Public

Outturn Balancing Costs: 2025/26



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Contents and Introduction

This report explains what drove balancing costs in 2025/26, how NESO is managing costs, and how these insights are shaping future priorities.

Contents:

1. **Executive Summary**
   Costs, drivers and savings in 2025/26.
2. **System and Market Conditions**
   The weather, market and network conditions that shaped costs.
3. **Managing Balancing Costs**
   How analysis is shaping NESO's priorities and cost-reduction activity.
4. **Detailed Cost Breakdown**
   Where costs arose and what drove them.

This report sits alongside:

Thermal , which examines the largest balancing cost category in greater depth, including future projections, structural drivers and cost-reduction action.	**Electricity Markets Roadmap**, which sets out the development of markets and services used to meet system needs.
Operability Strategy Report, which provides the longer-term technical view of changing operability requirements.	**Monthly balancing cost and regulatory reporting**, which provides more regular updates on costs, trends and quantified savings.

Building on last year's commitments

Last year, NESO committed to strengthen balancing cost reporting, to improve evidence-based prioritisation and to work with industry to reduce costs. This year's reporting continues that approach through two complementary publications:

- **Outturn Balancing Costs Report:** what costs were in 2025/26, what influenced them and the quantified savings delivered.
- **Thermal :** deeper analysis of the largest cost component, including updated projections and our view of priorities for action across industry.

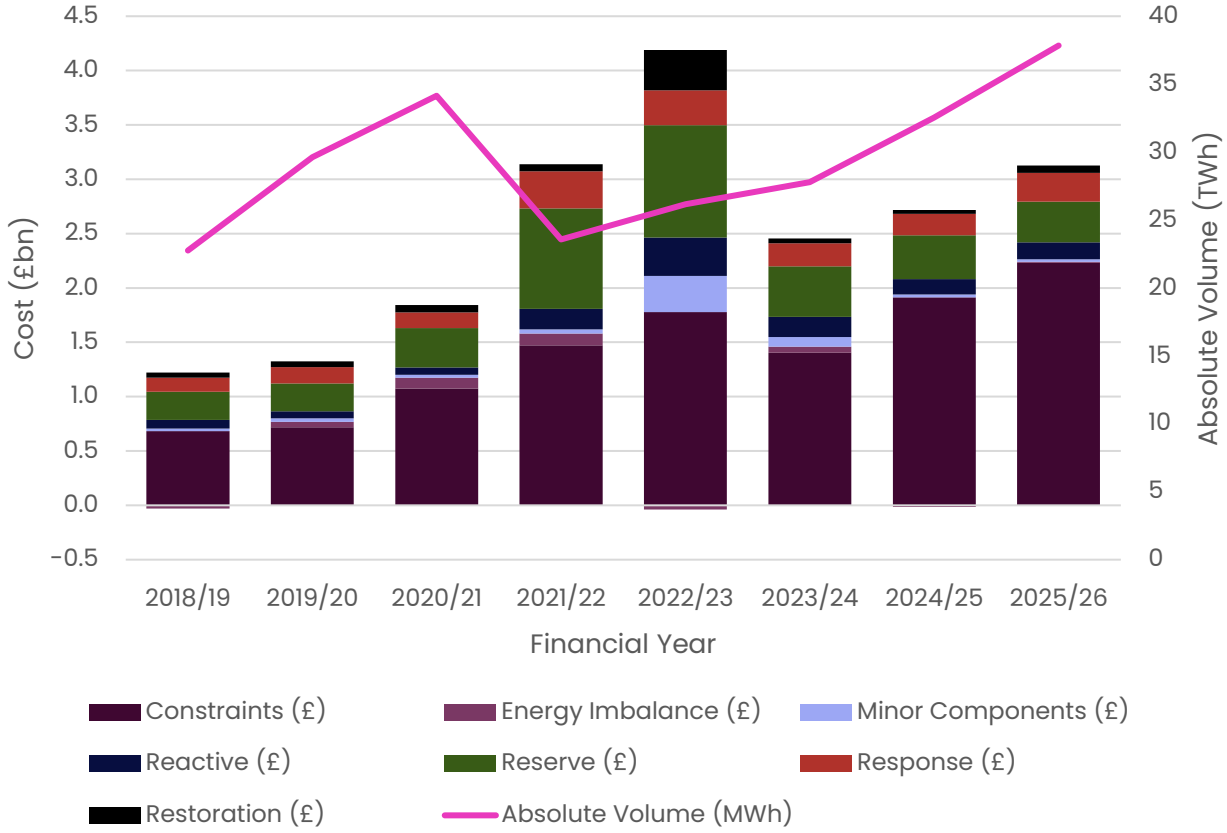
Together, the reports provide an update on the implementation of NESO's Balancing Costs Strategy, using improved analysis to refine priorities and to focus action where it can deliver greatest consumer value.

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Executive Summary

1. **Balancing costs increased by 16% to £3.1bn in 2025/26**. The increase was driven by higher thermal, voltage and response requirements. The price of balancing actions remained comparatively stable.
2. **NESO and industry partners delivered £891m of quantified savings to consumers in 2025/26.** Analysis of costs, drivers and savings continues to inform priorities and focus action where it can deliver greatest consumer value.
3. **Costs broadly followed prevailing system and market conditions during 2025/26.** Higher wind output, lower transmission demand and reduced network availability increased the actions needed to operate the system securely, while average day-ahead prices remained largely comparable year on year.
4. **Thermal constraints continued to dominate balancing costs,** accounting for £2bn (65%) of spend. **The Thermal** sets out what drives thermal constraints, future projections and cost-reduction actions.

Outturn balancing costs and volumes 2018/19 – 2025/26



Balancing costs are grouped into categories by the operational requirement being managed. See the glossary for definitions of constraints (thermal, voltage, inertia), reserve, response, restoration and other balancing cost categories.

Please note this report covers the system cost of balancing actions

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How has NESO reduced overall balancing costs in 2025/26

£891m

In 2025/26 NESO and partner initiatives delivered £891m in savings

Of this total **£430m** was saved in thermal constraint costs

£356m delivered through work with TOs to **increase network capability**

£164m delivered by **inertia requirement reductions** reducing the need for system actions

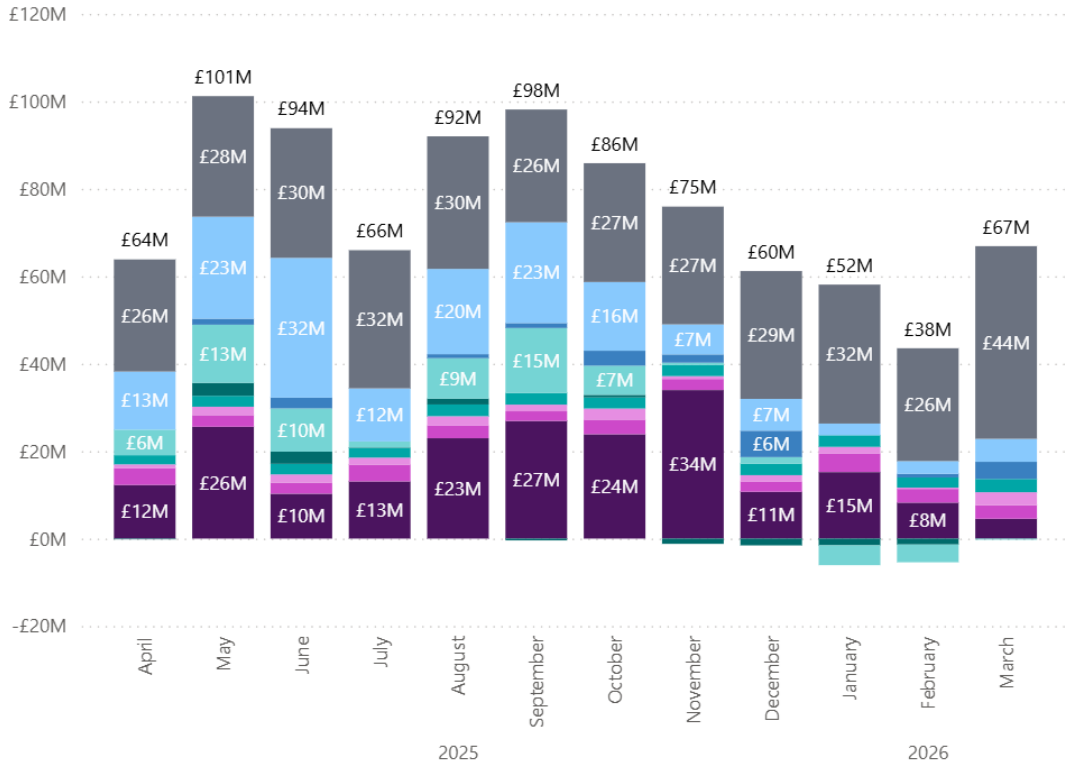
£128m delivered by **Network Services** delivering smarter solutions to electricity system challenges

£37m delivered though new **reserve and flex markets**

£207m delivered by **trading actions** proactively managing system needs.

- Enhanced Network Provisions
- Inertia Requirement Reductions (FRCR)
- B6 Intertrip Services
- EC5 Intertrip Services
- Stability Phase One
- Stability Phase Two
- Voltage Mersey
- Voltage Penines
- Balancing Reserve
- Demand Flexibility Service (DFS)
- Trading

2025/26 quantified balancing cost savings



*These figures represent **quantified savings** only. This work is just part of the range of initiatives targeted at reducing balancing costs. Total savings are expected to be worth billions of pounds to consumers ahead of 2030. These savings are regularly reported in our Monthly Balancing Cost Reports.*

System and market conditions

In operational timescales, Balancing Costs arise from the interaction between system conditions, market prices and the capability available to operate the network securely. Assessing these factors provides insight into what drove balancing costs in 2025/26.

