Public

NESO RIIO2 Business Plan 2 (2023-25)

18 Month 2024-25 Incentives Report

23 October 2024

NESO
National Energy System Operator

Contents

Introduction

As part of the RIIO-2 price control, we submitted a second Business Plan to Ofgem in August 2022. It sets out our proposed activities, deliverables, and investments for years three and four of RIIO-2 (2023-2025) as we respond to the rapidly changing external environment.

The Business Plan 2 Delivery Schedule sets out in more detail what we will deliver, along with associated milestones and outputs, for the “Business Plan 2” period.

Ofgem, as part of its Final Determinations for the RIIO-2 price control, set out that we would be subject to an evaluative incentive framework, assessing our performance in delivering the Business Plan.

An updated guidance was published in September 2024 called NESO Performance Arrangements Governance (NESO PAG) Document. It sets out the process and criteria for assessing the performance of NESO, and the reporting requirements which form part of the incentives scheme for the remainder of the BP2 period. Every month, we report on a set of monthly performance measures; Performance Metrics (which have benchmarks) and Regularly Reported Evidence items (which do not have benchmarks). This report is published on the 17th working day of each month, covering the preceding month.

Every quarter, we report on a larger set of performance measures. Our eighteen-month report will broadly be similar to our usual quarterly report with the addition of providing an update on our progress against our Delivery Schedule in the RIIO-2 deliverables tracker.

Our end of scheme report will be more detailed, covering all of the criteria used to assess our performance.

Following our Business Plan 2 (BP2) submission, Ofgem outlined the requirement for a Cost Monitoring Framework (CMF). The objective of the CMF is to provide visibility of our BP2 Digital, Data and Technology (DD&T) delivery progress and cost management, and the value being delivered across the BP2 DD&T investment portfolio. As per the NESO PAG guidance, we are required to provide quarterly reports directly to Ofgem as part of the CMF. We feel it is important to share updates with our external stakeholders and industry as part of the framework. So, we’ll be including a summary of the CMF update every six months alongside our incentives reporting.

Please see our website for more information.

Changes to performance framework reporting

On 1 October 2024 we became the National Energy System Operator (NESO). From that date, the NESO Performance Arrangements Governance document (NESO PAG) replaced the previous Electricity System Operator Reporting and Incentives (ESORI) Arrangements Guidance Document for the remainder of the RIIO-2 Business Plan 2 (BP2) period. The BP2 period spans from 1 April 2023 to 31 March 2025. The NESO PAG focuses on the remaining requirements relevant until the end of BP2, as certain aspects of the process have already been completed.

The NESO PAG aims to ensure transparency, effective performance reporting, and monitoring of NESO's activities during this period. Changes that have been made, include:

- The removal of financial elements to align with NESO's not-for-profit organisational model,
- The integration of new responsibilities and activities,
- The streamlining of existing arrangements for more proportionate reporting requirements and flexibility in the assessment process.

The NESO PAG document, issued by the Authority, outlines provisions regarding performance reports, assessment procedures, feedback gathering, and regulatory performance incentives. It is crucial to note that this document is subordinate to the license and does not modify or supplement the NESO's compliance with broader obligations under legislation, its license, or industry codes. The purpose of the NESO PAG document is to provide stakeholders with accessible and informative guidance, ensuring clarity on the arrangements put in place to effectively oversee NESO's performance.

The following report now refers to us as NESO rather than ESO, however the period this report looks at was at a time when we were still ESO, July to September 2024. We are however reporting based on the new guidance outlined in the NESO PAG rather than the ESORI, meaning there are slight differences to what we would have published before the change. These are:

Metric / RRE	Change from 1 October 2024
Metric 2Ai - Phase-out of non-competitive balancing services	Reported every six months, instead of every quarter.
RRE 2Aii - Balancing services procured in a non-competitive manner	Reported every six months, instead of every quarter.
RRE 2B Diversity of Service Providers	No longer reported.
RRE 2E Accuracy of Forecasts for Charge Setting - BSUoS	Reported every quarter, instead of every month.
Metric 1C – Wind forecasting	APE calculation method and associated reporting requirements updated in line with NESO PAG. See Metric 1C for detail.
Metric 1D - Short Notice Changes to Planned Outages	Reported every quarter, instead of every month.
Stakeholder evidence	The requirement to report stakeholder satisfaction survey results by role now applies at the end of each year, instead of every six months. We continue to seek feedback from stakeholders via a range of different channels and use this to inform the delivery of our objectives. We'll present stakeholder evidence and the results of the stakeholder satisfaction survey in our end of scheme report.

Summary of Notable Events

In September we successfully delivered the following notable events and publications. We provide further detail on each of these under the role sections:

- On 26 September, we hosted a successful Balancing Programme Industry Webinar with 75 industry attendees. The webinar highlighted our advancements in balancing and forecasting capabilities, including system transformation, constraint management using the Open Balancing Platform, and enhancements to the Legacy Dispatch Algorithm. The event received positive feedback and sparked active engagement with over 25 questions asked. Answers to these questions will be published on our website for further transparency.
- The Contracts for Difference (CfD) scheme has awarded contracts for over 30GW of new renewable capacity in Great Britain. The Electricity Market Reform Delivery Body (EMR DB) successfully conducted CfD Allocation Round 6, with project results published by DESNZ on 3 September. The competitive auction allocated contracts against an increased annual budget of £1.555 billion. The allocated technologies include Solar PV, Onshore Wind, Floating Offshore Wind, Tidal Stream, Offshore Wind, and Offshore Wind Permitted Reductions.
- On 17 September, we successfully hosted an in-person Revenue and Charging forum, providing valuable insights into tariff-setting and charging methodologies for TNUoS, BSUoS, AAHEDC, and connection charges. Additionally, on 24 September, we conducted a highly engaging online forum. These events attracted over 270 industry participants, and we delivered informative content, addressing more than 60 questions. The in-person forum received an overall satisfaction score of 8.6, while the online forum received a score of 7.4.
- On 16 September, the Connections Team hosted an in-person event to provide customers with insights into how Connections Reform aligns with the Government's Clean Power 2030 plan. The event included presentations on Current Connections Reform proposals, methodologies, factors to consider within the context of Clean Power 2030, and financial instruments. The engagement during the event was high, with a significant number of questions asked. As a result of audience demand, the event was extended to address additional questions during the final Q&A session.

From April to August 2024 we successfully delivered the following notable events and publications. Please refer to previous reports for full detail:

- On 15 April, we achieved a new low carbon intensity record of 19gCO2/kWh, driven by mild weather, high wind levels, and increased clean energy connections. Wind was the largest source of generation in April, providing 35.1% of electricity, and 59% of electricity came from zero-carbon sources, peaking at 88% on 15 April at 1pm.
- On 15 April, the share of Great Britain's electricity generated by fossil fuels dropped to a record low of 2.4%. This year, there have been 75 half-hour periods with fossil fuels accounting for less than 5% of electricity demand, indicating progress towards a zero-carbon electricity system.
- On 11 April, we published our 2024 Summer Outlook, setting out our operational expectations for the national electricity network over the coming summer months. The full Summer Outlook and associated data workbook are published on our website or you can watch a short video here.
- On 23 April, we hosted our bi-annual Customer Connections Seminar for over 160 guests in Glasgow. Through a series of panel discussions, breakout sessions and drop-in rooms, customers and stakeholders had the opportunity to engage in conversations around key connections topics. A key topic of conversation at the seminar and our ongoing monthly forums was connections reform, following the recently published Retrospective Application of Upcoming Long-Term Connections Reform.
- On 17 May, we held a webinar for our new Annual Balancing Cost Report 2024, which was published on the same day. The session looked back at balancing cost trends over the past six years, our latest projection of future balancing costs out to 2040, and a summary of the initiatives that are underway as part of our balancing cost strategy to minimise costs.

- On 27 June, we held the Balancing Programme Engagement Event in London, which was attended by 65 industry representatives from 48 organisations. Stakeholders had the opportunity to contribute to shaping future balancing and forecasting product roadmaps, and there was a customer listening session to gather input on customer engagement and partnership approaches. The event received positive feedback, with an average score of 8.5 out of 10 for the overall event and individual agenda items scored between 4 and 4.5 out of 5.
- On 6 June, we released our Early View of Winter and Winter Review and Consultation documents. The Early View provides an initial assessment of the energy security of supply outlook for the upcoming winter, allowing industry participants to prepare in advance. The documents include an assessment of global energy markets, potential risks, and efforts to collaborate with relevant stakeholders. Additionally, we published a Winter Review and Consultation to share operational insights and lessons from the previous winter, aiding industry preparation for the upcoming season.
- In June, we announced the release of our Innovation Annual Summary 2023/24, showcasing the role of innovation in shaping the future of NESO and the energy landscape. The summary provides an overview of our performance, key activities, and project case studies from the past year. Key highlights include 75 live projects, 74 project partners, 144 innovation ideas with a 33% approval rate at the big ideas stage, and an average stakeholder and customer satisfaction score of 8.63.
- On 27 June, we published consultations on BM Quick Reserve (QR) and Dynamic Response products (DM/DC/DR). These consultations seek feedback on revised terms and the implementation of new reserve services by Autumn 2025. QR will be procured for both positive and negative volumes with a 1-minute delivery time. The consultations will close on 29 July 2024 and will be reviewed before submission to Ofgem for approval.
- On 10 July, we published the latest Power Responsive Annual Report. It reflects on policy, regulatory, and market developments in 2023 and provides insights into demand side flexibility participation. The report aims to support stakeholders in navigating industry changes and fostering the growth of demand side participation in flexibility markets. It covers recent initiatives, demand side metrics, and future outlook, with contributions from Everoze, DESNZ, Ofgem, and Kraken.
- On 15 July, we launched the annual Future Energy Scenarios (FES) publication, which provides credible pathways to decarbonise the energy system in alignment with the UK Government's 2050 net zero initiative. This year's FES introduces a new framework with three net zero pathways and a 'Counterfactual' scenario. The publication includes the full suite of FES 2024 documents and recordings of the launch webinars, which can be accessed on our website.
- On 7 August, we held an industry Q&A session following the publication of the interim results of the Constraints Collaboration Project (CCP) at the end of July. The CCP took a collaborative approach, seeking solutions from the industry to address constraints. Market-based options for constraints markets showed potential value for end-consumers, leading us to further investigate their detailed design. Technical solutions to increase flow over transmission lines were also proposed, but require further investigation due to technical challenges. We will maintain ongoing collaboration and engagement with the industry, providing regular communications, as we work towards a final decision on the options by the end of Q1 2025.
- On 13 August, we published our recommended design for the connection of 4.5GW of floating offshore wind in the Celtic Sea (The Crown Estate’s leasing Round 5), between South Wales and South West England. This is the first time we’ve provided a recommended network design ahead of the outcome of a leasing round, marking a key achievement delivered in close collaboration with our key stakeholders.

Summary of Metrics and RREs

The tables below summarises our Metrics and Regularly Reported Evidence (RRE) for April 2024 to September 2024.

Table 1: Summary of Metrics

Metric			Unit	Apr	May	Jun	Jul	Aug	Sep	YTD Status Apr 2024 - Sep 2024
1A	Balancing Costs		£m	209	135	208	123	291	173	●
1B	Demand Forecasting*		MW	687	610	565	528	596	612	●
1C	Wind Generation Forecasting**		%	4.6%	3.6%	4.7%	4.2%	4.2%	5.2%	●
1D	Short Notice Changes to Planned Outages		#	0	0	1	0	3	0	●
2Ai	Phase-out of non-competitive balancing services	FR & Reserve	%	H1: 12%						●
		Reactive	%	H1: 96%						●
		Constraints	%	H1: 0%						●
2X	Day-ahead procurement		%	Q1:83%			Q2:83%			●

** Awaiting Ofgem confirmation of benchmark for 1B*
*** New 1C methodology*

Below expectations ● **Meeting expectations ●** **Exceeding expectations ●**

Table 2: Summary of RREs

RREs don't have performance benchmarks (with the exception of 2D which is reported annually).

RRE	Title		Unit	Apr	May	Jun	Jul	Aug	Sep
1E	**Transparency of Operational Decision Making**		%	**91%**	**91%**	**92%**	**96%**	**94%**	**91%**
1F	**Zero Carbon Operability indicator**		%	Q1: **92%**			Q2: **89%**		
1G	**Carbon intensity of NESO actions**		gCO2 /kWh	**11.9**	**3.9**	**12.3**	**6.3**	**15.0**	**6.7**
1H	**Constraints cost savings from collaboration with TOs**		£m	Q1: **£141**			Q2: **£749**		
1I	**Security of Supply**		#	-	-	**1**	-	-	-
1J	**CNI Outages - Planned**		#	-	-	-	**1**	**1**	-
1J	**CNI Outages - Unplanned**		#	-	-	-	-	-	-
2Aii	**Balancing services procured in a non-competitive manner**		#	H1: **£115m** spend on non-competitive services. Volume of **27.7 TWH** and **20.8 TVARH**					
2E	**Accuracy of Forecasts for Charge Setting (BSUoS):** *Month ahead APE (absolute percentage error)*		%	**16%**	**19%**	**12%**	**47%**	**32%**	**22%**
3A	**Future savings from Operability Solutions**		£m	i) Saved balancing costs: **£68m** (Constraints Management Pathfinder B6 extension**)** **£11m** (Constraints Management Intertrip Service EC5 Interim)					
3A	**Future savings from Operability Solutions**		£m	ii) Monetised carbon reductions: **£47m** (Constraints Management Pathfinder B6 extension) **£49m** (Constraints Management Intertrip Service EC5 Interim)					
3A	**Future savings from Operability Solutions**		£m	iii) Indicative impact on the SZCP limit: see report					
3X	**Timeliness of Connection Offers** *Number of offers made (from clock-start date):*	**Within 3 months**	#	Q1: **626**			Q2: **386**		
3X	**Timeliness of Connection Offers** *Number of offers made (from clock-start date):*	**Longer than timeframes outlined in report**	#	Q1: **117**			Q2: **2**		
3Y	**Percentage of 'right first time' connection offers**		%	Q1: **92%**			Q2: **96%**		

We welcome feedback on our performance reporting to
box.soincentives.electricity@uk.nationalenergyso.com

Hannah Kruimer
Interim Head of Regulation

Role 1

(Control Centre operations)

Metric 1A Balancing cost management

This metric measures NESO's outturn balancing costs (including Electricity System Restoration costs) against a balancing cost benchmark.

A new benchmark was introduced for BP2. Analysis has shown that the two most significant measurable external drivers of balancing costs are wholesale price and outturn wind generation. The new benchmark was derived using the historical relationships between those two drivers and balancing costs:

i. The benchmark was created using monthly data from the preceding 3 years.
ii. A straight-line relationship has been established between historic constraint costs, outturn wind generation and the historic wholesale day ahead price of electricity.
iii. A straight-line relationship has been established between historic non-constraint costs and the historic wholesale day ahead price of electricity.
iv. Ex-post actual data input into the equation created by the historic relationships to create the monthly benchmarks.

The formulas used are as follows (with Day Ahead Baseload being the measure of wholesale price):

Non-constraint costs = 62.25 + (Day Ahead baseload x 0.478)
Constraint costs = -33.49 + (Day Ahead baseload x 0.39) + (Outturn wind x 23.51)

Benchmark (Total) = 28.76 + (Day Ahead baseload x 0.87) + (Outturn wind x 23.51)

**Constants in the formulas above are derived from the benchmark model*

NESO Operational Transparency Forum: NESO hosts a weekly forum that provides additional transparency on operational actions taken in previous weeks. It also gives industry the opportunity to ask questions to our System Operations panel. Details of how to sign up and recordings of previous meetings are available here.

September 2024-25 performance

Figure: 2024-25 Monthly balancing cost outturn versus benchmark

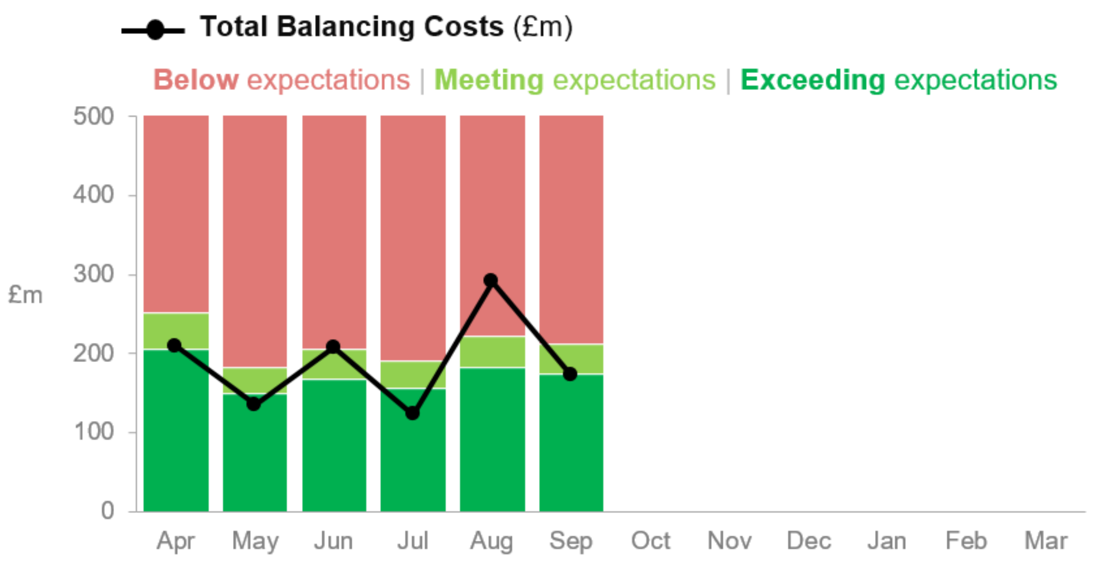


Table: 2024-25 Monthly breakdown of balancing cost benchmark and outturn

All costs in £m	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	YTD
Outturn wind (TWh)	6.3	3.2	3.9	3.5	5.1	4.2							26.2
Average Day Ahead Baseload (£/MWh)	59	72	76	71	62	76							n/a
Benchmark	228	167	187	173	203	194							1151
Outturn balancing costs[1]	**209**	**135**	**208**	**123**	**291**	**173**							**1139**
Status	●	●	●	●	●	●							●

Previous months' outturn balancing costs are updated every month with reconciled values. Figures are rounded to the nearest whole number, except outturn wind which is rounded to one decimal place.

Performance benchmarks:

- **Exceeding expectations:** 10% lower than the annual balancing cost benchmark
- **Meeting expectations:** within ±10% of the annual balancing cost benchmark
- **Below expectations:** 10% higher than the annual balancing cost benchmark

Supporting information

BALANCING COSTS STRATEGY

Balancing Cost Strategy update

In February 2023, and as part of our RIIO-2 Business Plan (BP2), we established a new Balancing Costs team in response to recent increases in balancing costs. The team's purpose is to provide analysis and commentary around causes and influences of balancing costs, and to drive business and industry change with the aim of finding the right balance between minimising balancing costs and the impact on consumers while still providing market signals for investment.

Over the last six months the team has continued to expand its capabilities, having developed new methodologies to calculate the cost savings from several new initiatives including Balancing Reserve, the FRCR Minimum requirement change and Network Services Procurement projects. The team has also developed its analysis and reporting on balancing costs, having published the first Annual Balancing Costs Report in May 2024 which provides an overview of past and future balancing cost trends, the NESO balancing cost strategy, and the range of initiatives being implemented to mitigate balancing costs. A new method of data sharing is also under development to support access and transparency around balancing cost data via a multipage dashboard to be made available on the NESO portal. The dashboard has now been shared with Ofgem and is undergoing review.

Below we highlight some of the initiatives that have had a significant impact under the four levers of our balancing cost strategy over the last six-months. Where possible we have outlined expected cost savings achieved by initiatives compared to the status quo, which in most cases is where equivalent actions are taken through the Balancing Mechanism (BM).

1 Network Planning and Optimisation

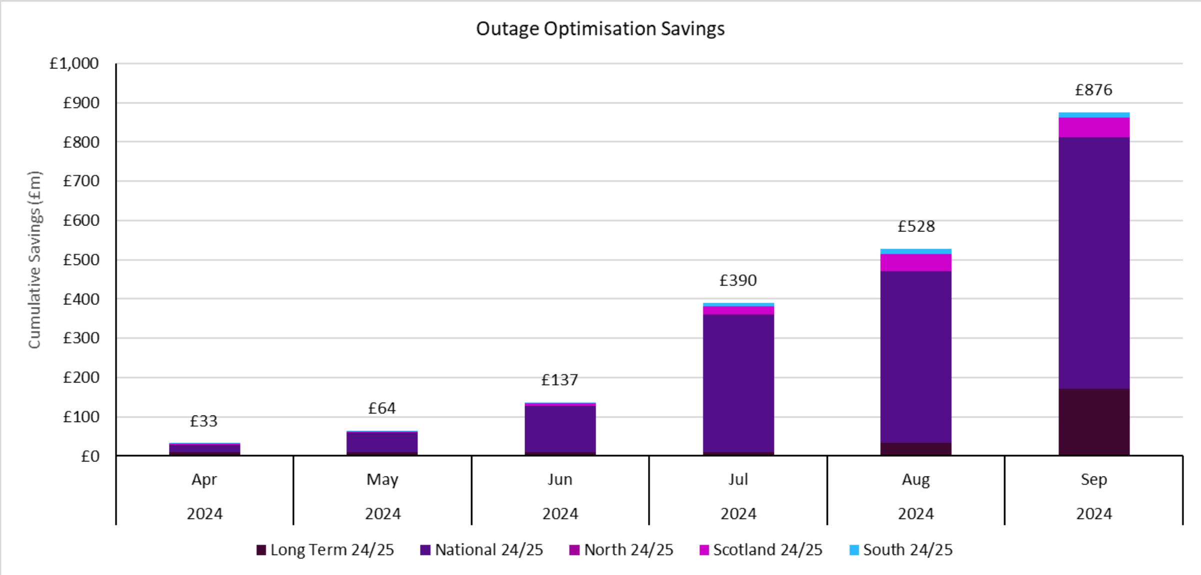
The Balancing Costs team have recently developed methodologies to track balancing costs savings from NESO's Network Services Procurement (NSP), including the Constraint Management Intertrip Service, Voltage Mersey, and Stability Phase 1. We have calculated that these services have delivered approximately £226m in savings

[1] Outturn balancing costs excludes Winter Contingency costs for comparison to the benchmark as agreed with Ofgem. However, in the rest of this section we continue to include those costs for transparency and analysis purposes.

since April 2023. Calculated savings from the Voltage Mersey and Stability Phase 1 suggest that both services are currently outperforming expectations.

We have also been further optimising and improving our outage procedure to maximise flows on the electricity system by minimising constraint costs. Our Outage Optimisation initiatives have potentially saved up to £876m in balancing costs from April 2024 to September 2024. Requests for network access have risen significantly in recent years, making outage optimisation increasingly challenging and yet more important in managing balancing costs. We also continue to track hot joints with associated costs for this year included in our System and Market Conditions analysis later in the report.

GRAPH: Accumulated Savings from Outage Optimisation in FY2024/25

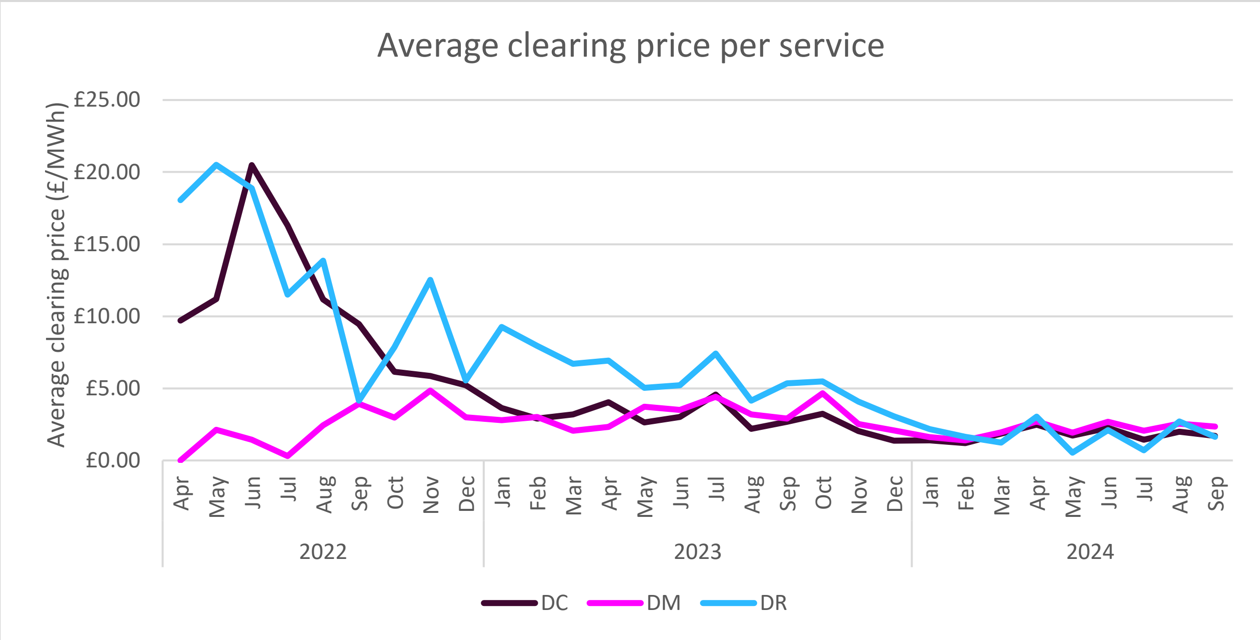


2 Commercial Mechanisms

On 12 March we held the first auction for our new Balancing Reserve (BR) service. The BR service sees us move to day-ahead procurement of the energy reserves we need to respond to system demand in real-time, rather than the current on-the-day system – reducing costs and improving system security. We are currently in the process of quantifying the benefits associated with this service, and the results will be shared in the coming months. Furthermore, progress has been made on the development of Quick Reserve, a new product aimed primarily at reacting to pre-fault disturbances to restore energy imbalance quickly and return frequency close to 50.0 Hz. NESO completed its proposed service and procurement design in August and the service is due to go live in late 2024.

Our Dynamic Services for response, Dynamic Containment (DC), Dynamic Moderation (DM) and Dynamic Regulation (DR) continue to see the benefit of more competitive and more liquid markets and the continued development of the Single Market Platform, with average clearing prices for 2024/25 so far (Jan – Sep) falling below prices across the same period in 2023/24. For DC the average clearing price for this financial year so far is £1.95/MW/h compared to £3.19/MW/h last year, £1.71/MW/h this year for DR compared to £5.68/MW/h last year, and £2.41/MWh this year for DM compared to £3.35/MWh last year.

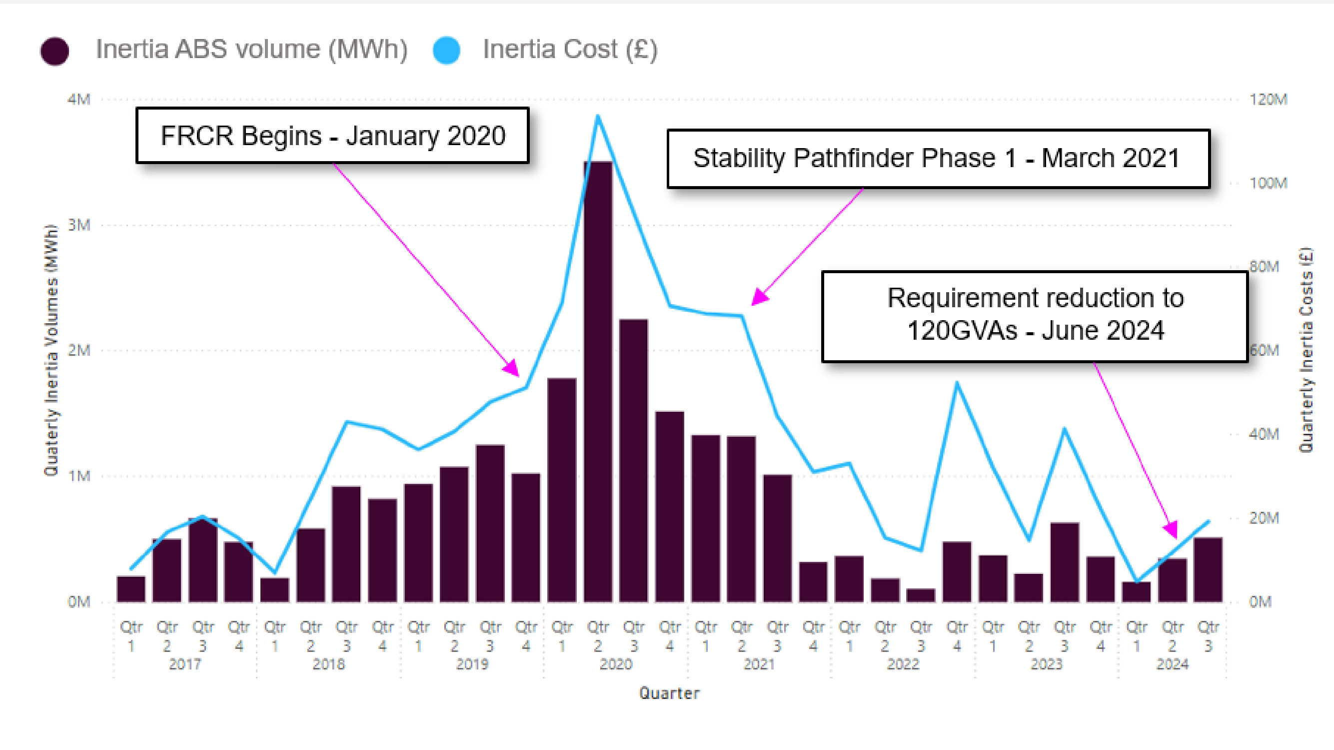
GRAPH: Average clearing price continue to reduce for our Dynamic Services



❸ Research, Innovation and Engagement

Inertia costs are a balancing cost segment that has seen significant savings realised since the introduction of some of our more innovative initiatives. In recent months, inertia costs have seen further benefits from the introduction of the FRCR minimum requirement change from 19 June 2024, which saw the system's inertia requirement reduced from 130 GVAs to 120 GVAs. This reduction allows the system to operate with 10 GVAs less without an increased risk of frequency deviations. As a result, fewer machines need to be instructed to meet the reduced inertia requirement. We are currently in the process of calculating these savings. This follows previous reductions to inertia requirements and the introduction of the new Stability Pathfinder which together have realised notable savings in balancing costs compared to their peak across 2020-21.

GRAPH: Inertia volumes and costs reduced significantly following the introduction of the FRCR and the Stability Pathfinder



During 2023-24 we have also been investigating issues with Physical Notification (PN) misalignment. The concern is that PN misalignment is causing costs incurred for bid or offer acceptance from some generators to be different from the cost that should be incurred, pushing up balancing costs. We are working with Ofgem, DESNZ, and industry to establish measures to mitigate this issue, which is expected to both lower balancing costs and increase Control Room visibility of asset availability. In August 2024, we published a Guidance Note on 'Good Industry Practice' in relation to FPN accuracy in accordance with the Grid Code BC 1.4.2(a).

4 NESO Capabilities

The major initiative that will contribute to Balancing Cost savings within the NESO Capabilities is the Balancing Programme, which will see better integration of Distributed Energy Resources (DER), improved forecasting capabilities, and more efficient dispatching capabilities. The first stage of our new platform to support the bulk dispatch of battery storage and small Balancing Mechanism Units (BMU), the Open Balancing Platform (OBP), went live on 12 December 2023. Control room engineers can now send bulk instructions to smaller BMU and battery storage units at the press of a button. The Balancing Costs team is now looking into how savings are realised through OBP and will attempt to track these on an ongoing basis. Significant emissions savings have been calculated based on the battery dispatches in the BM since the start of the OBP period. The findings are highly promising, as over 90,000 tons of carbon dioxide emissions have been successfully avoided. This demonstrates the substantial environmental and financial benefits achieved through the utilisation of battery dispatches in the BM.

Utilisation of storage assets has continued to grow in the last 6-months. August 2024 saw a battery dispatch volume of 74.3 GWh compared to 59.4 GWh in April 2024 and has grown significantly compared to ~4 GWh in March 2022, as illustrated in our cost savings section below. This illustrates our commitment to maximising the flexibility of energy offered by battery storage over the last year.

Industry Engagement Update

A comprehensive list of the initiatives that we are undertaking and how they fit into our Balancing Costs Strategy can be found on the Balancing Costs webpage, but we are constantly looking for engagement on new initiatives and ideas that can be utilised to minimise balancing costs.

One such case was the webinar we held for the Annual Balancing Costs report on 17 May 2024. This webinar delivered an overview of the key messages from the report and provided an opportunity for questions and views to be expressed on the balancing cost outlook and strategy.

We are also continuing to hold workshops and discussions with DESNZ and Ofgem on a monthly basis in order to better understand balancing costs, discuss high-level issues impacting balancing costs and promote information-sharing to facilitate cooperative actions between organisations.

