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

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

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Balancing Reserve

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

Dispatch Efficiency	
Automation	✓
Competition	✓
Flexibility	✓

SMP Integration

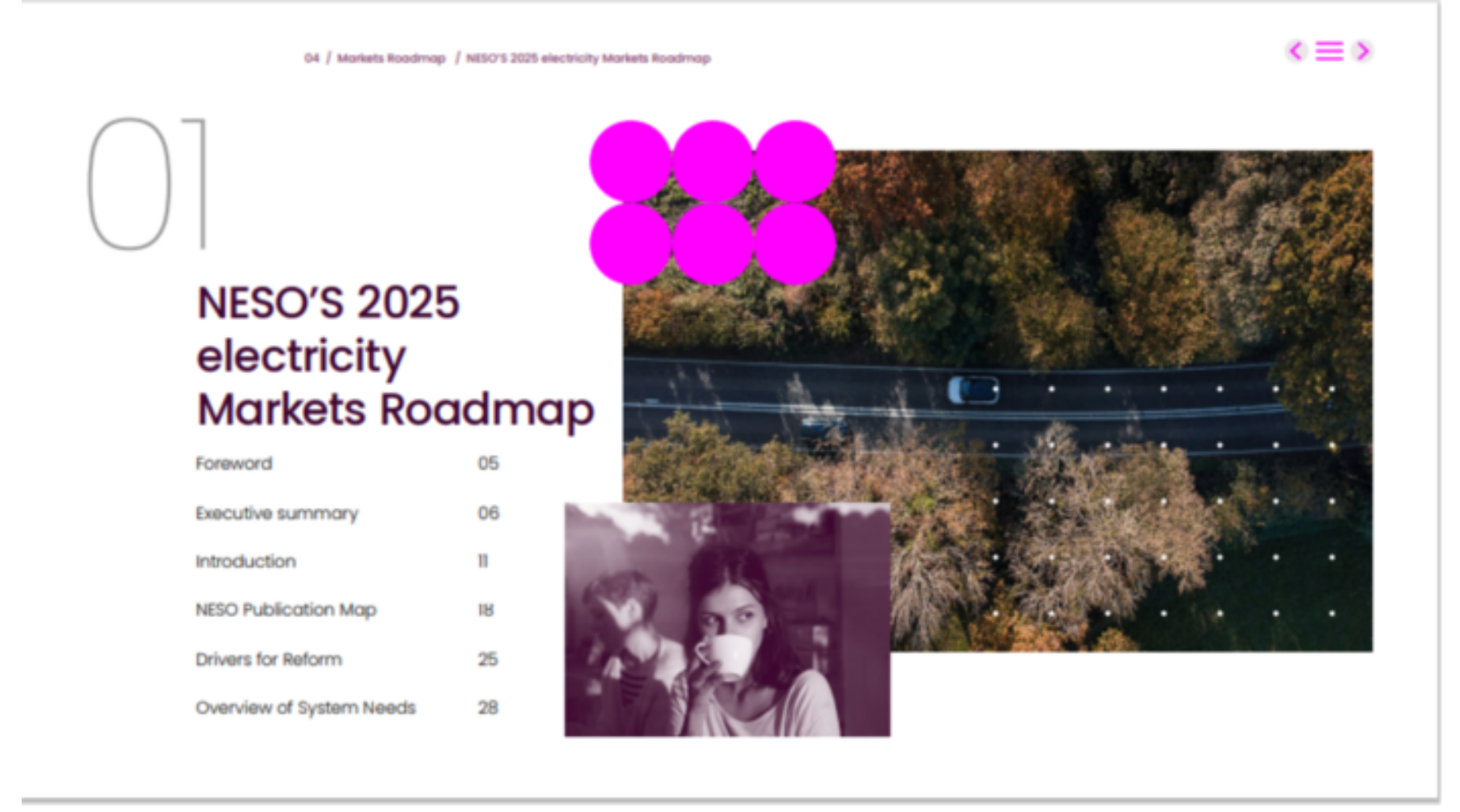
System impacted: OBP

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.



NESO'S 2025 electricity Markets Roadmap

Foreword	05
Executive summary	06
Introduction	11
NESO Publication Map	18
Drivers for Reform	25
Overview of System Needs	28

Dec 2024 (BM)

Oct 2025 (nBM)