Some factors that influence balancing costs, such as weather patterns, wholesale energy prices and network availability, sit largely outside NESO's direct control but have a significant impact on costs.

The table opposite sets out key drivers of balancing costs observed during 2025/26.

Market/system factor	What happened in 2025/26 and how did it affect costs?
Wholesale price of energy	**The average day-ahead power price was comparable to 2024/25, but varied across the year.** Wholesale electricity prices influenced monthly cost trends, affecting both the cost of replacement energy and the price of balancing actions. Prices rose sharply in March amid global energy supply concerns due to Middle East conflict.
Demand	**Daytime transmission demand was generally lower during summer 2025 than in previous years.** Lower demand periods over summer increased the need for voltage and stability services, as fewer conventional generators were running on the system. Higher levels of embedded generation helped meet demand locally, reducing demand on the transmission system.
Unconstrained wind outturn	**Unconstrained wind outturn was 17% higher than in 2024/25.** Where network capacity was insufficient to transport available electricity to demand centres, record wind output increased the volume of constraint actions and the need for replacement generation, often from more expensive gas-fired units.
Network availability	**Planned outages for network reinforcement reduced transfer capacity across key boundaries. For example, average B4/B5 capacity was 57% of its maximum level during the year.** Structural congestion and planned outages restricted the movement of electricity around Great Britain and increased the actions required to manage congestion.

For analysis of how balancing costs tracked system and market conditions, see the appendix for details on our balancing cost benchmark.

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What drove the year-on-year change in balancing costs?

Most of the increase in balancing costs came from thermal constraints, voltage and response. Other cost categories were stable or made a relatively small contribution to overall cost movements.

Cost component	2025/26 cost	Annual Change	What drove the change?
Thermal constraints	£2.0bn	£250m increase (▲ **15%**)	Higher wind output (+17%) and reduced network capacity increased congestion and the need for redispatch actions. Costs rose broadly in line with action volumes.
Voltage	£366m	£69m increase (▲ **23%**)	Prolonged periods of low transmission demand over the summer increased the need for voltage support, requiring more generators to be brought on specifically to support the system.
Inertia	£41m	£0.5m increase (► **1%**)	Costs remained stable. Many actions taken for voltage support also met inertia requirements, limiting the need for separate inertia actions. Significant inertia savings were also delivered through reductions to inertia requirements and stability network services.
Reserve	£375m	£28m decrease (▼ **7%**)	More reserve was required during the year, but changes to procurement arrangements and increased competition helped reduce overall costs.
Response	£267m	£71m increase (▲ **36%**)	Increasing system volatility and lack of visibility of certain resources is increasing balancing actions, particularly on a constrained network, including the need for fast-acting frequency response.
Restoration	£66m	£29m increase (▲ **75%**)	Additional restoration capability was procured to ensure the Electricity System Restoration Standards can be met, recovering the system quickly following a major outage.
Other balancing costs	£33m combined	£22m increase	Energy imbalance and minor components remained a small proportion of balancing costs and did not materially influence overall trends.

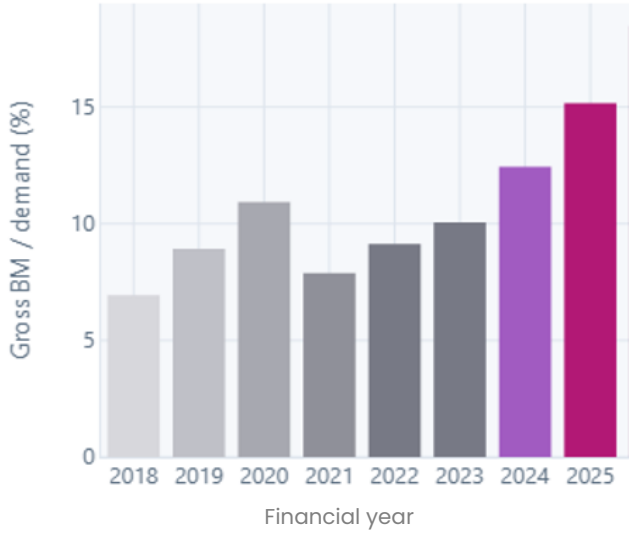
The Detailed Breakdown of Costs section in this report examines each major cost component in more detail, including the operational factors that shaped costs during 2025/26.

In 2025/26 NESO managed greater balancing activity while unit action costs fell

In 2025/26 NESO managed a much greater volume of balancing activity. Average action costs remain below the exceptional levels seen in 2021/22 and 2022/23 and have continued to reduce in more recent years, however, the increase in activity has more than offset this reduction, placing upward pressure on overall balancing costs.

Balancing activity relative to demand has nearly doubled since 2018/19, reflecting a growing need for operational intervention to balance the system and manage network requirements

Gross balancing volume relative to national demand



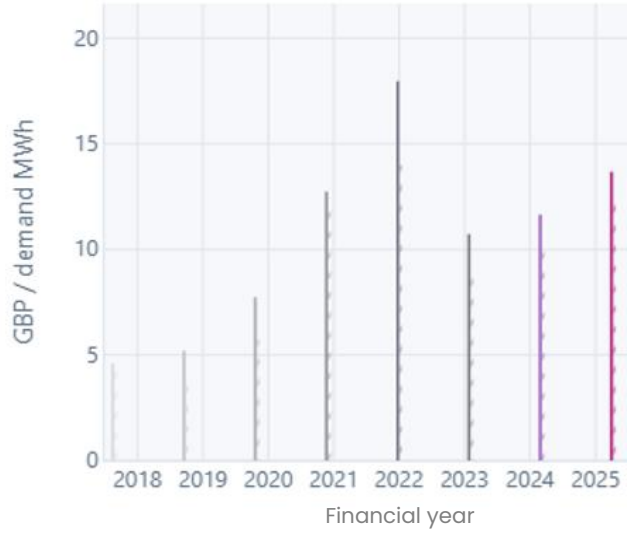
Recent years have combined higher action volumes with lower unit action costs than 2021/22 and 2022/23. This has acted to limit cost rises caused by increased balancing volumes.

Average balancing action cost per gross BM MWh



In 2025/26, rising action volumes contributed to higher thermal and voltage costs, while reserve requirements increased despite lower overall reserve costs.

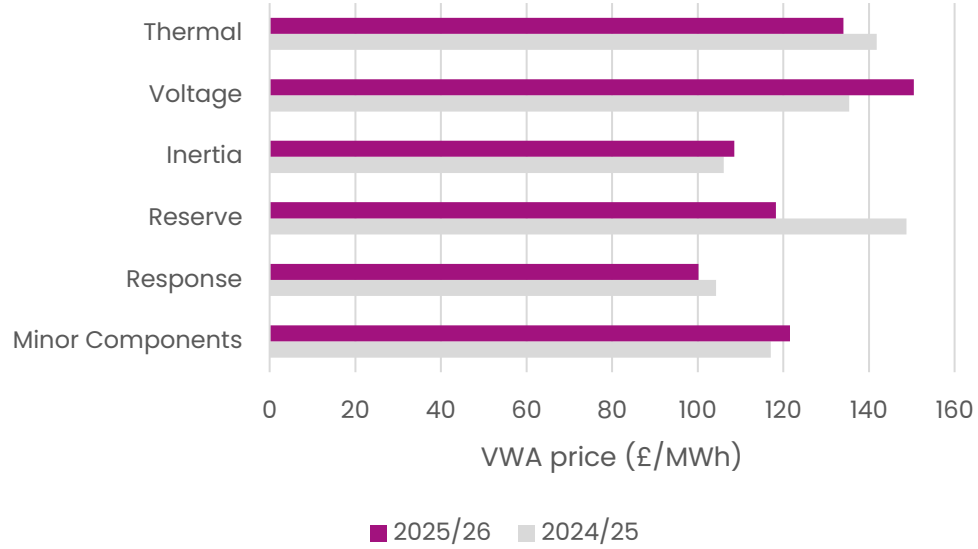
Balancing cost per MWh of national demand



This reinforces the need to reduce underlying system requirements while continuing to improve the efficiency of balancing actions.

Stable or lower VWA prices show that higher costs were largely volume driven across categories

Volume-weighted average (VWA) prices help distinguish whether changes in balancing costs arise from the price or volume of actions. In 2025/26, VWA prices were stable or lower than 2024/25 across most cost categories, indicating that costs principally reflected increasing system requirements and action volumes.





- Thermal, response and reserve offer prices fell, helping limit the cost impact of greater balancing activity.
- Reserve recorded the largest reduction, reflecting more competitive and efficient procurement, which helped to lower overall costs despite a rise in the volume of actions.
- Voltage was the main exception, with higher prices reflecting the locational nature of voltage support and the availability of a limited number of suitable units.

- Bid prices are typically negative reflecting payments from generators to reduce output, while positive bids tend to reflect actions that are taken on subsidised assets that need to account for lost revenues (see page 27). Average bid prices therefore vary according to the technologies and individual units instructed, as well as wider market conditions.
- Bid prices were broadly stable across the largest cost categories compared to the previous year.