We are also continuing to engage with industry on PN misalignment and following the release of the of the Draft Guidance Note, a three-week consultation period was conducted, during which 6 one-to-one calls were held and written feedback was received from 21 market participants regarding the threshold calculation methodology and the monitoring procedure outlined.

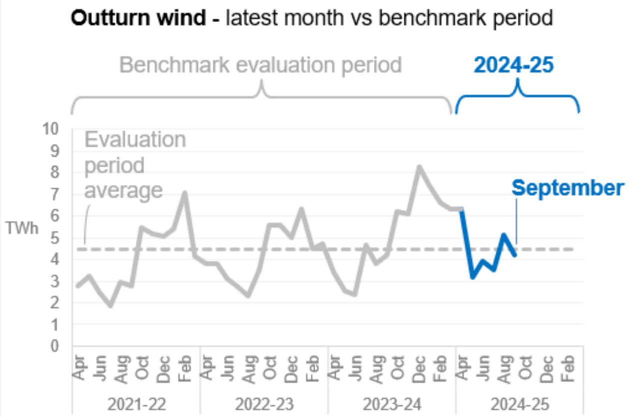
BALANCING COSTS METRIC & PERFORMANCE

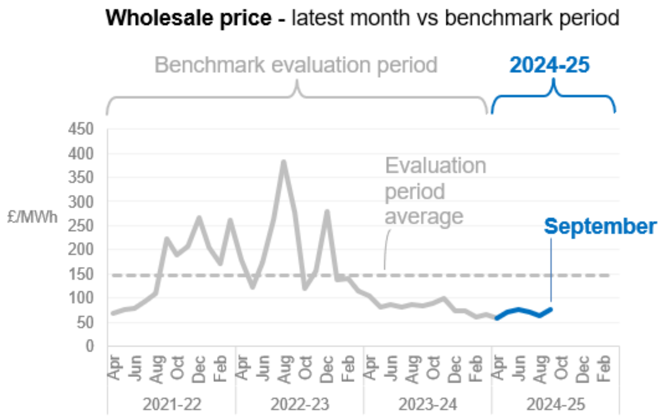
This month's benchmark

The September benchmark of £194m is £9m lower than August 2024 (£203m) and reflects:

- An **outturn wind** figure of 4.2 TWh that is lower than the average during the benchmark evaluation period (the last three years, where the average monthly wind outturn was 4.5 TWh) and is lower than last month's figure (5.1 TWh).
- An average monthly **wholesale price** (Day Ahead Baseload) that remains low compared to the benchmark evaluation period, but £14/MWh higher than last month's figure (August 2024).

The lower wind outturn contributed to the decrease in the overall benchmark compared to last month, but this was somewhat offset by the higher wholesale price.





Variable	September 2024	August 2024	September 2023
Average Wholesale Price (£/MWh)	76	-14	+7
Total Wind Outturn (TWh)	4.2	+0.9	+0
Benchmark (£m)	194	+9	+7
Performance	●	●	●

*The first three rows show the outturn measures for this month and difference in the previous month and same month last year, while the bottom row outlines outturn performance for each month.

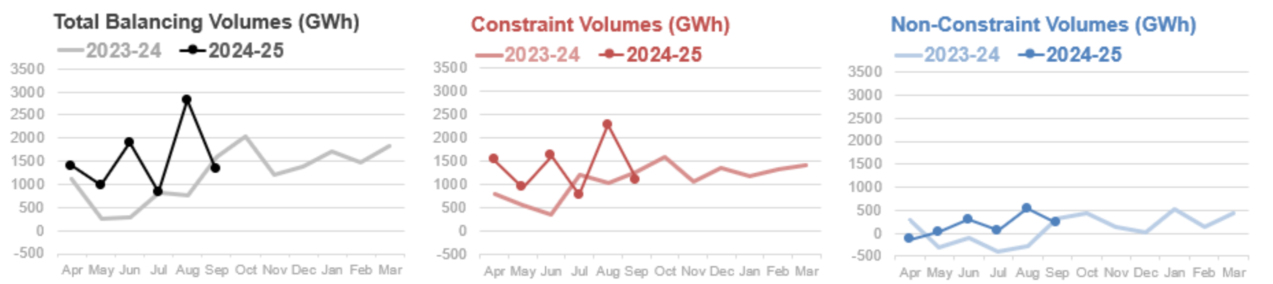
Balancing Costs - Overview

September's total balancing costs were £173m which is £21m (~11%) below the benchmark of £194m, and therefore performance is exceeding expectations. September saw an 18% decrease in overall wind generation compared to August contributing to a £116.9m reduction in constraint costs. Scottish constraints in particular saw a significant drop month-on-month falling £83.1m compared to August. Despite this reduction, Scottish constraints continued to be impacted by several outages in September, with lower wind outturn (down 32%) acting to limit the impact compared to August.

Wholesale power prices were up £14/MWh compared to August. The volume weighted average price for bids decreased by £13.7/MWh compared to last month (from £114.7/MWh to £101.0/MWh) as constraint volumes reduced by 489 GWh, while the volume weighted average offer price rose £5.5/MWh (from 108.7/MWh to £114.2/MWh) in line with market trends. Non-constraint volumes decreased by 316 GWh (mainly due to fewer actions to manage operating reserve) and costs were £2.6m lower compared to August.

Balancing COSTS (£m) monthly vs previous year

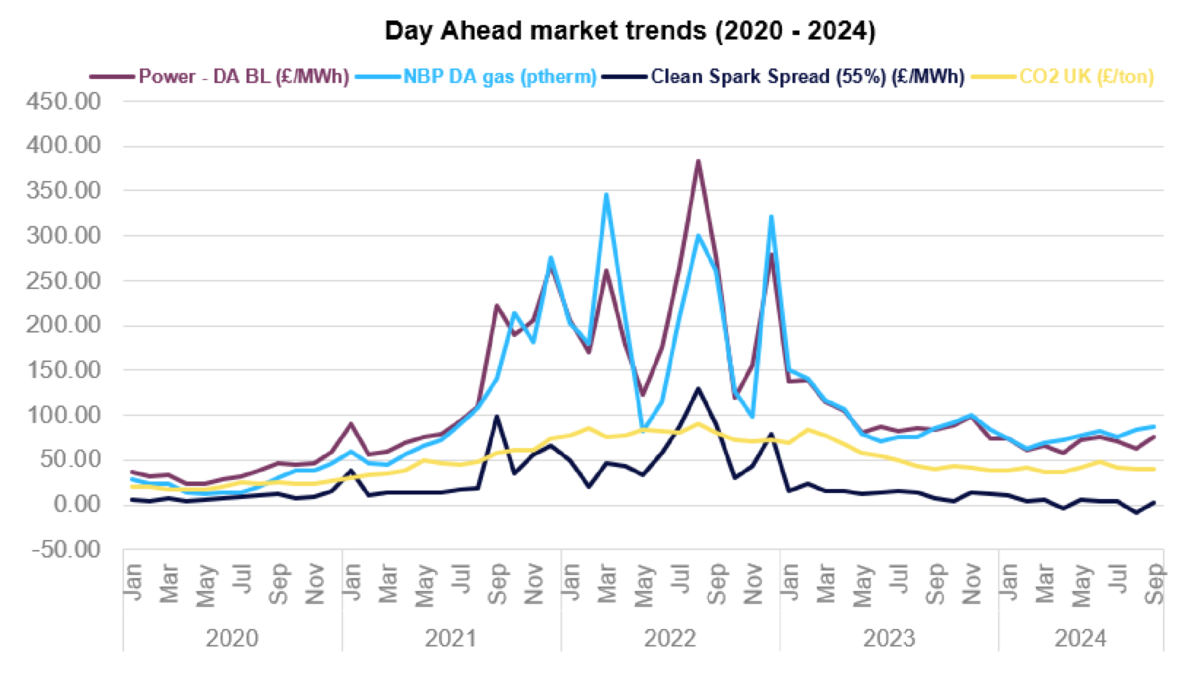
Balancing VOLUMES (GWh) monthly vs previous year



System and Market Conditions

Market trends

Power, gas and CO_2 prices increased compared to last month, with a consequent slight rise in the Clean Spark Spread price. Power remained lower compared to last year whereas gas and CO_2 were up slightly compared to September 2023. Below seasonal average temperatures and restrictions to Norwegian gas supplies have acted to increase gas prices in September. Power prices have followed their gas counterpart higher, with decreased wind generation in September also acting to push up power and CO_2 prices by contributing to increased gas-for-power requirements.



DA BL: Day Ahead Baseload **NBP DA:** National Balancing Point Day Ahead

Wind Outturn

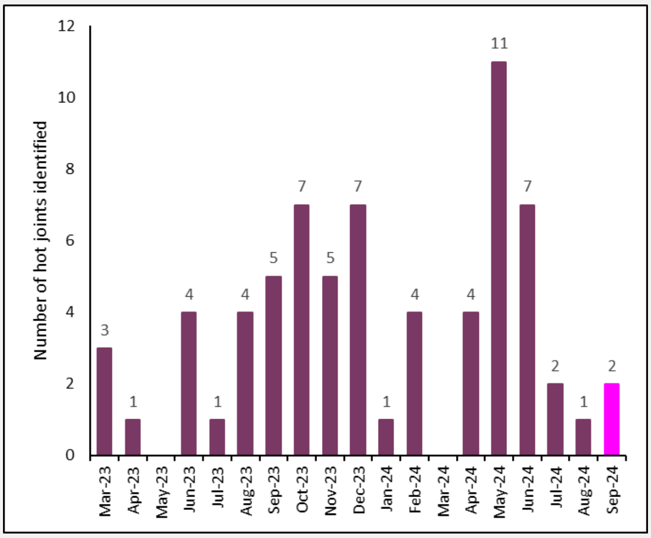
Although September saw unsettled weather across GB with variable temperatures and persistent showers, windspeeds were down by 23% on last month. Overall wind outturn decreased by 18% compared to August 2024. Regionally, England and Wales saw a 9% decrease month-on-month while wind outturn in Scotland reduced by 32%.

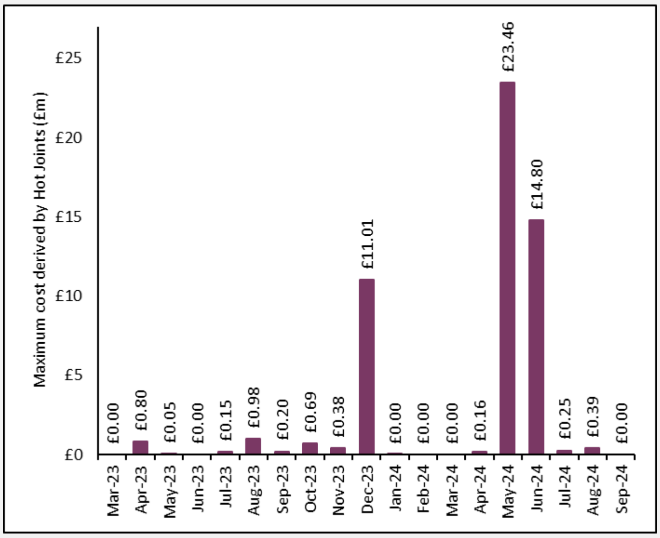
Constraints

Constraint costs in September reduced £116.9m compared to August 2024. Scottish constraints contributed to the majority of this reduction, decreasing £83.1m month-on-month. Despite this reduction Scottish constraints continued to be impacted by several outages in September, with lower wind outturn acting to limit the impact compared to August.

Network Availability

We continue to monitor the occurrence of hot joints in the system and their potential cost impact. In September two hot joints were reported in the North-East and North-West. No significant cost associated with them has identified. The costs figures reported for May and June 2024 show a slight change from previous reports due to a recent data update from ENCC.





BALANCING COSTS DETAILED BREAKDOWN

Balancing Costs variance (£m): September 2024 vs August 2024

		(a) Aug-24	(b) Sep-24	(b) - (a) Variance	decrease ◄► increase Variance chart
Non-Constraint Costs	Energy Imbalance	-0.9	1.5	2.4	
	Operating Reserve	6.9	5.4	(1.5)	
	STOR	3.4	3.6	0.2	
	Negative Reserve	0.1	0.3	0.1	
	Fast Reserve	15.1	16.8	1.6	
	Response	15.1	13.5	(1.6)	
	Other Reserve	2.6	1.7	(1.0)	
	Reactive	11.4	10.2	(1.2)	
	Restoration	3.3	3.1	(0.3)	
	Winter Contingency	0.0	0.0	0.0	
	Minor Components	6.9	5.6	(1.3)	
Constraint Costs	Constraints - E&W	45.1	26.4	(18.7)	
	Constraints - Cheviot	0.3	6.5	6.3	
	Constraints - Scotland	145.4	62.3	(83.1)	
	Constraints - Ancillary	0.8	0.7	(0.1)	
	ROCOF	7.2	4.3	(2.9)	
	Constraints Sterilised HR	29.3	10.9	(18.4)	
Totals	Non-Constraint Costs - TOTAL	63.9	61.6	(2.4)	
	Constraint Costs - TOTAL	228.0	111.1	(116.9)	
	Total Balancing Costs	**291.9**	**172.7**	**(119.2)**	

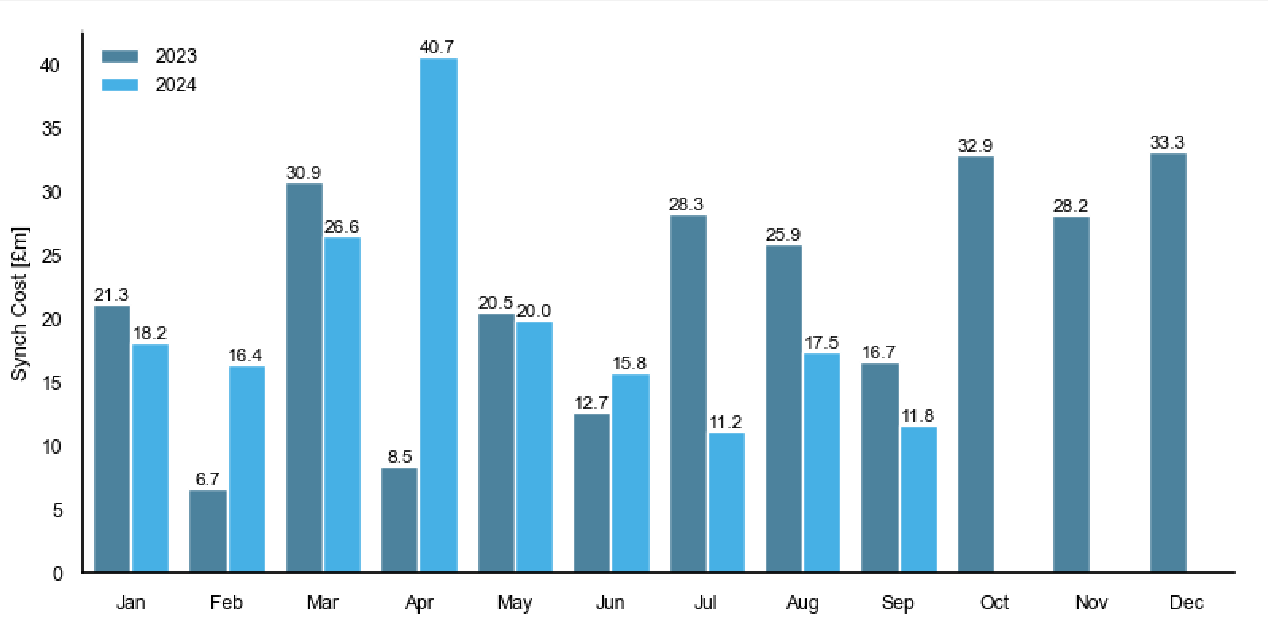
As shown in the totals from the table above, constraint costs decreased by £116.9m and non-constraint costs decreased by £2.4m, resulting in an overall decrease of £119.2m (rounded to £0.1m) compared to August 2024.

Constraint Costs/Volumes

Constraint costs have reduced by £116.9m compared to last month in line with a 489 GWh reduction in volume of actions, following a reduction in outturn wind. Constraint costs in Scotland contributed to the majority of the reduction month-on-month with this region having been particularly impacted by the combined effects of high wind and outages in August 2024.

Comparison Versus Previous Month	Comparison Versus Same Month Last Year
Constraint-Scotland & Cheviot: -£76.8m **Constraint – England & Wales: -£18.7m** **Constraint Sterilised Headroom: -£18.4m** Constraint costs have reduced by £116.9m compared to last month in line with a 489 GWh reduction in volume of actions, following a reduction in outturn wind and active constraints. Constraint costs in Scotland contributed to the majority of the reduction month-on-month with this region having been particularly impacted by the combined effects of high wind and outages in August 2024. **ROCOF: -£2.9m** Lower wind outturn in September will have contributed to reduced ROCOF costs compared to August, with a 103 GWh reduction in volume of actions.	**Constraints – Scotland & Cheviot: +£14.4m** **Constraints – England & Wales: -£21.3m** **Constraints Sterilised Headroom: -£24.4m** Constraint costs have reduced by £36.6m compared to last year, following a 111 GWh reduction in volume of actions. Wind outturn in September 2024 was similar to September 2023 while wholesale prices were lower compared to the previous year. Several outages remain in effect impacting Scottish constraints compared to September last year. **ROCOF: -£4.7m** The implementation of the FRCR requirement reduction (130GVAs to 120GVAs) in June 2024 is contributing to reduced ROCOF volumes and costs compared to the previous year.

Voltage – Monthly synchronization costs for voltage across 2023 and 2024:

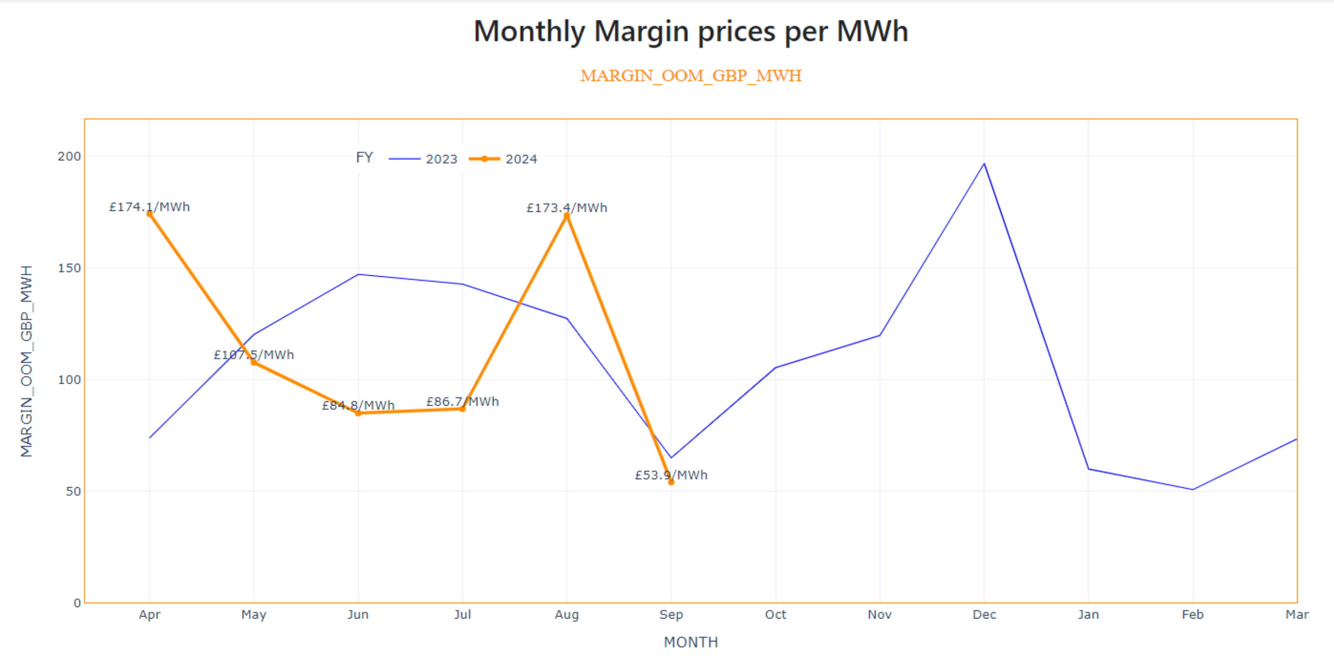


Synchronization costs for voltage constraints have also reduced in September 2024 compared to last month and last year. The absolute volume of actions required for voltage control was lower compared to last month by 173 GWh but 21 GWh higher than last year. Overall market trends will have contributed to the reduction year-on-year.

Thermal constraints currently dominate constraint costs. NESO is progressing several initiatives to reduce thermal constraint volumes/costs including the Constraints Collaboration Project and Constraint Management Intertrip Service. The ongoing review of electricity market arrangements (REMA) is also considering options that could alleviate thermal constraints over the long term such as zonal pricing. Network Service Procurement projects for voltage and stability are also helping to provide solutions for network management at lowest cost.

Reserve Costs/Volumes

Margin prices decreased to £53.9/MWh in September (its lowest level this financial year) compared to £173.4/MWh in August 2024.



Comparison Versus Previous Month	Comparison Versus Same Month Last Year
Operating Reserve: -£1.5m **Fast Reserve: +£1.6m** There was a 321 GWh decrease in the volume of reserve required to secure the system compared to August.	**Operating Reserve: -£6.1m** **Fast Reserve: +£2.9m** The reduced operating reserve cost experienced this year can be attributed, in part, to the lower energy prices compared to September 2023. Additionally, the introduction of the Balancing Reserve service in March has the potential to decrease reserve prices in the BM.

We are currently in the process of quantifying the benefits associated with Balancing Reserve, and the results will be shared in the coming months.

Response Costs/Volumes

Our Dynamic Services for response, Dynamic Containment (DC), Dynamic Moderation (DM) and Dynamic Regulation (DR) continue to see the benefit of more competitive and more liquid markets and the continued development of the Single Market Platform.

Comparison Versus Previous Month	Comparison Versus Same Month Last Year
-£1.6m There was a 6.9 GWh decrease in the absolute volume of actions compared to August.	**-£4.6m** The volume of actions taken for response reduced 5.3 GWh compared to September 2023.

Average clearing prices across all three Dynamic Services were down compared to August and September 2023. For DC the average clearing price was down £0.28/MWh and £0.98/MWh on last month and last year respectively. DM was down £0.20/MWh and £0.55/MWh and DR reduced £1.06/MWh and £3.72/MWh. The design and introduction of these services by NESO have increased liquidity and competition in the provision of these services, driving down costs.

Reactive Costs/Volumes

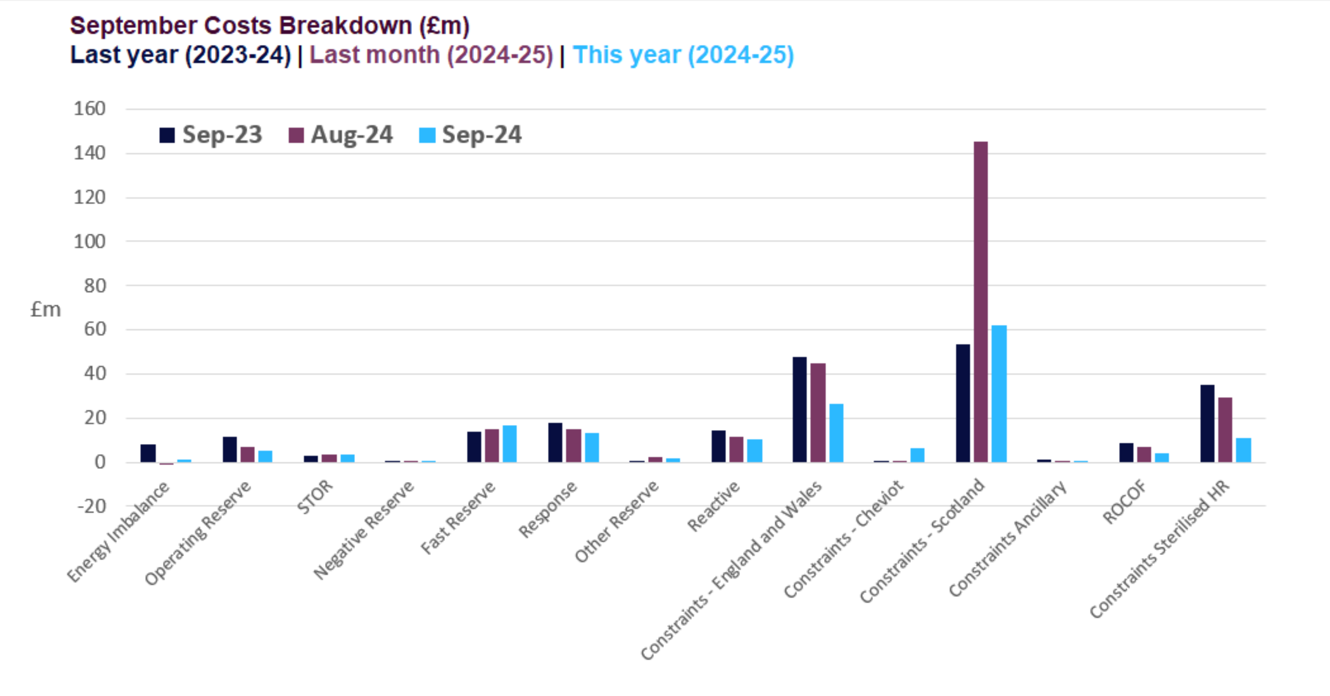
The volume-weighted average price for reactive power was £3.78/MVAr in September.

Comparison Versus Previous Month	Comparison Versus Same Month Last Year
-£1.2m Reactive volumes reduced by 2.4% compared to August 2024.	**-£4.2m** The volume-weighted average price decreased from £4.17/MVAr to £3.78/MVAr compared to last year.

NESO will kick-off a NIA project that will review of the Obligatory Reactive Power Service (ORPS) methodology to ensure that the service remains fit for purpose and cost reflective.

Comparison breakdown

The Scotland constraint component was the main driver of reduced costs compared to last month. Constraint costs overall were down by £116m on last month and £36.5m on last year. Most categories for non-constraint costs showed a decrease or small deviation compared to last month. Overall non-constraint costs were down £2.6m on last month and £18.3m on last year.



COST SAVINGS

Cost Savings – Outage Optimisation

The total savings from outage optimisation were roughly £348m in September 2024, this represents an increase of £214m relative to August this year (£134m). The action that yielded the greatest value was the decision to reject an outage in the South-West that overlapped with another already in plan. If both outages had been taken simultaneously, it would have largely reduced the transfer capacity of a transmission constraint in the south of England and Wales. Cost savings for this action are estimated to be roughly £126m.

Cost Savings – Trading

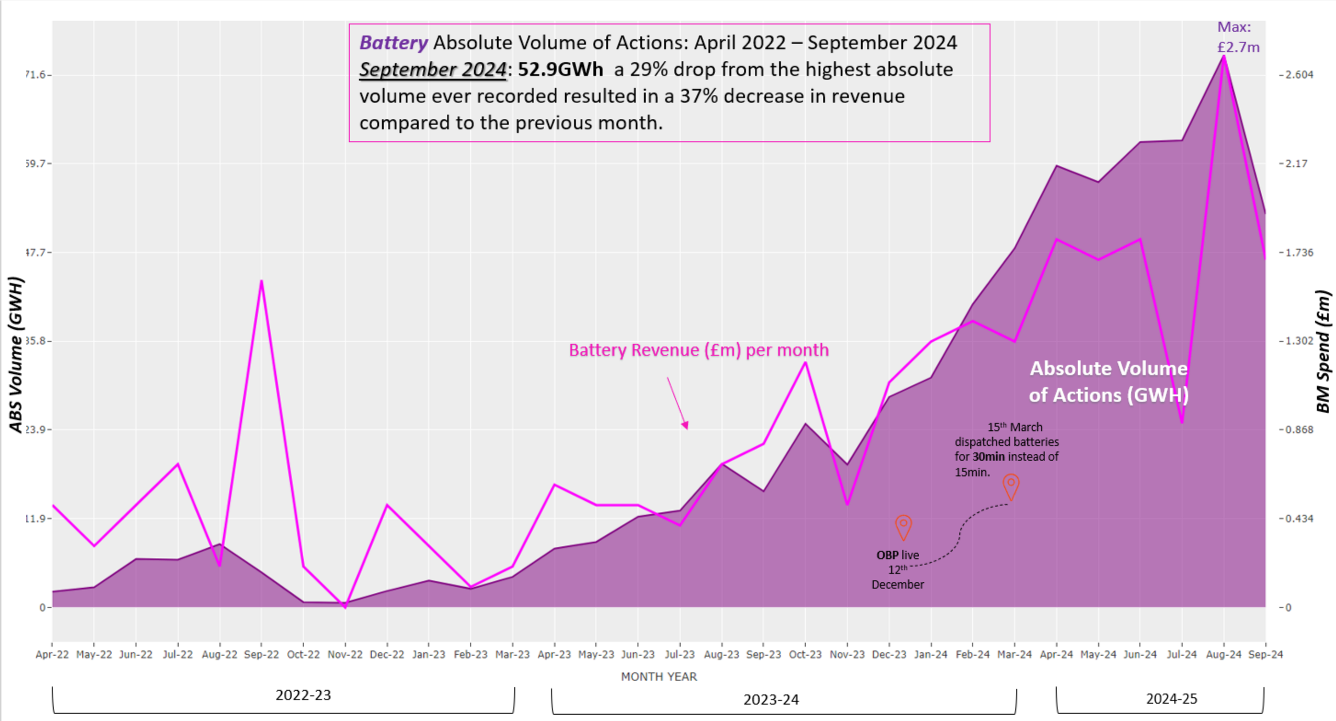
The Trading team have made a total saving of £13.2m in September through trading actions as opposed to alternative BM actions, representing a 65.1% decrease on the previous month. This is lower than the yearly average for 2024 and was because of multiple factors. These factors included restricted interconnector capacity due to both planned and unplanned outages across the month, along with interconnector imports mostly meeting demand leading to less trading for margin. Also, there was a lower requirement for voltage trading in September due to wind generation being around seasonal averages if not lower at points. The day with the greatest spend on trades was on the 2 September at a cost of £1.5m, with the greatest spend being on the SEIMP constraint.

Cost Savings – Network Services Procurement (NSP)

NESO is using Network Services Procurement (NSP) to implement solutions to operability challenges in the electricity system. This includes the Constraint Management Intertrip Service, Voltage NSP and Stability NSP. We have calculated that the B6 Constraint Management Intertrip Service, Voltage Mersey, and Stability Phase 1 have delivered approximately £226m in savings since April 2023. This represents the first set of live NSP projects, with savings for other live and future projects also undergoing development and implementation, such as Voltage Pennines and Stability Phase 2.

NOTABLE EVENTS

Monthly Absolute Volume of actions and spend for Batteries in the Balancing Mechanism
April 2022 to September 2024



The first stage of our new platform to support the bulk dispatch of battery storage and small Balancing Mechanism Units (BMUs), the Open Balancing Platform (OBP), went live on 12 December 2023. Since then, our ability to dispatch a greater number of typically smaller BMUs within a settlement period has increased. This has unlocked greater capability to dispatch batteries in the Balancing Mechanism.

The total absolute volume of actions has decreased by 44% compared to the previous month (August 2024). This significant reduction is the primary factor contributing to the 29% drop in battery dispatch for this month, which in turn has led to a decrease in battery revenue. With less of a need for balancing, battery dispatch has decreased.

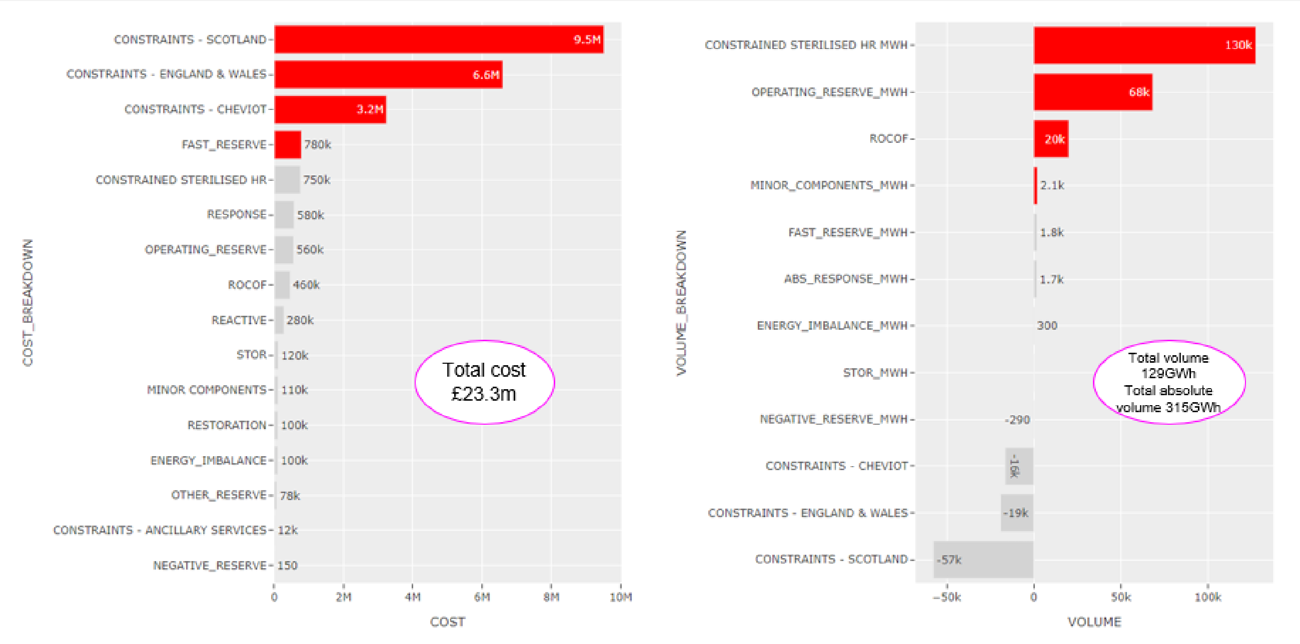
DAILY CASE STUDIES

Daily Costs Trends

September's balancing costs were £173m which is £118m lower than the previous month. 2 days were recorded with costs above £15m and 5 days had a daily total cost over £10m, resulting in a decrease in the average monthly daily cost by £5.4m (from £9.4m to £5.7m).

