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## **Executive Summary**

Energy is the lifeblood of society and the economy. Great Britain's increasingly complex energy system must be planned and operated in a way that considers the interactions across electricity, gas and other forms of energy. Consideration must also be given to the interdependencies with other sectors, such as water, transport, telecommunications and industry.

At NESO we bring together activities required to deliver the plans, markets and operations of the energy system of today and the future, building on our previous experience as the Electricity System Operator (ESO), where we had extensive expertise in balancing electricity supply and demand 24/7, while making sure the networks we operated and the markets we served were prepared for the future.

Bringing the broader range of activities together in one organisation encourages holistic thinking on the most cost-efficient and sustainable solutions to the needs of our customers, society and the economy. Fundamental to NESO is the ability to bring an independent, impartial voice to energy system planning and operations and ultimately work towards optimal outcomes for energy consumers.

#### Context

NESO is required to provide a third Regulatory Business Plan (BP3) to Ofgem and the wider market as part of the RIIO 2 framework. This is a 1-year plan for the period April 2025 to March 26 and is transitional as we close out the last year of the RIIO 2 five-year period and work with Ofgem to determine the enduring regulatory framework for NESO.

This business plan, the first developed by NESO, is intended to look and feel different to previous ESO business plans reflecting that we have become a new independent, government-owned, not-for-profit organisation with expanded roles and responsibilities.

The energy sector is undergoing a fundamental transformation, with the pace of change continuing to accelerate and a clear government driven ambition to reach Clean Power by 2030. Our business plan seeks to reflect the unprecedented change that is taking place across the energy system, focusing on the most critical and impactful activities we need to undertake.

## Stakeholder engagement

In developing BP3 we have sought engagement from a broad range of customers and stakeholders from across the energy sector. In March 2024, we formally stood up our Independent Stakeholder Group (ISG), consisting of a range of representatives from across industry and who were consulted throughout the plan's development to help ensure that the priorities we took forward as NESO were the right ones. Those strategic priorities then informed the development of our eight BP3 Performance Objectives and related Success Measures, which were tested with, and shaped by, ISG.

We consulted on the draft business plan during December, including holding five webinars with over one hundred stakeholders attending and we received seven written responses. We have reflected on the feedback, along with input from Ofgem and Ofgem's Performance Panel, to shape this Final BP3 plan.

#### Structure of BP3

BP3 sets out our delivery focus for the period April 2025 to March 2026 against eight Performance Objectives<sup>1</sup>.

The objectives, which recognise the transformational changes currently taking place within the energy system, are:

#### Table 1: Our Performance Objectives for 2025/26

#### **WHOLE ENERGY**



#### Strategic Whole Energy Plans

NESO will establish the capabilities, foundations and methodologies needed to deliver national and regional strategic whole energy plans.

#### Enhanced Sector Digitalisation and Data Sharing

NESO will work with the sector to develop an aligned and interoperable digital ecosystem that enables industry digitalisation collaboration utilising innovation, underpinned by transparent data sharing and access.

#### Fit-for-Purpose Markets

NESO will support the government in making informed decisions on policy and market reform across the whole system. We will also continue to reform our own markets to level the playing field and deliver value to consumers.

#### Secure and Resilient Energy Systems

NESO will improve whole energy system emergency preparedness and resilience. We will ensure the necessary capabilities and requirements are in place and facilitate industry readiness to meet the Electricity System Restoration Standard.

#### Separated NESO Systems, Processes and Services

NESO will transition remaining systems, processes and services from National Grid to NESO ownership to enhance our capabilities and establish our autonomy and full independence.

#### Clean Power 2030 Implementation

NESO will play a pivotal role in securing clean power for Great Britain by 2030 on the path to net zero by 2050. Building on our 2024 advice to government on pathways to a clean, secure, operable and deliverable electricity system, we will move to action and implementation in line with the government's CP30 action plan.

#### **ELECTRICITY**



#### Operating the Electricity System

NESO will transparently operate a safe, reliable and efficient system throughout BP3, while continuing to transform the capabilities of our people, processes and systems to enable secure zero-carbon operation of the system by the end of 2025.

#### **Connections Reform**

NESO will drive delivery and implementation of a reformed connections process that enables projects needed for 2030 and beyond to connect in a timely and coordinated manner.

<sup>1</sup> Note: the BP3 Plan does not cover all activities in NESO. For activities not expressly referenced in BP3, we remain committed to delivering our existing commitments made under the previous business plan (BP2), our licence obligations and our core functions.

Our plan sets out Success Measures for each Performance Objective. These are intended to represent the key deliverables or milestones which, if achieved, demonstrate progress towards the Performance Objective. While we have sought to be as specific as possible in the Success Measures, in some cases this is not possible as they will evolve through the year, for example Clean Power delivery. As the year progresses, we will, with industry and Ofgem, develop more granularity on the required outcomes and Success Measures.

Equally important as what we're doing is how we propose to achieve our objectives:

- We are committed to working in close collaboration with the broader energy sector a customer-centric approach that underpins all our Performance Objectives.
- Have the right digital skills, using modern technologies and innovation including Al-driven approaches and embracing open data sharing.
- Ensure our people have the skills and capabilities to enable us to deliver our BP3 obligations

#### Costs

The estimate of total costs, to enable us to fulfil our Performance Objectives set out in this BP3, as well as our broader obligations, is £690m. This is made up of:

- FY26 forecast presented in BP2 totalling £393m:
  - £243m enduring 'run the business costs', delivering the three Roles outlined in BP2 and including the cost of shared services provided by National Grid.
  - £150m of investments in the supporting digital and data foundations and property estate.
- £118m forecast costs associated with establishing the FSO as set out in the FSO Blueprint. These costs were always subject to change and future amendment.
- £86m new additional roles that NESO is undertaking, for example SSEP, RESP, and DSI, supported by a digital-first approach to delivery.
- £19m accelerating NESO delivery in support of the government's Clean Power Action Plan, including reforming the connections process.
- £30m to continue to strengthen and enhance cyber security in line with our adverse risk appetite in a more challenging and increasing threat landscape, including investing in a contingent control centre and in operational resilience in the control room.
- £44m establishing a fit-for-purpose NESO, including transforming our underpinning business systems to reduce future costs, enhancing customer-centricity, and supporting an organisation with expanded roles.

The waterfall overleaf shows cost increasing from £511m from BP2 and FSO through to our estimated needs of £690m for BP3, a difference of £179m broken down in the waterfall by key building blocks of areas of anticipated additional need.

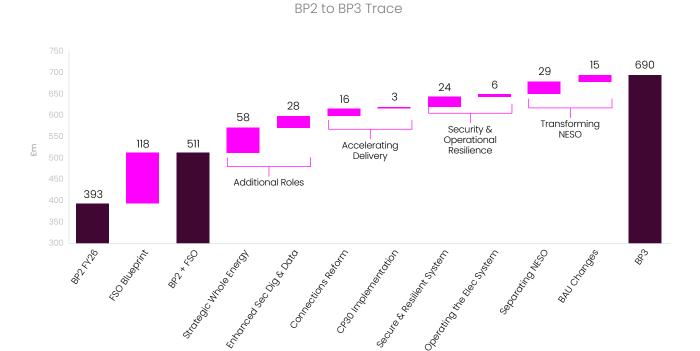


Figure 1: Original BP3 forecast vs revised BP3 forecast – RIIO-2 excluded the full scope of NESO's new roles. Costs presented are nominal, in a 2025/26 price base.

## Value for Money

All our activities under the Performance Objectives are designed to ensure value to consumers, both current and future. Consumer value is not necessarily financial; examples of other considerations include security of supply and environmental impact.

Our costings for different elements of BP3 are at different levels of maturity. Where plans have been fully developed and agreed, whether through our internal processes or with Ofgem, we have clarity on required numbers of people and IT investments and these have been benchmarked against the market or previous work. In other areas, proposals require further clarity through consultation with customers and market providers. All investments are taken through NESO governance requirements, under the Board's agreed delegation of financial authority. These require detailed business cases setting out costs and likely benefits, together with options analysis to demonstrate that proposals provide value for money.

The challenges and opportunities ahead, both in the coming year, and beyond, cannot be underestimated. However, with meaningful collaboration, we are confident that we can achieve our shared goals. Together, we can work towards a sustainable, affordable and resilient energy system that benefits both consumers and our customers.

<sup>2</sup> Under our regulatory framework, Ofgem holds us to account for delivering value for money to consumers. In addition, value for money is a key principle within the Managing Public Money (MPM) framework, which sets out the main principles for managing resources in a public sector organisation.

## . Introduction

Our RIIO-2 Business Plan 3 for the period April 2025 to March 2026 (BP3) marks a significant milestone as it is our first business plan as NESO and the final plan for the RIIO-2 period.

The energy system is the foundation of a thriving modern society in Great Britain. As the system continues to undergo rapid and fundamental transition, our focus remains on promoting net zero, access to affordable energy and ensuring security of supply for the nation.

Our business plan identifies eight Performance Objectives that ensure we deliver value for consumers and fulfil our purpose and vision. These objectives serve as guiding principles for our expanded roles and responsibilities as we move towards clean power by 2030 and aim for net zero emissions by 2050.

The challenges ahead cannot be underestimated and include addressing the connections queue, reforming energy markets and embracing a digital future. However, with meaningful collaboration, we are confident that we can achieve our shared goals.

We look forward to forging new relationships and partnerships as NESO. Together, we can work towards a sustainable, affordable and resilient energy system that benefits both consumers and our customers.



## A Changing Energy Landscape

The energy system is critical to almost all aspects of our daily lives and is essential to decarbonising the economy. How we use, store and source energy is changing significantly. We have an opportunity to shape an energy system that supports economic growth and prosperity for Great Britain, creating jobs and building skills. This valuable opportunity will help protect the environment for future generations while ensuring energy remains affordable for everyone.



#### Yesterday

Previously, most electricity came from fossil fuels at a few large power stations. Heat for homes and businesses relied on coal, oil and natural gas, while transport was mostly fuelled by oil.

#### **Today**

The energy landscape is changing at an unprecedented rate, but we still rely on fossil fuels like natural gas for flexibility and energy security.

This reliance on fossil fuels affects our energy independence and exposes consumers to higher bills when international fuel prices rise.

#### **Tomorrow**

Our energy landscape will become increasingly complex as we shift to domestic energy sources and reduce reliance on imported natural gas.

Energy will come from a diverse mix of low-carbon sources including wind, solar, biogas, hydrogen, abated natural gas, nuclear, hydropower and more. This will require a smarter, more flexible energy system.









Key





Oil

Natural Gas

Fossil Fuel

Green Electricity Electricity Biogas

Hydrogen

We must work together locally, regionally and nationally to realise the benefits of the energy transition for Great Britain and its people.

Figure 2: A changing energy landscape

## A Whole System Challenge

Achieving an energy transition that boosts the economy and encourages competition is a complex challenge. It requires whole system thinking and collaboration across the energy sector, from homeowners and local businesses in their communities through to regional, national and international customers.

With representation across England, Scotland and Wales, NESO will engage transparently with communities and work across Great Britain to create an energy system that is affordable, secure and low carbon.

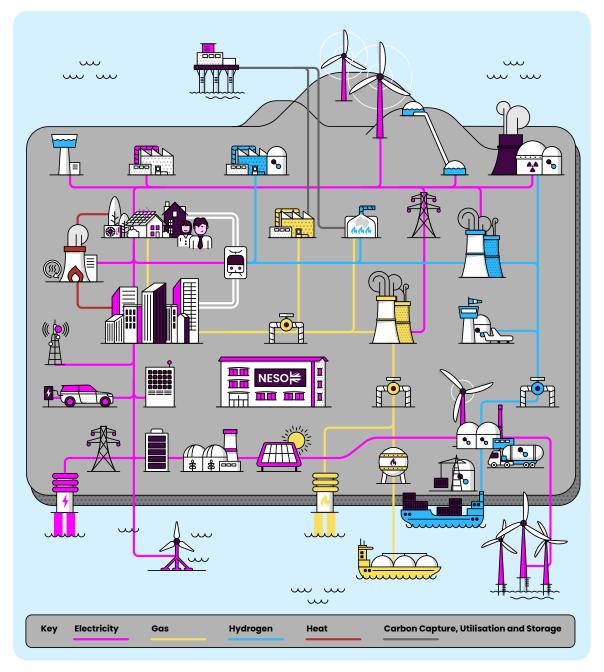


Figure 3: An illustrative story of a hypothetical future energy system\*

\*Note: This is intended to tell an illustrative story of a hypothetical future energy system. It is not intended to be comprehensive, nor does it define NESO's view of the future energy system.

## **NESO's Role in the Energy Sector**

Our increasingly complex energy system must be planned and operated with consideration for interactions across electricity, gas and other energy forms. We will also account for interdependencies with other sectors such as water, transport, telecommunications and industry.

At NESO, we bring an independent, impartial voice to energy system planning and operations, taking a whole system view. We will address interrelated challenges and trade-offs to deliver the best outcomes for energy consumers.

We integrate energy markets, connections, system operations, resilience and emergency management, security of supply, energy insight and strategic planning – all essential for delivering the plans, markets and operations of today's and tomorrow's energy system. Combining these activities within one organisation promotes holistic thinking to develop cost-efficient and sustainable solutions that meet our customers' needs.

The transition to NESO requires a significant expansion in our capabilities and we are transforming to meet this challenge. We will continue important functions, from real-time system operation to market development, managing connections and advising on network investment. At the same time, we will progress our new roles to support government in delivering a world-leading, integrated approach to energy.

More information can be found by visiting What we do on our website.



This business plan is intended to look and feel different to our previous business plans. We have been working closely with Ofgem, the energy regulator, to reform our regulatory framework. The changes outlined in this plan reflect our status as a new, independent, government-owned organisation with expanded roles and responsibilities.<sup>3</sup>

For more information on our BP3 performance framework, please refer to Ofgem's consultation on the National Energy System Operator's performance incentives framework for BP3.<sup>4</sup>

## Scope

BP3 proposes our delivery focus for the period April 2025 to March 2026. It will not cover all that we do. For activities not referenced in BP3, we want to assure everyone that we remain committed to delivering:

- our existing commitments made under BP2<sup>5</sup> for each Performance Objective, we have identified the relevant BP2 activities, which will either not have completed by the start of BP3 or constitute a continuous activity. A consolidation of these commitments can be found in Appendix 1, BP2–BP3 Mapping of Commitments. We will continue to engage with customers on these through our existing channels and publications.
- our licence obligations<sup>6</sup>
- **our core functions** Balancing the National Electricity Transmission System (NETS) in a safe, reliable and efficient way. This includes coordinating with other network operators on operational decisions, outage changes, and network planning up to one-year; short-term energy forecasting; managing and sharing system data and information; and restoration and emergency response to system instability events.<sup>7</sup>

## Stakeholder input

The customer feedback from our various BP2 activities helped us understand where to focus our delivery for the next year to maximise consumer benefit.

Our Independent Stakeholder Group (ISG), an iteration of the ESO RIIO-2 Stakeholder Group (ERSG), has provided invaluable feedback on our Performance Objectives and Success Measures for this plan. For information on how the consultation on our draft plan has influenced our final plan please see Annex D: Stakeholder, which is published as a separate document.

<sup>3</sup> NESO is built on our previous experience as the Electricity System Operator (ESO). The ESO had extensive expertise in balancing electricity supply and demand 24/7, while making sure network operations and the markets were prepared for the future. The transition to NESO requires a significant expansion in our capabilities and we are transforming our organisation to meet this challenge. More information can be found by visiting <a href="https://www.website.">What we do</a> on our website.

<sup>4</sup> Ofgem's Consultation on NESO's performance incentives framework for BP3

<sup>5 &</sup>lt;u>RIIO-2 Business Plan 2023-2025</u>

<sup>6</sup> Electricity System Operator Licence and Gas System Planner Licence

<sup>7</sup> ESO Roles Guidance

## An ambitious plan

The energy sector is undergoing a fundamental transformation, with the pace of change only continuing to accelerate. Our business plan reflects the unprecedented shift that is taking place across the entire system, focusing on the most critical and impactful activities we need to undertake.

Our proposed Performance Objectives demonstrate our expanded and wide-ranging whole system remit as NESO. Many of the activities we intend to undertake for this period represent roles we have not previously been responsible for. In some areas, we are committed to undertaking work that has never been done before to advance the energy transition, both in the energy sector in Great Britain and on an international scale.

For the first time, we will produce strategic national energy plans with strategic environmental assessments for Great Britain, something no other system operator worldwide has achieved on this scale. Achieving clean power by 2030, while keeping the system secure and affordable for consumers, will be a significant achievement. We will take on a digital leadership role for the energy sector, improving sector-wide data practices and advancing collaborative digitalisation of the whole energy system.

Our work as NESO will also build on the strong foundations established as ESO, continuing to pursue excellence across all previous ESO functions. We will meet our ambition for zero-carbon operability in 2025. We will continue to transform our markets, unlocking the full potential of flexibility, while also remaining prepared to deliver fundamental reforms subject to a final decision on the review of electricity market arrangements (REMA).

We are confident that our business plan sets the necessary level of ambition, while remaining both credible and achievable, at this pivotal moment for the energy sector.

### **BP3 timetable**

Figure 3 provides an overview of the main stages and timings for the BP3 process. We have published our draft BP3 (step 1), consulted on the document (step 2) and used this to inform our final BP3 (step 3).

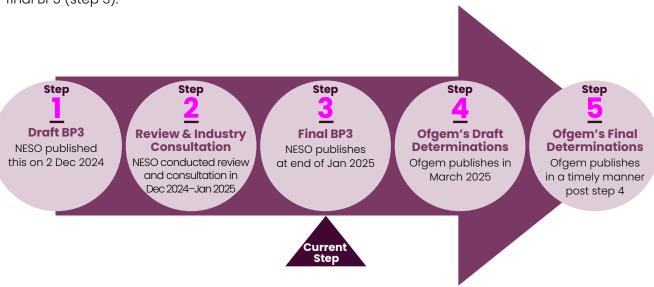


Figure 4: BP3 timetable

# 3. BP3 Building Blocks

BP3 articulates our delivery focus through eight Performance Objectives. These objectives underpin our NESO strategic priorities, enabling us to fulfil our statutory duties as well as our purpose, vision and values.<sup>8</sup> This is shown in Figure 5.



