Department for Energy Security & Net Zero

Ready for RESP:

Net Zero Planning Masterclass: Flexibility and the DNO perspective



Greater South East Net Zero Hub

MIDLANDS NET ZERO HUB

north east & yorkshire NET ZERO HUB

north west net zero hub

South West NET ZERO HUB

Programme delivered by CATAPULT Energy Systems

Catapult team:
Chris Brierley, Dr Anna Stegman, David Lee & Fay Holland

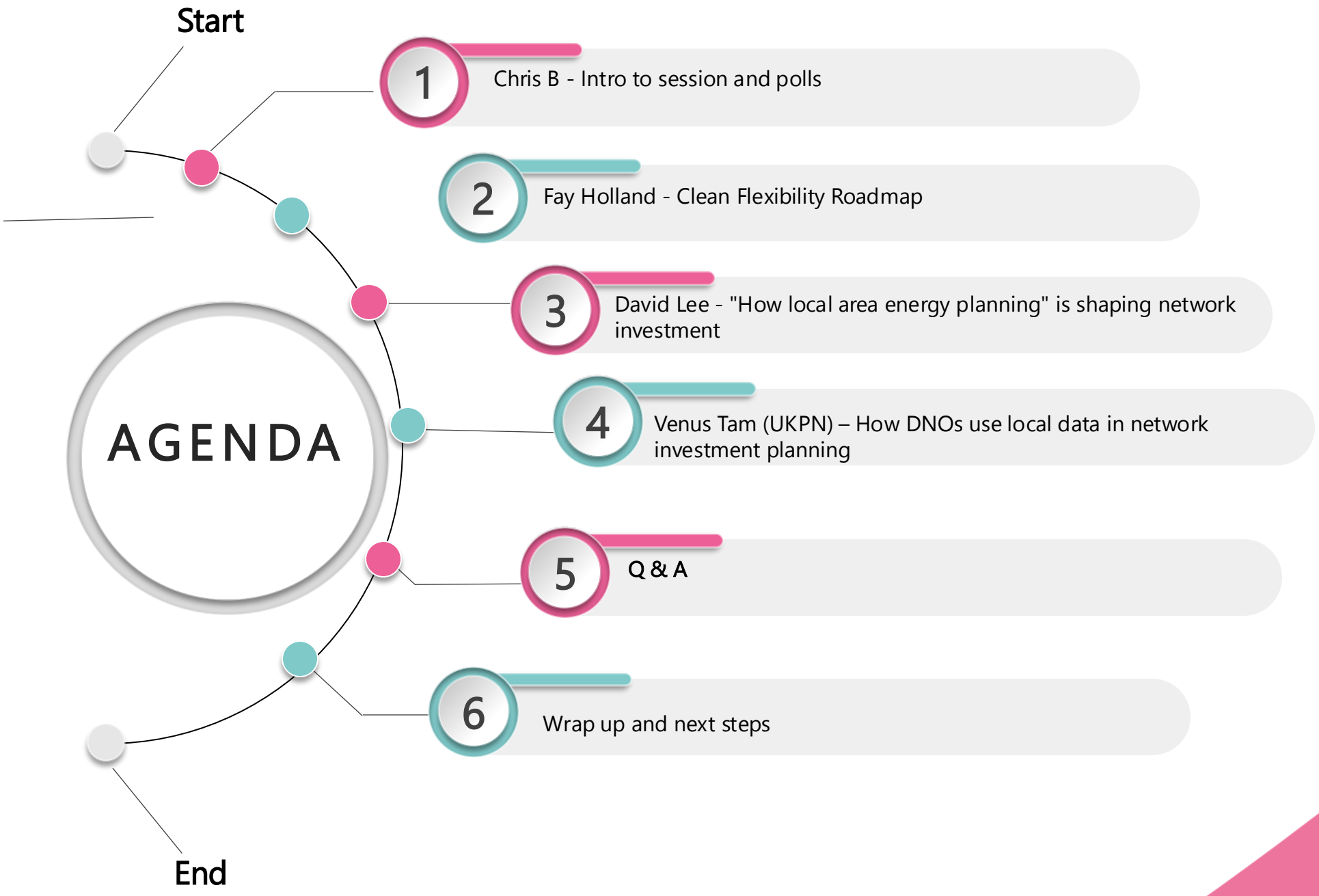
Housekeeping







Ready for RESP



Programme delivered by

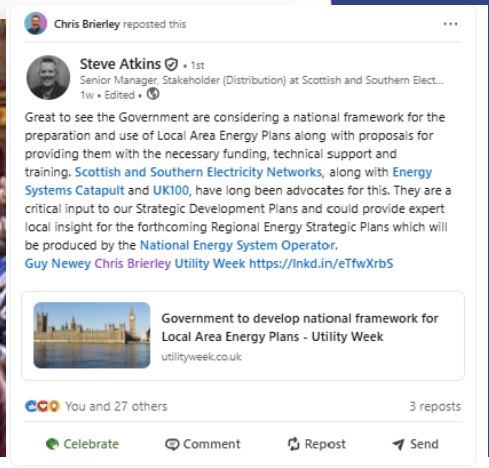
CATAPULT Energy Systems

Ready for RESP

Sector Updates

- Planning and Infrastructure Bill amendments





- RESP forums ongoing (last week and this week)

NESO
National Energy System Operator

Forums round 3 – Autumn 2025

- London - 13 October
- South East - 15 October
- East - 15 October
- South West - 16 October
- Wales - 16 October