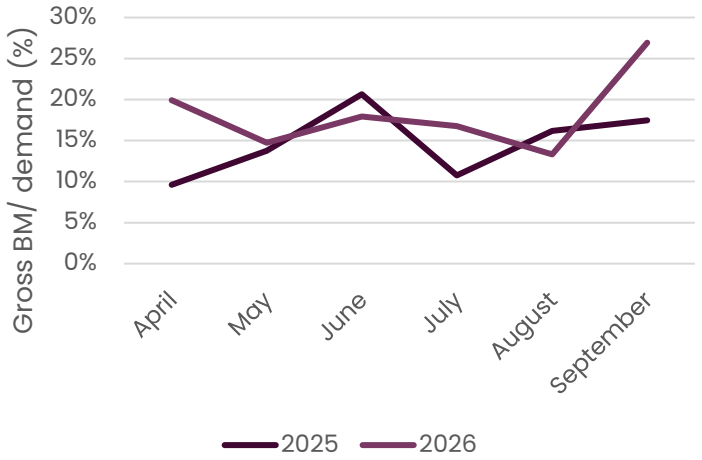
Please note the VWA prices on this page use action costs

*Inertia actions in the BM are exclusively Offers, as Bids to reduce the size of the largest loss were phased out following the introduction of Dynamic Containment.

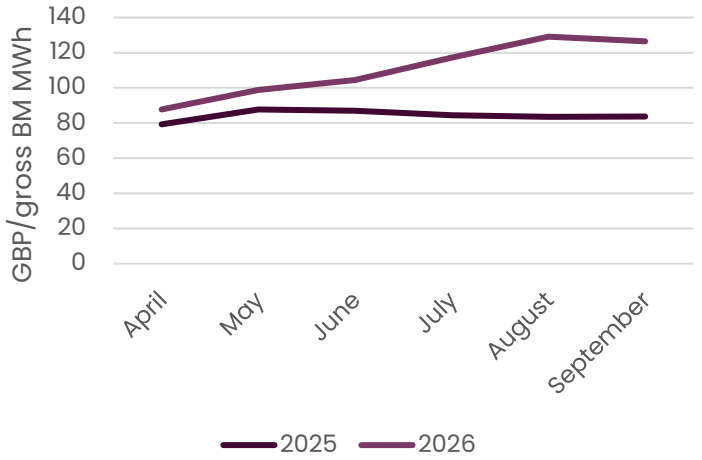
Market conditions have changed significantly since 2025/26

In 2025/26, higher balancing costs were primarily driven by increasing action volumes, with prices stable or lower across most cost categories. Since then, gas and power prices have risen substantially, increasing the cost of balancing actions.

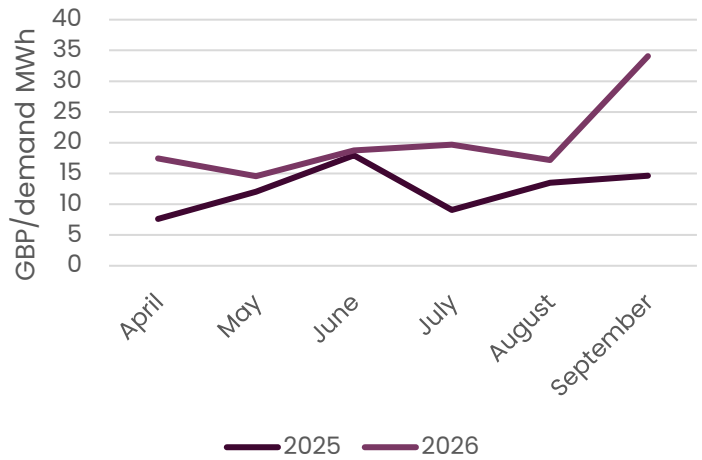
Gross balancing volume relative to national demand



Average balancing action cost per gross BM MWh



Balancing cost per MWh of national demand



Action volumes remained elevated
Balancing volumes relative to demand were higher than the previous year in several months, reflecting ongoing operational requirements.

Average action costs increased
Average action costs were higher year on year in every month, rising further later in the summer as wholesale energy prices increased.

Price and volume effects reinforced each other
In September, high action volumes combined with higher unit costs, resulting in a marked increase in balancing costs relative to demand.

For further detail on costs since April 2026 please see our Monthly Balancing Cost Reports.
Our Thermal Report provides a forward-view of how thermal constraint costs could evolve as the electricity system changes. We are also working with Ofgem to provide further updates incorporating the latest information such as commodity prices, expected generation connections, and transmission network delivery.

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What does this mean for how we manage balancing costs?

Balancing costs were significantly influenced by market conditions, weather and network availability during 2025/26.

While many of these factors cannot be controlled directly, understanding their impact helps NESO and industry focus effort where interventions can deliver the greatest value for consumers.

Key conclusions for 2025/26	NESO's strategic response
Thermal constraints remain the largest opportunity As the largest balancing cost category, thermal constraints remain a key focus for future cost reduction activity.	**Prioritise thermal constraint reductions over the short and long-term**
System needs are changing Higher renewable output and lower transmission demand are increasing voltage, stability and flexibility requirements.	**Develop efficient system services**
Wholesale energy prices influence balancing costs. More competitive markets can help reduce the cost of securing balancing services during periods of higher prices.	**Increase competition and participation in balancing markets**
Balancing requirements are becoming more dynamic Growing balancing activity and increasingly dynamic system conditions place greater importance on forecasting, visibility and operational decision-making.	**Strengthen operational tools and decision making**

These findings inform how NESO prioritises balancing cost reduction activity and the initiatives described on the following page.

How is NESO managing balancing costs?

Some initiatives are already delivering savings, while others are intended to address future cost pressures. For a full breakdown of NESO balancing cost reduction activity please see our balancing cost portfolio.

Prioritise thermal constraint reductions

Reduce thermal constraints over the short and long term

Reducing thermal constraint costs requires coordinated action across industry. The accompanying **Thermal** report explores three priority areas:

- Delivering network capability to support a growing electricity system.
- Improving short-term constraint management through operational improvements, flexibility and market reforms.
- Supporting more efficient long-term system development through strategic planning and reforms such as RNP

Develop efficient system services

Secure operability requirements through targeted services.

Key initiatives underway:

- **Voltage and Stability Network Services** secure critical operability services through competitive procurement, reducing reliance on conventional generation.
- **Balancing Reserve, Quick Reserve and Slow Reserve** provide competitive flexibility across different timescales.
- **Response and Reserve Service Reform** is improving service design and procurement to increase competition and reduce costs.

Increase competition and participation

Improve competition and unlock a wider range of balancing providers.

Key initiatives underway:

- **Demand Flexibility Service** is removing barriers for flex providers, including households and businesses, to our markets
- **Voltage and Stability Markets** increase competition in specialist operability services and improve procurement efficiency.
- **ORPS Reform** is reviewing reactive power payment arrangements to better reflect the value of voltage support.

Strengthen operational tools and decision making

Improve forecasting, visibility and dispatch decisions.

Key initiatives underway:

- The **Open Balancing Platform** introduces new real-time balancing capabilities, including bulk dispatch and improved situational awareness.
- **The Volta Programme** is exploring options to enhance decision-making and operational efficiency in our control room through a range of targeted innovation projects.
- **Demand forecasting improvements** help the control room anticipate balancing needs more accurately.

NESO coordinates and operates the electricity system, but reducing balancing costs depends on decisions made across the wider energy industry

Balancing costs are influenced by factors that no single organisation controls. The amount and location of electricity generation, the capacity of the transmission network, market incentives and the cost of balancing actions are all shaped by decisions made across the electricity sector.

Thermal constraints remain the largest balancing cost category. The accompanying Thermal provides a detailed assessment of actions to improve network capability, manage congestion and reduce redispatch costs.

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Detailed breakdown of costs

The following section examines each major balancing cost category in more detail. For each category, we explain the underlying operational requirement, what shaped costs in 2025/26, and how changing system conditions influenced spending during the year.

Thermal constraint costs

What are thermal constraint costs?

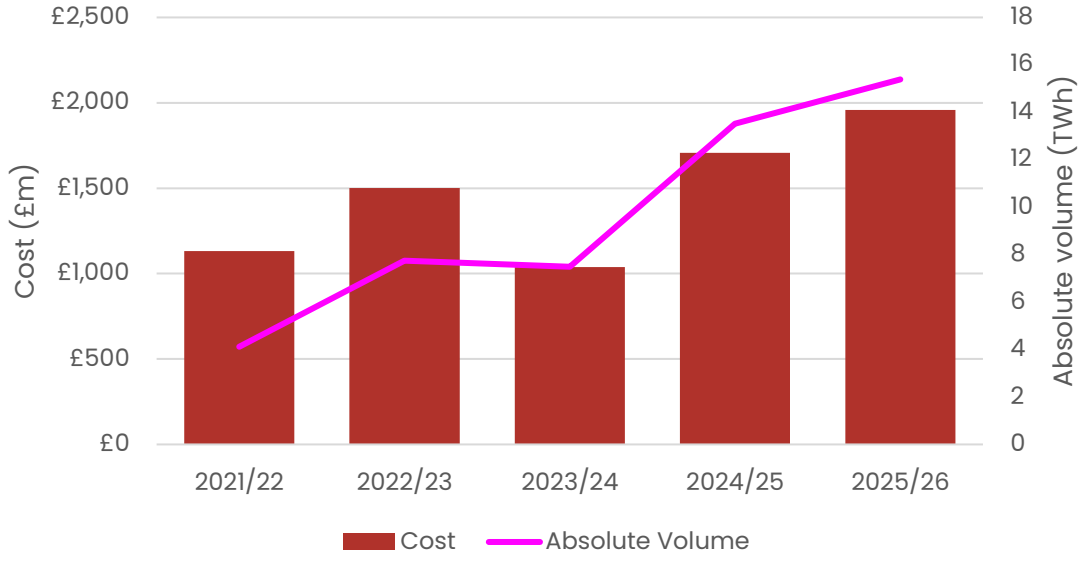
Thermal constraint costs arise when electricity cannot be transported from where it is generated to where it is needed without exceeding network limits. NESO manages this by reducing generation in one location and increasing it elsewhere. Costs therefore reflect the regional imbalance between supply and demand, available network capacity and the cost of redispatching generation.