Figure 5: BP3 building blocks

## **Energy Act 2023 and Duties**

The Energy Act 2023 established the legislative framework for an independent system planner and operator to help accelerate Great Britain's energy transition, leading to the establishment of the National Energy System Operator (NESO).

As NESO, our statutory duties are set out in the Energy Act 2023. Our primary duty is to carry out our functions and activities in a way that we consider will best promote our three statutory objectives, which are enabling the government to deliver net zero, efficient, coordinated and economical systems for electricity and gas and ensuring security of supply.

In carrying out our functions and activities, under our secondary duty, we must also consider:

- competition in the energy sector
- facilitating innovation
- consumer and whole energy system impacts

Additionally, we must have regard to the strategic priorities set out in the *Strategy and Policy Statement* (SPS). Further details on these general statutory duties can be found in Table 2. We have other duties, including to respond to requests for advice from government and Ofgem, and keep energy sector developments under review.

<sup>8</sup> You can find a suite of documents explaining <u>what we do</u> on our website. This includes our vision, purpose and values and our strategic priorities through to 2026.

#### Alignment with our statutory duties

Our business plan has been designed to align our intended programme of work for the next regulatory period with our statutory duties, having considered the above points and strategic priorities outlined in the SPS. We have carefully assessed how our proposed Performance Objectives, when viewed as a coherent package, can deliver the right outcomes for consumers and the energy system, balancing our duties where trade-offs may exist.

The particular focus of each Performance Objective will differ depending on the specific activities and workstreams we undertake. For example, our proposed Performance Objective on Clean Power 2030 implementation is fundamental to delivering the government's clean power mission, lowering consumer bills and reducing carbon emissions.

Similarly, the continued operation of the electricity system directly supports our objective to promote energy security, while also enabling net zero carbon operability and maintaining economic and efficient system operation.

Table 2: Summary of NESO's general statutory duties

Primary Duties	Secondary Duties	Strategy and Policy Statement Priorities
Carry out our functions and activities in a way we consider best calculated to promote:  • Enabling Net Zero:  Supporting the government in meeting its legally binding emissions targets  • Efficiency and Economy:  Promoting efficient, coordinated and economical systems for electricity and gas and the economy and efficiency of energy businesses  • Security of Supply:  Ensuring security of supply for current and future consumers of electricity and gas	Carry out our functions having regard to:  • The Need to Facilitate Competition: Creating and maintaining competitive energy markets and networks  • Consumer Impacts: Understanding what changes mean for consumers  • Whole System Impacts: Understanding the linkages across energy systems  • The Desirability of Facilitating Innovation: Creating an environment that enables others to help solve energy challenges	Carry out our functions having regard to the strategic priorities set out in the Strategy and Policy Statement.  More information can be found in Appendix 2: Consideration of the Strategic and Policy Statement.

## Purpose, Vision and our Strategic Priorities

Our purpose is to forge the path to a sustainable future for everyone. Our vision is a future where everyone has access to reliable, clean and affordable energy; our work will act as a catalyst for change across the global community.

Our values define us, laying the foundation for our purpose and guiding us as we work towards achieving our vision. They include:

- accelerating progress
- building trust
- · creating belonging
- · being curious

As we enter a new regulatory period in BP3, we are building on our previous ambitions to reflect NESO's expanded remit. We have identified six priorities that will guide our efforts through to 2026, ensuring we deliver our objectives effectively.

At the start of RIIO-2 we set out our ambition as a legally separate company, trusted by our partners and stakeholders. Our ambition was to:

- **Deliver reliable and secure system operation:** Ensuring energy is available when consumers need it, with an electricity system that can operate carbon-free by 2025.
- Transform participation in smart and sustainable markets: Promote competition through creating new market platforms and lowering the barriers to entry for all participants.
- **Unlock consumer value through competition in networks:** Encouraging innovation and increased participation to meet future system requirements
- **Drive towards a sustainable whole energy future:** Optimising outcomes for consumers across transmission and distribution networks, while setting pathways for the UK to meet its 2050 carbon reduction target across electricity, gas, heat and transport sectors.

In the second *Business Plan*, we refreshed and expanded our ambitions to align with our updated mission – driving the transformation to a fully decarbonised electricity system by 2035 that is reliable, affordable and fair for all.

- Ensuring the electricity system can operate carbon-free by 2025: A clear and ambitious goal, set in 2019, that remains unchanged and on track.
- **Encouraging competition for the benefit of consumers:** Maximising innovation and consumer value through competition in current and emerging markets.
- **Being the net zero employer of choice:** Building a talented and diverse workforce to address challenges on the path to net zero.
- **Engaging as a trusted partner:** Strengthening partnerships with customers and stakeholders to address the industry's most complex challenges.
- **Being innovative, digital and data-driven:** Leveraging IT, data, and digitalisation to enhance flexibility, transparency, and innovation across the energy system.

Our new strategic priorities build on the ambitions of BP2, expanding their scope to align with NESO's purpose as an organisation.

- Clean Power: At the start of RIIO-2, we committed to driving towards zero-carbon operation, an ambition re-affirmed through BP2. In BP3, our Clean Power strategic priority takes this a step further, not only realising the ambition for zero-carbon operation in 2025, but also preparing for the challenge of achieving a fully decarbonised power system, as set out in our CP30 publication. This priority also requires an expanded commitment to whole energy systems.
- **Decarbonised Energy:** Managing and planning networks has been a core activity throughout RIIO-2. While this focus continued through BP2, our Decarbonised Energy priority represents NESO's significantly expanded role in centralised and regional planning, incorporating spatial elements to ensure a decarbonised, efficient, and flexible energy system.
- **Consumer Value:** Ensuring value for money for consumers has been a key ambition across RIIO-2. This has been achieved through market reform, increased competition, and improved network planning. Our Consumer Value priority reinforces our commitment to delivering fair and efficient outcomes for consumers across all NESO activities.
- **Customer Centricity:** Our stakeholders and customers have always been integral to achieving our ambitions across the RIIO-2 period. BP2 placed greater emphasis on engagement, introducing our Trusted Partner ambition. Our Customer Centricity priority builds on this, recognising the expanded scope of NESO's roles and activities, broadening our customer base and enhancing engagement.
- **Digital Mindset:** As we progress through RIIO-2, the importance of technology, data and digitalisation continues to grow. Our Digital Mindset strategic priority, which was first introduced in BP2, expands in BP3 to position NESO as a leader in sector-wide digitalisation, unlocking innovation, flexibility and transparency across the energy system.
- **People Value:** Our ability to deliver our ambitions is underpinned by our people. In BP2, this was captured in our Zero Carbon Employer ambition, which has now evolved into our People Value strategic priority. As NESO expands, we have significantly upscaled our workforce and capabilities. We continue to focus on talent development, diversity and empowerment to ensure we have the right skills and expertise to deliver the right outcomes.

We have considered what we will deliver, focusing on a whole system approach to clean power and consumer value, while planning for a decarbonised, efficient and flexible energy system. The 'how' is reflected in our commitment to putting customers first, adopting a digital mindset, and valuing our people.



## Performance Objectives

We have identified eight Performance Objectives that support the delivery of our Strategic Priorities between April 2025 and March 2026. These objectives recognise the transformational changes currently taking place within the energy system, sharpening our focus on advancing clean power, decarbonising energy and maximising consumer value.

#### Table 1: Our Performance Objectives for 2025/26

#### **WHOLE ENERGY**



#### Strategic Whole Energy Plans

NESO will establish the capabilities, foundations and methodologies needed to deliver national and regional strategic whole energy plans.

#### Enhanced Sector Digitalisation and Data Sharing

NESO will work with the sector to develop an aligned and interoperable digital ecosystem that enables industry digitalisation collaboration utilising innovation, underpinned by transparent data sharing and access.

#### Fit-for-Purpose Markets

NESO will support the government in making informed decisions on policy and market reform across the whole system. We will also continue to reform our own markets to level the playing field and deliver value to consumers.

#### Secure and Resilient Energy Systems

NESO will improve whole energy system emergency preparedness and resilience. We will ensure the necessary capabilities and requirements are in place and facilitate industry readiness to meet the Electricity System Restoration Standard.

#### Separated NESO Systems, Processes and Services

NESO will transition remaining systems, processes and services from National Grid to NESO ownership to enhance our capabilities and establish our autonomy and full independence.

#### Clean Power 2030 Implementation

NESO will play a pivotal role in securing clean power for Great Britain by 2030 on the path to net zero by 2050. Building on our 2024 advice to government on pathways to a clean, secure, operable and deliverable electricity system, we will move to action and implementation in line with the government's CP30 action plan.

#### **ELECTRICITY**



#### Operating the Electricity System

NESO will transparently operate a safe, reliable and efficient system throughout BP3, while continuing to transform the capabilities of our people, processes and systems to enable secure zero-carbon operation of the system by the end of 2025.

#### **Connections Reform**

NESO will drive delivery and implementation of a reformed connections process that enables projects needed for 2030 and beyond to connect in a timely and coordinated manner.

## Value for money

All our activities under the Performance Objectives should ensure value to consumers, both current and future. Consumer value is not necessarily financial; examples of other considerations include security of supply and environmental impact.

Under our regulatory framework, Ofgem holds us to account for delivering value for money to consumers. In addition, value for money is a key principle within the *Managing Public Money* (MPM) framework, which sets out the main principles for managing resources in a public sector organisation.

Value for money is crucial, as it ensures that resources are used efficiently and effectively to achieve the best possible outcomes for consumers.<sup>9</sup>

It is therefore crucial that we have systems, processes and governance that drive value-for-money decision-making in everything we do. This includes our approach to resource allocation through a corporate planning process, investment approvals, application of procurement best practice, and forums where subject matter experts provide insights and challenge on the actions and decisions we take.

We already have these systems, processes and governance in place, but will refine and improve them to ensure they are fit for purpose for NESO and provide consumer value through this and future business plans. Our focus is on maximising value while maintaining high performance standards, especially in critical investments.

Our Performance Objectives articulate the strategic activities we are undertaking to accelerate progress towards clean, reliable energy that is affordable for all. The benefits they will deliver are significant but will materialise in different ways and across different timescales. This makes it challenging to quantify them in a way that is both comparable and measurable. We have therefore applied a qualitative approach to benefits, which aims to give a clear understanding of how the Performance Objectives and supporting Success Measures will add value to consumers and the wider energy sector.

We have identified four broad categories to describe the core outcomes that our objectives will deliver:

- Lower costs than would otherwise be the case: Many of our activities will have a direct impact on the costs we incur to operate the system and on the investment required to coordinate, plan and build energy networks. Effective delivery should result in lower consumer bills than would otherwise be the case.
- Ensuring system security and reliability: Having a system that is secure, reliable and resilient for the future is essential for consumers. Changes to our ways of working are needed as the energy systems evolve to be more decentralised, but also more integrated, with whole system considerations now a key requirement.
- **Supporting net zero:** Driving the transition to net zero is a primary focus for us and the government, benefiting consumers. This priority is embedded in our statutory duties and strategic objectives.

<sup>9 &</sup>lt;u>Consultation on National Energy System Operator's performance incentives framework for BP3</u> (ofgem.gov.uk), p 34.

• **Improved industry coordination:** In our central role, we will identify and support more effective and efficient flows of information, data and processes within and across the energy ecosystem, enhancing overall consumer benefits in terms of cost, security and sustainability.

Each of our Performance Objectives will include an explanation of how it contributes to one or more of the above benefits categories and how we envisage that benefit being realised. We also outline the timeframe over which we expect those benefits to be realised.

While our activities can result in more immediate benefits, it is important to recognise that much of what we are doing in this period is in preparation for the future. The costs we incur now may not necessarily deliver immediate benefits but will provide benefits in the future. We have used the following timeframes to articulate when we expect benefits to occur:

- Within BP3: Benefits that occur in the regulatory period from 1 April 2025 to 31 March 2026.
- Medium-term: Benefits which occur after the end of BP3 but before 2030.
- Longer-term: Benefits that occur in 2030 and beyond.

Public



Our third business plan for the RIIO-2 period represents a transformational plan. It consolidates:

- run the business costs
- investment in core infrastructure set out in BP2
- transformational change contained in the FSO Blueprint
- continued investment in standing up our new roles to deliver our Primary and Secondary Duties as set out in the Energy Act 2023

Our cost estimates for different elements of BP3 are at varying levels of maturity. Where plans have been fully developed and agreed – through our internal processes or with Ofgem – we have clarity on the required number of people and IT investments that have been benchmarked against the market or previous work. In other areas, proposals require further refinement through consultation with customers and market providers. The detailed cost annex, which has been published separately, outlines these varying levels of cost understanding. All investments are subject to NESO governance requirements under the Board's agreed delegation of financial authority. This process requires detailed business cases that set out costs and expected benefits, along with options analysis to demonstrate value for money.

As such, some uncertainty remains in the cost levels set out, particularly regarding new investments in technology and new roles. These costs represent forecasts based on the information at the time of writing, while FY26 will conclude much of the design work, enabling firmer cost estimates. Where applicable, we have outlined below the quarter in which we expect to determine more precise estimates.

The estimated total costs to fulfil our Performance Objectives set out in BP3, along with our broader obligations, is £690m. This is made up of:

- FY26 forecast presented in BP2 totalling £393m:
  - £243m for enduring run-the-business costs, delivering the three roles outlined in BP2 including the cost of shared services provided by National Grid
  - £150m for investments in supporting IT infrastructure and the property estate
- £118m Forecast costs associated with establishing the FSO as set out in the FSO Blueprint. These costs were always subject to change and future amendment.
- £86m New additional roles that NESO is undertaking, for example SSEP, RESP, and DSI, supported by a digital-first approach to delivery.
- £19m Accelerating NESO delivery in support of the government's *Clean Power 2030 Action Plan*, including reforming the connections process.
- £30m To continue strengthening and enhancing cyber security in line with our adverse risk appetite in a more challenging and increasing threat landscape, including investing in a contingent control centre and in operational resilience in the control room.
- £44m Establishing a fit-for-purpose NESO, including transforming our underpinning business systems to reduce future costs, enhancing customer-centricity, and supporting an organisation with expanded roles.

In Figure 5, the waterfall illustrates the cost increase from £511m (BP2 and FSO) through to our estimated needs of £690m for BP3, a difference of £179m. This increase is broken down by key building blocks of anticipated additional needs, as annotated in the waterfall demonstrating the groupings above.

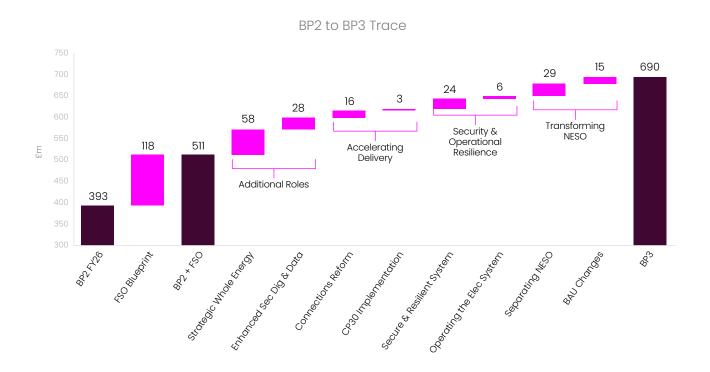


Figure 1: Original BP3 forecast vs revised BP3 forecast – RIIO-2 excluded the full scope of NESO's new roles. Costs presented are nominal, in a 2025/26 price base.

Table 3 outlines the cost breakdown between enduring operational expenditure, investment in core infrastructure and cost to achieve (CTA). It also details the split of incremental full-time equivalents (FTEs) between enduring and temporary roles.

Table 3: Overview of cost increases and allocation across key NESO activities

£m	Орех	Investment	СТА	Total	FTE Enduring	FTE Temp	FTE Total
Strategic Whole Energy Plans	16	19	23	58	313	-	313
Enhanced Sector Digitalisation & Data Sharing*	6	22	-	28	80	-	80
Connections Reform	3	6	7	16	-	23	23
Secure & Resilient Systems	9	10	5	24	102	14	116
CP 2030 Implementation	3	-	-	3	48	-	48
Operating the Electricity System	3	3	-	6	-	24	24
Separated NESO† (inc. BAU Changes)	35	9	-	44	330	81	411
Total	84	60	35	179	873	142	1,015

<sup>\*</sup> Includes digital transformation across NESO

We have reviewed the commitment and deliverability of the plan and are comfortable in our ability to achieve it, while recognising the need to remain agile in the face of ongoing uncertainty. The past two years have demonstrated NESO's ability to deliver significant change and growth. In FY24, NESO (formerly ESO) employed 1,500 FTEs and incurred totex of approximately £380m. NESO's FY25 outturn forecast projects a workforce of around 2,400 FTEs and totex of approximately £560m, representing a 150% on FY24. In FY26, we are forecasting a workforce of approximately 2,800 FTEs and totex of £690m, an 120% increase on FY25. This trend indicates that our continued growth is due to stabilise over time as the operating environment becomes more predictable.

Over half of the £179m increase in spend is due to activities newly assigned to NESO or expanded in scope since the previous plan. These changes have primarily resulted from requests by the government and Ofgem, as well as shifts in the energy and technological landscape.

#### Key areas where costs have increased due to evolving roles and responsibilities:

• **Strategic Whole Energy Plans:** NESO has taken on new responsibilities as the Strategic Energy Planner following the Energy Act 2023. The government and devolved administrations have commissioned a *Strategic Spatial Energy Plan*, and Ofgem has

<sup>†</sup> Investment costs comprise of two investments which net to £0 (see below for further details)

confirmed NESO's implementation of Regional Energy Strategic Planner (RESP) role across Great Britain. These roles were in their early stages at the time of the *Future System Operator* (FSO) Blueprint<sup>10</sup> and have since evolved significantly through consultations with Ofgem and DESNZ. Our plan allocates £63m, with £21m in enduring operating expenditure and £42m in infrastructure investment and the cost to achieve RESP. Investment and cost-to-achieve figures remain subject to final decisions and detailed designs, expected in Q2/Q3 FY26.

