DSO Performance Panel Submission Year 2

April 2025

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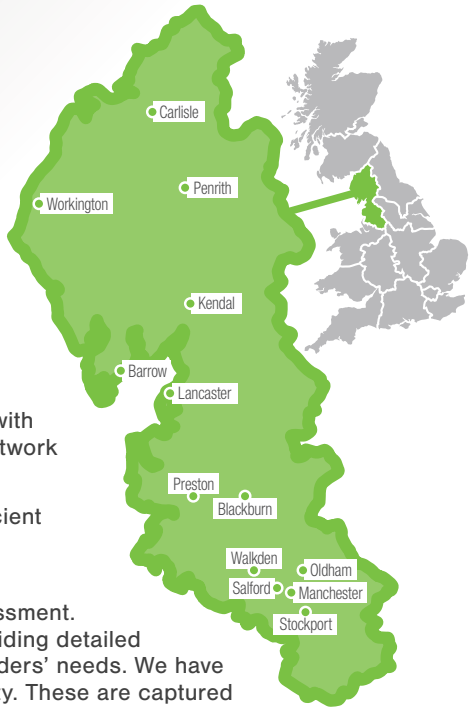


As the Distribution System Operator (DSO) serving the North West, we are proud to power 2.4 million properties and deliver exceptional service to over 5 million customers.

Through our DSO activities, we are transforming traditional ways of working by:

- Accelerating progress towards net zero through innovative, large-scale network optimisation and control.
- Enabling a fair and inclusive energy transition by fostering meaningful collaboration with local authorities, communities, businesses and individuals, to inform co-ordinated network development.
- Driving economic growth and the green economy by supporting competitive and efficient flexibility markets.

The purpose of the DSO Performance Panel Submission is to report our progress and achievements with clear evidence to inform the 2024/25 DSO Performance Panel assessment. Our 2024/25 report is structured around the five DSO Performance Panel criteria, providing detailed insight into the progress we have made against our business plan to meet our stakeholders' needs. We have abbreviated terms throughout our report where doing so improves clarity and readability. These are captured in Appendix A.

Executive Summary

I am delighted to introduce our second submission outlining our progress to DSO. Over the past year, we have made significant advances in delivering on our commitments to meet stakeholder needs, and we are excited to share our progress with you.

We believe digitalisation is a fundamental enabler of the future energy system. In our DSO Transition Plan for RIIO-ED2, we set out a clear intention to focus on building the essential systems and data foundations needed to be flexibility ready. **This year we have achieved major milestones in our journey**. We have launched the **broadest range of third-party market platform functions in Great Britain** in partnership with Electron, and completed the **successful go-live of our industry-leading Active Network Management (ANM) system**. Together these capabilities allow us to offer the full range of Open Networks flexibility products, including dynamic services, as well as flexible connection products enabled by central systems and responsive to real-time network conditions.

However, **it was clear from our Year 1 feedback that stakeholders needed to see us doing more than building foundations for the future**, and also see how we are delivering outcomes for customers today. With the support of our DSO Stakeholder Panel, broader stakeholders, and the efforts of leadership at all levels of our business **we have set out to deliver a step change in Year 2**. By the end of RIIO-ED2 **we want to be widely recognised as leading the way in DSO**. To support this ambition we have instigated regular executive committee involvement, and with the help of our directors and strong senior management in the DSO team, we have made significant progress.

In response to this feedback, this year we have **trialled a range of new flexibility products, dispatched more flexibility than ever before, and developed a refreshed Flexibility Strategy** which sets out how we are extending our activities into local networks to benefit the communities we serve. We have **expanded our data portfolio while enhancing accessibility and usability** – for instance through our **Data Education Hub**, a comprehensive resource that helps stakeholders navigate and make the most of our data. We have **prioritised transparency to strengthen stakeholder confidence in our approach.** We have refreshed our Distribution Network Options Assessment (DNOA) methodology and our Operational Decision-Making Framework (ODMF), and published these alongside a new DSO:DNO Governance Framework and a detailed assessment of the DSO benefits we are targeting and delivering.

We have achieved this while **aspiring to excellence in delivery of our core DSO roles** – supporting our local authorities, forecasting and planning system requirements, collaborating with stakeholders across the energy system and procuring and dispatching flexibility services.

To help guide our continued evolution I have personally given a priority focus to developing our new **Social DSO Strategy** in collaboration with our customers and stakeholders. This strategy, outlined in a separate forward-looking publication, will be followed by a refreshed, detailed delivery plan in early 2025/26.

Once again, I would like to thank our entire stakeholder community for their invaluable support, time and insights that have helped drive all we have achieved. I look forward to us building on this progress together and through an accelerated trajectory of good-to-great performance, delivering a fair and equitable transition to net zero in the North West.

Ian Smyth
Chief Executive Officer (CEO)

Our key achievements in 2024/25

Data
- Increased volume of datasets by 125% - highlights include our new capacity headroom and connection queue datasets
- Used various methods to provide insights and support to our stakeholders, including our newly developed Data Education Hub
- Visualised our datasets in a variety of styles to enhance user experience
- Created data-driven tools to help stakeholders plan low carbon initiatives

Flexibility
- Launched our new market platform with the widest range of support services in GB
- Dispatched 4,349MWh of flexibility - more than ever before
- Improved data, tools and document provision for all market participants
- Strengthened market engagement and enhanced contracting methods, registering 14 new providers
- Tendered for LV products for the first time

Benefits
- Took on board Year 1 feedback, increasing our leadership focus and setting out our ambition through our Social DSO Strategy
- Engaged >450 stakeholders to guide our focus
- Delivered £29m of net benefits this year, and forecasted that our DSO can deliver £303m in RIIO-ED2
- Developed a new benefits methodology and established stronger benefits realisation processes

Options & Conflicts
- Successfully engaged with all 35 local authorities, working with over 370 officers to inform our forecasting
- Used co-ordinated network development to reduce scheme costs by up to 33%
- 44% of DNOA assessments resulted in sites managed with flexibility this year
- Published our DSO:DNO Governance Framework to clarify our approach to managing conflicts of interest

DER Dispatch
- Successfully tested and commissioned our industry-leading integrated ANM system
- Consulted on and republished our Operational Decision-Making Framework
- Implemented 48 hour 'look ahead' module for short-term forecasting
- Enhanced monitoring across our secondary substations, increasing coverage from 20% to 25%

1. Delivery of DSO Benefits

Introduction

This year we set out to respond to the feedback we received from the Year 1 Performance Panel. We engaged a range of stakeholders to gain insight and advice on our focus, and mobilised a high degree of leadership focus, governance and resource internally to ensure we set stretching targets and began to deliver on them.

We also continued to deliver the DSO activities that create a range of benefits to customers and the wider energy system. We have revised our approach to understanding and quantifying benefits, to make sure we have a clear rationale for how we direct our efforts, and can track Key Performance Indicators (KPI) to assist in benefits realisation. We have taken a prudent approach to quantification and tracking in line with HM Treasury Green Book principles, and we have assumed the industry lead role for the Energy Networks Association (ENA) DSO Collaboration Forum on benefits standardisation.

In this section, we set out the key achievements we have made in clarifying and delivering against our ambition, delivering benefits for our customers and stakeholders, assessing our DSO benefits, and managing our DSO delivery strategy and programme.

Our key achievements in 2024/25

>450 stakeholders consulted

Co-created and published our **Social DSO Strategy**

Reduction in reinforcement costs by 20% at Extra High Voltage (EHV) levels and 33% at High Voltage (HV) levels through coordinated network development

100,000 homes benefiting from Smart Street with £40 per home per year energy bill savings

50 initiatives delivered this year

44% of DNOA assessments resulted in sites managed with flexibility this year

Accelerated generation customers by six years and demand by four years through flexible connections

Driving **20%** of Electric Vehicle (EV) and heat pump connections through Connect & Notify arrangements eliminating delays

An **increase** in **network monitoring** from **20%** to **25%** of sites

Provided storage customers with **50%** additional peak import/export capacity

Dispatched **4,349 MWh** of flexibility - more than ever before

For every **£1** of network cost savings we deliver for connected customers we deliver nearly **£3** of additional benefits to the wider energy system and society

Smart network optimisation implemented capable of delivering 5-30% additional headroom at substations

1.1 Evolving our DSO strategy and ambition

- Responded to Year 1 Performance Panel feedback, engaging stakeholders and mobilising a high degree of internal focus to make a series of 'course corrections' which have maximised the benefits delivered.
- Continued to run our established Stakeholder Governance Framework and DSO Stakeholder Panel, and engaged >450 stakeholders through wider stakeholder engagement channels and events.
- Co-created and published our Social DSO Strategy to signal our ambition and forward focus.
- Continued to deliver against our RIIO-ED2 Business Plan, reaching major delivery milestones.
- Established a set of internal DSO KPIs linked to our benefits areas and will be reviewing these metrics quarterly alongside DSO programme delivery.

1.2 How we assess DSO benefits

- Updated our methodology for benefits assessment, in alignment with the ENA's DSO Collaboration Forum and HM Treasury Green Book principles.
- Took on the industry lead role in the DSO Collaboration Forum for benefits, drafting the common approach appendix, maintaining ownership throughout the process and keeping Ofgem updated.
- Our benefits are clearly linked to our internal activities, with clear outcomes and benefits associated with different stakeholder types.
- Published our DSO Benefits Methodology for the first time.

1.3 How we are delivering benefits for our customers and stakeholders

- Delivered £29.1m of NPV benefits in Year 2 and £47.5m RIIO-ED2 to date (in 2023/24 prices).
- Forecast that we will deliver NPV benefits of £303.3m - including £81.7m of network cost savings for customers, and £221.6m of benefits to the wider energy system and society - nearly a 3 to 1 ratio.
- Forecast that our DSO can deliver benefits totalling £3.8bn out to 2040 and save five million tonnes of CO2 equivalent ($MtCO_2e$).
- Delivering additional non-quantified benefits not yet captured in our benefits assessment, such as improved data access for stakeholders and improved market access support services to make it easier for service providers to work with us.

1.1 Evolving our DSO strategy and ambition

How we are responding to the feedback we have received

Our DSO Transition Plan, initially outlined in our RIIO-ED2 Business Plan, set out the key initiatives and our roadmap towards realising our vision to be the most digitalised DSO. Prior to RIIO-ED2 we introduced a new Network Management System (NMS), building the **digital foundations** that ensure robust data quality and a scalable platform, and in the early stage of RIIO-ED2 we have focused on building the systems and data so that we are **flexibility ready**.

This year we have achieved major milestones in this journey, which we set out throughout this second progress report. However, it was clear from our Year 1 feedback from Ofgem's panel that **stakeholders needed to see us doing more than building foundations for the future, and instead see how we are focusing on delivering outcomes for customers today**.

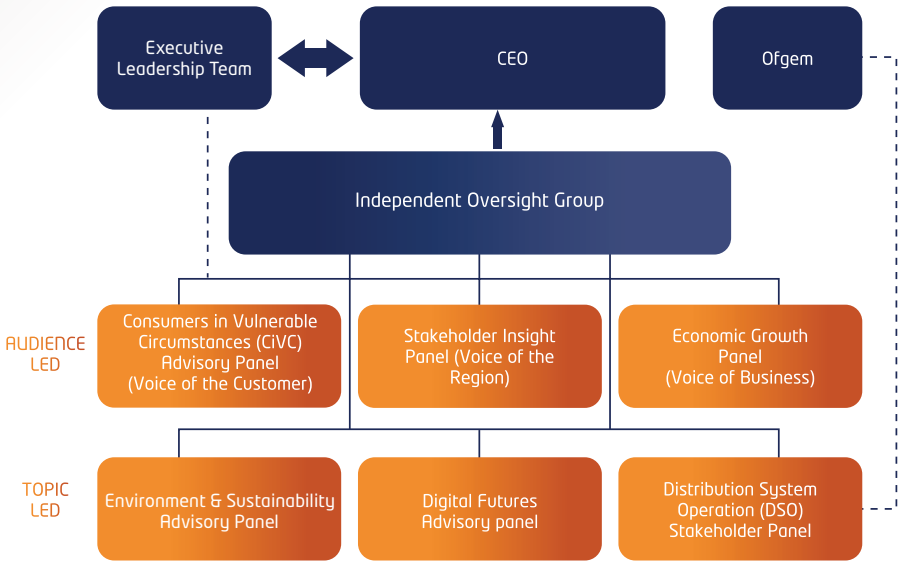
By the end of RIIO-ED2 our ambition is to be leading the way in DSO. We do not believe we have four years to mobilise – and so we set out to drive a step change in Year 2 and have listened to stakeholders to drive 'course corrections'.

Governance of our DSO delivery

Stakeholder engagement has continued to be a driving force in setting our focus and prioritising how we deliver our plan. Our wider business **Stakeholder Engagement** report outlines our approach, built on transparent governance, clear feedback channels and strong executive commitment.

This year **we have taken steps to strengthen the CEO, Executive Leadership Team and Board-level focus on our DSO delivery**. We have established DSO as one of our 'Focused Improvement Projects' meaning it has a heightened level of internal governance, with monthly updates brought before the CEO, Executive Committee and Board members, and more frequent discussions occurring as and when needed.

Figure 1: Our stakeholder governance framework



At the heart of our external engagement structure for the DSO is our independent DSO Stakeholder Panel, which represents a diverse range of customer and stakeholder groups, and is designed to oversee and guide the scope and pace of our transition. **In 2024, the panel convened five times, providing valuable feedback, challenging the scale and ambition of our initiatives,** and actively contributing to the ongoing development of our DSO strategy. Outputs from the DSO Stakeholder Panel sessions are **published on our website**.

The value of these panels is the scrutiny they bring, which ensures we are not acting autonomously without challenge, constructive input and support for our actions.

This year we have also published a new **DSO:DNO Governance Framework**, which sets out our approach to separation, how the DSO and Distribution Network Operator (DNO) parts of our business interact, how decisions are managed, and how we provide assurance and transparency. This is set out in further detail in Section 5 and the accompanying publication.

Beyond our governance structures, we leverage multiple feedback channels to gather valuable insights into the diverse needs of our stakeholders. This year, **we engaged with all 12 DSO stakeholder categories** (as identified by Ofgem), **as well as community energy groups** given their high interest and influence in DSO developments.

>450 stakeholders consulted

12 industry events attended

11 different events hosted, including:

- 2 conferences
- 2 consultation discussions
- 2 DSO function webinars
- 4 Local Area Energy Plan (LAEP) engagements
- 1 roundtable discussion

This engagement was carried out through various means, including 1-2-1 meetings, webinars, online consultation exercises for feedback and an annual satisfaction survey in which we track satisfaction across **our different DSO personas**.

Key 'course corrections' this year

Feedback from stakeholders has been invaluable in helping us to identify and recognise where we needed to go further and faster. **Drawing on feedback from all these channels we made a range of 'course corrections'** – ranging from reorganising our teams and increasing senior stakeholder focus, though to making changes to our delivery plans to add new initiatives and de-prioritise others.

The following table summarises examples of key areas in which we have changed our focus based on feedback. **These are discussed in further detail throughout this progress report, and captured in detail in our 'You Said, We Did' document.** These corrections will continue to be delivered in the coming year as we work on activities with longer cycles, such as flexibility tenders.

Table 1: An overview of key 'course corrections' this year

	Feedback	Highlights of how we have sought to address feedback
Delivery of DSO Benefits	• The DSO Performance Panel encouraged us to improve clarity of benefits and tracking, and demonstrate how activities impact across stakeholder groups. • Stakeholders asked that we expand the geographical reach of our engagement, help them understand industry complexities and provide visibility on how feedback is used.	• Refreshed our benefits methodology with a focus on how we can deliver benefits across the whole energy system. • Strong contribution to the ENA DSO Collaboration Forum on benefits standardisation, including drafting the collaboration appendix. • Developed our Social DSO Strategy to better signal our DSO ambitions. • Defined KPIs and strengthened our internal benefits tracking and programme governance approach. • Increased 1-2-1 engagement and regional coverage, and introduced a 'you said, we did' process for all channels.
Data and Information Provision	• The DSO Performance Panel suggested they saw room for us to push ahead and catch up with leaders' offerings on data provision. • Data users provided feedback in a range of detailed areas, such as updates to datasets, their frequency and a need for more guidance. • Local authorities asked for more specific data to help them in planning for their region.	• Published our Data Roadmap highlighting future improvements based on industry practice review. • Published 45 new datasets, created video guides and offered webinars and 1-2-1s for demonstrations. • Developed visualisations for key datasets. • In response to feedback, we launched data-driven tools designed to support the needs of our stakeholders. • Made data available by local authority/county level.
DER Dispatch Decision Making Framework	• The DSO Performance Panel wanted insight into our dispatch decision-making and evidence of the intended roll-out of our plans (e.g. ANM). • Wider stakeholders asked for help to better understand our approach to operational dispatch decision-making. • It became apparent in year that there was an opportunity to adapt our ANM delivery to enable connections for customers delayed by transmission reinforcement.	• Reached major delivery milestones with the successful commissioning and testing of our integrated ANM system. • Consulted on and republished our ODMF, with visuals and examples. • Pivoted our ANM delivery programme and worked with Schneider Electric to integrate management of transmission constraints into our solution, and worked with customers to accelerate connections for those in areas of transmission constraints to enable wider system benefits.
Flexibility Market Development	• The DSO Performance Panel wanted to see us priming the market for flexibility, and better explain the rationale for our approach. • Flexibility Service Providers (FSPs) asked us to give them clarity on revenue returns, more opportunities to participate and publish flexibility outturn data.	• Adapted our approach to drive greater participation by ramping up targeted sector engagement and publishing our Flexibility Strategy to engage more stakeholders. • Continued tendering and contracting flexibility services. • Accelerated tendering for Low Voltage (LV) needs for the first time. • Addressed contracting barriers, improved revenue transparency with £/kWh payments, updated our cost calculator and user guides, and data publications.
Options Assessment and Conflict of Interest Mitigation	• The DSO Performance Panel wanted us to provide greater clarity on conflict management processes, how the DSO function works alongside the DNO and greater justification for our DSO:DNO separation approach. • Wider stakeholders requested an updated DNOA methodology with improved clarity on our decision-making approach.	• Defined and published our DSO:DNO Governance Framework to clarify how our DSO and DNO functions work together and our decision-making, governance and assurance approaches. • Updated our DNOA methodology to outline how we assess LV flexibility, prioritise non-asset solutions to optimise capacity release and highlight the key aspects of our ANM system that enables us to scale flexibility services and accelerate connections.