What shaped costs in 2025/26?

Thermal constraint costs in 2025/26 rose broadly in line with constraint volumes, suggesting that the increase was primarily driven by higher levels of network congestion rather than changes in underlying unit costs.

Rising constraint volumes reflected both a 17% increase in unconstrained wind generation and periods of reduced network capacity due to ongoing reinforcement outages taken to enhance long-term network capability. In 2025/26, the majority of thermal constraint costs linked to wind turn down were payments to generators (typically gas) to provide replacement energy (~75%). A breakdown of these costs can be found in the appendix.

Outturn thermal constraint costs and volumes 2021/22 - 2025/26



Cost

£2.0bn was spent on thermal constraints in 2025/26, an increase of £250m (15%) year on year.

Volume

15.4TWh of actions were taken to manage thermal constraints, an increase of 15% year on year.

Please note the costs on this page cover BM & Trades actions only

For a detailed assessment of thermal constraint drivers and mitigation activities see the accompanying Thermal Report.

Voltage costs

What are voltage costs?

Voltage costs arise from maintaining transmission system voltage within operational limits. They include Balancing Mechanism actions to synchronise generators for voltage support and payments for reactive power through the Obligatory Reactive Power Service (ORPS).

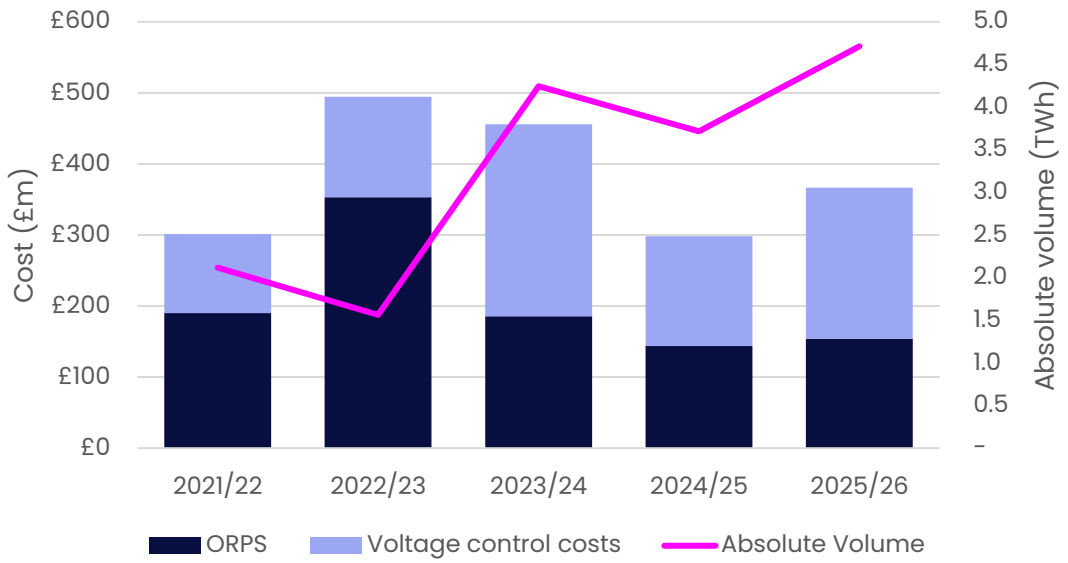
What shaped costs in 2025/26?

Voltage control costs increased to £212m, £58m (37%) higher than in 2024/25. Prolonged periods of low transmission demand, particularly overnight and during summer, meant fewer synchronous generators were operating through the energy market, increasing the need to bring on units specifically for voltage support.

ORPS costs increased to £154m, £10.6m (7.4%) higher year on year, reflecting changes in demand, network conditions and reactive power requirements.

Please note the voltage control costs on this page cover BM & Trades actions only

Outturn voltage costs and volumes 2021/22 - 2025/26



Cost

£366m was spent on voltage management in 2025/26, an increase of £69m (23%) year on year.

Volume

4.7TWh of actions were taken to synchronise voltage units, an increase of 27% year on year.

Inertia constraint costs

What are inertia constraint costs?

Inertia costs are incurred when NESO takes actions to maintain sufficient inertia and keep system frequency stable. As renewable generation displaces conventional power stations, additional measures are sometimes required to maintain system stability.

What shaped costs in 2025/26?

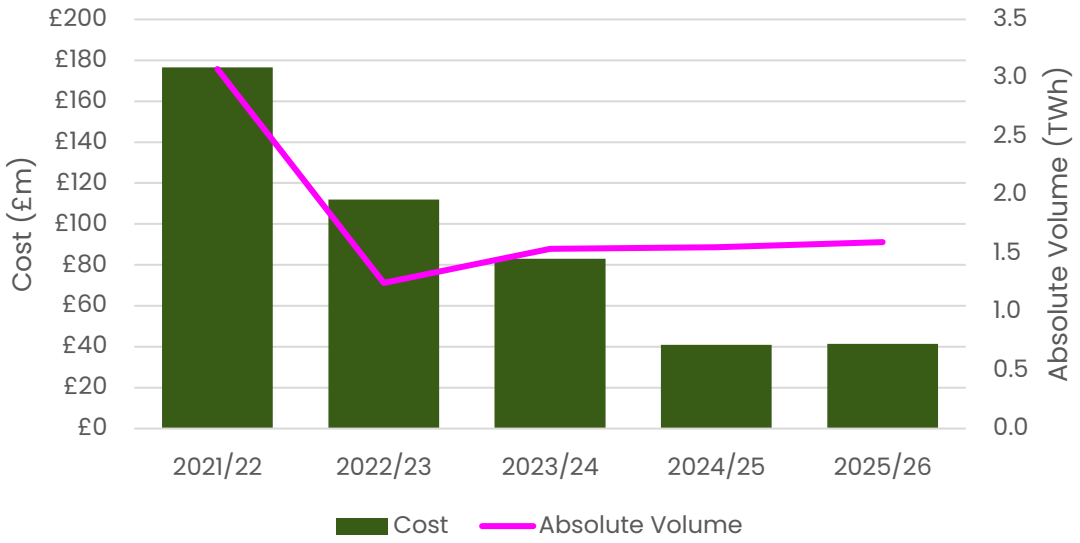
Requirements for inertia follow a similar pattern to voltage requirements, increasing during periods of high renewable output and lower demand when system stability can be more challenging.

By initially resolving voltage needs, inertia requirements are also met meaning the increase in voltage actions during 2025/26 reduced the need for separate inertia actions and associated costs.

Inertia spending has reduced significantly since it's peak in 2021/22 due to ongoing NESO initiatives including reducing inertia requirements and deliver stability network services and markets.

Please note the costs on this page cover BM & Trades actions only

Outturn inertia costs and volumes 2021/22 - 2025/26



Cost

£41.4m was spent on managing inertia in 2025/26, an increase of £510k (1.2%) year on year.

Volume

1.6TWh of actions were taken to manage inertia requirements, an increase of 2.6% year on year.

Reserve costs

What are reserve costs?

Reserve services provide flexible capacity that can be called on to restore system balance and manage changes in supply and demand. Unlike response services, which act within seconds, reserve services operate over minutes to hours and are typically delivered through contracted providers or the Balancing Mechanism.

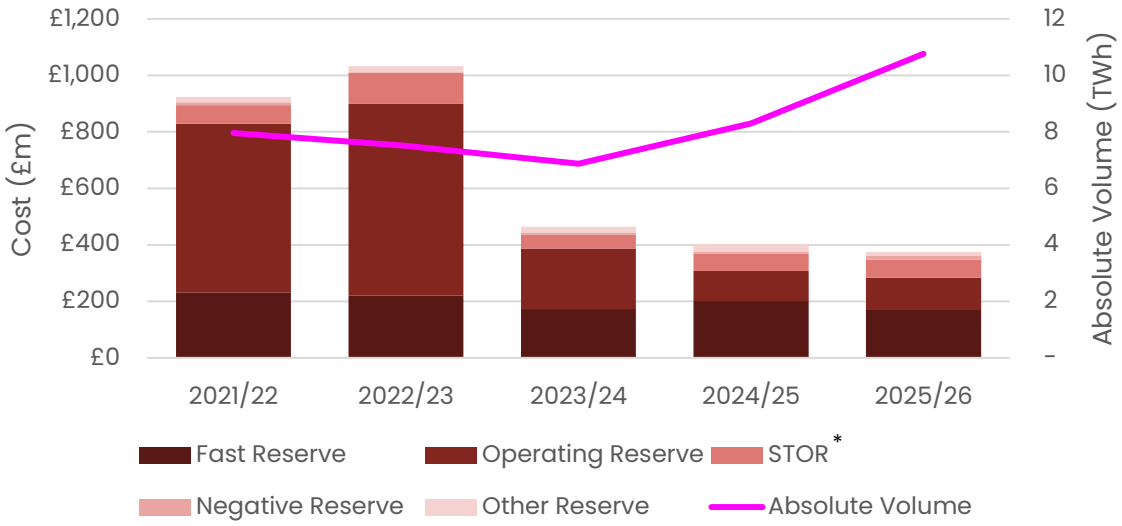
What shaped costs in 2025/26?

Reserve volumes increased by 30%, while total costs decreased by 7%. Changes to day-ahead procurement enabled reserve and response bids to be co-optimised through the Enduring Auctions Capability (EAC), increasing competition across the services.

Within the overall reserve category, STOR costs increased as long-term contracts ended ahead of the introduction of Slow Reserve in April 2026, resulting in greater reliance on shorter-term procurement.

