Smart Optimisation Output:

Collaboration Plan

May 2026

SP Energy Networks | DSO

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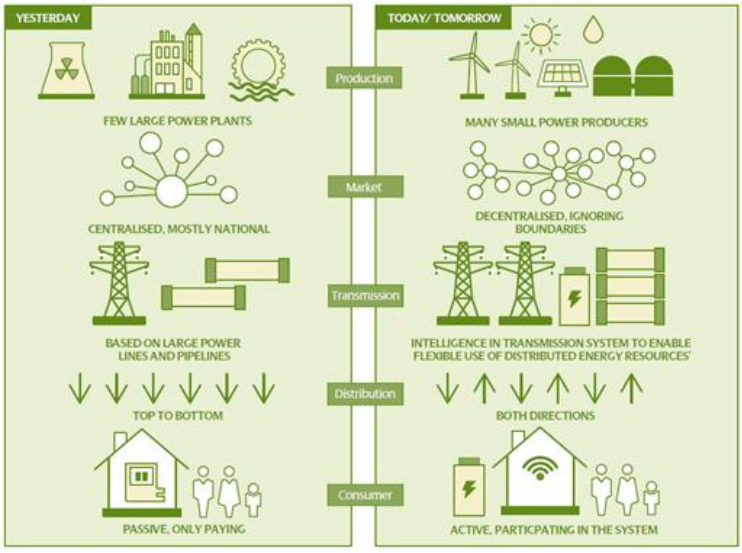
1. Who we are

We are SP Energy Networks. We own and operate the electricity distribution network in Central and Southern Scotland (SP Distribution network), and in North Wales, Merseyside, Cheshire, and North Shropshire (SP Manweb network). It is through these two networks of underground cables, overhead lines, and substations that we provide 3.5 million homes, businesses, and public services with a safe, reliable, and efficient electricity supply.

The energy landscape is changing as the way our customers generate, use, and interact with energy evolves. This means that our role – how we plan, design, and operate the network for our customers – must evolve with it. Within a relatively short period of time, we forecast that a significant proportion of transport and heating will be electrified. We anticipate significant growth in distributed generation connected to our networks, with the UK Government targeting carbon-free power generation by 2030. Coupled with the rapid rise of digitalisation, this will precipitate a revolution in how both domestic and commercial customers interact with the electricity distribution system.

These changes will result in higher distribution network utilisation, more dynamic and volatile power flows, more complexity in network operation, and a greater need for whole system coordination. This is a step-change from the historical design and usage of our networks, which were built for an era of passive, predictable consumer demand. If we do not adapt now, these changes will push the system beyond what it is designed for – leading to increased safety risk, higher costs, a poorer service for customers, and inhibit the Net Zero transition.



This transformation provides opportunities. Our customers increasingly have increased and varying needs to participate in their energy system, meaning there is an ever-increasing number of parties we can work with to solve network challenges and keep network costs efficient – at SPEN we must continually adapt to their needs. Digitalisation means we can share data and better coordinate with other parties, facilitating new solutions. Through our strong links with our customers, communities and communities, we can quickly understand and respond to their needs, and we have the capability, knowledge, and experience to deliver on time and in a cost-effective way. We look forward to working with Ofgem and our stakeholders to make this happen.

2. Introducing Our Collaboration Plan

Welcome to our third publication of our **Smart Optimisation Output Collaboration Plan**. This plan brings together a diverse group of people, teams, and perspectives, to enable better decision-making, improved outcomes, and lasting value. Smart Optimisation is about working differently: taking a whole-system view, using evidence and insight to guide our actions, and collaborating effectively across organisational and functional boundaries.

This Collaboration Plan sets out how we will support those ambitions through clear, open, and inclusive ways of working. It is intended to support us all in working together in a way that feels open, practical, and constructive. It sets out our shared approach to collaboration — how we communicate, how we make decisions, and how we stay aligned as the work evolves. Above all, it aims to make it clear how everyone can contribute and feel confident that their input is valued.

The purpose of this plan is to enable collaboration that is:

- **Outcome-focused**, with a clear line of sight from activity to customer, system, and organisational value
- **Data-led and transparent**, supporting informed decision-making and shared understanding
- **Inclusive and partnership-based**, recognising the importance of diverse expertise and perspectives
- **Adaptive and continuously improving**, learning as we go and responding to change

By working together in a collaborative and transparent way, I am confident we can deliver Smart Optimisation outputs that create meaningful, lasting value. It will evolve as our DSO capability continues to mature and as we learn more about what delivers the greatest impact for our stakeholders and customers.

N Lowe

Nia Lowe
Head of DSO, SP Energy Networks

In RIIO-ED2, Ofgem introduced the “Smart Optimisation Output” to promote collaboration between the licensee and its local stakeholders and communities. It is comprised of 2 principal activities:

1. To create and submit a Collaboration Plan which describes how we work with stakeholders to support the development of net zero strategies and how we collaborate with stakeholders through a transparent and user-centric approach to the sharing of data.
2. To develop a System Visualisation Interface that provides access to forward-looking, open and accessible, digital network tools and related information.

Their intention was that the Smart Optimisation Output would facilitate meaningful collaboration and partnerships between licensees and their local stakeholders by structuring and packaging network and development data to make them more accessible, transparent, and interoperable. Achieving net zero at least cost will require a highly optimised and integrated future energy system with a greater number of market participants interacting digitally to determine the configuration of assets on the system. SPEN have a

fundamental role to play in enabling this by making data about our network more accessible and, by engaging collaboratively with stakeholders to inform our own strategic planning and to support the creation of least cost decarbonisation pathways for electricity, heat and transport, at a local level, in partnership with others.

By ensuring that data is more accessible, transparent and consistent, this standardised approach across networks helps stakeholders gain a greater understanding of the electricity distribution networks, acting as a vehicle for a collaborative approach to the development of local area energy plans (LAEPs) and supporting whole system optimisation across different energy vectors. In this collaboration plan, we provide insight into the digital tools and strategic programmes we are using to share data and information with our stakeholders, and how these capabilities, principles and tools will be used as a vehicle for more effective collaboration, making it easier for local stakeholders to access and extract data that can be integrated and overlaid with gas, transport, land registry, urban and other datasets, to inform local cross-vector, whole system plans.

In Chapter 3, we outline our approach to sharing data with our stakeholders. We provide an overview of our Open Data Portal, our main data sharing interface with our customers and stakeholders. We provide an overview of how our stakeholder engagement, our capabilities and our digital tools are informing future plans, and how they are supporting the delivery of our RIIO-ED2 business plan.

In Chapter 4, we describe our Whole System mission, our approach to Whole System, and where you can access further details.

In Chapter 5, we describe how we are collaborating with our stakeholders in the co-development of strategic regional plans. We outline how we are Strategic Optimisation support to our Local Authorities in the development of their Local Area Energy Plans (LAEPs) in Wales and England, and their Local Heat and Energy Efficiency Strategies (LHEES) in Scotland. We also outline how we are providing Low Carbon Technology (LCT) optioneering to support the deployment of Electric Vehicles, Heat Pumps and Renewable Generation.

