Public

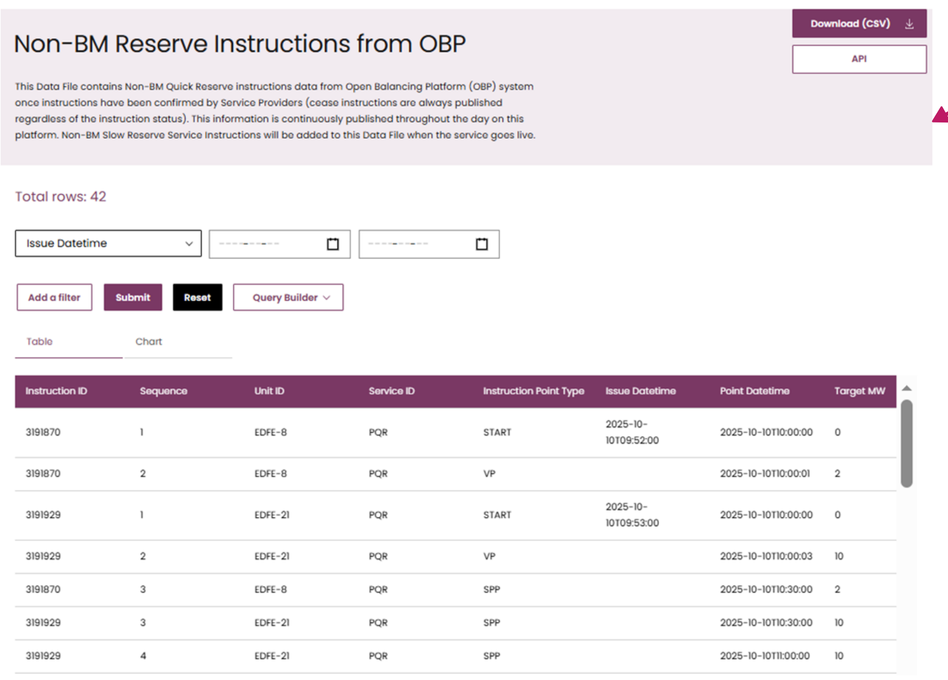
Welcome to our Ancillary Services Capability Journey

Key:

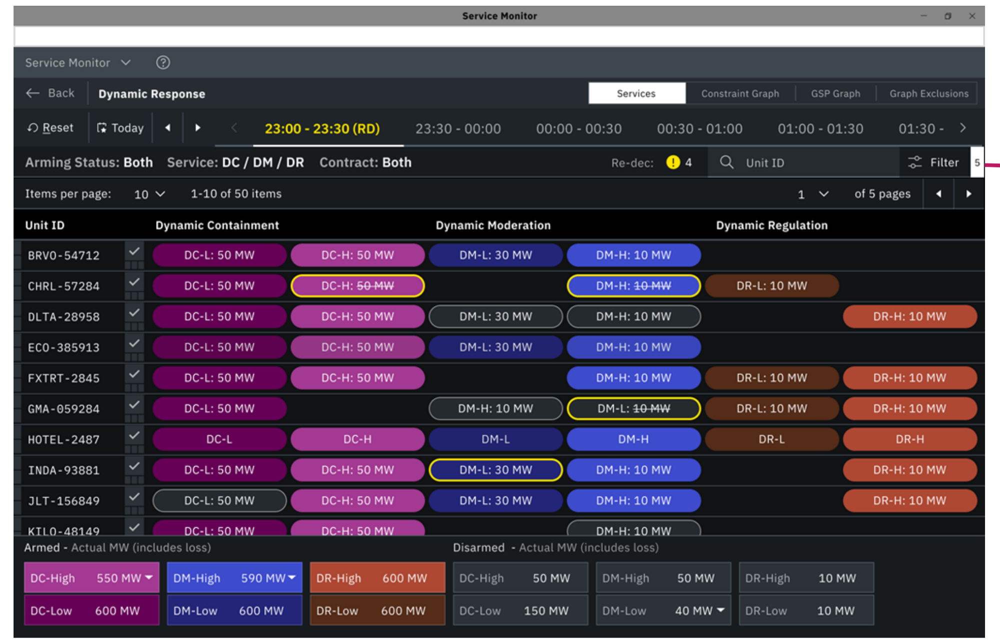
- Drive Consumer Value
- Deliver a Secure, Resilient & Operable Energy System
- Pave the Way to Sustainable Energy
- Lead as a Trusted Expert
- Digital Enabler

