

Distribution System Operation Conference

29 October 2025



Welcome & Introduction

Helen Norris

Stakeholder Engagement and CSR Manager



Housekeeping



For those here in person:

- There are no planned fire drills
- Please use the QR code to the left to submit questions at any time for our Q & A session at the end (although there'll be opportunity for discussions throughout also)
- Please put your phones on silent
- Toilet access

For those joining us online:

- Please mute yourself during presentations
- Please turn your camera off

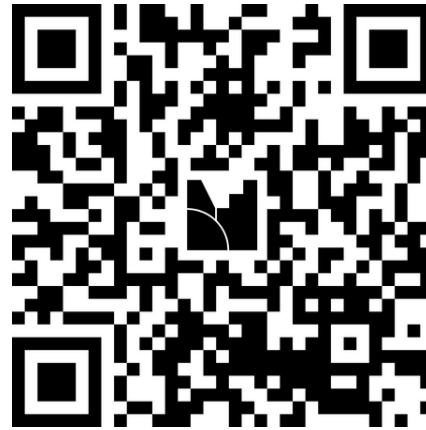
We are recording today's event and will also be taking photos so if you're not comfortable with this, please let a member of the SP Electricity North West team know as soon as possible.

How to interact with us today



Scan QR to answer polls

(You will be prompted throughout the day when to answer these)



Scan to submit your questions



Scan to view agenda

Get involved on social media

#DSNorthWest | @ElectricityNW

Agenda

Time	Item	Speaker
10.00 - 10.10	Welcome and introduction to the day	Helen Norris
10.10 – 10.30	DSO at SP ENW	Paul Auckland
10.30 – 10.50	Recent developments and next steps in the flexibility market	Harrison Leaf
10.50 – 11.10	Catalysing flexibility: hydropower, decarbonising heat and the GB energy market	Kate Gilmartin
11.10 – 11.25	Break	
11.25 – 11.35	Social DSO	Paul Auckland
11.35 – 11.45	Our engineering progress	Antonella De Corato
11.45 – 11.55	Flexibility and market enablers	Paul George
11.55 – 12.05	Data and insights for action	Ian Povey
12.05 – 12.30	Q&A with the DSO team	All
12.30 – 13.30	Lunch and networking	
13.30 – 14.20	Breakout sessions	All
14.20 – 14.30	Summary and a look ahead	Paul Auckland
14.30 – 15.00	Networking and close	

Meet our presenters & breakout team



Helen Norris
Stakeholder Engagement and
CSR Manager



Paul Auckland
Head of Economic Regulation
& DSO



Kate Gilmartin
CEO, British Hydropower
Association



Harrison Leaf
Acting Chief Operating Officer,
Electron



Antonella De Corato
Network Development
Engineer



Paul George
DSO Commercial Lead



Ian Povey
Infrastructure & Service
Development Manager



Keith Evans
DSO Technical Lead



Ivan Bolokov
Network Development Engineer



Geraldine Paterson
Innovation Manager

DSO at SP ENW

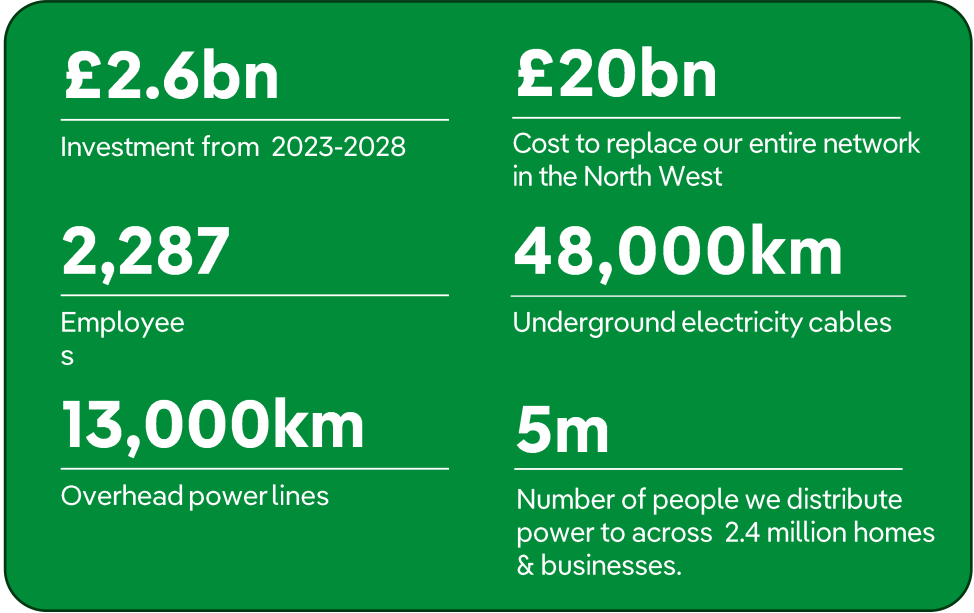
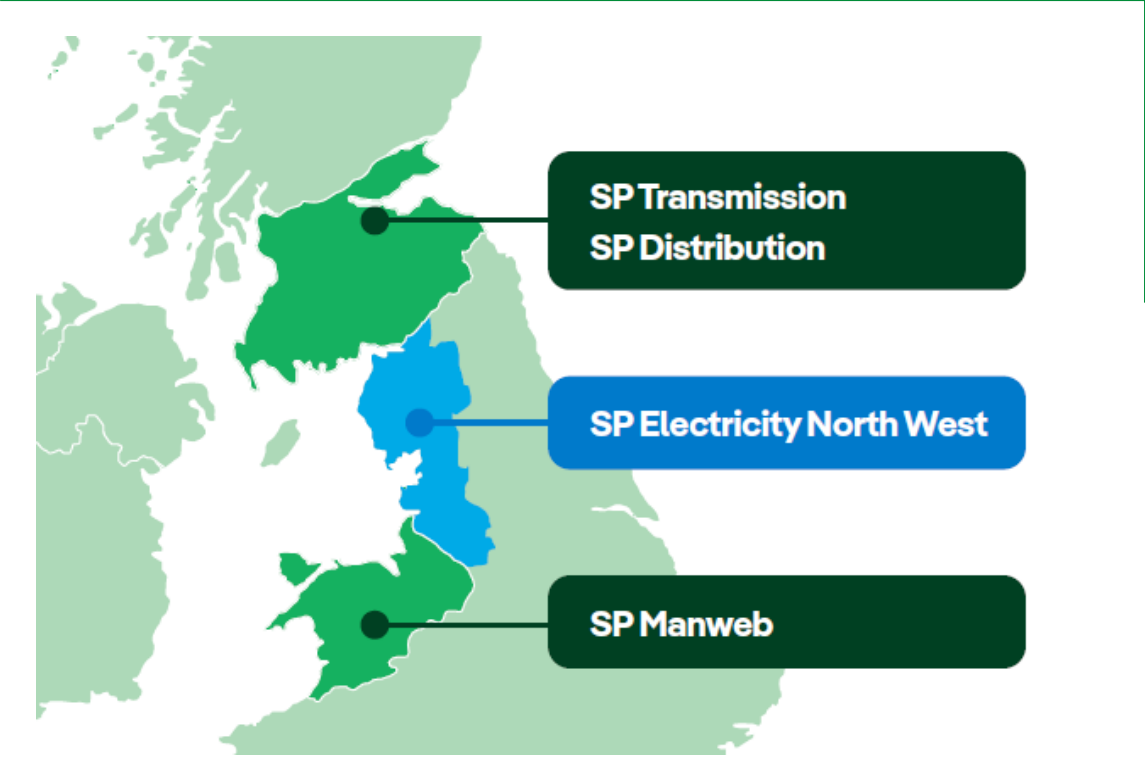
Paul Auckland

Head of Economic Regulation & DSO



Overview

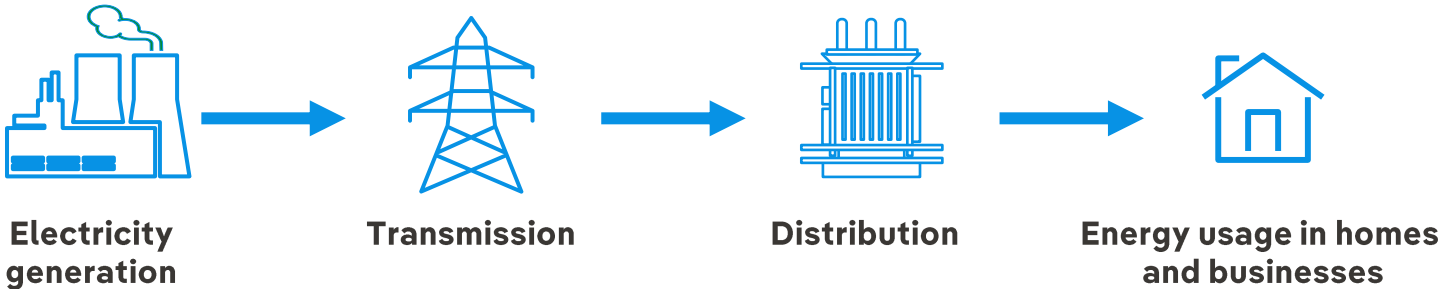
- SP Electricity North West (SP ENW) is one of Great Britain’s 14 electricity distribution network operators.
- We maintain and invest in our network of 61,000km of underground cables and overhead lines, plus thousands of substations and innovative technology.
- We deliver a safe and reliable power supply to 2.4 million homes and businesses from Cumbria to Cheshire, supporting electrification and clean growth.



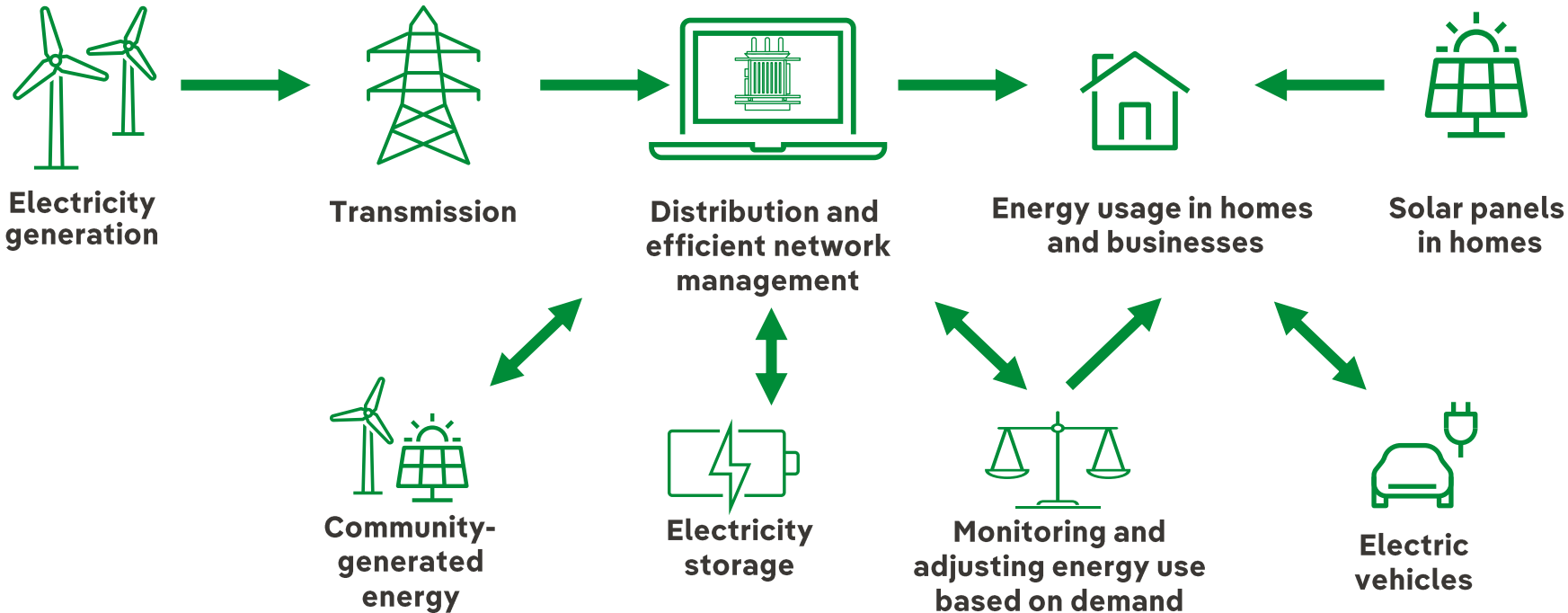
- Global energy leader, **Iberdrola**, acquired an 88% shareholding in Electricity North West in 2025 through its UK arm, ScottishPower (SP) resulting in our rebrand as SP Electricity North West.
- Iberdrola and ScottishPower are committed to building smarter, greener electricity networks and now distributes electricity to 12 million people in the UK through its 170,000km network.

The way electricity is generated, stored, transported and traded is changing

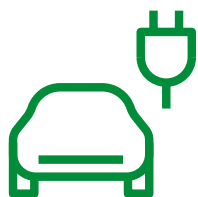
How we used to manage the network



How the network increasingly looks today

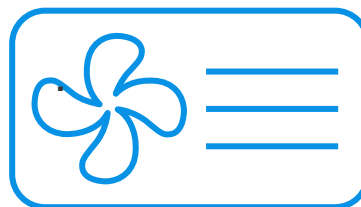


By 2040 our customers are projected to use twice the amount of electricity they do today



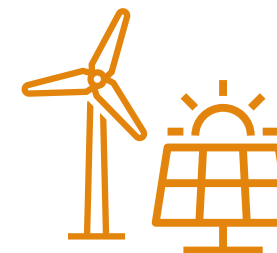
Electric vehicles

Nearly 9 out of 10 drivers in the North West will be driving electric vehicles



Heat pumps

It's likely that gas boilers will be phased out in all new homes

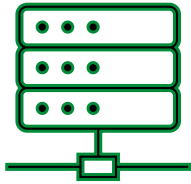


Renewable energy

Rooftop solar panels will be installed on one out of every 16 homes

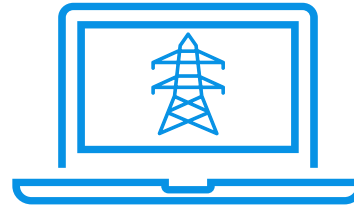
What is distribution system operation?