In Chapter 6, we provide insights into how we are supporting regional Net Zero ambitions within our Licence area, including specific examples for planning, heat, transport and industrial clusters.

In Chapter 7, we describe how we take account of local stakeholder plans and requirements, including anticipated and forecast changes in demand, generation, storage, or services, to inform our own network planning and optimisation activities.

In Chapter 8, we provide an overview of our teams and their relevant contact information to enable you to access people and information from within our organisation to support such collaborative projects.

3. Sharing Data and Information

3.1. Our Data Strategy

Our Data Strategy, published for the RIIO-ED2 period, outlines how we will enhance our data and analytics capabilities and underlines our commitment to sharing data with our customers and stakeholders on a "presumed open" basis. Easy access to comprehensive, high-quality data is crucial for supporting our customers and stakeholders with a wide range of use-cases, including efficient whole system planning and operation, and the development of new markets. Our customers and stakeholders have emphasised – through open data requests and engagement with our teams – the need for access to data about our network to develop accurate plans, enhance project proposals, and to understand their impact on our network.

Our goal is to provide our customers and stakeholders with seamless access to a comprehensive suite of secure, high-quality data and information aligned with their needs. Our Network Data and Intelligence function, which oversees our Data Strategy, comprises specialists in data science, data governance, data engineering, and data architecture. We ensure the effective governance, mastery, and utilisation of our data, establishing a robust foundation for sharing our data with customers and stakeholders. Through our Open Data Portal, used by over 4,000 users, we publish 35 datasets, comprising over 150 data tables. Over the last 12 months our dedicated Open Data team has responded to over 320 bilateral requests for access to our data, and we treat each of these engagements as an opportunity to learn our stakeholders' needs.

We recognise that provision of our data and information must be aligned with industry standards. It is important that the industry remains aligned to ensure all customers and stakeholders benefit from improved availability of data and information in a standardised format. One of the main enablers of industry standardisation is compliance with Ofgem's Data Best Practice Guidance; 11 principles that set out how organisations should manage their data. SPEN are fully committed to compliance with Ofgem's guidance and have built our teams and framework to ensure clear accountability for each of the principles.

The main forum within the industry for stewarding a standardised approach to Data Best Practice is the ENA's Data and Digital Steering Group (DDSG) which is chaired by SPEN. Through our leadership role in this forum, we take an active role in delivering real change, enabling the industry to work together towards enhancing maturity of compliance with Data Best Practice. In particular, we lead on the development of the new ENA Shared Data Licence which has been successfully implemented on SPEN Open Data Portal.

The energy data sharing landscape continues to evolve, with increased scrutiny on data security from the Department for Energy Security and Net Zero (DESNZ) and the National Protective Security Authority (NPSA). We engage regularly with Ofgem, DESNZ and the NPSA, and our comprehensive Data Triage framework is aligned with the ENA's Data Triage Playbook and the NPSA's Triage Process Guidance. Our aim is to ensure we make data openly available for customers and stakeholders, and where this isn't possible, due to exposure of sensitive information, we work with our customers and stakeholders to identify appropriate controls.

We adopt a stakeholder-led approach in shaping our publication plans. In 2026, we strengthened this approach by introducing a flexible roadmap, with quarterly reviews, allowing us to respond to stakeholder requirements as they evolve. We conduct trend analysis on the most requested and utilised datasets to understand the needs of our customers and stakeholders. Insights from this analysis inform the development of our annual roadmap, which we publish on our Open Data Portal for transparency.

We also include input from our annual Stakeholder Survey and industry engagement. This year, as an example of our stakeholder-led approach, we have focussed on user journeys on our portal. We have updated our homepage to allow for easier navigation to our data and to inform users about our datasets, and we have a planned suite of new feature pages and landing pages in our 2026 roadmap which will help our stakeholders find and interpret the data more easily.

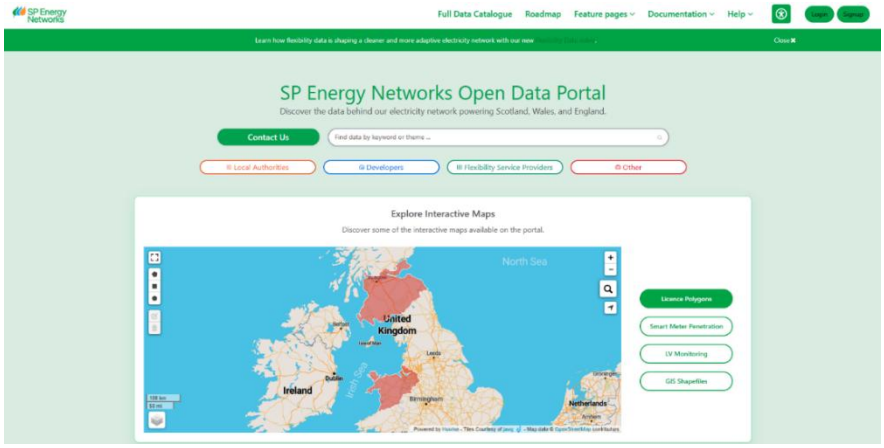
Over the last 12 months, we have expanded our data provision, publishing 18 new or improved datasets. Summaries of these datasets are included in the table below:

Role	Name	Description	New / Improved
Market Information	Flex Landing Page	Central hub for information on flexibility services including future opportunities, market activity and assets capable of flexibility	***New***
	Flexibility Dispatch	Data table contains all previous flexibility dispatch instructions	***New***
Network Planning Data	Distribution Network Options Assessments	DNOA evaluates short-term options for addressing network constraints and network investment. Feature page includes Individual Project Insights & Map & Regional Data.	***New***
	Distribution Network Options Assessments		***New***
	Distribution Network Options Assessments Polygons		***New***
	SPD DFES Totals by Building Blocks	Forecast numbers of heat pumps, EVs, and residential EVs, aggregated to local authority.	***New***
	SPM DFES Totals by Building Blocks		
	Customer Connections Profile - HV Feeder	Information on the number of import and export customers by connection voltage and customer type at the various levels (HV feeder, Census area etc).	***New***
	Customer Connections Profile - Census Area		
	Customer Connections Profile - Primary Substations		
	Customer Connections Profile - LV Transformer		
	Connections Data - Volumes by Market Segment	Volume of accepted applications made to SPD and SPM over the ED1 and ED2 period	***New***
	SPD LTDS CIM — SPENOpenDataPortal	Structured representation of the Long-Term Development Statement (LTDS) using the Common Information Model (CIM)	***New***
	SPM LTDS CIM — SPENOpenDataPortal		
Network Operations	Non-Firm Connections Insights	Half-hourly MVA measurements of the majority of GSPs/BSPs/Primaries to show a load duration curve.	***New***
	Historic Substation Demand Curve	Historic half-hourly demand (MW) for the last three years for SPD and SPM license areas.	***New***
	SPD & SPT GIS Shapefiles - Line Assets	GIS format for the key network assets across our Distribution (SPD & SPM) and Transmission (SPT) business licence areas.	***Improved***
	SPD & SPT GIS Shapefiles - Point Assets		
	SPM GIS Shapefiles - Point Assets		
	SPM GIS Shapefiles - Line Assets		
	SPEN Secondary Substation Polygons	GIS dataset shows the supply area for each of the SPEN secondary substations.	***New***
	Network Flows: SPEN Boundaries	Half hourly data on flows to and from SPEN licence assets into other DNO/TOs	***New***
	Capacity Management System Data	Daily aggregated generation losses caused by curtailment under network management schemes: ANM and LMS.	***New***
	Historic Feeder Utilisation SPD	Annual utilisation and capacity of each transformer on SPD & SPM and the 11kV feeder on the SPD network.	***New***
	Historic Substation Utilisation SPD		
	Historic Substation Utilisation SPM		
	Secondary Network Visibility Dashboard	Smart meter and LV monitoring data.	***New***
	Carbon Accounting GSP Substation SPD	CO2 equivalent emissions - SPs/BSPs/Primaries using NESO Carbon Intensity API.	***New***
	Carbon Accounting GSP Substation SPM		
	Carbon Accounting Primary Substation SPD		
	Distribution Network Live Outages	Live outage data for our Distribution network, Low Voltage (LV) and High Voltage (HV).	***New***
Additional	SPD Substation Naming Reference Table	Unified view of substation naming conventions for SPD and SPM license areas.	***New***
	SPM Substation Naming Reference Table		
	Glossary	List of terms used across our portal along with a description and any acronyms	***Improved***

We continuously enhance our Portal and its content, expanding available datasets and enhancing the stakeholder experience. By collaborating with other industries and stakeholders, we aim to refine our digital tools, services, and capabilities. Our roadmap has been developed from stakeholder and regulatory requirements to outline data and digital tools we plan to release throughout 2026, providing stakeholders with visibility of our planned publications and the opportunity to feedback on whether these align with their needs. This has also been upgraded for 2026 to be interactive - allowing users to link directly to published datasets. You can view our data roadmap on the Roadmap page — SPENOpenDataPortal.

3.2. Our Open Data Portal

We make it easy for our stakeholders to access our data, with all our openly published, and shared, datasets hosted on our Open Data Portal, accessible via our website.



A snapshot of our Open Data Portal.

Our Open Data Portal provides a single, easy-to-access interface for users to explore, filter, view, download and consume our available data. Through our Portal, stakeholders can:

- **Search our Open Data catalogue;** we offer various ways to group and filter datasets. We have updated our themes and keywords to improve the filtering options and help users find data more easily.
- **Download data in multiple formats;** our datasets are downloadable in multiple formats, including machine readable types; these include XLSX, CSV, GeoJSON, Shapefile, XML, RSS, and more.
- **Consume data via an API;** all our published datasets can be accessed via a common API with the new API Console providing a lower barrier of entry.
- **Review detailed descriptions;** we publish detailed metadata for all our datasets, in line with industry standards, to help stakeholders understand the content.
- **Request access to new datasets;** stakeholders can request access to Shared datasets and ask for new datasets through our "request data" form. Requests are reviewed via our data triage process.
- **Access our Data Quality assessments**; helps our stakeholders understand the quality of our data in terms of validity, completeness and uniqueness.
- **Access Feature Pages;** visualisations of our data which help our stakeholders interpret complex datasets and show related datasets combined to provide powerful insights.
- **Access our Data Triage documentation**; allowing our stakeholders to understand the controls implemented to protect sensitive information and the methodologies used to compile the datasets.

3.3. Development of New Features

In December 2025, following stakeholder feedback, we completed a revamp of our homepage. The new page has a modern feel and puts our data front and centre. Over the past year, we also launched a variety of new tools and feature pages with the aim of helping our stakeholders navigate and understand our data more easily.

- **New Homepage:** this revamp of our homepage now includes a map view of a variety of our key datasets, user personas, updated asset themes and keywords, spotlight on our restricted datasets and easier access to the feature pages.
- **Recite Me:** our new accessibility tool allows users to adapt our portal to meet their accessibility needs ensuring that all users can access our data.
- **Find data related to a persona:** we have added four personas (Local Authorities, Developers, Flexibility Service Providers and Other) onto our homepage which provides relevant datasets and tools for each. This acts as a starting point for users who do not know where to start.
- **Secondary network visibility dashboard:** this feature page combines our smart meter and LV monitoring data to provide new and useful insights for our stakeholders. It aims to help users access

and visualise the large smart metering and LV monitoring datasets. It can be used to identify areas with greater smart metering/LV monitoring uptake and therefore greater data quality.

- **Glossary:** the new glossary feature provides a list of terms used along with a description and any acronyms. This was a request from Stakeholders via the 2025 survey and helps to improve understanding of our data.
- **How to guides & Learning Hub:** shows our stakeholders how to use our portal successfully and see the major updates in more detail. Creating more structured support to help stakeholders find datasets, navigate the Portal and make better use of data in practice. The How to guides are regularly updated, most recently including a guide to the API console which helps stakeholders access our data quicker.

3.4. Working with stakeholders

Recognising the importance of comprehensive and high-quality data for our customers and stakeholders, we continue to place engagement at the heart of our efforts to enhance data and information provision. We work directly with stakeholders to ensure that we understand and meet their needs, and to identify opportunities for improvement. Recognising the diverse ways in which different stakeholders derive value from data, in 2025/26 we created opportunities for our Open Data team to personally collaborate with our stakeholders to improve our data practices, support their bespoke needs, and to develop new and improved offerings. Examples of our stakeholder engagement activities over the last 12 months include:

- **Our annual Open Data survey:** we engaged 2823 users and received 35 responses via our annual Open Data stakeholder survey, hosted on our Open Data Portal. The survey provided the opportunity for stakeholders to feedback their views of our Open Data Portal, how they interact with our data, and what more they would like to see from us.
- **Data request and feedback forms:** we responded to over 207 requests for access to our data - comprised of requests for new datasets to be published, access to our shared datasets or feedback on existing datasets. All requests were fulfilled with an average turnaround time of 6.05 working days and fed into our Open Data roadmap where required.
- **External events:** our teams presented at and hosted a range of events, In each, engaging directly on what data they would like to see published, and how we can improve the accessibility of our data. Our North and South DSO events to engage with our DSO stakeholders, our “Hands on with our Data” webinar, where our expert team took the audience through building a network model from multiple datasets and our Flexibility Summit, where the team gave an in-depth look at our flex data.
- **Powering Wales Renewably (PWR) Project:** under NESO leadership and with several principal partners and the Welsh Government, PWR will deliver a digital twin of the energy transmission and distribution networks across Wales. The Welsh Government has ambitious decarbonisation plans to identify locations for economic, timely connections of renewables and to evaluate potential use of flexibility, and we are working together to inform and demonstrate the value of digitalisation and data accessibility to accelerate the energy transition through a core data model, a collaborative approach, and enabling a co-ordinated view of flexibility across the country.
- **Academic Partnerships:** we are working with academic institutions to better understand energy data sharing, to allow effective challenges to our roadmaps, and to increase the number of studies using our data. Through academic partnerships in ENSIGN and TransiT we work closely with universities who bring feedback from their research. Our multi-year partnership with the University of Glasgow will focus on developing the foundations of graduate apprenticeships in core skill areas, expanding research and development to support cyber, data and digital programmes, and deliver a framework for knowledge exchange, innovation and project delivery – working to design solutions and, test ideas in live environments, and explore new opportunities.
- **Industry Engagement**: It is important to recognise the emerging opportunities within the industry too, having successfully participated in the NESO’s innovation pilot for the Data Sharing Infrastructure (DSI), the team are now actively working on the deployment of the DSI MVP with the NESO and other network

operators; including the development of the priority use-cases including RESP, PWR and GB CIM. This work is building our readiness for operational usage in 2027.

Feedback gathered is regularly reviewed by subject matter expects across the business to transform it into actionable insight. Some direct actions from our Open Data survey that have been included in our plans are:

1. **Requests for additional datasets,** including data on 11kV feeders and historic HV & LV faults including NAFIRs codes.
2. **New interactive options**: expanding our data visualisation provisions along with new landing pages, roadmap and glossary to help stakeholder find, understand and interpret our data more easily.
3. **Additional support in understanding our data** and how our data can be used. We have a planned programme in place for videos and webinars to address this requirement.
4. **1-1 engagement sessions** with respondents of our 2025 survey to fully understand their feedback. This provided great insights to their requirements which have been included in the 2026 roadmap.
5. **Group engagement sessions** with an external consultant, Sirio, where we walked through our new homepage design, data accessibility and future data plans with small groups of stakeholders. The feedback has been taken into consideration for our 2026 roadmap.
6. **Targeted Local Authority webinars** to showcase our portal and how it can be used to access data. We started these sessions in early 2026 and have received positive feedback in the session. We plan to continue this work into the SPD area throughout the year.

Additionally, our teams conduct trend analysis on the datasets that are most frequently requested and most utilised on our Portal to better understand the needs of our customers and stakeholders. The output of this trend analysis forms the foundation of our ongoing plans to expand our data and information provision and improve data accessibility.

Our teams have expertise in how to understand and use our data for the purposes of planning, project development, and in identifying opportunities and we make our technical teams available to support stakeholders and to ensure that the data and information we provide is fit for purpose.

Additionally, building on the feedback received from our survey where stakeholders have asked for more support, we have commenced the development and publication of a series of landing pages while continuing to expand our how-to guides, videos and webinars to help users get what they need from our data and our Portal.

4. Our Whole System Approach

By adopting a Whole System Strategy, we will take a holistic approach to identifying and creating value for customers, our business, and the Whole Energy System - enabling a more efficient and just transition to Net Zero. We all need to work together to achieve Net Zero. With that in mind, we know we're a central organisation in the energy landscape and have a responsibility to put Whole System solutions at the heart of a just transition to Net Zero. To do this, our Whole System approach will help deliver the energy network of the future.

4.1. Our Whole System Mission

Our mission is to unlock the full value of Whole System thinking by collaborating not only with other electricity companies, but also key stakeholders including gas and water networks, innovators, network users, non-regulated companies, local areas and communities. This is to ensure efficient investment in the electricity network and to achieve a just transition to Net Zero.

4.2. Whole System Concept

Whole System Thinking is a method used to understand how elements and systems are related, and how they influence one another. Whole System Thinking helps us to understand linkages among elements, cause and effect, feedback loops and to identify leverage points.

As we decarbonise the energy sector to meet climate change targets, we must develop our networks to create additional capacity that will facilitate the connection of low carbon technologies and the electrification of sectors like heat, transport and gas. Enabling this future is dependent not only on the role that network companies play, but also on effectively harnessing the contribution that can be made by other parties.

4.3. Our Whole System Approach

Our Whole System approach is centred on bringing a more outward-looking approach into how we plan, operate and develop the network. Our Whole System approach is underpinned by our strategic pillars:

1. Develop a network that is ready for Net Zero	2. Be a trusted partner for customers, communities, and stakeholders	3. Ready our business for a digital and sustainable future
Think beyond the electricity sector to support other energy vectors including heat, transport, and hydrogen by using innovation, markets, and smart grid networks to push the boundaries of Whole System thinking.	Use Whole System thinking to support a just transition to Net Zero and establish Strategic Partnerships and deliver Strategic Optimisation to enhance our approach and achieve better Whole System outcomes.	Embed Whole System thinking in our organisation, culture, and ways of working to deliver better Whole System outcomes while also considering appropriate Open Data that can support Whole System solutions.

Our Whole System Strategy & Optimisation team will have accountability for:

- Maintaining key external whole system relationships
- Maintaining a view of stakeholder plans and ambitions
- Identifying opportunities for whole system solutions
- Ensuring stakeholder plans are incorporated in our forecasting and decision making.

You can find out more about our Whole System Strategy and Activities on our Whole System Website

5. Supporting our Local Authorities

5.1. Our Strategic Optimisation Team

Our Strategic Optimisation team work pro-actively with central and devolved Government in Scotland, England, and Wales, and have built Strategic Relationships with all 40 Local Authorities across SP Distribution and SP Manweb, along with 12 Regional Growth Deals / Regional Bodies, 3 Regional Transport Partnerships, Investment Zones and Freeports and the 3 large scale Industrial Clusters within our two licence areas.

Our Strategic Optimisation team supports Local Authorities and Regional Government bodies develop their energy plans and decarbonisation programmes

We can help Local Authorities & Regional Government bodies by:

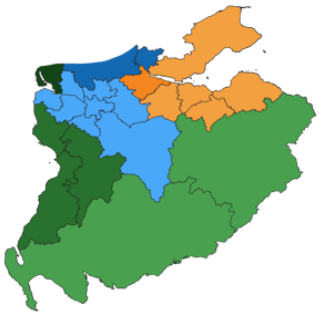
- Supporting the development of Local, Regional and National energy plans.
- Providing Low Carbon Technology (LCT) optioneering to support early-stage development of Electric Vehicles (EVs), Heat Pumps (HPs) and Solar (PV) infrastructure.
- Informing our Distribution Future Energy Scenarios (DFES) and future network planning.
- Recognising Whole System opportunities and feeding into appropriate plans and registers.

We aim to be the strategic interface between local and regional government bodies to support and facilitate the development of local, regional and national energy plans (such as LHEES, REPs and LAEPs) that are aligned with our future network development plans.