- Enhancing Sector Digitalisation and Data Sharing: NESO is investing in digital transformation and data-sharing capabilities in response to evolving regulatory requirements. Ofgem has asked NESO to take on the interim Data Sharing Infrastructure Coordinator role, and we are also adopting generative AI, which has developed rapidly over the past two years. This is another role that was in its early stages at the time of the FSO Blueprint and has since evolved through Ofgem and DESNZ consultations. Our plan allocates £25m, including £3m in enduring operating expenditure and £22m for investment in data infrastructure, digital transformation for NESO, Contracts for Difference (CfD), review of electricity market arrangements (REMA) and AI.
- Secure and Resilient System: BP3 includes funding to expand and strengthen our cyber security efforts. As part of our continual improvement approach in enhancing our physical and cyber security controls, additional and ongoing investment is required in line with our averse risk appetite, compared to the FSO Blueprint. More significantly, it aims to address an increasingly complex and challenging landscape with a growing variety of threat actors. Our plan allocates £25m, with £10m in enduring operational expenditure for increased FTEs, £10m for investment in supporting technology, and £5m in incremental costs associated with a contingent control centre.
- Connections Reform: NESO is working with Ofgem, DESNZ, network owners and customers to enable projects required for 2030 and beyond to connect in a timely and coordinated manner, subject to Ofgem's decisions on TM04+ and methodologies. This reform was not accounted for in the previous business plan. Our plan allocates £16m, including an increase of £3m in operating expenditure for staff secondments and backfilling, £7m for additional change management capacity, and £6m forecast for investment in the Connections Platform and data analytics.
- Implementing Clean Power 2030: NESO is providing resources to accelerate existing activities and support new initiatives beyond those included in BP2. These actions align with the government's Clean Power 2030 Action Plan, published in December 2024, which was not anticipated in the previous business plan. BP3 sets out an additional 44 full-time equivalents (FTEs) to support implementation. We continue to assess requirements and expect further detail in Q2 FY26.

#### Other areas where costs have increased:

• Operating the Electricity System: Costs have increased to ensure our operational infrastructure keeps pace with an increasingly complex system and supports the transition to clean power. Our plan includes £7m, with £4m allocated to enduring operating expenditure (50 FTEs) and £3m for investment in enabling technology to enhance operational awareness and transparency to support decision-making.

<sup>10</sup> The FSO Blueprint submission to Ofgem in March 2023 was a proposal submitted by National Grid and ESO (Electricity System Operator) outlining their plans and costs for implementing the FSO.

• Setting up an Independent, Standalone Organisation: Our cost estimates have become more certain as we have progressed procurement events and gained a clearer understanding of the work required following our separation from National Grid. This level of detail was not available at the time of the FSO Blueprint submission in March 2023. We have also adjusted our approach, bringing forward the transformation of our business systems and processes. While this results in higher upfront costs, it will generate long-term savings by avoiding the need for another significant round of transformation. Our plan includes £23m for the incremental cost of delivering Day 2 beyond the original FSO Blueprint. In FY26, this has been offset by deferring a £23m investment in relocating from Faraday House on the National Grid Estate in Warwick.

We are also investing in our organisational design, customer focus, early careers, replacement of employee benefit schemes, transformation and project delivery, and digital functions to support NESO's growth and ensure we are fit for future challenges. These costs reflect the organisation's wider growth over the past year, as well as greater clarity on plans since the *FSO Blueprint*. Our plan includes £44m of enduring operational expenditure.

#### **Innovation**

In addition to the activities and costs described above, we will continue to maintain a portfolio of active innovation projects funded by the Network Innovation Allowance (NIA), Network Innovation Competition (NIC) and Ofgem's new Strategic Innovation Fund (SIF).

We publish an *Innovation Strategy Report* annually. To learn more about our innovation priorities for 2024-25, visit Innovation strategy on our website. Our innovation strategy for 2025-26 will be published in March 2025.



## **Customer Centricity**

To effectively serve energy consumers and Great Britain, NESO will need to work in close collaboration with the broader energy sector. Our focus is on a customer-centric approach that underpins all our Performance Objectives. We define 'customer' as anyone impacted by our work, including service providers and communities. Using this term consistently in all our communications emphasises our commitment to understanding and balancing the needs of the diverse range of external parties we work with to fulfil our purpose.

Our expanded role as NESO means working with a wider range of customer groups, both existing and new. To ensure we are continually listening to and engaging with customers to shape our future initiatives and improve our service, we have appointed a Customer Director to our Executive team.

By establishing mechanisms to gather and share insights into customer needs and priorities, we will ensure our cross-organisational decisions and priorities are well-informed. Through a redesigned communication and engagement strategy, we will ensure that customers have access to the right level of information and opportunities to work with us, share their ideas and provide feedback. We will also use customers' feedback to enhance our service channels and processes. Our goal is to make it easier for customers to work with us by providing integrated service journeys and improving digital options for support and information access.

In striving for the best outcomes for consumers and Great Britain, we recognise we may not always meet everyone's needs. However, we will proactively collaborate with a broad range of industry partners and community groups to ensure we take an informed position that carefully considers and balances the broader impacts of our decisions.

## **Digital Mindset**

A digital mindset is crucial to our strategic priorities, positioning us as a leader in sector-wide digitalisation. It means having the right digital skills, using modern technologies and innovation – including Al-driven approaches – and embracing open data sharing.

This mindset unlocks the potential of modern technology, harnessing data to drive interoperability, maximise its value, and enabling innovation and collaboration across the whole energy system. We are committed to measuring progress in this area, using a key performance indicator (KPI) to assess digital literacy, skills, and readiness (the Digital Quotient, or DQ). Our current baseline is 61%, with a target of 65% for this financial year.

Engagement and confidence from the wider energy sector are critical to our success. By adopting a digital mindset, we will deliver a seamless and supportive experience for customers throughout their journey with us.

A digital-first approach will drive the adoption of AI both internally and externally to improve productivity and enhance customer outcomes. During the BP3 period, we will invest in AI solutions to accelerate the deployment of new technologies. We will also partner with organisations like Climate Change AI to host an annual global competition for AI solutions that reduce carbon emissions.

## People Value

Our people capability is central to delivering our BP3 obligations and preparing for future requirements. Our people approach will support BP3 Performance Objectives by:

- **Reinforcing culture and values:** Embedding our defined culture and values through communication and engagement programmes, hiring, onboarding processes and leadership role modelling.
- **Developing capabilities:** Implementing a resourcing and development process to anticipate, build and deploy the skills needed to meet our BP3 obligations.
- **Agile resource deployment:** Forming agile teams that combine the best capabilities and support team development to meet future challenges.
- **Promoting diversity and inclusion:** Advancing diversity, equity, inclusion and belonging (DEIB) to maximise creativity and relevance, and harness the full potential of our workforce.
- **Encouraging positive performance:** Promoting a culture of positive performance to maximise productivity and effectiveness.

Each BP3 Performance Objective relies on people to ensure its smooth and efficient delivery. For example:

- Strategic Whole Energy Plans: Our work with national and regional strategic whole energy plans requires an increase in skills. By building capabilities in whole energy systems, strategic spatial energy plans and regional system energy plans, we will collaborate with government, customers and communities to deliver a clean, secure and affordable energy system for communities, consumers and society.
- Enhanced Sector Digitalisation and Data Sharing: As we become a digital-first and dataled organisation, we will continue investing in our employees to develop the skills needed to deliver sector digitalisation and data sharing.
- **Connections Reform:** Delivering Connections Reform requires dedicated resources to drive this work forward. This key priority demands a focused and experienced team, requiring a temporary uplift in people to ensure timely and coordinated delivery.
- Separated NESO Systems, Processes and Services: Separating IT support systems from National Grid grants us autonomy and agility. This transition allows customisation to better meet our people's needs, empowering them and improving efficiency. Transforming core systems such as payroll, finance, procurement and enterprise will streamline services, enhance employee experience, and ensure timely delivery of essential functions. Leveraging data insights will boost operational efficiency, tailor services and enhance People Value within NESO.



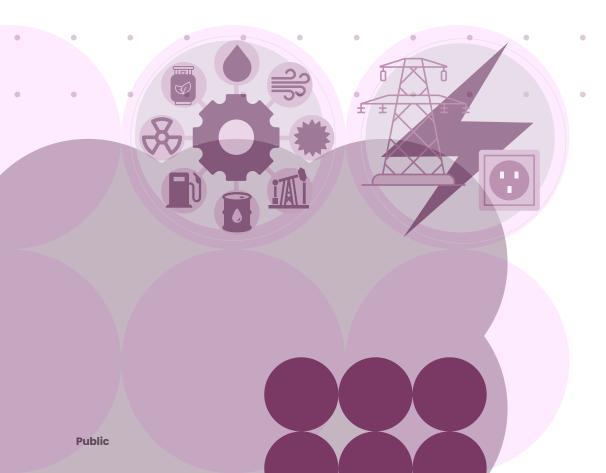
# What We Will Deliver

The Performance Objectives set out the outcomes we are working to achieve during the business plan period. The Success Measures for each Performance Objective represent the key deliverables or milestones that demonstrate progress toward achieving the objective.

Each Performance Objective includes an introductory section outlining its benefits and importance. The measurability of Success Measures varies across the objectives. Some, such as Operating the Electricity System, have well-established metrics that enable clear performance measurement. Others, such as Clean Power 2030 Implementation, have less-defined Success Measures due to the evolving nature of policy development and the need for further industry consultation.

For these less mature areas, further details will be provided through topic-specific publications as the year progresses.

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# Performance Objective: Strategic Whole Energy Plans

**WHOLE ENERGY** 

NESO will establish the capabilities, foundations and methodologies needed to deliver national and regional strategic whole energy plans.

To achieve the UK's decarbonisation targets and integrate low-carbon and renewable energy projects into the system, a coordinated approach between governments, industry and customers is essential. As we transition to net zero, we will see accelerated decarbonisation and decentralisation of generation and demand. Strategic planning that accounts for increasingly complex tradeoffs between energy vectors will be critical to achieving a low-cost net zero system. Delivering an increasingly complex and interconnected clean energy system requires resilient systems thinking, strategic planning and coordination. Through our new and innovative strategic plans, we will align national-scale asset strategies with local initiatives to support policy ambitions in security, net zero, efficiency and economy. We will accomplish this by evaluating the necessary energy infrastructure requirements across Great Britain, determining where and when they are needed.

The <u>Pathway to 2030</u> Holistic Network Design and the recommendations in the <u>Network Options</u> <u>Assessment 2021/22 Refresh</u> (NOA) were the first steps towards a more centralised, strategic energy planning approach. This approach is critical for delivering affordable, clean and secure power as we journey toward a net zero future. The next phase includes the Regional Energy Strategic Plans (RESPs), Strategic Spatial Energy Plan (SSEP), Gas Options Advice Document (GOAD) and Centralised Strategic Network Plan (CSNP).

The SSEP will be the first of these, taking a holistic approach to national planning for electricity and hydrogen supply and storage in Great Britain for the first time since privatisation. It will address the challenges of a more decentralised and weather-linked energy system. The plan will integrate significant geospatial and energy sector data to assess the optimal zonal locations, quantities and types of energy infrastructure required – initially electricity and hydrogen – across a range of plausible futures to meet future energy demand with clean, affordable and secure energy.

The GOAD will focus on the options presented by National Gas Transmission (NGT) to respond to the needs identified in NESO's Gas Network Capability Needs Report (GNCNR). We will work with NGT to ensure that this work is focused on ensuring the national gas transmission network can meet consumers' needs for natural gas efficiently. In addition, alongside our gas network and broader whole-system analysis activities, we will progress the development of hydrogen network planning activities. This will enable us to assess the value to consumers of repurposing natural gas pipeline assets, as well as identify other opportunities for cross-vector optimisation.

In our RESP role, we will integrate national and local energy plans creating credible whole energy regional plans enabling society to innovate and decarbonise. Most of this work is 'first-in-the-world', so we will need to build skills and capabilities alongside transparent processes to effectively develop national and regional strategic energy plans and network projects.

Ahead of this, through CP30, we have provided advice to the government on which network upgrades, markets and policy decisions could accelerate the development of a clean power system by 2030. The strategic energy plans will take this near-term view into account as background or a starting point for analysis.

We are developing a new strategic energy planning function that encompasses our roles across SSEP, CSNP and RESPs. This will provide industry with clarity on our new roles and responsibilities and establish our approach to engagement as we develop methodologies and deliverables.

We aim to seamlessly implement our new capabilities into NESO, ensuring timely and high-quality delivery of both initial iterations and future updates of each plan. We will be ready to deliver strategic whole energy plans that address the complexities of the rapidly evolving energy landscape.

This Performance Objective delivers benefits by supporting progress towards net zero through coordinated, strategic plans that accelerate the decarbonisation and decentralisation of generation and demand. These plans will enable investment in the required network infrastructure across Great Britain.

By determining the most efficient network plans, this objective will lower costs through strategic coordination at national and regional levels and whole systems integration of different energy vectors. This ensures effective and efficient infrastructure investment, so consumers pay no more than necessary.

We will also ensure our plans maintain a secure and reliable energy system, so consumers will continue to benefit from networks that meet their needs. While most benefits will be realised in the longer term due to the nature of network planning, some benefits may emerge in the medium-term.

#### Table 4: Summary of Performance Objective 'Strategic Whole Energy Plans' Success Measures



#### Success Measures

Submit the first SSEP pathways document to the UK Energy Secretary by the end of 2025.

Publish the *Transitional Centralised Strategic Network Plan 2 Refresh Methodology* (tCSNP2) report by 31 January 2026.

Publish the approved strategic energy planning methodologies within the specified timelines:

- SSEP methodology by May 2025
- CSNP methodology by September 2025

Publish the RESP methodology consultation by November 2025.

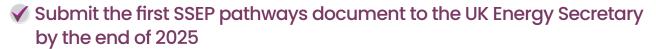
Publish RESP inputs to Electricity Distribution-3 price control as agreed with Ofgem by March 2026.

Publish the Gas Options Advice Document (GOAD) by 31 December 2025.

Establish hydrogen network planning activities by 30 March 2026, including, where relevant, proposals to extend the *2026 Gas Network Capability Needs Repor*t (GNCNR) to cover hydrogen network requirements.

Build capability and establish regional teams with at least five full-time equivalents (FTEs) per RESP region by December 2025. Convene the first quarterly Regional Forum for each region by May 2025, to support transitional RESP and RESP development.

We will provide clear and concise publications, supported by evidence of engagement with a broad range of customers. Each publication will include a report demonstrating how feedback has been fully considered and incorporated where accepted. If feedback is received on the engagement and communications method, the report will outline how this feedback has been addressed and how we will adapt our engagement approach moving forward.



The first SSEP will be delivered after BP3 and does not constitute a Success Measure for this period. However, during BP3, we will produce a set of pathway options as part of developing the final SSEP. These options will outline how the energy system might evolve and how infrastructure needs may vary under different future scenarios.

The UK Energy Secretary will select the final pathway option, which will undergo public consultation to shape the final plan. Welsh and Scottish governments will also be consulted as part of this process. This pathway will be used to conduct environmental assessments.

We will provide our pathways report to the UK Energy Secretary by the end of 2025.

## Publishing the tCSNP2 Refresh Report

The tCSNP2 Refresh will be the latest in a series of transitional CSNPs covering the development of the electricity transmission network in Great Britain. The original tCSNP2 recommended network reinforcements needed beyond 2030 and was published in March 2024. Given that most recommended projects were at an early development stage, Ofgem requested TOs to further develop their options and submit them to NESO for reassessment. These, along with other proposed options, will be reassessed in the tCSNP2 Refresh.

We will publish the tCSNP2 Refresh Report by the end of January 2026. TOs will use this report to support their business cases for funding, while Ofgem uses it as part of its funding decision process where required. The results of our tCSNP2 Refresh will also form the initial round of delivery projects in the CSNP delivery pipeline, subject to meeting design requirements and passing funding decisions.

Further details on the end-to-end process for developing the tCSNP2 Refresh can be found in our draft methodology. We expect to publish the final methodology in spring 2025, following Ofgem's approval.

## Gain approval of the strategic energy planning methodologies within the specified timelines

During BP3, we will develop and finalise methodologies for the CSNP, the SSEP and the RESPs. These methodologies will outline how each plan will be produced, including key outputs, and will be subject to consultation. We will ensure that coherent plans are produced at all levels of the system and across energy vectors, reflecting the interactions between the RESPs, CSNP and SSEP.

To fulfil our strategic energy planning duties, we must enhance engagement at local and regional levels, build new partnerships and strengthen relationships with customers. Our plans will consider technical, environmental and economic factors, alongside diverse customer views. Our SSEP engagement will seek societal consent and incorporate public views where appropriate. To facilitate this, we have established a comprehensive stakeholder engagement structure, incorporating representatives from 14 societal groups, areas expected to host infrastructure for the first time or at an increased level, and energy industry representatives. Our analysis will also consider the views of a representative survey of 9,000 people, and we will conduct a public consultation on the draft SSEP later in 2026. Each RESP will enable input from local actors and align with regional priorities.

By involving customers, seeking their feedback, and providing engagement opportunities, we aim to encourage advocacy and ownership of the plans. Stakeholder engagement forums for each plan will support this goal and enable meaningful contributions. We recognise the importance of

a comprehensive and effective customer engagement programme across our strategic energy planning function.

We have also established external governance forums to coordinate planning and alignment across strategic energy plans, DESNZ and Ofgem. These forums will bring together key customers and decision-makers to ensure a unified approach.

We will submit the SSEP methodology for approval by the UK Energy Secretary and Ofgem by May 2025, and the CSNP methodology for approval by Ofgem by September 2025. Following Ofgem's decision on the RESP consultation, expected in March 2025, we will develop the enduring RESP methodology and plan to consult externally on this by December 2025.

Strategic planning represents a major expansion of our responsibilities, requiring substantial capability building. Gaining approval for our methodologies demonstrates our strong ambition in this area.

## Publishing regional input to electricity distribution plans

The first RESPs are due to be published by December 2027 and fall outside this business plan period. However, during the period we will publish an initial RESP output by March 2026 to inform the next price control for electricity distribution networks (RIIO-ED3).