Case study: How this feedback is shaping our strategy and ambition - Our new Social DSO Strategy

Responding to stakeholder feedback regarding our Year 1 progress has shaped our near-term delivery focus, but **also triggered a wider-reaching reflection on our long-term strategy for DSO**.

Our **Social DSO Strategy** was co-created with customers and stakeholders through a collaborative approach that brought together diverse perspectives to develop, shape and refine our strategy. Rather than a top-down model, we embraced co-creation to ensure our strategy is well-informed, inclusive and reflective of stakeholder needs.

Our Social DSO Strategy aims to achieve **our vision 'to be the leading Social DSO in Great Britain'**. It combines a strong focus on decarbonisation, economic growth and affordable infrastructure while maximising societal benefits. The strategy provides a clear framework for **ensuring a fair and inclusive energy transition, making sure the shift to clean energy benefits everyone**.

Traditionally, the conversation around DSO often begins with what energy networks, the regulator and the wider industry are doing to implement the DSO model. **We advocate for a more progressive approach where DSO activities are delivered in a distinctive way**, enhancing the ability of individuals and organisations to contribute to achieving net zero.

A just energy transition refers to ensuring fairness, equity and inclusivity as societies shift from fossil fuels to renewable and sustainable energy sources. As part of our Social DSO business model, **we will make specific social commitments — explicit promises, goals and initiatives that tackle societal issues, enhance community wellbeing and fulfil our responsibilities to customers**. This social model will guide our actions, providing a new perspective on the decisions we make.

This new strategy will be followed up with a refreshed detailed delivery plan in early 2025/26.

Figure 2: Our Social DSO Strategy goals

Goal 1:
Timely investment to enhance the network's ability to support regional and national net zero targets.

Goal 2:
Make investment decisions that maximise social benefits in the North West, supporting the environment, economy and community resilience.

Goal 3:
Promote broader sharing of net zero benefits by supporting clean energy investments, sustainability and climate projects in vulnerable communities.

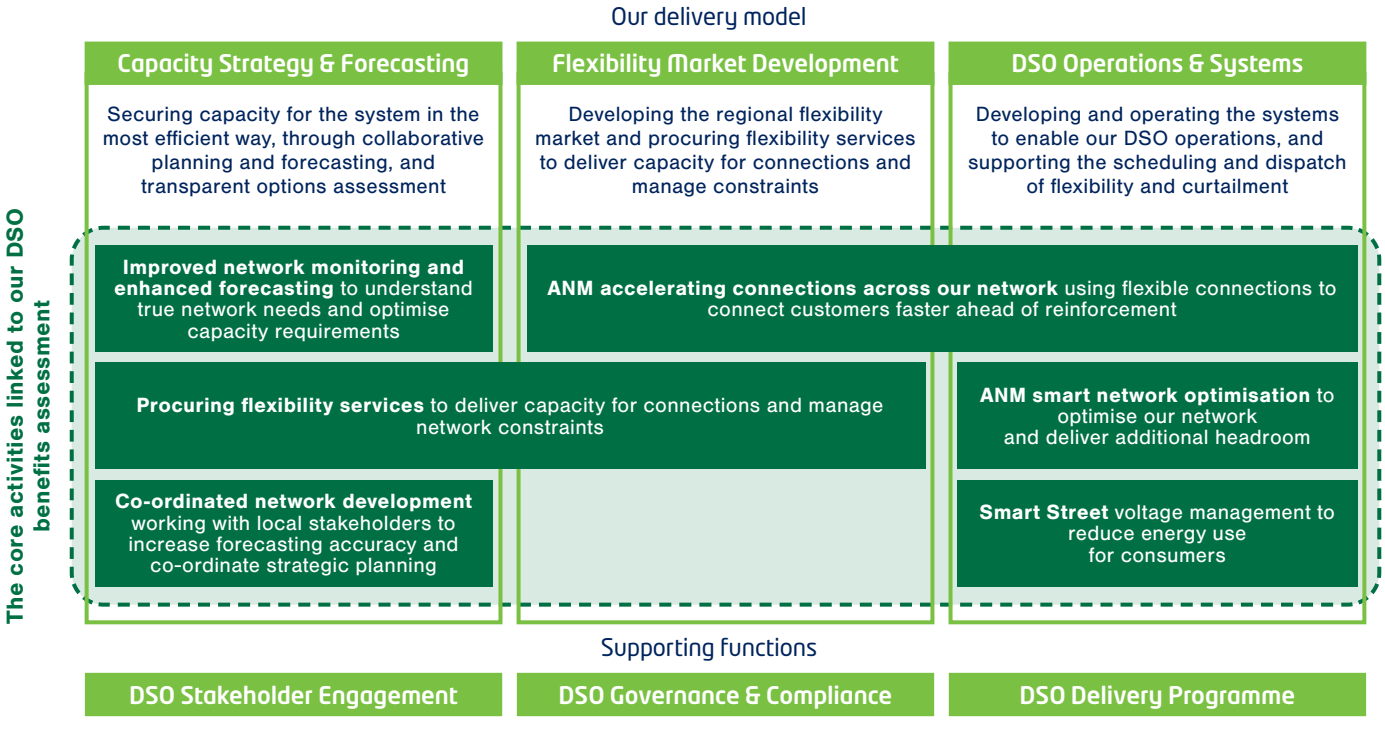
Goal 4:
Increase participation in the energy transition, extending beyond the usual groups to include those at risk of being left behind.

Goal 5:
Work collaboratively to increase system efficiency, using smart technology and partnerships to maximise clean renewable energy when it is available.

How we are organised to deliver DSO benefits today

Our DSO team and capabilities are structured around Ofgem's three key DSO roles. Each area of our DSO delivers a range of activities, which in turn deliver benefits to a range of customers and stakeholders. The figure below illustrates the structure of our DSO, and a set of specific **activity areas that are clearly linked to our quantified benefits assessment which is set out later in this section**.

Figure 3: Our DSO functions and the key activities set out in our benefits assessment



How we are tracking and managing delivery of our DSO programme

Delivering DSO requires balancing the ongoing **delivery of Business as Usual (BaU) activities, while also managing investments and business change projects** to build capabilities and evolve what we do. We employ **robust project management office processes** based on PRINCE2 methods to manage our programme.

A range of regular operational meetings take place with other key teams in the delivery of business outputs, to facilitate interactions detailed in our DSO:DNO Governance Framework. From a delivery governance perspective, o**ur DSO management team meets weekly** to discuss progress of delivery and raise any issues for discussion and resolution. We have a **regular monthly Executive Committee meeting** to provide an update on progress, as well as **ad-hoc director and CEO meetings** to resolve blockers and issues that may emerge.

At the end of Year 2, 92% of the activities from our original RIIO-ED2 DSO Transition Plan have been completed or are in progress, while four have been adapted or postponed in response to business decisions, external factors or stakeholders' demands. While this shows good progress – particularly on longer-term systems delivery items – **it highlights that we need to continually review and refresh our delivery plans with stakeholders**.

In addition to the activities outlined in our RIIO-ED2 Business Plan, **we committed to 38 new activities in our Year 1 report, 74% of which have been completed this year**. Additional focus areas and initiatives were also introduced for Year 2 **in response to feedback from the Ofgem DSO Performance Panel**, and wider new insights from stakeholders. One such initiative is the development and publication of our DSO:DNO Governance Framework, which was created based on stakeholder feedback and in alignment with emerging industry best practices.

Further details on what we have stopped, started, and continued can be found in Appendix B.

Progress against our DSO Transition Plan

92% of our original DSO Transition Plan activities have been completed or are in progress - including 12 completed this year

10 new activities instigated specifically due to Ofgem Stakeholder Panel feedback, 100% of which have been delivered

38 new activities committed to last year, 74% of which have been successfully delivered

9 activities have been closed or postponed due to clear business decisions, external factors or stakeholder demands

Establishing and tracking against DSO KPIs

Alongside refreshing our benefits methodology, **we have also reviewed and updated our DSO KPIs**. These KPIs are now linked to our benefits delivery, as well as broader indicators and outcomes. In developing the KPIs we ensured they are:

1. **Measurable,** enabling clear tracking.
2. **Material,** ensuring we focus on what matters most to our business, customers and stakeholders.
3. **Within our control,** so we can take full accountability and ownership.

Going forward, we will track these KPIs during our monthly management meetings and quarterly DSO Stakeholder Panel meetings. We will also publish these on a quarterly basis for stakeholder visibility.

Table 2: Our DSO benefits tracking KPIs

DSO Incentive Criteria Alignment	KPI
DSO benefits	Value of reinforcement deferred due to DSO/DNO activities
	Connections accelerated using active network management
	Network capacity released through flexibility services
Data and information provision	Forecasting accuracy of peak utilisation across primary substations
	% of local authorities engaged in LAEP sessions
	% of datasets accessed via the Application Programming Interface (API)
Flexibility marketplace development	Volume of flexibility services procured
	Strategic regional partnerships focusing on delivering social value
Options assessment and conflict of interest mitigation	DSO stakeholder satisfaction
	Proportion of network options assessments recommending flexibility
DER dispatch decision making framework	Consumer energy savings from smart network operation (Smart Street)
	Curtailment efficiency - proportion of network capacity which was available for flexible connections

1.2 How we assess DSO benefits

Our approach

To ensure that our DSO activities remain focused on delivering the best return for our customers and stakeholders, we have strengthened our benefits framework this year. In doing so we have ensured that our approach:

- Follows HM Treasury Green Book guidance to evaluate benefits, ensuring robust and transparent tracking of benefits. This includes alignment with our RIIO-ED2 Business Plan and planning for RIIO-ED3.
- Clearly considers how DSO activities affect different types of consumers and facilitating parties.
- Balances the use of data, leveraging network monitoring along with forecasted and historical data, to ensure our methodology supports progress towards future system needs, not just near-term ones.
- Collaborates across DNO and DSO functions to align activities and complement broader network investment planning.

What we have delivered this year

The DSO Performance Panel set a clear expectation for greater rigour in demonstrating and quantifying benefits, along with improved consistency across the six DNO Groups in Great Britain. In response, the DSO Collaboration Forum, facilitated by the ENA, set out to develop a common approach. We took a lead role in the project, establishing the forum, becoming the chair, drafting the **collaboration appendix** and maintaining ownership throughout.

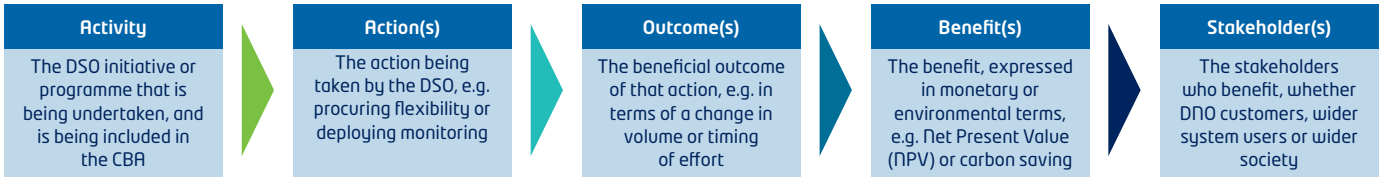
We have updated our methodology and published our first annual **DSO Benefits Methodology report** for stakeholders and Ofgem to review. Our approach now encompasses a broader range of activities and captures both wider system and societal benefits. It is also underpinned by the 'Theory of Change', aligning us with industry best practices developed through the ENA DSO Collaboration Forum.

A high-level overview of the approach taken to assess the benefits attributed to our DSO activities is illustrated in Figure 4.

Figure 4: Benefits approach

The Theory of Change, shown below, ensures that each activity has clear outcomes and benefits, which are directly linked to the stakeholders they impact. This method provides quantifiable benefits, typically expressed in monetary terms (e.g. avoided or deferred costs), while also accounting for non-monetary benefits such as carbon emissions reduction. To measure the broader social, environmental and economic impacts of our activities, we have calculated Net Present Social Value (NPSV) in line with the Social Return on Investment (SROI) framework, ensuring a comprehensive evaluation of the value generated by our DSO activities.

Figure 5: Theory of Change



A summary of our benefits assessment is shown below. On the following pages we provide an overview of each activity area, including a concise summary based on our DSO Benefits Methodology Report explaining how each area has been assessed.

Table 3: Summary of quantified benefits per DSO activity (£m)

Activity	NPV Y1	NPV Y2	NPV ED2	NPV to 2040
Monitoring	1.9	3.0	24.2	97.6
Flexibility Procurement	0.2	1.2	30.0	1,495.9
Accelerating Connections	5.3	11.4	141.5	1,316.6
ANM optimisation	0.0	0.1	30.5	348.2
Co-ordinated network development	8.6	8.7	43.8	438.6
Smart Street	2.4	4.7	33.4	33.4
Total	18.4	29.1	303.3	3,833.3
Network cost savings	4.9	7.3	81.7	1,005.3
Wider system and societal benefits	13.5	21.8	221.6	2,828.0

Table 4: Summary of carbon benefits per DSO activity (tCO_2e)

Activity	Carbon Y1	Carbon Y2	Carbon ED2	Carbon to 2040
Monitoring	1,425	2,139	17,099	41,894
Flexibility Procurement	187	273	5,646	193,553
Accelerating Connections	38,112	54,684	380,037	4,726,460
ANM optimisation	0	0	0	0
Co-ordinated network development	136	136	679	21,547
Smart Street	161	322	2,418	12,092
Total	40,022	57,554	405,880	4,995,545

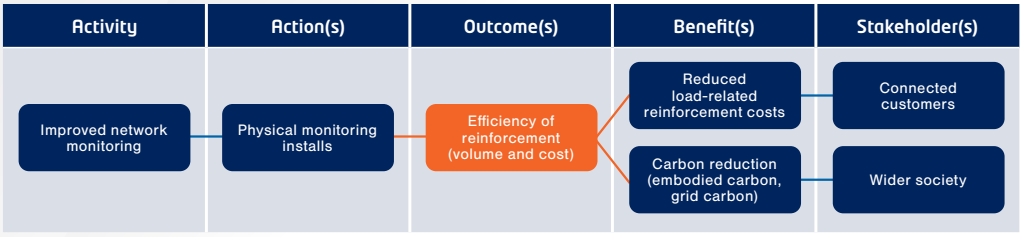
An overview of the benefits set out in our **DSO Benefits Methodology report**. All benefits are provided in 2023/24 prices.

Improved network monitoring and enhanced forecasting

Monitoring	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	3.0	24.2	97.6
Carbon saving (tCO_2e)	2,139	17,099	41,894

How this delivers benefit: The first step in the DSO role of securing efficient network capacity for customers is to have visibility of the demand and load flows on the network. By having greater visibility of network conditions across a wider proportion of our network, it allows us to intervene (i.e. through flexibility or reinforcement) more accurately. This can avoid us intervening too early when not necessary, or too late when issues have emerged on the network, therefore saving reinforcement or operating costs.

How we have quantified the benefit: As a baseline, we assume that sites in the 80-100% peak utilisation band would have been reinforced in the absence of permanent LV monitoring. Our monitoring deployment profile increases from 20% to 35% over RIIO-ED2, with Year 2 bringing coverage up to 25%. In parallel we continuously investigate the quality and adequacy of smart meter data to produce enhanced estimates (see our **Smart Meter Data Study** for more information). We observe that reinforcement can be deferred at those sites in the 80-100% band where monitoring is put in place, and that reinforcement can be deferred by five years.



An increase in network monitoring from 20% to 25% of sites

Average five years reinforcement deferral per site with monitoring installed

Accelerating connections across our network

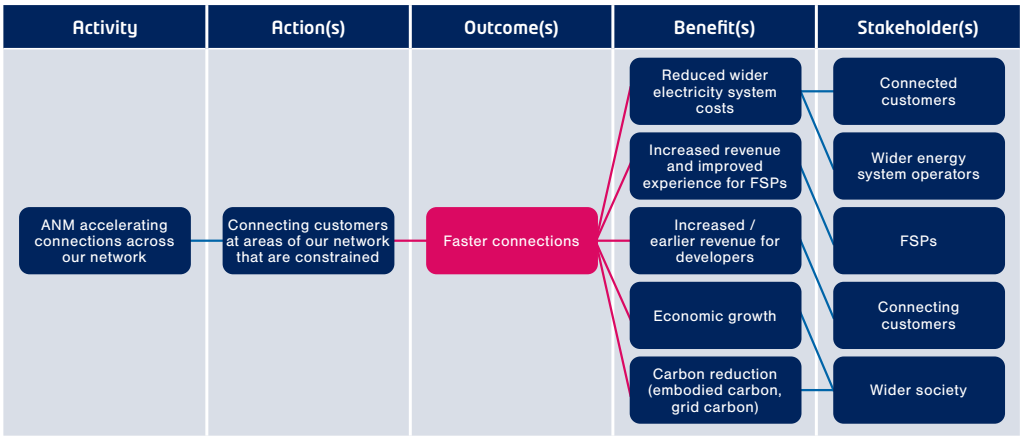
Accelerating connections	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	11.4	141.5	1,316.6
Carbon saving (tCO_2e)	54,684	380,037	4,726,460

How this delivers benefit: Flexible connections enable customers to connect to the network sooner than if they had to wait for reinforcement to occur ahead of connection. This delivers benefits to the connecting party, along with wider system and consumer benefits, and (in the case of generation) a reduction in grid carbon intensity. We have a range of flexible connections schemes in place, allowing us to accelerate or increase the access rights for a range of new generation, storage and demand customers, at both transmission and distribution levels, including enabling the installation of EV chargers and heat pumps.