The lowest total daily cost of £1.4m was observed on 17 September, whilst the highest total cost was observed on 10 September when the total spend was £23.3m (see 'Daily wind outturn' chart below). Thermal Export Constraints dominated the cost breakdown on this day, with Scottish and Cheviot constraint making up 55% of the daily cost and constraints in England and Wales contributing to a further 28%. No individual action was expensive, but high volumes of wind curtailment and a heavily constrained system contributed to the high total balancing costs for the day.

High-Cost Day - 10 September 2024

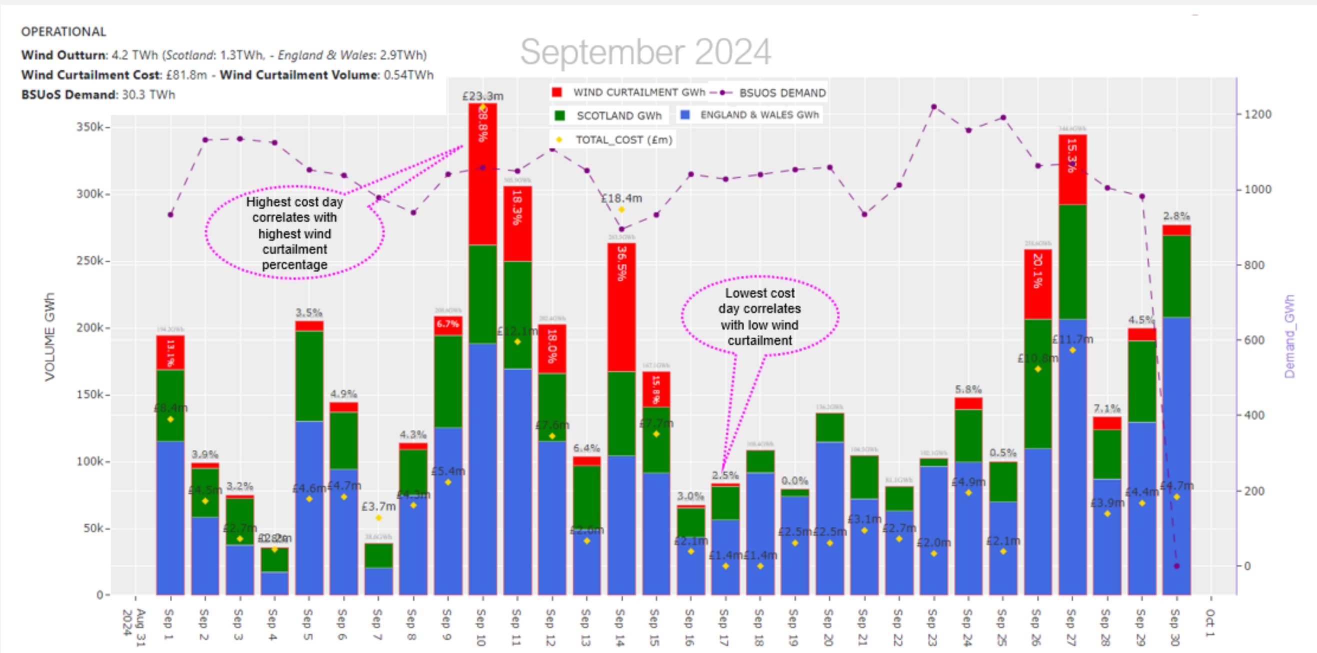


September Daily Wind Outturn – Wind Curtailment, Daily Costs and BSUoS Demand

The chart below serves the purpose of supporting the transparency and the descriptions above. It is the daily "tour" of wind performance. With this graph we can trace, for example, how wind performance and low demand affect the cost of each day.

KEY:

Blue bars:	Wind generation in England and Wales
Green bars:	Wind generation in Scotland
Red bars:	Wind curtailment
Purple dotted line:	Demand resolved by the BM and trades
◆ Orange diamonds:	Daily cost



High-cost days and balancing cost trends are discussed every week at the Operational Transparency Forum to give ongoing visibility of the operability challenges and the associated NESO control room actions.

Metric 1B Demand forecasting accuracy

This metric measures the average absolute MW error between day-ahead forecast demand (taken from Balancing Mechanism Report Service (BMRS[2]) as the National Demand Forecast published between 09:00 and 10:00) and outturn demand (taken from BMRS as the Initial National Demand Outturn) for each half hour period. The benchmarks are drawn from analysis of historical errors for the five years preceding the performance year.

A 5% improvement in historical 5-year average performance is required to exceed expectations, whilst coming within ±5% of that value is required to meet expectations.

In settlement periods where the Demand Flexibility Service (DFS) is instructed by NESO, this will be retrospectively accounted for in the data used to calculate performance.

Performance will be assessed against the annual benchmark, but monthly benchmarks are also provided as a guide. The NESO will report against these each month to provide transparency of its performance through the year.

September 2024-25 performance

Indicative benchmark figures for 2024-25: Please note that the benchmark figures used below are indicative only. We have calculated these in line with the method specified by Ofgem, but we have not yet received the confirmed figures from Ofgem. We will update previous performance figures in subsequent reports once the benchmarks have been finalised.

Figure: 2024-25 Monthly absolute MW error vs Indicative Benchmark

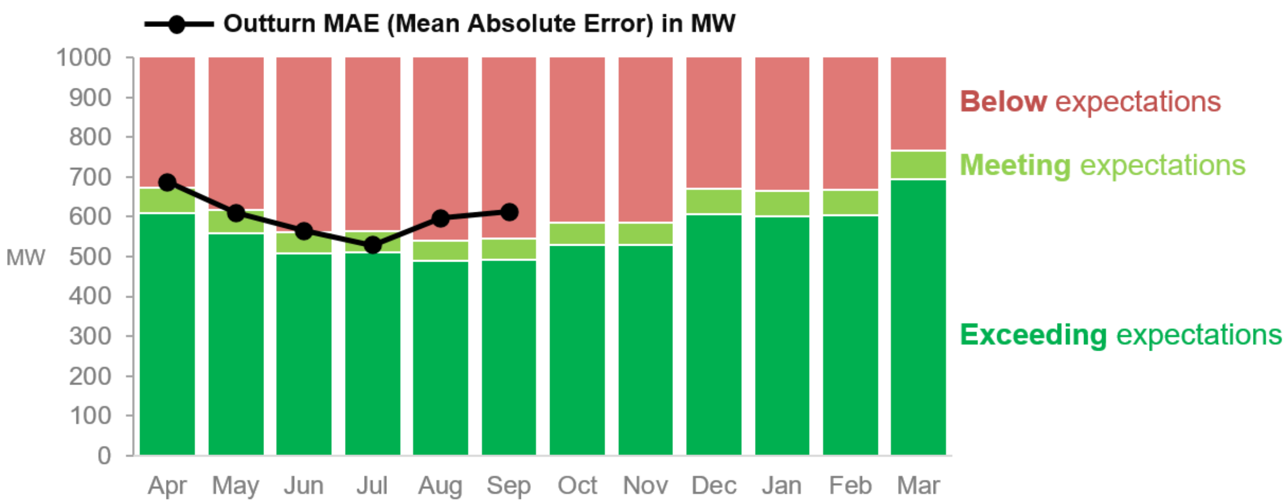


Table: 2024-25 Monthly absolute MW error vs Indicative Benchmark

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Indicative benchmark (MW)	642	588	534	538	515	519	558	557	639	632	636	730
Absolute error (MW)	**687**	**610**	**565**	**528**	**596**	**612**						
Status	●	●	●	●	●	●						

[2] Demand | BMRS (bmreports.com)

Performance benchmarks:

- **Exceeding expectations:** >5% lower than 95% of average value for previous 5 years
- **Meeting expectations:** ±5% window around 95% of average value for previous 5 years
- **Below expectations:** >5% higher than 95% of average value for previous 5 years

Supporting information

In September 2024, the mean absolute error (MAE) of our day ahead demand forecast was 612 MW compared to the indicative benchmark of 519 MW. The 5% range around this benchmark extends to 545 MW, meaning our performance did not meet expectations for September.

The Met Office reports September saw unsettled weather across the UK with variable temperatures and persistent showers. The weather alternated between above average temperatures, to cold periods affected by Arctic air, to above average again. There were several frontal systems which brought heavy rain and thunderstorms. This highly variable weather proved hard to forecast at day ahead, and these weather forecast errors led to demand forecast errors.

The most common factor in the larger error days of September was again variable solar outturn, while overnight errors remain consistently low. Solar irradiance was quite unsettled, frequently changing from sunny to cloudy days. These forecasts were often unstable, even during within-day timescales.

The distribution of settlement periods by error size is summarised in the table below:

Error greater than	Number of SPs	% out of the SPs in the month (1440)
1000 MW	280	19%
1500 MW	108	8%
2000 MW	38	3%
2500 MW	3	0%

The days with largest MAE were September 2, 13, 22, 23 and 29

Missed / late publications

There was 1 occasion of a missed or late publication in September. This was due to an IT update which affected our forecasting processes, but which is now complete.

Triads

Triads run between November and February (inclusive) each year and therefore did not affect this month's performance.

Metric 1C Wind forecasting accuracy

This metric measures the average absolute error between day-ahead forecast (between 09:00 and 10:00, as published on NESO data portal) and post-event outturn wind settlement metering (as published on the Elexon insights portal) for each half hour period as a percentage of capacity for BM wind units only. The data will only be taken for sites that:

- did not have a bid-offer acceptance (BOA);
- did not withdraw availability completely between time of forecast and time of metering; for the relevant settlement period. We publish this data on its data portal for transparency purposes.

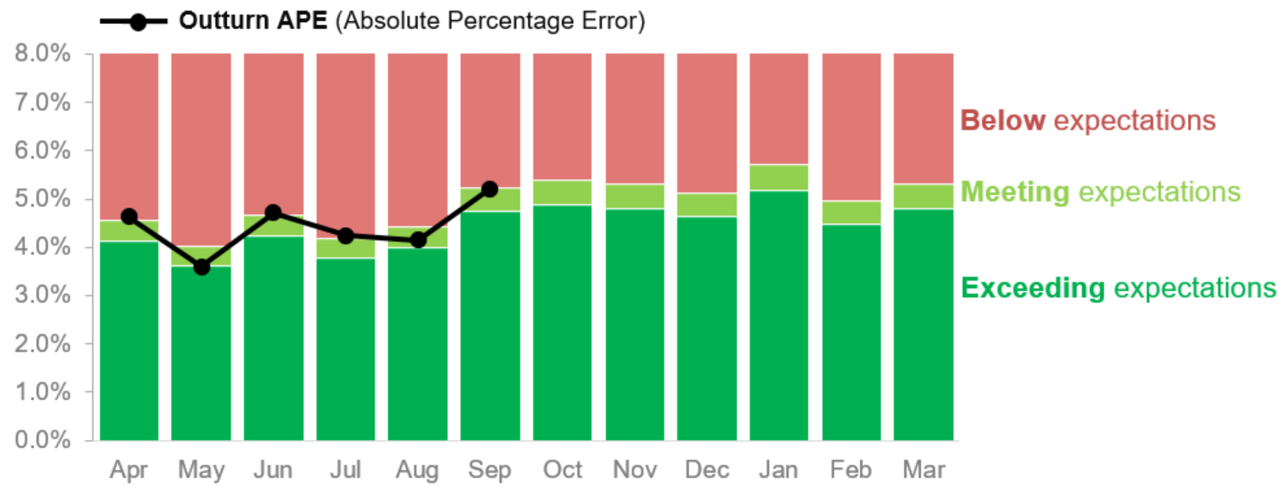
Sites deemed to have withdrawn availability are those that:

- re-declare maximum export limit (MEL) from a positive value day-ahead to zero at real-time; or
- re-declare their physical notification (PN) from a positive value day-ahead to zero at gate closure of the Balancing Mechanism.

The benchmarks are drawn from analysis of historical errors of the five years preceding the performance year. A 5% improvement in performance is expected on the 5-year historical average, with a range of ±5% used to set the benchmark for meeting expectations.

September 2024-25 performance

Figure: 2024-25 BMU Wind Generation Forecast APE vs Indicative Benchmark



Change to methodology from 1 October 2024

In line with the NESO Performance Arrangements Governance Document, from 1 October 2024, the APE% that we report excludes some of the factors that are outside of our control. This view excludes sites that have redeclared to zero and incorporates Initial Settlement Runs (+16 Working Days). This approach applies to the figures reported from September 2024 onwards.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Indicative benchmark (%)	4.34	3.82	4.45	3.98	4.22	4.99	5.13	5.07	4.89	5.44	4.73	5.05
APE (%)	**4.64**	**3.60**	**4.72**	**4.24**	**4.15**	**5.21**						
Status	●	●	●	●	●	●						

ESORI view of BMU Wind Generation Forecast APE (Previous Method)

Below, we report the APE% and benchmark based on the method described in The Electricity System Operator Reporting and Incentives (ESORI) Arrangements: Guidance Document. This applied prior to the transition to NESO on 1 October 2024, up to and including the figures reported in August 2024. This view includes sites that have redeclared to zero and does not incorporate Initial Settlement Runs (+16 Working Days).

A performance status is shown in the table below, however for the figures reported for September 2024 onwards, this is for information only and is not part of the 2024-25 incentives assessment.

Table: 2024-25 BMU Wind Generation Forecast APE vs Indicative Benchmarks (ESORI method)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Indicative benchmark (%)	4.32	3.85	4.43	4.02	4.19	4.98	5.13	5.02	4.93	5.46	4.74	5.09
APE (%)	**5.14**	**3.61**	**4.89**	**4.30**	**4.60**	**5.19**						
Status	●	●	●	●	●	●						

Performance benchmarks:

- **Exceeding expectations:** < 5% lower than 95% of average value for previous 5 years
- **Meeting expectations:** ±5% window around 95% of average value for previous 5 years
- **Below expectations:** > 5% higher than 95% of average value for previous 5 years.

Supporting information

In September 2024, the mean absolute percentage error (APE) is currently reported as 5.21% against the corresponding benchmark of 4.99%. The 5% range around this benchmark extends to 5.24%, meaning our performance met expectations for September.

With the previous metric calculation method, APE was 5.19%, compared to the monthly benchmark of 4.98%. The 5% range around this benchmark extends to 5.23%, which is also meeting expectations.

Monthly error was brought up by three larger error days on 14, 24 and 26 September.

The largest forecast error this month was 3.67 GW on 26 September, settlement period 13. This was due to errors in the weather forecast, especially in the North Sea off the east of England. At day ahead, wind speeds were forecast at 13m/s, but outturned at 7m/s.

Offshore performance continues to be challenging and consistently returns higher forecast errors, largely driven by inferior weather forecast accuracy and outturn. Relaxed obligations (outage reporting) on small windfarms, also contribute to performance accuracy.

Note: August performance has been recalculated with the full month of SF run settlement data (rather than partially using the II run interim view available at the time). This recalculated performance has improved the metric from 4.60% to 4.15%, which changes the monthly status to ‘meeting expectations’. When recalculated for August, performance on the previous metric improved from 5.10% to 4.60%, though this is still below expectations for the month.

Missed / late publications

There was 1 occasion of a missed or late publication in September. This was due to an IT update which affected our forecasting processes, but which is now complete.

Metric 1D Short Notice Changes to Planned Outages

This metric measures the number of short notice outages delayed by > 1 hour or cancelled, per 1000 outages, due to NESO process failure.

September 2024-25 performance

Figure: 2024-25 Number of outages delayed by > 1 hour, or cancelled, per 1000 outages

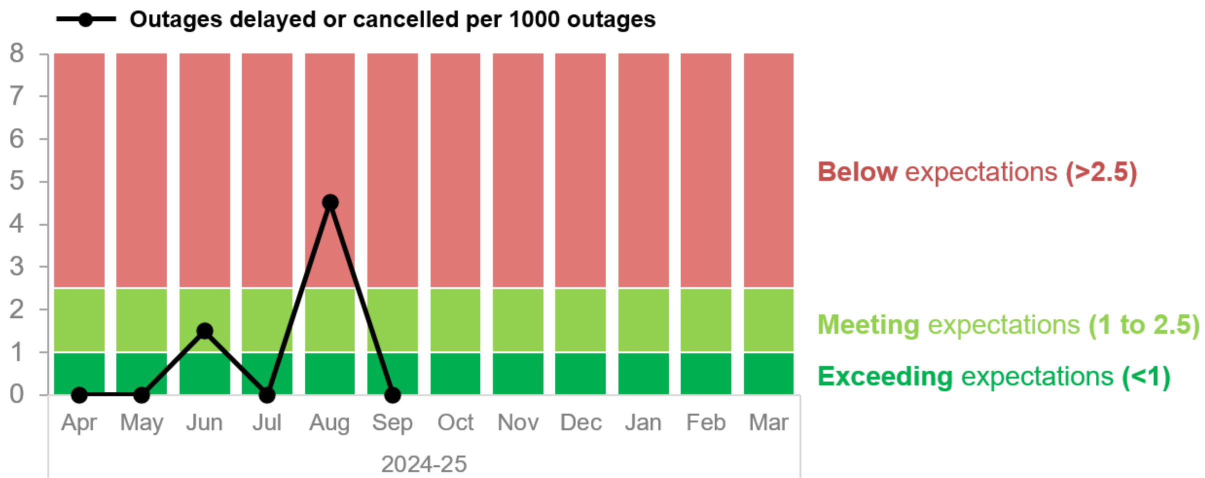


Table: Number of outages delayed by > 1 hour, or cancelled, per 1000 outages

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	YTD
Number of outages	673	614	670	784	665	729							4135
Outages delayed/cancelled due to NESO process failure	0	0	1	0	3	0							4
Number of outages delayed or cancelled per 1000 outages	0	0	1.49	0	4.51	0							0.97
Status	●	●	●	●	●	●							●

Performance benchmarks:

- ● **Exceeding expectations:** Fewer than 1 outage delayed or cancelled per 1000 outages
- ● **Meeting expectations:** 1-2.5 outages delayed or cancelled per 1000 outages
- ● **Below expectations:** More than 2.5 outages delayed or cancelled per 1000 outages

Supporting information

ℹ	**Reporting Frequency change:**	Please note that this will be the final report where this Metric will be shown as monthly. We have reported as monthly for this report as data and commentary have already been reported for the 2 previous months. The frequency has changed to quarterly now we have become NESO as outlined in the new guidance.

For September, we have successfully released 729 outages and there has been zero delays or cancellations that occurred due to a NESO process failure. The number of stoppages or delays per 1000 outages is 0.97, which is inside the ‘Exceeds Expectations’ target of less than 1 delays or cancellations per 1000 outages.

The number of outages released in September 2023 was 734 and has remained consistent in September 2024 at 729. Overall, NESO is continuing to liaise with the TOs and DNOs to effectively facilitate system access through weekly or monthly liaison meetings to maximize system access.

RRE 1E Transparency of operational decision making

This Regularly Reported Evidence (RRE) shows the percentage of balancing actions taken outside of the merit order in the Balancing Mechanism each month.

We publish the Dispatch Transparency dataset on our Data Portal every week on a Wednesday. This dataset details all the actions taken in the Balancing Mechanism (BM) for the previous week (Monday to Sunday). Categories and reason groups are allocated to each action to provide additional insight into why actions have been taken and ultimately derive the percentage of balancing actions taken outside of merit order in the BM.

Categories are applied to all actions where these are taken in merit order (Merit) or an electrical parameter drives that requirement. Reason groups are identified for any remaining actions where applicable. Additional information on these categories and reason groups can be found on our Data Portal in the Dispatch Transparency Methodology.

Categories include: System, Geometry, Loss Risk, Unit Commitment, Response, Merit

Reason groups include: Frequency, Flexibility, Incomplete, Zonal Management

The aim of this evidence is to highlight the efficient dispatch currently taking place within the BM while providing significant insight as to why actions are taken in the BM. Understanding the reasons behind actions being taken out of pure economic order allows us to focus our development and improvement work to ensure we are always making the best decisions and communicating this effectively to our customers and stakeholders.

We have been publishing the Dispatch Transparency dataset since March 2021, and it has sparked many conversations amongst market participants. As we continue to publish this dataset for BP2 we will also be providing additional narrative to help build trust by explaining:

- actions we are taking to increase understanding of the NESO's operational decision making
- insight into the reasons why actions are taken outside of merit order in the Balancing Mechanism
- activity planned and taken by the NESO to address and reduce the need for actions to be taken out of merit order.

September 2024-25 performance

Figure: 2024-25 Percentage of balancing actions taken in merit order to meet requirements in the Balancing Mechanism

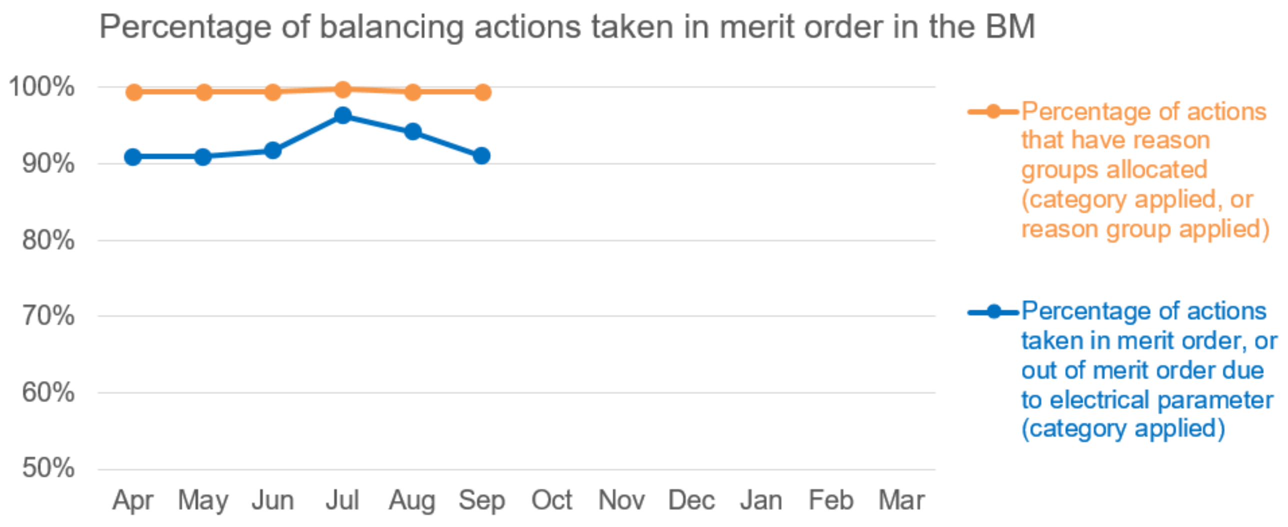


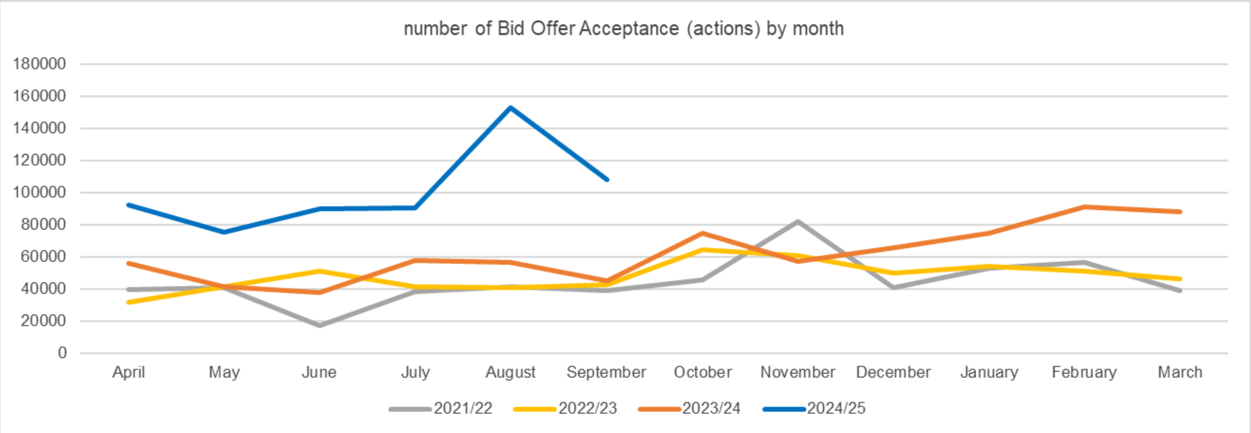
Table: Percentage of balancing actions taken outside of merit order in the BM

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Percentage of actions taken in merit order, or out of merit order due to electrical parameter (category applied)	90.9%	90.9%	91.7%	96.3%	94.2%	91.0%						
Percentage of actions that have reason groups allocated (category applied, or reason group applied)	99.4%	99.5%	99.4%	99.8%	99.5%	99.4%						
Percentage of actions with no category applied or reason group identified	0.6%	0.5%	0.6%	0.2%	0.5%	0.6%						

Supporting information

September performance

This month 91.0% of actions were either taken in merit order or taken out of merit order due to an electrical parameter. 8.4% of actions were allocated to reason groups for the purposes of our analysis, and the percentage of actions with no category applied or reason group identified remained in line with previous months. During September, there were 108,103 BOA (Bid Offer Acceptances) and of these, only 672 remain with no category or reason group identified, which is 0.6% of the total. The number of BOAs in September decreased from August but this is in line with previous months.



Other activities

As mentioned previously, LCP Delta is progressing with their independent assurance report and we're committed to delivering this report to industry as soon as we are able. A new date for the webinar will be shared as soon as possible. Regular further updates will continue at the OTF.

RRE 1F Zero Carbon Operability Indicator

This Regularly Reported Evidence (RRE) provides transparency on progress against our zero-carbon operability ambition by measuring the proportion of zero carbon transmission connected generation that the system can accommodate.

For this RRE, each generation type is defined as whether it is zero carbon or not. Zero carbon generation includes hydropower, nuclear, solar, wind, battery and pumped storage technologies. As this RRE relates to NESO's ambition to be able to operate a zero carbon transmission system by 2025, only transmission connected generation is included and interconnectors are excluded (as EU generation is out of scope of our zero carbon operability ambition). Note that the generation mix measured by RRE 1F and RRE 1G differs.

The Zero Carbon Operability (ZCO) indicator is defined as:

$$ZCO(\%) = \frac{(Zero\ carbon\ transmission\ connected\ generation)}{(Total\ transmission\ connected\ generation)} \times 100$$

Part 1 – Defining the maximum ZCO limit for BP2

Below we define the approximate maximum ZCO limit - using a reasonable approximation of likely operating conditions - the system can accommodate at the start and end of BP2, explaining which deliverables are critical to increasing the limit.

Table: Forecast maximum ZCO% after our operational actions

BP2 2023-25	Maximum ZCO limit	Calculation and rationale
Start of BP2 (Q1 2023-24)	**90% - 95%**	The maximum ZCO% achieved prior to the start of BP2 was 90%, set in January 2023. New frequency products and voltage and stability pathfinders are the main projects delivering increased ZCO% during the early part of BP2. The methodology for calculating ZCO% is consistent with BP1 and our continued delivery of projects and programmes increases the opportunity to operate the system at higher ZCO%.
End of BP2 (Q4 2024-25)	**95% - 100%**	We expect that our remaining projects, products and programmes will enable us to operate at 100% ZCO in 2025. Our operational strategy is set to deliver some key projects which will increase the maximum ZCO% over the BP2 period. These key deliverables are the deployment of our full suite of response and reserve products, voltage and stability pathfinders, further reduction of minimum inertia requirement via the Frequency Risk and Control methodology (FRCR), and improved tools for monitoring system inertia. These deliverables are either enabling zero carbon providers of ancillary services or increasing the window in which we can operate the system securely.

Part 2 – Regular reporting on actual ZCO

Every quarter we report the ZCO provided by the market versus the ZCO following NESO actions. This is presented at a monthly granularity.

The table below is calculated according to the formula for ZCO for each settlement period for every day over the reporting period. ZCO is a percentage of the zero-carbon transmission generation (hydropower, nuclear, solar, wind, battery, and pumped storage technologies) divided by the total transmission generation. Two figures are calculated: one represents the system conditions before NESO interventions are enacted, the other is after. This indicator measures progress against our zero-carbon operability ambition by showing the proportion of zero carbon transmission generation that the system can accommodate.

For each month, the settlement period that has the highest ZCO figure after our operational actions were enacted is displayed. The corresponding market ZCO figure is also included. It is worth noting that this market ZCO figure might not necessarily be the maximum ZCO that the market provided over the month. For example, the maximum ZCO provided by the market in Q2 2023-24 was 98% on 28 September 2023, settlement period 8. However, for that period the final ZCO dropped to 80% after our operational actions were taken into account, meaning that this was not the highest final ZCO of the month.

The graphs further below show the underlying data by settlement period and highlight when the maximum monthly values occurred.

Table: Q2 maximum zero carbon generation percentage by month (2024-25)

Month	Highest ZCO% in the month (after NESO operational actions)	ZCO% provided by the market (during the same day and settlement period)	Date / Settlement Period
April	92.3%	94.7%	15 Apr SP29
May	83.4%	93.8%	12 May SP28
June	86.1%	88.6%	4 Jun SP28
July	86.7%	92.7%	4 July SP33
August	89.2%	95.0%	21 Aug SP24
September	84.6%	91.1%	30 Sep SP3

Note that the values can change between reporting cycles as the settlement data is updated by Elexon.