Please note the volumes on this page include BM actions only

Outturn reserve costs and volumes 2021/22 - 2025/26



* STOR categorisation includes STOR, Quick Reserve and Balancing Reserve services.

Cost

£375m was spent on reserve in 2025/26, a decrease of £28m (7%) year on year.

Volume

10.7TWh of reserve actions were taken, an increase of 30% year on year.

Response costs

What are response costs?

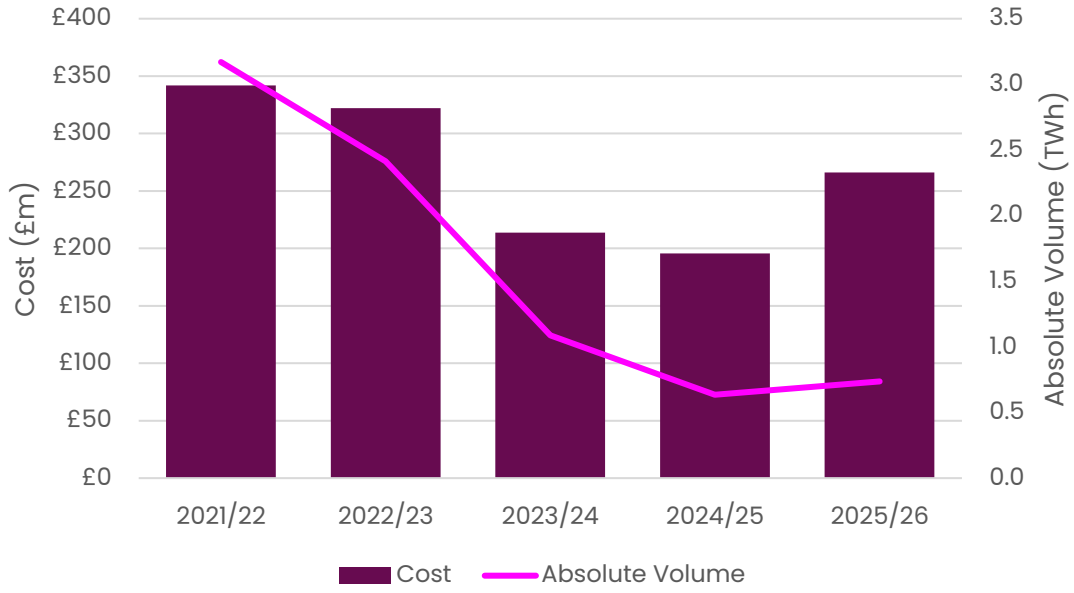
Response services are used by NESO to rapidly adjust electricity supply or demand to maintain system frequency in real time.

What shaped costs in 2025/26?

Response costs increased in 2025/26 as higher service requirement led to greater procurement of pre-fault Dynamic Moderation (DM) and Dynamic Regulation (DR) services. These changes reflect increasingly dynamic system conditions and a growing need for fast-acting flexibility. Greater participation from batteries and other flexible technologies, alongside market dynamics such as NIV chasing, can contribute to faster changes in demand and generation and increase the need for rapid response actions.

Please note the volumes on this page include BM actions only

Outturn response costs and volumes 2021/22 - 2025/26



Cost

£267m was spent on response in 2025/26, an increase of £71m (36%) year on year.

Volume

737GWh of response actions were taken, an increase of 16% year on year.

Restoration costs

What are restoration costs?

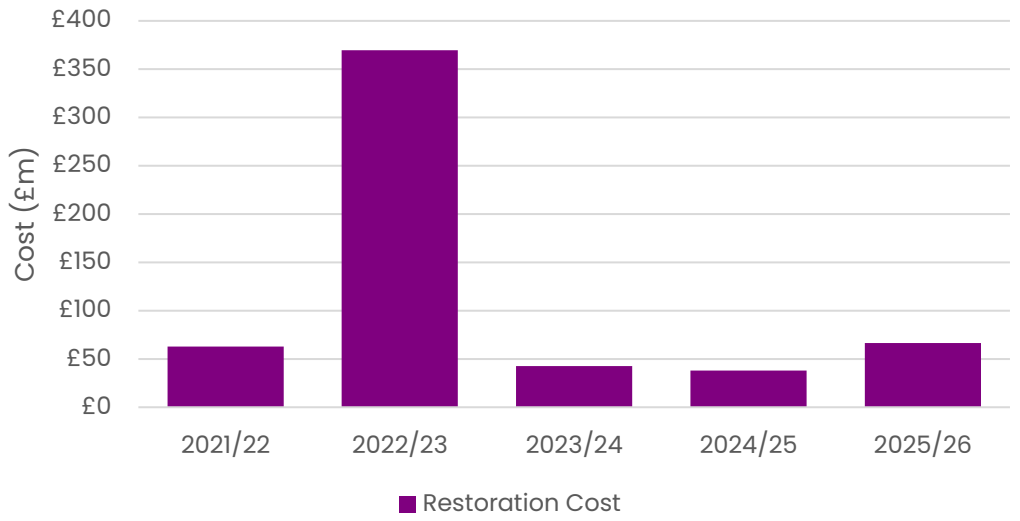
Restoration costs arise from services that are contracted to ensure the electricity system can recover from a partial or total blackout by restarting generation and rebuilding the network.

What shaped costs in 2025/26?

Restoration costs increased during 2025/26 as NESO procured additional restoration capability through regional tenders across Great Britain.

This capability ensures that NESO will meet Electricity System Restoration Standards (ESRS), maintains geographic coverages and strengthens NESO's ability to restore the electricity system quickly and effectively following a major system outage.

Outturn restoration costs 2021/22 - 2025/26



Cost

£66m was spent on restoration in 2025/26, an increase of £29m (75%) year on year.

The 2022/23 peak reflects temporary winter contingency contracts procured to maintain security of supply.

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Energy Imbalance Costs

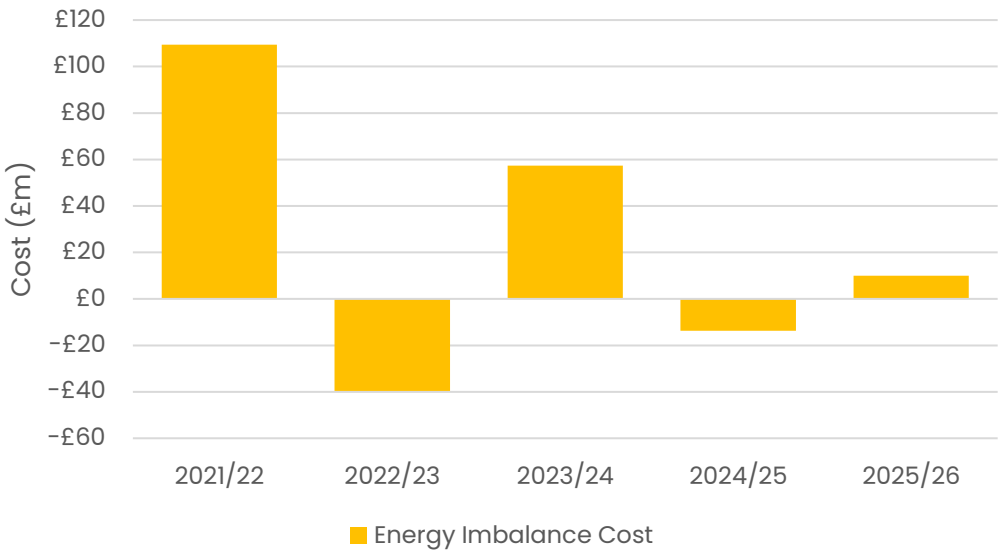
What are energy imbalance costs?

Energy imbalance costs reflect actions associated with real-time differences between electricity generation, demand and market positions. The annual cost can be positive or negative depending on whether the system is predominantly short (when the market has not delivered enough energy) or long (when the market has delivered more electricity than is needed) and on the prices of the actions taken.

What shaped costs in 2025/26?

The annual position moved from a net benefit of £14m in 2024/25 to a net cost of £10m in 2025/26, a £24m year-on-year movement.

Outturn energy imbalance costs 2021/22 - 2025/26



Cost

£10m was spent on energy imbalance in 2025/26, an increase of £24m year on year (from -£14m in 2024/25).

Minor components costs

What are minor component costs?

Minor components services refer to a collection of smaller or less prominent balancing cost elements, covering a variety of supporting actions and adjustments used by NESO to operate the system.

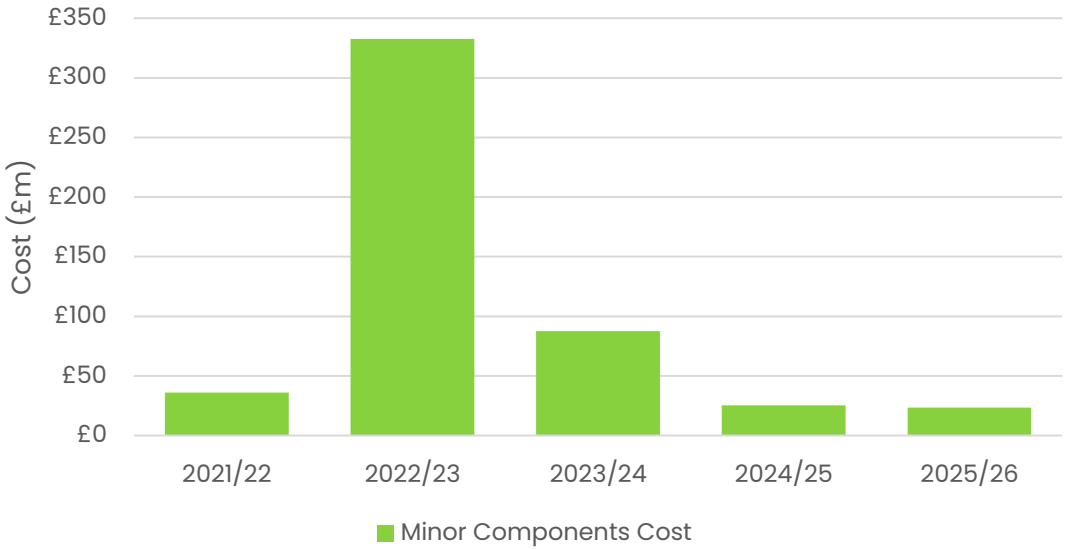
They typically include:

- Unwinding actions (reversing earlier balancing decisions where conditions change)
- System Operator-to-System Operator (SO-SO) trades
- Reconciliation adjustments and other operational balancing activities

What shaped costs in 2025/26?