What Pain Point does the capability help address?	
Dispatch Efficiency	Lower skip rates and balancing costs
Automation	Removing work-arounds, reducing manual intervention, staff wellbeing
Competition	New/improved services and more efficient routes to market
Flexibility	Use of flexible technologies, consumer led flex, integration of DNOs

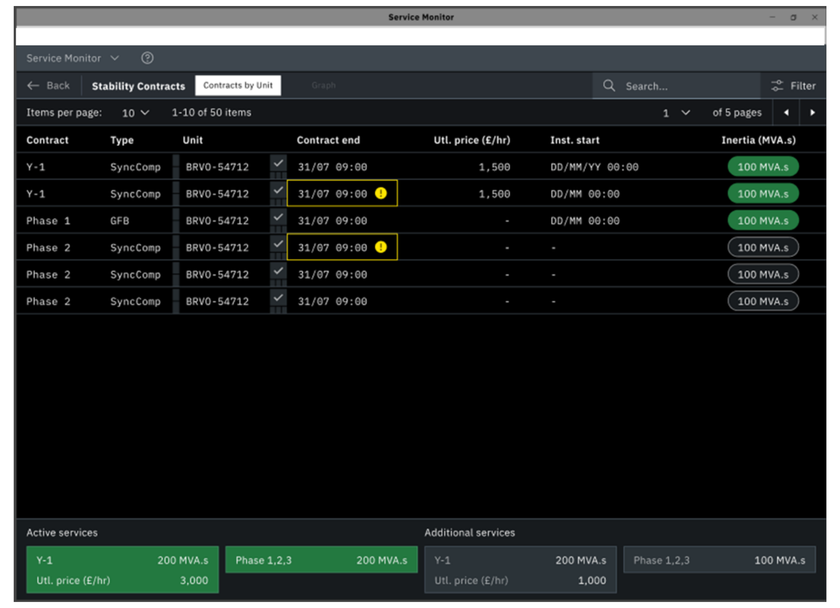
Data Portal



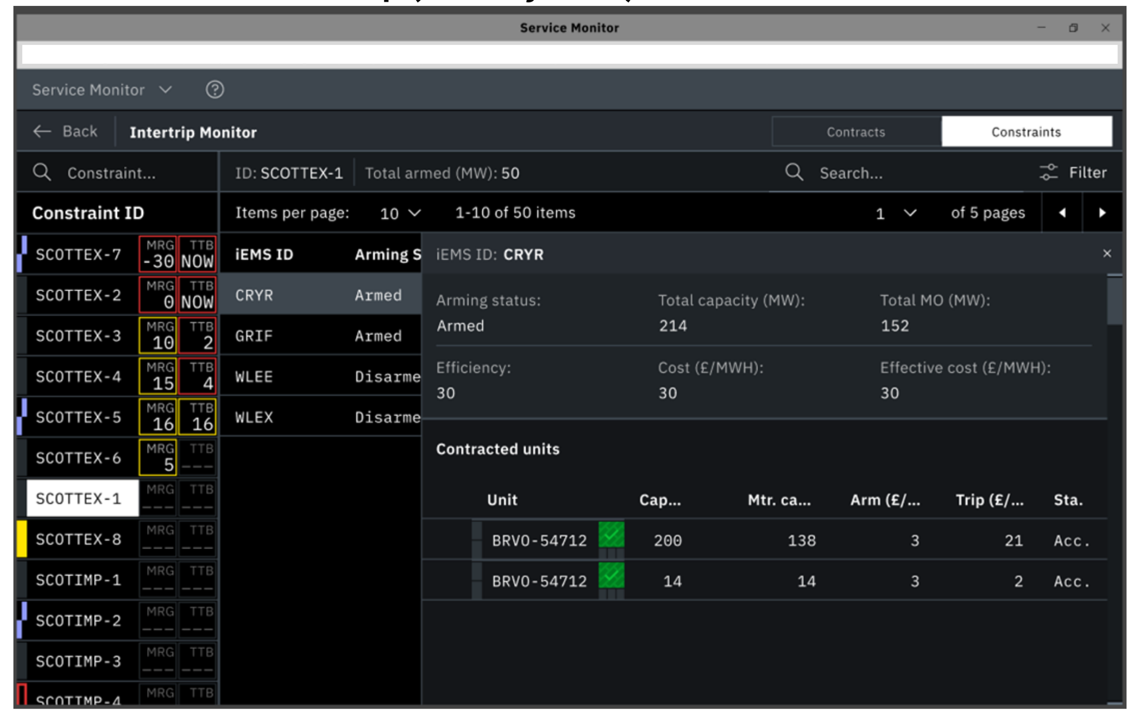
Service Monitor: Dynamic Response (Dummy Data)