Put simply: the systems and processes needed to enable our business and our stakeholders to deliver green growth



Connections, planning & network development

- Efficiently plan for the future amid uncertainty
- Facilitate seamless connections for new customers and technologies
- Consider outcomes that benefit the entire energy system
- Ensure planning data is readily available



Network operation

- Increase visibility of network operations and share valuable data
- Support the efficient use of distribution flexibility services
- Ensure the availability and accuracy of data to enhance data-driven decision-making



Market development

- Provide clear, user-friendly market information
- Establish fair and simple rules for procuring flexibility services
- Harness digital tools to reduce barriers and increase involvement in flexibility

Key DSO benefits achieved in 2024/25

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

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 capable of delivering 5-30% of additional headroom at substations

Reduction in reinforcement costs by 20% at extra high voltage (EHV) levels and 33% at high voltage (HV) levels through co-ordinated network development

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

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

20% of electric vehicles and heat pumps connections driven through Connect & Notify arrangements eliminating delays

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

44% of network needs assessments resulted in sites managed with flexibility

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



Social DSO

- Net Zero Terrace - a trial to decarbonise a street of terraced houses using a smart local energy system
- Smart Street Rural – looking at technologies for overhead networks and potential benefits to customers
- 3 projects looking at heat decarbonisation



Voltage management

- Award-winning CLASS project demonstrated voltage control can reduce demand; used by NESO to balance supply and demand GB-wide
- Smart Street regulates voltage and reduces emissions and customer bills
- QUEST – control system to co-ordinate voltage management techniques and exploit their benefits



Flexibility

- Forerunner to flexibility services and our current BiTraDER project - design and trial options for a bilateral trading market
- Capacity to Customers innovation project successfully proved customers prepared to sign up to demand side response contracts



Forecasting

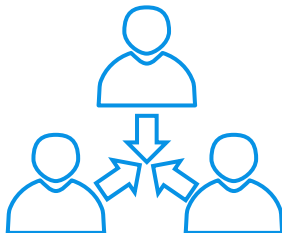
- Real options cost benefit analysis (ROCBA) tool developed as an innovation project in 2016
- Holistic approach to investment analysis recognised by ENA, led to industry-standard common evaluation methodology for flexibility services
- Innovation projects improved forecasting tools

DSO – underpinned by stakeholder engagement



Engaging, refining insights and activity

We work closely with our stakeholders to refine insights, validate priorities and drive collaborative activity that supports DSO delivery



Collating and understanding the region's needs

Our capacity strategy secures capacity for the system in the most efficient way through collaborative planning and forecasting, and transparent options assessment

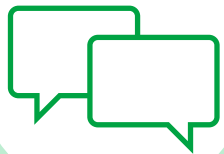


Being accessible and providing transparency

We are committed to open and transparent engagement, ensuring stakeholders have clear access to information, decision-making processes and opportunities to contribute



All underpinned by working with key partners and engaging with our stakeholders



Keynote

Harrison Leaf
Acting COO, Electron



Recent developments and flexibility market next steps

Agenda

1. Past six months

Scaling flexibility market participation

1. What's next?

Co-creating operational value

1. Q&A



Harrison Leaf

Acting COO - *Electron*

About Electron

Working with system operators to orchestrate the full value of distributed energy resources (DERs)



7+ GW / hr

Cumulative reserved flexibility **volume** on ElectronConnect

3 out of 6

UK DSOs working with Electron

79

Flexibility Service Providers **registered** on ElectronConnect

ELECTRON

Recent developments and flexibility market next steps

Trusted by
utilities worldwide



nationalgrid



Scaling flexibility leads to whole-system value

Improved network visibility and a more reliable grid

Where the value comes from



Preventing asset damage, reducing risk of faults and power cuts, and aiding in network planning.

Deferred grid build out for a more affordable grid

Where the value comes from



Reducing load-related expenditure and saving costs for consumers.

Granting flexible connections and deploying smart solutions

Where the value comes from



Accelerating the rate at which low-carbon assets are connected to the grid.

1. Past six months

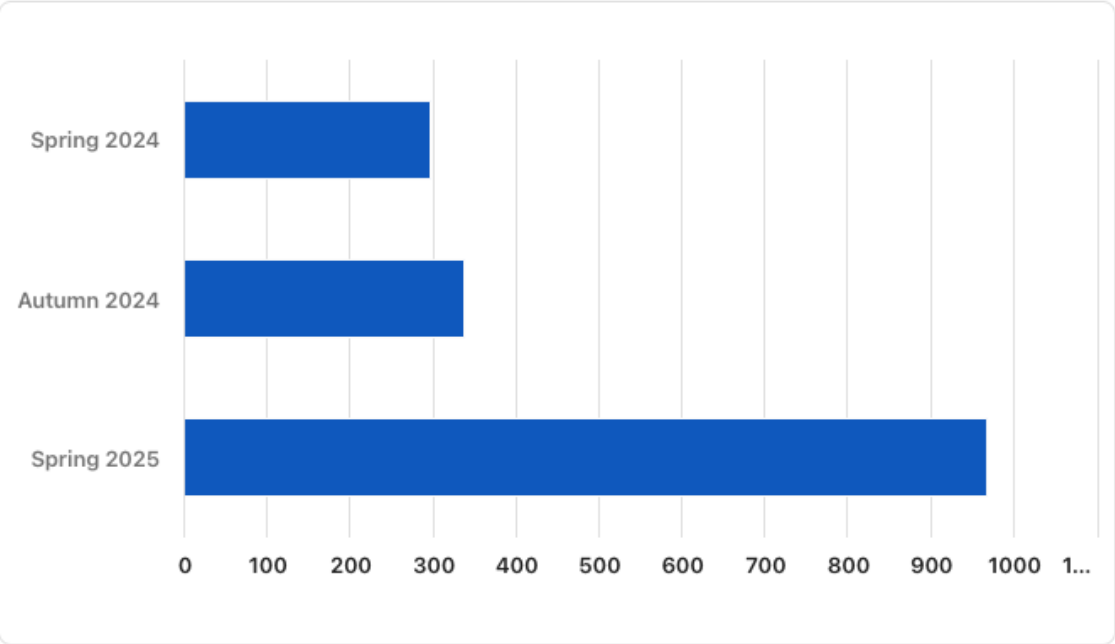
Scaling flexibility market participation

Flexibility trajectory

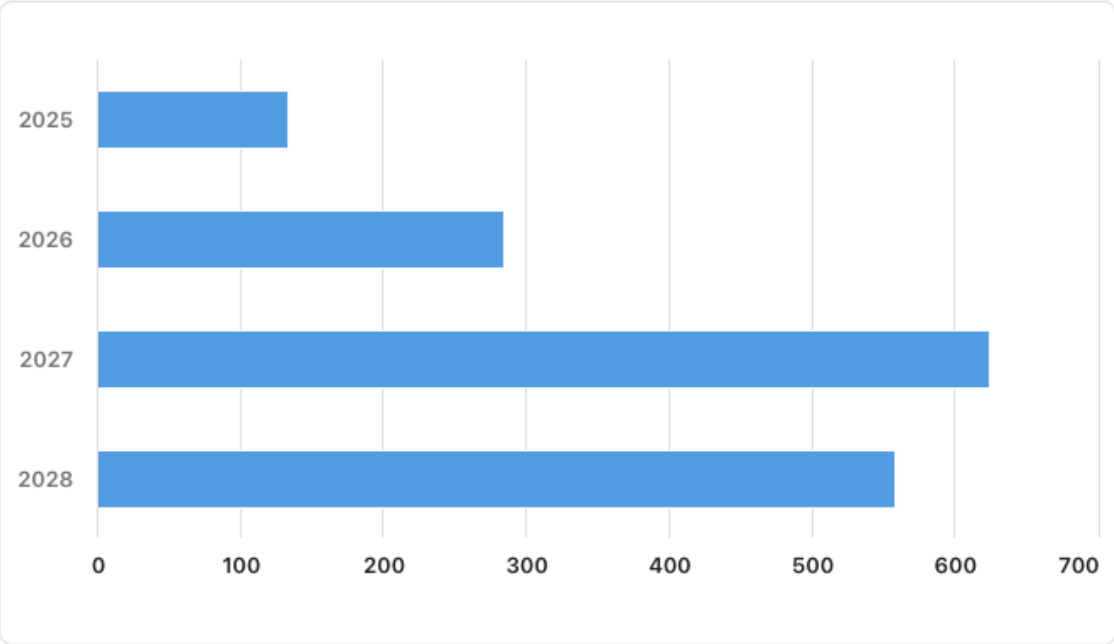
Overview

Total traded: 1,602 MWh (f)

Utilisation volume by tender round (MWh) (f)

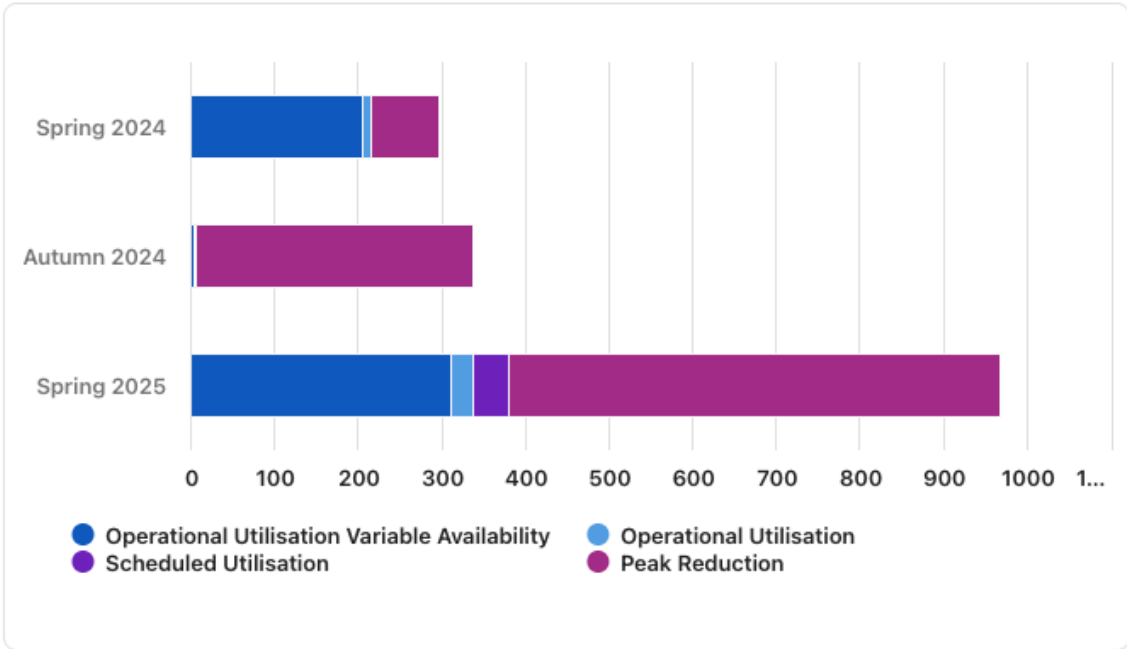


Utilisation volume by year (MWh) (f)

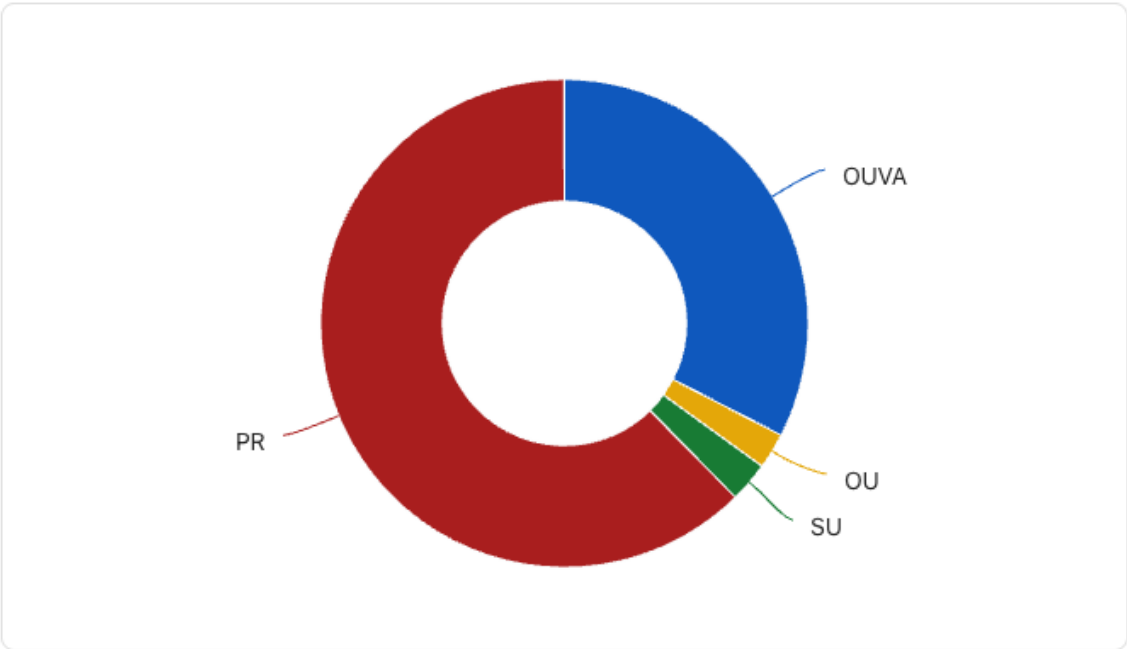


Flexibility trajectory: Product types

Utilisation volume by tender round by product (MWh)(f)