- North West - 20 October
- North East, Yorkshire & Humber - 21 October
- Central England - 21 October
- West Midlands - 22 October
- East Midlands - 23 October
- Scotland - 23 October

A joined-up approach



National → Regional → Local

Providing consistent system-level forecasts and network investment needs that shape the strategic direction of the RESP

Bringing together place-based data and local priorities to ensure the RESP reflects real local needs

This year the priority is the **transitional RESP** but then focus on the longer-term **enduring RESP** due to be published in Late 2027

Ready for RESP

QUICK POLLs:

- Should the government mandate and fund a local energy planning framework?
- What are your main concerns around RESPs
- What are your hopes for what RESPs will deliver?

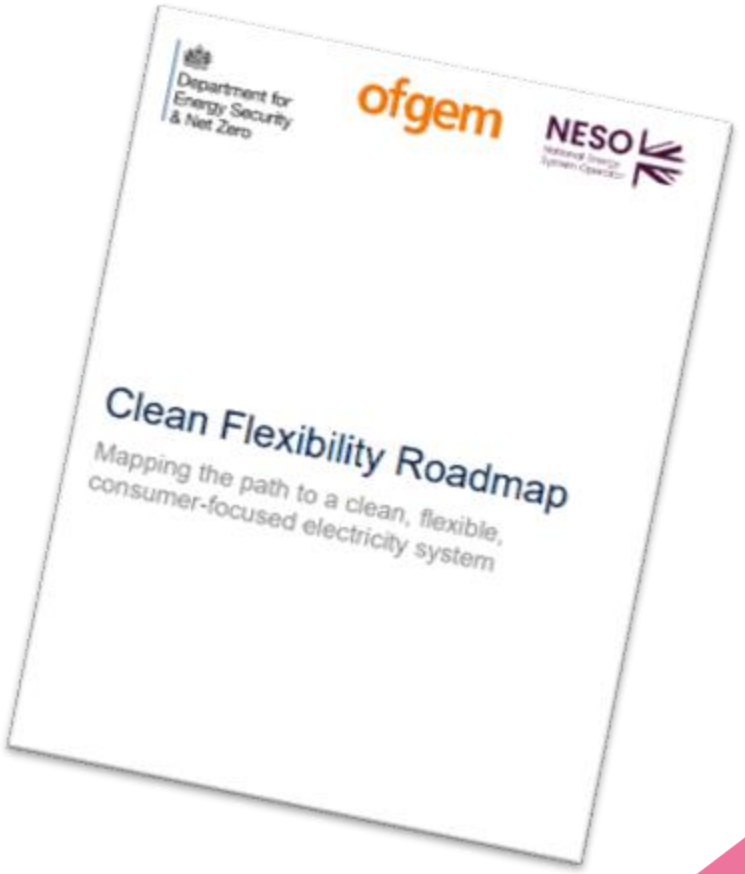
Programme delivered by CATAPULT Energy Systems