How we have quantified the benefit: For **generation customers**, using flexible offers is allowing us to accelerate connection of these technologies by an average of six years, displacing the need for gas generation mix. For demand customers flexible offers can speed up connections by an average of four years at the Bulk Supply Point (BSP) and primary levels of our network. Benefits are quantified based on the wider economic benefit this facilitates using a Gross Value Added (GVA) figure of £430k/MVA/year, and assuming a 20% attribution to our DSO activities.

For **storage customers**, flexible connections allow us to ascribe 50% additional peak import/export capacity than they would have under conventional connections, allowing them to generate greater revenue, which we quantify as a proxy to wider system value.

For **EVs and heat pumps** we are able to use connect and notify arrangements where circuit upgrades are required through the use of load limiting devices. Approximately 20% of the projected rollout is enabled through our DSO activities, with benefits quantified through lower driving costs and carbon emissions, and the carbon savings associated with heat pumps compared to gas boilers.



Accelerating generation customers by six years and demand by four years through flexible connections

Providing storage customers with 50% additional peak import/ export capacity

Driving 20% of EV and heat pump connections through Connect & Notify arrangements eliminating delays

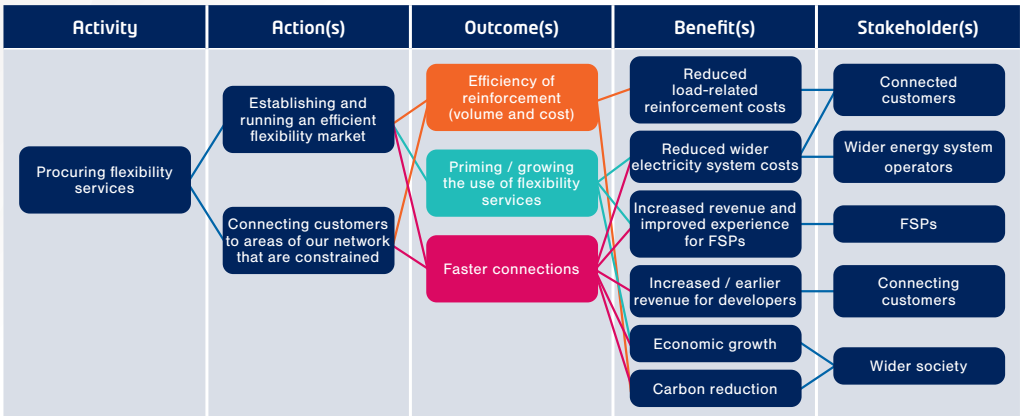
Procuring flexibility services - for reinforcement deferral and for accelerating connections

Flexibility for reinforcement deferral	NPV Y2	NPV ED2	NPV to 2040	Accelerating connections (via flex)	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	1.2	11.0	209.7	**Financial saving (£m NPV)**	0.0	19.0	1,286.2
Carbon saving (tCO_2e)	273	1,877	15,480	**Carbon saving (tCO_2e)**	0	3,769	178,073

How this delivers benefits: As described in Section 4, our targeted stakeholder engagement and launch of the new ElectronConnect market platform has made it easier for FSPs to participate in our market. Flexibility services can (a) allow us to defer reinforcement of our BSP, primary and secondary sites, thus enabling more efficient timing of reinforcement, and (b) drive accelerated connections to our grid which in turn can drive economic growth.

How we have quantified the benefit: For reinforcement deferral benefits we have forecast the number of substations that require load-related intervention, and assumed that flexibility services can be used on an increasing proportion of those sites (3% as of today, rising to 35% by 2040) based on observations to date and industry practice. We estimate the cost of flexibility based on the ceiling price from the Common Evaluation Methodology (CEM), assuming that the cost is 80% of this ceiling price during RIIO-ED2, then falling by 2% per year. Using our reinforcement scheme costs data, we assume that the reinforcement of a BSP costs £8.8m and can be deferred by five years. For a primary substation, we assume a cost of £5.5m and four years deferral. For secondary substations, we assume a cost of £32k and five years deferral.

In addition, we assume that flexibility can be used in lieu of flexible connections – i.e. that connections eligible for flexible arrangements could also be accelerated through flexibility procured to enable capacity for connections. This benefit is calculated based on the assumptions set out for flexible connections (see previous page), and assuming that we are able to deliver an increasing proportion of these connections through capacity released via flexibility, rather than flexible connections, between now and the end of RIIO-ED3.



Dispatched 4,349 MWh of flexibility - more than ever before

44% of DNOA assessments resulted in sites managed with flexibility this year

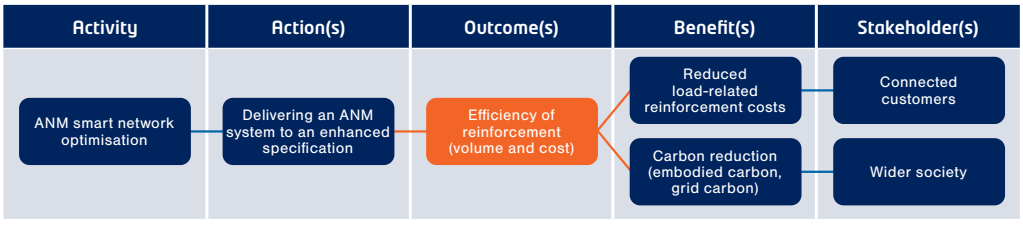
22 LV flexibility requirements in our autumn tender, across 11 secondary substations serving 5,000 customers

ANM smart network optimisation

ANM optimisation	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	0.1	30.5	348.2
Carbon saving (tCO_2e)	0	0	0

How this delivers benefit: Flexible assets are items of plant or equipment which can be controlled to modify the network topology. Load transfers and network reconfigurations using flexible assets can remove capacity constraints in real time. We derive unique benefits from our ANM that, unlike all other industry approaches, utilises real-time centralised power flow data to manage flexible assets. This allows for greater network optimisation and the capability to unlock greater network capacity, while also improving network stability and security. See Sections 3 and 5 for more details.

How we have quantified the benefit: Network ANM allows us to create headroom, reducing the need for conventional reinforcement. ANM is energised and can be deployed across the HV and EHV networks by the end of RIIO-ED2 (though we will only deploy where it is needed). The RIIO-ED2 benefit can therefore be considered 'unlocked'. Where ANM is active, it has been shown to enable up to 30% additional headroom at some substations. In the CBA we conservatively assume an additional 5% of headroom, to which we ascribe a value of £63.3k/MVA. This value is based on the unit rate per Ground Mounted Transformer as per the Load-Related Expenditure (LRE) Secondary Reinforcement Volume Driver.



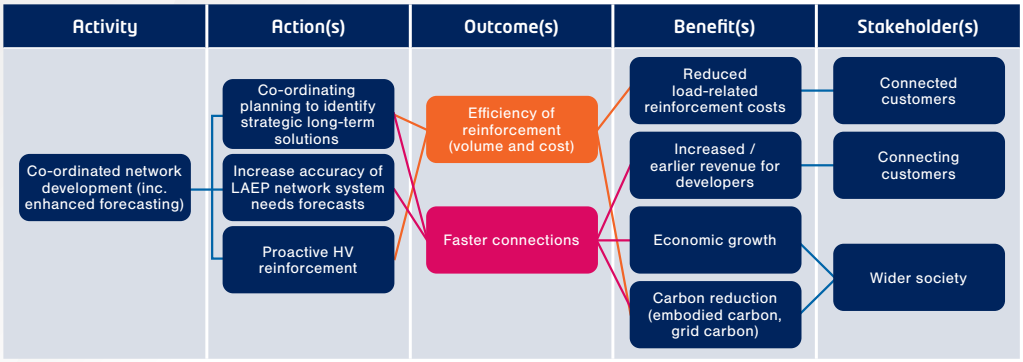
Smart network optimisation implemented capable of delivering 5-30% additional headroom at substations

Co-ordinated network development

Co-ordinated network development	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	8.7	43.8	438.6
Carbon saving (tCO_2e)	136	679	21,547

How this delivers benefit: This refers to the process we use to develop the network as described in Section 5.2. We collaborate extensively with local authorities, developers and regional businesses to take a long-term view and develop the network strategically, avoiding piecemeal reinforcement driven by individual connections applications. This enables the timely release of capacity for connecting parties, and cost-effective reinforcement. Rather than delivering reinforcement actions several times in the same area, we work with stakeholders to identify opportunities to deliver more strategic solutions that enable us to intervene once and at lower cost.

How we have quantified the benefit: We have delivered a range of strategic schemes, as set out in case studies in Section 5. At EHV levels of the network, CND has been shown to reduce scheme costs by 20%, and at HV levels by 33%, compared to a purely reactive network development approach. This has been translated into a network reinforcement saving against our LRE plan, driving a cost saving as well as an embedded carbon saving. By bringing this reinforcement activity forward, and being more proactive in our engagement with third parties, we also provide benefits for wider stakeholders through earlier connections. This impact was assessed through a SROI study undertaken as part of our **LRE re-opener** submission to Ofgem.



Reduction in reinforcement costs by 20% at EHV levels and 33% at HV levels through coordinated network development

Associated benefits of faster connections

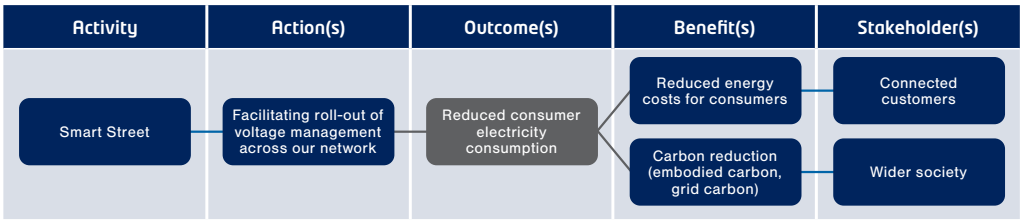
Smart Street

Smart Street	NPV Y2	NPV ED2	NPV to 2040
Financial saving (£m NPV)	4.7	33.4	136.5
Carbon saving (tCO_2e)	322	2,418	12,092

How this delivers benefit: Smart Street reduces the electricity demand at domestic properties, resulting in bill savings for customers and associated carbon savings. Although not quantified, this can also deliver network savings by reducing loading at peak times. This is achieved through an automated operational process that uses tap changers to reduce the voltage at these properties. This provides significant support for customers in vulnerable circumstances, particularly those in fuel poverty. All assumptions align with our Ofgem approved Smart Street Consumer Value Proposition created as part of the RIIO-ED2 submission.

How we have quantified the benefit: Around 100,000 customers benefited from Smart Street this year, and we project this number to increase to 250,000 by the end of RIIO-ED2. As such £20m of the RIIO-ED2 benefits are already 'unlocked'. Our trials have shown that savings of £40 per home per year can be expected from Smart Street. Furthermore, we estimated that 16% of the customers can be considered vulnerable. As such, there is an additional £59/year of benefit that can be ascribed to these customers based on our SROI methodology. The carbon benefit is calculated by first calculating the kWh consumed by affected customers. This is estimated as 157kWh based on an assumed 25p/kWh customer electricity cost. This is then multiplied by the carbon intensity of a kWh of electricity.

There is also a benefit of reduced demand on the network reducing reinforcement requirements, though we assume this is captured financially within customer bills and so do not double count.



100,000 homes benefiting from Smart Street

£40 per home energy bill savings per year

1.3 How we are delivering benefits for our customers and stakeholders

Through our activities, we have delivered a range of benefits to various stakeholder groups. The figure below outlines how these benefits are distributed across these groups and **our personas** to illustrate how DSO is delivering value across them. It also provides insights into the expected scale of impact in RIIO-ED2 and beyond, extending to 2040.

Figure 6: How we are delivering benefits for our customers and stakeholders

Our eight stakeholder personas

Stakeholder type	Connected customers	Connecting customers	Flexibility service providers	Wider energy system	Wider society
Description	Refers to those already connected to our network, with these benefits translating into reduced bills.	Refers to all those looking to connect to our network, who can benefit from cheaper or faster connections.	Refers to those involved in our flexibility markets, responding to our tenders and contracting to provide services.	Refers to the overall system electricity price and wider system operators, particularly the NESO.	Refers to benefits delivered to society in general, without attribution to a specific beneficiary.
How our activities deliver benefits to stakeholders					
Monitoring & forecasting	↓ Reinforcement cost				↓ Embodied carbon
Flexibility procurement	↓ Reinforcement cost	↓ Connection delay ↑ Earlier revenue	↑ Revenue opportunity ↑ Provider service	↓ Connection delay ↓ Wider system costs	↓ Embodied carbon ↑ Economic growth
Accelerating connections	↓ Wider system costs	↓ Connection delay ↑ Earlier revenue	↓ Connection delay ↑ Earlier revenue	↓ Connection delay ↓ Wider system costs	↓ Grid carbon ↑ Economic growth
ANM optimisation	↓ Reinforcement cost				↓ Embodied carbon ↑ Economic growth
Co-ordinated network development	↓ Reinforcement cost	↓ Connection delay ↑ Earlier revenue		↓ Connection delay ↓ Wider system costs	↓ Embodied/grid carbon ↑ Economic growth
Smart Street	↓ Energy consumption				↓ Grid carbon
NPV RIIO-ED2	**£134m**	**£83m**	**Not quantified**	**£39m**	**£47m**
NPV 2040	**£1,286m**	**£1,055m**	**Not quantified**	**£1,146m**	**£345m**

Benefits to connected customers

'Connected customers' are those already connected to our network – including domestic consumers, I&C and DERs. We deliver financial benefits to these customers by reducing distribution network and wider system costs on their bills.

All of the DSO activity areas set out in our benefits assessment deliver benefits to connected customers:

- **Improved network monitoring and enhanced forecasting** enables us to avoid intervening in the network too early when not necessary, or too late when issues have emerged, reducing reinforcement costs which feed through to bills.
- Where interventions on the network are required, we **procure flexibility services** and use **ANM smart network optimisation** to unlock efficient and accelerated capacity on the network without the need for reinforcement costs.
- We also **accelerate connections on the network** through flexible connections which drives a range of benefits that reduce wider energy system costs (e.g. through reduced higher-cost gas generation or better access to DERs for system balancing) which feeds through to customer bills.
- When reinforcement is required, through **co-ordinated network development** we deliver proactive solutions that avoid fragmented network expansion, ensuring asset solutions are economic and efficient, leading to reduced energy bills and network charges.
- Finally, we continue to embed **Smart Street** into BaU, reducing the demand from customer appliances within safe operating limits, reducing the energy required in the home and delivering electricity bill savings.

Benefits to connecting customers

'Connecting customers' refers to all those looking to connect to our network. In some areas, when customers apply to connect to the network they may face delays due to constraints on the transmission or distribution networks.

A range of our DSO activities deliver benefits to these customers through accelerating connections timeframes:

- **Co-ordinated network development** is a key tool to ensure timely connections, by ensuring network capacity is in place when and where needed before customers apply to connect.
- **Flexible connections** enable us to connect customers faster by providing the means to restrict network access occasionally at times of network constraint.
- We can also **procure flexibility services** to deliver network capacity for connections ahead of (or avoiding) reinforcement.

Earlier connections provide customers with the opportunity to develop their projects sooner and in their preferred locations, driving financial benefits by enabling them to make investments and earn returns more quickly.

It also delivers benefits for wider society, such as earlier carbon reduction from distributed generation, and GVA benefits associated with regional economic development. For instance, the connection of a new housing estate will have associated benefits for residents and local businesses.

As set out in Section 2, we also provide a range of data and accessibility support for connecting customers, to make it easier for them to understand and assess where to apply to connect.

Benefits to flexibility service providers

FSPs are the parties involved in our flexibility markets, responding to our tenders and providing flexibility. Our role is to bring opportunities to market, make it easy for FSPs to participate, and co-ordinate with other system operators to ensure they can maximise their flexibility value.

This year we have extended the range of opportunities for FSPs to include flexibility to release capacity for connections, and our first tenders at low voltage levels of the local network.

We have also conducted a range of activities as set out in Section 4 to improve their experience, including: launching new dynamic flexibility services, updating our contracting approaches to make it easier to participate, launching our new market platform which streamlines their user journey, and providing updated tools and data to FSPs so they can self-serve for data when they need it.

While these benefits are non-financial or non-quantifiable, they are important services for our FSPs and serve to enable the benefits of the flexibility market more widely.

Benefits to the wider energy system

By 'the wider energy system' we are referring to the overall electricity system performance (i.e. wholesale price, balancing costs and carbon intensity) and wider system operators, particularly the NESO.

The key way we deliver quantified benefits to the wider energy system is through accelerating connections – through **co-ordinated network development, flexible connections and procuring flexibility services** to deliver network capacity for connections ahead of (or avoiding) reinforcement.

This enables low carbon generation to connect to the system earlier than it otherwise would, bringing down the overall cost of energy. Earlier connections of DERs also provide a benefit for system operators from earlier access to the flexibility they can provide, reducing balancing and ancillary services costs.

A unique feature of our approach to flexibility is our Merit Order Management (MOM) system which integrates and optimises across flexibility service and flexible connections options. We are able to consider a cost for a curtailment action, which in practice means our systems will select **flexibility options** (such as demand turn-up) rather than curtailing a generator where it can **lead to a more optimal whole system outcome**.

We also co-ordinate with the NESO to ensure FSPs can maximise their participation in both our DSO flexibility market and the NESO's markets at the same time. This includes maintaining alignment of the commercial terms of our market products with those of the NESO, as well as ensuring our dispatch framework is consistent with the ENA Primacy Rules.

In operational timeframes, our market platform, enabled through our partnership with Electron, enables us to notify the NESO about availability and intended dispatch of flexibility services a week in advance. We also share a risk of conflicts report available via an API from our Open Data Portal.

This co-ordination empowers service providers to effectively participate in the NESO's markets, thereby boosting liquidity and improving market access for providers, and benefits the NESO by enhancing their awareness of available resources.