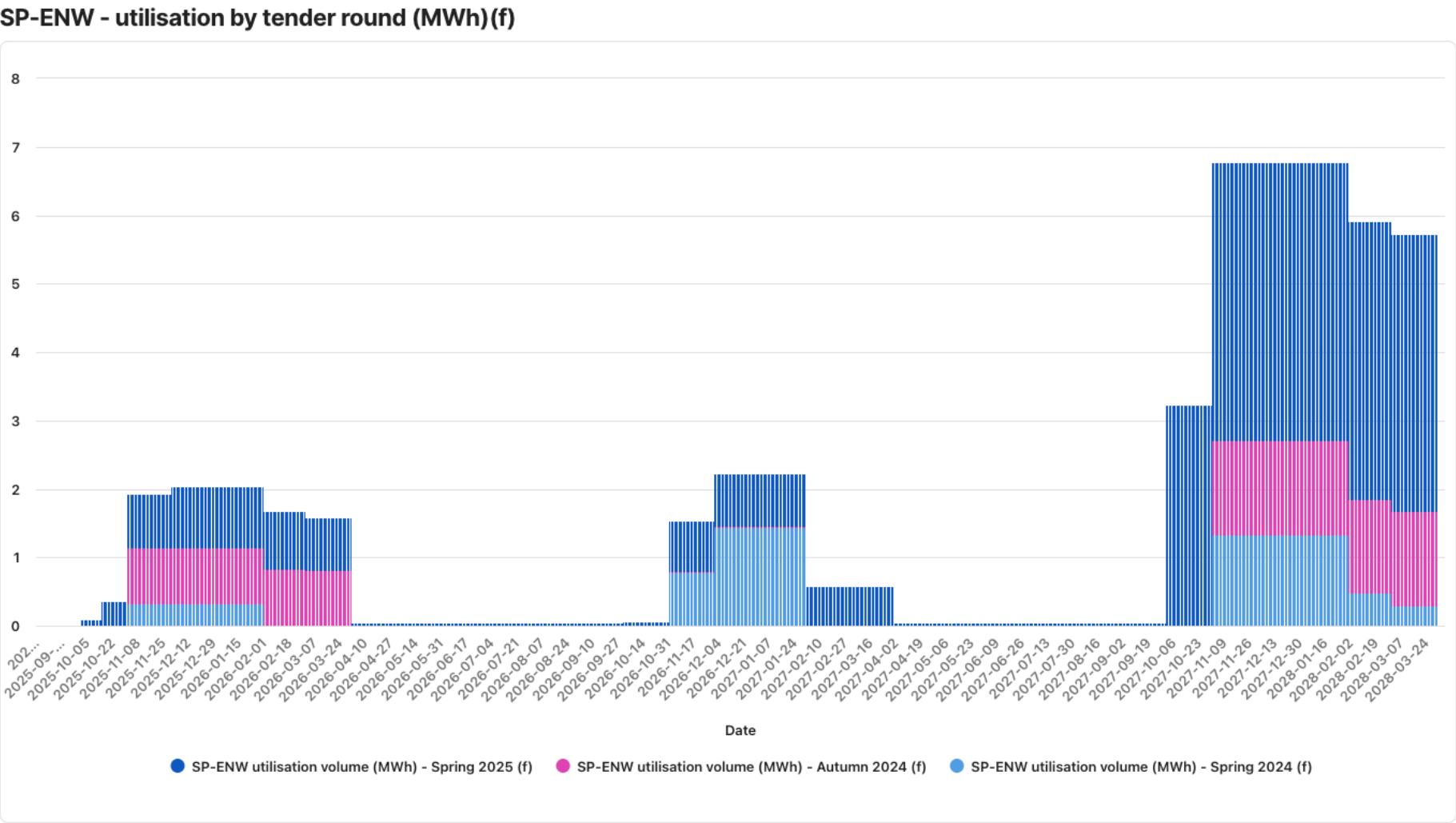


Utilisation volume by product (MWh)(f)



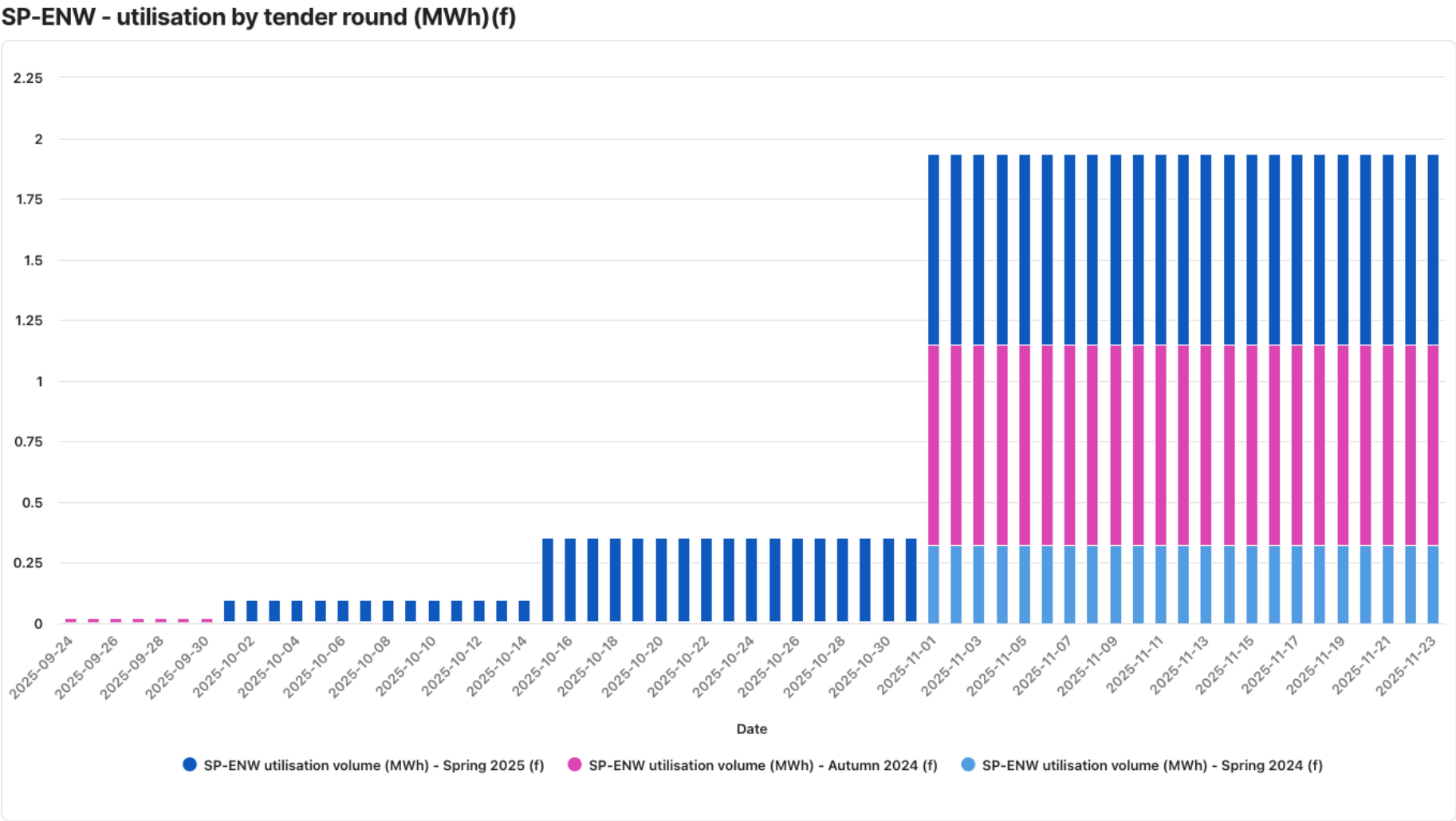
Flexibility trajectory: Tender rounds

A daily time series of traded flexibility by tender round (1 Sep 25 - 30 Apr 28)



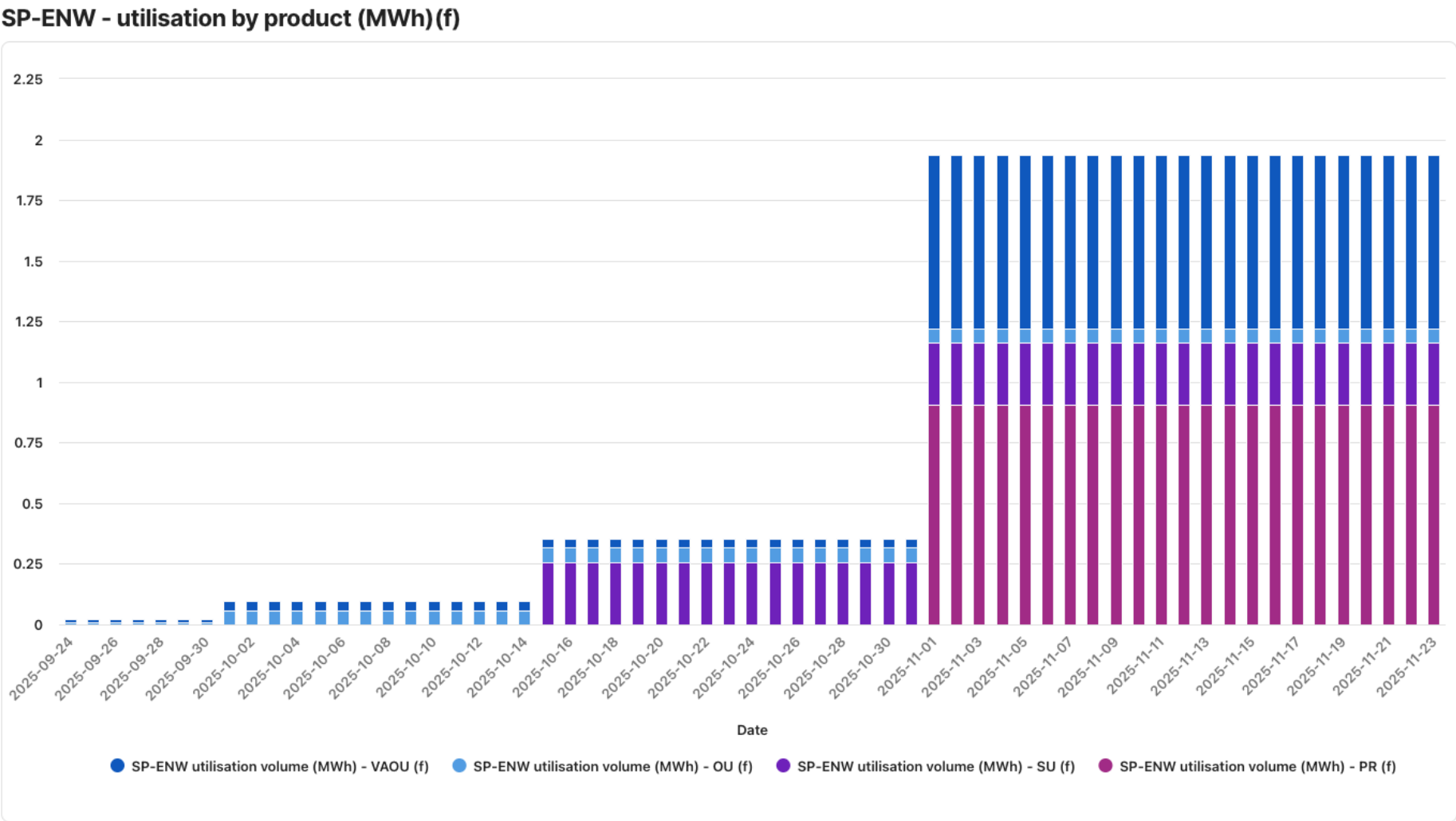
Flexibility trajectory: Tender rounds

A daily time series of traded flexibility by tender round (24 Sep 25 - 23 Nov 25)



Flexibility trajectory: Product types

A daily time series of traded flexibility by product type (24 Sep 25 - 23 Nov 25)



Enabling participation: Reducing barriers and meeting system needs

The problem

Verification bottlenecks

Repeated asset checks and limited network visibility slowing asset onboarding.

Curtailment risks

Curtailable assets risk constrained exports, deterring participation.

Operational disconnect

Manual coordination and slow response limited real-time flexibility.

The solution

Group asset verification

Verified aggregation of individual assets into groups ready to bid into markets.

Project BiTraDER

A peer-to-peer market on ElectronConnect where DERs trade curtailment obligations in real time.

Real-time operational dispatch

Automated dispatch directly linked to DSO operations for live system response.

2. What's next?

Co-creating operational value

What's next for real-time operational dispatch?

Growing the types of contract available via ElectronConnect for real-time operational dispatch

What's new?

Variable Availability and Operational Utilisation contracts go live this month, giving SP ENW the ability to **refine flexibility requirements closer to real-time**.



14 Variable Availability and Operational Utilisation contracts going live in November

Total: 2.7MWs across 7 flexibility service providers

Q&A

Thank you for listening

Scan the QR code to see an interactive demo of ElectronConnect



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www.electron.net



Keynote

Kate Gilmartin

CEO British Hydropower Association



Building the future grid: Unlocking the value of 'Local'



Kate Gilmartin
CEO British Hydropower Association



CEO: trade membership association
solely representing the interests of the
UK hydropower industry



Volunteer Director: Rossendale Valley Energy
Community Benefit Society developing
affordable energy and healthy warm homes:
leading Net Zero Terrace project



Founder member and Director



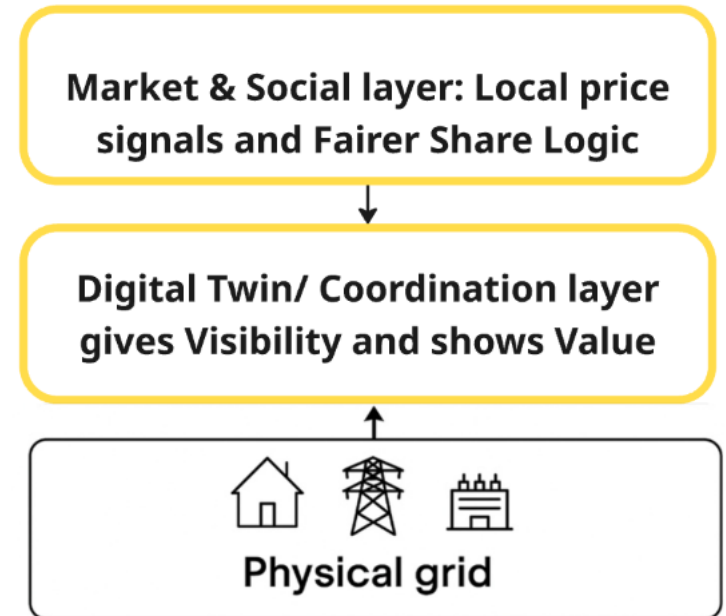
State owned Energy Company
Non-Executive Director – advising on
'Local'



CIC set up as a JV by Rossendale Valley
Energy & Centre for Energy Equality
Founder member and Volunteer Director

The Future We Need to see

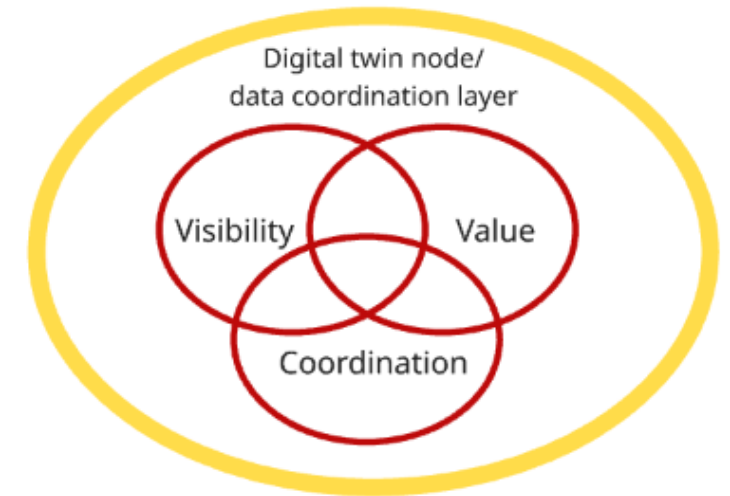
- Electrification of heat, transport and homes is accelerating.
- The change happens on the **distribution grid**, but it's largely unseen.
- We need a digital coordination layer that makes the grid **visible, flexible and fair**
- A distribution system that delivers for people: **affordable energy and warm, healthy homes**
- Digitalisation, local energy markets (or price signals), and social design working together to unlock value for consumers and the grid