Service Monitor: Stability Pathfinder (Dummy Data)



Service Monitor: Intertrip (Dummy Data)



START

2023 – What did the world look like?

Energy Environment:

- Increasing amounts of renewables, flexibility, and smaller units
- Need for greater coherence across Ancillary & Network Services
- Growing importance of whole-system operations with more interconnection, DSO involvement, and consumer participation

ENCC Balancing & Forecasting Systems:

- Processes are complicated requiring significant manual effort
- Capabilities spread across multiple systems
- No optimisation capability within ENCC
- No Service Harmonisation – decision made at individual service level
- BM and non-BM handled in different systems with different price stacks
- Difficult to add new services, functionality or scale up existing systems
- Reliance on workarounds and grey IT
- Inconsistent control room operations across services
- Lack of integration across systems from contract decision/award through to Settlement.

Drivers of transformation:

- Reduce manual workload
- Improve dispatch efficiency
- Ensure consistency and transparency in decision-making
- Enable competition and support integration of ancillary services
- Manage increasing number of market participants
- Adapt to new requirements, services and innovation

Mar 2024 – Balancing Reserve

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP & BM

What does it do? Guaranteed reserve capacity ahead of real-time operation, instructed within the Balancing Mechanism.

Did it exist before? New functionality alongside existing Services

Impact / Benefit to NESO operations: Reduces reliance on uncertain and optional Balancing Mechanism actions. Improved margins and security of supply.

Impact / Benefit to Industry: Additional transparency at day-ahead stage with corresponding price signal to market participants. Wider renewable participation in services.

More economic dispatch saving up to £35m per year

Sep 2024 – SMP Integration

Dispatch Efficiency	Automation	Competition	Flexibility
	✓	✓	✓

System impacted: OBP

What does it do? Integrates SMP with OBP to provide a single authoritative source for unit registration data, Service pre-qualification status and Auctioned contract details.

Did it exist on our legacy BM systems? No – this is new functionality.

Impact / Benefit to NESO operations: Timely and improved visibility of auctioned reserves. Enables more efficient and cost-effective system operations

Impact / Benefit to Industry: Streamlined onboarding for market participants, reducing costs and enabling earlier market entry. Greater competition across the market.

Dec 2024 (BM) / Oct 2025 (nBM) – Quick Reserve

Dispatch Efficiency	Automation	Competition	Flexibility
✓		✓	✓

System impacted: BM & OBP

What does it do? Pre-contracted rapid reserve service that can be activated within one minute.

Did it exist before? No – this is new functionality that replaces legacy Optional Fast Reserve.

Impact / Benefit to NESO operations: Allows recovery of Response services to respond to future events and maintain operational confidence. Reduces risk of instruction of more expensive services.

Impact / Benefit to Industry: Additional transparency at day-ahead stage with corresponding price signal to market participants. . Wider renewable participation in services.