Minor component costs and action volumes were stable, with costs decreasing by 8% year on year.

Outturn minor component costs 2021/22 - 2025/26



Cost

£23m was spent on minor components in 2025/26, a decrease of £2m (8%) year on year.

Case Study – High Wind Day

12 March 2026 | Daily Cost: **£21.4m** | Volume: **114.9 GWh**

Network Outages

Planned reinforcement outages in Scotland reduced B4/B6 boundary capability. Reduced transfer capacity increased thermal constraint requirements, although the works will increase network capacity over time.

High Wind Conditions

Unconstrained wind output was elevated throughout the day. This combined with reduced boundary capacity in Scotland, to drive increased thermal constraint volumes.

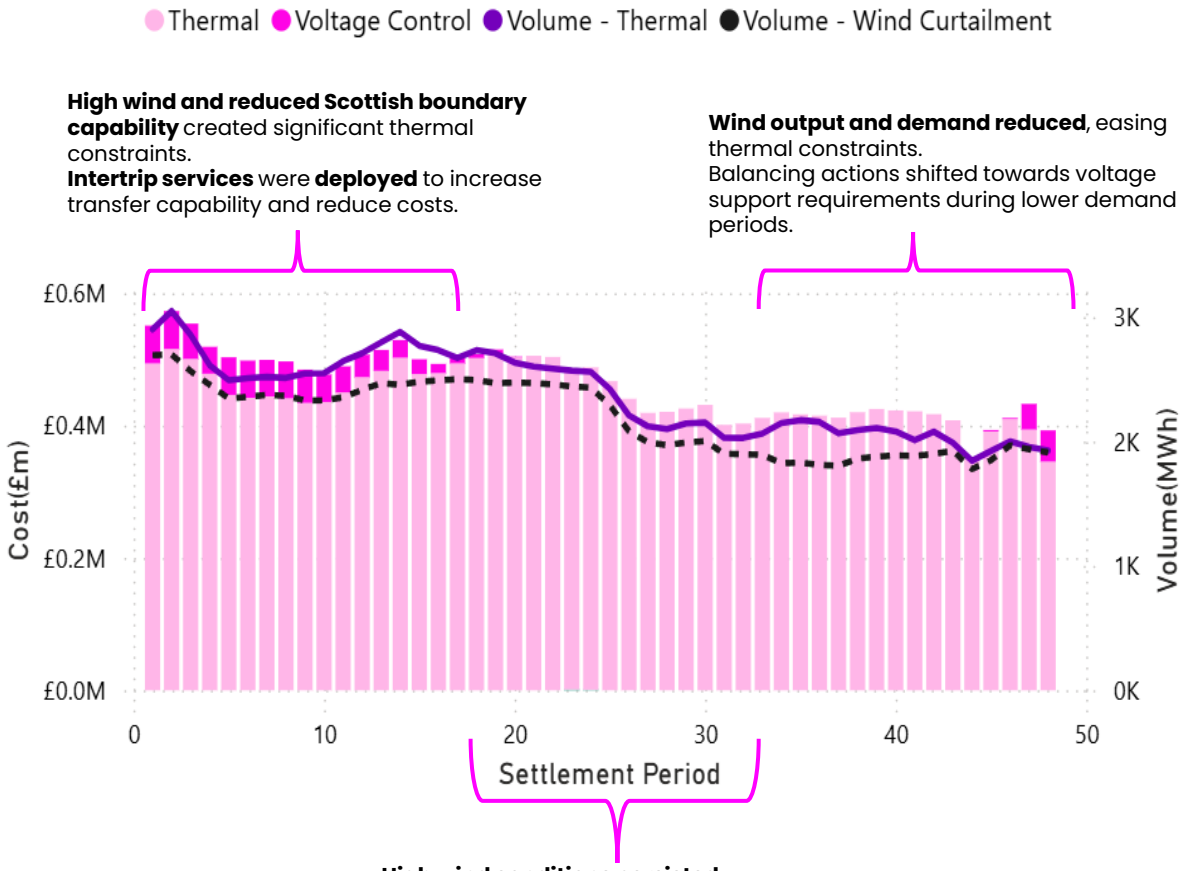
Cost Mitigation

Constraint Management Intertrip Services increased flow limits on key boundaries, delivering approximately £1m of balancing cost savings.

Key Takeaway

Thermal constraint costs were primarily driven by the combination of Scottish network outages and high wind generation. The deployment of Intertrip Services and competitive battery charging actions helped mitigate balancing costs throughout the day.

12 March 2026 – Constraint costs and volume of actions

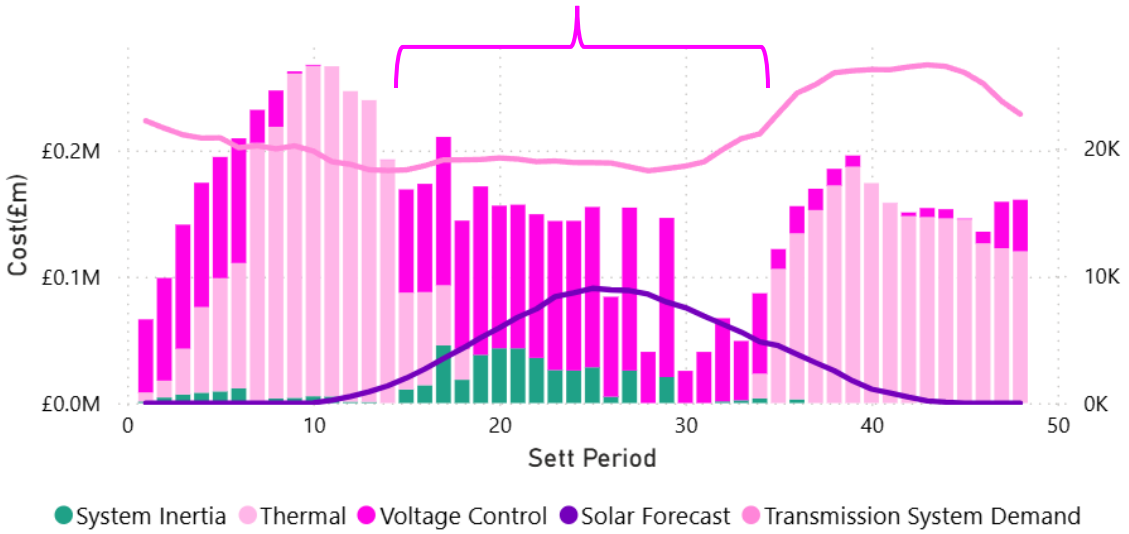


Case study - Voltage and Demand Interaction

15th June 2025 | Daily Cost: **£2.6m** | Volume: **35 GWh**

15th June – Constraint costs

Embedded solar generation can significantly reduce demand seen by the transmission network during the middle of the day. Lower demand can increase voltage-management requirements and reduce the number of generators operating naturally through the energy market. As a result, NESO may need to synchronise additional units to maintain voltage within operational limits.



Voltage management is highly location dependent so only a limited set of assets are effective in voltage support. Cost increases are therefore often concentrated in specific network locations where units are required to be instructed (synchronised) on a regular basis to maintain voltage under SQSS limits.

Access to sufficient reactive equipment at key locations on the network will help to displace the need to dispatch more expensive plants through the BM for voltage management. We are therefore working with Transmission Owners to enhance access to reactors in these regions to lower costs. We have also been working closely with a DNO trialling whole system solutions

We are also procuring targeted voltage capability through our Voltage Network Services and using our new mid-term reactive power market to provide us with more access to zero carbon reactive power providers.

Voltage offer spend (£) by GSP



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Public

Appendix

This section contains supporting technical information referenced throughout the report, including the benchmark methodology, renewable redispatch metrics, and definitions of balancing cost categories.