The RESPs will formally interact with RIIO-ED3, ensuring that investment plans for distribution network capacity align with their strategic direction. While this output will be smaller in scope than the full RESPs, it will help establish consistent assumptions, provide a pathway for planning and set up regional governance.

## Publishing the gas options advisory document

Our <u>Gas Network Capability Needs Report</u> (GNCNR) was published in 2024 and we are required to publish it every two years thereafter. The subsequent <u>Gas Options Advisory Document</u> (GOAD) will be published by the end of 2025. Both the GNCR and GOAD are new NESO licence obligations.

The GNCNR will assess the current network and analyse it against the likely needs of gas network users, enabling National Gas to identify various options for meeting user needs and delivering value for consumers. The GOAD will then provide advice to Ofgem on the value of these options, helping Ofgem to determine the most effective solutions. We expect the GNCNR and GOAD to evolve as the energy system transitions, for example, by identifying and assessing opportunities for repurposing.

As we transition to NESO, we are building our gas capability. We will continue to strengthen this capability to be recognised as a trusted advisor across gas, electricity and whole system publications.

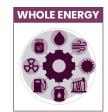
## Build capability and establish a presence across the RESP regions

As outlined in Ofgem's consultation on the RESP policy framework, each RESP must fully reflect its regional context, be grounded in local priorities, and consider place-based interdependencies within and beyond the RESP area. High-quality local inputs will enhance each RESP's alignment with place-based considerations.

To establish a strong presence and deliver effectively, we will build capability in the regions and develop key relationships. This includes recruiting people into the relevant regions to ensure sufficient local input and regional democratic oversight. We are working with Ofgem to finalise details on the timing and approach to building this team. We will establish regional teams with at least five FTEs per RESP region by December 2025. To support RESP development, we will convene the first quarterly Regional Forum for each region by May 2025.



# **Performance Objective:** Enhanced Sector Digitalisation and Data Sharing



NESO will work with the sector to develop an aligned and interoperable digital ecosystem that enables industry digitalisation collaboration utilising innovation, underpinned by transparent data sharing and access.

We play a pivotal, independent role in the energy system, bringing together and providing visibility of the opportunities and challenges across various system components. Our proposed approach to digitalisation and data sharing aligns with the government's *Invest 2035: The UK's Modern Industrial Strategy, Clean Growth Strategy,* and the *Smart Systems and Flexibility Plan 2021*, which emphasise the importance of data and Artificial Intelligence in achieving a low carbon, flexible, affordable and modern digitalised energy system. As NESO, we have a unique position which will enable us to bring transparency to data from across the energy system, enhancing everything we do and delivering end-to-end benefits. As our role in industry evolves, so must our approach to digitalisation. Using the power of data and innovation, we will become a digital leader, driving collaborative digitalisation of the whole energy system. To action our responsibilities and advisory position, we have created a new *Digitalisation Strategy and Action Plan*.

Within the BP3 period, we will develop and publish our AI strategy and roadmap. Over time, we anticipate that our AI initiatives will significantly support sector digitalisation by streamlining interactions with stakeholders and customers, whether they are submitting applications, sending inquiries or providing data. Our AI plans also aim to enhance energy scenario modelling, making it more accessible and flexible to run various scenarios and analyse data to derive insights beyond the capabilities of traditional data analytics methods. This approach will enable us to scale the delivery of insights more effectively and efficiently.

We will continue to collaborate with the industry, DESNZ and Ofgem to align and optimise data sharing and technologies across our organisations. Our focus is on how we share data between Ofgem, DESNZ and NESO, ensuring alignment in data strategies, insights and industry data sources for Strategic Energy Planning (SEP). We aim to coordinate efforts and learn from each other on how to create our data landscapes.

Benefits of this objective will start to be realised during the BP3 period and will continue to grow in the medium and long term, as increased data sharing and transparency influence more decisions and processes, delivering greater consumer benefits over time.

## Table 5: Summary of Performance Objective 'Enhanced Sector Digitalisation and Data Sharing' Success Measures



#### **Success Measures**

Publish a sector digitalisation plan study by the end of April 2025.

Establish Data Sharing Infrastructure (DSI) for the industry, with Minimum Viable Product (MVP) readiness by the end of September 2025.

Fully implement the interim Data Sharing Infrastructure (DSI) Coordinator role (subject to consultation outcomes) by the end of 2025.

## Table 5: Summary of Performance Objective 'Enhanced Sector Digitalisation and Data Sharing' Success Measures (continued)



#### 🕎 Success Measures

Improve the Open Data Portal by increasing the availability of shareable energy data and embedding a more comprehensive data catalogue for greater transparency.

Increase distributed energy resources (DER) visibility through improved registration and forecasting.

## Publish a sector digitalisation plan study

Developed in collaboration with stakeholders from the energy sector and beyond, this study will propose a plan for energy sector digitalisation. The plan will be based on:

- · the current state of digitalisation in the energy sector
- ongoing activity to deliver new digital infrastructure for the sector
- digitalisation requirements needed to deliver clean power by 2030, particularly where collaboration or interoperability across organisational boundaries is required
- potential solutions to address any identified gaps in these requirements

The first major iteration of the plan will be published by spring 2025. Its core focus will be the power system and the goal of CP30, while its proposals for the foundational digital infrastructure will take a wider energy system perspective and maintain a long-term vision for achieving net zero. The underpinning study will prioritise exploration and analysis of areas identified as having the greatest potential impact, specifically unlocking flexibility and network planning.

## Establish Data Sharing Infrastructure for the Industry

The Virtual Energy System programme is implementing the Data Sharing Infrastructure (DSI), designed to enable trusted, secure, resilient and scalable data exchange between participants across the sector. The programme is currently delivering a pilot to validate both the specification and the development method for the DSI. The pilot is planned to conclude around April 2025.

In line with commitments from DESNZ in their response to the <u>Digital Spine Feasibility Study</u> and Ofgem in their <u>Governance of Data Sharing Infrastructure Consultation</u>, the programme is planning to deliver an MVP of the DSI as the next step. The MVP will build on the technical capability developed during the pilot and will be launched in test mode (private beta release) for trials by network partners. This test phase will provide feedback and insights to refine the DSI and establish a foundation for the industry to explore DSI use cases.

The estimated start date for MVP delivery is July 2025, with readiness for launch projected within approximately 12 months. The MVP phase will include:

- initial deployment of MVP 'Data Preparation Nodes' into the network partners' ecosystems
- development of the initial capabilities required to operate the DSI as a service
- implementation of a trust framework and catalogue service to onboard organisations and support the discovery of available data

## Implement the interim Data Sharing Infrastructure Coordinator role

Assuming Ofgem's decision (following their <u>Governance of Data Sharing Infrastructure</u> <u>Consultation</u>) provides support, we will implement the interim Data Sharing Infrastructure

Coordinator role by the end of 2025. This will include:

- establishing the organisational function and capabilities required to deliver the role
- recruiting and onboarding the necessary people
- transitioning the DSI implementation responsibilities from the Virtual Energy System programme to the new role
- engaging with industry to collaboratively determine how to build and operate the DSI effectively and support the achievement of CP30
- publishing the first yearly use case report for DSI, which will present the initial pipeline of data sharing infrastructure use cases

## ✓ Improve NESO's Open Data Portal

The data we manage plays a central role in whole energy system decision-making. We actively embrace the need to share our data to encourage transparency, innovation and collaboration.

To uphold this commitment, we have developed a comprehensive external data-sharing approach, prioritising accessibility through our Open Data Portal. While we strive to make data as accessible as possible, we adhere to strict safeguards to protect sensitive information. Where data cannot be shared openly, we provide safe, secure and governed direct-sharing solutions when required.

We will continue to expand NESO-controlled shareable data to support sector-wide energy objectives, such as Clean Power 2030 and Connections Reform. This includes embedding a data catalogue function, which will:

- increase the amount of descriptive information
- improve search and query functions
- enable faster access and download of data

These enhancements will strengthen NESO's data ecosystem, ensuring a single source of truth for high-quality, reliable data.

## ✓ Increase DER visibility with registration and forecasting

We will continue to work towards increased visibility and access to DER data. Through our Transformation to Integrate Distributed Energy (TIDE) programme, we will deliver an industry-wide transformation addressing:

- NESO business changes
- NESO data and systems changes
- industry changes involving DNOs, TOs, market participants and market platforms

This transformation will focus on enabling greater visibility and access to DER and Consumer Energy Resources (CER) data across the energy sector.

During BP3, we will focus on DER registration and forecasting. Working with Industry stakeholders, we will:

- deliver a design for data-sharing API standards
- · establish guidelines for data sharing

This initiative will be delivered under Digital, Data and Technology investment 650. For further details, refer to Annex B: Digital, Data and Technology, which is published as a separate document.



# **Performance Objective:** Operating the Electricity System

ELECTRICITY

NESO will transparently operate a safe, reliable and efficient system throughout BP3, while continuing to transform the capabilities of our people, processes and systems to enable secure zero-carbon operation of the system by the end of 2025.

Decarbonisation, decentralisation and digitalisation are driving significant changes across our electricity network, transforming how we operate our electricity system both now and in the future. CP30 will further accelerate the need for low-carbon technologies to be integrated across the system, while also meeting changing market conditions and system characteristics driven by higher volumes of renewable generation. In 2025, the government will publish the outcome of REMA. We must develop a plan to transform how we operate a safe, secure and clean electricity system under the revised or enhanced arrangements following this review.

We will continue fulfilling our core function of balancing the electricity transmission system in a safe, resilient and efficient way during the BP3 period, while also transitioning to a secure, clean and reliable power system. To achieve this, we must enhance our people, process and systems capabilities to ensure we make the right decisions using the best available data and forecasts. These capabilities will enable us to operate the system whenever the market provides a zero-carbon solution and will continue to evolve as zero-carbon operation becomes more frequent and sustained over time.

The benefits delivered by this Performance Objective will be reflected in balancing costs, dispatch efficiency and carbon efficiency, while maintaining a stable, secure and reliable system. This ensures that consumers continue to receive electricity whenever they need it. Challenging existing processes and ways of working will help achieve this at the lowest cost to consumers.

Our customers underpin the work we do, and we must improve industry coordination by enabling better access to markets, more effective control and management of the electricity system, and greater transparency for customers. During the BP3 period, we will engage with our customers to understand their needs and identify ways to improve collaboration. We will develop a plan for continuous customer engagement, helping us to enhance the customer experience and support customers in better understanding the challenges and opportunities of managing the real-time system.

#### Table 6: Summary of Performance Objective 'Operating the Electricity System' Success Measures



#### Success Measures

By the end of 2025, we will demonstrate our ability to operate the system carbon-free whenever electricity markets provide a zero-carbon solution. We will measure this through reporting against the Zero Carbon Operability Indicator (BP2: RRE IF) and the Carbon Intensity of NESO Actions (BP2: RRE IG).

We will further develop and implement initiatives from our Balancing Cost Strategy to demonstrate cost efficiency through the Balancing Cost metric (BP2: Metric 1A). In consultation with industry, we will publish an updated Balancing Cost Strategy by June 2025.

## Table 6: Summary of Performance Objective 'Operating the Electricity System' Success Measures (continued)



#### 🕎 Success Measures

In December 2024, we published a skip rate methodology and delivery plan alongside a continuous skip rate measure on our data portal. We will develop this further into a detailed delivery programme and roadmap ahead of BP3, aligning it with our dispatch strategy. During BP3, we will deliver all commitments within our delivery programme and roadmap to reduce skip rates, providing transparency by continuing to report against the skip rate measure.

In BP3, we will deliver new products and capabilities in accordance with our Balancing Programme, following our industry-agreed roadmap.

Continuous improvement in forecasting is vital to ensuring we make informed decisions across all timescales. We will continue to publish our performance in this area through the Demand Forecasting metric (BP2: Metric 1B) and Wind Generation Forecasting metric (BP2: Metric 1C).

Enhanced forecasting capability is key to enabling secure and economic balancing decisions through the energy transition. We will develop and publish our *Forecasting Strategy* for consultation by October 2025, followed by a corresponding delivery plan by February 2026. We will implement any initiatives specified in our delivery plan that are due within BP3.

As the electricity system in Great Britain evolves, we will transform the capabilities of our people, processes and systems and continue to deliver economic and efficient real-time operation of the electricity transmission system, as measured through the Security of Supply reporting evidence (BP2: RRE 11).

Share Platform for Energy Forecasting (PEF) and skip rate data, as well as issuing data associated with other strategic platform energy releases.

During this period of transformation across the industry, we will measure how our electricity system operations evolve by demonstrating new capabilities in real-time operations, detailed planning for significant change programmes – including REMA and CP30 – and improved engagement with our customers. This will be supported by specific reporting carried forward from BP2, such as balancing costs, dispatch efficiency and zero-carbon operation.

The Success Measures outlined in this narrative reflect our focus for the BP3 period across zero-carbon operations, enhanced decision-making capabilities, and continued economic and efficient real-time operation of the electricity transmission system during this period of industry transformation.

## **Zero-carbon Operations**

Great Britain continues to be one of the fastest decarbonising electricity systems in the world. Through our plans to deliver new services, policies and processes, we are moving closer to our ambition of delivering periods of 100% zero-carbon operation.

This transformation represents a fundamental change in how our system is operated, reducing reliance on services from traditional carbon-emitting sources. We have consistently surpassed records for maximum zero-carbon operation, setting a record of 95% of generation from zero-carbon sources in 2024.

In 2019, we set out an ambition to be able to operate the system at zero-carbon by 2025. Throughout 2024, we continued delivering projects in our zero-carbon 2025 programme, including further reducing the minimum inertia requirement, with more projects planned for delivery during BP3 and beyond, as we prepare for zero-carbon operation.

## ✓ We will demonstrate our ability to operate the system carbon-free

During BP3, we will have the capability to operate a zero-carbon system for at least one settlement period. Initially, our capability to manage this generation mix will be limited by wider system conditions. However, as we continue our programme of work, both the frequency and duration of time we can operate at zero-carbon will increase, supporting the transition of the electricity system towards a zero-carbon future. Whether we operate at zero-carbon depends on the markets providing the right mix of zero-carbon generation.

We will demonstrate this through BP3 by reporting on:

- Maximum zero-carbon generation percentage by month: This data will provide
  transparency on the zero-carbon generation supplied by the markets and the percentage
  of zero-carbon operation achieved through our operational actions. To support this
  information, we will also provide the minimum number of carbon-generating assets
  utilised on the system, collectively demonstrating our increasing capability to operate a
  zero-carbon system.
- Carbon intensity of NESO's operational actions: This will show the difference between the carbon intensity of the combined Final Physical Notification (FPN) of machines in the Balancing Mechanism (BM) and the equivalent profile after balancing actions are applied, demonstrating progress towards reducing reliance on services from traditional carbonemitting sources.

## By adopting a digital-first approach, we will empower our people to make the right decisions across all timeframes

The decisions we make while operating the system directly impact our customers, the security and stability of the system, carbon efficiency and costs for the end consumer. The BP3 period will be pivotal in transforming the way we operate to ensure we make informed decisions across all timescales. To achieve this, we must enhance the capabilities of our people, processes and systems to align with the evolving operating environment.

The Success Measures outlined in this section focus on strengthening our capabilities to support effective decision-making across all timeframes.

## Deliver new initiatives from the balancing costs strategy and enhance our understanding and accessibility of balancing costs

The Balancing Costs Strategy and Balancing Costs Portfolio have served as invaluable tools to provide a view of the balancing costs landscape and prioritising the most important things NESO and the industry can do to reduce balancing costs.

Our *Balancing Costs Strategy* and *Portfolio* outline a comprehensive range of initiatives to minimise balancing costs across four areas:

- Designing and procuring new services and markets: We aim to increase competition
  and optimise pricing through reforms to our response and reserve markets, along with our
  Network Service Procurement initiatives.
- Optimising network design in Great Britain and managing delivery: Savings will be achieved by implementing initiatives to address thermal, stability and voltage constraints, enhancing network efficiency.
- Exploring innovative cost-reductive solutions: This includes our Causal Analysis of Balancing Costs in collaboration with Imperial College London. This analysis aims to quantify the impact of market and system features such as wholesale prices, fuel mix, interconnector flow and outages on balancing costs and assess the likelihood that changes in these features will increase or decrease costs. It will inform our balancing costs strategy and provide advance indications of the probability of high-cost days.
- **Enhancing control room products and processes:** With further IT releases scheduled in 2025, our goal is to improve forecasting and control room capabilities as part of our Balancing Programme.

We will continue implementing our *Balancing Costs Strategy* to lower costs by delivering the initiatives outlined in the *Balancing Costs Portfolio*. An updated strategy will be introduced in June 2025 to incorporate revised views and approaches for addressing balancing costs at NESO.

#### We will further develop Costs Savings Trackers

Understanding the impact of our initiatives on balancing costs is an important part of NESO's approach to reducing costs. To ensure we are maximising the value provided by our initiatives, we will continue to adapt and optimise them.

Throughout BP3, we will further develop our Costs Savings Trackers. These trackers allow us to identify the conditions that yield the greatest and least savings for specific initiatives. This enables us to optimise initiatives to better align with favourable conditions.

#### We will provide comprehensive and expert reporting on Balancing Costs

NESO has made significant progress during BP2 in promoting balancing cost analyses and making insights accessible through our reports. The <u>Balancing costs</u> webpage serves as a central hub for this information and will continue to host these publications.

Throughout BP3, we will:

- provide expert analysis on the dynamics of balancing costs
- Highlight conditions that lead to specific cost outcomes
- Share insights on how the industry can address balancing costs challenges

Key reports include:

- the yearly Balancing Costs Review, offering detailed analysis of the cost landscape to date
- the *Balancing Costs Outlook*, providing commentary on the effectiveness of initiatives and reforms in addressing potential future cost issues

#### We will improve the accessibility and understanding of Balancing Cost data

Balancing cost data and its categorisation are inherently complex due to the dynamic nature of decisions required to balance the power system. Over BP3, NESO will:

- improve access to balancing cost data
- provide clear guidance to help interpret cost data, enabling stakeholders to better understand decision-making processes and cost outcomes

## Reduce skip rates in line with skip rate programme

NESO has an obligation to operate a safe, reliable and efficient system. In consultation with industry, we have developed the All Balancing Mechanism (All BM) skip rate and Post System Action (PSA) skip rate as measures of dispatch efficiency and to demonstrate continuous improvement in our decision-making processes.