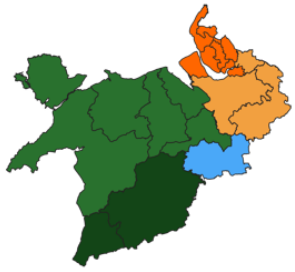
We foster relationships that enable us to understand regional specific requirements, needs, and aspirations to input into our network planning process to support the development of future infrastructure requirements that can help facilitate each local area's industrial, commercial, and domestic decarbonisation plans.

We support Local Authorities, Regional Growth Deals / Regional Bodies, Regional Transport Bodies, Investment Zones, Freeports and Industrial Clusters by:

- Identifying and developing Strategic Relationships
- Supporting the development of energy strategies, scenarios, and decarbonisation programmes
- Providing guidance, support, and optioneering to develop co-ordinated energy plans
- Analysing network project viability by determining future decarbonisation scenarios
- Recognising whole system opportunities and feeding into appropriate plans and registers
- Feeding key stakeholder energy plans into our medium and long-term investment plans



7 Regional Growth Deals we work with in SP Distribution licence area	
Glasgow City Region	www.glasgowcityregion.co.uk/city-deal/
Borderlands	www.borderlandsgrowth.com
Ayrshire	www.ayrshiregrowthdeal.co.uk/about-the-deal/
Argyll and Bute	www.argyll-bute.gov.uk/my-council/plans-and-policy/rural-growth-deal
Stirling & Clackmannanshire	www.stirclacksdeal.com
Falkirk & Grangemouth	www.falkirk.gov.uk/local-investment/falkirk-and-grangemouth-growth-deal
Edinburgh & South East Scotland	www.esescityregiondeal.org.uk/about-us



5 Regional Growth Deals we work with in SP Manweb licence area	
Liverpool City Region Combined Authority	www.liverpoolcityregion-ca.gov.uk/lcr-growth-plan
Enterprise Cheshire & Warrington	cheshireandwarrington.com/what-we-do/strategy/funding/
Marches Forward Partnership	www.marchesforwardpartnership.org.uk/our-priorities
Ambition North Wales	ambitionnorth.wales/economic-well-being/growth-deal/
Growing Mid Wales Partnership	www.growingmid.wales/MidWalesGrowthDeal

5.2. Low Carbon Technology (LCT) Optioneering

Low Carbon Technology (LCT) is critical to the transition to Net Zero. We have the knowledge, the tools, and the resources to support Local Authorities in understanding how to optimise LCT opportunities which are available in their area of the network, and we can support the realisation of proposed decarbonisation projects.

We do this across three LCT technologies: Electric Vehicle (EV) charging, Heat pumps, and Renewable generation. In the last twelve months we have established a repeatable framework to deliver optioneering and are building new partnerships and working relationships to further support Local, Regional and National bodies.

In 2025/2026, we have supported the identification and optimisation of over 2,500 locations across our network, totalling over 6,000 sites since 2023. Through this support, we have been involved in optioneering works across most of the Local Authorities in our licence areas. Our initial work since 2023 has also led to our team supporting larger scale Combined Authorities and transport bodies in an effort to provide a similar level of insight that they can utilise to support the develop of their LCT plans.

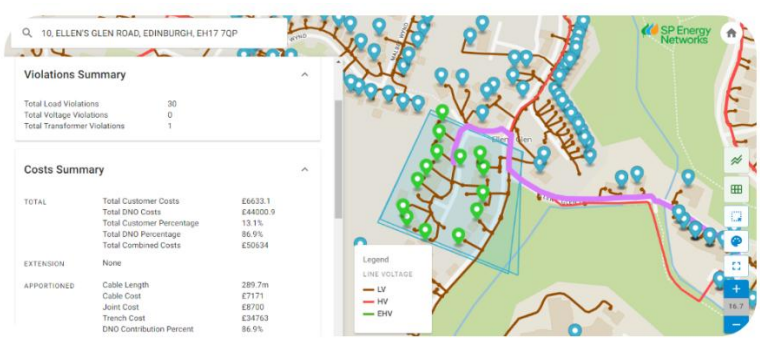
Some of the key projects we have supported this year include:

- Over 1780 EV Optioneering sites evaluated across 8 Local Authorities as part of our wider work with Glasgow City Region.
- Over 240 EV Optioneering sites evaluated across 6 Local Authorities as part of our wider work with Liverpool City Region Combined Authority.
- Two large scale bus decarbonisation sites in Mid Wales for Welsh Government Energy Service to understand the North to South Wales transport routes.

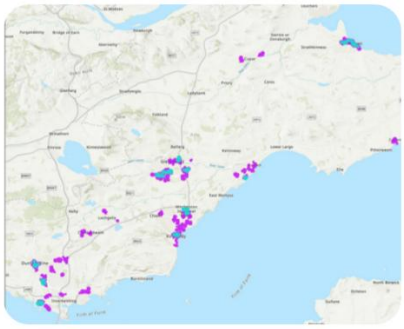
As part of our support for Local Authorities, we also aim to provide tools and services to help develop and inform local and regional energy strategies. Central to this has been the further development of our Local Authority Network Insight Tool (LANIT). LANIT looks to allow for Local Authorities to have a far greater insight into the existing network conditions and the potential impact of their LCT plans. With built in power flow analysis capabilities, LANIT can give a full evaluation of the potential impact of new LCT connections to the grid along with indicative costs that may be incurred from either a customer side, or as reinforcement works required to enable these new LCT connections.

Since 2025, we have since published an updated version of our LANIT tool, with upgraded capabilities. The tool is now able to carry out more detailed power flow analysis using additional network data, providing greater accuracy in outputs and potential costings. We have also enhanced generation studies, with a new PV specific power flow analysis now available for LAs to utilise. We've also aimed to offer stakeholders more flexibility and freedom with new connections, namely through the new "Draw Connection" tool, to allow for brand new connections to be added to the network and allow a full understanding of their impact to the grid.

We have offered training on the updated LANIT tool to all 40 Local Authorities, Regional Government Organisations and Transport Bodies across our two licence areas. To date we have carried out over 18 demonstrations to over 25 different stakeholder groups during 2025/2026.



EV Charge Point optioneering
Feasibility studies for the rollout of public EV chargers



Heat Pump optioneering
Analysis and cost / timescale estimates for heat pump rollout in off gas grid areas and social housing

Renewable Generation optioneering
Support and analysis for local energy projects and opportunities

6. Supporting Regional Net Zero ambitions

Our Strategic Optimisation Team has provided an insight into the electricity network through our optimisation analysis and through sign-posting available Open Data on our website. This network analysis and optioneering support has helped stakeholders make informed decisions on their heat, transport and industrial decarbonisation plans. The early engagement with Local Authorities and other bodies also provides our network planning team with evidence on stakeholder ambitions to inform future forecasting and investment planning requirements.