Figure: Maximum monthly ZCO% after NESO operational actions, versus ZCO provided by the market (during the settlement period when the maximum occurred) – two-year view

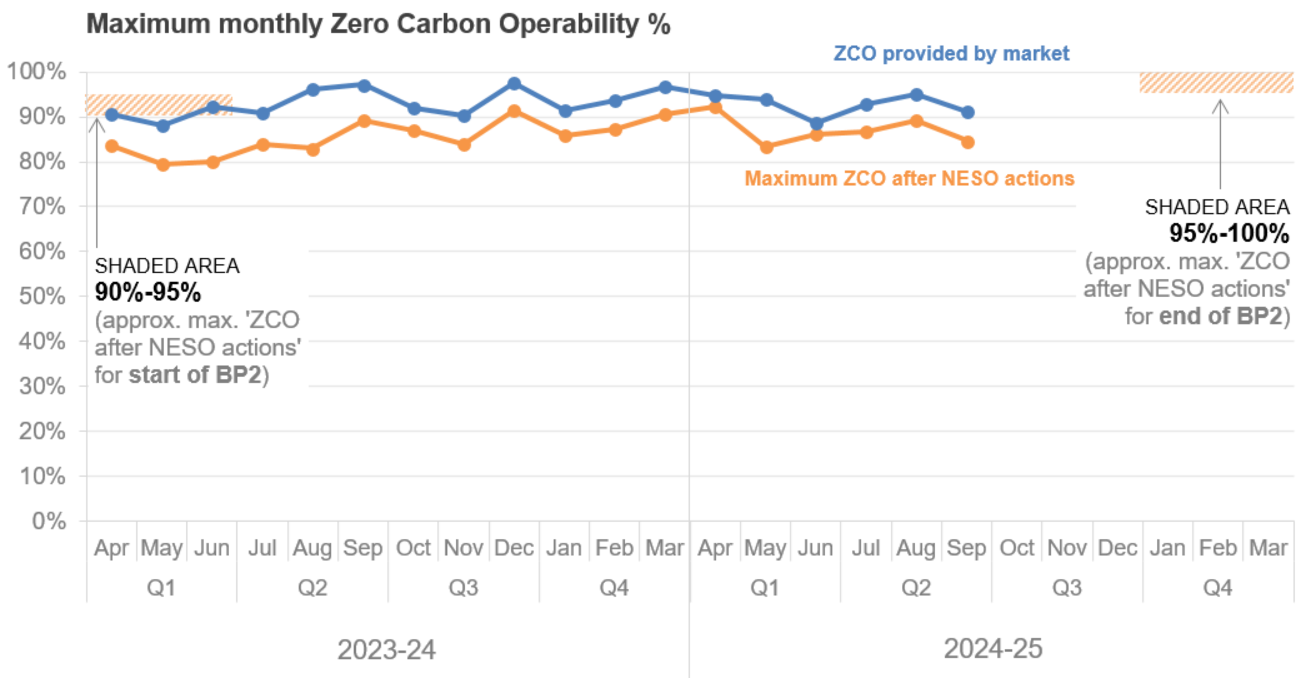
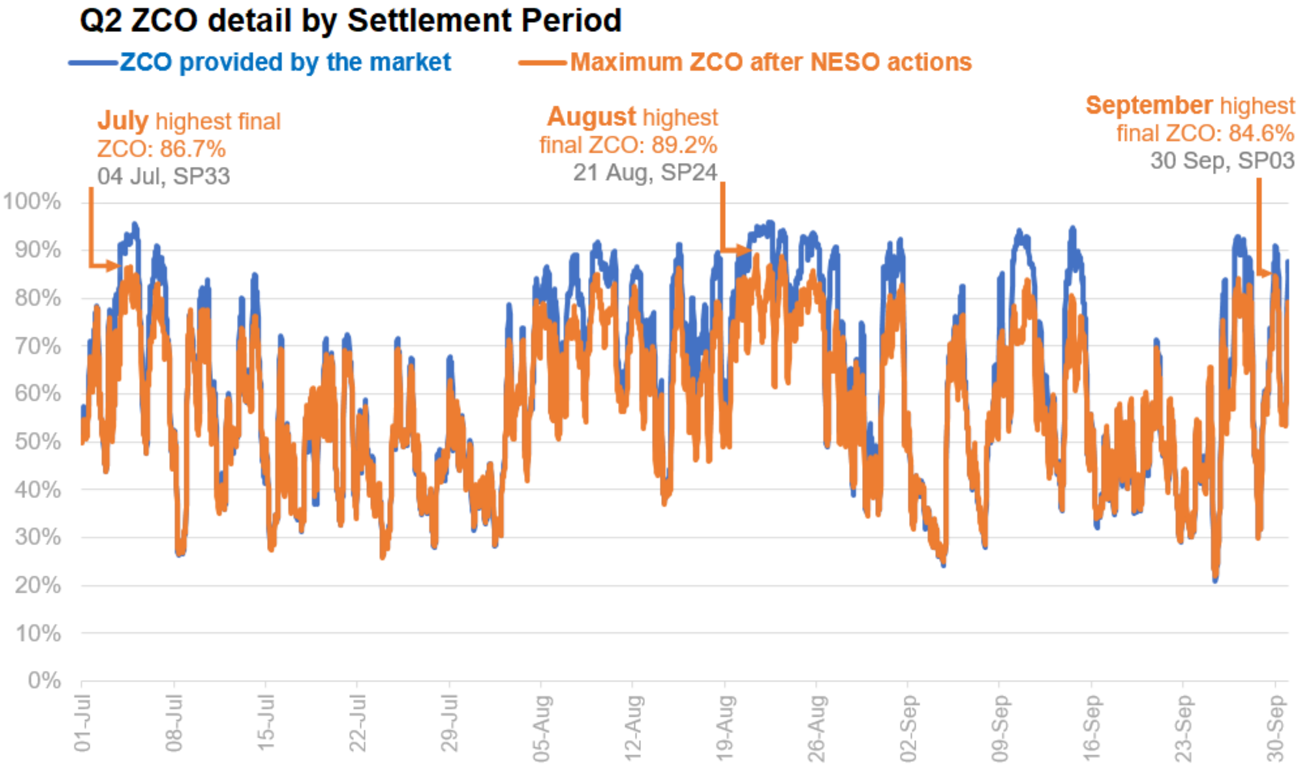


Figure: Q2 2024-25 ZCO by Settlement Period, before and after NESO operational actions



Supporting information

In Q2 2024-25, the monthly average highest ZCO was 87% which is consistent with the Q1 monthly average, also 87%.

In July the highest ZCO% performance for a single settlement period was 87%, the highest achieved since setting a new record of 92% in April. On 4 July transmission connected wind output remained high at around 16GW and embedded solar generation forecast peaked at over 9GW. The high wind output was focused in areas of high transmission congestion which required careful management and contingency gas units to ensure sufficient margin was held outside of the constrained regions.

In August the highest ZCO% performance for a single settlement period increased by 2.5% to 89%. On 21 August high levels of system constraints in multiple areas resulted in high levels of wind being bid off the system manage constraints. System operation was challenging with wind output forecast due to increase from 12.2GW to 19.6GW withing 24 hours.

September ZCO% performance for a single settlement period decreased to 85%. This was 4.5% lower than September 2023 and the second lowest month this year since May 2024.

On the highest day, 30 September, embedded solar output was low with a peak forecast of 1.5GW. Yellow weather warnings for rain were in place for the Southwest and Midlands and the wind forecast gradually reduced during the day but remained 1GW above forecast. This day also marked a significant milestone in the UK’s journey to Net Zero as it became the first G7 nation to remove coal completely from its power generation portfolio after 142 years of the use of coal for electricity generation in the UK.

The YTD average ZCO% performance for a single settlement period at this time in 2023 was 83.2%. The current YTD average is 3.8% higher at 87%.

Highest final ZCO by month vs previous year

Quarter	Month	2023	2024	Difference
Q1	April	83.6%	92.2%	+8.6%
	May	79.6%	83.4%	+3.8%
	June	79.9%	86.1%	+6.2%
Q2	July	83.9%	86.7%	+2.8%
	August	82.9%	89.2%	+6.3%
	September	89.1%	84.6%	-4.5%
Q3	October	86.8%		
	November	84.0%		
	December	91.3%		
Q4	January	85.8%		
	February	87.1%		
	March	90.5%		

RRE 1G Carbon intensity of NESO actions

This Regularly Reported Evidence (RRE) measures the difference between the carbon intensity of the combined Final Physical Notification (FPN) of machines in the Balancing Mechanism (BM) and the equivalent profile with balancing actions applied.

This takes account of both transmission and distribution connected generation and each fuel type has a Carbon Intensity in gCO2/kWh associated with it. For full details of the methodology please refer to the Carbon Intensity Balancing Actions Methodology document. The monthly data can also be accessed on the Data Portal here. Note that the generation mix measured by RRE 1F and RRE 1G differs.

It is often the case that balancing actions taken by NESO for operability reasons increase the carbon intensity of the generation mix. More information about NESO's operability challenges is provided in the Operability Strategy Report.

September 2024-25 performance

Figure: 2024-25 Average monthly gCO2/kWh of actions taken by NESO (vs 2023-24)

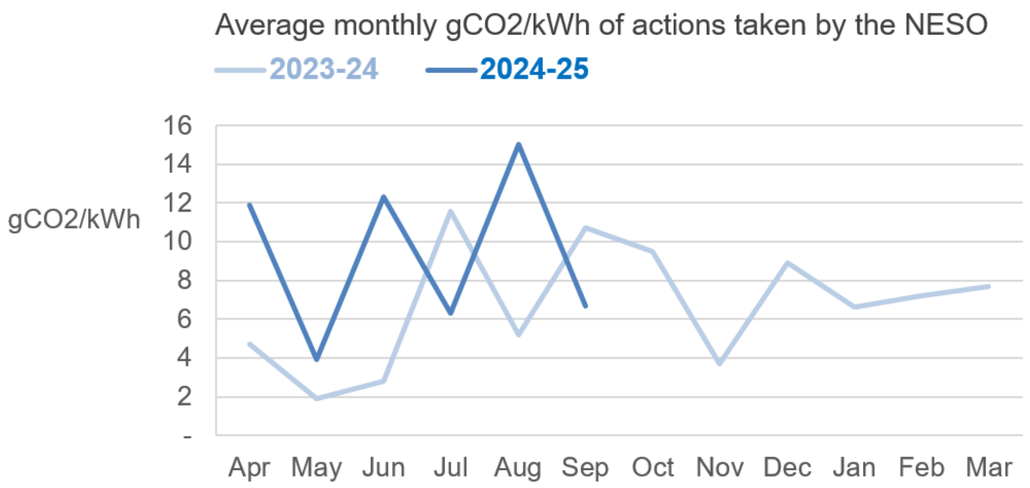


Table: Average monthly gCO2/kWh of actions taken by NESO

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Carbon intensity (gCO2/kWh)	11.87	3.93	12.31	6.33	15.02	6.69						

Supporting information

In September 2024, the average monthly carbon intensity from NESO actions was 6.69g/CO2/kWh. This is 1.92g/CO2/kWh lower than the 2024 YTD average of 8.61g/CO2/kWh.

The maximum difference between the carbon intensity of the combined FPN of machines in the BM and the equivalent profile with balancing actions applied was 61.41g/CO2/kWh which took place on 14 September at 1830.

On 14 September across the afternoon the initial unconstrained market was 5GW higher than forecast demand, in addition 4GW of bids were being taken to manage system constraints and inertia.

On 21 September NESO actions resulted in a negative carbon intensity of -13.22g/CO2/kWh. During this time, transmission connected wind output remained steady and there were no active constraints.

Multiple periods of negative carbon intensity on 1-9 September and 16-25 took place and contributed to a reduction of 8.61g/CO2/kWh from August's carbon intensity.

RRE 1H Constraints Cost Savings from Collaboration with TOs

The Transmission Operators (TOs) need access to their assets to upgrade, fix and maintain the equipment. TOs request this access from NESO, and we then plan and coordinate this access. We look for ways to minimise the impact of outages on energy flow and reduce the length of time generation is unable to export power onto the network.

This Regularly Reported Evidence (RRE) measures the estimated £m avoided constraints costs through NESO-TO collaboration.

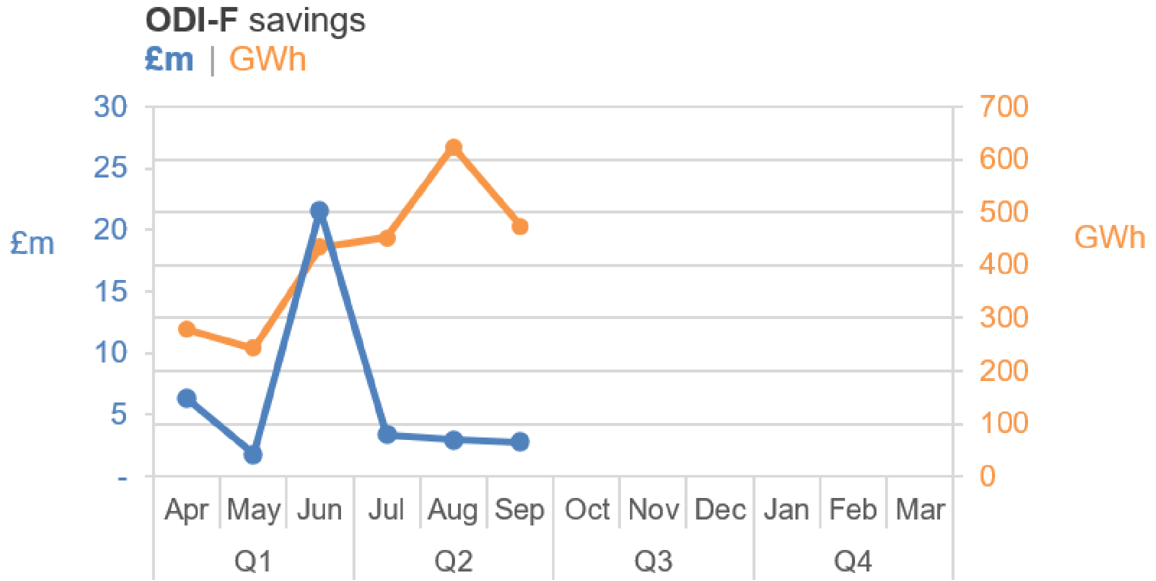
There are two ways NESO can work with the TOs to minimise constraint costs. We will report on both for RRE 1H:

- ODI-F savings: Actions taken through the System Operator: Transmission Owner (SO:TO) Optimisation ODI-F
    - Output Delivery Incentives (ODIs) are incentives that form part of the TOs' RIIO-2 framework. They are designed to encourage licensees to deliver outputs and service quality that consumers and wider stakeholders want to see. These ODIs may be financial (ODI-F) or reputational (ODI-R).
    - One of these ODIs, the SO:TO Optimisation ODI-F, is a new two-year trial incentive to encourage the Electricity Transmission Owners (TOs) to provide solutions to NESO to help reduce constraint costs according to the STCP 11-4[3] procedures. NESO must assess the eligibility of the solutions that the TOs put forward in line with STCP 11-4, and must deliver the solutions in order for them to be included as part of the SO:TO Optimisation ODI-F and this RRE 1H.
    - For RRE 1H, where constraint savings are delivered through the SO:TO Optimisation ODI-F, the savings are calculated in line with the methodology for that incentive.
- Other savings: Actions taken separate from the SO-TO Optimisation ODI-F

NESO also carries out other activities to optimise outages. In these cases, the assumptions used for estimating savings will be stated in the supporting information.

Figure: Estimated £m savings in avoided constraints costs (ODI-F) – 2024-25

(Estimated savings in GWh are also shown for context)



[3] The STCP 11-4 'Enhanced Service Provision' procedure describes the processes associated with NESO buying a service from a TO where this service will have been identified as having a positive impact in assisting NESO in minimising costs on the GB Transmission network.

Figure: Estimated £m savings in avoided constraints costs (Other)

(Estimated savings in GWh are also shown for context)

*Note **vertical axes scales** differ from the ODI-F graph above.*

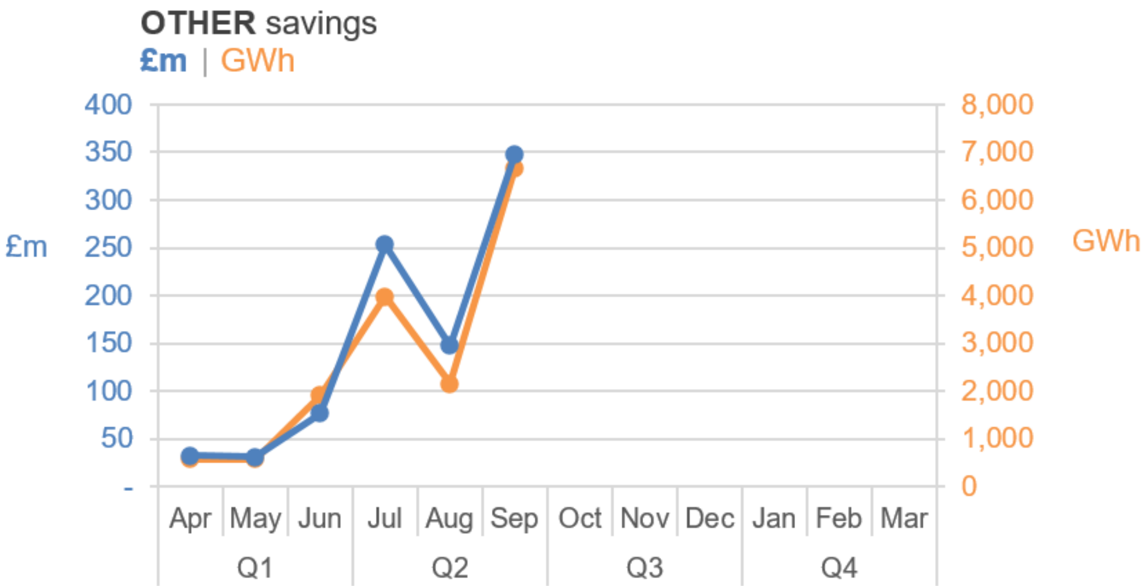


Table: Monthly estimated £m savings in avoided constraints costs (2024-25)

	ODI-F savings	Other savings	ODI-F savings	Other savings
	£m	£m	GWh	GWh
Apr	6.3	32.8	278.8	573.6
May	1.8	30.8	243.4	576.6
Jun	21.6	76.9	434.6	1908.5
Jul	3.4	253.4	451.3	3981.4
Aug	3.0	147.3	623.5	2150.0
Sep	2.8	347.9	474.1	6676.9
Oct				
Nov				
Dec				
Jan				
Feb				
Mar				
YTD	**39.0**	**889.1**	**2505.7**	**15867.0**

Note that figures from previous quarters may change as some savings are updated retrospectively with costs that were not available at the time that the activities were carried out.

Prices of £36 per MWh are used for conventional generation and £75 per MWh for renewable generation.

Supporting information

ODI-F (STCP 11-4) Constraint Cost Savings

The Network Access Planning (NAP) team has progressed and completed **9** approved enhanced service provisions from TO's through STCP 11.4 that provided constraint cost savings this quarter. Some of these provisions are highlighted below:

- In July, NGET and NAP agreed an enhancement on Cellarhead - Drakelow 2 400kV circuit to facilitate an outage on Cellarhead - Drakelow 1 400kV circuit, for undertaking routine maintenance works and insurance inspections on this circuit. This enhancement yielded a saving of **12.1 GWh** circa **£0.725 million** to the end consumer.
- In August, enhancements on the Connahs Quay – Legacy - Trawsfynydd 1 (Connahs Quay Leg) 400Kv circuit and on the Connahs Quay – Legacy – Trawsfynydd 1 (Legacy Leg) 400kV circuit were agreed between NGET and NAP to facilitate an outage on Connah's Quay - Legacy - Trawsfynydd 2 400kV circuit, which was needed on outage to carry out routine maintenance on the circuit. With this enhancement in place, a total saving of **72.6 GWh** and **£1 million** to the end consumer was achieved for the duration of the outage.
- In September, NGET and NAP agreed to use a Line Vision technology, on the Kirkby – Washway Farm – Penwortham 1 275kV circuit, to facilitate an outage on Kirkby - Washway Farm - Penwortham 2 275kV circuit, needed for routine maintenance works, system construction and insurance inspection works. This enhancement saved the end consumer **108.0 GWh** and **£1 million**.

In Q2, NAP has realised **1548.9 GWh** approximately **£9.2 million** of cost savings through STCP 11-4. This reporting contains savings for started and completed enhancements, and also enhancements that running across the year have been distributed across each month. There are several ongoing enhancements which will be included in the next quarterly reports once they have successfully completed.

Other Savings (Customer Value Opportunities (CVO)):

The Network Access Planning team has made good progress over the last three months. In collaboration with our stakeholders (TOs and DNOs), we have identified and recorded **72 instances this quarter,** where the NESO's actions directly resulted in adding value to the end consumers and its innovative ways of working facilitated increased generation capacity to the connected customers.

Such actions include moving outage dates, splitting/separating outages, reducing return to service times, obtaining enhanced ratings from TOs, re-evaluating system capacity, identifying and facilitating opportunity outages, aligning outages with customer maintenance and generator shutdowns, proposing, and facilitating alternative solutions for long outages that impact customer, and many more.

Some examples of these instances include:

- NAP received a system access request in July from SHETL on Braco West – Kinadorchy – Tummel 275kV circuit, but this request would clash with the Tummel 275kV half-substation outage. If outages overlapped, a drop of 2300 MW boundary capability would occur for the duration of the overlapped outages. NAP advised SHETL to delay the start of Braco West – Kinadorchy – Tummel 275kV circuit until the Tummel 275kV half-substation outage was completed. This action saved the end consumer **936 GWh** of energy circa **£70.2 million**.
- In August, NAP received an outage request of Hunterston-Kilwinning-Saltcoats 2 132kV and Kilwinning-Meadowhead 2 132kV circuits. For this combination of outages to be agreed, NAP initiated the need to obtain an agreement for a single circuit risk at Meadowhead 132kV. Running Meadowhead at single circuit risk allowed the continued use of Meadowhead – Kilmarnock 132kV circuit, thus preventing the need to restrict the Western Link HVDC. This action realised savings of **563.2 GWh** and **£42.2 million** to the end customer.
- NAP secured an operational capability limit (OCL) for SHETL to update the substation control systems and remove the down rating on Blackhillock – Cairnford – Kintore 275kV. This action enabled a successful placement of the Blackhillock - Kintore 1 275kV circuit outage, to undertake the new cable section installation works on the circuit. This OCL action increased the boundary capability by **700MW** for the duration of the outage. Thus saving **1.14 TWh** and circa **£86.2 million** to the end consumer.

The above and many more customer value opportunities represent a total of **12.81 TWh** approximately **£748.7 million** of extra generation capacity across Q2, which would have otherwise been constrained at a cost to the end consumer.

The £/MWh figure for savings is calculated per outage. £50 per MWh is used for savings on conventional generation, £75 per MWh is used for renewable generation. Where full commercial cost benefit analysis assessment is available these figures are used instead. Due to the high price per MWh in fully costed CVOs and the increase in renewable generation on the network, the average price per MWh is approximately £65.

RRE 1I Security of Supply

This Regularly Reported Evidence (RRE) shows when the frequency of the electricity transmission system deviates more than ± 0.3Hz away from 50 Hz for more than 60 seconds, and where voltages are outside statutory limits. On a monthly basis we report instances where:

- The frequency is more than ± 0.5Hz away from 50 Hz for more than 60 seconds
- The frequency was 0.3Hz - 0.5Hz away from 50Hz for more than 60 seconds.
- There is a voltage excursion outside statutory limits. For nominal voltages of 132kV and above, a voltage excursion is defined as the voltage being more than 10% away from the nominal voltage for more than 15 minutes, although a stricter limit of 5% is applied for where voltages exceed 400kV.

For context, the **Frequency Risk and Control Report** defines the appropriate balance between cost and risk, and sets out tabulated risks of frequency deviation as below, where 'f' represents frequency:

Deviation (Hz)	Duration	Likelihood
f > 50.5	Any	1-in-1100 years
49.2 ≤ f < 49.5	up to 60 seconds	2 times per year
48.8 < f < 49.2	Any	1-in-22 years
47.75 < f ≤ 48.8	Any	1-in-270 years

At the end of the year, we will report on frequency deviations with respect to the above limits and communicate any plans for future changes to the methodology.

September 2024-25 performance

Table: Frequency and voltage excursions (2024-25)

	2024-25											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Frequency excursions (more than 0.5 Hz away from 50 Hz for over 60 seconds)	0	0	0	0	0	0						
Instances where frequency was 0.3 – 0.5 Hz away from 50Hz for over 60 seconds	0	0	1	0	0	0						
Voltage Excursions defined as per Transmission Performance Report[4]	0	0	0	0	0	0						

Supporting information

September performance

There were no reportable voltage or frequency excursions in September.

[4] https://www.neso.energy/industry-information/industry-data-and-reports/system-performance-reports

RRE 1J CNI Outages

This Regularly Reported Evidence (RRE) shows the number and length of planned and unplanned outages to Critical National Infrastructure (CNI) IT systems.

The term 'outage' is defined as the total loss of a system, which means the entire operational system is unavailable to all internal and external users.

September 2024-25 performance

Table: 2024-25 Unplanned CNI System Outages (Number and length of each outage)

Unplanned	2024-25											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Balancing Mechanism (BM)	0	0	0	0	0	0						
Integrated Energy Management System (IEMS)	0	0	0	0	0	0						

Table: 2024-25 Planned CNI System Outages (Number and length of each outage)

Planned	2024-25											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Balancing Mechanism (BM)	0	0	0	1 outage 265 mins	1 outage 203 mins	0						
Integrated Energy Management System (IEMS)	0	0	0	0	0	0						

Supporting information

September performance

There were no outages, either planned or unplanned, encountered during September 2024.

Notable events during September 2024

Balancing Programme webinar – 26 September

On 26 September, the team were joined by 75 attendees from across the industry to share the latest on transforming our balancing and forecasting capabilities at the Balancing Programme Industry Webinar. The session provided an overview of system transformation for both balancing and forecasting, as well as details on constraint management using the Open Balancing Platform & enhancements being made to the Legacy Dispatch Algorithm.

Alongside other product delivery updates, the team looked beyond 2025 with a snapshot of future product development driven by industry insight and discussed next steps to progress ideas.

The event was well received by stakeholders and prompted over 25 questions, the answers to which will be published on our website.

Role 2

(Market developments and transactions)

Metric 2Ai Phase-out of non-competitive balancing services

This metric measures the percentage of services procured by NESO that are procured on a non-competitive basis. For the purpose of this metric, we consider a 'non-competitive' service to be either a bilateral contract or a service with significant barriers to entry. It excludes SO-SO trades, which are trades made between system operators of connected countries. These are used to determine the direction of electricity flow over interconnectors. The volumes reported in this metric are those delivered within the time period.

There are benchmarks for the following categories: Frequency Response (FR) and Reserve, Reactive Power, and Constraints.

Benchmarks are set based on NESO's current and projected procurement for each of these services:

Category	Benchmark	Assumptions applied in BP2 benchmark
FR and Reserve	Year 1: 25% Year 2: 20%	• Historical data was analysed from the previous reporting period (BP1) and uplift of 5% applied for the benchmark • Reserve will continue to be procured competitively until the implementation of new reserve services
Reactive power	Year 1: 90% Year 2: 90%	• Historical data was analysed from the previous reporting period (BP1) and no uplift applied for the benchmark • Understanding of opportunities for competitive procurement of Reactive Power have been further developed through 2024 as part of the development of the Reactive Power Market. • There will continue to be specific regional requirements, and these will be procured through market mechanisms where feasible.
Constraints	Year 1: 65% Year 2: 55%	• Historical data was analysed from the previous reporting period (BP1) and uplift of 5% applied for the benchmark • B6 Commercial Intertrip service was the first Constraint service to be delivered competitively. More will be delivered through market mechanisms in BP2, such as Constraint Management Intertrip Service (EC5 CMIS) and Local Constraint Market (LCM).

The non-competitive percentage is calculated on a volume basis, which is measured in MWs, with the exception of Reactive Power which is measured in MVAr.

These expectations are set for the current suite of products and may be revised if new products are introduced.

Category	Services procured competitively	Services procured non-competitively
Frequency Response	• Static FFR (Firm Frequency Response) • Dynamic Containment Low and High • Dynamic Moderation Low and High • Dynamic Regulation Low and High	• Mandatory Frequency Response (Primary, Secondary and High) • Fast Start
Reserve	• Day-Ahead STOR (Short Term Operating Reserve) • Balancing Reserve	• Long Term STOR • Optional Fast Reserve • Super SEL (Stable Export Limit) (Footroom)
Reactive Power	• Mersey Reactive Power Pathfinder • Pennines Pathfinder • Stability Pathfinder • Mid-term Stability Market • Voltage 2026 contracts (Contract award Sept/Oct 2024)	• Reactive • Mandatory Reactive Lead & Lag • Stability Reactive Lead & Lag • Reactive Sync Comp, Comp Lead and Comp Lag
Constraints	• B6 & EC5 Constraint Management Intertrip Service	• Strike Price

Overall performance – All services

H1 2024-25 performance

Figure: Percentage of volume procured non-competitively vs benchmark

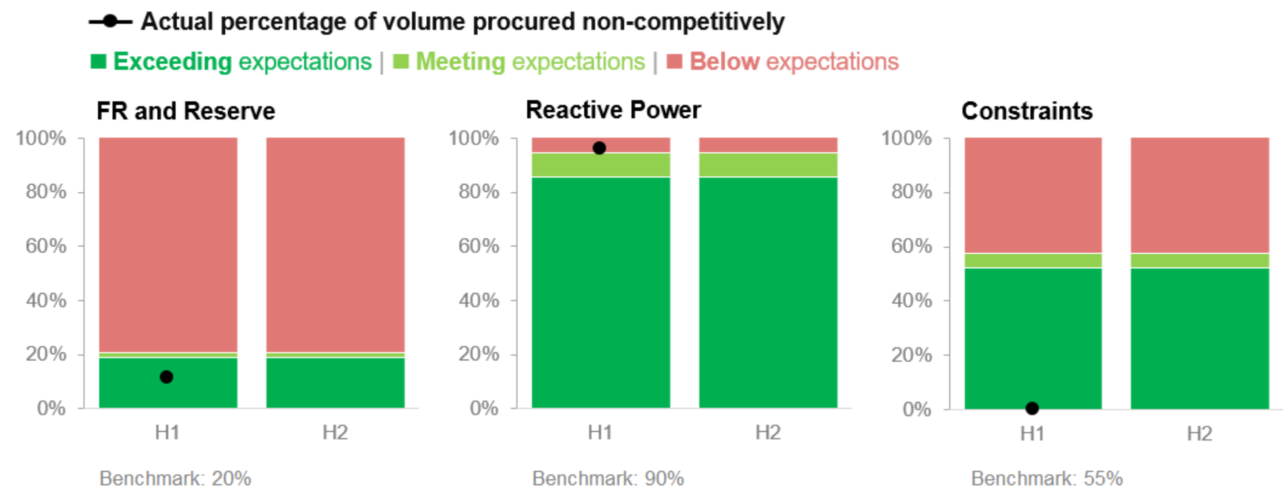
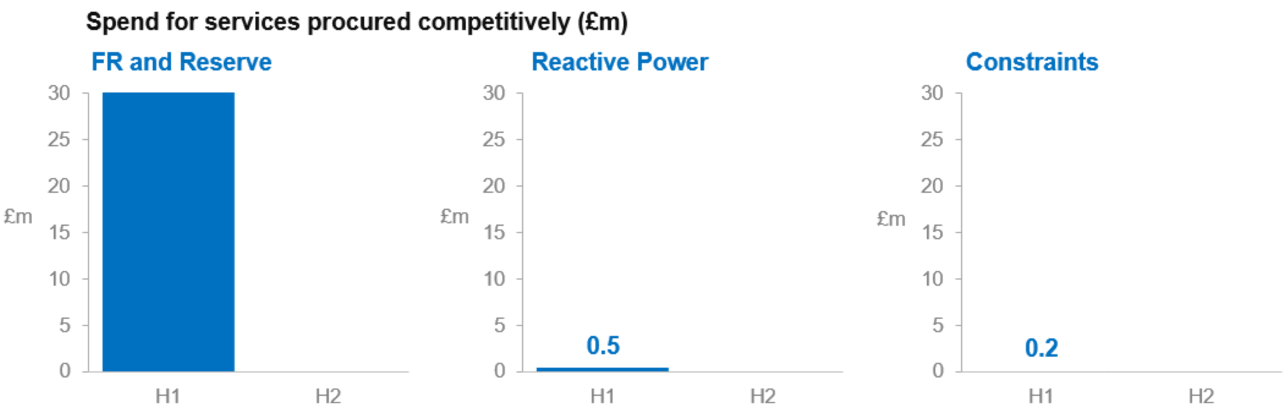


Figure: Six-Monthly competitive spend by service



SO-SO trades made during H1

Historically SO-SO Trades were available to us across the IFA & IFA2, Nemo Link, EWIC & Moyle Interconnectors. Since the introduction of hourly gates on IFA, IFA2 & Nemo Link, the current required notice period is longer than the hourly gates provide, and so we can no longer use this service. EWIC & Moyle Interconnectors enable SO-SO trades via Cross Border Balancing (CBB) and Coordinated Third Party Trading (CTPT) with EirGrid and SONI. We do not trade via third Parties and therefore only have access to CBB.

Trades for H1 total £0m consisting of 0 trades on 0 interconnector/s.

Data content Information: Data consists of final settlement data for the first five months of the most recent six months with the sixth month to be provided within the next submission of the report.

1. Frequency Response and Reserve

H1 2024-25 performance

Table: Frequency Response and Reserve percentage of services procured on a non-competitive basis, and spend.

Frequency Response & Reserve		Unit	H1	H2	Full Year
Volume	Total volume procured	GWh	44,413		44,413
	Volume procured non-competitively	GWh	5,145		5,145
	Percentage of volume procured non-competitively	%	12%		12%
	Year 2 benchmark	%	**20%**		**20%**
	Status	n/a	●		●
Spend	Total spend	£m	68.3		68.3
	Spend for volume procured competitively	£m	30.9		30.9
	Spend for volume procured non-competitively	£m	37.4		37.4

Performance benchmarks:

- **Exceeding expectations:** 5% or more lower than annual procurement benchmark
- **Meeting expectations:** within ±5% of the annual procurement benchmark
- **Below expectations:** 5% or more higher than the annual procurement benchmark

The benchmark for Year 2 is 20%

Supporting information

In H1,12% of Frequency Response and Reserve volume was procured non-competitively, which is greater than 5% of the benchmark of 20%, and therefore exceeding expectations.

With the growth in response and reserve competitive markets, including the launch of Balancing Reserve in March 2024, we are able to procure more of our requirements at day-ahead so have less reliance on non-day-ahead procured services. As more reserve services are introduced to day-ahead procurement we expect to see further reductions in the Frequency Response and Reserve volumes that are procured non-competitively. For Long Term STOR, we remain committed to the legacy ~ 400MW volume of contracts which expire in April 2025. This volume will then be replaced by volumes procured at day-ahead through the new reserve products.

2. Reactive Power

H1 2024-25 performance

Table: Reactive Power percentage of services procured on a non-competitive basis and spend.

