Public

Welcome to our Scheduling 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

Dispatch Strategic Review

NESO commissioned an independent review of Control Room processes, systems & operational model associated with energy scheduling and dispatch.

Key Aim: Recommend changes to tools, processes or operating model to make the ENCC ready to meet 2030 energy system challenges.

Recommendations in the Scheduling space where OBP is the Enabler	Activity already underway?	Activity
Develop a process for dynamically increasing the frequency of SOPs depending on system conditions	✗	System Operating Plan (March 2027)
Develop systems to enable real time data and live automatic margin analysis of SOPs	✗	Calculate & Display Operating Margin (December 2026)
Move from Cardinal Point (CP) to probabilistic System Operating Plans	✗	New capability date tbc

START

Now – What does the world look like?

Energy Environment:
- Increasing amounts of flexibility and smaller units etc
- Changing demand profile
- Market position changing due to increased number of influences

ENCC Balancing & Forecasting Systems:
- Process is becoming more complicated
- Heavy reliance on manual effort due to limited automation
- Increased number of active constraints on the system at any one time
- Difficult to add new functionality or scale up in existing systems
- Capabilities spread across multiple products
- Multiple systems used to Schedule & Dispatch
- Market outages necessary to facilitate system upgrades

Drivers of transformation inc. Customer Voice:
- Reduction in manual workload
- Increasing operational efficiency
- Lower balancing costs
- Consistency and transparency of decision making
- Enable level playing for flexibility services
- Support integration of new energy services
- Manage increased number of market participants
- Adapt to new requirements and services and enable innovation

Jan 2026

Dispatch Efficiency	✓
Automation	
Competition	
Flexibility	

Dynamic Reserve Setting (DRS) Interim Integration

System impacted: BM - SPICE

What does it do? DRS adjusts reserve requirements based on current conditions (e.g., wind, temperature, time of day) and largest loss analysis.

This capability will enable machine learning driven recommendations to be uploaded in the current Scheduling system, SPICE, replacing static BST/GMT reserve requirements. This serves as an interim solution until required scheduling functions are moved to OBP.

Did it exist before? No – This is new functionality

Impact / Benefit to NESO operations: Enhances operational decision-making by incorporating dynamic reserve requirements, reducing reliance on fixed assumptions. Improves security of supply during periods of uncertainty.

Impact / Benefit to Industry: Supports innovation and modernisation of reserve-setting processes, enabling more accurate and cost-efficient procurement of reserve services.

DRS is anticipated to deliver a **£29m** per annum saving

March 2026

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Volta - Advanced Scheduling Advice (Phase 1 – Discovery & PoC)

System impacted: Innovation Project

What does it do? Explores cutting edge machine learning and AI techniques for scheduling advice. This tests AI-assisted decision support for OBP schedulers and delivers an early Proof of Concept (PoC).

Did it exist before? No – Innovation project

Impact / Benefit to NESO operations: Supports future innovation in security of supply & scheduling methodologies, whilst identifying potential for improved optimisation and operational efficiency, through enhanced user decision making in scheduling, using ML/AI.

Impact / Benefit to Industry: No direct benefit to Industry at this stage.

Dispatch Efficiency	✓
Automation	
Competition	✓
Flexibility	

Managing Slow Reserve Ahead of OBP Migration

System impacted: BM – SPICE

What does it do? Provides functionality on the current system to identify, manage and model contracted Slow Reserve capacity ahead of full migration to OBP. This ensures sufficient reserve is available to restore energy balance following major faults or largest loss events during recovery periods.

Did it exist before? No – This is new functionality

Impact / Benefit to NESO operations: Maintains operational resilience during the transition to OBP by ensuring reserve capability is managed effectively on existing platforms. Reduces risk of cascading failures and recover security of supply.

Impact / Benefit to Industry: Supports continuity of reserve services during transition to OBP. Expands opportunities for participation across a wider range of assets and markets

Helps stabilise consumer costs by avoiding expensive last-minute interventions.

Date to be added following discovery

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Constraint Modelling

System impacted: OBP

What does it do? Models expected constraint margins based on the output of units behind the constraint boundary and the expected demand within the area. If the constraint limits are violated, allows users to plan necessary actions to stay at or below the set limits. This capability also includes scheduling voltage services with consideration for inertia and other stability requirements to maintain secure system operation.

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations: Reduces reliance on legacy systems and improves efficiency of voltage and constraint requirement resolution whilst maintaining system stability.

Impact / Benefit to Industry: Supports cost-efficient management of voltage and constraints, while reducing curtailment.

Jun 2026

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	✓

Implement GC0166

System impacted: OBP

What does it do? There is currently no clear provision of projected energy capacity for Limited Duration Assets (LDA) & NESO currently uses an interim arrangement to get around this - the '30-minute rule'; this limits how NESO use these assets. GC0166 parameters (Maximum Delivery Offer & Maximum Delivery Bid) will feed into OBP (bulk dispatch optimisation & price stack) for real-time dispatch, enabling LDAs to inform NESO of energy available over longer time, instead of NESO having to derive this from existing parameters not intended for this purpose. In addition, GC0166 mandates BMUs to provide a Future State of Energy for use in scheduling timescales.

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

Impact / Benefit to NESO operations: Enhanced information for the management of LDAs, enabling more efficient use of them in balancing.