6.1. Supporting Regional Decarbonisation projects

We have outlined some example heat decarbonisation projects our team has supported:

- **Fife Council LHEES:** Fife Council published its Local Heat and Energy Efficiency Strategy (LHEES) at the end of 2023, identifying several areas across the region with the potential for District Heating Network (DHN) or Air Source Heat Pump (ASHP) development. In partnership with the Danish Energy Agency, Fife Council examined the potential role for district energy in Scotland's decarbonisation strategy, with a particular emphasis on smaller towns and settlements. SPEN supported the study by developing an indicative ASHP model, providing estimated costs for LV and HV reinforcement works. As a result of our contribution to the study, we were invited by the Scottish Government, together with the Danish Energy Agency, to a roundtable discussion on district energy and the launch of the project.
- **Glasgow City Council Heat Decarbonisation:** Scotland aims to be Net Zero by 2045, with 50% of heat, transport and electricity supplied by renewables. To address the challenge in identifying sites for heat pumps in densely populated areas, Star Renewables have proposed a project in conjunction with Scottish Enterprise that would install a large river-source heat pump barge on the River Clyde within proximity of Glasgow City Centre. Glasgow City Council are supportive of the proposal as it aligns with the council's plans around heat networks in Glasgow.

- **Realising Net Zero Liverpool (RNZL:** RNZL is a £2.9 million city-led innovation project, co-funded by Innovate UK, under the Net Zero Living Programme. The principal objectives of RNZL are to:
    - Quantify the clean energy investment opportunity in Liverpool, underlying revenue streams, and CO2 impact potential
    - Test solutions to barriers to deployment of energy assets in real estate.

The multi-partner consortium aims to accelerate urban decarbonisation through integrated strategies in clean energy, building retrofit and sustainable mobility, supported by city-wide planning, investment modelling and stakeholder engagement.

- SPEN provided local network data to build a digital simulation to analyse markets modelling, hosting capacity, network reinforcement analysis, flexibility assessment, and recommendations to support electrification and grid readiness, which in turn delivered useful analysis for SPEN with the outputs from RNZL being incorporated into Distribution Future Energy Scenarios (DFES).
- The project also provided useful case study evidence to help inform SPEN's phased rollout of monitoring assets across Low Voltage (LV) substations.
- Lessons learned from early project challenges around sensitive data access also informed SPEN's improved stakeholder engagement approach, including influencing the creation of a dedicated local authority landing page within SPEN's open data portal to streamline data access.
- Another major practical outcome was enabling LCC to participate in SPEN's month-ahead flexibility market. LCC is the first Local Authority to register with SPEN's flexibility platform provider, Piclo. Through collaboration with LCC, SPEN has been able to develop and publish participation guidance for local authorities, supporting the enablement and scaling of flexibility services across both of SPEN license areas. LCC also worked closely with SPEN to survey and analyse commercial premises.

- **Marches Forward Partnership:** Working with Powys and Shropshire Councils as part of their regional Business Coalition along with neighbouring DSO (NGED) and water companies, (Severn Trent & Dwr Cymru), Cadent and Network Rail to look at land based and engineering solutions to mitigate the impacts of climate change and in particular flood risk. The Severn Valley Water Management Scheme, the key delivery vehicle for the region is developing a suite of flood risk forecasting tools to which SPEN has contributed data. –We will continue to engage closely with the project to better understand and maximise the role we can play in reducing the impacts of climate change across the region.

6.2. Supporting Regional Transport Partnerships

We have outlined some example transport partnerships our team has supported:

- **Transport Scotland:** Transport Scotland launched a £30 million EVIF (Electric Vehicle Infrastructure Fund) in 2022 to deliver approximately 6,000 additional public charge points by 2030. SPEN have supported several EVIF projects and provided local authorities with insight into the existing network conditional and indicative costing through LANIT, allowing more informed decision making with their delivery plans.
- **Transport for the North:** SPEN continue to attend the quarterly EV Partners Meetings which has led to the development of a lamppost charging policy. SPEN were actively involved in the working group adopting a collaborative approach to develop the lamppost charging policy by inviting the ChargePoint operator Ubitricity to review the proposal, ensuring the final publication is fit for purpose and aligned with industry best practice.

  In addition, SPEN has been actively involved in TfN's DNO 'drop in sessions' discussing the challenges associated with cross pavement charging, highlighting the need to consider unlooping of household services to facilitate domestic and pavement-based EV charging.
- **Transport for Wales:** SPEN continue to be actively involved in the Zemo Partnership with Welsh Government, looking at decarbonisation of the commercial vehicle sector. We are also supporting Transport for Wales with strategic optimisation analysis for EV Charging Stations at 2 bus depots in Mid Wales and have provided a joint training workshop for Local Authorities with NGED.

6.3. Supporting Regional Economic Growth and investment Plans

We have outlined some key regional investment areas our team have been working with. SPEN haves been working with each of the regional government planning teams to fully understand the long-term vision for each area and incorporate the associated electricity network requirements into our investment plans. All planned projects have been included into SPEN's Register of Strategic Projects and incorporated into SPEN's DFES 2026 publication, which in turn has informed the tRESP Strategic Investment Request for Information.

- **Glasgow City Region Investment Zone:** Glasgow City Region (GCR)'s Investment Zone is expected to generate around £300 million initial private sector investment, to support 7,000 – 10,000 jobs, including through the expected Tax Site and to boost key growth sector specialisms of the Region's innovation economy – specifically the Space, Semiconductor and Maritime sub-sectors of the Advanced Manufacturing sector.
- **Forth Green Free Port:** Forth Green Freeport is a significant initiative aiming to drive economic growth and support Scotland's transition to a net zero economy. The area around Forth Green Freeport generates 40% of Scotland's industrial emissions today and the initiative will look to deliver a just transition in the area to achieve Scotland's 2045 net zero target.
- **Liverpool City Region Investment Zone:** The Liverpool City Region Investment Zone, focused on Life Sciences, is expected to unlock up to £800m in investment and create 8,000+ jobs over 10 years. Officially launched with £160m of government support, it focuses on areas like Sci-Tech Daresbury, Knowledge Quarter Liverpool, Maghull Health Park, and Parkside in St Helens. The initiative is designed to build on the region's strong life sciences ecosystem, supporting vectors such as vaccine development, infection research and AI-driven healthcare. 21 projects are planned, with support for the University of Liverpool's research and innovation assets.
- **Liverpool City Region Freeport:** The LCR Freeport is a multi-gateway multi-modal zone covering 300 hectares of land and the freeport sites, which include several existing rail terminals and water- accessible locations, are located within areas of logistics and manufacturing capability. The freeport has been shaped to support the delivery of the Liverpool City Region's vision outlined in its Plan for Prosperity and Economic Recovery.
- **Flintshire Wrexham Investment Zone:** The Flintshire & Wrexham Investment Zone is a 10-year partnership for £160million between UK and Welsh governments to create 6,000 jobs and £1 billion in private investment. Focused on high-value advanced manufacturing, it offers tax reliefs and funding for infrastructure, targeting areas like Deeside and Wrexham Industrial Estates.
- **Anglesey Freeport:** Anglesey Freeport will establish the region as a leader in low carbon energy generation, research and development. Boasting some of the world's most cutting-edge advances in sustainable technology and energy production, the Freeport will be pivotal in rejuvenating the UK's position as a hub for global trade through its abundance of local talent, prestigious education, skills and research establishments and unique geographic positioning. The Freeport's proposed tax sites are located at 4 sites across the island - Holyhead Port, Parc Cybi, Rhosgoch and M-Sparc Science Park.