Dispatch Efficiency	✓
Automation	
Competition	✓
Flexibility	✓

Quick Reserve

System impacted: BM & OBP

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

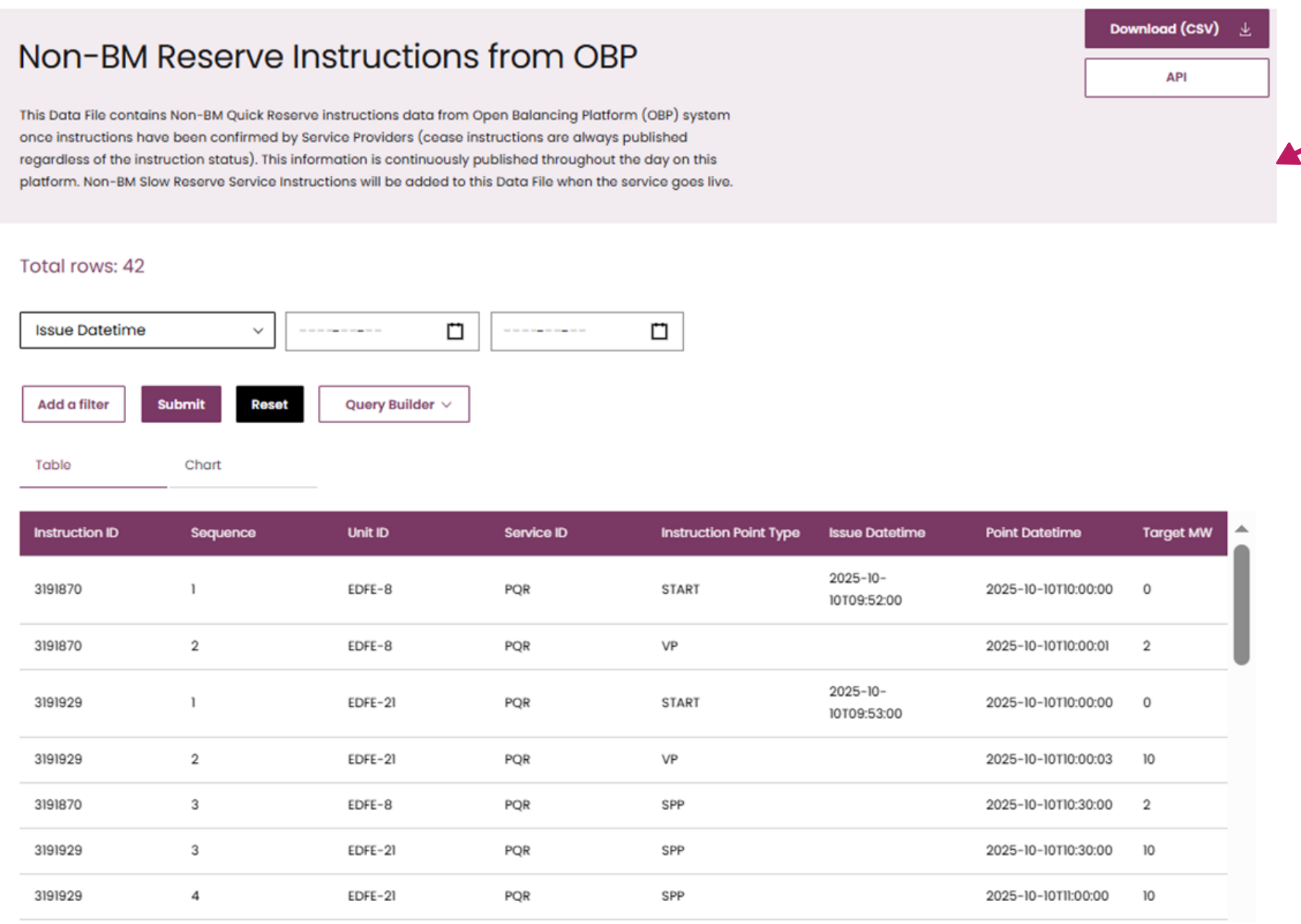
Did it exist before? No – this is new functionality that replaces legacy Optional Fast Reserve.

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

Data Portal



Non-BM Reserve Instructions from OBP

Download (CSV) | API

This Data File contains Non-BM Quick Reserve instructions data from Open Balancing Platform (OBP) system once instructions have been confirmed by Service Providers (cease instructions are always published regardless of the instruction status). This information is continuously published throughout the day on this platform. Non-BM Slow Reserve Service Instructions will be added to this Data File when the service goes live.

Total rows: 42

Issue Datetime

Add a filter | Submit | Reset | Query Builder

Table | Chart

Instruction ID	Sequence	Unit ID	Service ID	Instruction Point Type	Issue Datetime	Point Datetime	Target MW
3191870	1	EDFE-8	PQR	START	2025-10-10T09:52:00	2025-10-10T10:00:00	0
3191870	2	EDFE-8	PQR	VP		2025-10-10T10:00:01	2
3191929	1	EDFE-21	PQR	START	2025-10-10T09:53:00	2025-10-10T10:00:00	0
3191929	2	EDFE-21	PQR	VP		2025-10-10T10:00:03	10
3191870	3	EDFE-8	PQR	SPP		2025-10-10T10:30:00	2
3191929	3	EDFE-21	PQR	SPP		2025-10-10T10:30:00	10
3191929	4	EDFE-21	PQR	SPP		2025-10-10T11:00:00	10