For every £1 of network cost savings we deliver for connected customers we deliver nearly £3 of additional benefits to the wider energy system and society

Wider societal benefits

By 'societal benefits' we are referring to benefits delivered to society in general, without attribution to a specific beneficiary. We view societal benefits as a key enabler in delivering meaningful, lasting impacts for the communities we serve. In our benefits assessment we have reviewed and quantified both economic growth enablement as well as carbon reduction benefits.

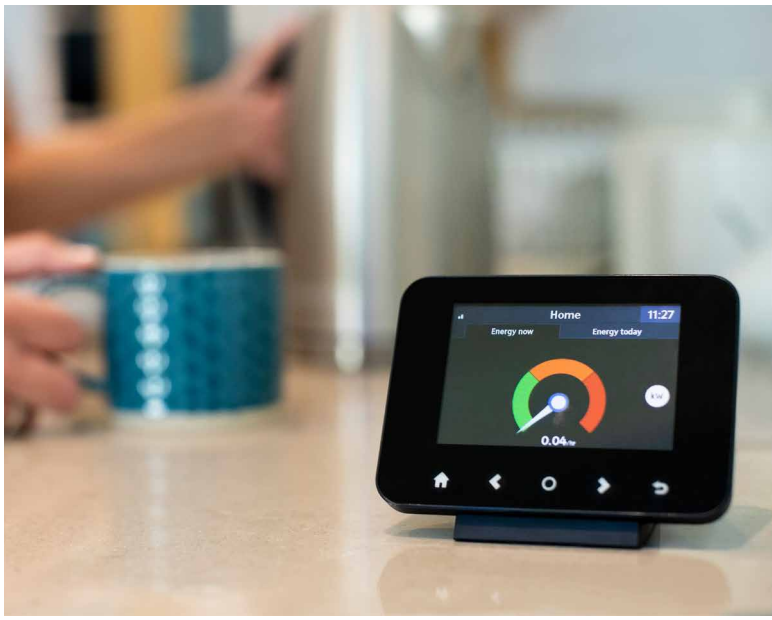
Our role in enabling economic growth stems from providing network capacity when and where it is needed, allowing developers across all sectors to connect to our network, enabling projects to move forward and creating job opportunities in our area.

The key DSO activities driving earlier connections and therefore economic growth enablement are **co-ordinated network development, flexible connections and procuring flexibility services** to deliver network capacity.

Many of our actions to deliver benefits also result in **carbon avoidance**. Firstly, where we can accelerate the connection of renewables and/or enable the use of flexibility to make better use of low carbon generation, we facilitate a reduction of carbon-intensive peaking plants. Secondly, whenever we can reduce the level of asset build – i.e. through **improved network monitoring and enhanced forecasting, ANM smart network optimisation, procuring flexibility services**, or **co-ordinated network development** – we can avoid the embodied carbon in building network infrastructure. Finally, through **Smart Street** we are currently enabling a reduction in end consumer energy demand which reduces the amount of generation needed.

We also support local energy projects via our community energy team, which provides funding and support for projects which foster regional economic development.

Going forward, our new Social DSO Strategy combines a strong focus on decarbonisation, economic growth and affordable infrastructure while ensuring a fair and inclusive energy transition, making sure the shift to clean energy benefits everyone, leaving no one behind.



2. Data and Information Provision

Introduction

At Electricity North West, data is more than just numbers, it's about transforming data into meaningful insights and actionable outcomes for our stakeholders. We provide a range of tools and methodologies on our Open Data Portal, and are committed to upholding the highest standards of accuracy, consistency and completeness to ensure stakeholder trust in our data.

Our continued investment in systems enables us to use and share high-quality, reliable and unbiased information across all data-driven publications. We are also committed to industry-wide data standardisation and have adopted the ENA's Data Triage Playbook to assess all datasets prior to publication. This year we have significantly expanded our data portfolio, increasing both the volume and range of datasets. Guided by stakeholder feedback, we have focused on making data more accessible and user-friendly, while also developing new analytical tools that directly support the needs of our stakeholders.

Our key achievements in 2024/25

Developed our Grid Charge Planner and Small-Scale Solar Project Planner tools

Over 300 stakeholders engaged on our data and information provision

Over 1,500 users now registered and 1.2 million data interactions, reflecting a 25% increase this year

43 new datasets added to our Open Data Portal (a 125% increase compared to last year)

Expanded APIs across all datasets

6 data and information centric events hosted

Launched the Data Education Hub

Published our new data roadmap and 'You Said We Did' report

Launched our ForeSight programme

25% of our secondary substations now have LV monitoring installed

2.1 How we use stakeholder engagement to enhance data provision

- **Gathered feedback from a diverse range of stakeholders** to update our understanding of their needs and our user personas.
- Actively used stakeholder feedback to drive continuous improvement in our data offerings, capturing these efforts in 'You Said, We Did' report.
- **Published our new data roadmap** to provide visibility of past and future datasets.
- **Created tailored user tools** where we have identified stakeholder value, such as tailoring insights for local authorities and community energy groups.

2.2 How we are improving our data offering

- Made improvements to our Open Data Portal to make it **easier to navigate and access data.**
- **Launched the Data Education Hub t**o help stakeholders navigate and utilise our data.
- **Expanded APIs across all datasets** to enable seamless data access and integration.
- **Improved our data offering by adding 43 new datasets** to our Open Data Portal (a 125% increase from last year).
- Continued to integrate **third-party** data with our own to deliver actionable insights rather than simply sign-posting links to external data.
- Continued to **exceed our statutory requirements by providing Long Term Development Statement (LTDS) system data** which combines measurement data from the transmission and distribution interface down to our LV networks.
- **Launched ForeSight**, a programme of projects designed to enhance forecasts across our network and provide better pre-connection tools and more frequently updated data for stakeholders.

2.3 How we drive data quality and standards

- Maintained a strong foundation for unbiased, accurate data through continued investment in our systems, such as expanding automated data processing and cleansing to include LV monitoring data.
- Continued consistent application of our data triage processes.
- Adherence to Ofgem's Data Assurance Guidance when publishing regulatory data, following Data Best Practice Guidance.
- **Aligning our network models with Common Information Model (CIM) guidance** and will share these with the NESO by 2026 in line with industry requirements.
- Led key **improvements to the grid code and distribution code**.
- Actively participating in the ENA's Data and Digital Steering Group to ensure alignment with industry.

2.1 How we use stakeholder engagement to enhance data provision

Our approach

The value of our data sharing activity is determined by the outcomes it drives for customers and stakeholders. As such it is important that we engage stakeholders to ensure that the data we share, and the way that we help them use it, meets their needs.

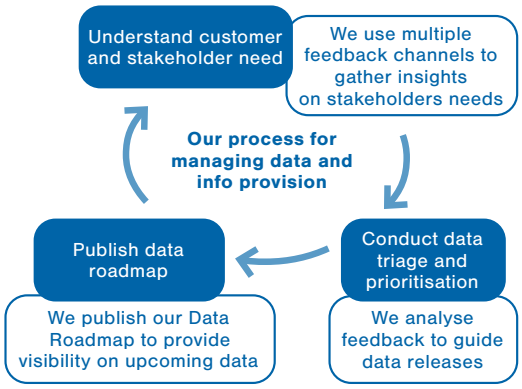
We leverage multiple feedback channels to facilitate direct engagement, consultation and ongoing improvement. These channels help us gather valuable insights into the varying needs of different stakeholders and how they access and use our data services. This feedback helps to refine our **user personas** which are central to prioritising the data we make available and guide how it is shared. Our data releases are outlined in our new **data roadmap**, which includes a timeline for releases and assists in stakeholder engagement.

What we have delivered this year

This year we engaged with our stakeholders on data provision through the following mechanisms:

- **Our DSO conferences (April and October 2024)** – Hybrid events engaging over 180 stakeholders on DSO strategy, including data provision and flexibility markets.
- **DSO functions: Distribution Future Energy Scenarios (DFES), data and flexibility forums (June and November 2024)** – Focused sessions with over 100 attendees covering data-driven network forecasting, flexibility markets and digital tools.
- **Data Drive (November 2024)** – An external industry event where we exhibited network data to generate discussion on potential uses and showcased the opportunities with key datasets.

Figure 7: Data and information monitoring process



- **Data consultation (December 2024)** – A smaller, targeted discussion with key stakeholders to review our data services and future improvements.
- **Stakeholder Panel** – Our DSO Stakeholder Panel plays a vital role in shaping how we share data with our community. This year we used the panel to review our data consultation questions to maximise engagement and gather high-quality feedback.
- **Bilateral meetings with local authorities** – Regular bilateral meetings and surgery sessions with all 35 local authorities to ensure they fully understand and can effectively use our data.
- **Data roadmap** – Our new data roadmap offers clear visibility into both past and upcoming datasets. It is regularly updated with each newly published or proposed dataset.
- **Online feedback** – Stakeholders can use our online feedback form, improved '**contact us**' mechanism, or direct links accessible via all datasets to make requests, ask questions and provide suggestions on our data and information provision services. On average, we receive 5-10 feedback or query emails per week, totalling 388 messages last year.

These efforts have enabled us to gather diverse feedback from a range of stakeholder groups. The key insights gathered this year, along with the actions we have taken in response, are outlined in our '**You Said, We Did**' report. Our early progress and the large volume of data we share has led to fewer requests this year. However, we remain committed to providing additional data where it adds customer value, as demonstrated in the case study below. Moving forward, we will continue to leverage feedback to enhance our data offerings.

Case study: Tailoring insights for local authorities and community energy groups

- **Developed a web tool for assessing small scale solar PV connection opportunities**. Our **Small-Scale Solar Project Planner** is designed to be user-friendly for individuals with varied backgrounds. Users can pinpoint project locations on the map, test various project constraints and view a breakdown of connection options to the nearest part of the energy network. The tool generates outputs that help users understand where to connect, as well as opportunities for additional income through flexibility.
- **Developed a tool which assists with site selection for EV chargers under the Local Electric Vehicle Infrastructure (LEVI) scheme**. Following a successful trial with Westmorland and Furness Council, we developed our **Grid Charge Planner**. This tool uses a traffic light colouring system to indicate the capacity availability on LV cables, allowing users to quickly and easily identify optimal locations for charge points. This tool in now available on our Open Data Portal, ensuring accessibility across our entire region.
- **Provided bespoke data for Greater Manchester Combined Authority**. This included data on domestic and non-domestic batteries to support their five-year environmental plan. We also re-platformed our Network Development Plan (NDP) workbook to show headroom for datacentres ≤50 MW and thereby support Greater Manchester Combined Authority's Artificial Intelligence (AI) strategy.

Westmorland and Furness Council:

"Being able to see the ENWL 'LV All' and specifically the 'LV Connectable' data as a layer in our modelling tool has been invaluable in helping us understand where we can/could/shouldn't locate potential EV charge points sites to achieve best value from our LEVI grant funding."

2.2 How we are improving our data offering

Our approach

We provide a range of tools and methodologies via our **Open Data Portal**, powered by the leading industry platform, OpenDataSoft. This portal serves as a centralised hub, offering data and links to relevant web pages and map portals. We also use third party data sources, but seek to integrate it into useful data sources for stakeholders rather than simply sign-posting to external datasets. For example, where we present smart meter data it is integrated into our overall capacity maps alongside network monitoring data.

The platform enables enhanced data visualisations and customisation features, helping to create accessible, user-friendly experiences for diverse audiences. We provide standardised APIs for seamless access to machine-readable data, enabling large-scale data integration for stakeholders. All published datasets are currently available under a Creative Commons licence, allowing users to freely use, modify and publish the data, provided we are credited as the source.

Following extensive stakeholder engagement, to improve our data offering this year we have:

- Introduced a range of enhancements to data accessibility and support, including our **Data Education Hub** and guidance videos, expanded visualisations and overlay capabilities, improved navigation, and consistent and standardised use of APIs.
- Improved our data offering by adding 43 new datasets to our Open Data Portal (a 125% increase from last year).

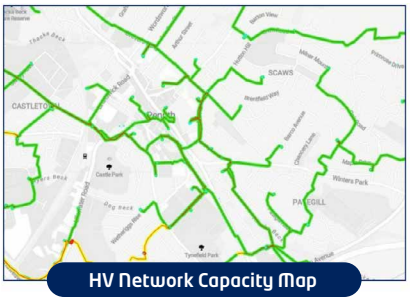
What we have delivered this year

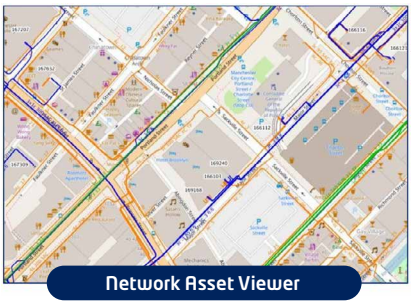
How we make our data and information as accessible as possible

As part of our commitment to improving accessibility and meeting stakeholder needs, we have introduced key enhancements this year:

- **Developed our Data Education Hub:** We created a centralised online resource that simplifies access to key DSO data and tools. It features video tutorials, tailored walkthroughs, interactive resources and easy navigation, making complex information more accessible and user-friendly.
- **Data journeys:** Created short videos to showcase our data and demonstrate its practical application, helping **key personas** unlock valuable insights and optimise their operations to deliver benefits.
- **Expanded data visualisations:** We have visualised our datasets in a variety of styles to enhance user experience. Stakeholders can now create custom visualisations from our datasets, including embedded capacity registers, HV capacity maps, thematic fault maps and our DFES workbook.
- **Enabled overlay capabilities:** Datasets with spatial characteristics can now be layered using the 'mapbuilder' functionality, providing more meaningful insights for stakeholders. Users can customise and save their preferred visualisations for future use, eliminating the need to recreate them each time they visit.
- **Improved navigation:** We have enhanced our Open Data Portal by replacing the generic home page with a more intuitive design that highlights key features. These include our new AI powered search functionality, improved 'contact us' mechanism for user feedback, and dedicated portal pages that provide additional functionality, insights and value to source datasets.
- **Continued access to our Network Asset Viewer:** This portal provides stakeholders with an interactive platform to explore our entire network, from EHV (132kV) down to LV assets.
- **Consistent and standardised use of APIs:** We continue to offer a range of ways to access our data, including enabling APIs across all our datasets. Our APIs have been used approximately 1.2m times by over 1,500 stakeholders, demonstrating their value in supporting efficient data access and integration.
- **Developed specific tools to enhance experience of local authorities:** In response to stakeholder feedback, we created data-driven tools to assist local authorities in planning community energy and EV charger locations. See the case study in Section 2.1.

Figure 8: Example visualisations





As previously discussed, we use various mechanisms, such as webinars, workshops and bilateral meetings, to engage with our stakeholders. These sessions not only provide valuable feedback but enable us to offer direct support to our stakeholders, helping them navigate and understand our data so they can fully leverage it for their applications.

Stakeholders have reported high satisfaction with the changes we have made this year, noting increased ease of access and use. Moving forward, we will continue collaborating with other DNOs to explore the integration of accessibility tools within OpenDataSoft, further reinforcing our commitment to inclusivity and collaboration.

How we are increasing the range of data that we publish

We have improved our data offering by adding 43 new datasets to our Open Data Portal (a 125% increase from last year). Currently, 36% of our published data are updated monthly. Stakeholder impressions continue to grow, with over 1,500 users now registered and 1.2 million data interactions, reflecting a 25% increase in usage compared to last year. Key highlights from this year are provided below, with a full timeline of the data shared on our Open Data Portal outlined in our **new data roadmap**.

Table 5: Our comprehensive data provision across DSO roles

Data type	Data highlights
We share **network planning data** – such as load forecasts, capacity constraints and planned infrastructure upgrades – to enable greater coordination across the energy system. This helps our stakeholders assess opportunities and plan their projects more efficiently.	• Developed new capacity heatmaps to visualise headroom from **Grid Supply Point (GSP)** to **primary**. • Launched ForeSight, a programme of projects designed to enhance forecasts across our network and provide better pre-connection tools and more frequently updated data for stakeholders. • For the first time, published forecasts for over 30,000 substations across our LV network in our new bespoke **DFES LV workbook**. • Continued to exceed our statutory requirements by providing **LTDS system data** which combines measurement data from the transmission and distribution interface down to our LV networks. • Refreshed previously available datasets, such as our primary and BSP demand capacity forecasts, as per our **NDP publication**. • Refreshed our EHV and HV DFES workbook, providing 750,000 data points across multiple geographic levels, including BSP and primary substations, as well as individual councils.
We share **operational and monitoring data** – such as power flow and network configuration data – that supports network users and other relevant stakeholders to make better decisions about how to use the network.	• Published our **GSP Connection Queue** dataset depicting the current 'Contracted Not Connected' pipeline of schemes. • Made our 'Risk of Conflicts' report available to the NESO at week ahead stage through our Open Data Portal via an API. • Continued to use network monitoring to enhance visibility and have significantly improved our insight into the LV network by expanding PRESense coverage to 25% of our secondary substations. • Continued to share **half-hourly GSP boundary flow data** on our dedicated boundary flow page, accessible via the Open Data Portal, which garnered 27,729 stakeholder interactions. • For our Part 4 customers who are subjected to Technical Limits due to transmission constraints, we developed and shared a simple Excel model incorporating half-hourly loading data at their respective GSPs. This helped them understand how they would be curtailed under Technical Limits, enabling them to make an informed decision about the benefits and whether to proceed.
We share **flexibility marketplace data** – such as our flexibility needs, prices and dispatched volumes – to help existing and future FSPs decide how, where and when they can provide flexibility.	• Introduced monthly dispatch data and updated flexibility requirements via our **Flexibility Hub**. • Upgraded our postcode checker tool to allow multiple postcode searches simultaneously, improving the user experience. • Improved our **cost calculator tool** in response to stakeholder feedback. • Increased transparency around flexibility services by sharing data on **historical** and **future** flexibility service requirements via an interactive map. • Developed and published our new **Flexibility Strategy** to provide stakeholders with a clear overview of our current and future flexibility ambitions.
We integrate **third-party data** with our own to deliver actionable insights.	• Leveraged the Microgeneration Certification Scheme database to enhance our own data, enabling us to track heat pump installations. • Combined anonymised Driver and Vehicle Licensing Agency EV registration data with network insights to better forecast charging demand. • Published our **Enhancing network visibility: a smart metering data study** comparing aggregated smart meter data against data from monitoring devices LV feeders. • Used smart meter data to improve network management, storm response and fault identification, helping confirm when customers have no supply.