More economic dispatch saving up to £60m per year

July 2025 – Secure Internet Gateway

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? New network and infrastructure that enables secure connectivity from internet to Critical Network Infrastructure (CNI) data centres with minimal complexity, used to connect internet based nBM providers to OBP.

Did it exist on our legacy BM systems? No – this is new functionality.

Impact / Benefit to NESO operations: Allows CNI and internet-based participants to be harmonised in a single system and price stack. Allows dispatch across the internet for the first time in OBP.

Impact / Benefit to Industry: Faster connectivity of non-CNI system allowing digitally transformed business processes for control room. This will enable nBM APIs.

Did you know? This enabled the launch of nBM in OBP which will result in more economic dispatch

Apr 2025 - Jan 2026 – Core Ancillary Services Instructions

Dispatch Efficiency	Automation	Competition	Flexibility
	✓		

System impacted: OBP

What does it do? Mandatory Frequency Response, Synchronous Compensation, Static Reactive Power, LF Relay & Fast Start instructed directly within OBP.

Did it exist on our legacy BM systems? Yes – This is migrating existing functionality from legacy systems.

Impact / Benefit to NESO operations: Improves operational efficiency and resilience by migrating instruction workflows from legacy systems.

Impact / Benefit to Industry: Supports more economic dispatch and security of supply by enabling faster and more reliable service execution.

Mar 2026 – Dynamic Response Services

Dispatch Efficiency	Automation	Competition	Flexibility
	✓		

System impacted: OBP

What does it do? Provides the Control Room with functionality to disarm and rearm. Dynamic services (Dynamic Containment, Moderation, Regulation) within OBP.

Did it exist on our legacy BM systems? Yes – This is migrating existing functionality from legacy systems.

Impact / Benefit to NESO operations: Enhances operational flexibility and security of supply by enabling rapid response to stability issues without relying on legacy tools, reducing risk during transition.

Impact / Benefit to Industry: Indirect benefit through improved system resilience and reduced risk of system instability.

Apr 2026 – MW Dispatch

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? MW curtailment (dispatch/cease) instructions to DNO/DER units to manage transmission constraints; current service is "turn-to-zero" for pre-fault thermal export constraints.

Did it exist on our legacy BM systems? Yes – This is migrating existing functionality from legacy systems.

Impact / Benefit to NESO operations: Consolidates DNO/DER dispatch into OBP and provides merit-order based curtailment behind a boundary. Standardised interfaces for ENCC reduces complexity of decision making.

Impact / Benefit to Industry: Reduces reliance on ad-hoc constraint actions by providing a structured, lowest-cost curtailment route for DER during constraints, contributing to more economic dispatch. Standardised provider interfaces.

Slow Reserve

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? Provides reserve capacity to restore system balance following a major fault or largest loss event, ensuring security during recovery periods.

Did it exist on our legacy BM systems? No – this is new functionality. This will replace Short Term Operating Reserve (STOR)

Impact / Benefit to NESO operations: Enhances system resilience by enabling controlled post fault recovery.

Impact / Benefit to Industry: Expands opportunities for participation across a wider range of assets and markets

More economic dispatch

2026 – Constraints Management Intertrip Service East Anglia (EC5) - Enduring

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	

System impacted: BM & OBP - Service will initially operate with interim processes; full OBP functionality enabled following EDT/EDL transition

What does it do? Delivers an enduring intertrip service for the EC5 (East Anglia) boundary within 200ms following a network fault.

Did it exist on our legacy BM systems? No – this is new functionality.

Impact / Benefit to NESO operations: Improves operational flexibility, reduces pre-fault curtailment and allows the Control Room to run circuits closer to thermal limits without breaching security standards.

Impact / Benefit to Industry: Supports more efficient balancing actions through reduction in pre-fault curtailment.

£170m savings from efficient dispatch over life of service

Oct 2027 – Response Management

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓		

System impacted: OBP

What does it do? Provides real-time system security assessment, management and monitoring for dynamic frequency response capability.