6.4. Supporting Regional Industrial Cluster decarbonisation plans

We have outlined some example industrial projects and clusters our team is working with which has been used to inform our next DFES and RIIO-ED3 network investment requirements for the industrial regions across our two licence areas.

Grangemouth Industrial Cluster: The Grangemouth Industrial Cluster Strategy aims to transform Grangemouth into a globally competitive, net zero industrial cluster that supports inclusive economic growth and a just transition. It provides a roadmap for sustainable transformation, aligning industry, community, and government to deliver clean energy, advanced manufacturing, and investment-led regeneration, ensuring Grangemouth remains central to Scotland's energy security and prosperity.

Net Zero North West: Net Zero North West (NZNW) Industrial Cluster represents an area that currently emits around 17 million tonnes of industrial CO2 and contains some of the UK's most significant and energy-intensive manufacturing infrastructure. NZNW is developing a Project Intelligence Platform (PIP) to track the

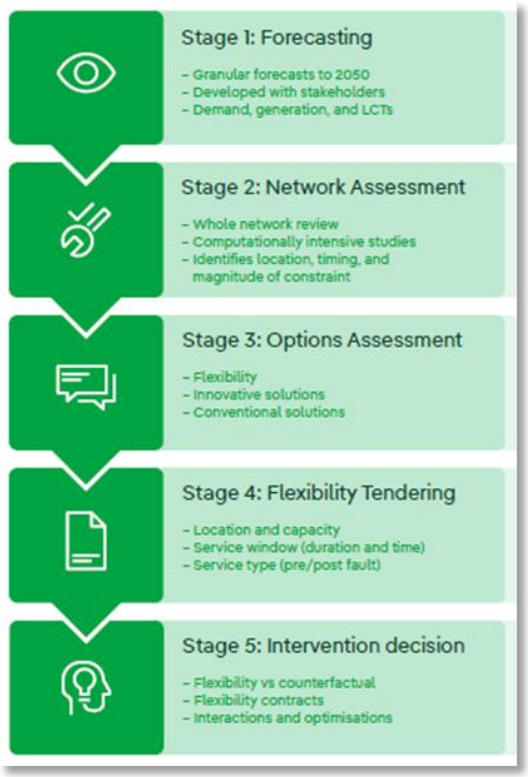
pipeline of industrial decarbonisation projects, which will become an evidence base for current and future industrial energy requirements critical to understanding the impact of decarbonisation on the energy system.

North East Wales Industrial Decarbonisation (NEWID): The North East Wales Industrial Decarbonisation (NEWID) cluster plan describes the pathways demonstrating how the industrial hubs of Deeside and Wrexham, and the companies that operate within the hubs, are planning to decarbonise. Alongside the pathways, the plan outlines the essential and urgent private and public investment and funding required, as well as near term actions, to realise the plan and achieve net zero industrial emissions in North East Wales by 2050. The NEWID Cluster is led by Net Zero Industry Wales in collaboration with five cluster partners (Wales and West Utilities, SP Energy Networks, Uniper, Net Zero Energy Systems and Bangor University) and is supported by key industrial stakeholders and other stakeholders in the region. The cluster plan addresses the unique challenges of a dispersed cluster and industrial sites and aims to transform regional emissions-intensive industries into a clean energy transition hub, and cornerstone of Wales' and UK's decarbonisation efforts.

Net Zero Industrial Pathways project: Net Zero Industrial Pathways (NZIP) is a Network Innovation Allowance (NIA) funded project that aims to deliver a whole energy system view of future industrial decarbonisation requirements across SPEN's two licence areas. NZIP will generate data driven pathways that complement existing projections for domestic and transport energy demands, improving the overall accuracy of forecasted demand requirements. The project has successfully completed phase 1, which has focused on generating estimated forecasts for key industrial stakeholders based upon published corporate aspirations and typical decarbonisation requirements for industrial sub-sectors. Phase 2 will be delivered in 2026 and involves engagement with key industrial stakeholders to validate and improve the accuracy of the profiles developed within phase 1. The output of NZIP will enhance SPENs industrial demand forecasting accuracy and therefore ensure industrial decarbonisation plans are reflected within long term reinforcement plans for the network.

7. Building our network plans with stakeholders

The primary role of our network planning function is to develop the distribution network capacity our customers need in a safe, efficient, and timely manner. We can only achieve this by engaging our customers and stakeholders to ensure we understand their requirements and incorporate them into our network plans.



The first stage is to understand what customer requirements are over the coming decades. We embed these customer requirements into our DFES forecasts, as these forecasts are the foundation on which we develop our network investment plans. That is why we engage with stakeholders right from the beginning of our network planning process (see right), when we're developing our DFES forecasts.

Our DFES scenarios draw directly from the Net Zero-compliant pathways developed by NESO through the transitional Regional Energy Strategic Plan (tRESP). These pathways reflect national and devolved government policy, including Clean Power 2030 and statutory Net Zero targets, and provide a consistent whole-system view of future demand and generation.

Within DFES, we apply these pathways at a granular spatial level, integrating Local Authority evidence, development plans and regional ambitions. This ensures our forecasts support both national objectives and the development of locally appropriate network investment proposals as part of our RIIO-ED3 business plan. A lot of this engagement is done by our Strategic Optimisation Team and explained in

Chapter 5. One important source of stakeholder information is Local Authority decarbonisation plans (LHEES in Scotland and LAEPs in England and Wales). Our stakeholders review our forecasts and we make changes based on well-justified feedback.

This process ensures that credible stakeholder requirements are bedded into our network plans from the start, and that our DFES forecasts reflect our stakeholder's decarbonisation plans. Our DFES forecasts include:

1. Growth in the volume of LCTs, such as heat pumps, district heating and electric vehicles (EVs).
2. Changes to demand and consumption as a result of technology and behaviour changes, not least due to the growth in LCTs.
3. Growth in / changes to electricity generation and storage. This is generation and storage connected to our distribution network as opposed to the transmission network - Distributed Generation (DG).

Our forecasts incorporate our advancements in network visibility through roll-out of LV network monitors and analytics from smart meter ensuring we are making decisions, or dispatching flexibility, using the latest data.