2.3 How we drive data quality and standards

Our approach

Our approach to data quality

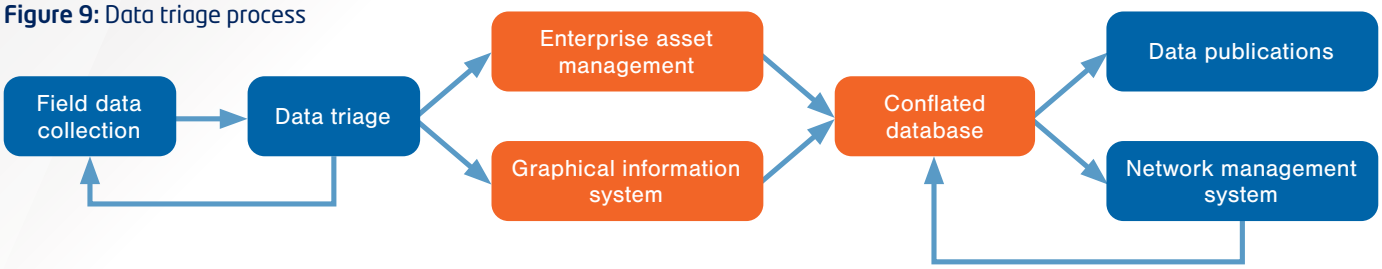
The accuracy, consistency and completeness of our network data is crucial to ensuring the safe and efficient operation of our distribution network, and in maintaining the trust of our stakeholders in the quality of our data across all publications.

Our investment in systems strengthens our ability to meet these needs, establishing a solid foundation for unbiased and precise data:

- **NMS:** Our NMS combines data from our Enterprise Asset Management and our Graphical Information System to form a single, accurate version of the truth across all network voltages, from 132kV to LV. This is an industry-leading feature of our systems, allowing us to incorporate network data into real-time power flows within the ANM system to control the network.
- **Monitoring:** Real time system power-flow data is collected across all voltages levels and stored within the combined NMS database to ensure the data is accurate and reliable.
- **Connect Direct:** We utilise data from ENA Connect Direct to process and publish information regarding the presence of generation, storage, heat pumps and EV charging points on our network.

Our data management team also plays a critical role in ensuring the accuracy of our published data. Experienced staff triage all data received from field operatives using our established quality assurance process before entering it into our corporate systems. Data entry is then subjected to system validation before it can be loaded into the NMS. These multiple validation layers ensure that any erroneous data is identified and addressed, safeguarding the quality of the data we use and provide to our stakeholders.

Figure 9: Data triage process



Our approach to data standards

As a provider of critical national infrastructure and a custodian of both personal and commercially sensitive customer data, we are committed to working alongside industry and government to ensure that the data we share is presented in a standardised and secure format. We adhere to Ofgem's Data Assurance Guidance when publishing regulatory data, leverage Data Best Practice Guidance, and are actively participating in the ENA's Data and Digital Steering Group.

We provide data in industry-standard formats to ensure accessibility and are aligning our network models with CIM guidance. By 2026, we aim to share our power system models in CIM format with the NESO, meeting industry requirements. We are committed to leading the industry by raising standards and driving meaningful improvements in industry codes.

What we have delivered this year

Ongoing data quality management is part of the way we do things, as outlined above. In addition, this year we have implemented several initiatives to improve data quality, including:

- Expanding automated data processing and cleansing to include LV monitoring data.
- Further automating data processing and cleansing at EHV and HV levels by utilising monitoring data across multiple electrical parameters (current, voltage and power).
- Improving forecast accuracy by considering the actual location of projects in the connections pipeline, taking into account overlaps in substation feeding areas (where data is more precise) with local authority regions.

Further, we have also taken proactive steps to elevate industry standards by driving meaningful improvements to industry codes, including:

- **Grid Code (Ref: GC0139):** In 2020, we proposed a modification to facilitate the exchange of electronic power system models in the CIM format, improving data standardisation and accessibility between DNO's and the NESO. This year, we have guided the proposal through industry consultation. The feedback received will be used to refine the code text before submitting to Ofgem for approval.
- **Distribution Code (Ref: DCRP/MP/20/04):** In 2020, we proposed a modification to improve system data exchange between DNOs and Interdependent Distribution Network Operators, leading to the creation of a new Engineering Recommendation, EREC G111. This year, the data exchange requirements were stress-tested with industry to refine them, with the aim of ultimately enhancing data availability and thereby strengthening the overall efficiency and reliability of the network.

3. DER Dispatch Decision Making Framework

Introduction

A central focus of our DSO Strategy in early RIIO-ED2 has been to build the foundational capabilities for flexibility management so that we are ready as market participation grows. **This year we reached a significant milestone with the successful go-live and end-to-end testing of our industry-leading ANM system**. Developed in partnership with Schneider Electric, our ANM is fully deployed across our network and seamlessly integrated with our NMS, and works alongside our third-party market platform ElectronConnect. We have also made progress scaling our use of flexibility, having dispatched 4,349 MWh – more than ever before.

Our key achievements in 2024/25

4 of the 5 of the standardised ENA ON-P products now offered

60% of our customers now covered by network monitoring

20% to 25% Increased deployment of network monitoring on our secondary substations

48-hour ahead visibility of likely future constraints in one-hour blocks through implementation of our 'Look-Ahead' module

Week ahead visibility of Risk of Conflicts report available to the NESO

October 2025 progressed Inter-control Communications Protocol (ICCP) link programme reaching a scheduled go-live date

4,349 MWh flexibility successfully dispatched - more than ever before

3.1 How we operate an efficient, scalable dispatch infrastructure	3.2 How we ensure transparency in dispatch decision-making	3.3 How we co-ordinate scheduling and dispatch for wider system outcomes
• Reached major delivery milestones with the **successful commissioning and testing of our industry-leading integrated ANM and MOM systems**. • Increased visibility of network conditions and DER data through increased network monitoring, consolidating DER response data, and implementing our **new 48 hour 'look ahead' module for short-term forecasting**. • Transitioned to ElectronConnect as our **primary solution for management of flexibility services.** • Enabled **the full range of Open Networks Project (ON-P) flexibility products**.	• **Published and consulted** on our updated ODMF, setting out **how we schedule and dispatch flexibility**, including engaging with our **DSO Stakeholder Panel**. • **Brought our ODMF to life by embedding** it through our new scheduling and dispatch systems.	• Proactively enhanced communication channels between our control room and the NESO. • Incorporated functionality that can enable enhanced DER access to the NESO markets. • Collaborated in the ENA Primacy Technical Working Group and ensured our ODMF dispatch principles align with the primacy rules.

3.1 How we operate our efficient, scalable dispatch infrastructure

Our approach

Our scheduling and dispatch infrastructure is based on two systems. Our ANM system is the core engine that monitors network conditions in real time, reviews flexibility options, and ultimately triggers action. Coupled with this, the ElectronConnect market platform contains details of flexibility contracts and facilitates the dispatch of flexibility services.

These systems work together to identify emerging constraints and review the available flexibility options and their prices (across both flexible connections and flexibility services), applying consistent and transparent rules to select the appropriate options. These are then either scheduled in advance by the DSO operational team, or presented to network control engineers as additional options in real time.

Our focus on scalability, transparency, and efficiency ensures that we are well-equipped to meet the challenges of the future, providing a reliable and resilient energy network for all stakeholders at the most efficient cost and carbon impact.

What we have delivered this year

In early RIIO-ED2 we have focused on delivering new systems and capabilities to enable the smarter use of our flexibility resources, and this year we have reached major milestones. Our progress has enabled us to dispatch more flexibility than ever, including: **0.041MWh for Operational Utilisation; 29.26MWh for Operational Utilisation and Variable Availability; and 4,320MWh for Peak Reduction services**.

Network monitoring and visibility

Efficient and transparent management of flexibility begins with visibility of network conditions and DER availability. We achieve visibility through a range of means. This year we increased monitoring across our secondary substations from 20% to 25% as we progress towards achieving full network visibility, with 95% from monitoring equipment and 5% from smart meter data as described in our **new smart metering data study**. This represents 60% of our customer base. Remote terminal units are used to monitor the input/output of DERs, while ElectronConnect tracks their response to dispatch commands. Our ANM system then uses a 'Look-Ahead' module (implemented this year) to generate a 48-hour forecast of likely future constraints in one-hour blocks. This data is all used to inform decisions on the use of flexibility.

Commissioned our industry-leading ANM system

Developed in partnership with Schneider Electric, our fully integrated NMS and ANM system offer a common data source for decision-making. This reduces the risk of data loss, while enabling direct control over telemetered assets through a single control interface. This year, we commissioned a full GSP group in a test area, ran live operations, and sent dispatch and curtailment signals to a customer who responded in real time. We have also established scalable internal processes and trained our control room and DSO teams to support the widespread roll-out.

As a result, our ANM system is now ready for full-scale live operations, with the first customer expected to connect in May 2025, followed by a phased roll-out across our published **ANM zones**. Integrating our ANM and NMS systems ensures that our infrastructure is efficient and scalable, as we do not need to install additional assets to enable flexible connections, nor configure bespoke local schemes, thus avoiding additional costs or complexities for customers. **We believe several features of our ANM system are unique and industry-leading**.

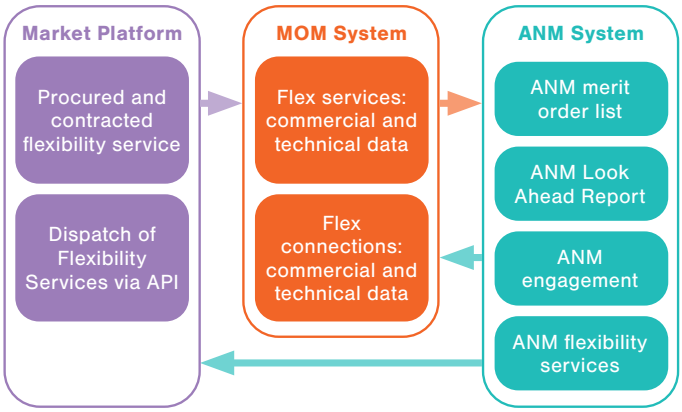
MOM system into BaU

The MOM integrates data for both flexible connections and flexibility services options, providing robust and comprehensive data regarding available DER and flexibility options, while also enabling the ANM system to select from both types of options based on the dispatch principles.

After successful testing for interoperability and functionality in simulated environments this year, MOM has been promoted to the live system for data exchange with the ANM.

In 2025/26, MOM will be modified to support additional needs for secondary trading, building on our BiTraDER project, and incorporate the chosen curtailment methodology from the Technical Limit (Part 4 Connections) consultation.

Figure 10: Our integrated systems



Transitioned to the ElectronConnect platform as our primary solution for dispatch of flexibility services

Covered in further detail in Section 4, ElectonConnect is now our primary channel for flexibility services dispatch, and enables seamless interaction between us and our FSPs through a user-friendly graphical user interface and an API. This facilitates data exchange, dispatch command issuance, and settlement processes such as baselining, metering, and delivery reporting. It offers a comprehensive suite of market access services, including registration, scheduling, dispatch, and settlement, providing a one-stop shop for our customers.

Our systems enable the full range of ON-P flexibility services

Our completion of the 'Look-Ahead' short-term forecasting functionality, alongside the MOM module and ElectronConnect platform means **we can now offer the full set of ON-P flexibility services products** to customers, accompanied by high levels of automation and API dispatch. In both our autumn 2024 and spring 2025 tender, we offered four of the five standard ENA ON-P products, in order to widen opportunities for potential FSPs and enable greater market participation.

3.2 How we ensure transparency in dispatch decision-making

Our approach

Our **ODMF document** is aimed at stakeholders who are interested in how we deploy flexibility when managing the network and dealing with constraints or unexpected events. It set out our principles for scheduling, optimising, and dispatching flexibility, and for whole system co-ordination under the ENA primacy rules.

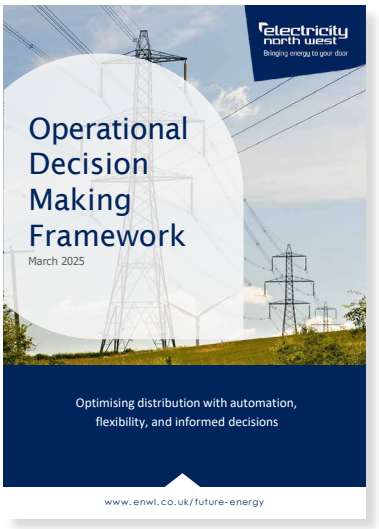
These principles are based on **Safety, Security and Reliability, Efficiency, Transparency, and Sustainability** and underscore our dedication to fostering trust in our operations, while ensuring customers only pay for services that are needed. In enacting these principles our approach is technology agnostic and treats providers that we have contracted directly with, or via an aggregator, equally.

Our dispatch decisions also consider the potential for conflicts of service between our DSO function and the NESO and adheres to the Primacy Rules that determine who has priority under specific circumstances. To ensure the document is clear and transparent, examples and use cases are included throughout the report to make it easy for stakeholders to understand.

A key feature of our strategy for dispatch transparency is to embed decision-making within systems – with the DSO preconfiguring rules, processes, and primacy considerations to automate the scheduling and dispatch of flexibility. Our DSO team schedules flexibility in advance, with control engineers managing real-time operations supported by systems.

This approach ensures capabilities for dispatch are not 'hard coded' into the DNO (i.e. with engineers needing to conduct offline analysis, adjust schedules, and make decisions in an opaque manner), and that systems can then provide transparent reporting of dispatch.

Figure 11: Updated ODMF document



What we have delivered this year

This year we have actively engaged stakeholders through webinars and our DSO Stakeholder Panel to ensure a clear understanding of the processes and systems we use for operational decision-making. In response to their feedback we have updated our ODMF to provide clearer details on when we apply flexibility use cases, how we manage Part 3 Connections (connections subject to interim restrictions or where site specific requirements apply), and how we implement Secondary (peer-to-peer) trading. Moving forward, the ODMF will be consulted upon and updated annually to continuously refine our processes. Following feedback from Ofgem, we also reviewed industry practices for scheduling and dispatching flexibility across our organisation and tested our approach with the DSO Stakeholder Panel. The outcome is now available in our new DNO:DSO Governance Framework (see Section 5.3), providing clarity and transparency for our stakeholders.

As set out above, we have also gone live with our ANM and MOM systems alongside our market platform, thereby establishing systems support for the decision-making involved in scheduling and dispatching of flexibility, and providing the basis for transparent reporting of dispatch decisions.

3.3 How we co-ordinate scheduling and dispatch for wider system outcomes

Our approach

Whole system co-ordination can enable FSPs to maximise the value of their flexibility across the energy system, driving value for all. We enable this by ensuring that our commercial arrangements facilitate participation in wider flexibility markets, and that scheduling and dispatch is co-ordinated with wider system operators to ensure the most valuable actions are taken.

What we have delivered this year

Supporting the ENA Primacy working group

We have been working closely with the ON-P as part of the Primacy Working Group to support development and implementation of the Primacy Rules, having trialed Primacy Rule 1 (NESO BM vs DNO Flexible Services) on our network last year. This year, our ODMF dispatch principles have been reviewed to ensure alignment with the group's outcomes. Further details on the evolution of our commercial arrangements, which have enabled providers to participate in multiple markets, are provided in Section 4 of this report.

Building co-ordination channels with wider system operators

To assist in dispatch co-ordination, this year we have introduced a Risk of Conflicts report which is available to the NESO at week ahead stage on our Open Data Portal via an API. We are working towards establishing an ICCP link between our control rooms and the NESO's to share real-time bilateral flows, and have worked with the NESO through multiple groups to determine the necessary data. We are currently awaiting the physical infrastructure and activation of the ICCP link, with go-live scheduled for October 2025.

Establishing the ICCP link will support Technical Limits by providing transmission boundary flow monitoring data from the NESO. In advance of this we have developed a solution to allow Technical Limits connections based on summations of existing monitoring points.

Selecting optimal whole system actions

We have developed our systems to enable a 'pseudo price' for curtailment options within our MOM system, **which we believe is unique**. This enables us to compare flexible connection options (which are uncompensated when curtailed) and flexibility service options (which receive payment when dispatched) that coexist within the same merit order list, and rank them in order for dispatch. The value of curtailment can be configured in the MOM system, providing a transparent way to fairly evaluate all flexibility resources against constraints. **In future, this price could incorporate wider whole system opportunity costs, enabling us to make decisions based on overall system value.** For example, if the system-wide cost of curtailment is higher, we may choose to dispatch demand turn-up instead.

4. Flexibility Market Development

Introduction

We recognise the need for a mature and dynamic flexibility market to effectively operate and develop our network at best value to customers. Last year, we assessed regional challenges to identify and address barriers to Low Carbon Technology (LCT) adoption and flexibility market growth in the North. These insights have shaped our approach this year, driving activities designed to prime the market.

Our key achievements in 2024/25

4 out of 5 of the ON-P suite of standardised products tendered

37 organisations engaged in bilataeral sessions to facilitate market participation

5 newly registered participants in this year's tenders

4,349 MWh of flexibility dispatched – more than ever before

22 LV flexibility requirements in our autumn tender, across 11 substations serving 5000 customers

Published our new **Flexibility Strategy**

Go live of our new end-to-end market platform in partnership with Electron

14 new flexibility providers registered on our market platform

4.1 How we work with stakeholders to unlock flexibility

- **Published our new Flexibility Strategy**, outlining our ambition to expand market participation, particularly in nascent areas.
- Conducted **targeted sector engagement** to facilitate flexibility participation and **address barriers** faced by our stakeholders. This has led to an **increase in registered providers and tender participation**.
- Launched marketing campaigns, and enhanced data sharing and tools to **help existing and potential FSPs to better understand participation opportunities**.