In December 2024, we published a delivery programme and skip rate methodology outlining how we are defining, measuring and addressing skips. Ahead of BP3, we will further develop this into a detailed delivery programme and roadmap, aligning it with our dispatch strategy.

Working closely with our industry partners, during the BP3 period, we will:

- hold regular engagement sessions with customers to discuss dispatch efficiency and continuous improvement activities
- evolve the skip rate methodology and establish a baseline for skip rate measures
- expand and demonstrate delivery against the skip rate delivery programme and roadmap

## Deliver new products and capabilities in accordance with the Balancing Programme

Our ability to fully operate a zero-carbon system will require a complete transformation of our balancing capabilities. Our Balancing Programme was established to develop the balancing capabilities that our control centre needs for the future. During BP2, we launched the Open Balancing Platform (OBP), the Platform for Energy Forecasting, and have continued to introduce functionality and improvements in our existing systems as we transition from current to future balancing capabilities. In BP3, we will continue to transform our balancing capabilities, delivering on our industry-agreed roadmap presented in our Balancing Programme Event in November 2024.

The Balancing Programme's aims will deliver security of supply though a highly resilient OBP with reduced market downtime. It also aims to make improvements in economic dispatch, operational efficiency and employee wellbeing through automation and removal of manual workarounds. It will enable a level playing field for market participants, allowing small, flexible, limited-duration, and low-carbon assets to participate, helping pave the way to clean power operation and a decarbonised future.

A well-managed, transparent approach in migration and improved transparency will build trust with our customers, driving customer centricity. Through product development, we will improve situational awareness, enhancing security of supply, reducing uncertainty and minimising operational risk. This will collectively improve dispatch efficiency and help lower balancing costs. We will maintain our current Balancing Mechanism systems while continuing the transition to OBP.

During BP3, we expect to deliver several key IT investments, in line with our industry-agreed roadmap.

#### **Enhanced balancing capability**

We will deploy a new national optimiser on the OBP to improve the efficiency and effectiveness of the balancing process.

Electronic Data Transfer will be made available within the OBP, enabling efficient data exchange.

Functionality will also be delivered to allow the retirement of the Ancillary Services Dispatch Platform (ASDP) and the Contingency Logging System (CLOGS), which will streamline operations and improve system efficiency.

#### **Real-time prediction**

We will implement a phased approach to enhance real-time prediction capabilities, leading to the introduction of a new real-time prediction system by March 2026. This step-by-step process involves the release of enhanced functionality over time, improving the accuracy and reliability of real-time predictions. The goal is to provide more precise and timely information on electricity system conditions, enabling proactive management and efficient decision-making.

#### Forecasting enhancements

We will explore new models and tools to enhance forecasting diagnostics and accuracy by incorporating additional datasets, including market and consumer data. Regional and MVar forecasting improvements are also being considered to support constraint studies and optimise system operations.

We will enhance control room situational awareness by providing real-time forecasting visualisations and profiles. This will enable better decision-making and response to changing system conditions. Furthermore, we plan to replace legacy end-user developed applications with new, modern Azure-based tools, ensuring efficient and reliable forecasting operations. As part of this effort, we will have a strategy to retire legacy Energy Forecasting System (EFS) by March 2026.

#### **Balancing asset health**

We will maintain the existing balancing services and systems until the migration to the OBP is complete. This will ensure the continued provision of reliable and efficient balancing services, supporting the stability and security of the electricity system throughout the migration process.

#### **Ancillary services dispatch**

By consolidating the Ancillary Services Dispatch Platform (ASDP) functionality to the OBP, we will streamline operations and optimise the dispatch of ancillary services, which are crucial for maintaining the stability of the electricity system. During BP3, we will begin the retirement process of ASDP, ensuring a smooth transition and efficient operation of the OBP. This initiative represents a significant step towards enhancing the efficiency and reliability of ancillary services dispatch, ultimately benefiting the overall reliability of the electricity system.

## ✓ Demonstrate continuous improvement in our forecasting capability

Enhanced forecasting capability, achieved through improvements to existing forecasts and the development of new ones, is vital for ensuring accurate decision-making across all timescales.

To demonstrate continuous improvement in our forecasting, we will maintain the Demand Forecasting Metric (BP2: Metric 1B) and Wind Generation Forecasting Metric (BP2: Metric 1C).

During the BP3 period, we will:

- consult with internal and external stakeholders on NESO forecasting requirements to meet zero-carbon operation by 2030 and beyond
- develop and publish a forecasting strategy for consultation in October 2025
- publish a delivery plan in February 2026 to achieve this strategy, maximising the use of technology and digitalisation to deliver clear benefits to customers
- implement items in the delivery plan within the BP3 timescales, along with other tactical enhancements to drive short-term improvements in forecasting capability

# As we support the energy transition, we will continue to transform the capabilities our people, processes and systems to deliver economic and efficient real-time operation of the electricity transmission system

As the electricity system in Great Britain evolves at pace, we are transforming our operational capabilities through specific, targeted workstreams. These include a future control strategy focusing on people capabilities and significant technology programmes, such as Network Control and Balancing, and delivering an IT system transformation. These workstreams will help drive efficiency by optimising the network to minimise balancing costs and maximise system access for network reinforcement and improvement.

When the outcomes of significant change programmes, such as REMA and CP30, are known, we will develop a plan to transform how we operate the system. This will align with these programmes and ensure we can maintain a safe, economic and clean electricity system.

## Continue to deliver economic and efficient real-time operation of the electricity transmission system

We will continue to optimise the operation of the transmission system to ensure it remains economically viable and efficient. This includes:

- · managing the flow of electricity
- · balancing supply and demand
- · maintaining grid stability

Efficient operation minimises costs and maximises the utilisation of available resources.

In addition to economic efficiency, we are committed to ensuring the reliable and uninterrupted delivery of electricity. This involves:

- maintaining system stability and resilience
- preventing and mitigating disruptions
- · responding to emergencies
- adhering to regulatory standards to ensure the security and quality of supply

To demonstrate this, we will continue to publish the Security of Supply Regularly Reported Evidence (RRE 11).

## ✓ Share PEF forecasting and skip rate data

We will share Platform for Energy Forecasting (PEF) and skip rate data, alongside issuing data associated with other strategic platform energy releases. Additionally, we are investing in locational and geospatial intelligence, incorporating spatial and environmental data modelling to enhance transparency and provide greater value to the industry and customers.



## Performance Objective: Connections Reform

NESO will drive delivery and implementation of a reformed connections process that enables projects needed for 2030 and beyond to connect in a timely and coordinated manner.



There is an urgent need to reform Great Britain's electricity connection process. Many project developers are currently waiting too long to connect to the network, hindering progress towards delivering *Clean Power 2030* and, ultimately, net zero. Additionally, some projects in the queue are holding capacity without progressing, significantly delaying the timely connection of other projects.

Reforming the connection process represents a critical opportunity for Great Britain to drive growth and achieve clean power targets. We propose aligning the connections queue to technologies that align with strategic goals. Initially, this will follow the CP30 pathways (up to 2035) and, in the longer term, the SSEP, while also supporting the connection of demand projects critical to decarbonisation and wider industrial strategy.

Aligning the connections queue to projects that contribute efficiently to zero-carbon operation will ensure faster, more coordinated and efficient connections. This approach will align connections with Great Britain's future strategic energy needs, reduce costs to consumers by connecting only the energy needed and ensure the system operates efficiently. We currently estimate that the reformed connections queue will be reduced from approximately 750 GW to between 200 GW and 250 GW by the end of 2025. This will provide the capacity needed to meet Clean Power by 2030 and the Sixth Carbon Budget targets by 2035.

This Performance Objective supports delivery of net zero by enabling zero-carbon projects to connect more quickly and efficiently. It also helps lower costs by aligning connections with strategic energy needs and providing developers with increased certainty about their connections. This should reduce unnecessary costs for consumers, as they won't pay for unneeded connections, and minimises risks for developers, lowering the costs passed on to consumers.

These benefits will begin to materialise during the BP3 period, as the reforms apply to projects in the existing connection queue. However, the benefits will also extend into the medium and long term as the new reforms continue to support the transition to zero-carbon.

#### Table 7: Summary of Performance Objective 'Connections Reform' Success Measures



#### Success Measures

100% of the projects that enter the Gate 2 to Whole Queue process will have connection offers by the end of December 2025.

During the connection reform process, achieve effective customer engagement through transparent and clear communication.

Provide enhanced support for customers via the Connections Reform Hub, hosting industry webinars, and using a range of other communication and outreach channels.

By March 2026 provide revised connection offers aligned with the new methodologies approved by Ofgem.

These offers will reflect the technological and locational mix required to deliver a queue of projects capable of supporting the government's *Clean Power 2030 Action Plan*.

#### Table 7: Summary of Performance Objective 'Connections Reform' Success Measures (continued)



#### Success Measures

By March 2026 design an approach to accelerate strategic demand projects leading to improved connection times. To include identifying and consulting on amendments to connection methodologies to support strategic demand identified by government.

Invest further into a fully customer-centric Connections Portal.

## ✓ Gate 2 offers for those eligible in the queue

Connections Reform will introduce Gate 1 and Gate 2 stages into the process for both new and existing applicants. To receive a confirmed contractual connection date, applicants must meet specific criteria to progress beyond Gate 2. They will need to demonstrate that they meet 'readiness' criteria and are aligned strategically with the technology mix required for Great Britain.

Projects meeting the criteria will be able to seek to retain or accelerate their existing connection dates, where capacity is released. Projects that do not meet the criteria will receive a Gate 1 offer, which does not include a firm contracted date.

Reordering and reducing the queue will involve accurately issuing offers to the entire customer base in the space of a few months. This is extremely challenging in complexity and scale and requires NESO to work with Ofgem and with networks to transform systems and processes radically on a tight critical path without contingency.

We plan to issue connection offers to all in-scope projects by the end of December 2025. However, due to reliance on third parties, such as the TOs and (I)DNOs, to meet this target, there is a possibility that some offers may not be completed until the end of the financial year. This will include indicative connection dates for Gate 1 applicants and confirmed offers for those who meet the Gate 2 criteria in the submission window in May 2025.

# ✓ Effective engagement and transparency through connections reform process

As we reorder and reduce the queue and process connections offers we will engage customers (networks, developers and investors) in the process. We will work with networks in the Connections Reform Hub on a number of workstreams to ensure communication with developers, investors and the projects in the queue is transparent, clear and timely.

We will use webinars, our website and public outreach to keep customers and stakeholders informed of the process of reform and to provide assistance to them to maintain confidence.

Our work in 2025 will lay the foundations for improvements to the quality and customer service of the enduring connections process.

We are committed to consolidating all relevant data into a single platform, aligning with work on the Connections 360 platform to deliver against the actions required to meet the Connections Action Plan (CAP). This consolidation will improve data management and accessibility, giving customers a comprehensive view of the connections process.



We are working closely with networks and industry to develop a reformed queue mechanism that will create a more co-ordinated and efficient process for connections design. This will ensure viable, net zero-aligned projects can connect more quickly. The reformed process will align the connections process more closely with strategic planning, offering developers certainty that ready projects, needed to meet clean power, net zero goals and GB's demand requirements, will be prioritised and connected efficiently.

Reforming the connections process offers significant benefits. We expect to reduce the current connections queue to about a third of its current size and accelerate connection dates for viable projects aligned with CP30. Aligning the connections queue to strategic energy plans will support efficient and economic anticipatory network investment and should also help reduce costs for consumers, encourage innovation and promote economic growth.

Our consultations last year on the required code modification (TMO4+) and the proposed new methodologies provide further details, including alternative options considered and the specific benefits of Connections Reform.

Subject to Ofgem's decision, expected before the start of BP3, we will work with networks and industry to implement the reformed connections process resulting from the code modifications and the new methodologies.

## Implement approach and accelerate demand connections

Our work on Connections Reform has highlighted the need to consider a different approach to demand connections compared to generation connections, given the range of benefits that demand projects could bring to GB, for example the need for electricity connections to support the decarbonisation of wider industrial processes. During the BP3 period, we will collaborate with Ofgem and the government to develop a medium-term strategy for demand connections, aligned with future strategic energy plans. This will ensure critical infrastructure can be built and operationalised promptly, supporting the growth of Great Britain's economy.

During BP3, we will seek to implement an agreed approach to improve connections dates for demand connections compared to what was achievable before reform.

## ✓ Invest in a fully customer-centric Connections Portal

Our continued investment in the Connections Platform and Connections 360 will support the delivery of Connections Reform during BP3. These platforms will ensure that customers can connect to the energy network promptly through a fully open, transparent and customer-centric approach. Key features include:

- real-time updates, tracking and visualisation
- integration of industry and NESO data to provide informed outcomes

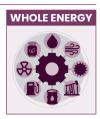
This initiative will enable governed, high-quality data to enhance and accelerate stakeholder and industry connections processes. The portal will be fully integrated with our Data and Analytics Platform (DAP).

We are already sharing data with the industry through Connections 360, and this will increase during BP3 as we collaborate with DNOs and TOs to optimise cross-sharing and align CP30 industry and stakeholder data tracking.



## **Performance Objective:** Fit-for-Purpose Markets

NESO will support the government in making informed decisions on policy and market reform across the whole system. We will also continue to reform our own markets to level the playing field and deliver value to consumers.



We are committed to ensuring that consumers have access to reliable and affordable energy while also promoting cleaner, more sustainable energy sources. Through market reforms developed in ongoing collaboration with our stakeholders, we aim to create energy markets that are fit for purpose responding to the evolving needs of the whole energy system and aligning with government policies for a low-carbon future.

We will contribute to lower costs by delivering markets with increased access and competition while significantly reducing energy and infrastructure costs. Our performance against these metrics supports net zero by creating market arrangements that accelerate decarbonisation, ensuring that we can use low-carbon assets to operate the system. This approach enables us to respond to current and future low-carbon energy policies while maintaining our ability to operate the system securely and reliably.

In addition to reforming markets, we will improve industry coordination by enhancing industry codes, regulations and frameworks to facilitate the energy transition efficiently. Improved coordination will also result from setting a strategic direction and priorities for the gas market and the development of a whole energy market strategy.

Benefits will continue to be realised during the BP3 period as new products are delivered and reforms progress. These benefits will extend into the medium and long term as increased competition and access to markets drive an efficient transition to a zero-carbon energy system. The gas and whole energy system strategies will also deliver significant benefits over longer timeframes.

#### Table 8: Summary of Performance Objective 'Fit-for-Purpose Markets' Success Measures



#### 🗾 Success Measures

Report the volume of services procured competitively. The proposed targets for BP3 are:

- Constraints: 100%
- Frequency Response & Reserve: 90%
- Reactive: 5%

Deliver quality analysis required for the REMA programme to reach a successful conclusion and move into the implementation phase. We will evidence engagement with a broad range of customers and clearly demonstrate how their feedback has been fully considered in our work.

Deliver against the Markets Roadmap to be published in April 2025.

- Improved capability to manage frequency, and a level playing field for response providers.
- New and improved procurement processes for ancillary services, such as stability and reactive power.
- Deliver the actions needed to support the objectives of our *Enabling Demand Side Flexibility* report, including the *Routes to Market Review* (as per the planned timeline).

## Table 8: Summary of Performance Objective 'Fit-for-Purpose Markets' Success Measures (continued)



#### Success Measures

Publish the first draft *Gas Future Markets Plan* for consultation and review. We will also lead and set the direction of the Future of Gas Steering Group and Forums which will support in providing a review done with effective industry engagement.

Engage with decision-makers and customers across energy vectors to move towards greater whole energy market coordination, collaborating to assess and prioritise our activities. Evidence engagement with a broad range of customers and clearly demonstrate how their feedback has been fully considered in our work to develop proposals in areas where there is benefit from improved whole energy market design coordination.

As Code Administrator for the CUSC, Grid Code, STC and SQSS, NESO will ensure that these codes are administered in an independent, fair manner in accordance with CaCOP standards. Positive feedback from our Independent Panel Chair, Panel Members and industry in relation to our performance as Code Administrator.

First Early Competition pre-qualification launched by the end of 2025 and Invitation to Tender launched by the end of March 2026. Deadlines met with sufficient market interest to run an effective procurement event.

Implement Capacity Market and Contracts for Difference regimes for CP30 and operate the markets effectively.

- Implement system and process guidance changes required to enable CP30 and wider policy objectives in line with DESNZ and Ofgem consultation decisions ready for the CM and CfD rounds opening summer 2025.
- Provide support for CM and CfD customers enabling participation in the schemes through maintaining guidance, offering points of contact and in running industry webinars.
- Deliver continuous improvements to CM and CfD systems and processes against prioritised customer enhancements.

Progress work to enable the realisation of the demand side flexibility required to achieve CP30, including through NESO markets.

## ✓ Volume of services procured competitively

Electricity markets are growing and diversifying rapidly. With advancing technologies and new business models emerging, it is vital to create an environment where all market participants can compete on a level playing field to provide solutions to network challenges.

To promote competition effectively, we need to ensure that the right frameworks and platforms are in place. Opening markets will encourage innovation and increase competition, which will translate into lower costs which should flow through to consumer bills. We propose to continue using competitive procurement as our key performance indicator for this Performance Objective, as in BP2. However, unlike BP2, the metric now measures competitive procurement rather than non-competitive procurement.

The benchmarks for this metric cover the following categories: frequency response and reserve, reactive power and constraints. These categories are grouped by service area rather than individual markets to provide a holistic view of comparable products and markets. They include all regularly held markets open to prequalified providers and any procurement involving an open and competitive tendering process.

This approach reflects our ongoing commitment to transitioning as much of our balancing service procurement activity as possible into competitive markets, as outlined in the Markets Roadmap. By ensuring that the optimal volume of balancing services is procured through the lowest-cost methods, we aim to deliver maximum value to consumers.