Impact / Benefit to Industry: Adapted Grid Code rules & implementation on OBP supports improved economic dispatch of these asset types and leads to better scheduling decisions and removal of 500MW cap.

Date to be added following discovery

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

System Inertia Management

System impacted: OBP

What does it do? Analyses operational conditions to identify the largest possible generation or demand loss, as well as the required response and system inertia requirements, to ensure security of supply.

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations: Improves situational awareness and reduces risk of instability, supporting security of supply during low-inertia conditions; reducing risk of costly emergency actions.

Impact / Benefit to Industry: Facilitates efficient procurement of stability services and supports integration of low-carbon technologies.

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Interconnector Management

System impacted: OBP

What does it do? Models interconnector schedules and identifies opportunities for interconnector trading to assist with Reserve procurement. This capability also enables the modelling of expected and enacted trades.

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations: More effective ENCC processes interconnector trading decision making & improved security of supply.

Impact / Benefit to Industry: Facilitates efficient interconnector trading and enhances market liquidity.

Date to be added following discovery

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	

Contingency Planning & Unit Commitment

System impacted: OBP

What does it do? Models contingency reserve requirements over all timescales, enabling the control room to take necessary actions to solve any margin shortfall by scheduling sync and de-sync events for available units

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations: Improves operational efficiency and confidence increasing security of supply; reduces risk of costly interventions.

Impact / Benefit to Industry: Supports efficient market participation.

Dec 2026

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Calculate & Display Reserve Margins

System impacted: OBP

What does it do? This enables the calculation and clear visibility of operating reserve and margins across a range of timescales and locations (geospatial). It allows users to identify any shortfall in available margins resulting from constraints and other limiting factors, and to plan actions to resolve.

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations:. Streamlines workflows and improves resilience by removing dependency on multiple systems. Improves situational awareness and reduces risk of insufficient reserve capacity thereby increasing security of supply.

Impact / Benefit to Industry: Facilitates more efficient procurement & utilisation of reserve, supporting market confidence and transparency.

March 2027

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Dynamic Reserve Setting (Strategic Implementation)

System impacted: OBP

What does it do? To productionise and integrate the DRS models into scheduling process on an enduring basis.

Did it exist before? No – This is new functionality

Impact / Benefit to NESO operations:. Enhances operational decision-making by incorporating dynamic reserve levels, across the day reducing reliance on fixed assumptions. Improves security of supply during periods of higher uncertainty.

Impact / Benefit to Industry: Enabling more accurate and cost-efficient procurement of reserve services.

Dispatch Efficiency	
Automation	✓
Competition	
Flexibility	

System Operating Plan (SOP)

System impacted: OBP

What does it do? Enables the creation of a consolidated SOP that demonstrates system demand and reserve requirements are met economically while maintaining security of supply. Identifies potential actions to increase capacity or improve margins if required.

Did it exist before? Yes – functionality is moving to OBP with any identified additional improvements to existing process included.

Impact / Benefit to NESO operations: Enhanced decision making and potential increases in security of supply and planning accuracy from reduced manual effort/data entry.

Impact / Benefit to Industry: Provides clearer signals on system needs, supporting efficient scheduling and market confidence.

March 2027

Dispatch Efficiency	✓
Automation	✓
Competition	✓
Flexibility	✓

Complete Migration of Balancing Functions to OBP

System impacted: OBP

What does it do? OBP has taken over all scheduling and dispatch capabilities allowing retirement of BM systems

Did it exist before? No

Impact / Benefit to NESO operations: Operational efficiencies and reduction in manual effort, with all functions streamlined into one modern & resilient system, which is adaptable to future requirements & has reduced downtime.

Impact / Benefit to Industry: OBP is adaptable to future market changes and new technologies; reduced downtime and market risk

Subsequent Relevant Milestones:
- Retirement of BM SPICE – Sept 2027
- Full Decommissioning of BM Systems - Dec 2027

Jun 2027

Dispatch Efficiency	✓
Automation	✓
Competition	
Flexibility	

Optimisation in Scheduling Timescales

System impacted: OBP

What does it do? OBP will optimise the commitment of units in scheduling timescales to meet the required system needs for voltage, inertia, reserve, response and constraints. Integrates learnings from the Volta Advanced Scheduling Advice Proof of Concept - AI-driven Scheduling Advisor.

Did it exist before? No – This is new functionality

Impact / Benefit to NESO operations: Delivers cost-effective security of supply by automating optimisation decisions, reducing reliance on manual processes and improving decision making.

Impact / Benefit to Industry: Supports efficient market behaviour.

End of NESO 1

2028 – Where will we be after NESO1

Energy Environment:
- Increased levels of flexibility and smaller units
- Demand profile increasingly sensitive to increased penetration of renewable energy resources
- Market volatility increasing due to changes in market and consumer pricing both in UK and Europe
- Power system has an increased number of active constraints that require forecasting of Interconnector flows

ENCC Balancing & Forecasting Systems:
- One system for Scheduling and Dispatch, delivering greater resilience and reducing the need for market outages
- Capabilities consolidated from multiple products into a single ecosystem, eliminating grey IT
- Significant reduction in manual processes, enabling strategy roles to evolve and focus on higher-value activities
- Increased data sharing and transparency of decision making
- Increased utilisation of flexibility services within scheduling timescales
- System designed to accommodate new requirements, including changes in ENCC ways of working and services
- Strong base for further automation to support ENCC users in decision-making