July 2025

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Secure Internet Gateway

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

Dispatch Efficiency	
Automation	✓
Competition	
Flexibility	

Core Ancillary Services Instructions

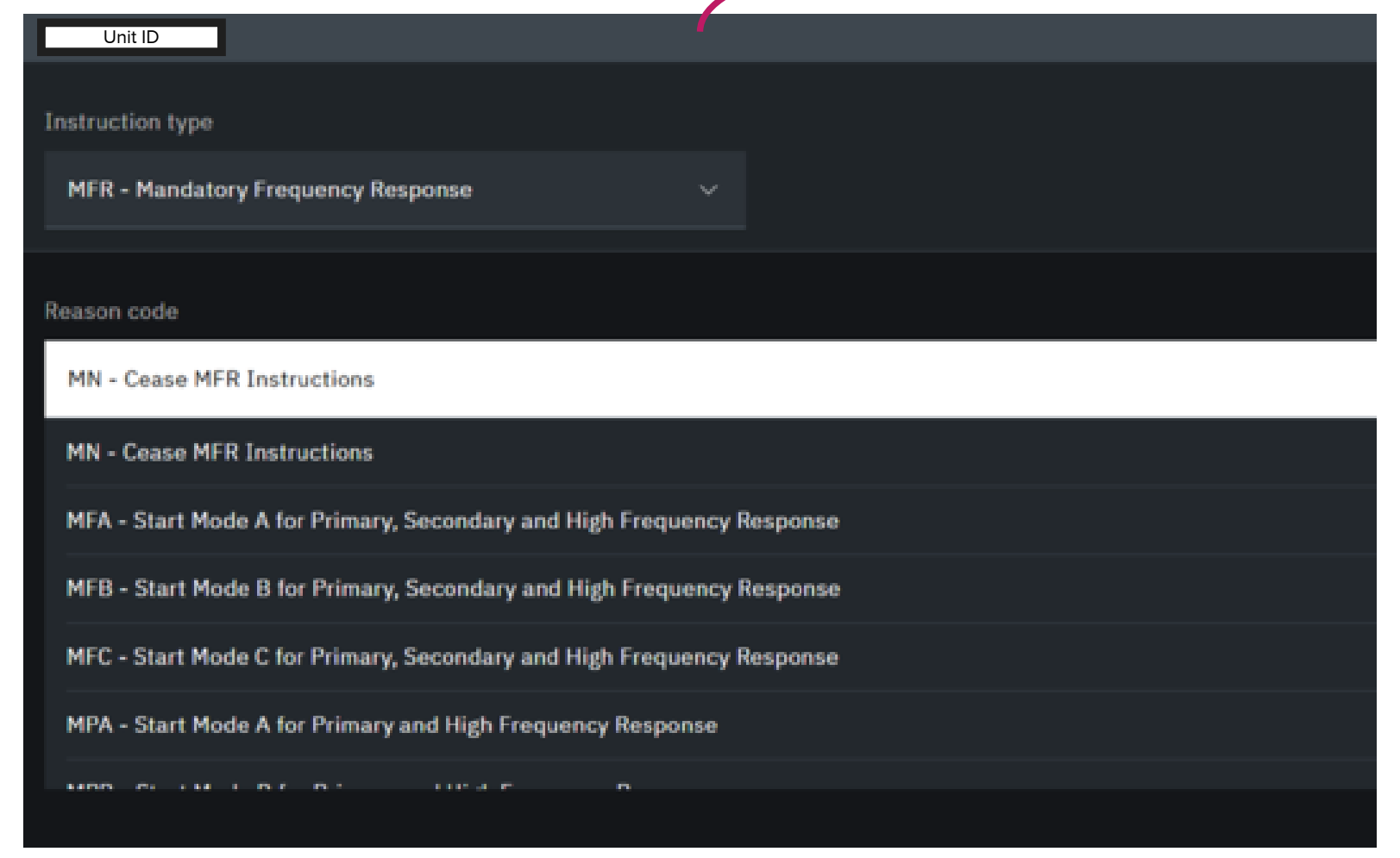
System impacted: OBP

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.



Unit ID

Instruction type

MFR - Mandatory Frequency Response

Reason code

- MN - Cease MFR Instructions
- MN - Cease MFR Instructions
- MFA - Start Mode A for Primary, Secondary and High Frequency Response
- MFB - Start Mode B for Primary, Secondary and High Frequency Response
- MFC - Start Mode C for Primary, Secondary and High Frequency Response
- MPA - Start Mode A for Primary and High Frequency Response