The Problem: Unlocking value local energy & flex

1. **Visibility Gap:** DSOs can't see LV activity behind transformers = digitization across customer assets - data-driven, dynamic visibility
2. **Coordination Gap:** No shared digital architecture and coordination layer linking DSOs, assets, and communities
3. **Value Gap:** Local generation & storage deliver benefits not recognised by markets. Digitilisation = measure, monitor, monetise

Unlocking Flexibility through:



Without sight, we can't plan. Without value, we can't invest. Without coordination, we can't act.
ED3 will be key in addressing all three gaps to unlock the value of local and make flexibility scalable and fair

1. Visibility gap:

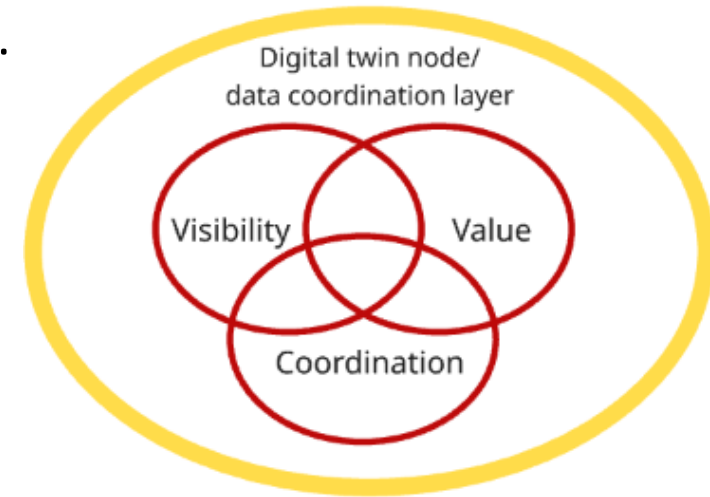
The Opportunity:

Building the Digital Architecture for Local Energy through Digital Twin nodes

Enabling infrastructure to build the future network:

- DSOs need **real-time sight** of the low-voltage network to manage it efficiently.
- **Digital Twin nodes:**
 - map load, generation, storage and flexibility down to street level
 - mirror each LV area in real-time.
- Fairer-Share Logic prioritises need: local benefit before export.
- Creates a scalable, data-driven platform that acts as a foundation for local, flexible, affordable energy.
- Provide common visibility for DSOs and communities.
- Create secure, **scalable digital twin nodes**, that inform planning, balancing, and investment

Unlocking Flexibility through:

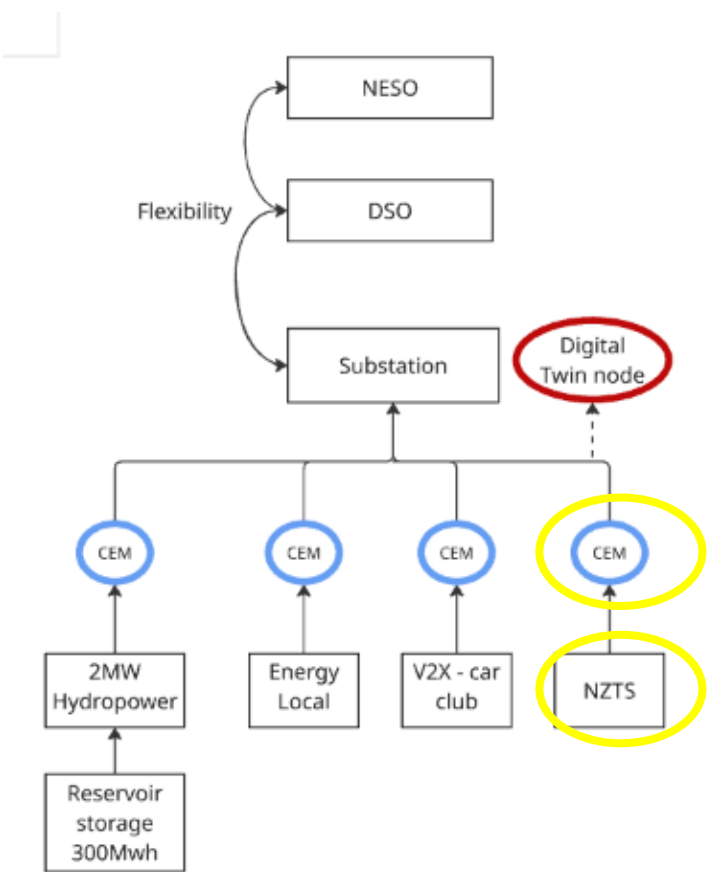
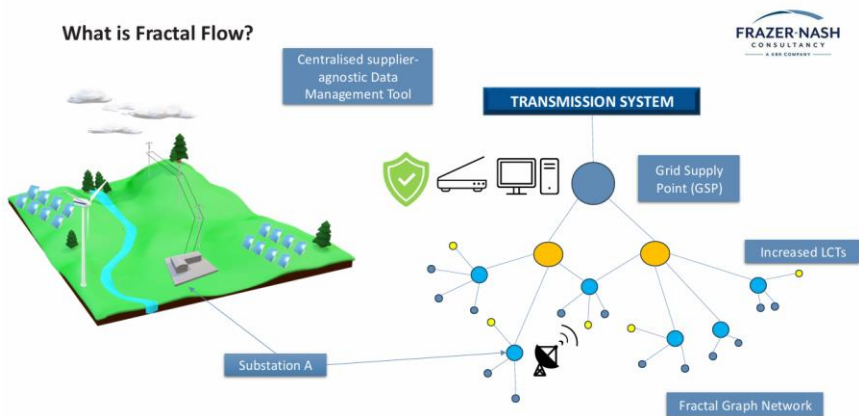


**We're electrifying everything, but the system is blind to dynamic activity below the substation.
Our task is to make the invisible visible**

2. Coordination Gap

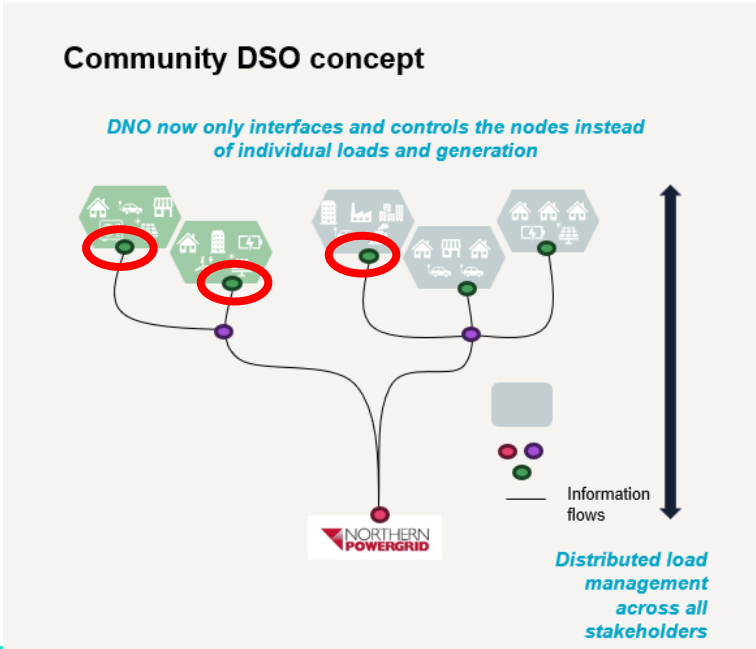
How is data gathered, coalesced, made visible, interfaced and useable to the DSO?

NZTS is looking to coordinate the deployment of kit in people's homes and at the same time give visibility and management ability to the DSO for that additional load



Fractal flow is looking at Flexibility events at different 'nodes' and trying to enable visibility of those events between those nodes

NPGs Community DSO is looking at the different scenarios of decarbonisation loads at different nodes and how they can be managed



3. Local Value Gap

1. The problem – Local energy projects

- PPA prices benchmarked to wholesale markets ignore local value.
- No bankable business model
- Local optimisation (flexibility, resilience, avoided reinforcement) isn't monetised as it's not visible.
- **New Local Energy Projects can not be mobilised**

2. The Solution: Visible = Valued

- Capturing local system value (flexibility, avoided upgrades, resilience) makes local generation investable.
- This turns visibility → value → investment — closing the loop.
- Once local value is visible, market signals can monetise, communities can invest in new generation, storage or demand side flex.
- Local Energy Markets (Energy Local/ P441) and local price signals precipitate deployment of LCTs
- Digital twin captures and makes visible the data to DSOs, further stimulating additional need in local node – ie more storage etc..

3. Social/ Network Value Gap

3. It needs to be fair: Fairer-Share Logic

- Routes local power first to households who need it most.
- Prioritises local needs before exporting flexibility
- Makes social and system value measurable and tradeable
- Only exports once local and social value is met
- Currently – most flex signals are national and ignore local value



We're adding social intelligence to technical intelligence — optimising not just for price but for purpose

Filling the Gaps: Visibility/ Value

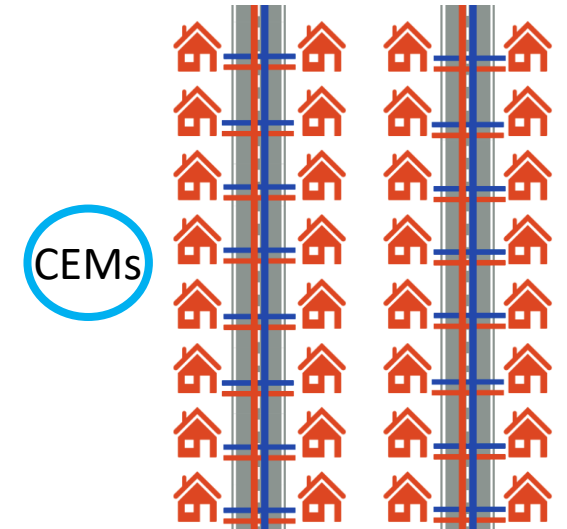
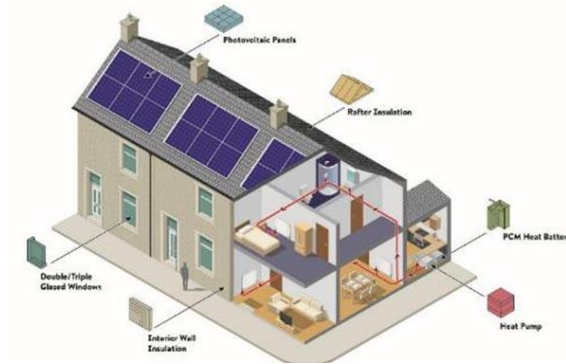
Net Zero Terrace as an example

- Each home has PV, heat pumps, batteries and Home Energy Management systems (HEMS).
- **Sensors & APIs** aggregate real-time data from local assets via HEMs
- Coordinated by Community Energy Management systems (CEMs) (for those who are part of the 'Energy Club') **VISIBILITY**
- **Fairer-Share Logic** **VALUE** (Local/ Social/ Network)

vulnerability → householder need → resilience → affordability → local optimisation → export

- **The NZTS Smart Local Energy System (CEMs) plugs into the digital twin node**
- **Digital Twin Layer** forecasts load, generation and flexibility across aggregation.
- **DSO Interface** turns data into actionable flexibility.
- Delivers measurable consumer savings and network benefits

Each street becomes its own node — a living demonstration of affordable, resilient energy at household scale
- Enables “**energy-intelligent**” operation—lower bills, lower emissions, greater resilience

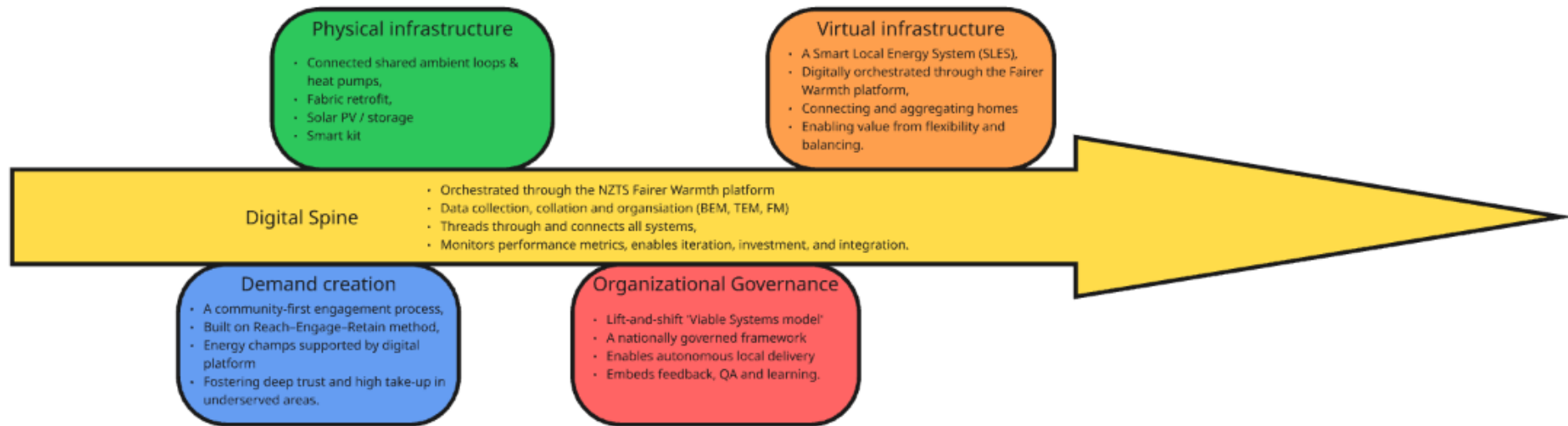


Filling the Gaps: Coordination

- Deployment plan to get kit in homes
- Digital spine that runs from people to smart system

