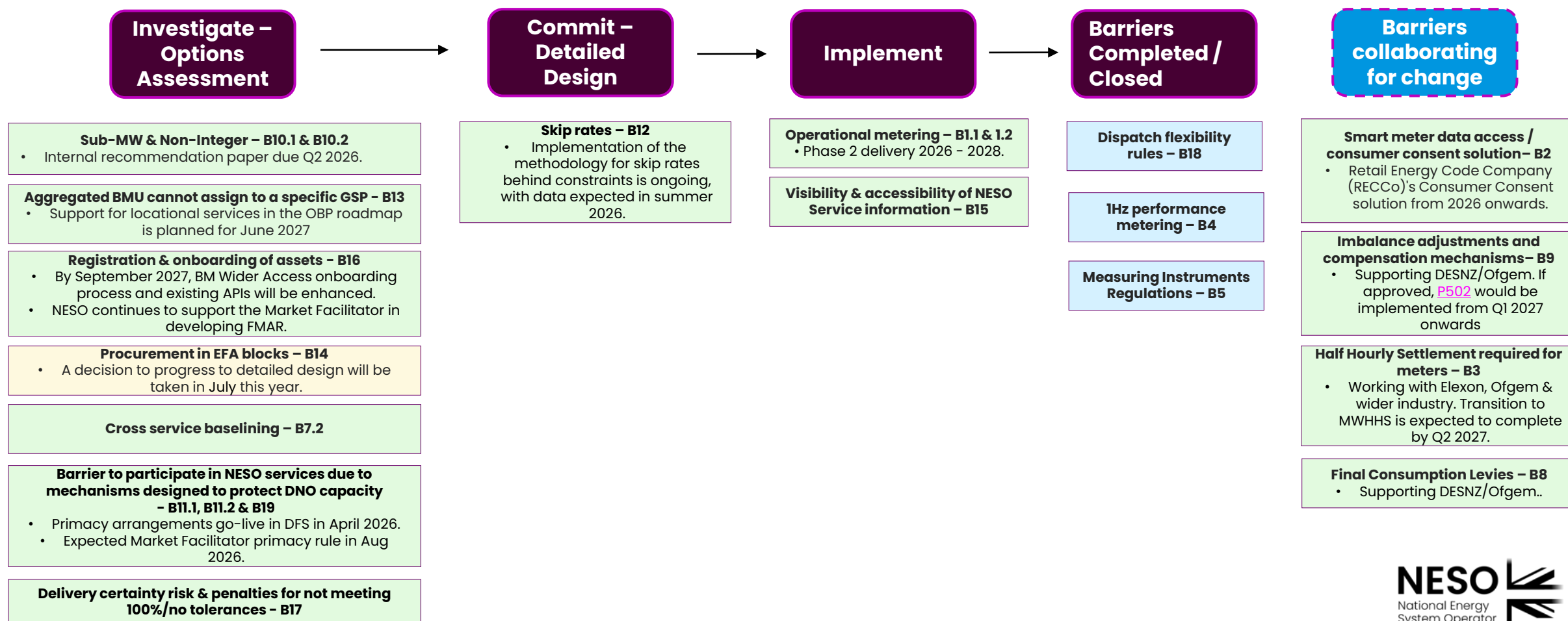
- Setting a single, defined onboarding process and standard materials
- Providing one clear entry point for participants.
- Reporting progress through EDSF governance.

Delivering a digital-first onboarding journey and improved APIs

- Introducing an improved WA API interface to support real-time operational communications and end user journey.
- Reducing manual processes to improve ease of use.

Where Each Barrier Stands Today

- This diagram highlights where each barrier sits in the removal process. B numbers refer to the barrier number & description from our [stage 2 report](#).
- The RAG ratings illustrate NESO's progress:
 - Clear – No workplan has been defined.
 - Red – No work has been delivered.
 - Yellow – Work is slightly behind schedule.
 - Green – Work is on track.
 - Blue – Work has been completed.