Reactive Power		Unit	H1	H2	Full Year
Volume	Total volume procured	GVARh	21,688		21,688
	Volume procured non-competitively	GVARh	20,806		20,806
	Percentage of volume procured non-competitively	%	**96%**		**96%**
	Year 2 benchmark	%	**90%**		**90%**
	Status	n/a	●		●
Spend*	Total spend	£m	93.9		93.9
	Spend for volume procured competitively	£m	0.5		0.5
	Spend for volume procured non-competitively	£m	93.4		93.4

*Rounding: Spend figures in £m are rounded to the nearest 1 decimal place, therefore Total spend may differ slightly from the sum of competitive and non-competitive spend.

Performance benchmarks:

- **Exceeding expectations:** 5% or more lower than annual procurement benchmark
- **Meeting expectations:** within ±5% of the annual procurement benchmark
- **Below expectations:** 5% or more higher than the annual procurement benchmark

The benchmark for Year 2 remains at 90%

Supporting information

In H1, 96% of Reactive Power volume was procured non-competitively, which is more than 5% higher than the benchmark of 90% and therefore below expectations. The benchmark was established late in the BP1 period, on the expectation that by BP2 we would have a Reactive Market in place.

The Reactive Power service is delivered primarily by providers who have Mandatory Service Agreements and are typically connected to the Transmission Network. These providers would also be in the Balancing Mechanism (BM).

The long-term Mersey Pathfinder awarded two contracts to meet a need in this region: the Peak Gen shunt reactor service went live in Q1 2022-23 and the Zenobe Battery live in Q4 2022-23.. In January 2022 we also awarded contracts to meet reactive needs in the Pennines region that are due to commence in 2024-26 which will decrease the percentage of reactive power services procured and utilised through non-competitive means. All three Pennines solutions delivered by NGET commissioned in the last two quarters and are now fully operational.

In October 2023 we launched a third long-term pathfinder style tender “Voltage 2026” to award further contracts to meet reactive power absorption requirements in London and Northern England. We are on track to enter contracts following this tender in October-November 2024.

A Reactive power market is being established based on the initial market design recommendation from the NIA “Future of Reactive Power” project in 2022. We have completed our work on the design of the long-term reactive power market and this is ready for use based on system requirements being identified.

We have identified 2029 as the earliest year in which there may be a requirement and continue to review these requirements to determine whether to launch a long-term tender. Implementing the long-term market will drive locational investment and enable greater competition in the delivery of reactive power service provision.

We are continuing to develop the mid-term and short-term markets and assess the consumer benefit impact these markets can deliver.

3. Constraints

Q2 2024-25 performance

Table: Constraints percentage of services procured on a non-competitive basis and spend.

Constraints		Unit	H1	H2	Full Year
Volume	Total volume procured	GWh	22		22
	Volume procured non-competitively	GWh	0		0
	Percentage of volume procured non-competitively	%	0%		0%
	Year 2 benchmark	%	**55%**		**55%**
	Status	n/a	●		●
Spend	Total spend	£m	0.16		0.16
	Spend for volume procured competitively	£m	0.16		0.16
	Spend for volume procured non-competitively	£m	0.00		0.00

Performance benchmarks:

- **Exceeding expectations:** 5% or more lower than annual procurement benchmark
- **Meeting expectations:** within ±5% of the annual procurement benchmark
- **Below expectations:** 5 or more higher than the annual procurement benchmark

The benchmark for Year 2 is 55%

Supporting information

During H1 the Intertrip service had low utilisation with only arming instructions for the EC5 boundary in August. The B6 region received no arming instructions for H1, due to certain operational factors such as circuit outages and increased flows in other parts of the network.

Metric 2X Day-ahead procurement

This metric measures the percentage of balancing services procured at no earlier than the day-ahead stage, i.e. those procured at day-ahead or closer to real time. We report on total contracted volumes (mandatory and tendered) in megawatts (MWs). Expectations are set for all relevant services that are currently procured by NESO and may be revised if new products are introduced.

Benchmarks are set based on expected product expirations, and expectations for new procurement volumes:

Note that in line with the terms of a derogation from the requirements of Article 6(9) of the Electricity Regulation, NESO is required to procure at least 30% of services no earlier than day-ahead stage.

Whilst NESO set out the daily requirements for day-ahead procurement, when these requirements are not met through competitive day-ahead tendering the outstanding requirement could be met through other means such as bi lateral agreements and mandatory markets.

The following services are included in the figures for this metric:

Day-ahead:	Short-Term Operating Reserve (STOR), Dynamic Containment, Dynamic Moderation, Dynamic Regulation, Static Firm Frequency Response
Non-day-ahead:	Mandatory Frequency Response, Long Term STOR

Services newly introduced during BP2 should only be included in this metric if they displace those procured earlier than day-ahead.

Q2 2024-25 performance

Figure: Quarterly percentage of balancing services procured at no earlier than day-ahead

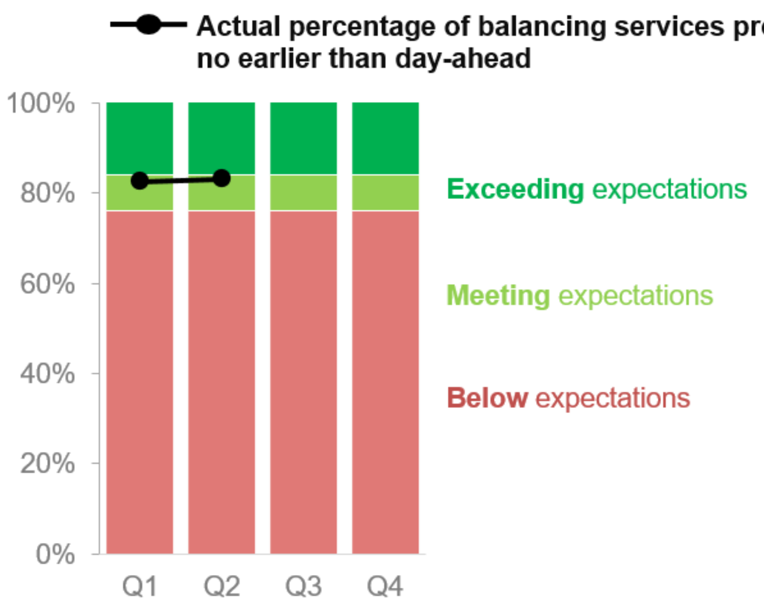


Table: Quarterly percentage of balancing services procured at no earlier than day-ahead

	Unit	Q1	Q2	Q3	Q4	Full Year
Total volume of balancing services procured	MW	13,025	13,102			26,127
Volume procured no earlier than day-ahead	MW	10,752	10,896			21,648
Actual % of balancing services procured no earlier than day-ahead (i.e. day-ahead or closer to real time)	%	83%	83%			83%
Benchmark	%	80%	80%			80%
Status	n/a	●	●			●

Performance benchmarks:

- **Exceeding expectations:** 5% or more higher than annual day-ahead procurement benchmark
- **Meeting expectations:** within ±5% of the annual day-ahead procurement benchmark
- **Below expectations:** 5% or more lower than the annual day-ahead procurement benchmark

For year 2, the benchmark increases to 80%

Data content Information:	Data consists of final settlement data for first two months of the most recent quarter with 3rd month to be provided within the next submission of the report.

Supporting information

In H1, 83% of balancing services volume was procured no earlier than day-ahead, compared to the benchmark of 80%, and therefore meeting expectations.

The meeting expectations performance for day-ahead procurement of services is due to several factors across the markets. Since their launches the response and reserve markets have matured, resulting in greater market liquidity and greater competition this latest figure includes the day ahead Balancing reserve service going in live in March 2024.

Going forward we would expect to see this performance increase as legacy services are fully phased out and new services go live.

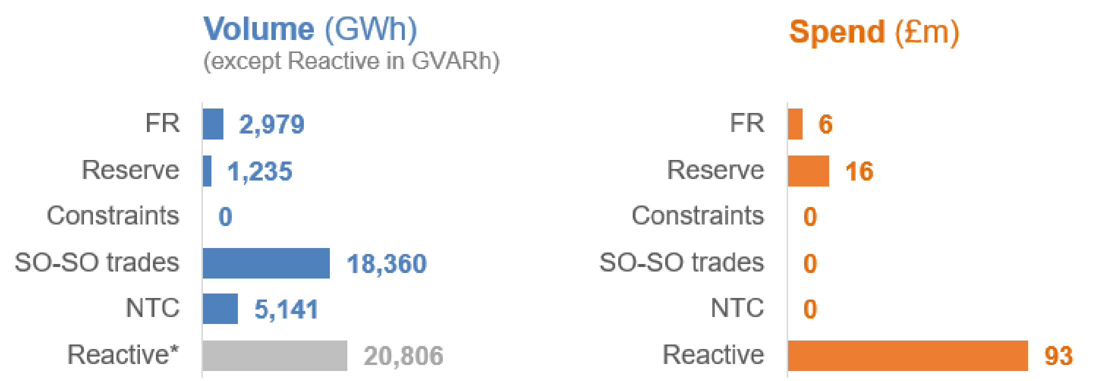
RRE 2Aii Balancing services procured in a non-competitive manner

This Regularly Reported Evidence (RRE) measures the volume and spend for non-competitive services for contracts. For the purpose of this metric, we have included volumes where the decision to instruct non-competitive services is made after 31 March 2023, even if the contract terms were signed before (e.g. Mandatory Frequency Response). Figures are reported in GWh/GVARh for the contracted month, which is calculated as the contracted volume in MW multiplied by the number of contracted hours.

Legacy Short-Term Operating Reserve (STOR) and Enhanced Frequency Response (EFR) contracts are excluded. However, all SO-SO trades and NTC application, as well as any other non-competitively procured services with contract award after this date, are included.

H1 2024-25 performance

Figure: Volume and spend for non-competitive services for contracts



*Reactive volume is measured in GVARh and is not directly comparable to the other services measured in GWh but is included in the graph with this caveat.

Table: Volume and spend for non-competitive services

	Service	Unit	H1	H2	Full Year
VOLUME	Frequency Response****	GWh	2,979		2,979
	Reserve****	GWh	1,235		1,235
	Constraints***	GWh	0		0
	SO-SO trades	GWh	18,360		18,360
	Net Transfer Capacity (NTC)	GWh	5,141		5,141
	Total Volume in GWH	GWh	**27,715**		**27,715**
	Reactive (in GVARh)	GVARh	20,806		20,806
SPEND	Frequency Response	£m	6		6
	Reserve -	£m	16		16
	Constraints	£m	0		0
	SO-SO trades *	£m	0		0
	Net Transfer Capacity (NTC)**	£m	0		0
	Reactive	£m	93		93
	Total spend	£m	**115**		**115**

*SO-SO trades, trade volumes and costs for services provided to NESO by another country's system operator have been included. Services provided by NESO to another country's System Operator are excluded.

**NTC cost was updated for Q1 to show payments to provider only – this logic to be used going forward

***For Q2 - Super SEL category has moved from Constraints to Reserve

****Total non-competitive procurement for Frequency Response and Reserve in RRE 2Aii will not align with volume stated in Metric 2Ai. This is because Legacy Short-Term Operating Reserve (STOR) and Enhanced Frequency Response (EFR) contracts are excluded from RRE 2Aii as per the agreed methodology.

Data content Information:	Data consists of final settlement data for the first five months of the most recent six months with the sixth month to be provided within the next submission of the report.

Supporting information

Frequency Response

The volume of non-competitive services procured in Frequency Response is Mandatory Frequency Response (MFR). MFR is used as an element of our response holding that can be instructed within operational timescales. We are considering alternatives to MFR to reduce this volume in future and have begun engagement with stakeholders.

Reserve

This volume of non-competitive Reserve is made up of the intra-day Optional Fast Reserve product, where prices for the service can be updated by providers per Settlement Period close to real-time. The Optional Fast Reserve product will be phased out with the introduction of the new day-ahead procured reserve products as they are introduced through 2024 and 2025.

Optional Fast Reserve is used for short-term frequency management outside contracted fast reserve windows e.g., periods where wind may have dropped unexpectedly, or demand has increased more than anticipated. Note that day-ahead procured STOR is to replace the largest loss and thus utilisation should always be quite low.

Super SEL, which is now included as a Reserve service, is an active but optional contract that a number of generators can provide as a backup to other solutions. Super SEL has been utilised briefly in June of this year.

Constraints

There were minimal arming instructions throughout H1 due to low wind and certain outage conditions.

SO-SO Trades

Historically SO-SO Trades were available to us across the IFA & IFA2, Nemo Link, EWIC & Moyle Interconnectors. Since the introduction of hourly gates on IFA, IFA2 & Nemo Link, the current required notice period is longer than the hourly gates provide, we can no longer use this service.

EWIC & Moyle Interconnectors enable SO-SO trades via Cross Border Balancing (CBB) and Coordinated Third Party Trading (CTPT) with EirGrid and SONI. NESO does not trade via 3rd Parties and therefore only has access to CBB.

Net Transfer Capacity (NTC)

A capacity management process is used to ensure secure system operation for both Interconnectors and onshore TSOs. This process can result in the reduction in capacity through the application of a Net Transfer Capacity (NTC) and this reduction is defined as a non-frequency ancillary service.

Standard Licence Condition C28 requires that we procure non-frequency balancing services using market-based procedures. NTC is not procured through market-based procedures and therefore requires a derogation from this requirement. The procurement of NTC cannot be market-based due to technical parameters and the fact that alternative actions are not sufficient or economically efficient.

On 28 September 2023, Ofgem granted us a derogation against C28 for NTCs until 30 September 2026. This follows a request we sent to Ofgem to extend this derogation in August. They also approved our revised NTC Commercial Consultation Methodology, which applies from 1 October 2023. This gives our Control Room certainty that they can use this vital tool when required for system security over the coming years.

NTCs are our only way of guaranteeing system security in real time. As a result, they are as near to real-time calculated values as the market structure allows. Any restrictions are based on the forecast system conditions for that particular real-time period and are reflective of the limits of GB system security.

RRE 2E Accuracy of Forecasts for Charge Setting – BSUoS

This Regularly Reported Evidence (RRE) shows the accuracy of Balancing Services Use of System (BSUoS) forecasts used to set industry charges against the actual outturn charges.

The BSUoS charge (£/MWh) is now based upon a fixed tariff that was published in January 2023 and implemented in April 2023. Daily balancing costs (and other costs that ultimately make up the costs recovered through the BSUoS charge) were forecast for the year ahead, and two 6-month tariffs were set to cover the 2023/24 charging year.

We continue to forecast balancing costs monthly and measure our performance against this forecast. It remains an important metric to support the fixed tariff methodology by being the main component of the fixed BSUoS tariff. The BSUoS cost forecast (costs rather than what is charged against the fixed tariff) is probabilistic and therefore produces percentile values. The published forecast for each month is based on the central value of the BSUoS cost forecast (50th percentile). If the outturn BSUoS costs are below the 50th percentile of the cost forecast, then the actual costs for that month would be lower than the forecast predicted, provided the actual volume is at or above the estimate (and vice versa).

September 2024-25 performance

Figure: 2024-25 Monthly BSUoS forecasting performance (Absolute Percentage Error)

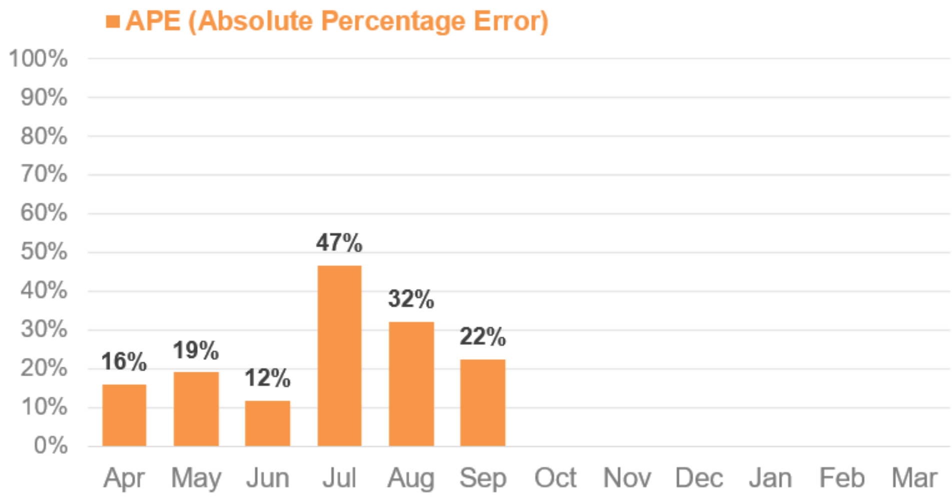


Table: Month ahead forecast vs. outturn BSUoS (£/MWh) Performance - one-year view

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Actual (£ / MWh)	11.5	8.5	12.7	8.0	16.5	10.4						
Month-ahead forecast (£ / MWh)	9.7	10.2	11.2	11.7	11.2	12.7						
APE (Absolute Percentage Error)[5]	**16.0**	**19.0**	**11.8**	**46.6**	**32.1**	**22.4**						

[5] Monthly APE% figures may change with updated settlements data at the end of each month. Therefore, subsequent settlement runs may impact the end of year outturn.

Supporting information

ℹ	**Reporting Frequency change:**	Please note that this will be the final report where this Metric will be shown as monthly. We have reported as monthly for this report as data and commentary have already been reported for the 2 previous months. The frequency has changed to quarterly now we have become NESO as outlined in the new guidance.

September Performance:

Actuals out-turned above forecast for September, with an Absolute Percentage Error of 22.4%.

This is a decrease from last month's absolute percentage error, although constraint costs were still the significant driver in the difference between our forecast and the actual outturn costs.

Costs:

September outturn costs were around the 25th percentile of the forecast produced at the beginning of August.

BSUS forecast is probabilistic and tries to find patterns in recent history. It also uses two key drivers in forecasting expected costs; wholesale market prices and the proportion of demand met by renewables. The proportion of demand met by renewables was 13% lower than our September forecast (22% outturn against 35% forecast). We have previously found that a higher proportion of renewables tends to drive higher constraint costs. Constraint costs were £35m below forecast.

The difference between September forecast and outturn will feed into our future BSUoS forecasts, as the BSUoS model includes a persistence element to account for recent forecast errors.

Volumes:

September actual volume was slightly below with the August forecast. This small variance could be due to weather and temperature fluctuations.

Forecast for September made at the start of July: 20.5TWh

September outturn: 20.4TWh

Notable events during September 2024

Contracts for Difference (CfD) AR6 results

The CfD scheme is the Government's main mechanism for supporting new, low carbon electricity generation projects in Great Britain and has so far awarded contracts totalling over 30GW of new renewable capacity. The Electricity Market Reform Delivery Body (EMR DB) has run the allocation process CfD Allocation Round 6 with results of successful projects published by DESNZ on 3 September.

A CfD Auction was run to competitively allocate contracts against a total annual budget of £1.555 billion (in 2011/12 Prices). The budget was increased from £1.025 billion (in 2011/12 Prices), as a part of the Budget Revision Process conducted by DESNZ after the confirmation valuation of Qualifying Applicants.

The Auction was held across three pots (technology groups) in Delivery Years – 2026/27, 2027/28 – for Pot 1; and Delivery Years – 2027/28 and 2028/29 – for Pot 2; and Delivery Years – 2027/28 and 2028/29 – for Pot 3. Solar PV, Onshore Wind, Floating Offshore Wind, Tidal Stream, Offshore Wind and Offshore Wind Permitted Reductions were the successfully allocated technologies and the capacity and number of projects for each pot are 4278.68 MW and 115 projects for Pot 1; 428.00 MW and 7 projects for Pot 2; and 4941.58 MW and 9 projects for Pot 3.

2024 Revenue and Charging Forums

On September 17, we successfully held an in-person Revenue and Charging forum, providing valuable insights into tariff-setting and charging methodologies for Transmission Network Use of System (TNUoS), Balancing Services Use of System (BSUoS), Assistance for Areas with High Electricity Distribution Costs (AAHEDC), and connection charges. Additionally, on September 24, we conducted a highly engaging online Revenue and Charging forum.

Across both events, we delivered informative content and answered over 60 questions to over 270 industry participants. The in-person forum received an overall satisfaction score of 8.6, while the online forum received a score of 7.4. We recorded the online event for future sharing on our website, ensuring broader accessibility. The feedback surveys collected from both events will play a vital role in shaping our future engagement strategies and event planning.

Role 3

(System insight, planning and network development)

RRE 3A Future Savings from Operability Solutions

April 2023 to September 2024 Performance

This Regularly Reported Evidence (RRE) outlines the forecast medium to long term benefits from new operability measures including:

i. Saved balancing costs
ii. Monetised carbon reductions
iii. Any indicative impact on the SZCP limit

In each report we show projects concluded in the BP2 period so far, with estimated benefits up to the end of contracts. In the narrative we also call out what upcoming projects are likely to be included in subsequent reports during BP2.

Q2 2024-25 performance

i. Saved balancing costs

Table: Forecast balancing costs savings for operability measures concluding in BP2 so far

Operability Solution projects	LATEST VIEW Mid-Year 24-25 View: Forecast Savings (£m)	PREVIOUS VIEW Mid-Scheme 23-25 View: Forecast Savings (£m)	PREVIOUS VIEW Mid-Year 23-24 View: Forecast Savings (£m)
Constraints Management Pathfinder (CMP) B6 extension (October 2025 to September 2026)	**68**	68	45
Constraints Management Intertrip Service (CMIS) EC5 Interim (February 2024 to March 2025)	**11**	11	N/A
TOTAL*	**79**	79	45

* The method to calculate the costs savings it to compare the forecast constraint costs had the contracts not been entered into against those with the contracts being in place. The model we use forecasts constraints across the whole of GB, rather than on a specific boundary.

There is no change to the forecast savings from the mid-scheme report as there has not been any change to the underlying analysis on future constraints. An update will be provided in the end of BP2 report.

In future BP2 incentive reports, we will include the forecast savings of further operability measures as they are completed.

These future projects may include:

- Implementation of the FRCR policy on minimum inertia requirements
- The first Stability Y-1 tender which is currently concluding for service delivery between October 2025 and September 2026
- Voltage 2026 tender which is at contract award stage for service delivery starting in April 2026.
- EC5 Enduring tender that will conclude in February 2025 for service delivery from Summer 2026.

The expected completion dates for the above projects are subject to change and further updates will be provided in future BP2 reports.

Supporting information

Constraints Management Pathfinder (CMP) B6 – Extension of contracts to September 2026

The CMP service has completed two rounds of tenders, awarding annual contracts for delivery between October 2023 and September 2025. However, as some of the contracted units were already connected to the intertripping scheme, we requested that these units commence their service from April 2022, bringing forward the cost and carbon savings as reported in the BP1 end-scheme report.

We intended to revise how the CMP service is procured, from annual tenders with year-long contracts to a one-off tender with longer term agreements. To allow ourselves time to update the commercial, contractual, and technical aspects of the service, we enacted the one-year extension option from the B6 year 2 contracts in Q2 2023-24 which ensures that the current service will be in place until September 2026. In addition, we are in discussions with the Scottish TOs on possible future needs for intertrip scheme on other boundaries in Scotland, which may trigger new tender activities and require the current set of contracts to be extended for a further year.

Constraints Management Intertrip Service (CMIS) EC5 Interim – (February 2024 to March 2025)

As part of the NOA 2021-22 Refresh, it recommended proceeding with commercial solutions CS07 and CS08 to manage constraints in the East Anglia region from 2025 until network reinforcement works are complete.

Since early 2023, we have been developing a commercial intertrip service to contract with generators in the region to be connected to the East Anglia Operational Tripping Scheme (EAOTS). A tender is ongoing with contract award due in February 2025 for services starting by July 2026. This is a delay from the previous start date of April 2025, due to the scope of works required to upgrade the capability of the tripping scheme. A number of generators are already connected to the EAOTS as part of their connection agreement and so we took the decision to carry out a tender with these parties to agree commercial contracts for a service in the interim. The table above shows the forecasted savings to March 2025 with the savings between April 2025 to July 2026 to be included in next incentive report.

ii. Monetised carbon reductions

The carbon prices used in the tables below are taken from the BEIS publication 'valuing greenhouse gas emission in policy appraisal'[6]. These prices are also those used in our RIIO-2 Business Plan 2 Cost-Benefit Analysis – Annex 2[7]. The prices are weighted for the calendar year in which the services are contracted to deliver.

Table: Constraints Management Pathfinder (CMP) B6 extension (October 2025-September 2026)

Constraint Management Pathfinder B6	Unit	Oct 25 – Sept 26
CCGT generation output avoided in GWh	GWh	450
Carbon intensity for Gas (Combined Cycle) from NESO Carbon Intensity Forecast Methodology	gCO2/kWh	394
CO_2 in tonnes	tCO2	177,300
Carbon price (BP2)	£/tCO_2e	263
Savings	**£m**	**47**

Table: Constraints Management Intertrip Service (CMIS) EC5 Interim – (February 2024 to March 2025)

[6] https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal
[7] https://www.neso.energy/document/266121/download

Constraint Management Intertrip Service EC5 Interim	Unit	Feb 24 – Mar 25
CCGT generation output avoided in GWh	GWh	488
Carbon intensity for Gas (Combined Cycle) from NESO Carbon Intensity Forecast Methodology	gCO2/kWh	394
CO_2 in tonnes	tCO_2	192,272
Carbon price (BP2)	£/tCO_2e	257
Savings	**£m**	**49**

Supporting information

There is no change to the forecast savings from the mid-scheme report as there has not been any change to the underlying analysis on future constraints. An update should be provided in the end of BP2 report.

Constraints Management Pathfinder (CMP) B6 extension

The Constraint Management Pathfinder B6 contracts are a contractual arrangement where generators in Scotland are contracted to provide an intertrip service to alleviate system constraints. This allows more renewable generation to be exported which would otherwise have been curtailed. The service has been in use since April 2022 with the table above showing forecasted savings for the contract delivery period of October 2025 to September 2026. To calculate the monetised value of carbon savings, we have used the 2025 Central Series price from BEIS' 'Valuation of greenhouse gas emissions: for policy appraisal and evaluation' policy paper.

The constraint service is estimated to deliver savings of:

- Avoided generation from CCGTs: 450GWh
- Avoided CO2: 177k Tonnes
- **£ Savings: £47m**

Constraints Management Intertrip Service (CMIS) EC5 Interim

The CMIS EC5 contracts make use of generators that are already connected to the EAOTS to be able to be armed to alleviate system constraints. This allows more renewable generation to be exported which would otherwise have been curtailed. The service has been in place since February 2024 with the table above showing forecast savings for the contract delivery period March 2025. To calculate the monetised value of carbon savings, we have used the 2024 Central Series price from BEIS' 'Valuation of greenhouse gas emissions: for policy appraisal and evaluation' policy paper.

The constraint service is estimated to deliver savings of:

- Avoided generation from CCGTs: 488GWh
- Avoided CO2: 192k Tonnes
- **£ Savings: £49m**

iii. Any indicative impact on the SZCP limit

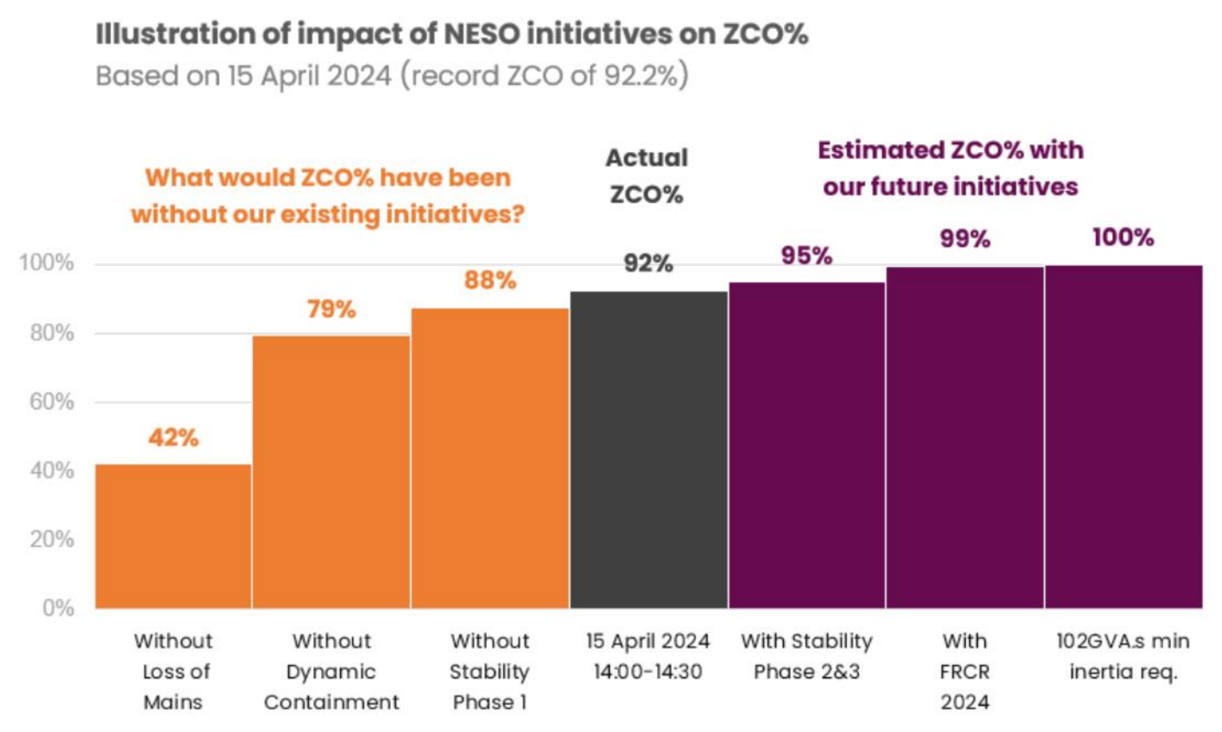
The record for Zero Carbon Operation was 92.2% on 15 April 2024 between 14:00-14:30 and Carbon Intensity was also a record low at 19g CO_2/kWh. There were six carbon emitting generators on the system at the time. Four of these units were running for steam and CfD reasons. The other two were bought by NESO for system reasons.

The below graph shows how much lower the ZCO% would have been on 15 April without the delivery of Stability Phase 1, Dynamic Containment and the Loss of Mains change programme. Each programme is assessed independently rather than cumulatively.

- **Stability Phase 1** delivered 12.5GVA.s of inertia, reducing the need for four units at 1000MW. Without Phase 1 the ZCO% would have been 88%.
- **Dynamic Containment (DC)** has significantly reduced the need to hold legacy frequency response products. Without DC, an additional 2,500MW of headroom would have been required on synchronous carbon emitting generation. This equates to 11 units at 250MW each, reducing the ZCO% to 79%.
- **The Loss of Mains change programme** has reduced the potential volume of embedded generation susceptible to trip following a frequency change faster than 0.125Hz/s. Had we not completed the programme, we would have required 285GVA.s of inertia to prevent the largest single generation loss causing frequency to change faster than 0.125Hz/s, leading to further generation loss. The system was expected to have 140GVA.s, so an additional 48 units would have been needed to deliver 130GVA.s at 250MW each. This would have reduced the ZCO% to 42%.

The graph then shows how our future projects will help close the ZCO gap to 100% by 2025.

- **FRCR 2024** was approved on 27 September 2024, which was to maintain the minimum inertia requirement at 120GVA.s. Therefore FRCR 2024 would reduce the minimum inertia requirement from the 140GVA.s on 15 April to 120GVA.s. This has the effect of needing approximately six less carbon emitting generators. This would increase the Zero Carbon MW by 1500MW and the ZCO% to 99%.
- **102GVA.s min inertia req.** As outlined in our Operability Strategy Report, we are aiming to reduce the minimum inertia requirement to 102GVA.s by 2025. This means more periods with a zero carbon generation mix will be operable. Compared to 15 April 2024, this could reduce the number of carbon emitting units by ten. This would effectively increase the Zero Carbon MW by another 3000MW and the ZCO% to 107%. As this isn't possible, the calculation is capped to 100%.



NB - The calculations make assumptions about the contribution to system needs on 15 April 2024, taken from FRCR. Each synchronous generator provides 3GVA.s of inertia, operating at a minimum output (Stable Export Limit – SEL) of 250MW with a maximum available output of 500MW.

Whilst this exercise shows that future projects will enable a day like 15 April to be zero carbon, there are further projects which will enable zero carbon on other days too.

There are four reactors being delivered throughout 2025 which are for economic reasons, effectively removing the need for a further four generators (1000MW).

Stability Phase 3 bought 17.1GVA.s which, once delivered, removes the need for five units (1250MW).

Looking beyond 2025, our voltage tender for 2026 will procure enough reactive power to remove another two units (500MW).

RRE 3X Timeliness of Connection Offers

This Regularly Reported Evidence (RRE) reports on the number of connection offers made within 3 months of clock start date, and the number of connection offers made that took longer than 3 months. The table is populated based on the offers sent during the quarter.