We recognise that the target for our reactive markets deliverable is not in line with other areas. Although reform of reactive markets is progressing within the 12-month BP3 timeframe, the reactive procurement metric remains at 5%, aligned to 95% non-competitive in BP2. This reflects our assessment that significant changes to this metric are unlikely within this period, however, where improvements have been achieved, we have adjusted our targets accordingly.

The metric for competitive procurement of constraints reflects the progress made in BP2, where performance reached 100%. Similarly, for response and reserve services, planned improvements have led to a revised target of 90% competitively procured for these services.

#### Market Reform

#### Review of electricity market arrangements (REMA)

The review of electricity market arrangements (REMA), led by government, aims to identify the reforms needed to transition to a decarbonised, cost-effective and secure electricity system. Its objective is to evaluate existing market arrangements and pinpoint areas for improvement or modification to align with decarbonisation, cost efficiency and system security goals. REMA covers all electricity markets, including wholesale and balancing markets, as well as investment policy such as the Contracts for Difference (CfD) scheme and Capacity Market.

We are leading the workstream on dispatch and balancing, where we are concluding our options analysis and will present our recommendation based on our findings. DESNZ plans to complete the REMA policy development phase by mid-2025.

We will continue to engage with industry on these models and continue to evaluate how they interact with other REMA decisions, such as potential changes to access rights, network charging and the CfD scheme.

Our work will support the government in reaching a final decision in 2025 as to what market changes are needed. When that decision is made, it may trigger the beginning of transformational changes to the electricity market in Great Britain, which will require us to quickly ramp up our capability to begin implementation. At this stage, the REMA decisions remain too uncertain to plan or budget for, so we will wait until a decision is made in 2025 before sanctioning the necessary resources and budget for the next phase.

#### **Markets Roadmap**

Reforming our ancillary service and balancing markets is crucial to delivering a clean, secure and operable electricity system by 2030. These reforms will not only support the transition to a cleaner energy system but also help lower costs for consumers by improving market efficiency, accessibility and liquidity.

We recognise the importance of ancillary services, flexibility and balancing markets as significant revenue streams for market participants. It is therefore essential for us to provide a clear view of our requirements and market developments.

The NESO <u>Markets Roadmap</u> serves as a guiding document, outlining our market objectives, principles and plans for market reform. By explaining the rationale behind new market initiatives, we will give market participants the information and confidence needed to actively engage in these markets. This transparency and clarity helps create a collaborative environment where all customers can influence the future of our markets.

The *Markets Roadmap* outlines how our market reforms align with the goals of operating a zero-carbon electricity system, as set out in our *Operability Strategy Report*, and improving market efficiency. It provides our vision for response, reserve, thermal, voltage, stability, restoration markets and the Balancing Mechanism.

To deliver these reforms, we will:

- improve capability to manage frequency and ensure a level playing field for response providers
- implement improved procurement processes for ancillary services, such as stability and reactive power
- improve access for demand-side flexibility to our markets by implementing the actions outlined in our *Enabling Demand-Side Flexibility* report and our *Routes to Market Review*, as required over the next year

## ✓ Gas Future Markets Plan and future of gas steering group and forums

Publishing and delivering the *Gas Future Markets Plan* will outline the strategic direction and priorities for the gas market, accounting for the evolving energy landscape. This plan will prioritise projects needed for a strategic shift towards whole system thinking, including methane, bio-methane, hydrogen and carbon capture.

We can drive the transformation towards whole energy thinking by coordinating engagement with gas market customers and leading the development and implementation of the gas market strategy. Through collaborative forums, strategic planning, and independent publication of the *Gas Future Markets Plan*, we can contribute to the evolution of the gas market and its alignment with the broader goals of a sustainable and decarbonised whole energy system.

**Coordinate engagement with gas market customers and drive action on gas market strategy:** This involves actively engaging with gas market customers and taking actions to advance the gas market strategy.

- Lead and establish the future of gas steering group and forums: We will set a new direction for these initiatives. For the first time, we will also independently publish and deliver the Gas Future Markets Plan, prioritising projects that support a strategic shift towards whole system thinking.
- **Provide guidance on optimising and designing markets for gas, hydrogen and electricity:** This includes identifying opportunities to enhance market efficiency and effectiveness in these areas, ensuring a coordinated and integrated approach to the whole energy system.

We will actively coordinate engagement with gas market customers, including industry participants and Ofgem. This includes leading and setting the direction of the Future of Gas Steering Group and Forums, facilitating discussions and gathering input to drive action on the gas market strategy. We will also take a leadership role by setting priorities and identifying projects that drive a strategic shift towards whole system thinking.

Our focus will be on aligning the gas market strategy with the broader whole energy market strategy and promoting the transition to a sustainable, decarbonised energy system.

The Future of Gas Steering Group and Forums platforms will provide opportunities for collaborative discussions, knowledge sharing and customer engagement on the future of the gas market.

## Whole Energy Market Strategy

The Whole Energy Market Strategy will develop an independent view of cross-vector market interactions. The primary focus is to identify and recommend solutions to address challenges, conflicts, and inefficiencies in the energy markets, with the ultimate goal of facilitating the transition to a net zero energy system.

Phase I was dedicated to developing the case for change. This phase included an analysis of the market landscape in Great Britain and a review of international case studies to establish a framework guiding the next phases of work. The framework outlines priorities and areas of focus, serving as a roadmap for more detailed analysis and strategy development.

Subsequent phases will involve more detailed analysis on the priorities identified in Phase 1. The case for change will include examining specific market interactions, regulatory frameworks, policy considerations and technology integration, among other factors to develop targeted strategies and solutions addressing identified challenges and inefficiencies in the energy markets. The Whole Energy Market Strategy will engage on the outputs of its Case for Change to gain industry feedback on key focus areas that could benefit from greater market coordination.

## ✓ Industry codes and frameworks

As part of our commitment to future-proofing industry codes, regulations and frameworks, we will continue to be a technical expert and code administrator. This will involve actively monitoring and analysing regulatory developments and industry codes to identify opportunities for future-proofing by staying informed about emerging trends, policy changes and technological advancements impacting the energy industry. This also involves incorporating mechanisms for iterative improvements, accommodating technological advancements and enabling customer-driven change to ensure our frameworks can evolve in response to changing needs and circumstances.

Through regulatory monitoring, customer engagement, flexibility, innovation and continuous improvement, we can ensure that the regulatory environment supports customer-driven transformation and enables the energy industry to adapt to evolving needs and aspirations.

- **Connection-related codes changes:** We will deliver all necessary changes to the connection-related codes. This includes ensuring they are up to date, aligned with industry needs and capable of accommodating future changes in the energy landscape.
- **Strategic alignment with Ofgem:** We will work closely with Ofgem to ensure strategic alignment on framework changes. This will ensure that our efforts meet regulatory requirements and contribute to the overall objectives of the energy industry.

• **Transmission charging reform:** We are committed to delivering the transmission charging reform. This involves reviewing and updating existing charging mechanisms to ensure fairness, efficiency and transparency in the transmission network.

By actively seeking and incorporating industry feedback, we can ensure that our codes changes process is well-received and aligns with the industry's needs and expectations.

The benefits of the codes changes process will be demonstrated through positive industry feedback. We will actively engage with customers to gather feedback on the codes changes we implement. This input will help us assess the effectiveness and impact of the changes and make any necessary adjustments.

## First tender event commenced for a competitively appointed transmission licence

The award of a competitively appointed transmission licence will be through a procurement process, where a preferred bidder is granted a licence to build assets typically constructed by transmission owners (TOs). The successful competitively appointed transmission owner (CATO) will be licensed to construct, own and maintain new onshore electricity transmission assets in Great Britain. Our role in this procurement event, often referred to as early competition, is to identify suitable projects and run the tender event.

Ofgem has consulted on the first project considered viable for competition and is expected to confirm whether there is a viable project before the end of the BP2 period. Subject to the outcome of the consultation, during BP3 we expect to move into the pre- tender market engagement phase, followed by the pre-qualification of bidders by the end of 2025, with Invitations to Tender sent to qualified bidders by the end of March 2026. For further details, visit Early competition on our website.

## Implement Capacity Market and Contracts for Difference regimes for Clean Power 2030 and operate the markets effectively

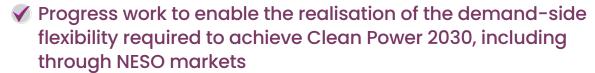
As the Electricity Market Reform Delivery Body, we will continue to administer the Capacity Market (CM) and Contracts for Difference (CfD) schemes on behalf of DESNZ and Ofgem, in line with the Rules and Regulations.

In our role as a trusted advisor to the government, we will support DESNZ and other delivery partners to ensure the CM and CfD schemes remain fit for purpose and help accelerate progress toward clean power by 2030. This will be achieved by increasing participation and competition in these regimes. Additionally, we will provide expert advice on scheme design and implement regulatory and policy changes in our CM and CfD portals and processes.

Where opportunities arise to improve the Rules by simplifying and reducing ambiguity, we will raise them with DESNZ or the industry-led CM Advisory Group.

Following the successful launch of our new CM Portal for the 2025 auction round, we will continue collaborating with customers to identify, prioritise and implement enhancements to improve their experience. We will also conduct a review to explore alternative delivery options for the CfD Portal to improve user experience.

We will work with DESNZ and Ofgem to shape and implement policy improvements in time for the Contracts for Difference Allocation Round (AR7) in June 2025 and the Capacity Market 2025/26 round.



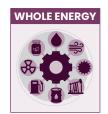
Market design must ensure that flexibility is sufficiently rewarded through markets that are open and accessible. Demand-side flexibility plays a crucial role in operating the electricity system. Therefore, we must ensure that demand-side flexibility can compete effectively in markets where it meets system operability needs.

We will publish our *Routes to Market Review for Demand-Side Flexibility* report during BP3, which will expand on our commitments.

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# **Performance Objective:** Secure and Resilient Energy Systems



NESO will improve whole energy system emergency preparedness and resilience. We will ensure the necessary capabilities and requirements are in place and facilitate industry readiness to meet the Electricity System Restoration Standard.

A resilient and secure energy system is the foundation of our way of life, supporting economic stability, and facilitating the transition to a sustainable future. Great Britain requires reliable energy to run essential services, support economic growth, protect the vulnerable and minimise disruption.

While the UK has one of the most reliable systems in the world, technology continues to evolve at a rapid pace and the threat of geopolitical uncertainty remains ever present. Russia's illegal invasion of Ukraine in 2022 and its effects on the energy supply chains was a stark reminder of the need to maintain a diverse and resilient energy system. During the BP3 period, we will continue identifying emerging threats and potential disruptions before they materialise.

The introduction of the Resilience and Emergency Management role for NESO formalises our whole-energy remit, providing a whole system perspective on resilience and how it interacts with other critical functions. We will assess and enhance the resilience and security of energy networks by understanding current risks, identifying future risks and addressing known threats and vulnerabilities. By identifying opportunities for improvement and learning from our experiences, we can put mitigation plans in place for the future.

For clarification, the Resilience and Emergency Management directorate continues to grow its capacity and capability and will mature while simultaneously delivering tangible improvements. It is too early to define all the deliverables and milestones, as many will extend beyond the BP3 timescales.

We prioritise energy security of supply across different time horizons, ranging from next day, to next season, to next decade. This ensures a comprehensive approach to maintaining a secure and reliable energy system in Great Britain. We are utilising our modelling expertise to derive key insights that inform our advice to the government and Ofgem on security of supply. This includes providing recommendations on the electricity Capacity Market and sharing information with the industry through publications like our *Winter and Summer Outlook Reports*. Our collaborative work with the industry and other partners helps identify and recommend improvements.

We will also examine the energy industry's emergency response preparedness and submit our seasonal readiness reports to the government and the regulator. As part of our commitment to emergency response preparedness, we will conduct assessments to evaluate the readiness of industry customers. These assessments aim to enhance the industry's emergency response preparedness and ensure a coordinated, effective response in times of crisis.

This Performance Objective will deliver benefits by ensuring system security and reliability through maintaining and enhancing our approach to managing and mitigating risks to the electricity system, and expanding it to the whole energy system under our new NESO role. This will ensure that we, the industry and the government are prepared to mitigate present and future risks, providing consumers with an energy system they can depend on. Benefits will begin to materialise

during the BP3 period as we address potential challenges in the coming year and implement recommendations for resilience and restoration, delivering results in the medium and long term.

#### Table 9: Summary of Performance Objective 'Secure and Resilient Energy Systems' Success Measures



#### Success Measures

Deliver 95% of capability and arrangements to meet the Electricity System Restoration Standard to restore 100% of Great Britain's electricity demand within five days.

Produce the first Energy Resilience Assessment by 30 June 2025.

We will evidence engagement with a broad range of customers and clearly demonstrate how their feedback has been fully considered in our work.

Publish the electricity Summer and Winter Outlook Reports by 30 April 2025 and 31 October 2025.

We will evidence collaboration with industry partners, including National Gas, which prepares the Gas Winter Outlook, to ensure there are 'no surprises'.

Submit to DESNZ and Ofgem the Summer and Winter Readiness Reports by 30 April 2025 and 31 October 2025.

Publish the Gas Supply Security Report by 31 October 2025.

Recommendations of the *Gas Supply Security Report* will be evidence-based, considering the impact on the whole energy system, and will be adopted by the government and Ofgem.

Submit the Electricity Capacity Report to DESNZ by 1 June 2025.

Recommendations in the *Electricity Capacity Report* are adopted by government. DESNZ's Panel of Technical Experts remark positively on the quality of the modelling in their published report.

Deliver the programme to look at the longer-term resilience of our control operations.

## Deliver Electricity System Restoration Standard (ESRS) to restore 100% of Great Britain's electricity demand

The new ESRS requires NESO to have sufficient capability and arrangements in place to restore 100% of Great Britain's electricity demand within five days. This must also be implemented regionally, with an interim target of restoring 60% of regional demand within 24 hours. We must ensure full compliance with this Standard by no later than 31 December 2026.

To meet the deadline, we will need to review our restoration plans and procure additional restoration services from both traditional and non-traditional sources. Several actions are already underway to ensure compliance, including modifying regulatory frameworks to accommodate ESRS and revising the restoration strategy. This revised strategy will integrate top-down and bottom-up restoration approaches, providing a more holistic framework for system recovery.

The Restoration Decision Support Tool is designed to aid faster restoration times in line with customer expectations and licence obligations. This tool will include features to assess system conditions, prioritise restoration actions and optimise resource allocation during the restoration process. This marks an important milestone in improving restoration efficiency and effectiveness. It will provide valuable guidance and support to industry customers, enabling informed decision-making and streamlined restoration efforts.

By implementing the Restoration Decision Support Tool, we aim to improve the overall resilience and reliability of the energy system. The tool will facilitate faster and more efficient restoration, minimising downtime and disruptions for end consumers and ensuring the safety of personnel involved in the restoration process. The *Electricity System Restoration Assurance Framework* will be produced to demonstrate compliance with the Standard.

By March 2026, we will have 95% of the required capabilities and arrangements in place to meet the Standard, demonstrating a significant level of ambition to ensuring substantial progress toward full compliance by the December 2026 deadline. To demonstrate our progress against this target, we intend to measure the following deliverables:

- Successful implementation of Inter-Control Centre Communications (ICCP) links into three DNOs to enable new Distributed Restoration Zones (DRZs) by June 2025.
- Delivery of phase 1 of Restoration Decision Support Tool. Success is shown by demonstration of significant progress towards tool development.
- Improvement in industry resilience, by requiring CUSC parties to have 72 hours of resilience by 31 December 2026. Evidence of engagement is demonstrated by the completion of week 24 process submissions. The claims submission and assessment process for cost claims from CUSC parties is ready for use and is supported by positive feedback from users.
- Establishing a robust understanding of all generation reliability in a restoration scenario. Success is measured through completion of an assessment and validation with stakeholders.
- Recruitment and training of additional engineers to support additional and new restoration plans at transmission and distribution level.
- Implementation of Distribution Restoration Zones and plans, to facilitate distributed generation contributing as Restoration Contracts. The goal is to have four DRZs in place by 2026.
- Development of plans with distribution network operators (DNOs) to establish and ensure the most optimal block loading of demand to facilitate restoration

## Producing the first Energy Resilience Assessment

We will develop an *Energy Resilience Assessment* report that evaluates the resilience of the whole energy system. The first assessment will focus on risks to the electricity system and will be submitted by 30 June 2025. Subsequent reports will focus on risks to both the electricity and gas systems, proposing mitigation measures to help improve system resilience. It will be an all-source assessment of key risks, including those posed by severe weather, malicious threats and the energy transition to net zero. We will engage with a broad range of customers and clearly demonstrate how their feedback has been fully incorporated into our work.

## Publish the Summer and Winter Outlook Reports

We will deliver the *Winter and Summer Outlook Reports* providing reassurance that risks to reliable energy supplies are mitigated, enabling the industry to take proactive steps, such as ensuring asset readiness. The *Winter Outlook Report* will be delivered each autumn, with an *Early View* released in the summer, while the *Summer Outlook Report* will be delivered each spring. Publishing these reports regularly provides industry customers with valuable insights to support decision–making and ensure the efficient, reliable operation of the energy system throughout the year. This iterative approach allows us to adapt and respond effectively to evolving challenges, continuously improving emergency readiness.



### Submit the Winter and Summer Readiness Reports

We will assess whole-energy industry readiness and preparedness for the summer and winter periods in cooperation with electricity and gas customers. This process will provide insights and analysis on industry readiness and preparedness ahead of each season, enabling NESO, DESNZ and Ofgem to develop a shared understanding of challenges and support coordinated action. We will submit the Winter Readiness Report by 31 October and the Summer Readiness Report by 30 April.

## Publish the Gas Supply Security Report

We will develop the Gas Supply Security Report, which will provide an understanding of risks to reliable gas supplies and their impact on the whole energy system in the context of the transition to net zero. Working closely with customers, including National Gas Transmission, we will focus on the gas supply outlook and potential challenges over the next 5 to 10 years. The report will be published by 31 October 2025, with recommendations provided to the government and Ofgem. The report will assess potential risks to reliable gas supplies and include recommendations to mitigate their impact on the whole energy system. This will enhance resilience and ensure a smooth transition to a net zero future while adapting to the impacts of climate change. The recommendations of the Gas Supply Security Report are evidence-based, considering the impact on the whole energy system. If successful, these recommendations will be adopted by the government and Ofgem.