Barrier removal programme plan (Q2 '26)

External activities

NESO timeline change

barrier removed - expected

Barrier removed - indicative

Quarters are calendar years throughout this report		2026				2027				2028			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Onboarding	B16 Registration & onboarding of assets	Continuous improvement of onboarding & registration systems, processes & information											
		FMAR design			Flexibility Market Asset Registration (FMAR) build & integration								
	B15 Visibility of service information	Onboarding team supporting non domestic consumers & aggregators/suppliers & improved digital experience											
Procurement & Dispatch	B10.1 & B10.2 Sub-MW & Non-Integer	Options assessment		Detailed design & implementation subject to outcome of Options Assessment.									
		DFS	sFFR										
	B13 Aggregated BMU location	Downstream systems to use granular aggregator data											
	B12 Skip rates	Phase 2 Skip Rate programme activities											
	B11.1, B11.2 & B19 Barrier to participate in NESO services due to mechanisms designed to protect DNO capacity	NESO-DNO risk of conflict data exchange	Application of Primacy in DFS	Market Facilitator proposal: Primacy in other services									
Settlement	B9 Imbalance & compensation	BSC modification for NESO ancillary services											
Metering & Baselines	B1.1, 1.2 Operational metering	Phase 1Phase 2											
	B2 Smart meter data access	Consumer consent solution MMP				Consumer consent solution iterative releases							
	B5 Measuring Instrument Regs	DSIT											
	B14 Procurement in EFA blocks	Needs assessment standardised 30 minute for Response services											
	B7.2 Cross Service Baselining	NESO and DSO services aligned, in line with Market Facilitator Flexibility Market Rules											

Procurement in EFA blocks: timeline change explained in slide 18.

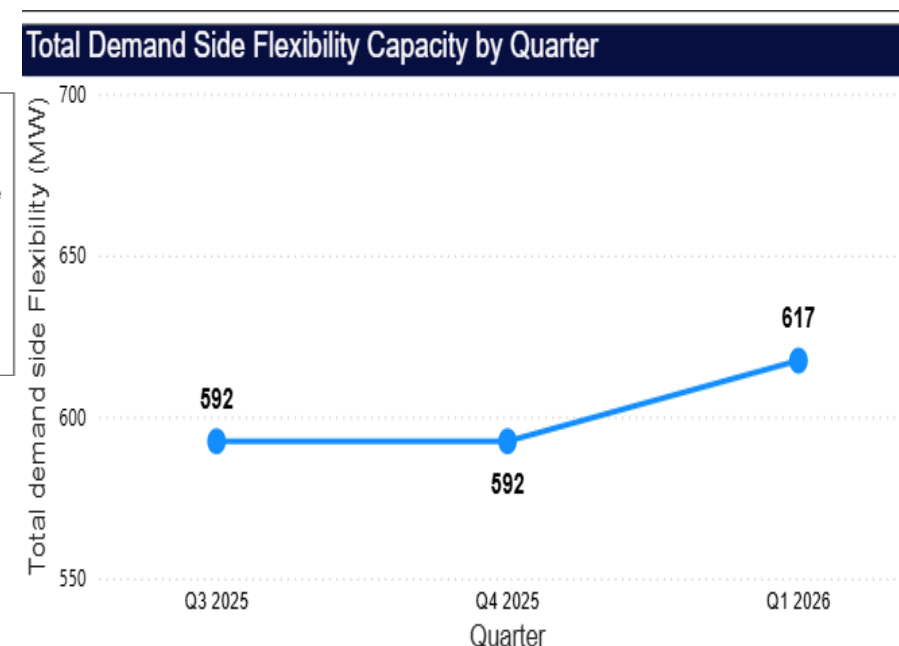
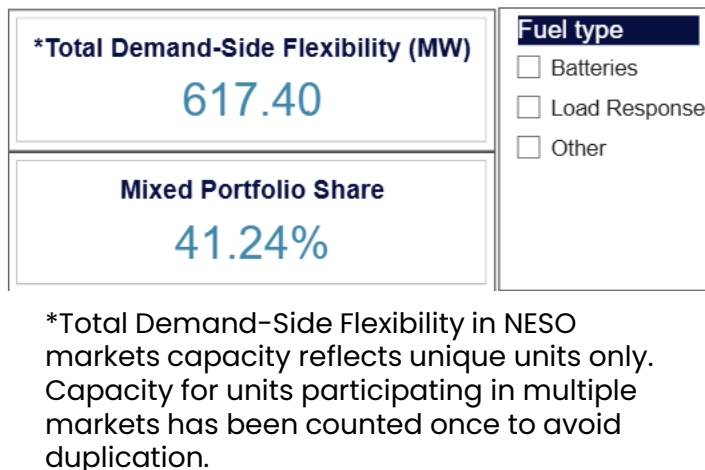
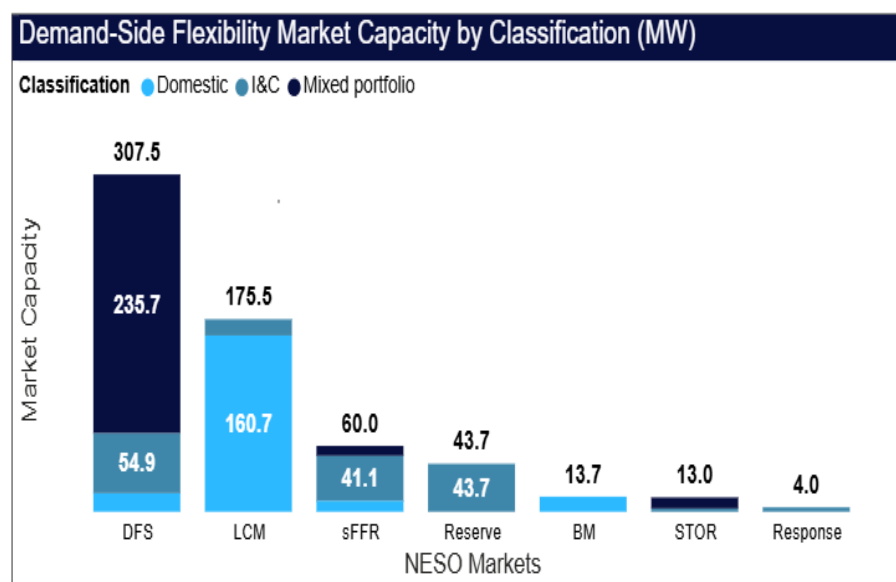