AS Instructor

Mar 2026

Dispatch Efficiency	
Automation	✓
Competition	
Flexibility	

Dynamic Response Services

System impacted: OBP

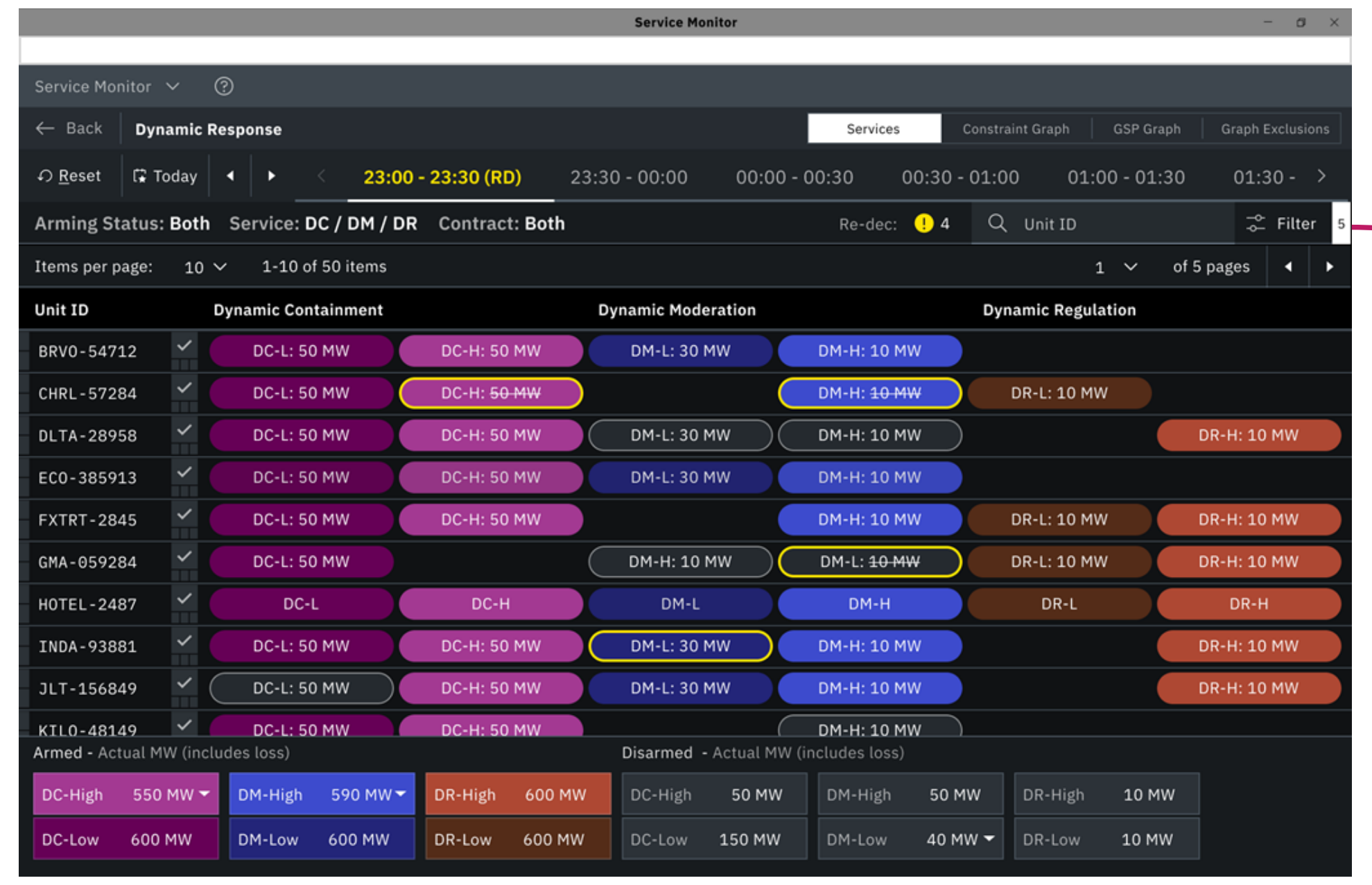
What does it do? Provides the Control Room with functionality to disarm and rearm. Dynamic services (Dynamic Containment, Moderation, Regulation) within OBP.

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.

Service Monitor: Dynamic Response (Dummy Data)



Service Monitor

Back | Dynamic Response | Services | Constraint Graph | GSP Graph | Graph Exclusions

Reset | Today | 23:00 - 23:30 (RD) | 23:30 - 00:00 | 00:00 - 00:30 | 00:30 - 01:00 | 01:00 - 01:30 | 01:30 -

Arming Status: Both Service: DC / DM / DR Contract: Both Re-dec: 4 Unit ID Filter

Items per page: 10 1-10 of 50 items 1 of 5 pages

Unit ID	Dynamic Containment		Dynamic Moderation		Dynamic Regulation	
BRVO-54712	DC-L: 50 MW	DC-H: 50 MW	DM-L: 30 MW	DM-H: 10 MW		
CHRL-57284	DC-L: 50 MW	DC-H: ~~50 MW~~		DM-H: ~~10 MW~~	DR-L: 10 MW	
DLTA-28958	DC-L: 50 MW	DC-H: 50 MW	DM-L: 30 MW	DM-H: 10 MW		DR-H: 10 MW
ECO-385913	DC-L: 50 MW	DC-H: 50 MW	DM-L: 30 MW	DM-H: 10 MW		
FXTRT-2845	DC-L: 50 MW	DC-H: 50 MW		DM-H: 10 MW	DR-L: 10 MW	DR-H: 10 MW
GMA-059284	DC-L: 50 MW		DM-H: 10 MW	DM-L: ~~10 MW~~	DR-L: 10 MW	DR-H: 10 MW
HOTEL-2487	DC-L	DC-H	DM-L	DM-H	DR-L	DR-H
INDA-93881	DC-L: 50 MW	DC-H: 50 MW	DM-L: 30 MW	DM-H: 10 MW		DR-H: 10 MW
JLT-156849	DC-L: 50 MW	DC-H: 50 MW	DM-L: 30 MW	DM-H: 10 MW		DR-H: 10 MW
KILO-48149	DC-L: 50 MW	DC-H: 50 MW		DM-H: 10 MW		

Armed - Actual MW (includes loss)

DC-High 550 MW	DM-High 590 MW	DR-High 600 MW
DC-Low 600 MW	DM-Low 600 MW	DR-Low 600 MW

Disarmed - Actual MW (includes loss)

DC-High 50 MW	DM-High 50 MW	DR-High 10 MW
DC-Low 150 MW	DM-Low 40 MW	DR-Low 10 MW

Apr 2026

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

MW Dispatch

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.