Net Zero Terrace Streets - Affordable Energy & healthy warm homes

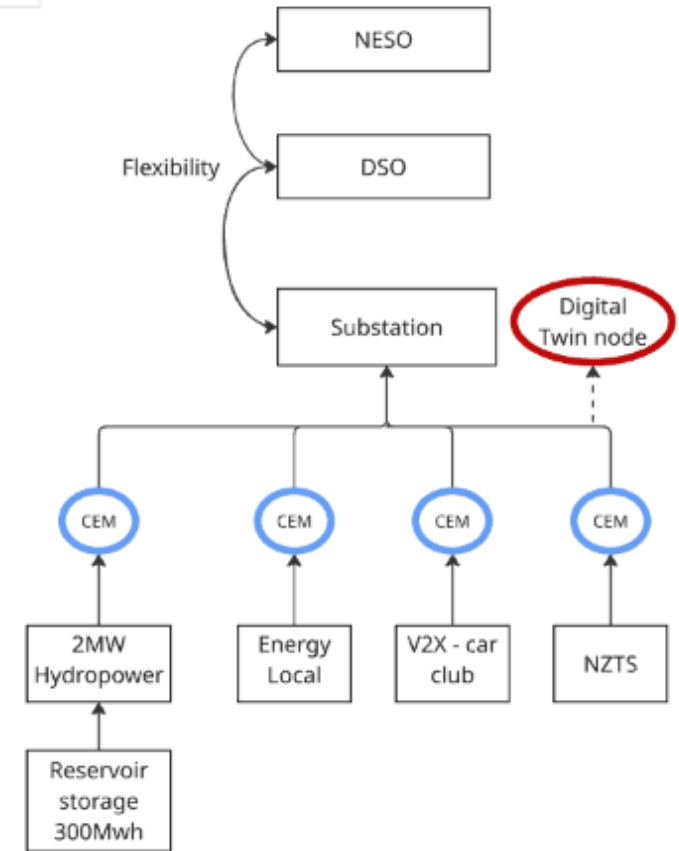
The 5 systems model



Market layers: Growing the nodes:

Local Energy Markets (LEM)

- Market signals can incentivise new generation, storage, LCT delivery
- Convert visibility into **economic signals** that reward flexibility & grid services.
 - Time of Use Tariffs
 - Voltage control, peak shaving, load management etc...
- Hyper-local tariffs and **P441 settlement** allow time-and-place-based value sharing.
- Incentivises deployment of low carbon tech
- LEMs **bring forward investment** in smart technologies and empower consumers to participate directly.
- Clustered & aggregated digital twins nodes = Virtual Power Plants = increased value, returned to consumers
 - Flexible, dispatchable capacity
 - Deferred/ avoided reinforcing
 - Local resilience



Direction of travel & ED3

The Social DSO (SP-ENW Model)

Digitalisation → Visibility → Coordination → Value → Flexibility → Fairness

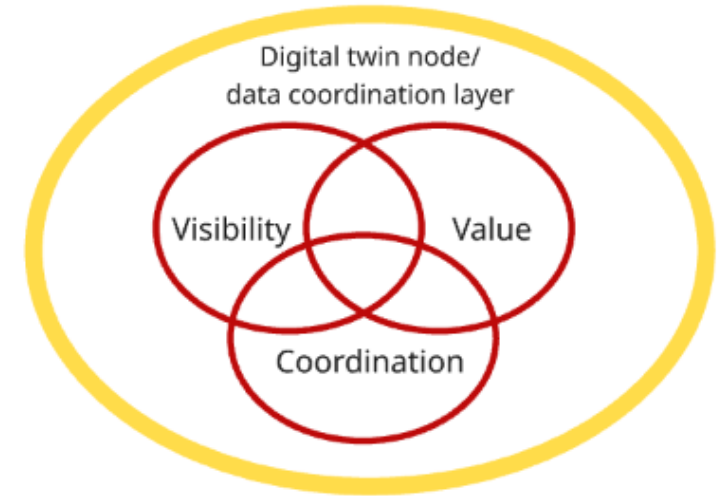
- Flexibility must be **inclusive and fair**, not a postcode or wealth privilege.
- Embed **social outcomes** in network planning and market design.
- Use flexibility revenues to support **fuel-poor households and local resilience** programmes.
- ED3 must surface and define new products/ services for visibility, storage and flexibility at LV level
- Standardisation of data and integration interfaces if we are to accelerate and unlock value at pace
- *Governance & Data Stewardship* – community representation, transparency, cyber-secure, data trust.

Social DSOs operationalise fairness – embedding social outcomes into network planning.

Summary

- The **future we need** delivers affordability, flexibility, and fairness.
- We need Visibility + Value + Coordination through digital twin nodes
- **Fairer Share SLES** make flexibility tangible and return value to consumers.
- **Local Energy Markets** reward & precipitate it.
- **Coordination - Integration to digital platforms to grow and** connect it.
- **DSOs** orchestrate it through **Social DSOs** ensure equity.
- **Digitisation** ties all this together — creating a system that truly works for people and planet.

Unlocking Flexibility through:



Thank you & questions



Kate Gilmartin kate.gilmartin@british-hydro.org 07763 756549

Break & Networking



Social DSO

Paul Auckland

Head of Economic Regulation & DSO



Our vision: To be the leading social distribution system operator (DSO) in Great Britain

Our mission: To enable the North West to achieve a just energy transition

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.



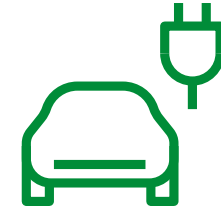
Inclusive flexibility services

- Expanding participation through a dedicated outreach team
- Many public-sector organisations often lack the time, knowledge, or capacity to participate in flexibility.
- Our targeted approach maximises financial and environmental benefits of flexibility services



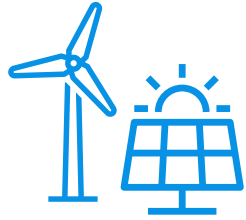
Take Charge

- Rollout of free expert advice on saving energy and low carbon technologies
- Available via our website, phone lines and events across the region
- Aimed at customers most at risk of being left behind to inspire cost savings reduction in carbon emissions



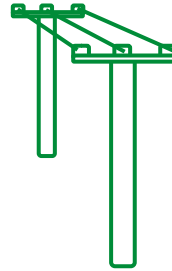
EV charging support

- By developing 50 sites by 2024, we have improved EV charging access in rural areas, including libraries, community centres, crematoriums and tourist attractions
- We will continue collaborating with stakeholders to expand smart charging infrastructure in underserved locations across the North West



Renewable energy

- Partnering with stakeholders to use grid-scale batteries to store and distribute excess power
- Encouraging consumers to shift electricity usage to peak generation periods, helping to balance the grid without restricting renewable output
- Innovation project to provide a tariff for smart meter users to use surplus green electricity for free



Smart Street Rural

- Smart Street controls voltage so that it can work more efficiently
- Reduce customers' electricity usage by up to 8%, equivalent to £60 off an annual household bill
- Aiming to roll out Smart Street more widely, starting with low-income and rural areas that are most disadvantaged



Social DSO Fund

- New fund will continue to support clean energy, sustainability and climate-related projects by providing grants to local community groups
- Now enhanced with matched funding and governance framework to promote fair access, co-investment and outcome-based support
- Drive to support participation in local flexibility markets

The fund has been enhanced to enable a wide range of community-led energy initiatives, with a particular focus on flexibility solutions such as battery storage

It aims to create opportunities for community energy groups to engage in local flexibility markets while supporting innovation and sustainable energy practices.

Beyond flexibility assets, the fund will also encompass other initiatives that help accelerate the transition to a fair and inclusive energy system.

Purpose

The fund seeks to deliver multiple benefits: strengthening local energy resilience, fostering inclusive participation in flexibility services, and contributing to system-wide decarbonisation goals. By promoting equitable partnerships and supporting community ownership, it helps unlock social, environmental, and economic value for the regions it serves. The overarching aim is to ensure no community is left behind — exploring any viable approach that advances fairness, accessibility, and shared benefits.

Enable community energy (CE) groups to become active flexibility providers

- Develop accessible frameworks and technical guidance for CE groups to participate in flexibility markets
- Provide capacity-building support, including training and digital tools, to reduce barriers to entry
- Foster partnerships between CE groups and technology providers to accelerate deployment of flexibility assets
- Contribute to overcoming development blockers to owning flexibility assets

Deliver social and environmental value through DSO programmes

- Prioritise projects that create measurable community and societal benefits such as reduced energy bills, improved energy equity, and local job creation
- Embed environmental performance metrics (e.g., carbon reduction, biodiversity impact) into programme evaluation
- Encourage circular economy principles in asset procurement and lifecycle management

Support local decarbonisation and resilience

- Align funding and project selection with regional net-zero targets and climate adaptation strategies
- Integrate resilience planning to ensure communities can withstand and recover from energy disruptions

Build trust and transparency in DSO operations

- Implement open reporting on funding allocation, project outcomes, and governance decisions
- Establish clear, fair criteria for project selection and co-investment to maintain stakeholder confidence
- Create feedback loops with communities to continuously improve programme design and delivery

Next steps for Social DSO – fund pilot

Pilot project preparation



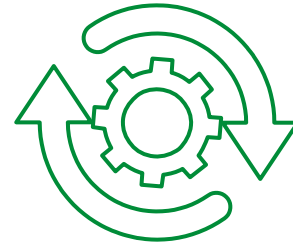
We are actively identifying 1–3 community energy groups to participate in the initial pilot phase

Development of community flexibility toolkit



Practical toolkit to support community groups through the application and participation journey

Operational Integration



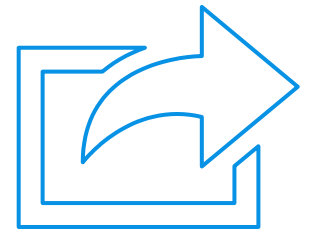
Social DSO principles are being embedded into broader programme planning and flexibility delivery mechanisms including funding choices

Monitoring, evaluation & learning



Framework to track social impact, asset utilisation and flexibility outcomes in development

Annual review & continuous improvement



Strategy will be reviewed so it remains aligned with social DSO objectives, community needs, evolving regulation and shows good value

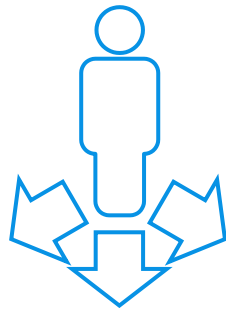
How to get involved

Partner with us



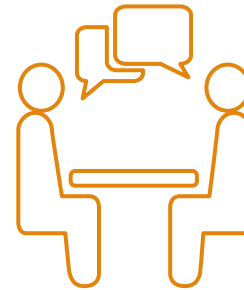
Collaborate on community-led projects or co-develop innovative solutions that align with our goals

Share your expertise



Offer technical knowledge, resources, or insights to strengthen delivery and unlock new possibilities

Be a voice in our advisory groups



Help shape strategy and share best practices by joining our DSO panel and other stakeholder forums

Empower our communities

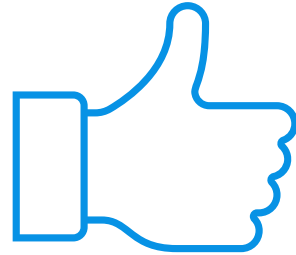


Support capacity-building initiatives so everyone can participate in the energy transition

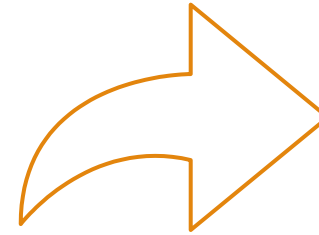
**We will continue to seek feedback and collaborate with our stakeholders
Social DSO will only be successful through continued collaboration**



**A great opportunity
to collaborate**



**It's the right thing to
do**



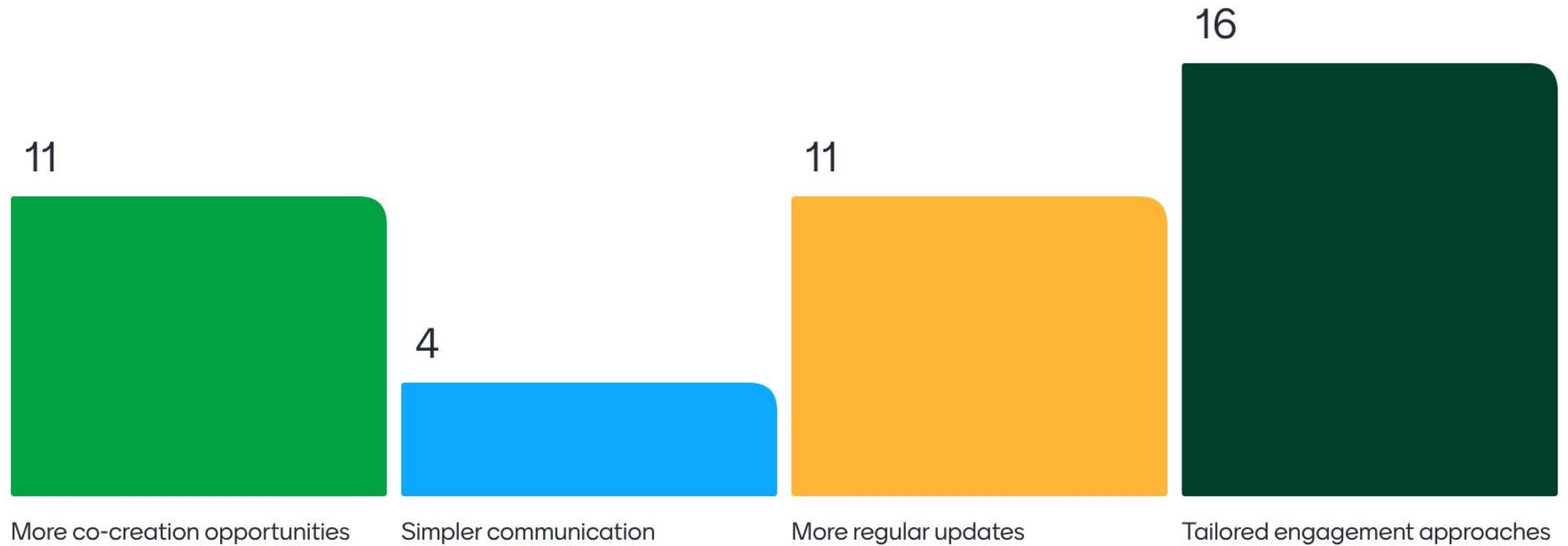
**It's gathering pace
and improving lives**



**We're making
progress**

enwl.co.uk/social-dso

1. What would help us build even stronger relationships with stakeholders?



Our engineering progress

Antonella De Corato

Network Development Engineer



How our DSO capacity planning supports stakeholders?