We provide this information separately for the England and Wales area, the Scotland area and by Transmission Owner (TO) area:

- England and Wales: National Grid Electricity Transmission (NGET)
- Central and Southern Scotland: SP Transmission (SPT)
- North of Scotland: Scottish & Southern Electricity Networks (SHET)

In year 1 (2023-24), in England and Wales, while the two-step offer process has been running, we have been reporting:

- The number of standard offers issued within 3 months.
- For two-step offers,
  - the number of (one-step) offers issued within 3 months;
  - the number of two-step offers issued within 9 months, after counter signature of the step one offer; and
  - the number of any connection offers that took longer than the above timeframes.

The two-step process concluded on 31 May 2024 and therefore reporting on the two-step offer process will not run past the end of Q1 in Year 2 (2024-25).

We also report on the scale of the connection queue in terms of GW and time from offer acceptance to connection date. We include a breakdown of assets in the connection queue by size, technology type, and TO area.

Please note these figures are consistent with the Connections monthly data submission provided to Ofgem.

Q2 2024-25 performance

ℹ	**Q1 data update**	We have updated the figures for Q1 as we identified some minor anomalies in the data resulting in miscounting. This does not have a significant impact on the figures, with total offers issued within 3 months / 9 months changing from 639 to 626, and those issued outside those periods changing from 129 to 117.

Table: Quarterly connection offers by time taken

Area	Connection offers issued:	Q1	Q2	Q3	Q4	Total
NGET (England and Wales)	(Standard offer) Within 3 months	146	225			
	(One-step) Within 3 months	-	-			
	(Two-step) Within 9 months*	332	-			
	Longer than the above timeframes	115	-			
	Total	**593**	**225**			
SPT (Scotland)	(Standard offer) Within 3 months	53	61			
	Longer than 3 months	-	2			
	Total	**53**	**63**			
SHET (Scotland)	(Standard offer) Within 3 months	95	100			
	Longer than 3 months	2	0			
	Total	**97**	**100**			
TOTAL	Within 3 months / 9 months*	626	386			
	Longer than the above timeframes	117	2			
	Total	**743**	**388**			

* after counter-signature of the step one offer

500 1st Step Applications – 7 did not receive an offer (withdrawn) - remaining 493 Offers Made before 1 March 2024

477 2nd Step Offers made – 29 Issued before 1st March 2024 – 448 issued before 31st May 2024

Graph: Connections queue in MW split by time from offer acceptance to connection: Q1 (30 June 2024) vs Q2 (30 Sep 2024) vs Q3 (31 December 2024 vs Q4 (31 March 2025)

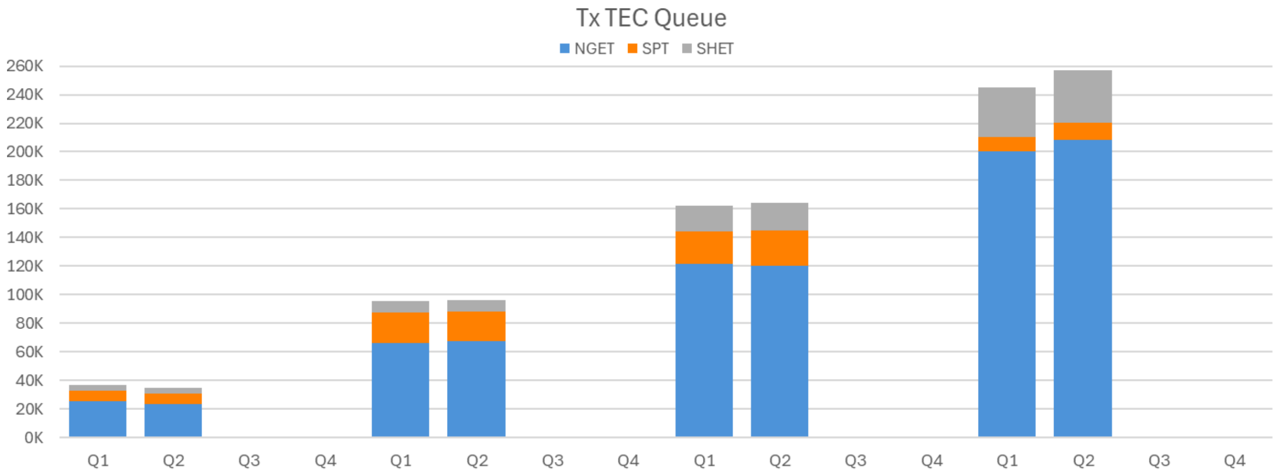


Table: Connections queue in MW split by time from offer acceptance to connection

Host TO	Unit	0-3 years	3-6 Years	6-10 Years	10-16 Years	Total*
NGET	MW	23,523	67,697	120,179	208,256	**419,656**
SPT	MW	7,439	20,659	24,438	11,793	**64,328**
SHET	MW	4,176	8,153	19,534	36,906	**68,771**
Total*	MW	**35,139**	**96,509**	**164,151**	**256,956**	**552,754**

*Timescale MW values are rounded up in this table but Totals are reflective of the unrounded base figures and therefore might appear slightly lower than the sum of the columns or rows.

Figure: Connections queue in MW by technology type (30 June 2024)

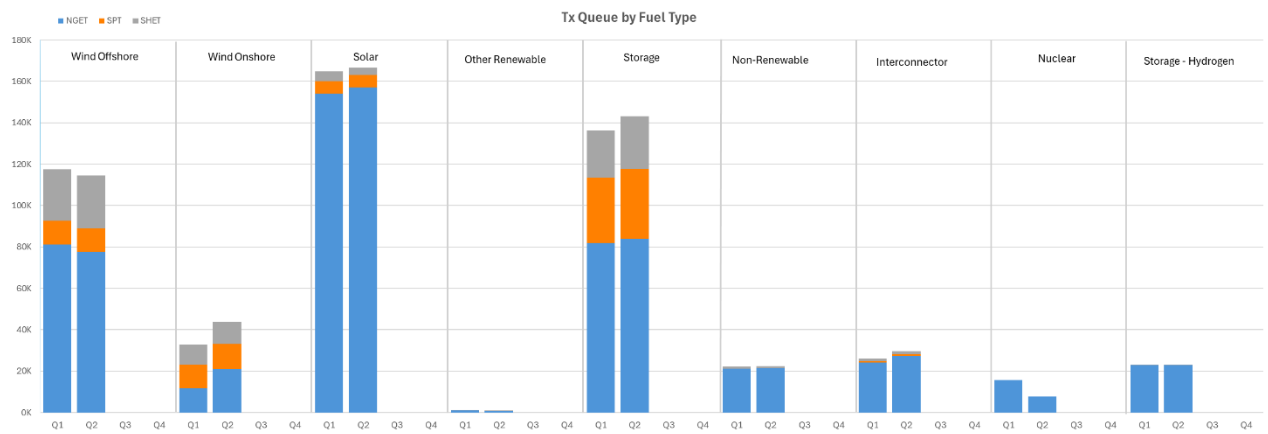


Figure: Connections queue in MW by technology type (30 September 2024)

*Technology Type MW values are rounded up in this table but Totals are reflective of the unrounded base figures and therefore might appear slightly lower than the sum of the columns or rows.

Host TO	NGET	SPT	SHET	Total*
Wind Offshore	77,581	11,356	25,580	**114,517**
Wind Onshore	20,856	12,227	10,689	**43,772**
Solar	157,139	6,032	4,638	**167,809**
Other Renewables	733	-	327	**1,060**
Storage	83,835	34,014	25,225	**143,074**
Non-Renewable	21,416	-	910	**22,326**
Interconnector	27,483	700	1,400	**29,583**
Nuclear	7,620	-	-	**7,620**
Storage - Hydrogen	22,992	-	2	**22,994**
TOTAL*	**419,655**	**64,329**	**68,771**	**552,755**

Supporting information

Timeliness of connection offers

Application volumes continue to increase in comparison with 2023-24 and this is reflected in the number of offers being sent out across all three TOs. There is an overall reduction due to the cessation of the 2-Step offer process however the number of Standard Offers continues to rise.

There were 2 offers in this quarter that were sent outside of their licensed timescales.

The two-step process was originally agreed with Ofgem to conclude on the 1st March 2024, however an extension was agreed for connection applications received between 27 November 2023 and 29 February 2024 to 1st June 2024.

Connections queue

The Connections queue continues to increase, moving from 534GW at the end of Q4 2023-24 to 553GW at the end of the Q2. The vast majority of this increase is due to new connection applications from battery storage developers. A large increase in connection dates for the 6-10 year and 10-16 year periods can be seen, which is in line with average connection timescales of 10 years in E&W and 7 years in Scotland.

CUSC modification CMP376 (Inclusion of Queue Management process within the CUSC) was approved and implemented in November 2023. This introduces queue management milestones into connection contracts and allows NESO to terminate contracted projects which are not progressing against agreed milestones. This is a significant step towards being able to reduce the size of the overall queue and remove stalled projects. Our connections reform proposals (proposed to go live in Q2 2025) will go further and faster towards reducing the overall queue by removing stalled projects.

RRE 3Y Percentage of 'right first time' connection offers

This RRE measures the % of connection offers made which did not need reissuing. For those that needed reissuing, we break these down by reason.

We include details of the number of connection offers made for the England and Wales area, and the Scotland area, in addition to each TO area. During the period where the 2-step offer process is in place, we will report this separately for step 1 and step 2 offers.

The two-step process concluded on 31st May 2024, however as Right First Time reporting is measured on when the offer was signed, we are likely to see 2nd Step offers reflected in this table until the end of Q3.

Q2 2024-25 performance

Table: Quarterly % of 'right first time' connection offers

Area	Connection offers	Q1	Q2	Q3	Q4	Total
NGET	Total Step 1 offers signed	1	1			
	Number right first time	0	1			
	Percentage right first time	**0%**	**100%**			
	Total Full / Step 2 offers signed	86	264			
	Number right first time	75	238			
	Percentage right first time	**94%**	**97%**			
SPT	Total connection offers signed	54	38			
	Number right first time	44	21			
	Percentage right first time	**93%**	**92%**			
SHET	Total connection offers signed	68	33			
	Number right first time	52	22			
	Percentage right first time	**90%**	**95%**			
TOTAL	Total connection offers signed	209	336			
	Number right first time	172	282			
	Percentage right first time	**92%**	**96%**			

Table: Connection offer that needed reissuing by reason

Area	**One-step** connection offers	Q1	Q2	Q3	Q4	Total
NGET	Customer driven	5	16			
	NESO driven	5	6			
	TO driven	2	12			
	Total	**11***	**26***			
SPT	Customer driven	6	5			
	NESO driven	4	4			
	TO driven	4	10			
	Total	**10***	**17***			
SHET	Customer driven	7	6			
	NESO driven	8	2			
	TO driven	2	4			
	Total	**16***	**11***			
TOTAL	Customer driven	19	27			
	NESO driven	16	12			
	TO driven	8	26			
	Total	**37***	**54***			

* Please note that re-offers can be driven by more than one factor. Therefore, the totals can be lower than the sum of the figures for each reason.

Supporting information

Numbers of re-offers are spread across the TOs relative to the number of offers signed within the period, with NESO driven re-offers accounting for less than half of the re-offers issued.

There are a variety of reasons leading to an offer being re-issued such as amendments to appendices, charging statements and offer documents following post-offer discussions.

The number of NESO driven re-offers directly affects our performance percentage, which is calculated by looking at the number of offers right first time not due to a NESO re-offer. Re-issued offers and the reasons for them are continuously reviewed.

Overall performance for the second quarter of this year at 96% right first time shows an improvement on the first quarter of this year.

Notable events during September 2024

Connections Reform and Clean Power Alignment Event

On 16 September the Connections team hosted an in-person event for customers to learn more about how Connections Reform aligns with the Government's Clean Power 2030 plan. We presented on Current Connections Reform proposals and methodologies, factors to consider in the context of Clean Power 2030, financial instruments and held question and answer sessions during the event. Engagement was high during the event, with a significant number of questions being asked. In response to audience demand, the event was extended to answer further questions as part of the final Q&A session.

As part of this series, we hosted a webinar on 7 October for those who were unable to attend the in-person event. This was well received and attended by over 180 people who asked lots of questions during the Q&A section. Our next engagement in the series is a follow up webinar on 16 October covering further updates on aligning Connections with Clean Power 2030. Topics of discussion include: progress on Clean Power 2030, high level recommendation for alignment, more detailed options and recommendations and next steps.

Plan delivery

Deliverable Status

Our BP2 RIIO-2 deliverables tracker which we publish on our website provides a full breakdown of the status of our deliverables, with commentary including explanations for all delayed milestones.

The statuses are defined as follows:

On track	For a milestone date in the future: we're on track to deliver it on time
Complete	Milestone has been delivered
Delayed – consumer benefits	Delayed or de-prioritised to maximise consumer benefits
Delayed – external reasons	Delayed due to factors outside our control (e.g., BREXIT, Covid, Ofgem)
Delayed – internal reasons	Delayed due to factors within our control and/or that we're accountable for
Continuous activity	For certain activities with ongoing delivery (e.g., OTF)
Milestone no longer valid	Removed from Delivery Schedule as no longer required (agreed with Ofgem)

Statuses of 'on track' or 'continuous activity' are not shown as they can only apply to milestones not yet due for completion.

Role 1 - Progress of our deliverables

For Role 1 (Control Centre Operations), the latest BP2 RIIO-2 deliverables tracker lists **52 deliverables** in total, which is made up of **140 milestones**.

- **85** of these milestones were due to be completed by September 2024 or earlier
- Of those:
  - **5** are delayed in order to deliver an improved outcome for consumers
  - **1 is** delayed due to reasons outside NESO's control
- Of the remaining **79:**
  - **63** (80%) are now complete
  - **16** (20%) are delayed due to NESO related delays

The results for the **85** milestones due to be completed by September 2024 or earlier are illustrated below:

Role 1 – Milestone status by deliverable
For milestones due by September 2024 or earlier

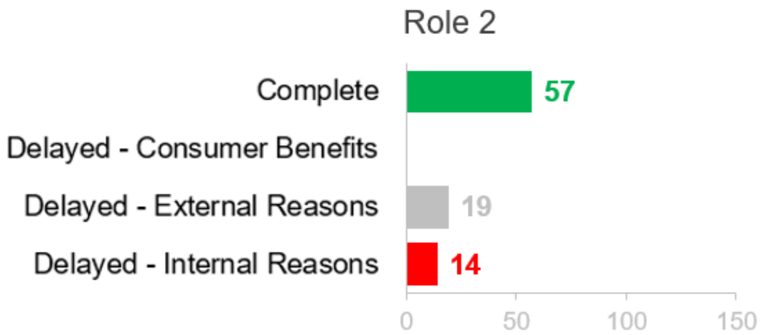
Ref	Deliverable name (shortened)	Complete	Delayed... Consumer Benefits	External reasons	Internal reasons
D1.1.4	Support development of new methodology under Trade...			1	
D1.1.5	Upgraded legacy balancing and situational awarenes...	1			
D1.1.6	Assessment of future operability challenges commun...	1			
D1.1.7	Produce and publish detailed forecasts and analysi...				2
D1.1.8	Trading solutions to deliver a safe, secure and ec...	1			
D1.2.1	(Now known as 'Future of Balancing') Enhanced bala...	1	3		
D1.2.2	Develop inertia monitoring capabilities and other ...	1			
D1.3.1	Develop and deliver new real-time situational awar...	1	1		3
D1.3.2	Enhanced network modelling capabilities with onlin...	1			1
D1.3.3	Upgraded Control Centre video walls and operator c...	4			1
D1.4.1	Creation of a data and analytics platform that wil...	1			1
D1.4.2	Continue to facilitate meetings of the Technology ...	6			
D1.5.1	Increased DER visibility in real-time operations	5			
D1.5.2	Whole electricity system operational service coord...	3			
D1.5.3	Development of RDP and LCM functionality into real...	1			
D1.5.4	Increased operational liaison	2			
D1.6.1	Constraint boundary optimisation				1
D1.6.2	An agile programme of strategic and tactical Balan...	3			
D1.6.3	Stakeholder Engagement on Minimising Balancing Cos	1			
D17.3	Transparency Roadmap	3			
D2.1.1	Develop and drive control centre strategic resourc...	1			
D2.2.1	Development of new modules and (based on feedback)	3			2
D2.2.2	Enhanced training and simulation with DNOs and wid...	1			2
D2.3.1	Upgrades to current simulators, including annual s...	1	1		1
D2.3.2	New training methods and platforms, including onli...	4			
D2.4.1	Personalised updates and automated shift logins to...	2			1
D2.4.2	Content and infrastructure for personalised traini...	5			1
D3.1.3	Engage and collaborate with industry to plan and d...	1			
D3.1.5	Fully competitive Restoration procurement process...	1			
D3.2.1	Facilitate and compile, on behalf of the GB indust...	2			
D3.2.3	Maintain obligations and requirements against the ...	3			
D3.3.1	Trial case studies based on different technology t...	1			
D3.3.2	Subject to industry adoption, Distributed ReStart ...	2			
	TOTAL - Role 1	**63**	**5**	**1**	**16**

Role 2 - Progress of our deliverables

For Role 2 (Market development and transactions), the latest BP2 RIIO-2 deliverables tracker lists **47 deliverables** in total, which is made up of **133 milestones**.

- **90** of these milestones were due to be completed by September 2024 or earlier
- Of those:
    - **0** are delayed in order to deliver an improved outcome for consumers
    - **19** are delayed due to reasons outside NESO's control
- Of the remaining 71**:**
    - **57** (80%) are now complete
    - **14** (20%) are delayed due to NESO related delays

The results for the **90** milestones due to be completed by September 2024 or earlier are illustrated below:



Role 2 – Milestone status by deliverable

For milestones due by September 2024 or earlier

Ref	Deliverable name (shortened)	Complete	Delayed...		
			Consumer Benefits	External reasons	Internal reasons
D13.1	Published Future Energy Scenarios (FES), Winter Ou...	1			
D13.5.3	Enhance our energy modelling to reflect stakeholde...	1			
D15.8.1	Develop policy areas to accelerate whole electrici...	3			
D15.8.3	Enabling whole electricity system operational serv...				4
D21.1	Cross-border strategy development	1			
D21.1.1	Strategic Engagement with EU	1		1	
D21.2.1	Continued facilitation of EU driven code changes i...	2			2
D21.2.2	Implementation of the TCA	2		3	
D4.1.1	Frequency management strategy				1
D4.2.1	Regular and specific metrics and publications acro...	2			
D4.3.3	New reserve products - development and introductio...				1
D4.3.6	Future developments to frequency response services	3			
D4.4.1	A market platform through which market participant...	1			3
D4.4.2	Common standards, including interoperable systems,...	2		1	
D4.5.3	Reforming markets to facilitate future growth of D...	1			
D4.5.4	Facilitating market access for Distributed Flexibi...	1			
D4.5.5	Ensure co-ordination of markets across the whole e...			1	
D4.6.1	Development of competitive approaches to procureme...	1			
D4.6.2	Development of competitive approaches to procureme...	1			
D4.6.4	Local Constraints Market reform	1			
D5.1.1	Continuation of Electricity Market Reform (EMR) De...	6			
D5.1.2	Continuation of EMR Delivery Body obligations:We ...	3			
D5.2	Deliver an enhanced platform for EMR	1			
D5.2	Developing the EMR platform	2			
D5.3	Use of enhanced modelling and more granular data s...	3			
D5.4	Building our long-term security of supply modellin...	2			1
D6.1	Continued facilitation of industry changes to the ...	1			
D6.1.1	Enable major net zero programmes - Offshore Coordi...			1	
D6.1.2	Enable major net zero programmes - Onshore Competi...			1	
D6.1.3	Enable zero carbon operation - System Restoration	2			
D6.1.4	Enable zero carbon operation - Stability	1			
D6.1.5	Lead charging reform	2			
D6.1.6	Support Market Wide Half Hourly Settlement	1		1	
D6.3	Continued managing, collecting and disbursing char...	4			
D6.3.1	Market half-hourly settlement	2		3	
D6.3.2	TNUoS reform			6	
D6.4	Change from a code administrator to a code manager...			1	
D6.5	Develop a single technical code for distribution a...	1			
D6.8	Implementation of digital solutions	1			
D6.9	Whole electricity system framework assessment	1			2
	TOTAL - Role 2	**57**	**-**	**19**	**14**

Role 3 - Progress of our deliverables

For Role 3 (System insight, planning and network development), the latest BP2 RIIO-2 deliverables tracker lists **62 deliverables** in total, which is made up of **228 milestones**.

- **153** of these milestones were due to be completed by September 2024 or earlier
- Of those:
    - **0** are delayed in order to deliver an improved outcome for consumers
    - **7** are delayed due to reasons outside NESO's control
- Of the remaining **146**:
    - **141** (97%) are now complete
    - **5** (3%) are delayed due to NESO related delays

The results for the **153** milestones due to be completed by September 2024 or earlier are illustrated below:

Role 3 – Milestone status by deliverable

For milestones due by September 2024 or earlier

			Delayed...		
Ref	Deliverable name (shortened)	Complete	Consumer Benefits	External reasons	Internal reasons
D11.1	Improved identification of when is the most econom...	1			
D11.2	Improved identification of network needs	1			
D11.3	Improved assessment of voltage requirements, and a...	1			
D11.4	Improved assessment of stability requirements acro...	1			
D12.2	Potential solutions identified and direction estab...	1			
D12.3	Key changes to SQSS made or in progress	1			
D13.1	Published Future Energy Scenarios (FES), Winter Ou...	4			
D13.2.1	Provide whole system regional insights	3			
D13.3	Shared insights on future energy expectations and ...	6			
D13.4	Bridging the Gap - produce evidence-based recommen...	1			
D14.3.1	Establish dedicated Distributed Energy Resource (D...	4			
D14.3.3	Whole electricity system connection seminars on an...	6			
D14.3.4	Improving Systems and Data	6			
D14.3.6	Proposing future policy and code improvements	1			
D14.4.1	Implement first phase of the ESO connections porta...	2			
D14.4.2	Phase 2 of the connections portal concluded	6			
D14.5.1	Five Point Plan	4			
D14.5.2	Connections Reform Phase 2	3			
D14.5.3	Connections Action Plan - ESO delivery	4			
D14.5.4	Connections Reform Phase 3	4		1	
D15.1.1	System Operability Framework (SOF) documentation t...	6			
D15.1.2	Innovation projects developing new operability sol...	1			
D15.11.2	Forward Plan 2020-21 RDP - Generation Export Manag...				
D15.4.1	Data transfers between network organisations in ac...	1			
D15.4.2	Technical modelling for use across the ESO – ongoi...	6			
D15.4.3	Automation of data exchange mechanism and preparat...	1			
D15.5.2	RDP2 of RIIO-2 (MW dispatch, South East, UKPN)	1			
D15.5.3	RDP3 of RIIO-2 (wider rollout & enhancements, WPD)	3		1	
D15.5.4	RDP4 of RIIO-2 (wider roll out & enhancements UKPN...	3		1	
D15.5.5	Deliver GB rollout of functionality developed thro...	3			
D15.5.6	RDP5 of RIIO-2	2			1
D15.5.7	RDP6 of RIIO-2	1		1	1
D15.6.2	Further Grid Code modification implementation (ari...	3			
D15.6.6	Deliver major upgrades to our offline modelling to...	1			
D15.6.7	Deeper Outage Planning go live in Offline Network ...	1			
D15.6.8	Development & ongoing maintenance of EMT Capabilit...	5			
D15.6.9	Co-simulation analysis innovation project	2			
D15.7.1	Commence System State Targeted Monitoring and Cont	1			
D15.8.2	Enabling whole electricity flexibility service pro...	3			2
D16.1.1	Year ahead regional outage programmes developed in...	1			
D16.1.2	Detailed week and day ahead operational documentat...	1			
D16.2.1	Great Britain (GB) wide NAP process goes live incl...	6			
D16.3.3	Finalise new processes in readiness for approval o...	1			
D16.3.4	Deeper access planning go-live – frameworks, proce...	1			
D16.4.1	Scoping exercise concluded for delivery of enhance...	2			
D16.4.2	Delivery of enhancements to outage notifications, ...	1			
D16.5.1	Agreed future platform for any automation and crea...	6			
D16.5.2	Scope future automation development	6			
D7.1	Electricity Ten Year Statement (ETYS)	2			
D7.2	NOA Annual Report	3			
D7.3	Large Onshore Transmission Projects (LOTI) (previo...	6			
D8.1	Rollout of Network Services Procurement (NPS) appr...				1
D8.4	Early Competition	1		3	
	TOTAL - Role 3	**141**	-	**7**	**5**

Value for Money

Under the performance incentives arrangements for RIIO-2, NESO must report on its outturn and forecast costs for each role against cost benchmarks. As the reporting for the Value for Money criterion relates to all 3 roles, we have brought this together in one section rather than providing a separate Value for Money chapter for each role. All figures in this section are in 2018-19 prices.

It is important to note that NESO's annual regulatory reporting to Ofgem remains the formal cost report. The reported spend to date for the 2024/25 reporting year has been reviewed as part of our normal monthly management review process but has not been formally audited or been subject to the formal governance process for submission that would normally be used for annual reporting. NESO uses the methodology, as set out in the NESO Performance Arrangements Governance Document[8], to allocate costs to each role.

As stated in the governance document we have sought to separate costs relating to BP2 from FSO Transition Activities and the delivery of new NESO activities. Following the change in our organisational structure in February 2024, this has been achievable for all areas except for Business Support Costs, where it is not possible to separate incremental run the business costs relating to the establishment of NESO from ongoing expenditure. We have therefore agreed with Ofgem that all incurred/forecast Business Support Costs will be reported separately within Value for Money with the narrative providing further detail where possible.

The following table sets out our forecast spend for the BP2 period (2023-24 to 2024-25), compared to our original BP2 plan. For a more detailed breakdown, please see the Cost Benchmark Summary Table at the end of this chapter.

		Role 1	Role 2	Role 3	**Total**
Original BP2 plan	(£m)	313.6	176.3	161.0	**650.9**
2023-24 Spend	(£m)	131.7	81.2	70.9	**283.8**
2024-25 Forecast	(£m)	166.2	103.4	98.0	**367.6**
Total 2023-25 Forecast	(£m)	297.9	184.6	168.9	**651.4**
Deviation from BP2 plan	**(£m)**	**(15.7)**	**8.3**	**8.0**	**0.5**
Deviation from BP2 plan	**%**	**(5.0)**	**4.7**	**5.0**	**0.1**

Total forecast spend for the BP2 period is £651.4m, £0.5m higher than the £650.9m presented in our BP2 plan. Further detail is provided on a role-by-role basis within this report.

[8] https://www.ofgem.gov.uk/decision/decision-associated-documents-anticipated-neso-licences-regulatory-framework-documents

Directly Attributable Costs (By Role)

Directly Attributable costs are reported below on a role-by-role basis. Please note that indirectly attributable costs[9] are summarised in the next section.

Role 1 (Control centre operations) expenditure

For Role 1, we are forecast to spend **£15.4m** less than BP2.

Category	Costs directly attributable to Role 1 activities	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	Total 2023-25 Forecast (£m)	Variance vs BP2 Plan (£m)
NESO Opex	NESO Opex	67.7	33.8	36.3	70.0	2.3
Investment	Capex and Project Opex	165.1	65.7	81.6	147.4	(17.8)
Total Directly Attributable to Role 1		**232.8**	**99.5**	**117.9**	**217.4**	**(15.4)**

Directly Attributable NESO Opex[10]

Role 1 opex costs are currently forecast to be £2.3m higher than BP2. This is primarily driven by expanding the team which develops our balancing costs strategy, with aims to recommend initiatives to lower balancing costs and clearly demonstrate what we can influence. This has enabled an aligned strategy across all impacted teams and clearly articulates what levers we have to minimise balancing costs both internally and externally.

Furthermore, there were additional training requirements to introduce new Power System Managers (PSM) of the level needed to meet the ever-changing landscape of managing the system in real time. More specific training was required to upskill PSMs in topics regarding the overall GB electricity system and how to utilise tools specific to NESO, as they will play a pivotal role in enabling a secure, operable clean power system.

9 Indirectly attributable costs relate to costs for teams that work across the NESO business supporting the activities within the three roles, and the costs for National Grid shared services. These costs are summarised in a separate section and subsequently split between roles so represent the difference between the costs summarised for each role here and the total costs for each role shown in the table above.

10 Directly attributable opex refers to the operating costs that NESO incurs to deliver its outputs under its three roles.

Directly Attributable NESO Capex and BSC[11]

ID	Investment Name	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)	RIIO-2 Spend as per BP2 (£m)	RIIO-2 Sanctioned (£m)	RIIO2 Higher/ (Lower) (£m)
110	Network Control	36.4	10.8	20.4	31.3	(5.2)	58.1	58.1	(0.0)
120	Interconnectors	4.3	1.6	1.3	3.0	(1.3)	10.9	7.3	(3.6)
130	Emergent Technology and System Management	3.9	0.4	2.0	2.4	(1.5)	8.7	6.9	(1.8)
140	ENCC Operator Console	2.8	0.3	2.2	2.5	(0.2)	5.5	5.4	(0.0)
170	Frequency Visibility	4.0	0.6	3.5	4.2	0.2	6.8	6.4	(0.3)
180	Enhancing Balancing Capabilities	39.8	26.9	18.7	45.6	5.8	102.8	103.5	0.7
190	Workforce and Change Management Tools	2.0	0.1	0.3	0.3	(1.7)	3.8	1.0	(2.8)
200	Future Training Simulator and Tools	4.4	0.0	0.0	0.0	(4.4)	7.3	0.0	(7.3)
210	Balancing Asset Health	10.1	5.5	4.7	10.2	0.1	27.5	27.5	(0.0)
220	Data Analytics Platform	15.1	7.6	5.3	12.9	(2.2)	29.9	30.3	0.3
240	ENCC Asset Health	5.8	2.5	3.1	5.7	(0.1)	14.2	12.5	(1.7)
250	Digital Engagement Platform	3.9	4.9	2.6	7.5	3.6	11.4	12.0	0.7
260	Forecasting Enhancements	6.1	1.8	2.8	4.7	(1.5)	13.4	13.4	0.0
450	Future Innovation Productionisation	4.0	0.0	0.0	0.0	(4.0)	6.6	0.0	(6.6)
480	Ancillary Services Dispatch	2.4	1.9	1.6	3.4	1.0	8.5	8.5	0.0
510	Restoration and Restoration Decision Support Tool	17.5	0.5	8.7	9.2	(8.3)	24.9	21.8	(3.1)
670	Real Time Predictions	0.0	0.0	2.9	2.9	2.9	0.0	5.2	5.2
	Wokingham ENCC*	2.7	0.0	1.6	1.6	(1.1)	4.9	2.0	(2.9)
	Inertia Monitoring Modulator*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
	Total	**165.1**	**65.7**	**81.6**	**147.4**	**(17.8)**	**345.3**	**322.5**	**(22.8)**

For Role 1 directly attributable NESO capex and BSC we forecast to spend £17.8m less than the plan across the two-year BP2 period based on our latest approved spend. Please refer to the CMF appendix for further detail on progress of investments relating to all roles.

**Investments relating to Role 1 outside of DD&T Portfolio referenced in CMF appendix*

Role 2 (Market development and transactions) expenditure

For Role 2, we forecast to spend **£8.6m** more than BP2.

Category	Costs directly attributable to Role 2 activities	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)
NESO Opex	NESO Opex	39.1	18.0	20.0	38.0	(1.1)
Investment	Capex and Project Opex	56.4	31.0	35.1	66.1	9.7
Total Directly Attributable to Role 2		**95.5**	**49.0**	**55.1**	**104.1**	**8.6**

Directly Attributable NESO Opex

Role 2 opex costs are currently forecast to be £1.1m lower than BP2. This is primarily driven by delays in recruitment during 2023/24, across both code and charging arrangements, and building the future balancing services market.

[11] Directly attributable NESO capex and BSC (Business Support Cost) expenditure refers to capex and opex costs relating to NESO investments that can be mapped to specific roles.

Directly Attributable NESO Capex and BSC

ID	Investment Name	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)	RIIO-2 Spend as per BP2 (£m)	RIIO-2 Sanctioned (£m)	RIIO2 Higher/ (Lower) (£m)
270	Role in Europe	9.4	0.7	5.0	5.7	(3.7)	22.3	19.9	(2.4)
280	GB Regulations	8.7	2.1	5.9	8.0	(0.7)	19.4	18.3	(1.1)
320	EMR and CfD Improvements	7.4	9.1	4.8	13.9	6.6	21.3	30.5	9.2
330	Digitalised Code Management	2.5	1.2	1.3	2.5	(0.0)	2.7	2.8	0.2
400	Single Markets Platform	14.5	5.9	7.6	13.5	(1.0)	34.9	33.5	(1.4)
420	Auction Platform	4.2	2.8	1.5	4.3	0.1	8.9	8.1	(0.9)
610	Settlements, Charging and Billing	9.8	9.2	8.5	17.7	7.9	33.5	43.2	9.7
680	Local Constraints Market	0.0	0.0	0.4	0.4	0.4	0.0	0.4	0.4
	Total	**56.4**	**31.0**	**35.1**	**66.1**	**9.7**	**143.0**	**156.8**	**13.8**

For Role 2 directly attributable NESO capex and BSC we forecast to spend £9.7m more than the plan across the two-year BP2 period based on our latest approved spend. Please refer to the CMF appendix for further detail on progress of investments relating to all roles.