4.2 How we simplify and standardise our processes to remove barriers

- **Rolled out our third-party market platform** for end-to-end services to simplify the process for FSPs.
- Expanded our flexibility tenders to include **short-term products, LV needs, and to deliver capacity for connections.**
- This year we have contracted, tendered and dispatched **4,349MWh of flexibility – more than ever before.**
- Used **standardised contracts and qualification processes** to procure the ENA Open Network Common Products during two tenders.
- Collaborated with ON-P working groups to ensure that services continue to align with stakeholder needs.

4.3 How we promote flexibility in nascent areas and through energy efficiency

- **Facilitated flexibility from energy efficiency** via our Peak Reduction service.
- For the first time, **tendered for LV flexibility** and prepared for scaling up to facilitate the growth of flexibility from more small-scale resources.
- **Supported our communities** to develop local power projects via guidance and funding and this year we also contracted our first flexibility services directly from a community energy project.
- Onboarded c. **50,000 new houses into our pioneering Smart Street project** bringing the total to 100,000 properties benefiting from reduced electricity costs.

4.4 How we collaborate across industry to share data and enable whole system flexibility

- Established **commercial arrangements that improve coordination** through enabling the timely release of availability obligations to encourage participation in wider markets.
- **Sharing of operational data that enables coordination**, including short-term curtailment forecasts to inform trading strategies, and enhanced data sharing with the NESO via a Risk of Conflicts report.
- **Go-live of systems capabilities that promote and enable whole system co-ordination**, including ANM with real-time awareness of live system conditions, and the ability to co-optimise flexibility service and curtailment options.
- Facilitated faster connections for customers in transmission reinforcement queues through **expansion of ANM to manage transmission constraints**, enabling more renewable generators to connect.
- Continued **preparation for secondary trading**, currently explored through simulated trials in BiTraDER.

4.1 How we work with stakeholders to unlock flexibility

Our approach

Last year, we reviewed regional challenges to better understand barriers to the uptake of LCTs and flexibility markets in the north. This led us to begin a strategic engagement approach to build strong relationships with stakeholders across the energy system and better tailor our support to meet their needs. Our goal is to ensure that all stakeholders, whether ready to participate now or in the future, have the resources and confidence to engage in flexibility markets. Our core objectives are to:

- **Raise awareness** of the opportunities and benefits associated with market participation.
- **Identify and address participation challenges** by implementing targeted strategies and resources that reduce barriers.
- **Provide clear participation guidance and support** to ensure stakeholders fully understand how to engage with flexibility markets.

What we have delivered this year

Our engagement programme

We have published a new **Flexibility Strategy** document for stakeholders, intended to explain how we manage flexibility today, how FSPs can engage to deliver services, and our direction of travel to evolve our use of flexibility. This strategy covers flexibility services, flexible connections, and our approach to co-ordination – both across the wider energy system, and on a local community level.

We have engaged 37 organisations through direct bilateral meetings, assigning key account contacts to promote ongoing collaboration. As a result, we have raised awareness, addressed challenges, and provided clearer participation guidance. This has resulted in 14 new providers registering on our procurement platform. Examples of our engagement include:

- **Bilateral local authority engagement:** We are helping Manchester City Council (MCC) to understand the flexibility market options available to them and evaluate their existing connections to identify opportunities to integrate more LCTs at 17 of their sites. We have also engaged with their social housing team to explore the opportunities from domestic flexibility to reduce bills for their tenants. This is expected to result in flexibility contracts once MCC has installed the LCTs.
- **Strategic I&C Customer Engagement:** Given our network has several constrained areas in industrial zones, we have focused engagement in these areas with the aim of increasing market participation. As a result, we have developed relationships with strategically significant I&C customers, such as automotive, academic and energy sector players, and are currently exploring how their assets can participate in our flexibility tenders.
- **Priming the market:** We are helping our stakeholders build flexibility projects in locations which benefit them most. For example, we have held discussions with National Trust to map their existing assets in the Cumbria region, and advise them on the best locations for existing or planned new assets to maximise revenues from flexibility services in our spring 2025 flexibility tender.
- **Bee Net Zero:** Leveraging our position on the **Bee Net Zero** Board, we have launched a marketing campaign across the Greater Manchester business community. This initiative aims to raise awareness amongst an audience we do not ordinarily engage with.
- **Cross Industry Engagement:** We have collaborated with other system and network operators through various ON-P working groups and bilateral meetings, fostering growth and sharing insights to better understand common challenges. We have also met bilaterally with Elexon to discuss their move into the Market Facilitator role.

Improvements to information provision and support

We have made real progress this year, but still have a long way to go to build the vibrant flexibility market that we want.

- We now share monthly dispatch data and bi-annual flexibility requirements via our **Flexibility Hub** and **Open Data Portal.** In response to feedback, we have also published **Case Studies** to help stakeholders understand each product. Stakeholders can also access new materials on our website, including the standard flexibility service contract.
- We have upgraded our postcode checker tool to support simultaneous searches for multiple postcodes, making it easier and quicker for FSPs to check their eligibility.
- We have improved our cost calculator tool in response to feedback. From Autumn, we began tendering for a £/kWh price for our utilisation products and updated our tool to reflect this change. This has helped FSPs to develop their bidding strategies and provided greater certainty on revenue. In addition, our updated tool allows users to search for the specific tenders and products they wish to participate in, and check if their bidding price is likely to be accepted. We have also updated our help guide, making the Cost Checker Tool easier for FSPs to use.
- We developed and published our **Flexibility Strategy** to provide stakeholders with a clear overview of our current and future flexibility ambitions. This document addresses barriers to entry by offering clarity on our processes and services. We have tested this with our DSO Stakeholder Panel and sought feedback from wider stakeholders to further refine our plans.

4.2 How we simplify and standardise our processes to remove barriers

Our approach

To promote participation in our flexibility market we believe we need to streamline our processes, and make it as easy as possible for providers to participate and maximise the value of their flexibility. This year we have made progress through:

- Implementing **our third-party market platform in partnership with Electron** to simplify the process for FSPs.
- **Tendering four of the five ON-P products**, including **short-term products, LV needs and flexibility to enable connections.**
- Following industry standards whenever possible but **being flexible on contractual terms where this removes barriers to entry.**

What we have delivered this year

Case study: Enhancing market participation through ElectronConnect

In March 2024, we partnered with Electron to unlock flexibility at scale using their enhanced, end-to-end market platform, and **this year our market support services have gone live**. We have deliberately minimised our use of proprietary systems as we believe third parties are better placed to offer a range of market support services. In doing so, we align with ON-P standards and ensure interoperability to avoid vendor lock-in and foster competition. Using this platform introduces several key improvements:

- **Enhanced customer journey:** The platform provides real-time visibility of tender progress, and by automating key processes (such as technical qualification) it improves efficiency and data integrity by reducing manual errors and accelerating processing times. Once FSPs complete the qualification process, they can participate in future tenders without re-registering, saving time and effort.
- **Dispatch of real-time flexibility:** The platform provides market data and, in many cases, a near real-time schedule of required availability and intended dispatch. This allows FSPs to better forecast their offer and optimise their operations, enabling better response times and greater participation in wider markets. As a result, they can stack revenues from multiple services and ultimately maximise their profitability.
- **API dispatch efficiency:** A standardised dispatch API is being developed by the ENA ON-P to provide a single, simple integration point for dispatch signalling. This will ultimately facilitate consistency across the regions where our customers operate. We are currently establishing an API between our systems and ElectronConnect, enabling us to efficiently switch providers or onboard additional third-party platforms in the future if needed, ensuring a continued best experience for our customers.
- **Collaboration:** We are actively collaborating with SSEN (the other core user of the platform) and Electron to harmonise our existing processes and platform functionality, aiming to deliver a uniform experience for FSPs participating across DSO flexibility markets. In turn, this will enhance their potential revenue streams and increase market liquidity on our network.

This year we have tendered, contracted, and dispatched 4,349MWh of flexibility

This year we have tendered, contracted, and dispatched more flexibility than ever before. We have achieved this by expanding our tenders to include new flexibility products to suit a wider range of provider needs, and through a clear timeline of bi-annual tender participation.

We tender for four out of the five ON-P products, including for the first time this year short-term products and LV needs. We also expanded our tenders to seek flexibility to accelerate connections where reinforcement is needed prior to connection.

We do not procure the fifth service, Operational Utilisation + Scheduled Availability, because it would mean holding availability even when we do not need it, hence it would be less efficient and limit liquidity in other markets. We will continue to review this decision with our FSPs if they are interested in providing this service.

Working with industry and stakeholders to offer accessible products

We recognise that removing barriers requires collaboration across the industry, and remain fully committed to working with the industry to simplify processes and make our systems more accessible to ultimately drive increased participation.

We are actively engaged in all ON-P working groups, ensuring our stakeholders' needs are considered when industry changes are proposed. For example, it was suggested that the Peak Reduction product could be retired, as not all DSOs use it. In response, we evaluated our contracts and sought feedback from our FSPs, who emphasised the opportunities this product provided. As a result, we advocated for the retention of this product. This has proven beneficial as, during the last year, we procured 5.87MW of Peak Reduction capacity, accounting for 99.3% of the total flexibility dispatched across our network.

Alongside published guidance and tools, we hold bilateral meetings to understand and address any challenges that FSPs face when signing the ON-P Standard Agreement. This year, 100% of our contracts used the ENA Standard Agreement, representing our commitments to ensuring standardisation. However, we are also negotiating minor contractual terms that represent a barrier to entry for specific providers.

Pelle Jacobs, Axle Energy:

"Real-time flexibility is a game-changer for the grid, and we're thrilled to see this being streamlined for the North West region by Electricity North West via ElectronConnect. This development allows Axle to enable distributed assets – like the EV chargers, batteries and heat pumps that we optimise – to respond dynamically to time-sensitive grid needs and to unlock flexibility value for consumers. We head forward to continuing to scale our flexibility services in our licence area with this innovation."

4.3 How we promote flexibility in nascent areas and through energy efficiency

Our approach

Having made progress establishing our flexibility capabilities, we are focusing on driving benefits for communities. This year we have continued with our energy efficiency programme, and expanded opportunities for FSPs by tendering for LV flexibility. We have also centralised community energy activities into our DSO function, recognising that working directly with communities will empower them to participate in our smart and flexible energy system, benefiting everyone.

What we have delivered this year

We continue to work with stakeholders to enable flexibility participation via energy efficiency

Our Peak Reduction product allows FSPs to deliver long-term energy demand reduction, achieved through energy efficiency measures implemented to create demand reduction across the year, and in particular to ease high peak periods. We are currently working with Manchester City Council and a range of I&C customers that are delivering sustained energy efficiency/demand reduction in key areas.

We tendered for LV products for the first time

This gives us access to a broader range of providers while expanding participation opportunities for FSPs, ensuring greater inclusivity and competition. Our autumn 2024 tender targeted 22 LV requirements across 11 secondary substations, serving over 5,000 customers, through two types of flexibility service products – Peak Reduction and Scheduled Utilisation. Moving forward, we expect the demand for LV flexibility services to increase, and have 67 locations available in our spring 2025 tender.

We have explored innovative opportunities with our stakeholders to deliver LV flexibility

We are working with a significant storage provider to understand how small-scale batteries deployed at secondary substations can provide LV flexibility. Through this pilot, we are deploying batteries at three of our substations, and anticipate that each could provide approximately 200kW of flexibility capacity. The project will help us evaluate the feasibility of this approach for participation of these solutions in future flexibility tenders.

We continue to embed our pioneering Smart Street project into BaU

Smart Street technology optimises the voltage supplied to customers on secondary substations, which reduces the demand from customer appliances while remaining within safe operating limits. This in turn reduces the energy volume required in the home, helping to deliver electricity bill savings, and reduce the amount of generation needed on the system, leading to carbon savings. Smart Street also makes it easier for LCTs to connect to the LV network, especially in areas with high LCT uptake. We onboarded c. 50,000 new houses into our pioneering Smart Street project this year bringing the total to 100,000 properties benefiting from reduced electricity costs.

Case study: Promoting local resilience via our community energy support to deliver wider system benefits

We have collaborated with Charge My Street, CyberMoor, and Fuse on their Rural Energy Resilience project. This project focuses on rural areas of the network where we anticipate significant demand growth due to the electrification of heating and transport. Instead of conventional reinforcement solutions, which would be costly and disruptive to local communities, the project seeks to install Vehicle to Everything (V2X) units to reduce peak demand and provide backup power sustainably.

The V2X units are installed at community hub resilience centres which support the community during emergency events such as power cuts and floods. Community car club vehicles are also used to support the network, while providing EV access to communities that have seen reductions in public transport services.

We have already seen the early benefits of this work. This year we contracted with two sites to provide 96kW of flexibility services. This is the first of several opportunities made possible through our community energy support work that we hope to involve in our flexibility services. As such, we supported a wider application for funding to deploy V2X technology in regions that would otherwise require significant network reinforcement, and where we would struggle to procure flexibility due to a lack of suitable DERs.

Further details on how we are supporting communities and local energy in our region can be found on our community and local energy website.

4.4 How we collaborate across industry to share data and enable whole system flexibility

Our approach

Whole system co-ordination is critical to ensure that customers and FSPs can maximise the value of their flexibility across the entire electricity system, driving benefits for providers and system operators, and reducing costs for all. This includes enabling DERs to participate in multiple markets simultaneously or ensuring they can participate in the highest-value market at any given time. Co-ordination between us and the NESO is key to enabling DERs to participate in multiple markets. Therefore, setting up our commercial arrangements and systems to enable operational co-ordination has been a key activity while developing our flexibility market arrangements.

As we ramp up flexibility dispatch, the requirement to co-ordinate with the NESO and other DNOs within operational timeframes will increase. To support this, we have prioritised the development of the necessary systems and processes. As a result, this year we have reached significant milestones in delivering our ANM system and market platform, which provide critical features in support of co-ordination.

What we have delivered this year

Establishing commercial arrangements that improve coordination

We procured our Peak Reduction and Scheduled Utilisation product using a new method which defines utilisation profiles more accurately, allowing FSPs to coordinate their responses with other markets. The refinement windows for our Operational Utilisation and Variable Availability products were also shared a week in advance of service provision. This enables us to release unnecessary capacity from FSPs' contractual availability obligations and creates opportunities for them to participate in other markets. We actively encourage the stacking of revenues and work with FSPs to help them understand the opportunities for doing so. As such, all our commercial arrangements are set up without exclusivity clauses.

Sharing of operational data that enables coordination

Following the go-live of our systems this year, we are now able to share short- and long-term curtailment forecasts and dispatch data with our FSPs, allowing them to plan their usage and trading strategies. We also share this information with the NESO to inform their planning.

We have modified internal policies to increase the collection of real-time data from DERs, enhancing network visibility and ensuring that further data requests from the NESO can be fulfilled. We share our procurement data ahead of tenders and provide dispatch data monthly after each procurement window. This allows the NESO to see what contracts we have in place and eases concerns around conflicts. We continue to engage with the ON-P Primacy working group and to collaborate with the NESO to improve communication between our control rooms. This includes publishing a 'Risk of Conflicts' report via an API as we await activation of our ICCP link by the NESO.

Systems that promote and enable whole system co-ordination

Given that our ANM system is globally enabled through the NMS our customers enjoy low cost of entry for an ANM connection which helps integrate DERs onto the system. In addition, curtailment is not managed via simple 'worst-case' rules or hard-coded local schemes, and instead the system has real-time awareness of network conditions, assisting in minimising curtailment. Lastly, we can easily update the ANM, allowing us to swiftly adapt to market changes (e.g., primacy rules) across all areas of our network.

As described in Section 3, our MOM system directly compares flexible connections and flexibility services within the same merit order list and ranks them in the optimal commercial order for dispatch. This puts an appropriate cap on curtailment for our flexible connections, safeguarding their interests. It also gives FSPs confidence that curtailable connections will not diminish the value stack for flexibility services and offers greater certainty on revenue.

Innovating ANM delivery in-flight to address transmission-related connection constraints

Given the industry-wide connection challenges, we recognised the need for a holistic ANM solution that could help manage transmission-related constraints as well as distribution. In developing our ANM this year, we collaborated with other DNOs, National Grid Electricity Transmission (NGET), the NESO and Ofgem to develop processes for this, and worked with Schneider Electric, our ANM software provider, to develop and integrate the solution. We also engaged with stakeholders to communicate the development of these accelerated connections and seek their input.

The resulting capabilities of our ANM can fast-track 1.8 GW of connection schemes across the North West, accelerating projects that faced delays of up to ten years. Most of these are renewable generators or battery storage sites which means that accelerating their connections will support our net zero goals, strengthen supply resilience, and enable their participation in flexibility services.

Our ANM and MOM systems are ready to facilitate secondary trading

This year, our innovative BiTraDER project simulated bilateral trading by trialing data sharing between Electron and Electricity North West during curtailment obligation trades. Secondary trading will enable affected customers to trade their risk of curtailment, as well as any excess capacity they may have. This should encourage greater participation in flexibility services and additional revenue for FSPs, reducing wider system services and energy costs.

Case study: Collaborating with customers to deliver wider system benefits

Third party damage to a cable resulted in the loss of supply to customers, including a generator with a curtailable connection. After conducting an assessment, it was determined that the cable needed to be replaced. However, due to its location, we had to either identify a new route or delay the work until planned highway maintenance could minimise disruption. In accordance with the connection terms, we were able to restrict the output of the generator while the network was operating abnormally. However, the annual curtailment forecast was only expected to limit output for 11 days. Acknowledging the six-month impact on both the generator and the wider system, we developed a solution that would allow the generator to operate at a restricted output by signing a three-month contract for generation turn-down. This holistic approach allowed the connected customer to remain active in the capacity market, reducing revenue loss and preserving overall system benefits.