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Slow Reserve

System impacted: OBP

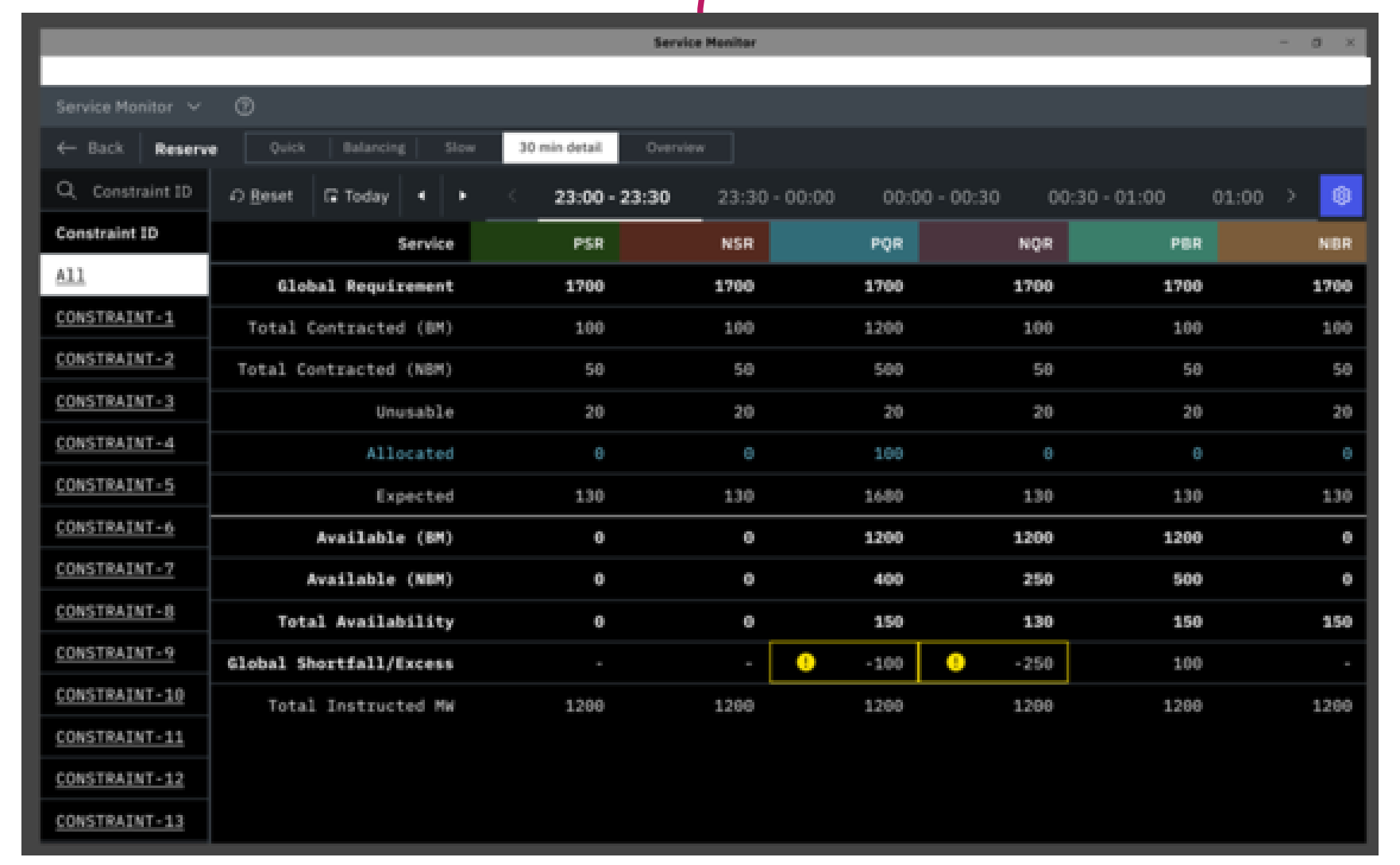
What does it do? Provides reserve capacity to restore system balance following a major fault or largest loss event, ensuring security during recovery periods.

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



Service Monitor

Back | Reserve | Quick | Balancing | Slow | 30 min detail | Overview

Reset | Today | 23:00 - 23:30 | 23:30 - 00:00 | 00:00 - 00:30 | 00:30 - 01:00 | 01:00

Constraint ID	Service	PSR	NSR	PQR	NQR	PBR	NBR
All	Global Requirement	1700	1700	1700	1700	1700	1700
CONSTRAINT-1	Total Contracted (BM)	100	100	1200	100	100	100
CONSTRAINT-2	Total Contracted (NBM)	50	50	500	50	50	50
CONSTRAINT-3	Unusable	20	20	20	20	20	20
CONSTRAINT-4	Allocated	0	0	100	0	0	0
CONSTRAINT-5	Expected	130	130	1680	130	130	130
CONSTRAINT-6	Available (BM)	0	0	1200	1200	1200	0
CONSTRAINT-7	Available (NBM)	0	0	400	250	500	0
CONSTRAINT-8	Total Availability	0	0	150	130	150	150
CONSTRAINT-9	Global Shortfall/Excess	-	-	-100	-250	100	-
CONSTRAINT-10	Total Instructed MW	1200	1200	1200	1200	1200	1200
CONSTRAINT-11							
CONSTRAINT-12							
CONSTRAINT-13							