Once we understand the customer requirements we must accommodate, we then go through a process of network assessments and optioneering (including flexibility service tenders) to establish where, when, and how best to provide this capacity. This process is set out in our Decision Making Framework. We've worked carefully to make the explanations of our assessment process and tools accessible to a broad range of stakeholders. It explains how we decide to contract with flexibility services, instead of using an alternative solution like reinforcement, and where we've contracted flexibility services, how we decide in near real time to dispatch that flexibility service.

Our Decision Making framework sets out how we incorporate the plans and ambitions of our local authorities, stakeholders, and communities in developing future plans for our network, ensuring that we accommodate their Net Zero ambition, and enabling a Just Transition for our communities.

7.1. Transmission and Distribution Network Planning

We assess wider whole-system options through coordination with transmission owners, neighbouring networks, and IDNOs, so that identified needs are addressed at the lowest cost across the wider system, not just within distribution. This year, we strengthened coordination with neighbouring networks, including through:

- **Scotland**: Working closely with SP Transmission (SPT) to address network needs identified through DFES and tRESP, including whole-system options assessments at the transmission–distribution boundary to manage capacity constraints and support renewable growth and decarbonisation. Holding both distribution and transmission licences gives us an integrated, whole-system view across network boundaries, enabling more effective planning and delivery.
- **Mersey Ring**: Working with NGET on the optioneering on Mersey Ring Upgrade Programme to expand North-South transmission capacity, enabling greater renewable power flows from Scotland and supporting decarbonisation-led demand growth. This upgrading of the 275kV Mersey Ring is a key enabler to meeting long-term forecast growth across Liverpool, Wirral, North Wales and Cheshire and involves coordinating potential upgrades and developments in 7 GSPs across the North West.
- **Mid Wales**: Jointly developing a holistic transmission and distribution solution that best meets the long-term capacity needs of all parties in Wales (including communities and network customers). We are working with NGED, NGET, IDNOs, NESO, the Welsh Government, RenewableUK Cymru, and DESNZ to identify optimal whole-system solutions. Through close coordination with NGED and NGET and joint engagement with government and stakeholders, we have been developing coordinated transmission / distribution infrastructure options for the PSNC project, which NGET has now submitted to NESO as part of the TCSNP2 process. This whole-system approach is groundbreaking for the extent of stakeholders involved in collaborative infrastructure planning in Wales, and supports decarbonisation and generation growth aligned with CP2030.
- **Technical Limits**: We have been working closely with NESO and TOs to implement new operating arrangements at GSPs to accelerate eligible connections by up to 10 years.

7.2. NESO transitional Regional Energy Strategic Plan (tRESP)

The National Energy System Operator (NESO) has published the first transitional Regional Energy Strategic Plan (tRESP) to help inform electricity distribution network investment for the next price control of RIIO-ED3. The tRESP is designed to better align future energy infrastructure needs with local ambitions and growth, by providing a more place-based view of needs and where proactive investment may be required to enable local projects. In developing the tRESP, NESO has used extensive stakeholder input (from over 2,800 stakeholders) and has worked with SPEN and Ofgem to ensure the outputs can be used practically within network planning.

This Collaboration Plan explains how we collaborate with stakeholders to support the development of local and regional net zero strategies, and how we use stakeholder inputs to build our network plans through our DFES forecasts and wider planning and optimisation activities. The NESO tRESP strengthens that approach by providing an additional, structured, regional strategic planning layer that is intended to inform DNO investment planning. In practice, we use tRESP outputs as a complementary evidence source within the same stakeholder-led planning cycle described in this document:

- **Stakeholder plans**: We already embed stakeholder decarbonisation plans (e.g., LHEES/LAEPs and other regional inputs) into DFES and refine forecasts based on stakeholder review and feedback.
- **Regional consistency and strategic signals**: tRESP provides CPAs and regional pathway/context signals intended to improve planning consistency and identify potential areas of strategic investment need, which can be assessed alongside our DFES evidence base and network visibility improvements.
- **Whole-system alignment**: RESP/tRESP is explicitly framed as a whole-system, cross-vector approach with local actor input, supporting more joined-up regional planning (which aligns to our “Whole System” approach in this plan).

We use our established stakeholder collaboration routes (described in this Plan) to help stakeholders:

- Understand what tRESP is and how it influences network investment planning
- Align and evidence local net zero strategies and major project pipelines in ways that can be translated into both DFES and the evolving RESP evidence base
- Coordinate regional priorities and timing so that local ambitions (housing growth, transport electrification, heat decarbonisation, and industrial decarbonisation) are reflected in the most credible and decision-useful way for network planning.

8. Encouraging stakeholder collaboration

Our engagement places our customers and stakeholders at the centre of what we do. With a tailored and locally focused approach, we will prioritise their needs in a consistent manner across our business. We will deliver safe, reliable services, sustainable value, and a better future, quicker. Our mission statement sets out our ambition and our principles to place stakeholder engagement at the heart of our plans. For more information read our Stakeholder Engagement Strategy here.

We encourage stakeholders to share their views with us and we want to make that as easy as possible, and as such we have organised our teams to create a dedicated route and personal approach for our various stakeholder groups. Below are some examples of how to engage with us:

Providing tools and services to Local Authorities, Local and Central Government to help them develop their local and regional energy strategies:

Our team, led by Mark Goudie, our Head of Strategic Projects & Optimisation, provides Strategic Optimisation and Low Carbon Technology (LCT) Optioneering services. We can support Local Authorities and Government with the development of their energy strategies. If you would like to engage with us on your future energy or decarbonisation plans, contact us on: strategicoptimisation@spenergynetworks.co.uk

Working with Community Energy Groups to raise awareness and support projects

Our Community Energy team, led by Jillian Violaris, delivers our Community Energy Strategy. Our team and strategy aims to provide advice, capacity building, support workshops and ensure that community groups have a positive experience when interacting with us. If you would like to engage with us to discuss your development, please contact us on: communityenergy@spenergynetworks.co.uk

Working with Flexibility Service Providers to develop markets and opportunities

Our Flexibility team, led by Gerard Boyd, our Head of Flexibility, manages the procurement and delivery of our flexibility requirements to meet the growing demands on our network. We can support organisations with registration and contracting. If you are a Flexibility Service Provider, with interest an in our markets or would like to know more, contact us at: flexibility@spenergynetworks.co.uk

Providing access to data and information for our stakeholders

Our Open Data team, led by Sean Bellew, our Open Data Manager, provides support to all stakeholders seeking access to data and information about our assets, our projects, and our plans. This includes supporting stakeholders in not only accessing our data but also how the data can be used to meet their needs. If you are interested in knowing more about our Data and Information provision, contact us at: opendata@spenergynetworks.co.uk

Delivering a standardised customer experience for distributed generators

Our Design and Development teams are led by Sean Kennedy (SP Manweb) and Alastair Graham (SP Distribution). The team's co-ordinate all connections activity at 33kV, 11kV and LV for each Licence area. We can support our customers in a connections solution that meets their requirements. If would like to discuss your connection, contact us at: gettingconnected@spenergynetworks.co.uk