How balancing costs tracked market and system conditions

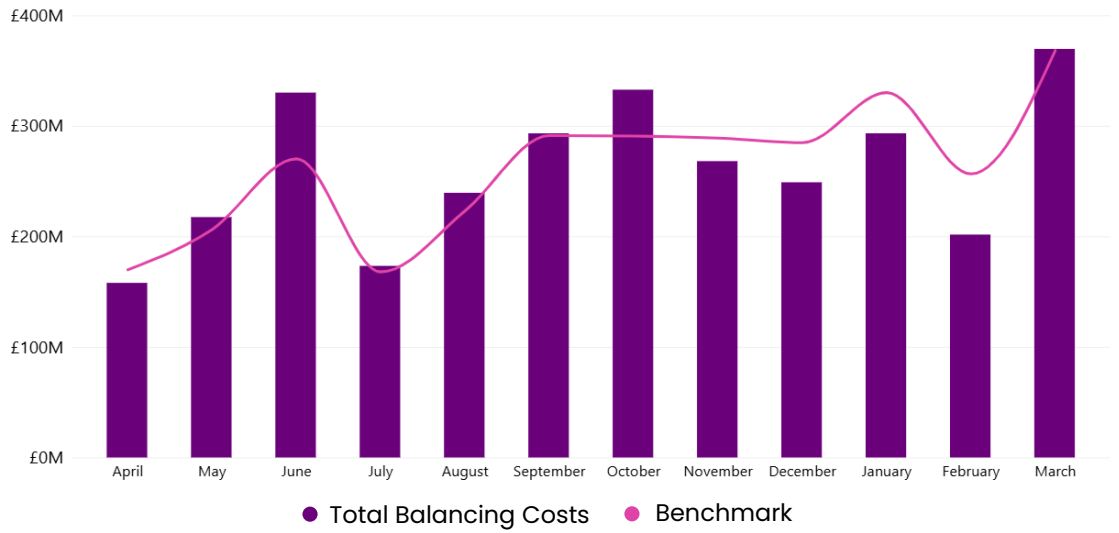
NESO's benchmark metric* estimates expected balancing costs given the market and system conditions each day.

The benchmark uses historical data expressing the relationship between balancing costs and key external drivers: the amount of unconstrained wind generation relative to demand (**wind penetration**), and **wholesale electricity prices** (day-ahead APEX price). The benchmark uses these relationships to estimate the level of balancing costs that might be expected under similar conditions.

Comparing actual costs against the benchmark helps provide context for monthly cost movements and supports a better understanding of the factors driving balancing costs.

- **When balancing costs are close to the benchmark**, it suggests that costs are consistent with what would be expected, given the prevailing system and market conditions.
- **When balancing costs are higher than the benchmark**, it suggests that factors not captured by the benchmark may have been having a greater influence on costs.
- **When balancing costs are lower than the benchmark**, it suggests that the system was managed particularly efficiently given the prevailing market and weather conditions.

Total Balancing Costs Against Benchmark



Key findings:

- In most months, balancing costs followed system and market conditions.
- June and October were notable exceptions, indicating that factors outside the benchmark had a significant cost impact.
- These months are explored further in the following pages.

By identifying the factors that have the greatest influence on balancing costs, the benchmark helps NESO focus effort on the areas most likely to deliver future consumer savings.

*Please note that this assessment uses our NESO1 benchmark metric. Further information can be found in our NESO1 Performance Documents

Weather and wholesale market conditions drove most monthly cost movements

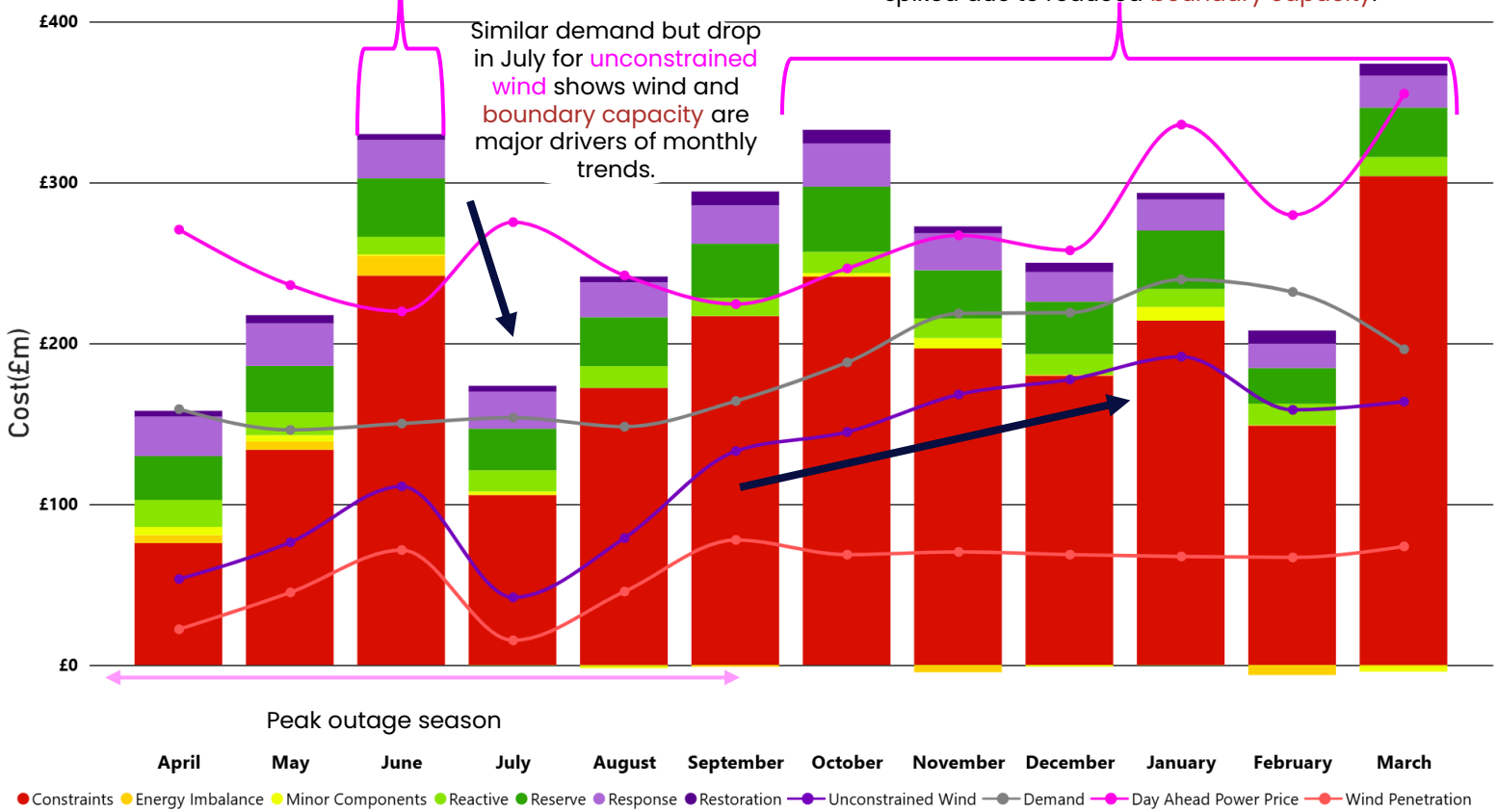
Monthly balancing costs largely followed changes in wind penetration and wholesale electricity prices throughout 2025/26, demonstrating the importance of these external drivers.

While these conditions are largely outside NESO's direct control, understanding how they influence costs helps identify where operational improvements, network investment and market reform can reduce their impact on consumers. Details on how NESO is managing balancing costs can be found on pages 10-11 and in our Thermal Report.

High unconstrained wind, combined with lower summer demand, and reduced boundary capacity saw constraint costs spike in June.

Higher costs are typically seen over the winter due to a combination of high unconstrained wind and power prices. Higher demand helps mitigate the impact of increased generation. As a result, winter costs broadly fall below the June spike, although March was a notable exception due to higher power prices. October prices also spiked due to reduced boundary capacity.

Similar demand but drop in July for unconstrained wind shows wind and boundary capacity are major drivers of monthly trends.



Where possible, outages are taken in summer, when demand is lower. Boundary capacities are generally at their lowest during this time meaning abnormally windy summer months can have a larger impact on costs.

*Unconstraint Wind, Demand, Day Ahead Power Prices lines are indicative of trends across the year

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Reduced network capability increased balancing costs beyond what weather and market conditions alone would suggest

While balancing costs broadly followed prevailing weather and market conditions during most of 2025/26, June and October stood out as notable exceptions. Comparing June and October with months with similar system and market conditions (July and December) helps to isolate what drove the additional spend beyond what is captured within the benchmark model.

June versus July: June combined higher wind penetration with restricted network capability during the summer outage period, increasing congestion and the volume of balancing actions required.

Condition	June	July
Benchmark expected cost	**£270m**	**£168m**
Month outturn	**£330m**	**£173m**
Monthly Demand	18 TWh	19 TWh
Unconstrained Wind	6.6TWh	3.7TWh
Average Day Ahead Power Price	£70/MWh	£78/MWh
Network capacity (Average transfer capacity of key boundaries)	B6 - 55%	B6 – 58%
	B4/5 – 47%	B4/5 – 47%
	EC5 – 69%	EC5 – 80%

October versus December: The benchmark indicated similar expected costs, but outturn costs were higher in October. Lower available network capacity increased balancing requirements beyond those captured by the benchmark.

Condition	October	December
Benchmark expected cost	**£291m**	**£285m**
Month outturn	**£333m**	**£249m**
Monthly Demand	22 TWh	25 TWh
Unconstrained Wind	7.9TWh	9.2TWh
Average Day Ahead Power Price	£53/MWh	£64/MWh
Network capacity (Average transfer capacity of key boundaries)	B6 – 71%,	B6 – 71%,
	B4/5 – 52%,	B4/5 – 67%,
	EC5 – 90%	EC5 – 100%

Key Takeaway

Weather and wholesale prices explain much of the month-to-month variation in balancing costs, but network capacity determines how effectively those conditions can be accommodated. When transfer capacity is reduced, the same underlying conditions can result in more congestion, more balancing actions and higher costs. Further details on the assessment of network capability, outages and their impact on balancing costs can be found in the Thermal Report.