5. Options Assessment and Conflicts of Interest Mitigation

Introduction

We take a continuous and transparent approach to engagement, analysis and investment planning — working closely with local authorities, other network companies and our DSO Stakeholder Panel to ensure efficient and evidence-led decision-making.

A key area of the DSO Performance Panel feedback related to how we are identifying and managing conflicts of interest, and how our approach is proportionate and justified. As a result we have focused on clarifying our approach to DSO transparency, and tested this extensively with stakeholders. We have done this while continuing to evolve and deliver our approach to system development, engaging stakeholders to inform our forecasts, develop and assess options, and decide efficient solutions for delivering capacity.

Our key achievements in 2024/25

- **117** sites assessed via our DNOA
- **300+** new planned developments incorporated in our DFES
- **10 GSPs** with technical limits introduced, enabling faster customer connections via ANM for 37 schemes
- **44%** of DNOA sites signposted for flexibility
- Published our new **DSO:DNO Governance Framework**
- **35** local authorities engaged (370+ officers) to enable LAEP development and expand our DFES inputs
- Consulted on and republished our DNOA and ODMF methodologies and DNOA report
- **33%** cost reduction of schemes via co-ordinated network development compared to a reactive approach
- **22** letters of support from a range of stakeholders for our LRE re-opener

5.1 How we engage with stakeholders to identify options and resolve needs

- Engaged all local authorities in our region and used our **LAEP Data Guidance Framework** to ensure the accuracy of data that feeds into our forecasting.
- Undertook proactive cross-vector engagement to inform our forecasts and develop whole system solutions **that align with the needs of our stakeholders**.
- Engaged with **NGET and the NESO to facilitate wider whole electricity system planning** and enabled faster customer connections through Technical Limits schemes.
- Worked with a **wide range of whole system stakeholders** to build plans and stakeholder support for our LRE re-opener, securing 22 letters of support.

5.2 How we assess options to resolve network needs

- **Refreshed and re-ran our DNOA methodology**, assessing 117 sites with 44% of these signposted for flexibility, and published the outputs on our website.
- Utilised **co-ordinated network development** to drive efficiency of reinforcement through strategic schemes, incorporated in the LRE re-opener with broad stakeholder support.
- Continued to assess options using the industry-standard CEM tool and **published all assessments along with our assumptions.**
- **Re-platformed and enhanced** the CEM and Real Options Cost Benefit Analysis (ROCBA) tools, sharing our progress via the ENA to help DNOs scale up flexibility.
- **Launched the ForeSight programme** to improve forecasting across our entire network.

5.3 How we manage conflicts of interest and deliver transparency for stakeholders

- Established an internal programme to scrutinise our DSO operating model, challenge our ways of working and establish a more formalised transparency approach, culminating in **developing and publishing our new DSO:DNO Governance Framework**.
- **Consulted stakeholders and our DSO Stakeholder Panel to challenge a range of methodology publications** – the DSO:DNO Governance Framework and also our ODMF and DNOA methodology and outputs.
- Continued to engage our DSO Stakeholder Panel who have offered challenge, feedback and support on a range of topics, with agendas and minutes available on our website.

5.1 How we engage with stakeholders to identify options and resolve needs

Our approach

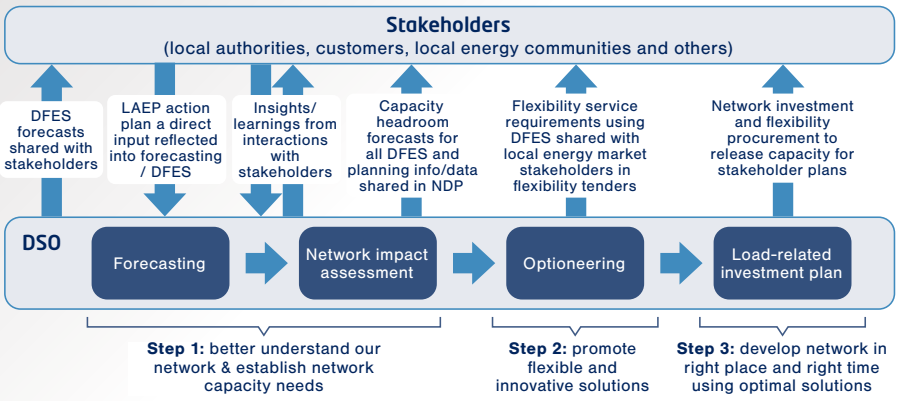
Our planning process is a continuous cycle of engagement, analysis, optioneering, evaluation and communication. Throughout this process we collaborate with a diverse range of stakeholders, including network companies and current and prospective network users.

For example, with our support Great Manchester Combined Authority was the first region to complete a Local Area Energy Plan (LAEP) from street to network level. This plan provides a unique understanding of the load requirements and necessary investments to meet these ambitions. Building on this success, we have introduced our ‘best practice’ Data Guidance Framework (detailed on the next page) for LAEP development. This helps to identify the existence and maturity of projects using standardised criteria from the Best View scenario defined by the ENA ON-P.

By maintaining strong communication, we ensure our support and services remain relevant and responsive to the evolving needs of our stakeholders. This approach enables us to identify and assess options that align with stakeholder needs, while ensuring our investments are efficient in the long term.

For example, we sit on the Greater Manchester Infrastructure Board which gives us the opportunity to collaborate with wider strategic organisations in shaping and maintaining our Manchester plan, aligning infrastructure development with the region's growth ambitions and net zero targets.

Figure 12: Stakeholder interaction with our DSO team during options assessment



What we have delivered this year

Cross-sector engagement conducted this year has deepened our understanding of long-term stakeholder needs, contributing to our updated DFES and LRE submission. Examples of this engagement include:

Case study: LAEP Data Guidance Framework informing our forecasts

We have engaged with all the local authorities in our region and a range of businesses across various sectors to feed into our DFES. This has included using our Data Guidance Framework to ensure the accuracy and standardisation of data that feeds into our forecasting:

- We hold standardised bilateral meetings with each local authority three times a year to gather data and provide insights. These meetings have a common format to ensure consistent communication. Where needed, additional 'surgery' sessions are arranged to provide specialised support, often focusing on decarbonisation and other local plans or proposals relevant to them.
- We leverage our user-friendly **LAEP templates** to create a transparent process for LAEPs to inform our DFES. These have been designed in two layers to reflect where local authorities are on their LAEP journey. Where this does not meet the needs of our stakeholders, we allow other forms of data-sharing as long as key project details are provided.

We have successfully engaged with all 35 local authorities (over 370 officers) through bilateral meetings, follow-up surgery sessions and offline support. Of these 35 authorities, 82% provided data, and 20% of those now engage with the standardised templates. To date, we have modelled over 300 new planned development areas, with higher certainty assigned to approximately 30%. This updated view has been incorporated into our **DFES 2024 publication** and forecasting data. As part of our commitment to continuous improvement, we are conducting an independent review to better understand the support that local authorities require. The recommendations from this have been **published** and used to refine our future support, strengthening our role as a key LAEP partner.

Engagement with wider electricity system stakeholders

We have strengthened data-sharing with the NESO, integrating their transmission generation forecasts into our DFES while aligning with the **agreed process to feed into the whole system electricity FES**. Our methodology now aligns with the NESO's four future energy scenarios, and we have introduced an Accelerated Decarbonisation scenario to reflect uncertainties. Our forecasts have been enhanced to include insights on EV adoption and heavy-duty transport, while the long-term impact of district heating networks has been modelled for the first time. Additionally, we have reflected the increased acceptance of renewable generation and battery storage due to the Access and Forward-looking Charges Significant Code Review (Access SCR).

We have also held bilateral meetings with NGET and the NESO to communicate our projected network needs and explore whole system solutions, aiming to drive efficiencies and ultimately reduce costs for our customers. Going forwards, we will continue to hold meetings with both organisations at least twice per year. This year we also partnered with NGET and the NESO to introduce Technical Limits across ten of our GSPs, facilitating quicker customer connections through ANM for 37 potential schemes.

Wider whole system engagement

We worked with the Greater Manchester Combined Authority and Transport for Greater Manchester on their plans to expand their electric bus fleet and develop a new depot in North Manchester. This resulted in the successful development of a flexible connection which allows the EV buses to charge at night when wider demand is low, accelerating the connection of the bus depot. The upgrades required to enable these plans were reflected in our LRE re-opener.

We engaged with a range of stakeholders in development of our RIIO-ED2 LRE re-opener this year. This brings significant direct and indirect benefits to North West customers, a fact recognised by our stakeholders, who shared 22 letters of support for our approach. Additionally, engagement with NGET led to the joint development of solutions for the LRE re-opener, including the upgrade of the Harker 132kV substation to connect over 1GW of distributed generation in Cumbria.

We are part of the advisory panel for Northern Gas Networks' Navigator project, focusing on decarbonisation pathways. Our role includes contributing forecasting and planning data, and continued involvement in the advisory panel to guide the project.

Transport for Greater Manchester:

"A note of thanks to Electricity North West for their work to date across a range of programmes. In particular, a successful bus reform programme could not have occurred without this input."

5.2 How we assess options to resolve network needs

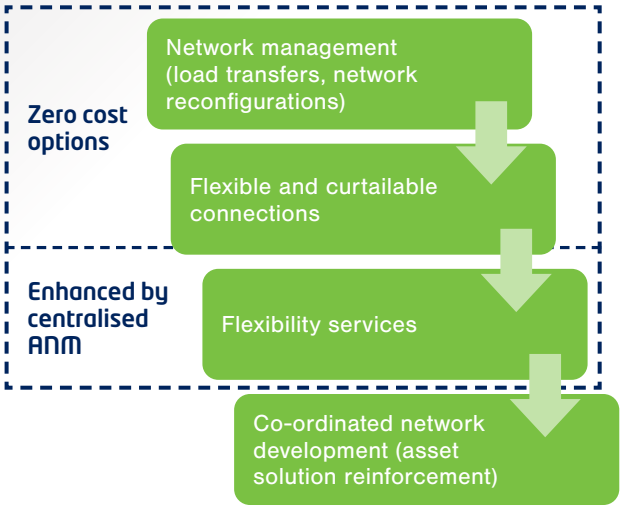
Our approach

Our capacity headroom forecasts are published annually in our NDP workbook using our latest DFES forecasts. Where we identify potential network constraints, we use our Capacity Strategy (as described in our DNOA) to prioritise zero cost options (see opposite) and release capacity in very short lead times.

Following the zero cost options, we prioritise flexible solutions wherever it is robust and economic to do so. The ceiling prices for released capacity are assessed using the industry standard CEM tool and based on the counterfactual network reinforcement costs with a consideration of environmental benefits.

When the capacity requirements cannot be met by non-asset solutions, our next step is to proceed with reinforcement through **co-ordinated network development**.

Figure 13: Options assessment hierarchy



The outcomes from our DNOA process are published annually in our DNOA report, which presents our recommendations for the use of different solutions to meet network needs. We also publish the outputs of the CEM tool assessments to ensure transparency in our decision-making, reassuring stakeholders that flexibility prices are clear in their rationale and values.

What we have delivered this year

Updated DNOA

In response to feedback from our consultation in 2024, we updated and republished our DNOA methodology this year to improve clarity and accessibility. This revision outlines how we assess LV flexibility alongside EHV and HV systems and prioritise non-asset solutions to optimise capacity release, and how our ANM system enables us to scale flexibility services and accelerate connections. We have re-run our DNOA process and published the outcomes, assessing 117 sites. Of these, 48 sites (41%) have been identified for reinforcement, 17 (15%) have been identified for load transfer, and 52 (44%) have been signposted for flexibility. In some cases, we have identified whole system solutions, such as utilising ANM to accelerate a connection without triggering transmission network reinforcement.

Re-platform of CEM and ROCBA tools

Our ROCBA tool supports a broad range of scenario analysis, carbon impact assessments, asset health considerations and whole system outcomes. This year, we re-platformed our ROCBA tool and the industry standard CEM tool in Python. This will allow us to evaluate larger volumes of interventions, including flexibility services to accelerate connections and LV flexibility. We have shared an initial version of our scripts with all DNOs, presented our work to the ENA working group, and are organising in-depth sessions for industry-wide alignment. As a result, the ENA has decided to forgo tendering for re-platforming the CEM tool and instead will focus on enhancing and building upon our work to enhance DSO decision-making across Great Britain. Moving forward, we aim to fully harness the capabilities of the ROCBA tool to deliver deeper insights and enhance decision-making.

Launching ForeSight to improve forecasting across our entire network

Our ForeSight programme is designed to move beyond the industry standard of annual forecasting and planning cycles, and towards monthly forecasting. It will use data from monitored assets and incorporate the latest connections, flexibility and local stakeholder plans. This will significantly improve our forecasts and thereby optimise our load-related investment going forwards. This year we mobilised the programme, engaged stakeholders on scope and requirements, and kicked off prototyping and IT architecture design.

Case study: Co-ordinated network development informing our LRE re-opener for RIIO-ED2

This year we have conducted a comprehensive review of our load-related expenditure for RIIO-ED2 to ensure that we are delivering the capacity needed for customers in the long term, and preparing the way for continued investment at pace into RIIO-ED3 and beyond. During this review, our DSO Capacity Strategy (as outlined in our DNOA) was used to ensure that our solutions remained economic and efficient over the long term. In this process, we conduct our comprehensive planning assessments with a broader perspective, considering synergies across the distribution network rather than focusing on isolated constraints, issues or segments. This approach – which we refer to as **co-ordinated network development** – allows us to integrate options and implement a single, optimal solution that addresses multiple needs, while also identifying opportunistic ways to create capacity and provide more efficient outcomes.

One such example is the South Heywood Northern Gateway project. Through proactive engagement we identified an opportunity for a holistic strategy to meet the growing demand in this area, instead of piecemeal expansions spread over multiple years. This resulted in the construction of a new primary substation, avoiding the alternative of upgrading six separate primaries. As a result, costs were reduced by 22%, and disruption and implementation times were minimised by consolidating interventions at one site.

This is one example of many listed in our LRE re-opener. By proposing additional allowances in the LRE re-opener, we are taking decisive action to future-proof our network, enabling us to meet the long-term needs of the region, support economic growth and reduce disruption to customers.

We are working to embed co-ordinated network development into our DNA. We have instigated monthly connections portfolio review meetings for the DSO and Connections teams to review the connections pipeline and to challenge and evolve our ways of working.

5.3 How we manage conflicts of interest and deliver transparency for stakeholders

Our approach

It is crucial that we operate transparently so that customers, service providers and stakeholders have confidence in our ability to appropriately manage actual and perceived conflicts of interest between our DSO and DNO roles. A key area of the DSO Performance Panel feedback related to how we are identifying conflicts of interest, and the subsequent frameworks, processes and practicalities for then dealing with them, as well as our rationale for our approach to DSO:DNO separation.

In advancing our approach to transparency this year we have therefore:

- Established an internal programme to scrutinise our DSO operating model, challenge our ways of working, and establish a more formalised transparency approach, culminating in **developing and publishing our new DSO:DNO Governance Framework**.
- **Consulted stakeholders and our DSO Stakeholder Panel to challenge a range of methodology publications** – the DSO:DNO Governance Framework and also our ODMF and DNOA methodology and outputs.

What we have delivered this year

Our DSO:DNO Governance Framework

Our DSO:DNO Governance Framework is comprised of three layers of **Governance**, **Accountability**, and **Transparency**, as illustrated in Figure 14. In developing this, we have drawn on industry best practice by reviewing DSO:DNO code documents published by other DNOs as well as taking learnings from the System Operator:Transmission Owner model. We are closely monitoring the progress of other DNOs, and periodically review our separation approach to ensure we are taking on board learning from others.

A key pillar of this is our **approach to separation** which is a 'functional separation' model. This means that we have identified activities that could constitute a conflict of interest between DSO and DNO roles, and separated them such that they are in different organisational units, with a single director – Ben Grunfeld – accountable for DSO activities and objectives, with no conflicting DNO activities and objectives.

Most other DNOs have followed a similar functional separation' approach, with one taking a further step through legal separation. In all cases final decision-making authority sits with the CEO. No DNOs have separated systems and shared services, choosing instead to maintain synergies and cost efficiency while we test the efficacy of separation models. We therefore believe we are following industry best practice.

We have also set out clearly **the processes and hand-offs between our DSO and DNO functions**, across network planning, connections, market development, and network operations. This has included identifying key outputs that embody the risk of conflicts of interest between DSO and DNO roles, and **establishing clear ownership, review, and sign-off processes for transparency**.

Figure 14: Our DSO:DNO Governance Framework

Governance	Decision governance	Independent oversight
	A clear structure for decision-making and Executive Committee and Board level visibility of decisions	A key challenge and assurance role for our external DSO Stakeholder Panel and wider business Independent Stakeholder Group

Accountability	Functional separation	Processes and hand-offs	Ownership of outputs
	We operate in a functional separation model with single director accountability for DSO activities	Clarity on roles and responsibilities for DSO and DNO contributions to key processes	Clear ownership of data and documents, with specified ownership and sign-off authority

Transparency	Stakeholder engagement	Compliance and assurance	Compliance and assurance	Data and reporting
	A broad range of wider stakeholder engagement to inform our focus and communicate our progress	A compliance officer reporting to the Head of DSO (with escalation path to Head of Legal & Risk in Shared Services)	Internal and external audits of methodology adherence and decisions	Publication of all key decision outputs, methodologies, datasets and annual reporting on progress

We have also formalised a **clear decision governance hierarchy**, as well as continued to strengthen the role of our **DSO Stakeholder Panel in providing independent oversight** of our priorities, approaches, and progress.

Our decision-making is managed via a clear hierarchy of forums. Our DSO and DNO teams work together as per the processes to develop proposals, with operational managers seeking agreement. Outputs which require joint DSO and DNO sign-off are raised at the DSO/DNO Decision Group for approval, which is comprised of the Head of DSO – Paul Auckland – and the DNO senior managers relevant for the given output. Paul is responsible for testing key outputs with the DSO Stakeholder Panel and building in their feedback prior to raising items for approval at the DSO/DNO Decision Group. Typically, operational management reach agreement on proposals prior to submitting them to the DSO/DNO Decision Group, but if disagreements arise a clear escalation path has been established for resolution.