Did it exist on our legacy BM systems? Yes – This is migrating existing functionality from legacy systems

Impact / Benefit to NESO operations: Improves situational awareness and operational decision-making by integrating frequency risk forecasting and dynamic response actions into OBP.

Impact / Benefit to Industry: Supports system resilience and reduces risk of instability, and greater security of supply. Results in more economic dispatch.

Oct 2027 – Constraint Management Intertrip Service (CMIS) Scotland

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	

System impacted: OBP

What does it do? Replacement of existing capability of the Scottish B6 boundary CMIS (September 2027 expiry), that will encompass B6 and wider Scottish boundaries.

Did it exist on our legacy BM systems? Yes, in reduced form, for OBP this will have enhanced capabilities.

Impact / Benefit to NESO operations: Improves constraint management and operational flexibility. Reduces pre-fault curtailment and ability to run circuits closer to thermal limits without breaching security standards.

Impact / Benefit to Industry: Reduction in skips for units behind a constraint from more economic. Enables greater renewable participation from less constraint actions.

FY 2027 / 2028 – Locational Response and Reserve

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? Enables NESO to procure response and reserve requirements on a locational basis.

Did it exist on our legacy BM systems? No – this is new functionality.

Impact / Benefit to NESO operations: Improves system security and operational flexibility by procuring day-ahead services accounting for network constraints.

Impact / Benefit to Industry: Enables participation to a wider spread of potential markets.

More economic dispatch

FY 2027 / 2028 – Realtime Dynamic Response Services

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? Adds real-time instruction capability to Dynamic services (Dynamic Containment, Moderation, Regulation).

Did it exist on our legacy BM systems? No – this is new functionality replacing Mandatory Frequency Response.

Impact / Benefit to NESO operations: Improves system security and operational flexibility by reducing over-procurement of day-ahead services and enabling targeted response when needed.

Impact / Benefit to Industry Greater transparency with more efficient instructions over a reduced number of markets. Wider low-carbon technology participation in services.

More economic dispatch

2027/28 – Splitting Response and Reserve

Dispatch Efficiency	Automation	Competition	Flexibility
✓	✓	✓	✓

System impacted: OBP

What does it do? Enables providers to split capacity across multiple services in the same settlement period

Did it exist on our legacy BM systems? No – this is new functionality.

Impact / Benefit to NESO operations: Increased provision of Response & Reserve Services

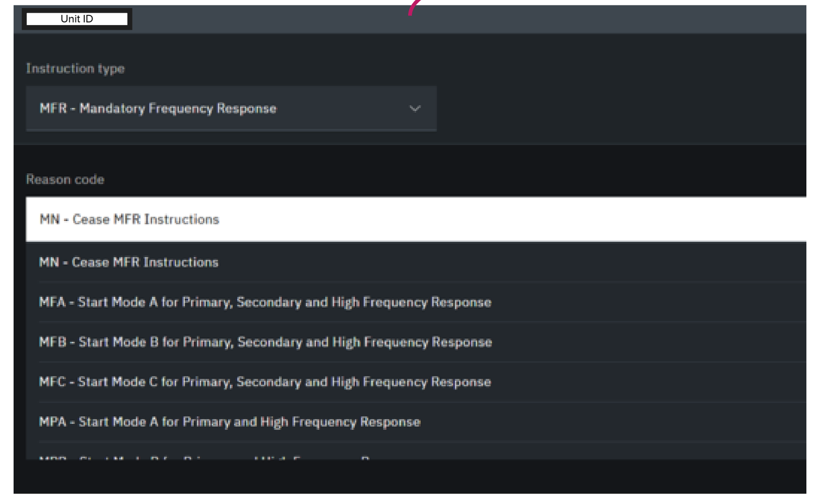
Impact / Benefit to Industry: Enables more flexibility to providers in the participation across markets. Results in more economic dispatch.