Service Monitor: Reserve (Dummy Data)

Jul 2026

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	

Constraints Management Intertrip Service East Anglia (EC5) – Enduring

System impacted: OBP

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

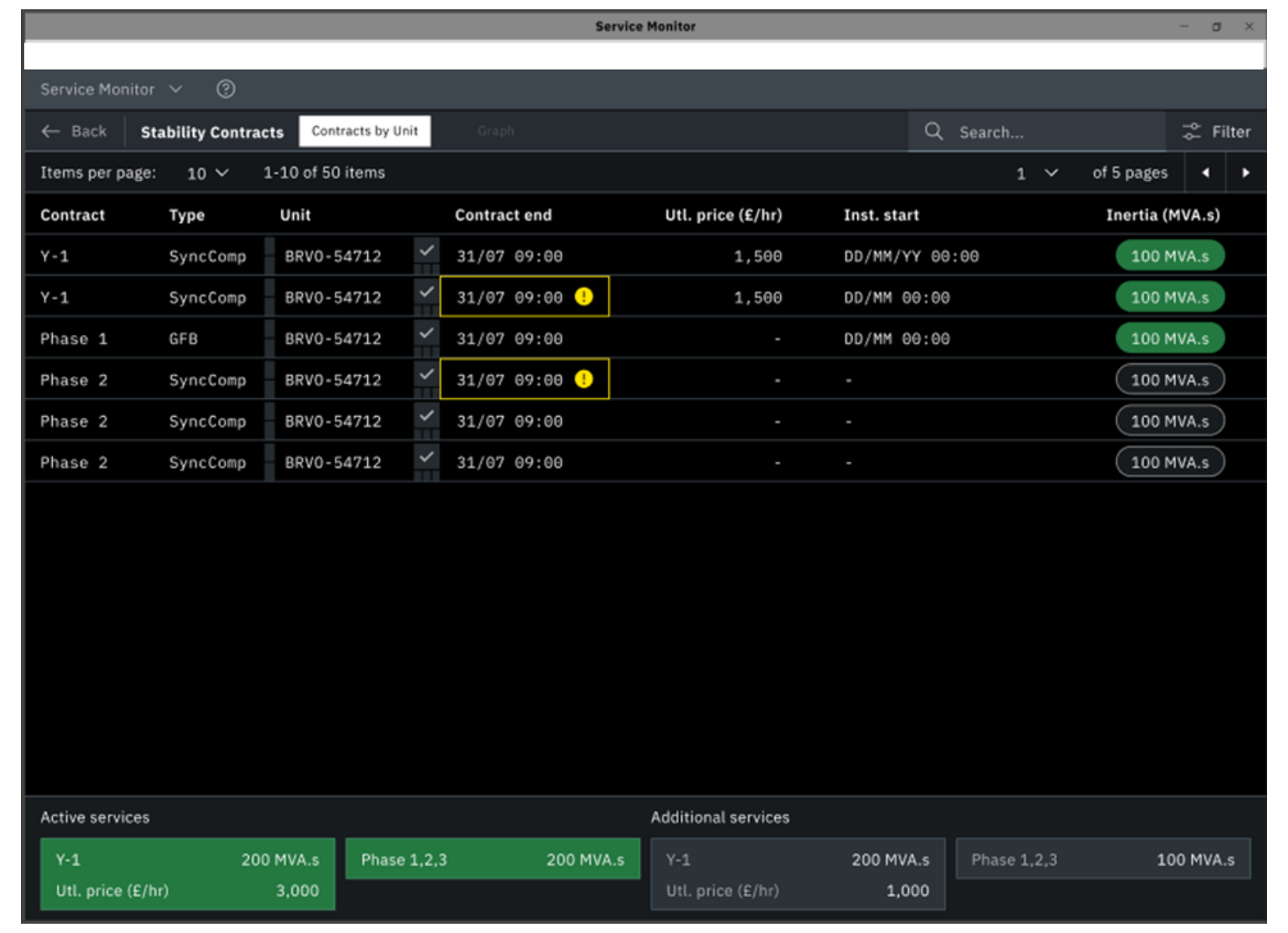
Did it exist on our legacy BM systems? No – this is new functionality.

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

Service Monitor: Stability Pathfinder (Dummy Data)