Stakeholders want timely facilitation of their decarbonisation and economic growth plans



DSO Capacity Strategy reflects their LAEPs and other plans to release capacity where and when needed

Stakeholders want cost efficient network capacity release (reduced energy bills)



DSO Capacity Strategy drives coordinated network development to avoid expensive piecemeal network expansion

Stakeholders want well informed LAEP and other plans



DSO Capacity Strategy publishes data and insights and provides LAEP and local plan support

Stakeholders want increased income opportunities from local energy markets



DSO Capacity Strategy identifies opportunities to use flex services for capacity release

Stakeholders want best whole system practices that enhance coordination and reduce costs



DSO Capacity Strategy builds on whole system practices and supports NESO in their whole system planning coordination

Energy planning → all energy vectors / whole energy system

Local authority initiatives

- Coordinators of Local Area Energy Planning (LAEPs)
- Coordinate and lead local economic growth and decarbonisation plans
- Define policy landscape to meet local government targets (incl decarbonisation)
- Ensure just transition to net zero as part of energy planning

SP Electricity North West

- Technical and non-technical support to LAEPs and other local plans supported/led by local authorities
- Bottom-up provision of data, insights (including processed local authority planning data) to the NESO for the tRESP/RESP
- Facilitator of local (LAEPs) and regional (NESO's RESP) energy plans → through **timely and cost-efficient network reinforcement & flexibility services**

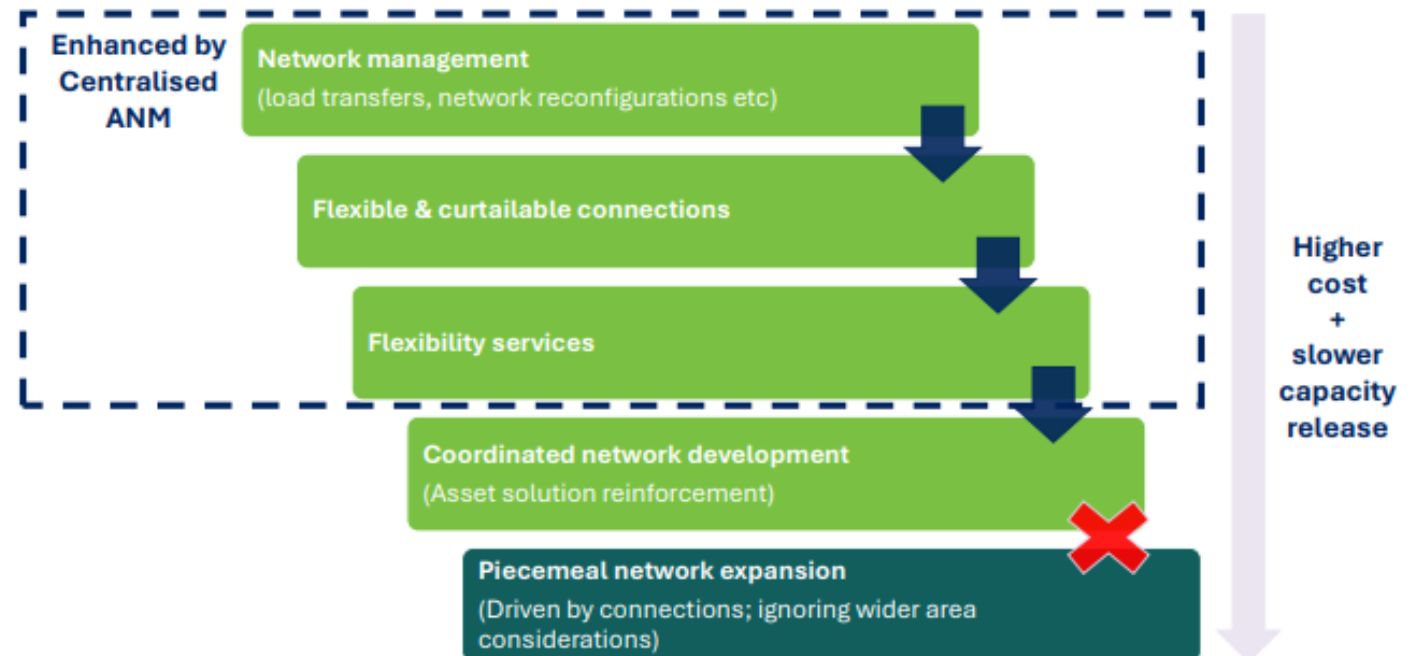
NESO

- Whole energy system planning coordinator
- Linking national and regional energy planning
- Producing regional energy plans incl. Regional Energy System Plans (RESP) and transitional RESP (tRESP)

We are planning the future network to meet growing energy demand and support local priorities, making the energy transition fairer and more inclusive.

Focus on faster and low cost capacity release

- Prioritise **zero cost capital expenditure** options to release capacity in **very short lead times**, such as:
 - via **network management**
 - **flexible connections** and **curtailable connections**.
- **Flexibility services** prioritised in all cases where they are more cost efficient to defer, in time, the network reinforcement counterfactual.
- **Coordinated network development**, focusing on wider network areas when capacity requirements cannot be met by any of the above-mentioned non-asset solutions.
- **Whole-system thinking**, engagement with the NESO and RESPs as well as **early engagement with local authorities** help us release capacity faster and at lower cost.

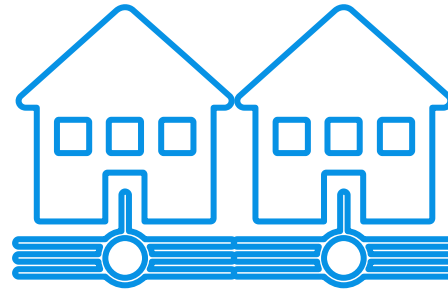


Core objectives of the LAEP support



Technical support

SP Electricity North West provides technical support to local authorities for LAEPs: guidance on the use of SP ENW planning data



Facilitation of LAEPs

SP ENW to release network capacity where & when needed to facilitate all LAEP and other local plans in their planned timeline



Flexibility Services

SP ENW to explain our DSO flexibility service opportunities for local service providers

LAEP engagement in numbers (incl. FY25 and up to now)

Type of activity	Amount of activity		
	Cumbria	Greater Manchester	Lancashire
Regular LAEP bilaterals	8 bilaterals with 34 officers	27 bilaterals with 109 officers	37 bilaterals with 104 officers
Bilateral support provided on SP ENW planning data and tools (follow up activity)	5 sessions	7 sessions	8 sessions
Emerging local plans + decarbonisation proposals/strategic developments supported	1+3	5+4	3+3
Planned development areas	8	83	24
Electricity capacity requirements identified*	353 MVA	724 MVA	121 MVA

You said, we did

Pinpoint land for renewables by understanding network capacity



Support for LAs in using our forecasting tools and DFES data

Help us develop our LAEP and decarbonisation plans



Bespoke approach for helping LAs – LAEPs are critical for our network planning

Help us with solar farm development



Bespoke sessions held with LAs to demonstrate our datasets. Support from our connections/customer engagement teams

Help us apply to the Public Sector Building Development Fund



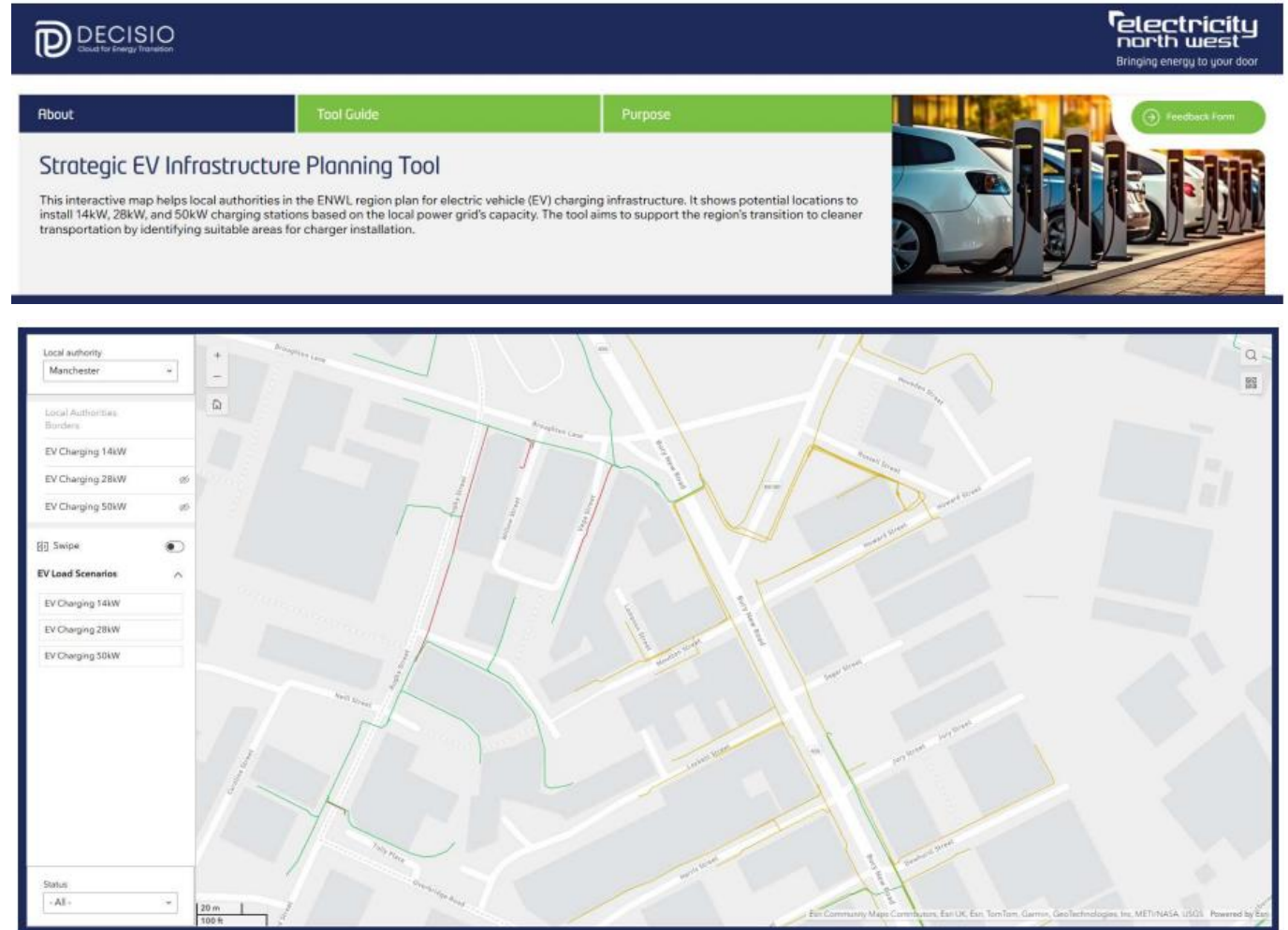
Our connections team is helping LAs understand the cost of reinforcement to support their planning process

Support industrial and commercial customers on decarbonisation activities



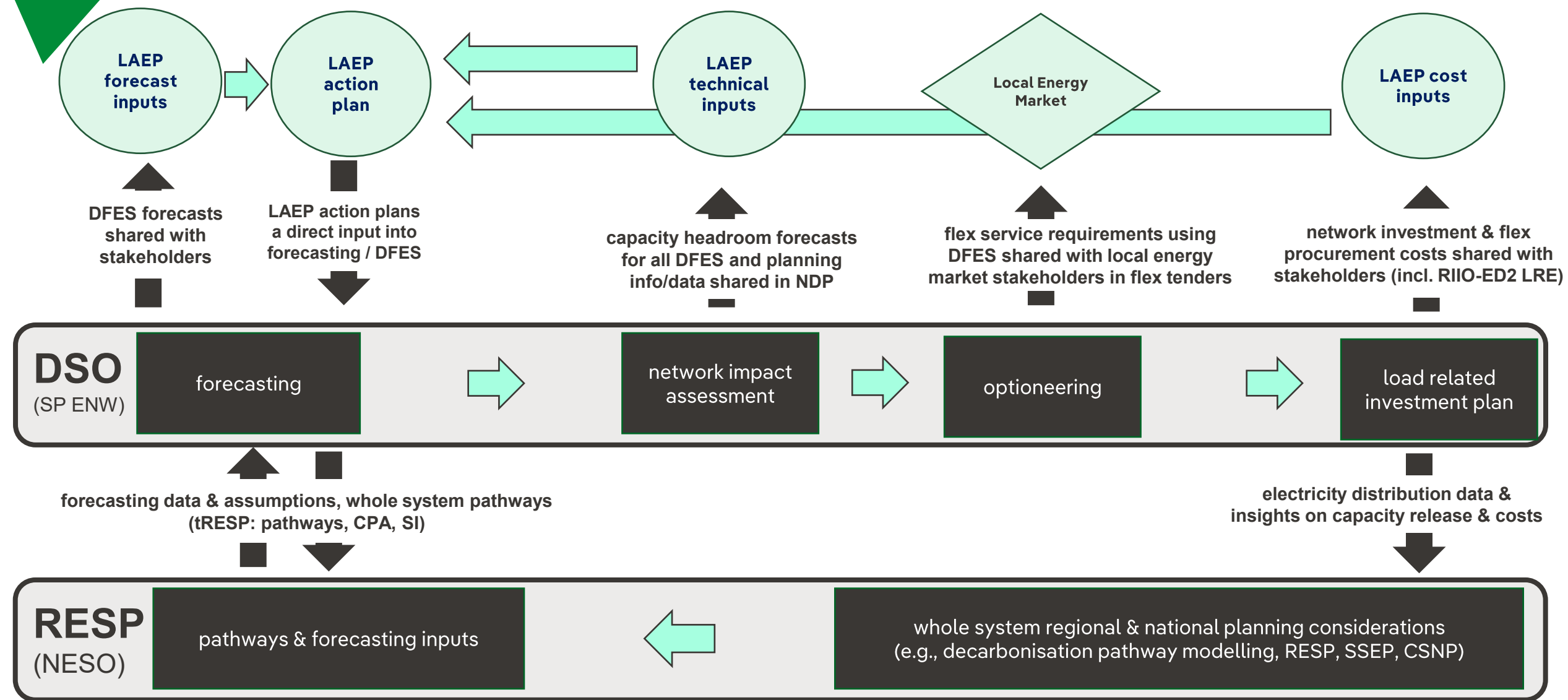
We are providing data and advice to I&C customers to support their design plans and use of government funds

- **Listening to stakeholders, delivering impact**
 - local authorities highlighted the need for quick visual insights into network capacity, particularly at low voltage (LV) level, to support net zero initiatives
- Developed **GridChargePlanner**, a heatmap interface and a traffic light system for LV cables capacity availability
- The tool is tailored to support Local Electric Vehicle Infrastructure (LEVI) planning, funding applications, and charge point rollout
- A **successful trial** with **Westmorland & Furness Council** helped shape the tool's design and functionality



with
RESP

DSO capacity planning – interactions with LAEP and RESP



Local authority planned developments in our ED3 business plan

Area	Cumbria	Greater Manchester	Lancashire	Other
SI needs already submitted to NESO				
<i>Number of planned development areas</i>	13	38	16	3
<i>Peak electricity demand (in MW)</i>	587	1571	499	142
Additional projects to be included in our ED3 business plan				
<i>Number of SI projects</i>	23	256	83	31
<i>Peak electricity demand (in MW)</i>	29	500	177	36

Strategic Investment needs (major electricity developments – NESO tRESP submission)