## Submit the Electricity Capacity Report to DESNZ

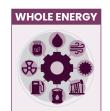
We will enhance our modelling capabilities and provide recommendations to support the electricity Capacity Market by publishing the Electricity Capacity Report. Submitted to DESNZ by 1 June each year, this report will provide continuous improvements in modelling to accurately reflect an evolving and increasingly complex system. It will also outline Capacity Market recommendations recognised and supported by DESNZ's Panel of Technical Experts, demonstrating how to better assess and mitigate risks and deliver value to consumers. Capacity Market remains the government's primary mechanism for ensuring security of supply and our modelling underpins recommendations to achieve this. If successful, recommendations in the Electricity Capacity Report will be adopted by the government, and we aim for DESNZ's Panel of Technical Experts to provide positive feedback on the quality of the modelling in their published report.

## Deliver the programme to look at the longer-term resilience of our control operations and the establishment of a new contingency control centre

Due to the sensitive nature of this programme, we will not be providing detailed information in the business plan for security reasons. However, we will work closely with Ofgem to ensure effective outcomes and efficient spending on this project.



# **Performance Objective:** Clean Power 2030 Implementation



NESO will play a pivotal role in securing clean power for Great Britain by 2030 on the path to net zero by 2050. Building on our 2024 advice to government on pathways to a clean, secure, operable and deliverable electricity system, we will move to action and implementation in line with the government's CP30 action plan.

In November 2024, we published our <u>Clean Power 2030</u> report, outlining what is required to deliver a clean, secure and operable electricity system by 2030. The plan considered possible clean energy generation mixes and their associated network, market and operability requirements, referred to as pathways. To create these pathways, we modelled different energy supply and demand mixes, and stress tested these against a range of scenarios, including varying weather patterns and demand peaks. The mixes included different levels of renewable deployment, flexibility and the accelerated delivery of newer low carbon technologies, for example CCUS.

The pathways met the security of supply standard, involved efficient dispatch, and met clean power in 2030 against the definition agreed with the UK government. We then used these different energy supply and demand mixes and analysed their associated networks, markets, and operability requirements. Many of the required electricity network and energy generation types to meet the government's 2030 target are already in development; however, significant acceleration in their rollout will be required. Therefore, we assessed what is needed to accelerate in-progress generation types and network projects, as well as the requirements for them to succeed.

Our live reforms to the grid connection process, known as TMO4+, continue to run in parallel to the development of this plan as the reforms provide the framework to reset the connections queue. Further detail on the connections specific work can be found in the Connections Reform Performance Objective on page 43.

Following the publication of NESO's advice, the government published its Clean Power Action Plan, informed by this advice and its own internal modelling. This established ranges of capacity deployment for necessary technologies and will form the basis of the government's strategy for reaching CP30. Ofgem has also indicated that it will use our advice to make key decisions on network investment. Following the publication of our advice, the next steps will involve detailed design work by those responsible for infrastructure delivery, market changes and regulatory decisions.

Ahead of the government's decision on the chosen pathway, we will ensure readiness for implementation.

This Performance Objective delivers benefits by supporting net zero through clear pathways that identify the actions required to deliver clean power by 2030, including how they interact with our other Performance Objectives.

#### Table 10: Summary of Performance Objective 'Clean Power 2030 Implementation' Success Measures



#### Success Measures

Consult upon and publish our comprehensive 2030 NESO delivery plan in April 2025. This will be a clear and concise publication with evidence of collaboration with and alignment to DESNZ Clean Power Team and Mission Control's objectives.

Establish ways of working with DESNZ Clean Power Team and Mission Control. We will provide timely responses to reactive requests from DESNZ through Mission Control who are planning to run "policy sprints" which would focus resolving an issue in a short 6-12 week time horizon.

Produce a stakeholder engagement plan that enables NESO publications to clearly and concisely demonstrate evidence of engagement with a broad range of customers on CP30 and how their feedback has been considered.

Develop a strategic approach to System Access Planning with TOs and wider stakeholders by the end of June 2025 with delivery following by the end of March 2026.

Publish the updated *Operability Strategy Report* in December 2025 incorporating the full detail of the Clean Power Action Plan.

Working with DESNZ, Ofgem and TOs, develop and implement by June 2025 a new dashboard system that provides a single version of the truth against which to track progress of transmission network projects required to meet CP30 and, where necessary, facilitates mitigation of project risks.

Work with stakeholders to produce a set of integrated dashboards to track and review the delivery of the supply side projects required to meet CP30 targets.

## Comprehensive NESO 2030 Delivery Plan consulted upon and published

We will play a central role in delivering clean power. Implementing the government's plan for clean power by 2030 will require coordinated action across the energy industry and its institutions, with NESO working as a partner with the government, Ofgem and key decisionmakers. This includes supporting Energy Code Reform, developing our implementation and engagement plans, and reviewing our operations to ensure alignment with the plan.

We will collaborate with DESNZ Clean Power Team, Mission Control and Ofgem to publish a plan containing the key CP30 delivery milestones that NESO will lead.

A coherent plan will be produced, reflecting the interactions between these groups and their respective roles.

The plan will reference all the key strategies critical to CP30 delivery, including but not limited to:

- **Connections Reform:** Implementing the new methodology to bring forward projects needed for CP30 and track progress of these projects
- 2030 Operability: Using the Operability Strategy Report to outline CP30 operability challenges
- **REMA:** Ensuring changes to Capacity Market (CM) and Contracts for Difference (CfD) regimes required for CP30 are in place ahead of relevant auctions



- **Strategic approach to System Access Planning:** Developing a long-term strategy for multi-year planning and optimisation of outage plans to support CP30 delivery
- **Operations:** Increasing transparency on how zero-carbon operation in 2025 aligns with CP30 and develop capability required for 2030
- **TO Delivery:** Working with Ofgem, DESNZ and TOs to create a new dashboard tool providing a single version of the truth on the delivery of network assets required for 2030, along with associated risks

To develop this plan and monitor progress, new cross-NESO governance arrangements will be implemented. We aim to publish and consult upon a draft plan in April 2025.

## Ways of working with DESNZ Clean Power Team and Mission Control are in place

We recognise that implementing CP30, which impacts a broad cross-section of the energy industry and wider economy, cannot be carried out in isolation. To ensure alignment with DESNZ's plans and focus on NESO-specific deliverables, we will establish close ways of working to maintain collaboration with the DESNZ Clean Power Team, Mission Control and Ofgem.

We also recognise that NESO's skills and expertise will be called upon by DESNZ throughout this process. To respond promptly and with the necessary level of detail and reliability, we will ensure that NESO is structured to support these advisory requests effectively.

The timings for establishing this support structure will align with the CP30 delivery implementation plan, with the full structure operational by the end of March 2025.

## CP30 stakeholder engagement plan

CP30 will be a theme which interacts with almost all NESO publications. Building on the effectiveness of current industry communication tools, we will utilise existing engagement forums and approaches to involve stakeholders. Where appropriate, bespoke approaches will also be developed to ensure effective engagement.

Our aim is not only to keep stakeholders informed about NESO's progress with CP30, for example, through forums like the Operational Transparency Forum, but also to involve them in early discussions on how best to deliver and communicate targets and milestones. This will build on successful engagement approaches, such as the industry workshops used during the development of NESO's Clean Power Advice.

CP30 engagement must be carefully managed to ensure coordination with existing engagement routes for individual CP30 delivery elements. This includes internal routes within NESO, such as zero-carbon operation, and externally across broader initiatives, such as REMA.

A holistic engagement plan will be developed alongside the CP30 delivery implementation plan. Feedback on the engagement plan will be incorporated to ensure ongoing alignment and clarity.



## Develop a strategic approach to System Access Planning

Gaining access to the transmission system to connect an increase in new generation and infrastructure will present an increasing challenge in the years to come. Providing system access, while ensuring a secure and operable system, is a complex engineering challenge for all of industry.

System access reform will play a critical role in balancing an increase in constraint costs against an increase in the level of work taking place on the power system. A clear prioritisation framework is needed to ensure the right decisions are made where there are competing drivers for example in the area of safety, regulatory and customer needs.

We will continue our role in system access planning including in longer-term planning, to effectively plan and optimise system access. We will work closely with TOs, Generators and other System Users to take steps to minimise their system access requirements, through innovative ways of working. We will engage with Ofgem and customers to focus on the strategic efficiency, stability, and transparency of the system access plan.

Ultimately, we believe that new ways of working should be deployed which optimise system access, while maximising the value of that system access that can be provided. We will develop a strategic approach with TOs and wider customers by the end of June 2025 with delivery following by the end of March 2026.

## Publish updated Operability Strategy Report

In our role of delivering a secure, reliable electricity system – it is key that we continue to understand and respond to the evolving operability challenges of the network.

The Operability Strategy Report (OSR) is an annual publication that explains the electricity system challenges associated with the whole energy system transition and describes the future capabilities and system requirements we need to resolve them.

The March 2025 publication will help inform the direction of travel and will be updated to reflect NESO Clean Power 2030 Policy Advice, with the next iteration in December 2025 further incorporating the Clean Power 2030 Action Plan and developing the strategy for ensuring an operable clean power system.

## Tracking delivery of transmission network projects

The NESO Clean Power Advice published in November 2024 set out 80 transmission projects that are required to efficiently deliver clean power by 2030 with a further 8 projects that would be beneficial if they could be accelerated. Given the dependency of the CP30 target on delivery of these projects, it is vital that there is a robust and regularly updated data source against which to conduct monitoring activities.

Working with DESNZ, Ofgem and TOs, we have started to develop a new dashboard system that provides a single version of the truth against which to track progress of transmission network projects required to meet CP30 and, where necessary, facilitates mitigation of project risks. This will replace the existing labour-intensive approach currently used to monitor progress in this area.

Following consultation and user testing with TOs, DESNZ and Ofgem, the new system will be rolled out in full for TOs to start using for CP30 reporting and wider change control processes by June 2025 with a minimal viable product available from April.



The Clean Power Action Plan sets out capacity targets for connection of generation – at transmission and distribution by technology type. It is a diverse and broad generation mix that will enable Clean Power in 2030.

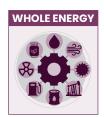
Inevitably delivery of generation and network projects will not always go to the original plan, and NESO will need to have an active role in monitoring this, making recommendations for updating the pipeline, as we move towards 2030 to ensure the overall objective is met.

We will work with stakeholders to produce a set of integrated dashboards to track the delivery of transmission and distribution projects for CP30. This will start with the extension of the TO Delivery Dashboard used to track changes in the connections status of projects and to provide a single version of the truth that can be used to assess overall progress towards CP30 and as the basis for any relevant reporting.



# **Performance Objective:** Separated NESO Systems, Processes and Services

NESO will transition remaining systems, processes and services from National Grid to NESO ownership to enhance our capabilities and establish our autonomy and full independence.



Establishing NESO as a new corporation requires significant change, including uplifting capability to ensure foundational services such as security, enterprise networks, digital workplace and enduser services, digital platforms such as cloud, and core systems for Finance, People, Procurement and Digital Data and Technology/Enterprise are physically separated from National Grid. This separation will create autonomy, pace and enhance user and customer experience, enabling a swift exit from transitional arrangements.

Ahead of Day 1, activities were undertaken to expedite separation. Our new platforms for IT Service Management and cloud have been built, and the logical separation of our data in National Grid's Enterprise Resource Planning platform and connected applications has been completed.

As set out in our licence conditions and independence statement, NESO is obligated to separate from National Grid within the two-year Transitional Services Agreement (TSA) timeframe. While we have delivered some activities prior to day one, the majority of our systems currently remain integrated with National Grid. Therefore, our strategy for separation and independence follows a structured sequence of ongoing activities.

Post day one, and throughout the BP3 period, we plan to:

- achieve network separation
- establish our own identity and access management capability
- migrate all structured and unstructured data (excluding HR, Finance and Procurement)
- migrate all NESO applications (excluding HR, Finance and Procurement)
- provide NESO employees with NESO devices
- complete the separation of physical security controls

Through these separation activities, we aim to exit 60% of TSAs during the BP3 period. The remaining activities beyond this period are aligned to HR, Finance and Procurement, and Security Operations. This approach is based on the mutually agreed TSA exit plan with National Grid.

A key factor in our success is the parallel delivery of new technologies via modern platforms and architecture, while transforming our capabilities to operate at speed and improve user and customer experience. This must be achieved while minimising risk and impact to our core operations. Establishing the technology and process foundations for an independent NESO, with fit-for-purpose capabilities, will deliver significant benefits.

Autonomy though separation enables NESO to make independent technology choices that directly respond to our needs and those of our customers. For example, selecting our own systems will allow us to deliver fit-for-purpose, data-driven capabilities and processes. By leveraging Software-as-a-service (SaaS) and cloud options, we will gain valuable insights through AI and ML (machine learning) capabilities, driving greater efficiency and improved decision-making. This will enhance the delivery of services to both our business and our customers. Additionally, it will enhance industry

coordination by delivering data-driven solutions that support efficient service delivery within NESO and across the wider industry.

SaaS platforms will provide a stable and secure application suite, incorporating the latest capabilities and functionality to reduce technical debt and improve user experience. Modern, scalable and adaptable platforms will enable us to increase the velocity of feature releases, reducing time-to-value.

System security and resilience are at the forefront of our agenda. Investments in cybersecurity capabilities will align with our enhanced security objectives and obligations, positioning us as a leader in supporting Great Britain's energy industry to strengthen its overall security posture.

Cost reduction will be achieved by transitioning services provided through the National Grid Shared Service Model to our ownership. While this will be offset by incremental 'run the business' costs to provide and maintain our standalone infrastructure, we anticipate a net benefit. For example, establishing our Vendor Management Office will enable effective third-party service delivery and performance management. This will be achieved by developing and implementing vendor selection strategies, establishing performance metrics and KPIs to objectively assess vendor performance, negotiating favourable contract terms, and managing costs to ensure value for money from third-party services.

Cost avoidance will result from parallel systems implementation and business process transformation. Allowing us to avoid a 'double hop' (physical separation of existing platforms followed by transformation). This approach will generate long-term efficiency, operational benefits and future value.

These benefits will begin to materialise during the BP3 period as physical and cyber security, foundational services and systems transition from National Grid, in line with Transitional Service Agreement (TSA) exit plans.

## Table 11: Summary of Performance Objective 'Separated NESO Systems, Processes and Services' Success Measures\*



#### Success Measures

Exit 60% of services from the Transition Service Agreements (TSA) by the end of March 2026.

Transition physical and cyber security from National Grid. Establishing the strategic Security Operations Centre (SOC), Security Information and Event Management (SIEM), Digital Forensics, and Threat Intelligence capabilities by March 2026.

Deliver foundational services, including:

- physical separation of the NESO network from National Grid by December 2025
- migration of all users and devices to NESO infrastructure by January 2026
- migration of digital platforms and the majority of applications to NESO by March 2026

Build systems and data for people-related functions, including the implementation of People, Payroll, Finance, and Procurement SaaS platforms.

<sup>\*</sup> Note: All dates are subject to agreement with National Grid on the baseline TSA exit plan in January 2025.



We aim to exit the Transitional Service Agreements (TSA) with National Grid as early as practical, while ensuring there is no risk to ongoing service provision. This position is fully supported by National Grid.

Detailed separation plans are being developed to feed into comprehensive TSA exit plans. Both separation and TSA exit plans are aligned with National Grid to identify technical interdependencies and ensure delivery viability. These plans are also subject to formal ongoing governance.

We have already implemented our core cloud platform, enabling the migration of cloud-hosted applications from National Grid's environment to ours. The physical separation of our enterprise network from National Grid is underway and targeted for completion in the first quarter of 2025. Once complete, this will allow us to expedite application, user and device migration, enabling the phased winding down of TSAs during the migration period. This approach aims to reduce service costs efficiently.

## ✓ Transition of physical and cyber security from National Grid

As part of the separation, we need to design and implement our own physical and cyber security services aligned with NESO's requirements.

Key services to be developed include:

#### **People**

 Full implementation of the cyber and physical security operating model while continuing to use a hybrid resourcing approach

#### **Process**

- Developing and implementing NESO-specific security and IT policies, standards and control frameworks
- Developing, implementing and testing our security incident response plans
- Developing and implementing our controls assurance program and conducting penetration testing

#### **Technology**

- Designing and implementing both a Cyber and Physical Security Operations Centre (SOC) and a Security Information and Event Management (SIEM) solution to detect and respond to suspicious or actual cyber events
- Designing and implementing physical security controls, such as CCTV
- Implementing threat tooling to support our obligations as an Operator of Essential Service (OES) and under our new licence conditions

## Transition of foundational services

We need to build our own core technology platforms and supporting infrastructure to remove reliance on National Grid for IT services. This will enable us to provide modern, scalable and reliable capabilities that can respond swiftly to the needs of NESO and customers.

The scope of this work includes:

- **Networks:** Provision of an enterprise network, including telephony, that is physically separated from National Grid. This will enable user and device migration while improving resilience and performance.
- Digital Workplace Services (DWS) and End User Compute (EUC): Delivery of modern, cloud-based office productivity applications; device management for desktops, laptops and mobile devices; workflow automation; email; collaboration and communication tools (including audio and video conferencing); and a service desk. These services will enhance productivity and efficiency, extend communication and information sharing through modern technology practices and improve the overall user experience.
- **Cloud tenancy:** NESO's own cloud tenancy has already been created, facilitating the migration of applications from National Grid's environments. This approach leverages modern cloud technologies to deliver improved scalability, flexibility and security; increased innovation and speed of delivery; more effective collaboration and sharing; automatic updates and integrated backup and disaster recovery capabilities.
- **Application and user migration:** Migration of applications and users from National Grid's data centres and cloud hosting arrangements, enabled by NESO's cloud-first strategy, enhanced DWS and EUC capabilities and support for digital ways of working.
- Identity and Access Management (IDAM) and Privileged Access Management (PAM): Establishing advanced IDAM and PAM capabilities to ensure users are granted only the permissions they need. These systems will safeguard sensitive data and systems from unauthorised or malicious access, improve operational efficiency, support regulatory compliance and reduce the risk of both internal and external threats.