Service Monitor

Back | Stability Contracts | Contracts by Unit | Graph | Search... | Filter

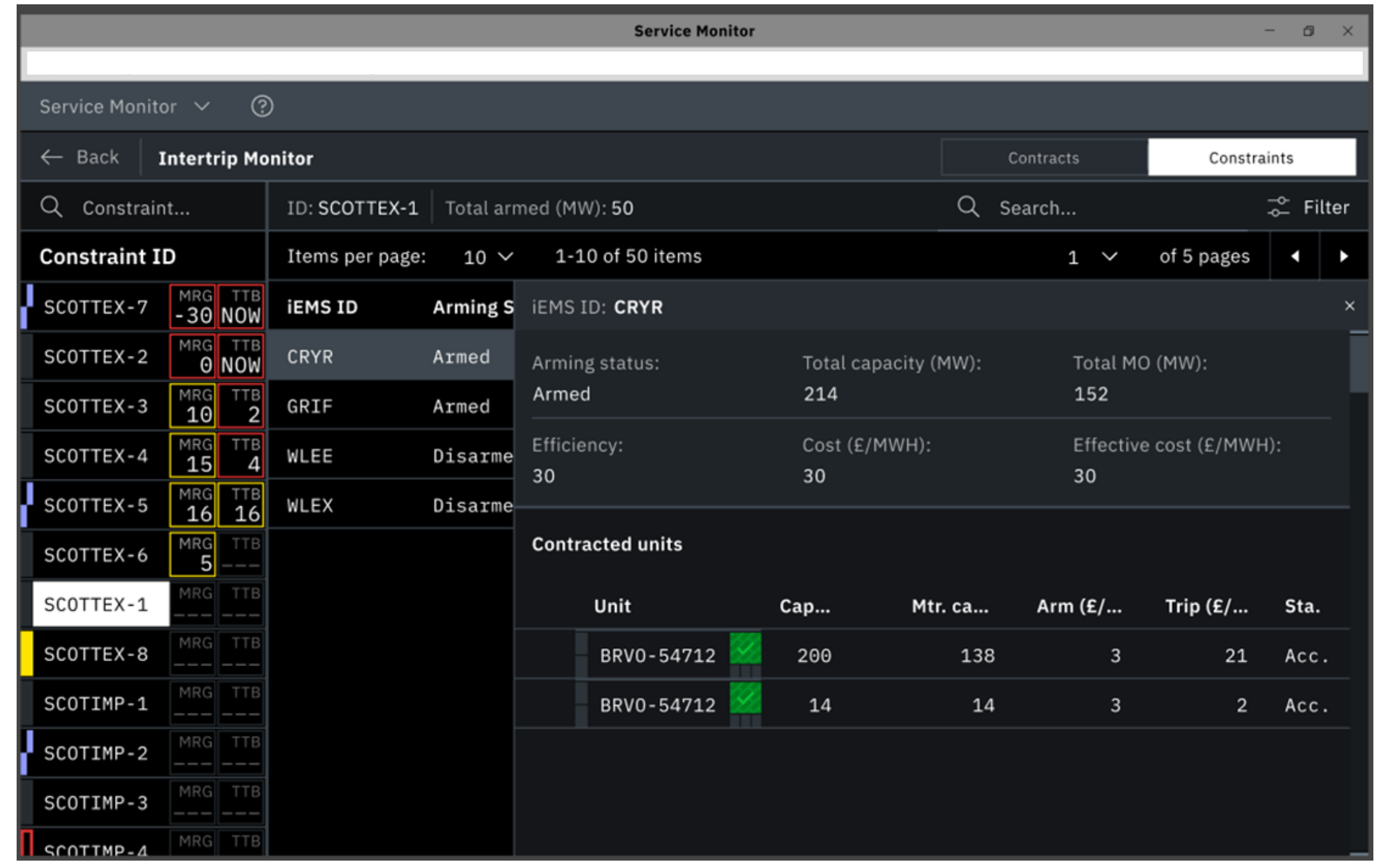
Items per page: 10 1-10 of 50 items 1 of 5 pages

Contract	Type	Unit	Contract end	Utl. price (£/hr)	Inst. start	Inertia (MVA.s)
Y-1	SyncComp	BRVO-54712	31/07 09:00	1,500	DD/MM/YY 00:00	100 MVA.s
Y-1	SyncComp	BRVO-54712	31/07 09:00	1,500	DD/MM 00:00	100 MVA.s
Phase 1	GFB	BRVO-54712	31/07 09:00	-	DD/MM 00:00	100 MVA.s
Phase 2	SyncComp	BRVO-54712	31/07 09:00	-	-	100 MVA.s
Phase 2	SyncComp	BRVO-54712	31/07 09:00	-	-	100 MVA.s
Phase 2	SyncComp	BRVO-54712	31/07 09:00	-	-	100 MVA.s

Active services: Y-1 200 MVA.s Utl. price (£/hr) 3,000 | Phase 1,2,3 200 MVA.s

Additional services: Y-1 200 MVA.s Utl. price (£/hr) 1,000 | Phase 1,2,3 100 MVA.s

Service Monitor: Intertrip (Dummy Data)



Service Monitor

Back | Intertrip Monitor | Contracts | Constraints

ID: SCOTTEX-1 Total armed (MW): 50 | Search... | Filter

Items per page: 10 1-10 of 50 items 1 of 5 pages

Constraint ID	MRG	TTB
SCOTTEX-7	-30	NOW
SCOTTEX-2	0	NOW
SCOTTEX-3	10	2
SCOTTEX-4	15	4
SCOTTEX-5	16	16
SCOTTEX-6	5	---
SCOTTEX-1	---	---
SCOTTEX-8	---	---
SCOTIMP-1	---	---
SCOTIMP-2	---	---
SCOTIMP-3	---	---
SCOTIMP-4		

iEMS ID	Arming S
CRYR	Armed
GRIF	Armed
WLEE	Disarme
WLEX	Disarme

iEMS ID: CRYR

Arming status:	Total capacity (MW):	Total MO (MW):
Armed	214	152
Efficiency:	**Cost (£/MWH):**	**Effective cost (£/MWH):**
30	30	30

Contracted units

Unit	Cap...	Mtr. ca...	Arm (£/...	Trip (£/...	Sta.
BRVO-54712	200	138	3	21	Acc.
BRVO-54712	14	14	3	2	Acc.