Decarbonisation plans (incl. LAEP action plans)

- Rapid EV charging at Motorway Service Areas
- District heat networks
- Industrial decarbonisation
- Hydrogen electrolyzers & carbon neutral aviation fuel
- Battery storage
- Public building heat electrification

Other developments (economic growth, housing)

- Strategic housing plans
- Strategic employment plans
- Strategic commercial & industrial plans
- Data centres (>10MW)

Additional planned developments to be included in our RIIO-ED3 business plan

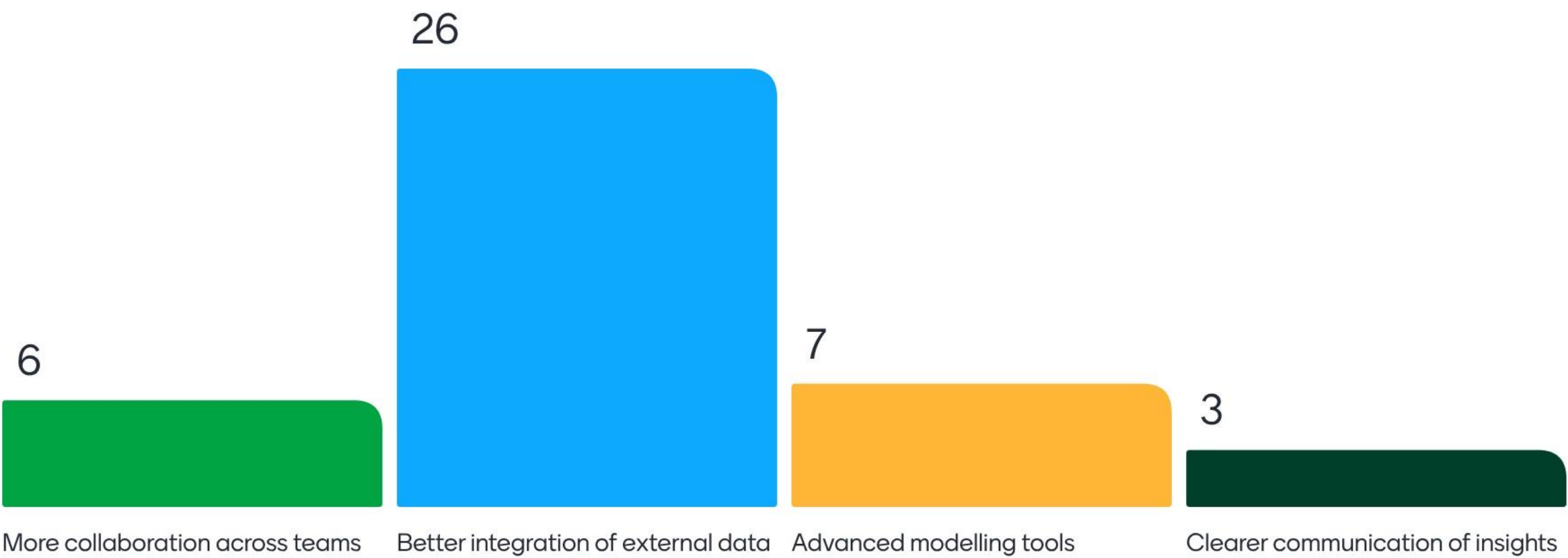
Decarbonisation plans (incl. LAEP action plans)

- EV charging infrastructure (incl. bus depots, car parks, slow up to ultra fast chargers)
- District heat networks & public building heat electrification
- Industrial decarbonisation (incl. hydrogen)

Other developments

- Strategic housing plans (incl. student accommodation)
- Strategic employment plans
- Strategic commercial & industrial plans (incl. manufacturing)
- data centres (<10MW)

2. What do you think would most enhance our forecasting work going forward?



Unlocking grid flexibility together

Paul George

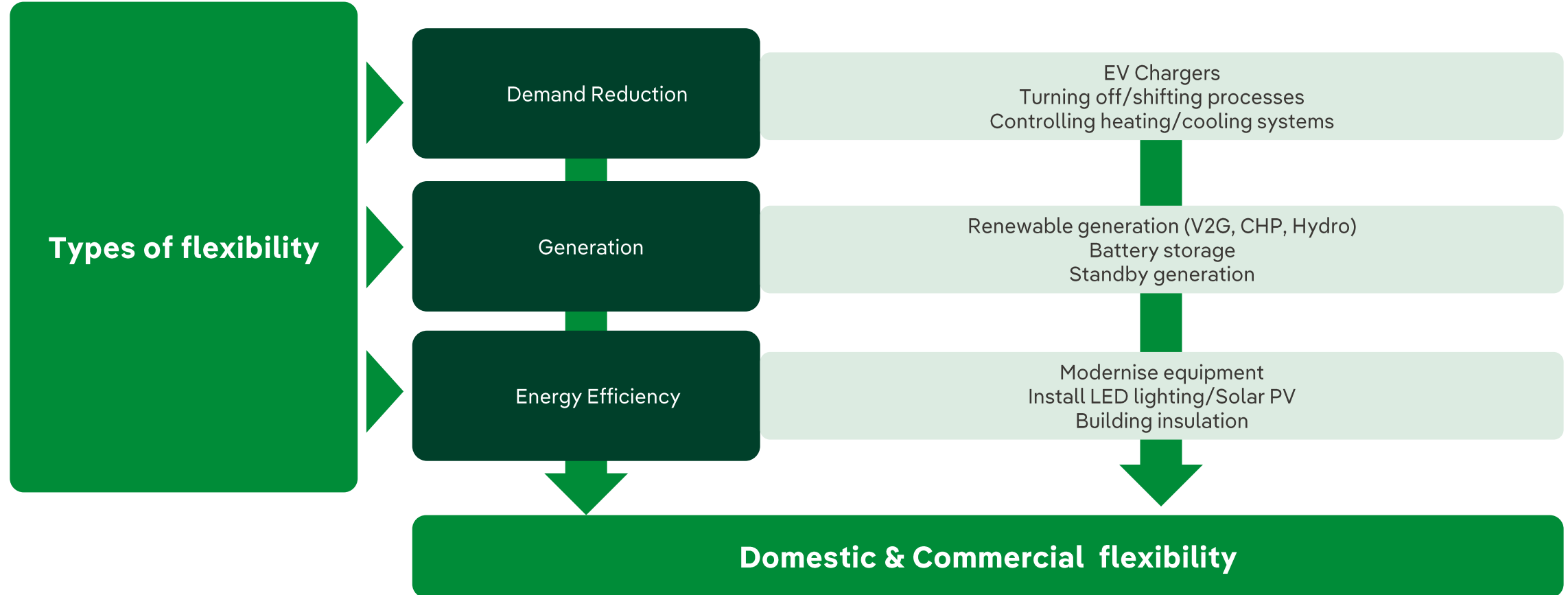
DSO Commercial Lead



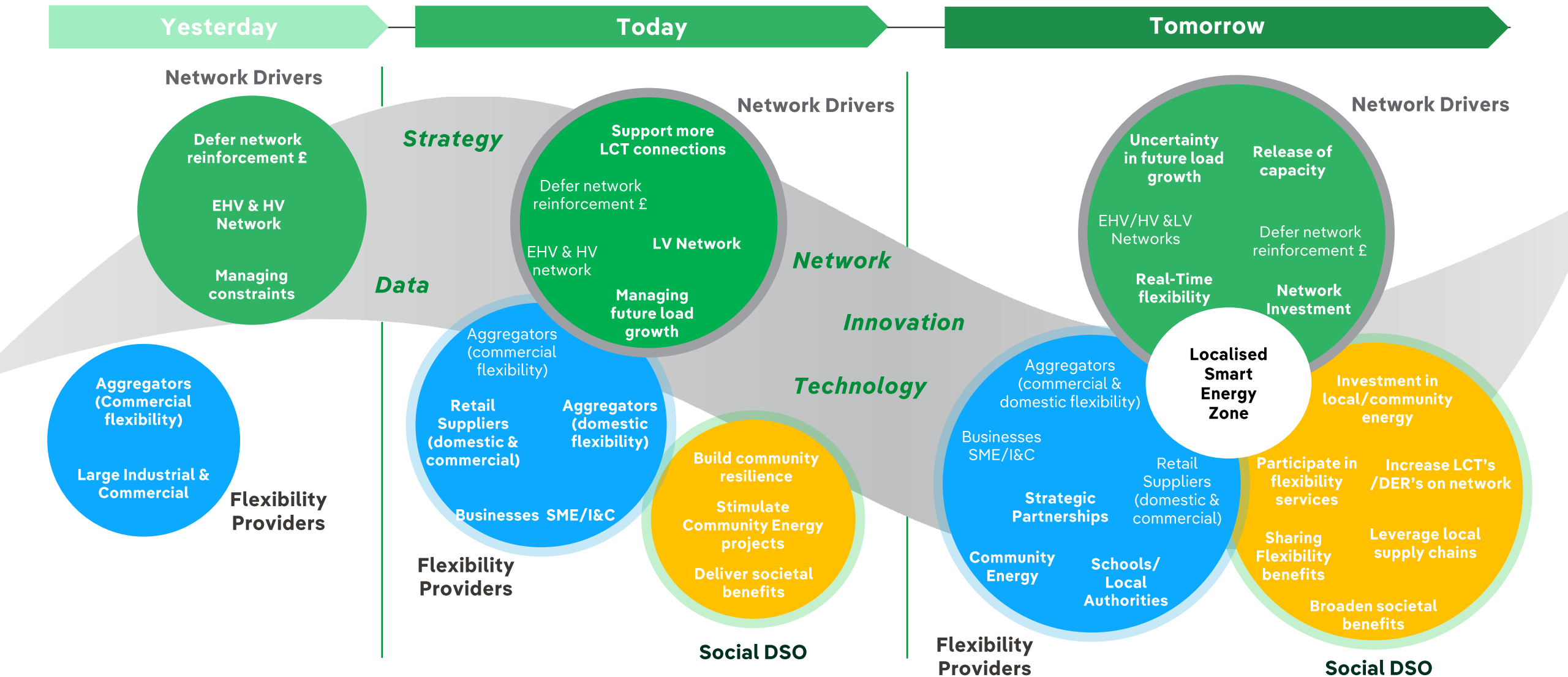
“Demand Side Response (DSR) could unlock up to 30GW of flexibility by 2030—more than the peak electricity demand of London, Manchester, Birmingham, Leeds, and Glasgow combined”

Source: NESO Clean Power 2030 Report

What are Flexibility Services?



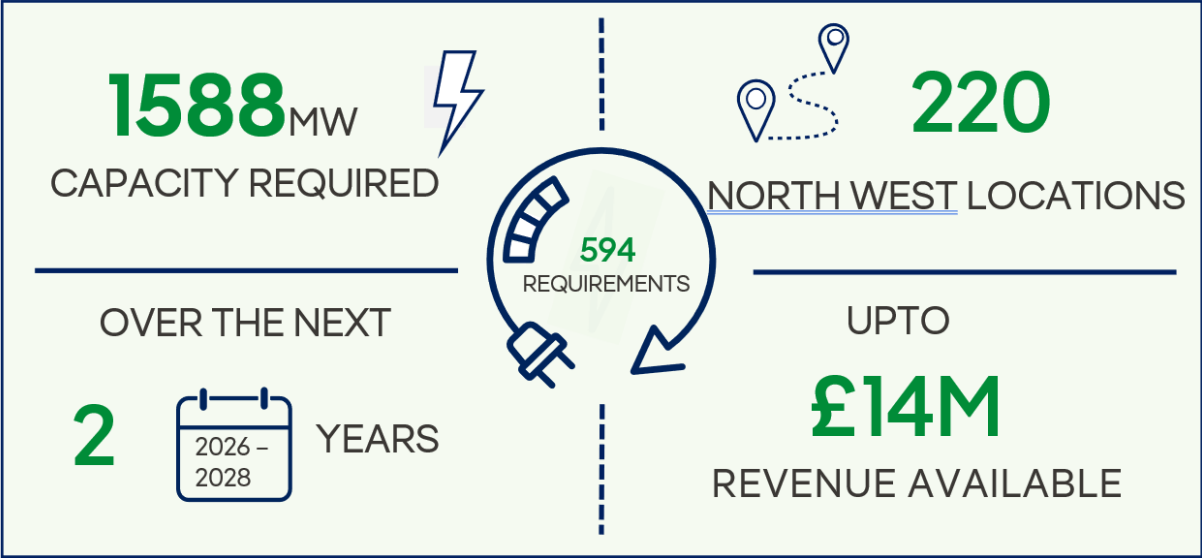
Evolving DSO Flexibility Services



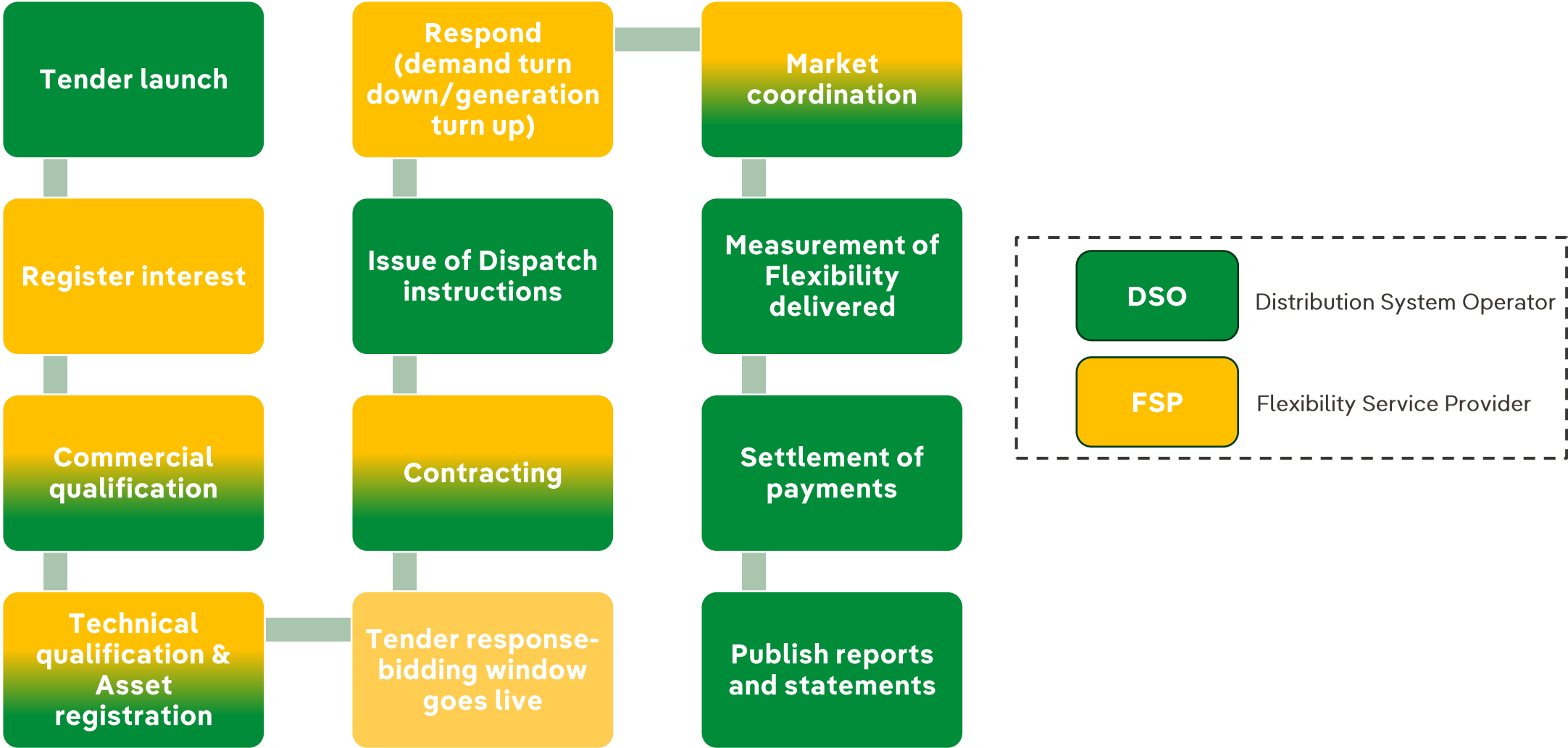


Autumn 2025 Tender

- Tender launched on 27th October
- Concludes in March
- Represents our largest Low Voltage requirements to date
- Requirements covering 2026-28