Role 3 (System insight, planning and network development) expenditure

For Role 3, we forecast to spend **£8.3m** more than BP2.

Category	Costs directly attributable to Role 3 activities	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)
NESO Opex	NESO Opex	56.4	27.0	35.7	62.7	6.3
Investment	Capex and Project Opex	23.8	11.6	14.1	25.7	2.0
Total Directly Attributable to Role 3		**80.2**	**38.7**	**49.8**	**88.5**	**8.3**

Directly Attributable NESO Opex

The £6.3m increase in opex costs for Role 3 relates to the Connections Reform project, which was not included in BP2. The project aims to address the connections process which is considered one of the key challenges facing our energy system today and transforming it will enable the transition to a decarbonised energy system.

In December 2023 we published our final recommendations for Connections Reform, following up on the Connections Action Plan published by Ofgem and the Department for Energy and Net Zero, and which is now in the detailed process design phase, with implementation likely to conclude in 2025-26.

Directly Attributable NESO Capex and BSC

ID	Investment Name	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)	RIIO-2 Spend as per BP2 (£m)	RIIO-2 Sanctioned (£m)	RIIO2 Higher/ (Lower) (£m)
340	RDP Implementation and Extension	7.7	3.3	3.6	6.9	(0.8)	17.1	14.1	(3.0)
350	Planning & Outage Data Exchange	3.3	1.1	1.7	2.8	(0.5)	8.4	8.1	(0.3)
360	Offline Network Modelling	3.5	1.7	3.2	4.9	1.4	8.1	8.7	0.6
380	Connections Platform	3.0	2.0	3.8	5.7	2.7	7.0	10.2	3.2
390	NOA Enhancements	6.0	3.4	1.8	5.3	(0.7)	9.3	8.9	(0.5)
500	Enhanced Frequency Control	0.2	0.2	0.0	0.2	(0.0)	1.2	1.3	0.1
650	Accelerating Whole Electricity Flexibility	0.1	0.0	0.0	0.0	(0.1)	0.1	0.7	0.6
	Total	**23.8**	**11.6**	**14.1**	**25.7**	**1.9**	**51.3**	**51.9**	**0.6**

For Role 3 we forecast to spend £1.9m more than the plan for directly attributable NESO capex and BSC across the two-year BP2 period based on our latest approved spend. Please refer to the CMF appendix for further detail on progress of investments relating to all roles.

Indirectly Attributable Costs (All roles)

Our assessment for value for money is not only based on costs which are directly driven by activities within a particular role. Some activities support all roles equally and a summary of these costs and our forecast against the BP2 plan is given below.

Activity	BP2 Plan (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)
Supporting Operational Costs	16.5	8.8	11.3	20.1	3.7
Property Capex	10.7	1.8	11.8	13.6	2.8
Indirect IT & Telecoms and Other Capex	21.3	10.2	6.7	16.8	(4.5)
Total Business Support Costs	166.7	62.3	107.3	169.6	2.9
IT & Telecoms Indirect	*133.8*	*39.2*	*73.7*	112.9	(20.9)
Property Management	*11.4*	*8.0*	*5.2*	13.2	1.8
HR & Non-Operational Training	*4.8*	*3.4*	*9.7*	13.1	8.2
Finance, Audit & Regulation	*6.6*	*5.5*	*6.9*	12.4	5.8
Insurance	*1.8*	*0.6*	*1.4*	2.0	0.2
Procurement	*1.4*	*0.5*	*2.8*	3.3	1.9
CEO & Group Management	*6.8*	*5.1*	*7.5*	12.6	5.8
Total Indirectly Attributable Costs	**215.2**	**83.0**	**137.1**	**220.1**	**4.9**

Please note that, as agreed with Ofgem, there was no update to the BP2 plan for costs which were allocated by National Grid to its regulated entities where services or projects were shared across the National Grid group. Therefore, for indirect capex, business support (excluding IT & telecoms), and other price control costs all values for BP2 are based on RIIO-2 final determinations. IT & telecoms business support costs were revised in our BP2 submission only to reflect the expected incremental support costs driven by our DD&T investment portfolio. This relates to costs incurred for 2023-24.

For 2024-25, following our organisational restructure, it is no longer possible to distinguish incremental run the business costs for business support areas relating to the establishment of NESO from ongoing costs. Therefore, as agreed with Ofgem, all incurred/forecast costs in 2024/25 relating to business support areas are included within value for money, with the narrative providing further detail where possible.

Supporting Operational Costs

There are several teams that work across the NESO business rather than being dedicated to one of the Roles. They carry out activities that we refer to as “cross-cutting”. These teams are Business Change, Innovation, Assurance, Regulation, and Customer & Stakeholder.

The variance of £3.7m is driven by the decision to implement a dedicated Customer function within the NESO operating model.

We recognise the importance of working across the broad array of customer segments that are critical to the successful delivery of our strategic priorities and performance objectives.

Property and Other Capex

Property capex relates to spend on NESO occupied properties. This is primarily spending on the Wokingham site but also covers enhancements for the contingency control centre and costs relating to our office locations. Other capex primarily relates to IT & Telecoms spend on Business Services systems, Hosting, IT Operations and Tooling, Infrastructure, Enterprise Data Networks and End User Computing that cannot be directly allocated to Roles. Combined, costs are forecast to be £1.7m under-spent.

Business Support Costs

Activity	BP2 Plan (£m)	FSO Blueprint (£m)	2023-24 Spend (£m)	2024-25 Forecast (£m)	2024-25 Forecast (£m)	Variance vs BP2 Plan (£m)	Variance vs BP2 Plan and FSO Blueprint (£m)
IT & Telecoms Indirect	133.8	0.0	39.2	73.7	112.9	(20.9)	(20.9)
Property Management	11.4	1.3	8.0	5.2	13.2	1.8	0.5
HR & Non-Operational Training	4.8	4.1	3.4	9.7	13.1	8.2	4.1
Finance, Audit & Regulation	6.6	4.8	5.5	6.9	12.4	5.8	1.0
Procurement	1.8	1.2	0.6	1.4	2.0	0.2	(1.0)
Insurance	1.4	1.1	0.5	2.8	3.3	1.9	0.8
CEO & Group Management	6.8	2.3	5.1	7.5	12.6	5.8	3.5
Total Business Support Costs	**166.7**	**14.8**	**62.3**	**107.3**	**169.6**	**2.9**	**(11.9)**

Business Support Costs detailing FSO Blueprint

Within the BP2 plan, Business Support Costs covered services that were shared across all the National Grid group businesses under a single function for several key support services. These included IT support, property management, human resources (HR), procurement, corporate affairs, legal and finance. Since May 2024 these have been operating as standalone functions in preparation for the transition to NESO.

Indirect IT and Telecoms costs are forecast to be £20.9m lower than BP2. This is primarily due to efforts to offset the incremental costs that materialise as a result of IT delivery with efficiency savings. Significant cost savings were achieved in 2023/24 through securing volume discounts with major suppliers.

Expenditure relating to Property Management is currently forecast to be £1.8m higher than expected for the BP2 period, mainly due to property rental costs relating to office space in London. A further lease has been signed for office space in Glasgow, which became operational in January this year. This allows us to have a presence closer to our customers in line with our customer centricity objective and also serves to widen the geographical area for attracting talent into our organisation.

HR & Non-Operational Training costs are forecast to be £8.2m higher than BP2, with the creation of HR as a standalone function in NESO, as part of becoming independent from National Grid, being the first key driver. Also, there is an increase driven by the development of the graduate and trainee schemes. NESO's people strategy includes supporting the evolving business requirements through recruiting graduates and apprentices with related skills for further development. Given the growth and specialist skills required as NESO we believe that investing more now in our Early Careers programmes is a cost-effective way to build capability internally and prepare for our future challenges.

Finance, Audit & Regulation, Procurement and CEO & Group Management costs combined are forecast to be £13.5m higher than BP2 and are all principally as a result of the additional costs incurred in setting up these teams as standalone functions. Broadly, the combined functions are in line with the level included in the aggregated BP2 and FSO Blueprint documents though there is an increase in CEO & Group Management. This additional spend is in line with that reported in the previous value for money reports for BP1 and BP2 mid-scheme, alongside ring fenced legal costs which may arise through either the Connection Reform process, Clean Power 30 or Review of Electricity Market Arrangements.

Other Price Control Costs

Other price control costs mainly relate to cyber security costs monitored under the PCD obligations. This portfolio is being delivered as a five-year plan by National Grid and progress is reported separately to Ofgem under the PCD obligations.

Cost Benchmark Summary Table

Funding Category	BP2 (£m)	2024-25 Forecast (£m)	2024/25 Spend to Date (£m)	2024/25 Full Year Forecast (£m)	Total (£m)	Variance (£m)
Total Price Control Costs						
Total Role 1 Costs	313.6	131.7	74.9	166.2	297.9	(15.7)
Total Role 2 Costs	176.3	81.2	45.5	103.4	184.6	8.3
Total Role 3 Costs	161.0	70.9	44.6	98.0	168.9	8.0
Total Price Control Costs	650.9	283.8	165.0	367.6	651.4	0.5
Role 1						
NESO Opex	67.7	33.8	16.8	36.3	70.0	2.3
Capex and BSC	165.1	65.7	35.7	81.6	147.4	(17.8)
Total Directly Attributable to Role 1	232.8	99.5	52.5	117.9	217.4	(15.4)
NESO Opex	5.5	2.9	1.3	3.8	6.7	1.2
Capex	10.7	4.0	2.5	6.1	10.1	(0.6)
BSC	55.6	20.8	17.6	35.8	56.5	1.0
Other Price Control Costs	9.0	4.6	1.0	2.5	7.1	(2.0)
Total Indirectly Attributable to Role 1	80.8	32.2	22.4	48.2	80.5	(0.3)
Role 2						
NESO Opex	39.1	18.0	7.9	20.0	38.0	(1.1)
Capex and BSC	56.4	31.0	15.1	35.1	66.1	9.7
Total Directly Attributable to Role 2	95.5	49.0	23.1	55.1	104.1	8.6
NESO Opex	5.5	2.9	1.3	3.8	6.7	1.2
Capex	10.7	4.0	2.5	6.1	10.1	(0.6)
BSC	55.6	20.8	17.6	35.8	56.5	1.0
Other Price Control Costs	9.0	4.6	1.0	2.5	7.1	(2.0)
Total Indirectly Attributable to Role 2	80.8	32.2	22.4	48.2	80.5	(0.3)
Role 3						
NESO Opex	56.4	27.0	15.5	35.7	62.7	6.3
Capex and BSC	23.8	11.6	6.6	14.1	25.7	2.0
Total Directly Attributable to Role 3	80.2	38.7	22.1	49.8	88.5	8.3
NESO Opex	5.5	2.9	1.3	3.8	6.7	1.2
Capex	10.7	4.0	2.5	6.1	10.1	(0.6)
BSC	55.6	20.8	17.6	35.8	56.5	1.0
Other Price Control Costs	9.0	4.6	1.0	2.5	7.1	(2.0)
Total Indirectly Attributable to Role 3	80.8	32.2	22.4	48.2	80.5	(0.3)

Appendix: Cost Monitoring Framework

Q1-Q2 2024-25 Summary

Cost Monitoring Framework (Q1-Q2 2024-25 Summary)

Overview of the Cost Monitoring Framework (CMF)

Following our Business Plan 2 (BP2) submission, Ofgem outlined the requirement for a Cost Monitoring Framework (CMF). The objective of the CMF is to provide visibility of our BP2 Digital, Data and Technology (DD&T) delivery progress and cost management, and the value being delivered across the BP2 DD&T investment portfolio. It also provides transparency of DD&T key achievements, risks and strategic decisions.

The RIIO-2 incentives scheme is the framework Ofgem uses to assess our performance against our RIIO-2 business plan and associated BP2 delivery schedule milestones. Separately, the CMF reports against our BP2 DD&T Annex 4 delivery roadmaps with its own schedule of DD&T-specific milestones. The CMF is not used directly to assess our performance, but it may be used as evidence as part of our 'Value for Money' assessment.

Our DD&T investments are critical enablers for many of our RIIO-2 deliverables, and it is important to understand dependencies between them. Our published BP2 delivery schedule provides a high-level view of where DD&T investments and BP2 deliverables are related to one another.

As per the NESO Performance Arrangements Governance (NESO PAG), we are required to provide quarterly reports directly to Ofgem as part of the CMF. We feel it is important to share updates with our external stakeholders and industry as part of the framework. So, we are including a summary of the CMF update every six months alongside our incentives reporting.

This appendix provides a summary of the previous six months (Q1 and Q2 2024/25) of the CMF across our DD&T investment portfolio and includes:

- **Delivery performance** – covering main achievements during the last six months.
- **Governance outputs** – an overview of current main delivery risks/issues plus key strategic decisions taken in last six months.
- **Cost performance** – a comparison of BP2 submission vs latest approved spending profiles.

High-Level Portfolio Summary (Q1-Q2 2024-25)

Following confirmation of CMF requirements with Ofgem, we have developed our internal CMF reporting governance and processes to enable a regular quarterly reporting cadence. In line with Ofgem's requirements, we have also provided detail on our governance processes as part of this reporting exercise to showcase the due process that is being followed as part of our ongoing portfolio management processes (e.g. inclusion of strategic decision making within the quarter, reference to change request processes).

Looking to improve on the way we report from FY25Q2 onwards, NESO will seek to provide an update on any key risks or issues that were cascaded in previous reporting cycles, but which have since changed their status (e.g. now deprioritised or closed). Where risks have been deprioritised, this is where they have been de-escalated to be actively managed at project-level.

As per the latest approved spend figures, our latest sanctioned position is £24.2m above our BP2 submission overall. Please note that a few investments in some roles are yet to be sanctioned and as such have not been included in our latest 'approved spend' position. 'Approved spend' refers to the full BP2 sanctioned spend. This is different to the forecasted forecast BP2 value in the Value for Money chapter of the incentives report which is based on actual spend for year 1 and sanctioned spend for year 2.

Our actual spend for the BP1 period was £25.5m below that forecast in the BP2 plan for the period. This underspend can be largely attributed to the timing of spend on projects, so our latest approved spend position includes the re-phasing of spend across the final three years of the RIIO-2 period. Further detail on cost variance at a role level is detailed in next role sections.

During the two quarters we have sanctioned 670 Real Time Predictions, which has added £2.9m to our Latest Approved Spend figure for BP2. The new Geospatial investment is still under discovery and does not yet feature in the CMF Reporting. We have also removed one investment report, 640 Network Planning Review after a decision on its scope being included within the mobilisation of a wider Discovery stage covering Strategic Energy Planning, with no impact to financial position until a new investment is mobilised. A new investment called 700 Strategic Energy Planning is still to go through sanctioning.

We have successfully launched the new DD&T operating model and organisational design to align to the NESO directorate structure, including the new DD&T governance model which DD&T will continue to mature and refine to drive value and efficiencies.

The DD&T Architecture team successfully concluded the Architecture maturity assessment with Gartner and Capgemini and are in the process of looking to develop a proposal on the roadmap including frameworks and master classes. We are exploring options to take this forward considering internal capabilities as well as a hybrid approach or an external partnership.

The DD&T Ways of working initiative successfully concluded the Agile Hygiene Dashboard pilot with Data Analytics Platform and STAR, with the aim to codifying a consist approach to Agile across investments. We completed the high-level process design for Automated Release Governance enabling key archetypes (OBP, Salesforce, MuleSoft, & Cloud). The Low-Level design for IT control validation created for ServiceNow & Cloud allowing reporting of adherence from build pipelines is to be implemented as part of the NESO ServiceNow & Cloud platform. The pilot 1st stage was postponed due to competing NESO launch priorities and will now start in FY25Q3.

We launched TBM (Technology Business Management) within DD&T and have been engaged with Ofgem on progress made on the specific taxonomy required in our industry and plans to take this forward.

In June 2024 we published our updated Digitalisation & Data Strategy and Action Plan (DSAP), detailing our digital ambitions. We have also started to create digital charters aligned to the directorates although this has been delayed due to Day 1 Priorities.

Plans were put in place for a phased implementation plan of rebranding applications for NESO launch, de-risking any launch activities have been concluded successfully.

Role 1 (Control Centre and Operations)

Role 1 summary

Executive summary	The role operated well and achieved multiple successful releases, noting the Greenlink Software release and the multiple rebranding activities in readiness for NESO launch. The GE AWS upgraded Reliance 2024.1 was also completed, conforming to agreed security requirements and converted database loaded to support testing. Significant strides were made within the Data Analytics Platform with the creation of an initial draft operating model focussing on the charging model, support, prioritisation and delivery areas to create a faster and more efficient delivery method. 180 Enhanced Balancing Capabilities launched Fast Dispatch creating an ability to optimise fast-acting units for frequency control. • Interface to SMP for contract data, interface to SCADA for metering, additional data items from BM for constraints • BM Quick Reserve 210 Balancing Asset Health progressed the activities for EBS application decommissioning. 250 DEP successfully completed the rebranding activities for NESO launch. 510 Restoration and Restoration decision support completed the initial LLD for Scottish Power Energy Networks (SPEN), Electricity North West (ENW) and Northern Power Grid (NPG) for Inter-Control Centre Communications Protocol (ICCP) links, awaiting final LLD 670 Real-Time Predictions financial sanction was granted, core delivery team established and initial engagement with OBP initiated.

The table below shows the current Role 1 position. It shows our BP2 submission figures for FY24 and FY25, and the same years are shown for the approved values through our whole life sanctioning process in "Approved BP2 Spend".

Latest DD&T role spend	**£m**	**FY24**	**FY25**	**Total**
	BP2 Submission	80.9	81.6	162.5
	Approved BP2 Spend	83.8	80.1	163.9
Rationale	Approved BP2 Spend' for Role 1 is currently aligned with the BP2 submission, this is largely due to non-utilisation of risk costs and savings achieved in some investments. We have faced delays in mobilising our investments and delivering some areas of the FY24 scope. In FY25 more investments will be sanctioned and mobilised.			

Investment summary
Investment summaries are organised in line with programme delivery groupings.

110 Network Control	
Delivery and spend update	The Network Control Management System (NCMS) programme continues to receive quarterly releases of both the Reliance and Wide Area Monitoring System (WAMS) products into Amazon Web Services (AWS) and GE environments. This has enabled continued development of test scripts and test execution on new

	features being delivered within releases. In parallel, NESO non-production environments are being configured to allow the deployment of Reliance and WAMS through automated pipelines. We expect to utilise these pipelines and deploy NCMS products into NESO non-production environments towards the end of Q3 FY25. The decision to pivot to GridOS has meant development of GridOS apps, to replace certain legacy Reliance product features, as well as integrate a broader GE product set, specifically; Reliance, WAMS, NMM (Network Model Manager), GridOS apps and GridOS Platform. This has presented delivery challenges to GE. NESO have been working side-by-side with GE to prioritise solution features that are required for Day 1 go-live, delivering a system that can both replace the existing iEMS and deliver enhanced value to Control Centre Engineers. Post go-live we will incrementally deliver features to the control centre through the DevSecOps processes we are putting in place. **Achievements over the last 6 months:** • Quarterly releases of Reliance and WAMS to both AWS and GE on-premise environments. • GridOS Application and Platform product developments as per NESO solution definition documents (SFDs) • Foundational application baseline security requirements achieved to enable deployment to NESO on-premise environments • External and CNI (Critical National Infrastructure) interface designs complete • Deployed Enterprise Grid Data Connect (part of GE GridOS platform) to support CNI to non-CNI integrations, (including DAP). • Established Service Transition and Change Management Forums to engage wider stakeholder groups in preparation of system acceptance and cutover.

Spend	**FY24 & FY25 Period**					
	BP2 Submission	£36.4m	**BP2 submission with BP1 under/overspend**	£36.1m	**Approved Spend**	£34.8m
	FY22 to FY26 Period					
	BP2 Submission	£58.1m		**Approved Spend**	£58.1m	

120 Interconnectors	
Delivery and spend update	The Interconnector investment has continued to deliver on track to expectations within the 6-month period. This has included the delivery of the GreenLink software release to enable the commercial testing and full go live of GreenLink. Furthermore, we have initiated NESO rebranding for key applications within the control room. We have also delivered on data capture and reporting improvements following feedback from OFGEM which has allowed us to improve granularity and transparency in decision making related to interconnector flows (NTC). Finally, we have completed works around restrictions increasing the frequency of recording from daily to every 30 minutes and these are now recorded for both flow directions rather than one overall. Releases: • IC Service Improvements: Upgrade IFLO webserver with latest OS • Interconnector Service Improvements release

	• GreenLink: Design, Development and Testing - Completion of all dependencies, pre-reqs and project work associated with preparing for the technical go live • GreenLink Software release July **Achievements over the last 6 months:** • EWIC & Moyle functionality transferred from BM to IFLO • Software releases to enable Greenlink Interconnector to commence commercial operations					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£4.3m	**BP2 submission with BP1 under/overspend**	£5.5m	**Approved Spend**	£2.8m
	FY22 to FY26 Period					
	BP2 Submission	£10.9m		**Approved Spend**	£7.3m	

170 Frequency Visibility						
Delivery and spend update	FATE-R (Frequency and Time Error - Replacement) has successfully been deployed into production. Initial feedback and unforeseen defects have been addressed with subsequent fixes deployed. Further to the initial implementation of Oscillation Guard Pro in Scotland we have decided to extend the coverage to the whole of Great Britain to provide visibility of oscillations GB wide. Dynamic System Monitoring (DSM) discovery work has identified a need to further establish current generator DSM equipment capability and requirements to support a strategic solution. To investigate the optimum solution to enable connection of both existing and new users' equipment, a tactical solution is proposed to, firstly; maintain access to England & Wales connected DSMs via NGET's solution, and secondly; run a proof of Concept (PoC) with a small number Participating Generators to understand the feasibility of technology, processes and impacts. **Achievements over the last 6 months:** • Go-Live of FATE (Frequency and Time Error), moreover, delivered enhanced visualisation and early warning of system issues. • Completion of DSM discovery and scope of initial proof of concept • Oscillation Guard Pro (OGP) contract negotiations for full GB coverage complete					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£4.0m	**BP2 submission with BP1 under/overspend**	£4.8m	**Approved Spend**	£4.2m
	FY22 to FY26 Period					

	BP2 Submission	£6.8m	**Approved Spend**	£6.4m

180 Enhanced Balancing Capabilities						
Delivery and spend update	We have continued to make positive steps within the Enhanced Balancing Capability investment. We now have Rack and Stack of OBP (Open Balancing Platform) Strategic within the data centre for prod and non-prod complete. We have also delivered the enabling of network for OBP Strategic in prod and non-prod environment. The PEF Wind API is now available, and Data Centre Enablement (DCE) is moving to configure the hardware stack in readiness for testing and then handover to OBP so there able to build a highly resilient solution moving forward. We have completed the interface to Single Markets Platform (SMP) for contract data and interface to SCADA for metering. Furthermore, we have reduced instruction remediation for auto generated instructions from bulk dispatch in small and battery zones to less than 1.6%. Finally, we have improved fast dispatch to increase the uses of OBP through the use of price caps and OBP has been configured to support BM Quick reserve when the new service goes live We have moved the delivery of Zonal Balancing Engineer which has shifted from Q2 to Q3 this function will all for issue of instruction in an optimal way to small BMUs but has been moved to Q3 due to reprioritisation. Releases: • Fast dispatch - Ability to optimise fast acting units for frequency control completed • Interfaces to SMP and SCADA: As part of this milestone there will be a new interface established between the OBP and the Single Markets Platform so that contract data and the results of day ahead auctions can be used						
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£39.8m	**BP2 submission with BP1 under/overspend**	£47.2m	**Approved Spend**	£50.5m
	FY22 to FY26 Period					
	BP2 Submission	£102.8m		**Approved Spend**	£103.5m	

210 Balancing Asset Health	
Delivery and spend update	The Balancing Asset Health investments has made considerable progress across Electronic Balancing System (EBS) and Balancing Mechanism (BM). The EBS decommissioning project has completed moving the functionality to the existing BM system or has reverted to a fallback/ pre-EBS method. The EBS interfaces were all identified and closed with the appropriate controls. The

	application CNI teams then shut the EBS application stacks down. The EBS hardware was then isolated awaiting hardware decommissioning. The hardware that remains will be disposed/ destroyed by Restore Technology. The EBS project is on track to deliver EBS decommission by the end of December as per our OFGEM commitment. The BM Asset Health project delivered BM Release 5 which includes the Ancillary Service Reform Dynamic Response giving the control room engineers up to date situational awareness of the Dynamic Frequency Response (DFR). This tool will allow the Control Room to suspend one or more DFR in case of an emergency. We have also delivered enhancements to Stability, Voltage and Constraint Pathfinders enabling changes to pricing models, giving situational awareness for failures of the demand and constraints process and usability improvements for the energy team enabling extensions of active battery BOA's. Finally, there were system changes enabling a new interconnector between Ireland and England to come online. Furthermore, we have delivered priority improvements for the Control Room including the decreasing of SPICE daily archiving run times from 4 hours to 1 hour, which improves overall process performance. **Achievements over the last 6 months:** • Re-branding discovery all preparatory work leading up to the NESO go-live					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£10.1m	**BP2 submission with BP1 under/overspend**	£11.4m	**Approved Spend**	£9.9m
	FY22 to FY26 Period					
	BP2 Submission	£27.5m		**Approved Spend**	£27.5m	

480 Ancillary Services Dispatch	
Delivery and spend update	We have fully delivered on our plans for this 6 month period. Release 18 delivered both RDP and ASR enhancements to the User Interface including Representation of the Price on MW Dispatch screens for better consistency with other services and updates to the availability screens for ASR. There was additional situation awareness functionality introduced including the provision for the control room user to view availability and PN by constraint level (and instruct). An integration to the DAP (Data Analytics Platform) was introduced to support more robust monitoring of service providers and a number of technical improvements introduced to improve the system performance and stability. Release 19 has also been successfully deployed delivering technical and asset health improvements including updates to security authentication following feedback from IT security compliance and also completed the production fix for smooth consumption of non-working day availability from service improvements. A proof of concept for improvement in constraint loading was completed which will ultimately allow us to more easily introduce the functionality in ASDP in the future to reflect

<table>
<tr><td></td><td colspan="6">real time constraints loading into ADP database from BM and improving efficiency of ENCC users by avoiding manual intervention.
Achievements over the last 6 months:
• Additional Release R20 added to the roadmap to deliver requirements for ASR and RDP
• We have also delivered key rebranding activities across ASDP related systems</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£2.4m</td><td>BP2 submission with BP1 under/overspend</td><td>£4.3m</td><td>Approved Spend</td><td>£3.3m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£8.5m</td><td>Approved Spend</td><td colspan="2">£8.5m</td></tr>
</table>

<table>
<tr><td colspan="7">670 Real Time Predictions</td></tr>
<tr><td>Delivery and spend update</td><td colspan="6">Within the Real Time Predictions investment we have received sanction for the RTP investment and the project has been kicked off with the initial recruitment of core team members complete.

We have also completed the product strategy and roadmap with initial RAID logs. Outcomes have also been developed to input into the Long Range plan.

Work has also been completed with the OBP team to understand existing architecture and design principles to progress with HL design and we’ve completed Epic breakdown to features and enablers for the first delivery increment.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£0m</td><td>BP2 submission with BP1 under/overspend</td><td>£0m</td><td>Approved Spend</td><td>£2.9m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£0m</td><td>Approved Spend</td><td colspan="2">£5.2m</td></tr>
</table>

<table>
<tr><td colspan="2">260 Forecasting Enhancements</td></tr>
<tr><td>Delivery and spend update</td><td>Forecasting enhancement has made considerable progress since BP2 submission. We have delivered an enduring cloud platform for hosting Platform for Energy forecasting Wind forecasting capability.

We have successfully delivered five out of six interim releases and are on target to complete delivery of wind forecast solution in Azure and enable Open Balancing Platform integration.</td></tr>
</table>

<table>
<tr><td rowspan="1"></td><td colspan="6"> While the wind forecasts are already proving more accurate than their legacy counter parts in EFS, we are on target to further enhance the wind forecast models and overwrite EFS data and deliver retirement strategy for Legacy forecasting system (EFS) within BP3 as planned. We have also initiated, mobilised the Oracle Cloud Infrastructure migration from current interim platform onto enduring Azure cloud platform for Solar, national Demand and Grid Supply point models and are on target to complete the migration and retire the interim solution within BP2. In delivering the above we have remained within the budget sanctioned at BP2. and are on target for spend against our BP2 targets. Achievements over the last 6 months: Strategic cloud platform delivered in azure for hosting forecasting models.
Developed MLOPs platform and Machine learning models for Wind forecasting.
Developed all technical pre-requisite releases enabling data ingestion and processing of key upstream data and enable Wind forecast model creation.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£6.1m</td><td>BP2 submission with BP1 under/overspend</td><td>£6.8m</td><td>Approved Spend</td><td>£6.0m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£13.4m</td><td>Approved Spend</td><td colspan="2">£13.4m</td></tr>
</table>

<table>
<tr><td colspan="7">220 Data and Analytics Platform</td></tr>
<tr><td>Delivery and spend update</td><td colspan="6"> Achievements over the last 6 months: DAP platform enhanced to enable faster ingestion
AAE enhancement with Infrastructure as Code scripts enables standing a new AAE under 3 hours
ASR Data product delivered for performance monitoring of Ancillary services
DAP internal UI released
Purview 1.0 set up as an enterprise capability tool.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£15.1m</td><td>BP2 submission with BP1 under/overspend</td><td>£15.8m</td><td>Approved Spend</td><td>£15.3m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£29.9m</td><td>Approved Spend</td><td colspan="2">£30.3m</td></tr>
</table>

<table>
<tr><th colspan="7">510 Restoration & Restoration Decision Support Tool</th></tr>
<tr><td>Delivery and spend update</td><td colspan="6">Site Surveys and Low-Level designs are complete for the Inter-control Centre Communications Protocol (ICCP) links for Scottish Power Energy Networks (SPEN), Electricity Northwest (ENW) and Northern Power Grid (NPG). We are experiencing implementation delays due to the contract exit of Vodafone and are in the process of rebaselining delivery with the incoming vendor, Magdalene.

Following the decision to engage directly with GE, as a strategic partner, for the Restoration Decision Support Tool (RDST), we have had extensive requirement review and product mapping sessions. These have now concluded, and GE have provided a formal proposal to implement their CoTs restoration tool, Real Time Shutdown and Restoration Management (RTSRM). The product will require feature enhancements, however this approach will support an initial deployment with incremental feature enhancements, expediting the value to the control Centre.

The Regional Demand Forecasting publication is progressing with data creation for all seven regions and discussions on file transfer format with Elexon completed. We presented solution options at the Balancing and Settlement Code (BSC) Panel for Regional Demand Forecast publication. Feedback and additional scope elements are being built into overall solution.

Restoration scope review conducted against BP2 investment 460 (merged with this investment) and determined that Optel and Telephony network upgrades are no longer in scope for this investment due to NESO separation and Optel network subject to wider conversations. This will be reflected within BP3 submission.

Achievements over the last 6 months:
ICCP hardware procured, site surveys and low-level designs complete.
RDST requirement alignment to GE’s RTSRM product, GE proposal received.
Stakeholder workshops held with Control Room Operators to explain the new Electricity System Restoration Standards (ESRS).
Regional Demand Forecast: Data creation for all seven regions completed and discussions on file transfer format with Elexon.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£17.5m</td><td>BP2 submission with BP1 under/overspend</td><td>£17.9m</td><td>Approved Spend</td><td>£14.8m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£24.9m</td><td>Approved Spend</td><td colspan="2">£21.8m</td></tr>
</table>

<table>
<tr><th colspan="2">130 Emerging Technology and System Management</th></tr>
<tr><td>Delivery and spend update</td><td>Achievements over the last 6 months:

Inertia Monitoring Enhancements
Forecast parameterisation implemented in production to enable more granular forecasts to be generated for longer time periods.</td></tr>
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<td></td>
<td colspan="6">

Data flows from the two Inertia systems ingested into the new DAP 2.0 environment with higher performance.
Engaged with NESO Transition team to impact-assess the migration of Inertia Grid Analytics servers into the NESO Azure tenancy.

Pathfinders

Detailed scope of work and plan defined for FY25.
Stability Grid Forming (Batteries) - Ongoing scope and modelling development discussions completed with the iEMS team to agree the enhancement deliverables for FY25.
Engagement with OBP & NCMS team on future planning 12-18mths ahead.
Scope & requirements defined & delivered for Stability Grid Forming Batteries.
Development & testing completed for NED (Uniform Pricing) Report which will support the Settlements team going forward.
Delivery of BM R5 Revision to facilitate i-trip arming price and Separation of SCL from Inertia Business Go-Live. The new SCL and SCO reason codes will allow control room users to instruct units that are able to deliver Short Circuit Level (SCL) capability independently of delivering inertia capability.
Uploading of CMP Contract Data to support new & existing constraint units.
Enduring IT solution Phase 2 complete - Enhanced modelling will ensure control room users have accurate information with regards to Grid Forming units. This will allow them to optimize what units are instructed to meet network needs.