End of NESO 1

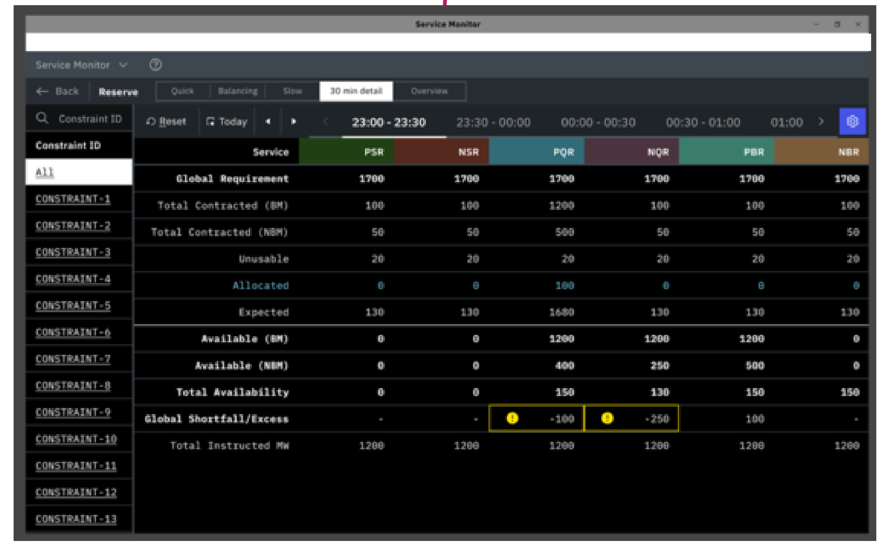
2028 – Where will we be after NESO 1

ENCC Balancing & Forecasting Systems:

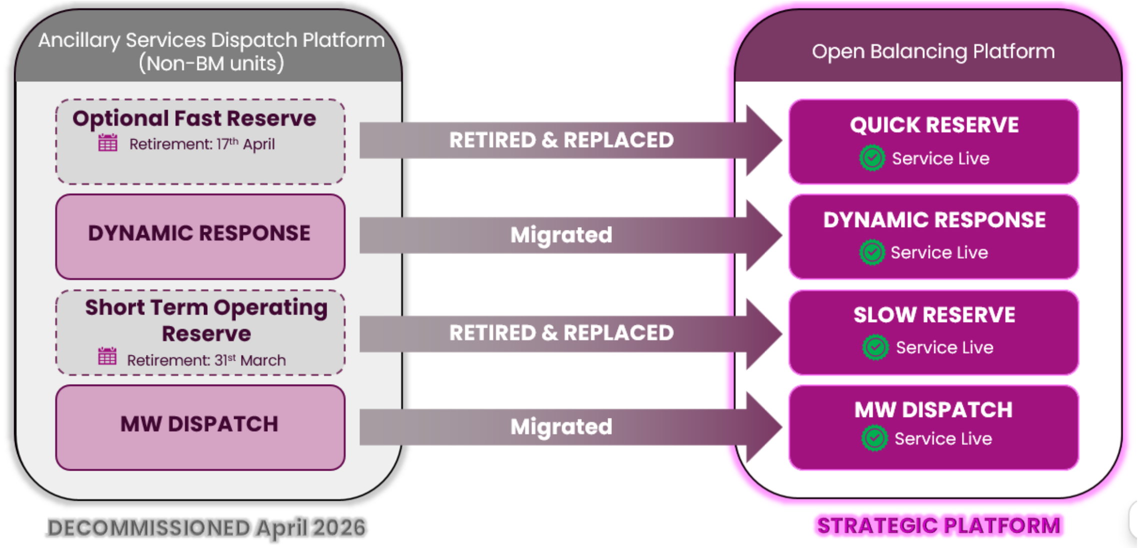
- Harmonisation & optimisation of Ancillary Services
- Automation of Control Room Workflow
- Alignment of BM and non-BM processes
- Adaptability to evolving industry priorities
- Standardisation of user experience
- Efficient decision-making and clear instructions
- Reduction of manual workarounds and Grey IT
- Expansion of market opportunities
- Streamlined onboarding of new services and providers



AS Instructor



Service Monitor: Reserve (Dummy Data)



Please note this roadmap is subject to change; changes will be communicated at the earliest opportunity.