We have established a DSO Strategic Forum for Director approval of key outputs, involving Ben Grunfeld for the DSO and the relevant DNO Directors. Our Executive Committee is notified of key decisions monthly, with the Board notified in the annual report. This year, in line with our ambition to respond to feedback and drive a step change in Year 2, our wider Executive Leadership Team has been more involved with the DSO, and our Board have had more frequent updates, with our CEO Ian Smyth making DSO a personal focus.

A wide range of DSO-related **outputs and datasets are published on our website and via our Open Data Portal** for transparency. We also operate with an internal **DSO compliance officer**, who is tasked with ensuring that processes and methodologies are correctly carried out, and conducting periodic **internal and external audit of key processes**.

Shaping our transparency approach with stakeholders

Stakeholder engagement is central to ensuring our decision-making frameworks are robust, clear and transparent. We utilise multiple feedback channels to foster direct engagement, consultation and continuous improvement with our stakeholders. In particular, our DSO Stakeholder Panel plays a pivotal role in shaping our approach. Comprising a diverse group of our stakeholders, the DSO panel provides invaluable insight, guidance and independent oversight of our DSO activities, including our decision-making processes. By refining and validating our decision-making approach in this way, we have secured broad support across a diverse range of perspectives, strengthening confidence in our framework.

We have made further progress delivering transparency by publishing our:

- **DSO:DNO Governance Framework:** For the first time, we have published our governance framework, clarifying our business structure and outlining how the DSO and DNO components interact.
- **Operational Decision-Making Framework:** We consulted on our ODMF and received feedback from 22 stakeholders. As part of this, we held two webinars where we presented an overview of the document and our approach to gather real-time feedback from a range of stakeholders. Based on these discussions, we have refined our decision-making approach and updated the ODMF to further define a transparent framework for flexibility use during operational timeframes.
- **DNOA Report and updated methodology:** We have presented on and updated our annual DNOA report on our website. This year, we have made our DNOA report more accessible by providing examples of how different stakeholders can utilise it. This ensures they can clearly understand the outcomes of our investment decisions and get the most out of the information we provide. As previously stated, we have also updated our DNOA methodology in response to stakeholder feedback.

Figure 15: DNO:DSO Governance Framework

Consulting a range of external stakeholders (including flexibility aggregators, electricity network or system providers and I&C customers) on our decision-making approach helps us gain wide-ranging stakeholder feedback and buy-in. Our DSO Stakeholder Panel have also reviewed and provided feedback on each of the above documents (ODMF, DNOA Report and DSO:DNO Governance Framework), helping to validate our approach and ensure it is well-justified, robust, and clearly communicated. However, we recognise that this is an ongoing process and remain committed to continuous engagement to align with evolving stakeholder needs and best practices.

Case study: DSO Stakeholder Panel

Our **DSO Stakeholder Panel** is comprised of representatives from various stakeholder groups, including customers, community organisations, electricity and gas network operators, and industry experts. As such, it reflects the diverse voices and perspectives of our DSO stakeholders. The panel meets quarterly with the DSO leadership team, with agendas and minutes available on our website. This year, we introduced a new meeting format, featuring standing items and themed sessions, which have allowed for more focused and productive discussions. As a result, the panel has:

- Offered valuable feedback, challenged the scale and ambition of our initiatives, and actively contributed to the ongoing development of our **Social DSO Strategy**. They expressed strong support for the vision but highlighted the importance of clearly communicating the strategy with stakeholders, while demonstrating progress, learnings and ambition.
- Scrutinised our LRE re-opener submission, challenging value for money and highlighting the impact on consumer bills. Following this engagement they offered a letter of support to be submitted to Ofgem alongside our proposals.
- Influenced the evolution of our flexibility procurement approach throughout the year by reviewing insights gained through our engagement programme, reviewing our proposals and making further suggestions to increase participation.
- Reviewed and provided insightful feedback on key methodologies, including our DFES, data consultation, ODMF, DNOA report and DSO:DNO Governance Framework.
- Overseen our independent LAEP review, during which 16 local authorities participated in independently facilitated interviews covering the status and progress of LAEPs, how planning translates into delivery, views on the support we have provided, and the role of Regional Energy System Plans (RESPs) in shaping our support for Local Government. To this end, they will define the Terms of Reference, observe key stakeholder engagements conducted during the review and approve the final report.

Looking ahead, we will continue to refine the panel's structure to further enhance its impact and input.

Andrew McIntosh (Chair of our DSO Stakeholder Panel):

> "Electricity North West's transparent, collaborative, and stakeholder-led approach is playing a vital role in accelerating decarbonisation across the North West and driving progress towards a fair, inclusive, and sustainable energy future. It has been enormously valuable for the DSO Stakeholder Panel to be part of Electricity North West's ongoing commitment to delivering meaningful DSO outcomes for customers and communities across the region. This engagement has not only strengthened trust and accountability, but also ensured that stakeholder priorities are reflected in decision-making, enabling more responsive, effective, and locally relevant solutions."

Appendix A - Glossary

We have abbreviated terms throughout our report, where doing so improves clarity and readability. We provide the full form of an abbreviation at first use and then the abbreviation thereafter. A full list of the abbreviations used is provided below.

AI	Artificial Intelligence
ANM	Active Network Management – an application of the Network Management System that manages network constraints in real-time by using flexible assets / connections and varying the import and/or export of distributed energy resources
API	Application Programming Interface – a set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service
BaU	Business as Usual (BaU)
BiTraDER	BiTraDER will investigate, design, build and trial – live on the network – options for the introduction of a bilateral trading market through which large connected customers can trade their position in the merit order stack, which determines the order in which they are asked to curtail their output at times of high demand on the network
BSP	Bulk Supply Point substation (typ. 132/33kV)
CBA	Cost Benefit Analysis – decision-making tool used to justify a wide range of potential interventions
CEM	Common Evaluation Methodology – developed in the ENA Open Networks Project in 2020 for evaluating a range of potential solution options, especially flexibility, against traditional reinforcement. An MS Excel Tool, based on the Ofgem Cost Benefit Analysis, was developed using the methodology for the assessment by DNOs in RIIO-ED1
CEO	Chief Executive Officer - Ian Smyth
CIM	Common Information Model – a protocol for sharing electrical network data between parties
DER	Distributed Energy Resource – small-scale power generation and storage such as solar, wind and electric vehicles that operate locally and are connected to a larger power grid at the distribution level
DFES	Distribution Future Electricity Scenarios – forecasting plans for a range of scenarios for how low carbon technologies will be taken up and how the network could respond. The scenarios inform our investment plans and provide visibility of flexibility opportunities
DNO	Distribution Network Operator – company licensed to distribute electricity in Great Britain by the Office of Gas and Electricity Markets (Ofgem)
DNOA	Distribution Network Options Assessment – encapsulates the vision, principles and strategies that underpin our approach to the operation and growth of the electricity distribution network
DSO	Distribution System Operation – the systems and processes needed to operate energy networks in the net zero carbon future
EHV	Extra High Voltage – 33kV to 132kV network
ENA	Energy Networks Association – industry body which represents electricity transmission and distribution network operators
ENWL	Electricity North West Limited
EV	Electric Vehicle – a vehicle powered by an electric motor instead of a traditional internal combustion engine
FSP	Flexibility Service Provider - a person or organisation who provides flexibility by making temporary changes to the way they consume, generate, or store electricity when requested
GSP	Grid Supply Point – the connection between the Transmission and Distribution Systems (typ. 400 or 275/132kV)
GVA	Gross Value Added
HV	High Voltage – 6.6kV to 11kV network
I&C	Industrial and Commercial customers – refers to businesses that are not domestic, such as factories, warehouses, and offices
ICCP	Inter-Control Communications Protocol – data exchange protocol used by Ofgem
KPI	Key Performance Indicator – used to track the delivery of our outputs and outcomes and assist in prioritising management focus
LAEP	Local Area Energy Plan – a data-driven and whole energy system, evidence-based approach that sets out to identify the most effective route for the local area to contribute towards meeting the national Net Zero target, as well as meeting its local Net Zero target

LCT	Low Carbon Technology – such as electric vehicles, electric heat pumps, solar and wind energy
LEVI	Local Electric Vehicle Infrastructure
LRE	Load Related Expenditure – capital expenditure required to install new assets or upgrade existing ones to handle changes in electricity demand and supply
LTDS	Long Term Development Statement – the requirement to publish network information, including the likely network developments across years 0 to 5, as detailed in standard licence condition 25 and the Form of Statement
LV	Low Voltage (0.4kV)
MCC	Manchester City Council
MOM	Merit Order Management – Electricity North West's system that derives the merit order or curtailment stack, using the curtailment index and flexible services contracts, which is shared with the Active Network Management system for delivery
NDP	Network Development Plan – the requirement to publish network and flexibility services information driven by DFES including the likely network development across years 1 to 10, as detailed in standard licence condition and the Form of Statement
NESO	National Electricity System Operator – responsible for managing the planning and design of electricity and gas networks across the Great Britain
NGET	National Grid Electricity Transmission – owns and maintains the high-voltage electricity transmission network in England and Wales
NMS	Network Management System – an electricity network control system
NPV	Net Present Value
NPSV	Net Present Social Value
ODMF	Operational Decision Making Framework – sets out Electricity North West's approach to decision making surrounding the use of network automation systems, flexibility, and human decision making. This includes the use of Flexible Services, Flexible Assets, and Flexible Connections
ON-P	Open Networks Project – the Open Networks programme is ENA's strategic initiative that brings together all electricity network companies, the Electricity System Operator (ESO), the government, the regulator, and the wider industry to lead the UK's transition to a smart, flexible energy system ready for net zero
Part 3	Connections that are subject to interim restrictions (for example while NESO works take place) and where Site Specific requirements also apply
Part 4	Connections that are subject to "Technical Limits" due to Transmission constraints. These will be managed within the ANM system using in a Curtailment Index stack order
PRESense	Our Low Voltage Monitoring devices that capture power flow data, enabling the proactive management of the network and an understanding of any emerging constraints due to the adoption of low carbon technologies
ROCBA	Real Option Cost Benefit Analysis – used to quantify the benefits in terms of cost and risk assessments accounting for uncertainties in future peak demand growth as well as other uncertainties (e.g., energy prices, weather conditions etc)
SROI	Social Return on Investment – a methodology used to measure and evaluate the social, environmental and economic value created by an organisation's activities
V2X	Vehicle to X, where X could be G - Grid, H - Home, B – Buildings etc.

Appendix B - List of 2024/25 Initiatives

Category	Activity	Source	Status
Delivery of DSO benefits	We will expand our collaboration with SSEN to encompass other networks, as we jointly develop a holistic and common framework for assessing and tracking DSO benefits.	Submission 23/24	Complete
	Delivering our first annual DSO benefits report to our DSO Panel (incl. ENWL quantification of benefits)	Submission 23/24	Complete
	Conducting a collaborative review of the benefits of DSO in the north west region, working in partnership with stakeholders across the entire energy systems spectrum	Submission 23/24	Complete
	Undertake a collaborative review of our support to LAEPs, chaired by Local Government	Submission 23/24	Complete
	Aim to expand LAEP data inputs into DFES from local authorities, focusing further on more granular projects supplied by lower voltages	Submission 23/24	Complete
	Design a seamless data journey that allows our DFES and NDP to inform emerging regional whole system energy plans	Submission 23/24	Complete
	Support the ENA Open Networks Project's System Forecasting Technical Working Group focusing on the alignment of DFES/forecasting across all DNOs	Submission 23/24	Complete
	Co-created and published our Social DSO Strategy to signal our ambition and forward focus	New	Complete
	Reviewed and updated our DSO KPIs linked to our benefits areas	New	Complete
	Updated our methodology for benefits assessment	New	Complete
	Took on the industry lead role in DSO Collaboration Forum for benefits	New	Complete
	Published our DSO Benefits Methodology for the first time	New	Complete
	Published our 'You Said, We Did' report	New	Complete
Data and information provision	Launch our online Data Learning Hub, with an expanded video library explaining how to use our data	Submission 23/24	Complete
	Create 'data journey' to inform RESPs	Submission 23/24	Complete
	Enhance linkages across all data, documents and tools using SOO	Submission 23/24	Complete
	Incorporate data from LDES NODE (blog release)	Submission 23/24	In Progress
	Sharing LTDS network data in a standardised format (CIM)	Submission 23/24	Delayed due to reasons outside of our control
	Make more of our network data available through our data portal, such as maps with LCT forecasts from our DFES	Submission 23/24	Complete
	Publish anonymised smart meter data for time-series (half-hourly probably) domestic electricity consumption	Submission 23/24	Delayed due to installation of a new DCC adapter
	Publish maps of electricity consumption forecasts and Distribution Generation capacity from our DFES alongside carbon reduction data	Submission 23/24	Complete
	Co-create user stories, videos and how-to guides tailored to the needs of our stakeholder personas, while holding hackathon events to enable practical and bespoke demonstration	Submission 23/24	Complete
	Publish planning and operational data and information across end-to-end processes on a single web-point Open Data Portal.	Submission 23/24	Complete
	Enhance visualisations for LCT volumes, distributed generation, energy usage, and carbon savings	Submission 23/24	Complete
	Integrate smart meter data into mapping and tabular representations for load and network capacity. This integration will occur once aggregated consumption data from smart meters achieves a threshold of 70% coverage among our domestic customers.	Submission 23/24	Expected 2026/27 (as per Yr1 report)
	Enhance LV measurements and monitoring capabilities by deploying PRESense devices to a wider array of secondary substations, elevating coverage from the current 12% to 15%.	Submission 23/24	Complete
	Co-design the processes to collate data from local authorities for investment programmes below primary substations.	Submission 23/24	Complete
	Work with local authorities to further refine the templates and guidance for inputting project data, with the aim of increasing take-up across region to 35 (100% of local authorities)	Submission 23/24	In Progress
	Allow access to data repository in the format of human readable visualisations	Business Plan	Complete
	Upgrade or replace the existing network planning tool to facilitate enhanced DSO forecasting and data exchange processes	Business Plan	Complete
	Enhance EHV forecasting techniques (ATLAS)	Business Plan	Ongoing
	Develop and embed new HV/LV Forecasting Techniques	Business Plan	Complete

Category	Activity	Source	Status
Data and information provision	Install LV network monitoring equipment (Pre-sense)	Business Plan	In Progress
	Develop the processes required to extract data from the corporate IT systems and convert this into a CIM format	Business Plan	In progress
	Procure a platform based market-place	Business Plan	Complete
	Published our new Data Roadmap	New	Complete
	Created tailored user tools where we have identified stakeholder value	New	Complete
DER dispatch decision making framework	Introduce curtailment liability trading	Business Plan	In Progress
	Publish ANM zones and constraint information	Business Plan	Complete
	Deliver flexible services dispatch using an API	Business Plan	Complete
	Consult on potential for third party management of MOM	Business Plan	Expected 2025 (in line with business plan)
	Complete the development of ICCP links between the control room and other licensees (including curtailment)	Business Plan	Delayed due to reasons outside of our control
	Integrate the ANM system seamlessly into our BAU operations	Business Plan	Complete
	Integrate MOM into our standard operations	Business Plan	Complete
	Consult on any updates required to the Operational Decision Making Framework and publish update	Submission 23/24	Complete
Flexibility market development	Incorporating LV requirements into our Autumn 2024 tender.	Submission 23/24	Complete
	Increase regularity of issuing tenders	Submission 23/24	Delayed due to prioritisation
	Get closer to real-time procurement with a standard offer product	Submission 23/24	Complete
	Speed up connections queued for transmission network reinforcement	Submission 23/24	Complete
	Carry out monthly flexibility tender	Submission 23/24	Delayed due to prioritisation
	Shift our focus to LV requirements where we will offer granular half hourly profiles for LV opportunities	Submission 23/24	Complete
	Run small scale, time limited trials for the implementation of central market facilitation measures via a DNO forum led in tandem by ENWL and NPg.	Submission 23/24	Cancelled – does not align with industry
	Procure short term flexibility for both planned and unplanned outages	Business Plan	Delayed due to prioritisation
	Procure flexibility for connections driven reinforcement	Business Plan	Complete
	Transition to the short term forecasting for the procurement of dispatch flexible services	Business Plan	Delayed due to prioritisation
	Develop the processes required to procure flexible services close to real time	Business Plan	Complete
	Define and publish market parameters within which parties can trade	Business Plan	Complete
	Continue to test and optimise bitrader	Submission 23/24	In Progress
	Work with other system and network licences to standardise flexible services products and agreements	Business Plan	Ongoing
	Develop/integrate a secure marketplace platform for secondary trading	Business Plan	In Progress
	Published our new Flexibility Strategy	New	Complete
Options assessment and conflicts of interest mitigation	Collaboratively design and release first annual Compliance Report.	Business Plan	Delayed due to prioritisation
	Sharing a comprehensive guide outlining our DSO Governance framework.	Submission 23/24	Complete
	Advancing the CEM by enhancing automation within decision-making processes, in partnership with other networks.	Submission 23/24	Complete
	Publish data on load indices.	Submission 23/24	Complete
	Improve DNOA report in response to stakeholder feedback and with reference to stakeholder personas.	Submission 23/24	Complete
	Introduce a new meeting format to Panel meetings (each session revolving around a specific theme and standard items and quarterly reports set for publication)	Submission 23/24	Complete
	Ensure the panel plays a key role in the review and potential refinement of the DSO strategy	Submission 23/24	Complete
	Ask the panel to assess the progress made in executing the DSO transition plan leveraging insights from an independent DSO assurance audit	Submission 23/24	In Progress
	Enhance the ROBCA tool to include micro-scenarios, full carbon impact assessment, asset management interventions alongside reinforcement needs, quantification, or qualitative assessment of whole systems outcomes	Business Plan	Complete
	Publish our new DSO:DNO Governance Framework	New	Complete

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