Sep 2026

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Response Management

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.

March 2027

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Instructible Dynamic Response Services

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

Jun 2027

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Locational Response and Reserve

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

Oct 2027

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	

Constraint Management Intertrip Service (CMIS) Scotland

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.

2027/28

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Splitting Response and Reserve

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.

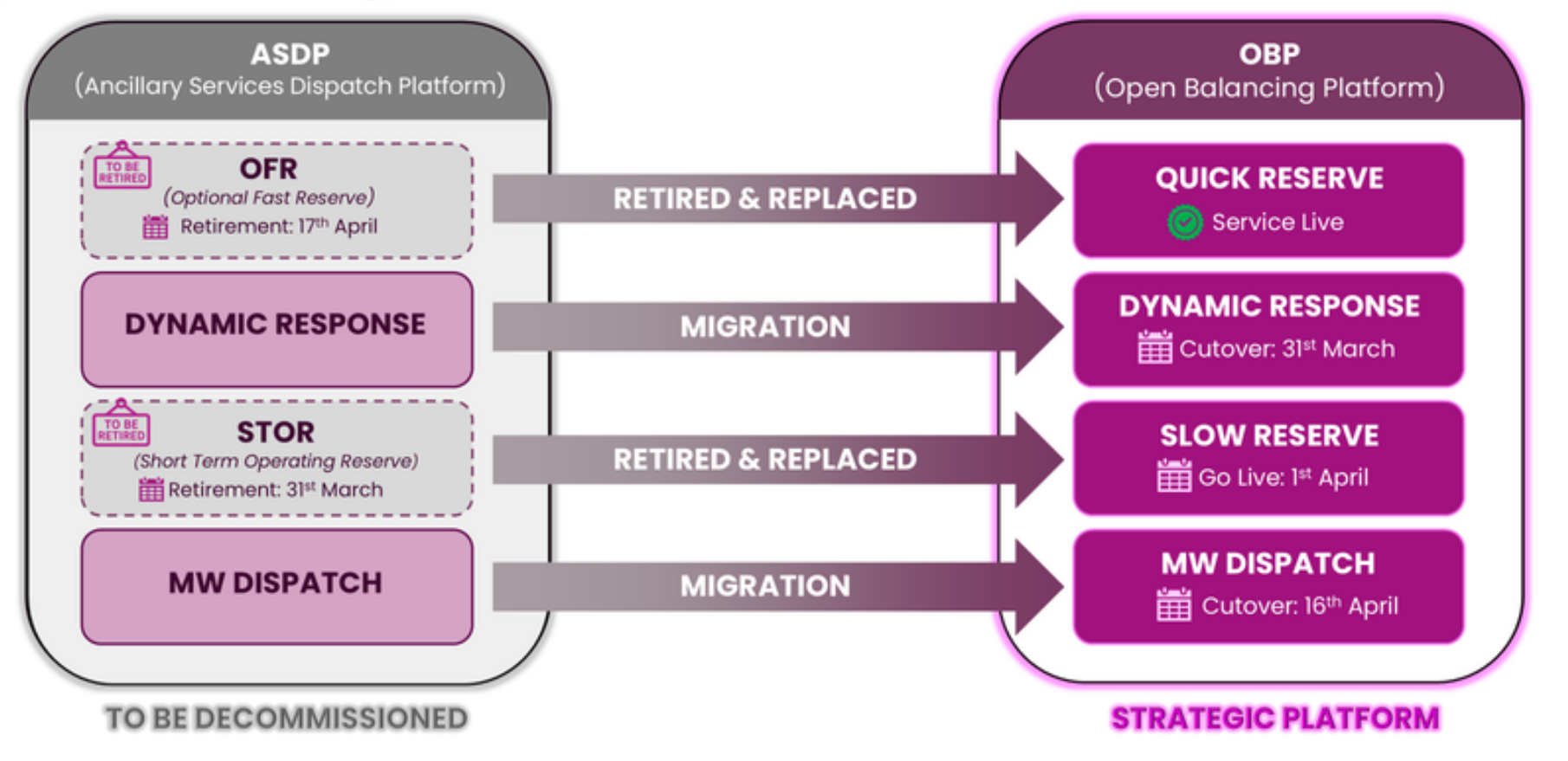
End of NESO 1

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

ASDP Migration & Decommissioning
(Non-BM Services Only)



ASDP (Ancillary Services Dispatch Platform)

- OFR (Optional Fast Reserve) Retirement: 17th April → RETIRED & REPLACED → QUICK RESERVE: Service Live
- DYNAMIC RESPONSE → MIGRATION → DYNAMIC RESPONSE: Cutover: 31st March
- STOR (Short Term Operating Reserve) Retirement: 31st March → RETIRED & REPLACED → SLOW RESERVE: Go Live: 1st April
- MW DISPATCH → MIGRATION → MW DISPATCH: Cutover: 16th April

TO BE DECOMMISSIONED

OBP (Open Balancing Platform)

STRATEGIC PLATFORM