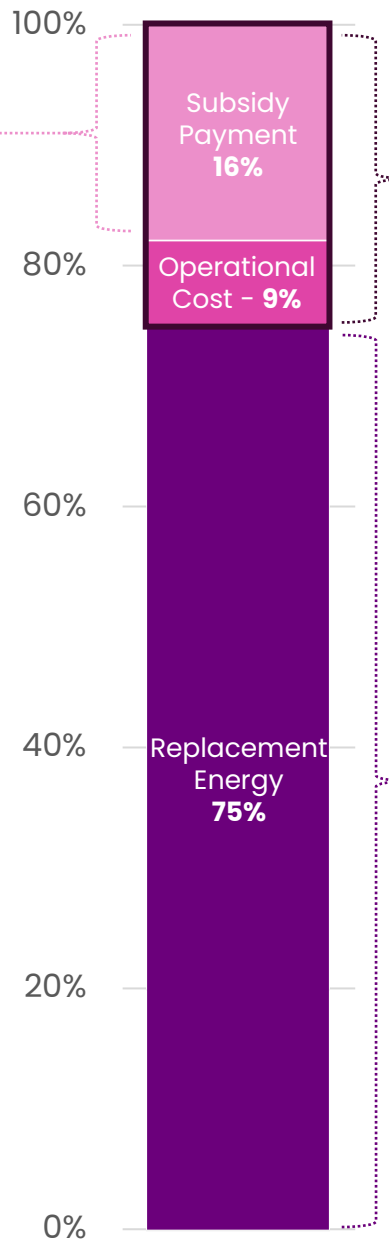
Thermal constraint cost breakdown

When managing a thermal constraint, NESO will typically instruct generators behind the constraint to turn down and instruct generators in unconstrained regions to provide replacement energy to keep supply and demand balanced.

When reporting system costs the total cost of these actions will be allocated to the initial turn down action. However, breaking this down provides a clearer view of where money is spent. In 2025/26, the majority of thermal constraint costs linked to wind turn down were payments to generators (typically gas) to provide replacement energy (~75%).

Turn-down costs can also include subsidy recovery meaning a portion of these costs represent a cost transfer from other charging mechanisms that would have been incurred regardless of whether the action was taken.

Constraint Management Cost



Subsidy recovery

When NESO instructs a wind farm to reduce output because of a transmission constraint, a payment may be made to the generator through the balancing mechanism.

For generators supported by schemes such as the Contract for Difference (CfD) or the Renewables Obligation (RO), part of the subsidy payment can reflect revenues that would have been earned had the generator continued to generate. If generation is reduced, some of these revenues may instead become visible within balancing costs.

Subsidy recovery therefore contributes to redispatch costs. However, **these costs do not represent a wholly new cost to consumers because part of the cost may have been incurred through another charging mechanism.** The cost has effectively moved from one charging mechanism to another.

Turn-down cost

When a constraint is active NESEO instructs generators behind constraints to turn down.

Turn-down payments can either be a cost to NESO or a payment back to NESO, depending on the price offered by generators to reduce output. Renewable generators often submit negative prices because reducing generation can affect subsidy-related revenues, meaning NESO pays them to turn down.

Replacement energy cost

Constraint costs are not only driven by payments to turn generators down. When generation is reduced behind a network constraint, NESO must buy replacement energy elsewhere on the system to keep supply and demand balanced. These replacement energy actions are most often provided by gas-fired generation and account for the majority of thermal constraint costs.

Based on 2025/26 outturn data. Turn-down costs include all curtailed wind generation volumes (subsidised and merchant) at actual bid prices. Replacement energy costs are estimated assuming all curtailed volumes are replaced at the volume-weighted average cost of replacement energy over the period. The analysis does not capture wider market effects, including the potential impact of subsidies on bidding behaviour across the market.

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Clean Energy Package 2026

NESO is obligated to publish annual figures on renewable redispatch to the energy regulator alongside information on the drivers for the volume of redispatch and initiatives aiming to reduce future redispatch levels.

These figures are also published externally for data transparency.

How much renewable generation did NESO redispatch in 2025?

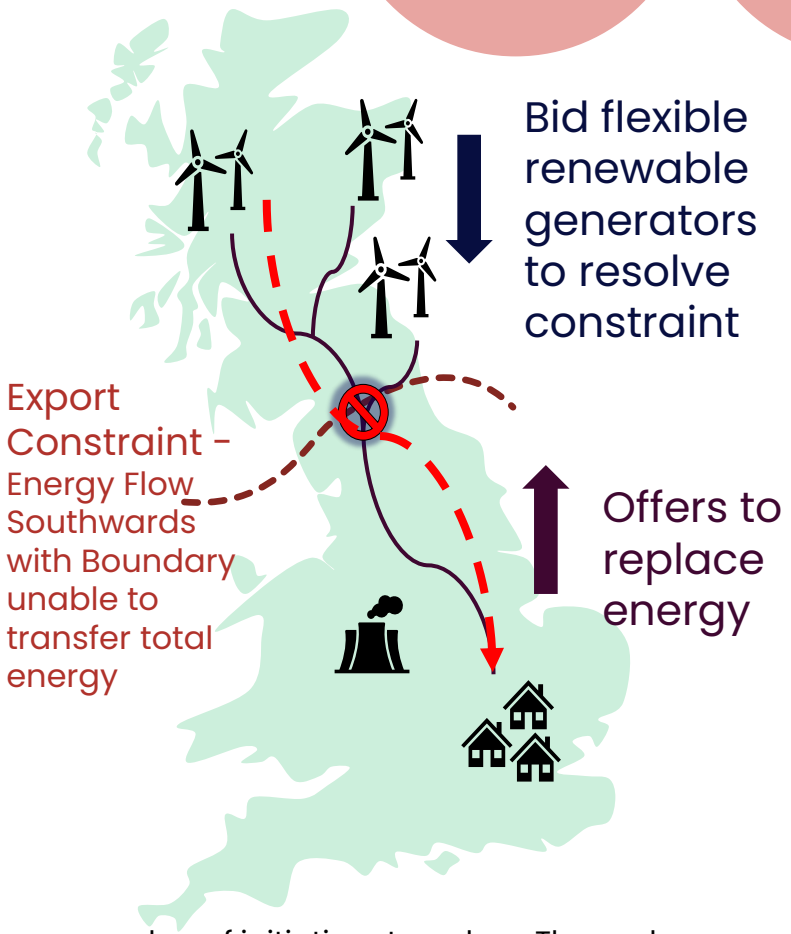
Renewable redispatch in 2025 totalled **9.62**%, whilst the percentage of renewable generation on the energy system was **33.69**% (Considering only Solar, Wind and Hydro fuel types).

For a full breakdown of generation figures please see the Article 13 Dashboard

What is redispatch and why do NESO have to do it?

NESO redispatches wind generation when transmission network constraints prevent all available renewable power from being transported to demand zones. These actions are necessary to maintain a safe and secure electricity system. Typically, these actions are required to manage **thermal constraints** which make up over **99**% of the actions for redispatch, and **wind** in particular making up **95**% of those actions.

Therefore, reducing the volume of actions taken for thermal constraints on the system will have a similar impact on renewable redispatch.



How can redispatch be reduced?

NESO and other Industry participants are working on a number of initiatives to reduce Thermal Constraints on the network. Some of our current thermal constraint initiatives are detailed on page 11 ***within this report.*** *Our* ***Thermal report*** *also provides details on work underway at NESO and across industry to help reduce thermal constraint over the short, medium and longer term.*

For more information on initiatives please see;

- Balancing Cost Reduction portfolio
- Markets Roadmap
- Constraint Report (published alongside this report)

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How does NESO report balancing costs

NESO reports on the **'system cost'** of balancing actions.

System Costs

System costs are NESO's measure of the cost of operating the electricity system. They allocate balancing costs to the underlying driver of the action, helping to provide a clearer picture of why costs were incurred.

For example, to manage a network constraint, a power station may be instructed to decrease output while another is instructed to increase output to replace the lost energy. Rather than simply reporting the payments made for those actions, system costs attribute them to the underlying reason they were required. In this example, the associated costs would be attributed to the constrained unit that reduced its output.

Action Costs

Balancing costs can also be reported as 'action costs'. Action costs are the direct payments made to Balancing Mechanism Units (BMUs) for the balancing actions NESO takes to operate the electricity system in real time. For example, if one power station is instructed to reduce output and another is instructed to increase output, the payments made to those generators would be recorded as action costs.

Unless otherwise stated, the figures in this report are system costs

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Glossary of Balancing Cost Categories

Constraints

Category	Definition
Thermal Constraints	Thermal constraint costs arise when electricity flows would exceed the physical capability of the transmission network. NESO manages these constraints by redispatching generation, reducing output in one location and increasing output elsewhere, to maintain secure network operation.
Voltage	Voltage costs arise from maintaining transmission system voltage within operational limits. This includes the procurement of reactive power and actions to synchronise generators where voltage support is required in specific locations on the network.
Inertia	Inertia costs arise from actions taken to maintain sufficient inertia and keep system frequency stable so the system can withstand and recover from disturbances. These costs are particularly influenced by the level of synchronous generation operating on the system.
Reserve	Reserve costs arise from procuring flexible capacity that can be called upon to manage forecast uncertainty, generation outages and changes in demand. Reserve services are generally dispatched over minutes to hours to restore balance following an imbalance event.
Response	Response costs arise from procuring fast-acting services that automatically increase or decrease generation or demand to maintain system frequency close to 50Hz following sudden changes in system conditions.
Restoration	Restoration costs arise from maintaining services that enable recovery of the electricity transmission system following a partial or total shutdown. This includes ensuring sufficient restoration capability is available across Great Britain.
Energy Imbalance	Energy imbalance reflects real-time differences between electricity generation, electricity demand and market positions. Costs can be positive or negative depending on whether the system was predominantly short or long during a particular period.
Minor Components	Minor components include balancing cost elements that cannot be readily allocated elsewhere, including SO-SO trades, unwinding actions, reconciliation adjustments and other operational balancing activities.

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