Market metrics dashboard

We publish a **Demand-Side Flexibility in NESO markets data dashboard** on a quarterly basis alongside these updates. Below is a summary of the total volume of Demand-Side Flexibility¹ that was active² in NESO markets from **January 2025 to March 2026**. The full dashboard can be found on this [webpage](#).

In this quarterly update, we added a new chart to track trends on a quarterly basis. We have also added fuel types data to markets which this data is available for.

Note: changes in Demand-Side Flexibility cannot be directly correlated with the removal of NESO Route to Market barriers.



- 1 Our full definitions of Demand-Side Flexibility can be found [here](#). This includes demand, storage and generation assets located “behind the meter” at a consumers site.
- 2 Active means units that have been active in bidding in markets within the last 12 months.

We appreciate your feedback

- Do the Quarterly RtM Updates we publish work for you?
- Feedback on any of these barriers? Any data to support impact?
- Any new barriers to raise?

Please reach out to the team at flexibilitystrategy@neso.energy.

Discussion

Please raise your virtual hand and introduce yourself when first speaking.



Power Responsive update

30 June 2026

Our public commitments

NESO Power Responsive Actions from the [Clean Flexibility Roadmap](#)



Onboarding function

Launched October 2025

Dedicated support from interest to participation



Call to industry

Launched October 2025

Open to large consumers, aggregators and solution providers



Minimum ambition

Published December 2025

[750MW of non-domestic flexibility](#) in NESO services by 2030

Our public commitments



Minimum ambition

Published December 2025

750MW of non-domestic flexibility in NESO
services by 2030

June 2026 update:

Demand turn up (DTU) will now be included within reported achieved volumes to reflect how flexibility is now being delivered in practice.

An updated version of our Non-domestic CLF flexibility targets can be found on the website.



255
Power
Responsive
engagements in
2026



255

Power
Responsive
engagements in
2026

170MW

New non-
domestic CLF
volume in NESO
markets
(as of June 2026)

Discussion

Please raise your virtual hand and introduce yourself when first speaking.



AOB

- **New topics / challenges** – bring us topics to discuss
- **Catch up:**
 - [Carbon Reporting workshop](#) – 26 March 2026
 - [Demand for Constraints Commercial webinar](#) – 23 June 2026
- **Monthly Power Responsive newsletter** – open for content
- **Next meeting** – target September – date TBC
- Anything from the room?

Engage with us

- Visit our [website](#)
- Sign up to our [mailing list](#)
- Book a 1:1 with us
- On-boarding support from interest to participation

power.responsive@neso.energy



power
responsive



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