## ✓ Transformation of systems and data for people

An integrated set of systems, platforms and processes will provide a single source of information, increasing data transparency and enabling the generation of insights for timely and accurate planning and decision-making. These systems will also include embedded automated controls to manage, monitor and govern compliance and risk. Our transformation focuses on the following key deliverables:

- **HR Operations and Payroll System:** We will deliver a new HR Operations and Payroll System that is independent from National Grid. This includes the development and standardisation of processes.
- **Fit-for-purpose operating model:** We will create a fit-for-purpose operating model for HR, Finance, Procurement and Foundational Services within the organisation to support our strategic vision and ambitions.
- **Data and technology advances:** Our new systems will leverage SaaS/cloud options and advancements in data and technology, including AI, to enhance user experience and simplify interactions.

People, Payroll, Finance and Procurement SaaS platforms will be implemented, with technical implementation completed by March 2026.



Term	Acronym	Description
Activity		A subset of responsibilities within a function.
Ancillary Services Dispatch Platform	ASDP	NESO web-based platform used to dispatch ancillary services.
Artificial Intelligence	Al	Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems.
Balancing Mechanism	ВМ	A platform used to make sure electricity supply and demand are balanced. From one hour prior to real time until the end of a settlement period, NESO can dispatch (or instruct) parties to decrease or increase their generation or consumption.
Business Plan	BP	Details our Performance Objectives, associated Success Measures and costs for the Business Plan cycle.
Business Plan 3	BP3	Our final Business Plan covering the last year of the RIIO-2 price control period. This will be delivered between 1 April 2025 and 31 March 2026.
Capacity Market	СМ	Introduced by the UK government as part of the Electricity Market Reform Programme to ensure the future security of our electricity supply. This is achieved by providing a payment for reliable sources of capacity, alongside their electricity revenues, ensuring they deliver energy when needed.
Centralised Strategic Network Plan	CSNP	Our new electricity transmission network planning output, which addresses all load-related planning.
Contracts for Difference	CfD	The CfD scheme is the main mechanism for supporting low-carbon electricity generation. CfDs incentivise investment in renewable energy by providing project developers with direct protection from volatile wholesale prices, while also protecting consumers from high energy costs.
Customer		Anyone impacted by our work, including service providers and communities.
Decarbonisation		The process of reducing carbon emissions, such as those generated by burning fossil fuels.
Delivery schedule		A grouping of deliverables for either a role or the Business Plan in BP2.

Term	Acronym	Description
Department for Energy Security and Net Zero	DESNZ	A UK government department responsible for delivering security of energy supply, ensuring properly functioning energy markets, encouraging greater energy efficiency and seizing the opportunities of net zero to lead the world in new green industries.
Digitisation		Process of converting information from a physical format into a digital one.
Early Competition	EC	Competition that occurs prior to the detailed design, surveying and consenting phases of solution development. This allows organisations to compete for the design, build and ownership of onshore transmission solutions. Early Competition encourages new ways of working and aims to find the best solutions at a fair cost for consumers.
Enterprise Resource Planning		A software system that manages and integrates various business processes.
Gas Market Plan	GMaP	To deliver safe and reliable gas supplies at the best value for consumers as we transition to net zero, this plan proactively considers how market frameworks may need to evolve.
Great Britain	GB	A geographical, social and economic grouping of countries comprising England, Scotland and Wales.
Independent Customer Group	ISG	An independently chaired group that scrutinises and challenges our business plans, ensuring they reflect customers' priorities and deliver value for consumers. Members are drawn from a range of experiences across the industry.
Low Carbon Electricity		Electricity produced with substantially lower (or none) greenhouse gas emissions than conventional fossil fuel generation.
Markets Roadmap		The Markets Roadmap outlines our market design objectives, principles and transformational process to reform balancing service markets. It includes our vision for response, reserve, thermal, reactive, stability and restoration markets as well as the Balancing Mechanism.
Minimum Viable Product	MVP	A version of a product with just enough features to be usable by early customers, who can then provide feedback for future development.
Megavolt-ampere reactive	Mvar	A unit of reactive power in AC electric power systems.
Net zero		Net zero means balancing any carbon emissions created with an equivalent amount removed from the atmosphere.

Term	Acronym	Description
National Electricity Transmission System	NETS	The high-voltage transmission system operated by NESO.
National Grid Electricity Transmission	NGET	The transmission owner that owns and maintains the high-voltage electricity transmission network in England and Wales.
Office of Gas and Electricity Markets	Ofgem	The UK's independent National Regulatory Authority, a non-ministerial government department whose principal objective is to protect the interests of current and future electricity and gas consumers.
Performance Objective	РО	An annual key outcome or output aligned with our regulatory duties and industry needs, associated with our Success Measures.
Reactive Power		The component of electrical power used to establish and maintain electrical and magnetic fields in alternating current (AC) circuits. It supports voltage and current levels to maintain system stability and reliability.
RIIO-2		The second regulatory price control period under Ofgem's RIIO model, covering 1 April 2021 to 31 March 2026.
Strategic Priorities	SP	Key outcomes intended to deliver our organisational vision. Strategic priorities extend beyond annual Business Plan submissions and underpin our Performance Objectives.
Strategic Spatial Energy Plan	SSEP	NESO's Great Britain-wide plan for the most efficient mix of electricity and hydrogen technologies to meet net zero and deliver security of supply. It sets out locations, capacities and timings of GW-scale supply, co-optimised with large demand sources and high-level network needs.
Success Measure	SM	Evidence demonstrating how each Performance Objective has been delivered.
Total Expenditure	Totex	The total cost of expenditure relating to licensees' regulated activities.
Transmission Owner	ТО	Refers to the three transmission asset owners within Great Britain: National Grid Electricity Transmission, Scottish Hydro Electric Transmission and Scottish Power Transmission.
Transitional Service Agreement	TSA	An agreement between the buyer and seller of a company, where the seller provides specified services to the buyer for an agreed period and cost.

Term	Acronym	Description
Value for Money	VfM	A balance between maximising the benefits delivered from outputs and minimising costs to achieve optimal outcomes.
Virtual Energy System	VirtualES	A NESO-led programme to create an ecosystem of connected digital twins for energy industry customers.
Whole Energy System		The interaction between electricity, gas and liquid fuels, and how these energy sources contribute to delivering net zero greenhouse gas emissions for technology, communications, transport, heat and water.
Zero-carbon		Zero-carbon means that no carbon emissions are produced from a product or service. For example, a wind farm generating electricity or a battery deploying electricity would be considered zero-carbon. Energy sources like wind, nuclear and solar do not create carbon emissions when used to produce electricity, so we refer to these as zero-carbon sources.



## Appendix 1: BP2-BP3 Mapping of Commitments

Our BP3 Performance Objectives are underpinned by Success Measures. However, these do not represent everything we will deliver as NESO. We want to reassure our customers that we remain committed to delivering all our obligations, including continuous and ongoing deliverables from BP2.

Table 12 shows a list of our BP2 activities with ongoing commitments into BP3 and how they broadly map to our Performance Objectives. For a comprehensive review of our commitments, please refer to our <u>BP2 Delivery Schedule</u>.

Table 12: BP2 activity and Performance Objective mapping

BP2 Role	BP2 Activity	BP3 Performance Objective	
1	Al Control Centre architecture and systems	On a water at the country of	
	A2 Control Centre training and simulation	Operating the System	
Control	A3 Restoration	Secure and Resilient Systems	
Centre operations	A17 Transparency and open data	Digitalisation & Data Sharing	
	A18 Market monitoring	Operating the System	
	A19 Data and analytics operating model	Digitalisation & Data Sharing	
2	A4 Building the future balancing service markets	Fit-for-Purpose markets	
Market	A5 Transform access to the Capacity Market and Contracts for Difference	Clean Power	
development and	A6 Develop code and charging arrangements that are fit for the future	Fit-for-Purpose markets	
transactions	A20 Net Zero Market Reform		
	A21 Role in Europe		
3	A7 Network development		
System	A8 Enable all solution types to compete to meet transmission needs		
insight,	All Enhance analytical capabilities Strategic Whole Energy Pla		
planning and network	A12 SQSS review		
development	A13 Leading the debate		
	Al4 Take a whole electricity system approach to connections	Connections Reform	
	A15 Taking a whole-energy system approach to promote zero-carbon operability	Operating the System	
	A16 Delivering consumer benefits from improved network access planning	Strategic Whole Energy Plans	
	A22 Network planning review/offshore coordination		

## Appendix 2: Consideration of the Strategic and Policy Statement

Our BP3 Performance Objectives have been reached having regard to the strategic priorities set out in the designated Strategy and Policy Statement (SPS) for energy policy in Great Britain<sup>11</sup>. In Table 13 we set out an overview of how we have considered, and how our BP3 business plan is aligned with these strategic priorities.

Table 13: How NESO's strategic priorities are aligned with our Business Plan 3

#### **SPS Strategic Priority** Consideration in BP3 Business Plan Section One: Enabling clean energy and net zero infrastructure To meet the UK's net zero Net zero is a key focus throughout BP3 and identified as a core outcome for our business plan, with clean power as a strategic and climate change targets, including the priority. In particular, our ambitious Performance Objective for Clean Power 2030 implementation, meets and exceeds the target carbon budgets set under the Climate Change Act for the electricity system set out in the SPS strategic priority. 2008 and the target for a Within BP3, during 2025 we will meet our ambition for zero-carbon decarbonised electricity operability. system by 2035, subject to Our Performance Objective for Strategic Whole Energy Plans security of supply acknowledges that strategic planning will be critical to achieving a low-cost net zero system, delivering benefits by supporting progress towards net zero through coordinated, strategic plans. Our Performance Objective for Connections Reform supports delivery of net zero by enabling zero-carbon projects to connect more quickly. Our Performance Objective for Fit-for-Purpose Markets supports net zero by creating market arrangements that accelerate decarbonisation. A strategic, whole system Our Performance Objective for Strategic Whole Energy Plans aligns approach to plan and with this strategic priority. Our proposed Success Measures include build reliable, resilient, the publication of a range of documents covering electricity and sustainable network gas networks. infrastructure which is Our Performance Objective for Connections Reform aims to appropriately connected ensure faster, more coordinated and efficient connections to the to wider markets. electricity transmission network.

<sup>11</sup> Strategy and policy statement for energy policy in Great Britain (accessible webpage) - GOV.UK

Table 13: How NESO's strategic priorities are aligned with our Business Plan 3 (continued)

SPS Strategic Priority	Consideration in BP3 Business Plan
Enabling anticipatory investment to build network infrastructure at scale and pace, ahead of need, to meet the demands of a decarbonised energy system as electrification grows, while controlling system costs by facilitating a smart, flexible and digitalised energy system.	Our Performance Objective for Strategic Whole Energy Plans aligns with this SPS strategic priority, setting out views on the network infrastructure needed for a decarbonised energy system.
	Our Performance Objective for Connections Reform sets out our proposals to support efficient and economic anticipatory network investment.
	Under our Performance Objective for Fit-for-Purpose Markets, we will launch the first Early Competition prequalification by the end of 2025, implementing a competitive process to enable network build at scale and pace.
	Our Performance Objective for Enhanced Sector Digitalisation and Data Sharing will facilitate further digitalisation of the energy sector.
Driving a net zero transition by achieving government targets for renewable and low carbon deployment, innovation and uptake of clean technologies, and providing opportunities to increase energy efficiency.	Our ambitious Performance Objective for Clean Power 2030 implementation involves a number of actions relating to this SPS strategic priority. These include our Success Measure of ensuring a comprehensive NESO 2030 Delivery Plan is published.
	Our Performance Objective for Fit-for-Purpose Markets will include implementing Capacity Market and Contracts for Difference regimes for Clean Power 2030 and operating the markets effectively.
	Our Performance Objective for Connections Reform will drive the net zero transition by aligning the connections queue to projects that contribute efficiently to zero-carbon operation.
	We have considered innovation across our Performance Objectives.
The transition to net zero alternatives from the unabated use of natural gas is planned and operated in a strategic and	As part of our Performance Objective for Strategic Whole Energy Plans, our gas publications are focused on ensuring the national gas transmission network can meet consumers' needs for natural gas efficiently. We will also progress the development of hydrogen network planning activities.
coordinated way, giving consideration to security of supply, system resilience, and costs for consumers, enabling necessary investment and promoting the move to the most cost-effective low carbon options wherever possible.	Our Performance Objective for Fit-for-Purpose Markets will include publishing the first Gas Future Markets Plan, contributing to the evolution of the gas market and its alignment with the broader goals of a sustainable and decarbonised whole energy system.

Table 13: How NESO's strategic priorities are aligned with our Business Plan 3 (continued)

#### **SPS Strategic Priority**

#### Consideration in BP3 Business Plan

Competitive and effective markets and regulation that facilitate the anticipatory investment required in innovation, clean technologies, and infrastructure to meet government's net zero targets while ensuring an appropriate balance between economic, environmental, and social costs, and addressing undue barriers to entry, growth, and innovation.

Our Performance Objective for Fit-for-Purpose Markets will drive Increased competition and access to markets. In particular, this includes a Success Measure on the volume of services procured competitively and continuing our support to the REMA programme.

Our Performance Objective for Connections Reform will support competitive and effective markets by aligning the connections queue to projects that contribute efficiently to zero-carbon operation.

Ensuring the benefits of investment in clean energy and net zero infrastructure are felt across the UK, from emissions reduction to economic development and job creation, in line with government's levelling-up agenda.

Through our Performance Objective for Strategic Whole Energy Plans, we will align national-scale asset strategies with local initiatives to support policy ambitions in security, net zero, efficiency and economy. As part of this, we will enhance engagement at local and regional levels. To establish a strong presence and deliver on RESP effectively, during BP3 we will build capability in the regions and develop key relationships to enable local views to be properly considered.

#### Section Two: Ensuring energy security and protecting consumers

An energy system which is fair, safe, secure and resilient, including from supply shocks, changes in the international environment and the impacts of climate change.

A fair, safe, secure and resilient energy system is a key focus throughout BP3 and ensuring system security and reliability is identified as a core outcome for our business plan. In particular, our Performance Objectives for Operating the Electricity System and Secure and Resilient Energy Systems sets out a range of measures focusing on a secure and resilient energy system.

Energy wholesale markets that are competitive, transparent, and liquid.

Our Performance Objective for Fit-for-Purpose Markets sets out a range of measures focusing on this SPS strategic priority, including in particular a Success Measure on the volume of services procured competitively and continuing our support to the REMA programme. Our whole energy market strategy will recommend solutions to address challenges, conflicts and inefficiencies in the energy markets.

Table 13: How NESO's strategic priorities are aligned with our Business Plan 3 (continued)

#### **SPS Strategic Priority** Consideration in BP3 Business Plan An energy system that Achieving lower costs than would otherwise be the case is provides protection for identified as core outcome for our business plan and consumer both domestic and nonvalue is one of our strategic priorities. Minimising cost to domestic consumers, consumers is a focus across our Performance Objectives. including a strong focus on protecting vulnerable domestic consumers, and delivers against the statutory fuel poverty target for England. A retail market that works Our Performance Objective for Fit-for-Purpose Markets includes better for consumers. a commitment to progress work to ensure that demand-side is more resilient and flexibility can compete effectively in markets where it meets system operability needs. investable, and supports the electrification and wider transformation of the energy system in the most cost-effective way.

#### Section Three: Ensuring the energy system is fit for the future

Electricity market
arrangements that
meet our objectives for
a decarbonised and
secure electricity system
by 2035 at least possible
cost to consumers.
Efficient, competitive
and transparent energy
markets that optimise
investment and operation
and work for the full range
of market participants.

Our performance objective for Fit-for-Purpose Markets set out metrics which aim to create market arrangements that accelerate decarbonisation at least possible cost while ensuring system security.

Our focus on a customer centric approach underpins all our performance objectives and will lead to us listening to the views of a broad range of stakeholders and our work on digitisation and data sharing will increase transparency.

Ensuring flexibility in the energy system at the national and local level, and the requisite growth in flexibility markets and consumer adoption of energy smart appliances to achieve this.

Our BP3 strategic priorities acknowledge the importance of flexibility in the energy system as part of the delivery of decarbonised energy. In particular, as part of our Performance Objective for Fit-for-Purpose Markets, our Markets Roadmap will serve as a guiding document, outlining our market objectives, principles and plans for market reform. This objective also includes a commitment to progress work to ensure that demand-side flexibility can compete effectively in markets where it meets system operability needs.

Table 13: How NESO's strategic priorities are aligned with our Business Plan 3 (continued)

SPS Strategic Priority	Consideration in BP3 Business Plan
An economic and efficient digital infrastructure which enables an inclusive, smart, digital, safe and secure energy system, based on principles of open data, security, interoperability and a whole systems approach to data sharing.	As one of our BP3 strategic priorities we will take on a Digital Mindset, positioning us as a leader in sector-wide digitalisation. This will drive the adoption of generative Al.  Our Performance Objective for Enhanced Sector Digitalisation and Data Sharing sets out further measures aligned to this SPS strategic priority, including progress of Data Sharing Infrastructure for the industry and improving NESO's Open Data Portal.
Effective governance during the transition to net zero of the codes and technical rules that govern the energy system, system operation and planning, and local governance.	Our Performance Objective for Fit-for-Purpose Markets includes our commitment to future-proofing industry codes, regulations and frameworks, as we continue to be a technical expert and code administrator.  Our Performance Objective for Clean Power 2030. Implementation includes a commitment to support Energy Code Reform.  Our Performance Objective for Strategic Whole Energy Plans sets out further measures on planning and local governance, including establishing regional governance to support the RESPs.

### **Annex A: BP3 Cost Narrative**

Available as a standalone document, published alongside this report.

## Annex B: Data, Digital and Technology

Available as a standalone document, published alongside this report.

## **Annex C: Enabling Functions**

Available as a standalone document, published alongside this report.

### Annex D: Stakeholder

Available as a standalone document, published alongside this report.

## NESO

Faraday House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA
United Kingdom

Registered in England and Wales No. 11014226

neso.energy