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<tr>
<td rowspan="4">Spend</td>
<td colspan="6">FY24 & FY25 Period</td>
</tr>
<tr>
<td>BP2 Submission</td>
<td>£3.9m</td>
<td>BP2 submission with BP1 under/overspend</td>
<td>£4.2m</td>
<td>Approved Spend</td>
<td>£2.5m</td>
</tr>
<tr>
<td colspan="6">FY22 to FY26 Period</td>
</tr>
<tr>
<td>BP2 Submission</td>
<td colspan="2">£8.7m</td>
<td>Approved Spend</td>
<td colspan="2">£6.9m</td>
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<tr>
<td colspan="2">250 Digital Engagement Platform</td>
</tr>
<tr>
<td>Delivery and spend update</td>
<td>NESO Branding was successfully implemented and deployed October 1st across CIAM and DXP. Key functionality was released to increase personalisation of MyNESO account, My news Carousel and My Events allowing users to see events/news of their choice. Upgrade of security around CIAM Single sign on, integrations with Connections 360, DCM and Operational Forms to create a seamless user experience, this also included CIAM SMP integration. CIAM integration with ENAMS and EGAMA was also completed in FY25Q1.

Achievements over the last 6 months:

DXP, CIAM rebranding
Query Management solution via Salesforce Design and planning completed and development underway with planned delivery for January 2025.
DEP (DXP) to DCM integration (Part 1)
CIAM integration with ENAMS and EGAMA
Filtering of My Events Carousel b
Data Portal Subscription enhancements

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</table>

	• Improving speed of updates made visible to Data Portal. This provides Users with combined emails when multiple updates are made to Data files or Datasets within a 5-minute period • CIAM SMP API integration					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£3.9m	**BP2 submission with BP1 under/overspend**	£4.9m	**Approved Spend**	£7.1m
	FY22 to FY26 Period					
	BP2 Submission	£11.4m		**Approved Spend**	£12.0m	

190 Workforce Change Management Tools						
Delivery and spend update	Within this investment we have resolved previous issues with supplier's core service with the release of a resolution patch. This has unblocked the previously delayed March release which has now been deployed and completed. The Project team have also embedded the changes for training and developed the next areas of functionality improvements for development and deployment. Finally, the first release associated with the FY25 objectives of imbedding training schedules was also deployed. Releases: • Annual Service Improvements for release's 1 and 2 • Training schedule's (1st drop) • Overtime Reporting • Second Release Training Improvements **Achievements over the last 6 months:** • Annual Service improvements • Training schedules • Automation of processes – Overtime and expense reporting					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£2.0m	**BP2 submission with BP1 under/overspend**	£2.0m	**Approved Spend**	£0.4m
	FY22 to FY26 Period					
	BP2 Submission	£3.8m		**Approved Spend**	£1.0m	

200 Future Training Simulator and Tools	
Delivery and spend update	In the first quarter of this year, we mobilised a Project delivery team consisting of Product, Technical and Project Management resources. We have conducted a series of requirements workshops engaging stakeholders from Control Training Unit

(CTU) to end-users (Transmission, Energy and Strategy). These workshops have manifested a set of requirements that, together with BP2 plans, have formed the basis of the Future Training Simulator product roadmap.

Additionally, we have engaged with the NCMS, OBP and Operator Console projects to establish capabilities, environments, dependencies, and roadmap alignment.

Engagements have also identified the need to provision additional training support tools that seek to enhance both authorisation and enduring training capabilities within the Control Training Unit (CTU).

Achievements over the last 6 months:

- Future Training Simulator requirements and product roadmap
- Conceptual Solution Architecture (CSA) to integrate OBP, NCMS and Operator Console capabilities.

Spend

FY24 & FY25 Period

BP2 Submission	£4.4m	**BP2 submission with BP1 under/overspend**	£4.4m	**Approved Spend**	£0m

FY22 to FY26 Period

BP2 Submission	£7.3m	**Approved Spend**	£0m

240 ENCC Asset Health

Delivery and spend update

By March 2025 in BP2 we will have completed over 115 small projects under the ENCC Asset Health investment line. These projects delivered the following:

- Over 40 Market participant onboarding activities
- Over 25 cases of remedial actions to address issues with business supported applications and bespoke systems
- Over 25 activities focusing on upgrading underpinning components of applications to ensure ongoing support
- Over 25 operational improvements through the deployment of small apps or hardware / software refreshes
- Delivering a solution to allow for the retirement fax machine usage in the control room

We are continuing to develop, evolve and prioritise a list of asset health needs which we will continue to mobilise on a quarterly basis. We will also be replacing, upgrading, or taking maintenance actions for systems as required.

We will plan and prepare tools to meet external demands, such as increased numbers of market participants or new performance reporting requirements. Ongoing general software and hardware patching maintenance will be delivered reducing security and technical debt risk.

Achievements over the last 6 months:

- Maintain and/or decommission specific tools that support ENCC activities
- Ensure system solutions maintain resilience in our business processes
- Implement solutions to mitigate risks associated with legacy and new unsupported user written tools
- Create smaller solutions and address minor enhancements via Rapid Development Team

	• Mobilised a team to develop a replacement solution to allow for the removal of Fax machines from the control room in line with Faxes no longer being supported technology					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£5.8m	**BP2 submission with BP1 under/overspend**	£6.7m	**Approved Spend**	£6.4m
	FY22 to FY26 Period					
	BP2 Submission	£14.2m		**Approved Spend**	£12.5m	

450 Future Innovation Productionisation						
Delivery and spend update	**Achievements over the last 6 months:** • Dynamic Reserve Setting - Phase 1 development awaiting on DAP for conclusion • IMMO was to be considered for Productionisation if the outcome of the NIA project work was favourable - unfortunately the conclusion was that we couldn't do what we want to do (which was extend the model without PMU data in England & Wales)					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£4.0m	**BP2 submission with BP1 under/overspend**	£4.0m	**Approved Spend**	£0m
	FY22 to FY26 Period					
	BP2 Submission	£6.6m		**Approved Spend**	£0m	

140 ENCC Operator Console	
Delivery and spend update	Enterprise architecture evaluation of Critical National Infrastructure (CNI) Virtual Desktop Infrastructure (VDI) versus Desktop Environment Management (DEM) options appraisal has concluded that DEM approach is most suited to achieve ambition of 'Single pane of glass'. This evaluation confirmed the need to launch a procurement event, initiated by a Pre-qualification questionnaire (PQQ) In Q2 we launched a PQQ to market to identify a partner to renew the desktop experience of operators at the ENCC sites providing design, implementation and support (Turnkey) of a new console experience, including: • An interactive 'single pane of glass' view across NESO's operational systems. • Implementation of the solution in conjunction with NESO's own infrastructure teams and those of their managed service providers. • Operational support of the Operator Desktop solution, including on-site response.

<table>
<tr><td></td><td colspan="6">PQQ response have been received and evaluated and four shortlisted vendors are to progress to the next stage, Request for Proposal.

Achievements over the last 6 months:
• Conceptual Solution Architecture (CSA) document approved through NESO architectural forums
• Demo desk fitted with network connectivity which will be required to support vendor's console demonstrations during next phase of the procurement event.
• PQQ material prepared and launched with vendor responses received and evaluated.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£2.8m</td><td>BP2 submission with BP1 under/overspend</td><td>£3.1m</td><td>Approved Spend</td><td>£2.9m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£5.5m</td><td>Approved Spend</td><td colspan="2">£5.4m</td></tr>
</table>

Role 2 (Market development and transactions)

Role 2 summary

Executive summary	Key achievements across the Role 2 investments include: 320 EMR and CfD improvements investment has successfully delivered the EMR Capacity Market (CM) Solution in FY25Q1. 420 Auction Capability investment concluded testing for NESO rebranding and successfully completed technical deployment of Quick Reserve BM on the EAC platform. 610 STAR investment achieved the technical go live for MFR successfully. 330 DCM investment successfully completed a new NESO rebranded site and a new GenAI capability in readiness for NESO launch. 400 Single Markets Platform investment delivered integration with the Open Balancing Program: Registration & pre-qualification data from SMP identified and made available for the Open Balancing Platform through API. Contract data from SMP identified and made available for the Open Balancing Platform through API. Considering Reserve, the Quick Reserve BM technical delivery was successfully delivered. Subsequently for Response, Arming and Disarming was successfully delivered which will benefit control room as below: • Monitor Efficiencies of market resources leading to reduced NESO procurement costs / Enable control room to better protect system security / Improved processes leading to faster operations and reduced mistakes

The table below shows the current Role 2 position. It shows our BP2 submission figures for FY24 and FY25, and the same years are shown for the approved values through our whole life sanctioning process in "Approved BP2 Spend".

Latest DD&T role spend	**£m**	**FY24**	**FY25**	**Total**
	BP2 Submission	27.6	28.8	56.4
	Approved BP2 Spend	40.0	35.1	75.1
Rationale	"Approved BP2 Spend" for Role 2 is currently £18.7m higher than the BP2 submission, however, this variance includes £5.5m of underspend from BP1. This underspend would have been mainly attributed to the timing of spend on projects. As reported previously, £6.7m of increased spend is driven by EMR and Settlements, Charging and Billing investments. The expected approved BP2 spend for the reprofiling of EU and GB regulatory changes being pushed to later years will be highlighted in FY25Q3.			

Investment summary

320 EMR and CfD improvements	
Delivery and spend update	Electricity Market Reform (EMR) continued to deploy features in line with the new aligned BP2 roadmap. A number of releases have delivered features including Stage1 EMR Capacity Market (CM) business go-live and Early Life Support. We initiated EMR Phase 2 to deliver regulatory and continuous improvement milestones and we are on track to deliver FY25 BP2 milestones.

<table>
<tr><td></td><td colspan="6">We accelerated delivery work for Q1 and Q2 to ensure the timely launch of the Capacity Market functionalities and have ramped down resources to single delivery squad from Aug 2025 (Q2FY25). As such, overall we are on track for FY25 budget.

Achievements over the last 6 months:
Conducted Customer Familiarisation Window in Q1, covering the end-to-end Capacity Market scheme functionalities that were delivered as part of the MVP delivery for the New EMR Portal. 67 user accounts were created for individuals participating in the Customer Familiarisation Window, representing 31 organisations and 298 individual companies. This represented 1306 active capacity market agreements and 61% of total active capacity at the time. Delivered prioritised enhancements based on feedback
R2.1.1 (Q1FY25) - Additional release for two EMRS integration features was delivered. This implemented secure system integration between the EMR Delivery Body and EMRS, to enable sharing of daily Capacity Market transactional data, to allow EMRS to settle Capacity Market payments.
Completed migration of Capacity Market related data, held by the EMR Delivery Body, from the Legacy EMR Portal, to the New EMR Portal. This included transformation and alignment of the data models for each portal, as well associated test cycles. This workstream successfully migrated 180GB data and 150k documents.
The New EMR Portal was fully launched in June 2024, comprising of the MVP delivery, to enable industry use for the Capacity Market scheme, including 2024 Prequalification, Auction readiness and Agreement Management processes. Supported customer adoption of the new product.
Completed Early Life Support phase of Stage1 EMR CM MVP, this enables core product team’s full capacity to move on upcoming continuous improvement releases.
Completed 'Release 2.2 .1(Q2 FY25) - Regulatory Reporting and Agreement Management’ milestone. This release delivered a key regulatory change related to iEV (Independent Emission Verifiers) along with priority product improvements related to CMR (Capacity Market Register) and agreement management processes, including SPD (Satisfactory Performance Dates).
Completed Release 2.2.2 Quarterly Release Train: This release comprises of improvements to prequalification assessment, Audit and Agreement management, Secondary trading, and Construction reports.
High level CfD (Contract for Difference) replacement feasibility and option analysis commenced.
File transfer solution has been delivered to securely receive EMRS metering assessment and component reallocation data.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£7.4m</td><td>BP2 submission with BP1 under/overspend</td><td>£6.4m</td><td>Approved Spend</td><td>£14.4m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£21.3m</td><td>Approved Spend</td><td colspan="2">£30.5m</td></tr>
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<table>
<tr><th colspan="2">400 Single Markets Platform</th></tr>
<tr><td>Delivery and spend update</td><td>
The SMP investment has successfully achieved the majority of the deliverables committed to within the last 6 months. Overall, the investment delivered a number of releases with features, however within Q1 the project delivery team had to manage around an organisation-wide change freeze necessitated by the C2C cutover and the finalisation of the initial NESO rebranding Day 1 Go-Live. Despite challenges, the project was able to reorganise and re-prioritise its feature backlog and deliver two releases in the quarter.
<u>Balancing Reserve</u>: Project successfully achieved all deliverables. Project set for closure. Project budget capitalization in progress to prepare for Project Budget line closure.
<u>Single Markets Platform</u>
Project is on track to meet financial forecasts in BP2 Assumptions. Intra-period over and underspends have been offset and overall spend is in line with GSV Sanction.
Achievements over the last 6 months:
<u>SMP</u>

Enhanced reporting on contracts enabling Increased customer satisfaction and greater visibility.
Enhancements to the Read API functionality and Enhanced SMP external APIs to allow market providers to update units via API leading to improved operational effectiveness.
Integration with the Open Balancing Program:

Contract data from SMP identified and made available for the Open Balancing Platform through API enabling seamless and strategic linkage to downstream systems and provision of visibility post contract award.
Registration & pre-qualification data from SMP identified and made available for the Open Balancing Platform through API. This will enable the release of the Quick reserve service later this year and the process flow will aid future services on SMP.

Integrated the strategic Single-Sign-On solution for external customers to access the Single Markets Platform from the Digital Engagement platform thereby enabling external customers to access all their accounts through Single-Sign-On. Also, allows market participants to switch between companies if they have access to more than one company.

<u>SMP Enhancement of existing features</u>

Enhancements for MW dispatch as part of Regional Development program (RDP including Form C Changes for UKPN, fuel type fields

Quick wins to improve the user experience for the RDP MW Dispatch Service and reduction of manual errors through system rules

Enhancements for the existing Demand flexibility Service (DFS) as part of DFS evolution
General enhancements on features like Global versioning, Related entity and others

<u>ASR</u>

Frequency Response

Delivered Operational Metering Graph Enhancements to the Control Room
Delivered Resubmission of Performance Data and Availability of PNs
Arming and Disarming capability delivered to the Control Room.
As part of Monitoring, Reporting and Penalties we have delivered various checks i.e. Unavailability Report, State of Energy Check,

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Performance Monitoring Non-Submission Penalty Check, Performance Monitoring Non-Submission Behavioural Check, PN Non-Submission Penalty Check, PN Non-Submission Behavioural Check. These monitoring services help identify providers not submitting the right quantity and quality of data and highlight instances where the provider is breaking the service terms or trying to gain an unfair advantage by submitting wrong performance data.
We have automated the way Performance data is aggregated and sent to Settlements. Now the final CSV report is aggregated automatically without manual intervention. Dashboards for Final Penalty & Final Non-Penalty provide internal users with a single view of breaches from different types of checks.
Deployed a consolidated view of "Reduction in Payment", which shows users the amount deducted from a Provider’s overall payment.

Reserve

Successful technical deployment of Quick Reserve BM ready for a Business Go Live upon conclusion of Ofgem consultation.
Release 3 Epics were signed off. They will benefit the Control Room by allowing monitoring of efficiencies of market resources leading to reduced NESO procurement costs; enabling better protection of system security and improving business processes leading to faster operations and reduced mistakes.

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<tr>
<td rowspan="4">Spend</td>
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<tr>
<td>BP2 Submission</td>
<td>£14.5m</td>
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<td>Approved Spend</td>
<td>£15.8m</td>
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<tr>
<td colspan="6">FY22 to FY26 Period</td>
</tr>
<tr>
<td>BP2 Submission</td>
<td colspan="2">£34.9m</td>
<td>Approved Spend</td>
<td colspan="2">£33.5m</td>
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<tr>
<td colspan="2">420 Auction Capability</td>
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<tr>
<td>Delivery and spend update</td>
<td>
The Auction Capability investment has successfully achieved the majority of the deliverables committed to within last 6 months. The investment delivered a number of releases, however within Q1 project delivery team had challenges around organisation-wide change freeze necessitated by NESO rebranding Day 1 Go-Live, the project was required to reorganise and re-prioritise its feature backlog for Auction Platform.
Achievements over the last 6 months:

Balancing Reserve Extended Life Support (ELS) completed on EAC in Q1FY25
Completed milestone for Quarterly Release Train Q1FY25 Capability enhancements to support new products and integration with other platforms.
Concluded testing for NESO rebranding ready for deployment in Q3FY25.
Successfully delivered Quick Reserve BM technical Go Live ready for a Business Go Live upon conclusion of Ofgem consultation.
Discovery Phase for Strategic Auction Initiatives in progress due to additional REMA requests
PQQ issued for tactical Capacity Market auction capability.

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<table>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£4.2m</td><td>BP2 submission with BP1 under/overspend</td><td>£5.1m</td><td>Approved Spend</td><td>£4.2m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£8.9m</td><td>Approved Spend</td><td colspan="2">£8.1m</td></tr>
</table>

<table>
<tr><td colspan="7">610 Settlements, Charging and Billing</td></tr>
<tr><td>Delivery and spend update</td><td colspan="6">In terms of Revenue, STAR has delivered the final migration of its services from CAB to STAR with the implementation of BSUoS (new methodology). Some resources will be retained to meet the additional reporting requirements on CAB archived data before the decommissioning of the legacy System CAB due by the end of the year. STAR has also implemented first part of the Reconciliation Functions, in alignment with annual business cycles, with all Reconciliation functions expected by end of FY25. TNUoS Gen tariffs have been descoped, and ALF calculations have been reprioritised to March 2025.

In terms of Settlement, FFR services – first major release since STOR - are now settled on STAR, However, STAR encountered a number of delivery setbacks, including SME availability and platform performance. The agreement to prioritise the remediation of these challenges to fix the foundations of the programme has had a knock-on effect on the delivery timelines of its roadmap, which has now been re-prioritised.

Achievements over the last 6 months:
• Within Revenue, TNUoS Initial Reconciliation is now live and reconciliation was run from STAR. TNUoS Gen tariffs have been descoped, and ALF calculations have been reprioritised to March 2025, to allow focus on BSUoS, which is now implemented on STAR for final billing validations. Additional customer enhancements have also been delivered.
• Within Settlements, Firm Frequency response dynamic suite of services is now settled on STAR, and MFR has been implemented on STAR to allow for final validations before settlement can take place.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£9.8m</td><td>BP2 submission with BP1 under/overspend</td><td>£9.7m</td><td>Approved Spend</td><td>£19.3m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£33.5m</td><td>Approved Spend</td><td colspan="2">£43.2m</td></tr>
</table>

<table>
<tr><th colspan="7">680 Local Constraints Market</th></tr>
<tr><td>Delivery and spend update</td><td colspan="6">The Local Constraints Market (LCM) investment has delivered the majority of its commitment in the last 6 months.

The investment is on-track to complete delivery within sanction value in FY25.

Achievements over the last 6 months:
• ABSVD Opt-out solution delivered to reduce barriers to market participation for aggregators.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£0m</td><td>BP2 submission with BP1 under/overspend</td><td>£0m</td><td>Approved Spend</td><td>£0.4m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£0m</td><td>Approved Spend</td><td colspan="2">£0.4m</td></tr>
</table>

<table>
<tr><th colspan="7">330 Digitalised Code Management</th></tr>
<tr><td>Delivery and spend update</td><td colspan="6">DCM can now be navigated to from the NESO homepage. DCM delivered a new NESO rebranded site including a new GenAI capability on 1st October. This will provide a new search capability for Grid Code end users. A feedback process has additionally been put in place to enable the capture of feedback from end users; this will feed into future development in Q3. In addition, CIAM-DCM integration has been established FY25 Q2

Achievements over the last 6 months:
• NESO rebranded site
• New GenAI capability
• CIAM-DCM integration</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£2.5m</td><td>BP2 submission with BP1 under/overspend</td><td>£2.6m</td><td>Approved Spend</td><td>£2.7m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£2.7</td><td>Approved Spend</td><td colspan="2">£2.8m</td></tr>
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<table>
<tr><th colspan="2">280 GB regulation</th></tr>
<tr><td>Delivery and spend update</td><td>This investment has continued the support of the Market Half Hourly Settlement (MHHS) Programme by attending MHHS Programme meetings, responding to programme consultations and change requests.</td></tr>
</table>

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<tr>
<td></td>
<td colspan="6">We have also continued to provide timely support to industry workgroups, Ofgem and the government by completing quality analysis in required timescales.

The investment continued to underspend against the Q1 and Q2 approved spend, primarily because of extended consultations, the reforecasting and replanning of MHHS and a reduction in the volume of CUSC requests.

Achievements over the last 6 months:

• Supported the MHHS Programme; refined impact assessments and liaised with MHHS Programme Team, Elexon and Helix to refine NESO’s implementation plans.
• Key feasibility analysis work as follows:
    o Review of Electricity Market arrangements (REMA): Discovery and impact assessment work in progress with focus on Zonal Pricing - capacity calculation and allocation, to support Department for Energy Security and Net Zero (DESNZ) market design decision process in Q3-4
    o P470 Protecting the Imbalance Price from Inflexible Offers Licence Conditions (IOLC) related Distortions: Impact assessment completed and mod subsequently withdrawn
    o CMP417 Extending principles of CUSC Section 15 to all Users: Impact assessment work in progress
    o CMP411 Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies: Impact assessment completed, moving to delivery platform backlog
    o GC0156 Facilitating the Implementation of the Electricity System Restoration Standard (forecasting only): Discovery work in progress</td>
</tr>
<tr>
<td rowspan="4">Spend</td>
<td colspan="6">FY24 & FY25 Period</td>
</tr>
<tr>
<td>BP2 Submission</td>
<td>£8.7m</td>
<td>BP2 submission with BP1 under/overspend</td>
<td>£10.0m</td>
<td>Approved Spend</td>
<td>£8.6m</td>
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<tr>
<td colspan="6">FY22 to FY26 Period</td>
</tr>
<tr>
<td>BP2 Submission</td>
<td colspan="2">£19.4m</td>
<td>Approved Spend</td>
<td colspan="2">£18.3m</td>
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<tr>
<td colspan="2">270 Role in Europe</td>
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<tr>
<td>Delivery and spend update</td>
<td>This investment has continued with the design and planning of the Physical Communication Network (PCN) and Regional Security Coordinator (RSC) Services Project. We have also followed up on an impact assessment on Clean Energy Package (CEP) 6.9 Mandatory Frequency Response (MFR) to support decision making by Ofgem.

The investment continued to underspend against the Q1 and Q2 approved spend, primarily because of derogations to CEP 6.9 MFR and a refinement of forecasts for the PCN and RSC Projects.

Achievements over the last 6 months:

• The Physical Communication Network (PCN) and Regional Security Coordinator (RSC) Services Project completed the Electronic Highway (EH) phase 1 & BLAN Portals designs, and our new vendor started the Global Services Load Balancing (GSLB) & Dual links projects.
• We continued the ongoing assessment of Future of Cross Border Capacity Calculation - DAY AHEAD
• Completed the assessment for CEP6.9 MFR</td>
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<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£9.4m</td><td>BP2 submission with BP1 under/overspend</td><td>£12.1m</td><td>Approved Spend</td><td>£9.6m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£22.3m</td><td>Approved Spend</td><td colspan="2">£19.9m</td></tr>
</table>

Role 3 (System insight, planning and network development)

Role 3 summary

Executive summary	Key achievements across the Role 3 investments include: 340 RDP Implementation and Extension investment delivered RDP 2-UKPN MW Dispatch: post technical go live, operational trial of live dispatch to prove end to end curtailment functionality successfully completed with friendly DER. 350 Planning and outage data exchange investment delivered access to Electricity Network Access Management System (eNAMS) to be able to restore the network deployed successfully. 380 Connections Platform released 9.0 (August Release) - Consultant Access feature completed successfully. Connections 360 Go live for Beta. Within 390 Electricity Network Development Tools' (ENDT) the testing of Plexos European data scenarios refresh was delayed due to slower than expected initial engagement. Stability Assessment MVP, Inertia and Short Circuit processes live, with Rotor Angle requirements complete and development in progress. Integration between Plexos and POUYA completed and initiated integration with 220 DAP. Voltage optimisation Pathfinder and NAP service implemented successfully. 500 Enhanced Frequency completed end to end testing and the Non Op Demo was done with learning capture and report completed.

The table below shows the current Role 3 position. It shows our BP2 submission figures for FY24 and FY25, and the same years are shown for the approved values through our whole life sanctioning process in "Approved BP2 Spend".

Latest DD&T role spend	**£m**	**FY24**	**FY25**	**Total**
	BP2 Submission	12.2	11.6	23.8
	Approved BP2 Spend	13.8	12.0	27.8
Rationale	Approved BP2 Spend" for Role 3 is currently £4.0m higher than the BP2 submission, however this variance includes £3.5m of underspend from BP1. This underspend would have been mainly attributed to the timing of spend on projects.			

Investment summary

340 RDP Implementation and Extension	
Delivery and spend update	We decided to change RDP 3 & 4 scope from Storage capability to purely focus on MegaWatt Dispatch Enhancements, aligned to the ENA Open Networks Programme and Strategic Connections Group to deliver a consistent enterprise wide DNO solution with wider benefits than simply delivering Storage solutions for only 2 DNO's. The Storage capability will now be RDP 5 - GSP (Grid Supply Point) Technical Limits solution which is now underway to deliver across all x6 DNOs. There is an underspend in FY25 in line with RDP GEMS project closure decision, with a portion of the underspend re-forecast against RDP 5 and 6 initiatives. **Achievements over the last 6 months:** • RDP 2 UKPN: successful live full dispatch trial along with Go-Live achieved, enabling a further 39 DER sites (just over 1.2GW) scheduled to connect before the end of 2025; maintaining security of supply by giving the control

	room the option to curtail these Distributed Energy Resources [DER's] once connected. • RDP N-3 Intertripping project closure activities completed, with the solution allowing connection of more renewable generation into the DNO network enabling them to generate energy without restrictions until there is a fault. To-date DNO data shows over 2GW already connected with further contracts taking the volume to nearly 6GW based on the N-3 intertripping scheme. • Formal approval by Sanction Committee to close Generation Export Management System (GEMS) project and proceed to Project Closure with the asset impairment provisioned.					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£7.7m	**BP2 submission with BP1 under/overspend**	£9.3m	**Approved Spend**	£7.6m
	FY22 to FY26 Period					
	BP2 Submission	£17.1m		**Approved Spend**	£14.1m	

350 Planning and outage data exchange	
Delivery and spend update	We continue to deliver quarterly releases for our Electricity Network Access Management System (eNAMS). We have provided users with seamless access to KPI 3, 4, 5, 10 & 12 reports on ad hoc and on demand basis and the ability to download reports with customed filters on the Salesforce TO portal. We have commenced a detailed analysis process to determine features and users stories required for deeper DNO / DSO access. This is to enable Deeper Access Planning with DNOs as they transition to become DSOs, and provides a whole system way of working. Our work on External Data Exchange (EDE) Replacement has progressed, with the low-level design and refined Users Stories for Enduring EDE Base Solution. We have also commenced the development of the portal for UK Network License owners to collaboratively specify and agree real world connections with GC0139 Digital requirements. **Achievements over the last 6 months:** • eNAMS Enhancements: PODE Release 11 • eNAMS Enhancements: PODE Release 12 • DNO / DSO detailed analysis underway for whole system thinking • EDE low-level design and refined Users Stories for Enduring EDE Base Solution.

Spend	**FY24 & FY25 Period**					
	BP2 Submission	£3.3m	**BP2 submission with BP1 under/overspend**	£3.2m	**Approved Spend**	£2.9m
	FY22 to FY26 Period					

	BP2 Submission	£8.4m	**Approved Spend**	£8.1m

<table>
<tr><th colspan="7">360 Offline network modelling</th></tr>
<tr><td>Delivery and spend update</td><td colspan="6">ONM programme continues to deliver the majority BP2 commitments in line with commitments in the first half of FY25
Achievements over the last 6 months:
• CoSim Feasibility completed and report produced
• EMT application in now live in Azure and in early life support (ELS). This enables simulations to be completed faster times using Azure technologies
• OLTA PowerFactory service pack6 fixes applied
• Caithness Moray Shetland HVDC modelling to UK network completed
• Multiple minor release of OLTA Platform to support NAP in support of the NOA programme and safety related modelling release
• DRC Generator Portal has completed UAT, and this requires some refinements prior to the technical go-live Q3.
Grid Connections Simulation Tool Design start has been delayed due to NIA contract negotiations taking longer than expected. The team will be mobilised upon completion of NIA contracts</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£3.5m</td><td>BP2 submission with BP1 under/overspend</td><td>£4.9m</td><td>Approved Spend</td><td>£5.3m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£8.1m</td><td>Approved Spend</td><td colspan="2">£8.7m</td></tr>
</table>

<table>
<tr><th colspan="2">380 Connections platform</th></tr>
<tr><td>Delivery and spend update</td><td>This investment has been expanded to include workstreams that have been prioritised by the Connections team in the Connections Digitisation Charter, including Securities process optimisation, Letters of Authority and Connections 360 geospatial visualisation and analytics. These are being delivered alongside BP2 commitments.
Achievements over the last 6 months:
10 Releases, delivering:
BP2:
• Consultant Access
• Queue Management enhancements (incl offshore projects)
• Customer driven enhancements through feedback on the portal incl DNO GSP Enhancements
• FAQs delivered through DEP Help Centre

Connections Charter:
• Letter of Authority v1
• Security Statements v1 (file upload/ download functionality)
Beta Release of Connections 360 for TO feedback ahead of Q3 full release</td></tr>
</table>

Spend	**FY24 & FY25 Period**					
	BP2 Submission	£3.0m	**BP2 submission with BP1 under/overspend**	£3.2m	**Approved Spend**	£5.7m
	FY22 to FY26 Period					
	BP2 Submission	£7.0m		**Approved Spend**	£10.2m	

<table>
<tr><th colspan="7">390 NOA enhancements</th></tr>
<tr><td>Delivery and spend update</td><td colspan="6">To align the investments’ name to scope being delivered and drive clarity, it was decided to change NOA programme name to 'Electricity Network Development Tools' (ENDT).

We also assigned Product manager for ENDT. The role will enable better visibility of backlog and licenses requirements and growth.

Achievements over the last 6 months:
• EA Enhancement Ancillary Services ("Enhancements to current Modelling Capability" milestone) CR approved with delivery commenced and on track for next quarter.
• Voltage optimisation Pathfinder and NAP service implemented as per plan.
• Stability Assessment MVP, Inertia and Short Circuit processes live, with Rotor Angle requirements complete and development in progress.
• Integration between Plexos and POUYA completed and initiated integration with 220 DAP.</td></tr>
<tr><td rowspan="4">Spend</td><td colspan="6">FY24 & FY25 Period</td></tr>
<tr><td>BP2 Submission</td><td>£6.0m</td><td>BP2 submission with BP1 under/overspend</td><td>£6.3m</td><td>Approved Spend</td><td>£6.0m</td></tr>
<tr><td colspan="6">FY22 to FY26 Period</td></tr>
<tr><td>BP2 Submission</td><td colspan="2">£9.3m</td><td>Approved Spend</td><td colspan="2">£8.9m</td></tr>
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<table>
<tr><th colspan="2">500 Enhanced Frequency Control</th></tr>
<tr><td>Delivery and spend update</td><td>Achievements over the last 6 months:

• Non-Prod Demo Equipment has been procured and deployed in three scheduled locations (with supporting software installed & data sets loaded).
• Training completed for the operation of the supporting non-Prod POC solution.
• Non-Prod Demo has been completed (including end to end testing)
• Non-Prod Demo Exit Reports have been populated & circulated for review / approval.</td></tr>
<tr><td>Spend</td><td>FY24 & FY25 Period</td></tr>
</table>

	BP2 Submission	£0.2m	**BP2 submission with BP1 under/overspend**	£0.3m	**Approved Spend**	£0.2m
	FY22 to FY26 Period					
	BP2 Submission	£1,2m		**Approved Spend**	£1.3m	

650 Accelerating Whole Electricity Flexibility						
Delivery and spend update	**Achievements over the last 6 months:** • Completion of DER Visibility and Access Discovery stage, with defined business needs, impacts to platforms and change strategy with estimates of effort and costs for further work. • Planning for next phase of DER Visibility initiated.					
Spend	**FY24 & FY25 Period**					
	BP2 Submission	£0.1m	**BP2 submission with BP1 under/overspend**	£0.1m	**Approved Spend**	£0.7m
	FY22 to FY26 Period					
	BP2 Submission	£0.1m		**Approved Spend**	£0.7m	

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