Location	Capacity required (MW)	No. of requirements	£ available
Cumbria	1,038	158	5,773,308
Lancashire	65	122	2,280,941
Greater Manchester	484	314	5,529,425
Totals	1,588	594	13,583,674

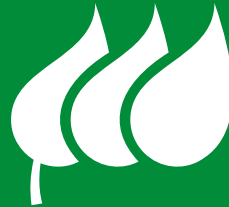


DSO Flexibility team contacts:

Paul George
Paul.George@enwl.co.uk

James Croft
James.Croft@enwl.co.uk

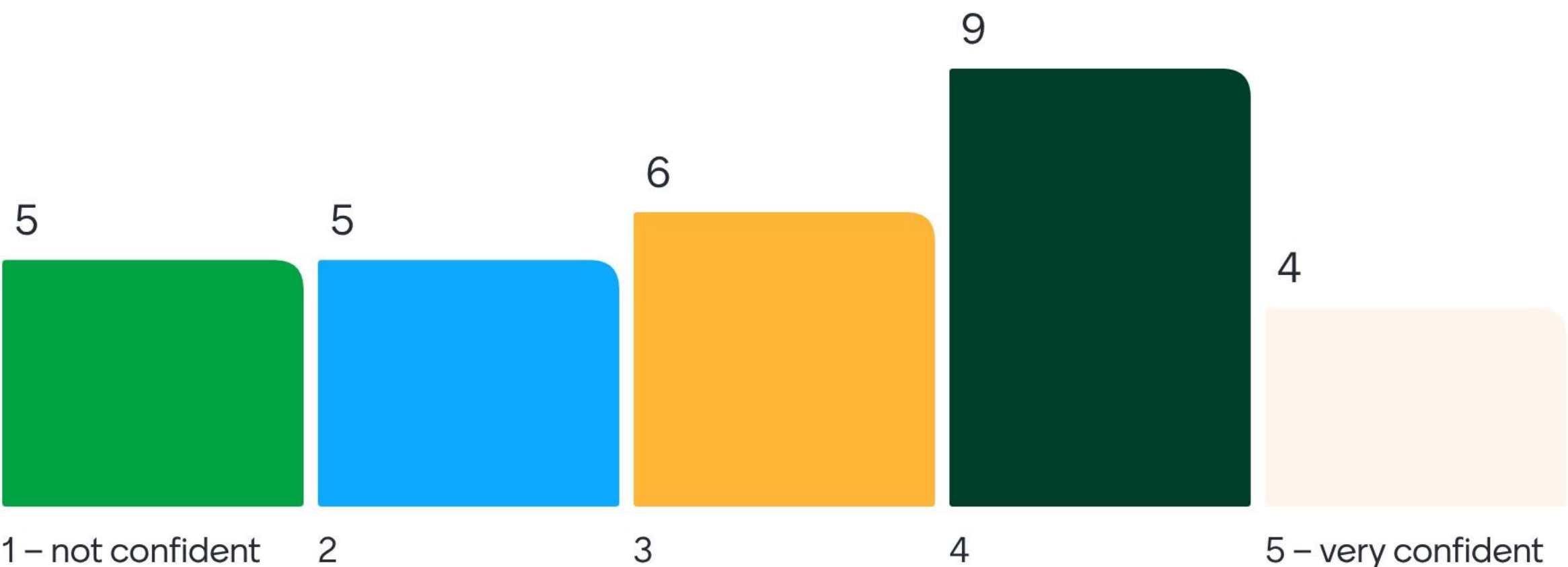
Franck Ngendakumana
Franck.Ngendakumana@enwl.co.uk



Keith Evans
Keith.Evans@enwl.co.uk

Georgia Anagnostou
Georgia.Anagnostou@enwl.co.uk

3. On a scale of 1–5 how confident are you in your ability to deliver flexibility services?



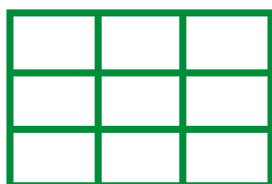
Data and insights for action

Ian Povey

Infrastructure & Service Development Manager



The SP Electricity North West Data Portal



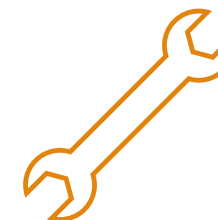
85 datasets

- DFES
- Network Development Plan
- Flexibility Services Maps
- HV Capacity Maps
- Embedded Capacity Register
- Datasets Roadmap



Dedicated pages

- DFES
- GSP connection queues
- Pry / BSP & GSP Capacity
- Boundary flow



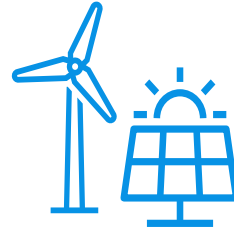
Web tools

- Grid charge planner
- Small scale solar project planner
- Network Asset Viewer (NAV)

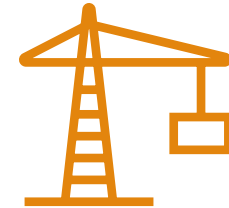
Distributed Future Energy Scenarios



Local Authorities



Community Energy Groups



Developers

Distributed Future Energy Scenarios



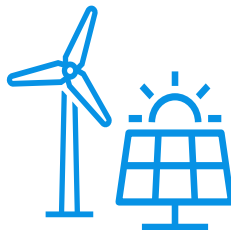
Local Authorities

Strategic Energy Planning

Infrastructure Co-ordination

Net Zero Alignment

Evidence Based Policy



Community Energy Groups

Project Opportunity

Local Engagement

Scenario Planning

Partnership Building



Developers

Market Intelligence

Grid Readiness

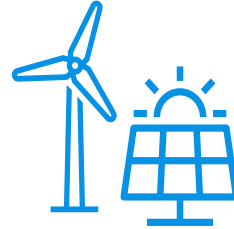
Scenario Flexibility

Stakeholder Alignment

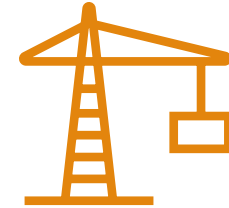
Embedded Capacity Register



Local Authorities



Community Energy Groups



Developers

Embedded Capacity Register



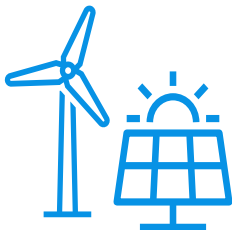
Local Authorities

Local Area Energy Planning

Local Flexibility

Infrastructure Development

Stakeholder Engagement



Community Energy Groups

Viable Project Locations

Local Area Landscape

Supporting Funding Applications

Collaboration



Developers

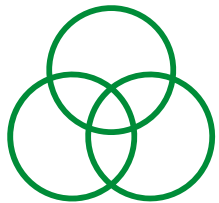
Viable Connection Points

Streamline Project Planning

Benchmark & Compare Regions

Accelerate Grid Connection

Data sharing is more than uploading a spreadsheet – at SP ENW we show you the big picture



Merging datasets

- Pre-publication, data workflows blend numerous data tables to create the visualisations of datasets
- e.g. DFES, Network Development Plan, GSP queue and capacity heat maps



Dedicated pages

- Dedicated pages combine datasets to maximise the data story e.g. DFES page visualises
 - 6 data categories
 - 28-year timespan
 - > 120 tables
 - > 6,000 charts



Truly accessible

- Spatial values from GIS place substations on map
- Bespoke Voronoi polygons represent feeding areas
- Coding creates user interface so datasets are available in most accessible way



Continuous improvement

- Ongoing, iterative process
- The way we share data constantly refined

External datasets offer a different perspective

Published in their original formats or incorporated partly or completely with our own datasets



ENVIRONMENT
AGENCY

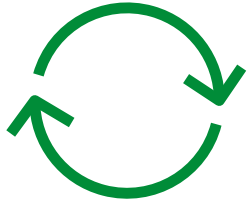


Example: Low carbon technology data from MCS

Alternative source of installations – detailed, certified records of heat pumps and small-scale embedded generation

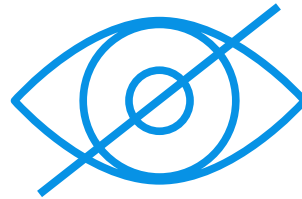
Installations mapped with our secondary network allowing users to identify numbers and types of installation by distribution substation

The landscape of data-sharing is changing



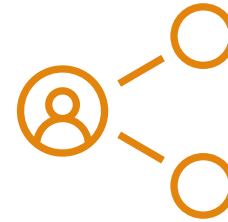
Open as possible

- Published datasets should be as open as possible
- Data portal published under Creative Commons Open licence, permitting end-user to use data for their own purposes (citing us as originator and source)



Sensitivity of data

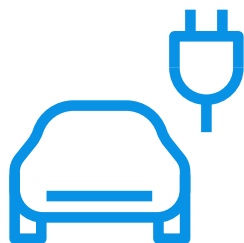
- DESNZ and governments security bodies issued guidelines on what should/shouldn't be openly shared
- This means data seen as valuable to stakeholders cannot be shared due to sensitivity



Shared licence

- Alternative is 'shared' licence, for selected users - similar to non-disclosure agreement
- Allows access to data while maintaining security
- ENA workshopping an industry standard 'shared' licence

We are developing web tools to support local authorities and community energy groups



Grid charge planner

- Bespoke digital tool to assist local authorities with their EV infrastructure planning, application and charge point rollout



Small scale solar planner

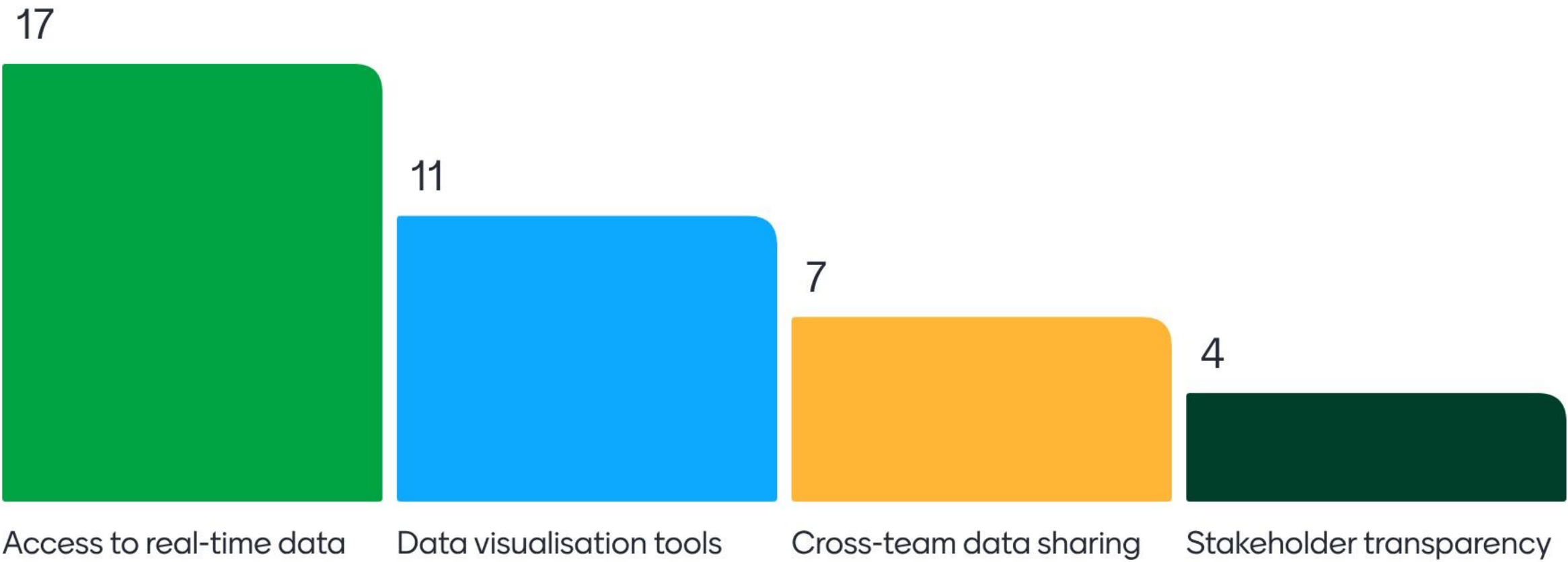
- To assist with the planning and rollout of local solar energy initiatives,
- Ensures community energy groups have all the data needed to develop and deployment of solar projects

We are continually assessing the data we publish, exploring different ways to format data to add additional value, or visualising it in clearer, innovative ways to make it more accessible

Please get in touch with your comments or suggestions on our data offering, either enhancements for existing datasets or ideas for something completely new

https://electricitynorthwest.opendatasoft.com/pages/contact_us/

4. Where do you see the greatest opportunity to enhance data-driven decision-making?



Q&A Panel



Scan to interact with
us during Q&A

Lunch & Networking



Breakout Sessions

Please make your way to allocated tables for breakout session



Closing Reflections & Forward Look

Paul Auckland

Head of Economic Regulation & DSO



Event Close

Thank you and safe journey!