Ready for RESP

RESP and Flexibility

Fay Holland

Senior Energy Policy Advisor



Programme delivered by CATAPULT Energy Systems

Ready for RESP

Clean Flexibility Roadmap

- Published in July 2025, the plan targets 51-66 GW of clean flexibility capacity by 2030
- The roadmap aims to:
  - Increase consumer awareness of and engagement in flexibility
  - Support network planning and operation, and market participation, by improving system visibility of energy assets
  - Explore the benefits of secure data sharing to unlock innovation and create growth across the economy



What does it say about RESP?

- *"Future iterations of both RESP and the Strategic Spatial Energy Plan (SSEP) will adopt a consistent, system-wide approach to modelling flexibility, underpinned by a shared commitment to greater data transparency and alignment across all strategic planning processes."*

  - Recognises that current regulatory and market frameworks limit the role of smart local energy solutions
  - Commits DESNZ to work with Ofgem and GBE to set out its vision in 2026 to assess the case for and operational models of community-led responses to local system needs and use these to inform RESP programme implementation
  - NESO will ensure the first RESP methodology has a transparent approach to modelling flexibility
  - For future iterations of the SSEP and RESP methodology will develop a coherent approach to how flexibility is modelled and assessed

Ready for RESP

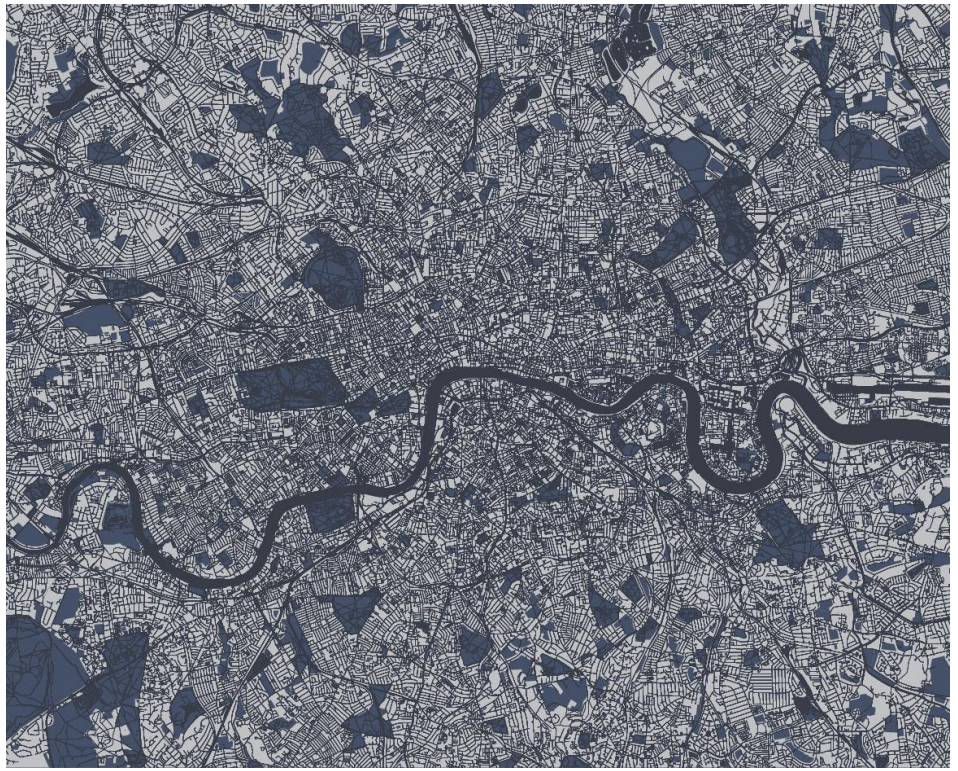
QUICK POLLs:

- How much do you feel network constraints an issue in your area/ local authorities you support?
- How well do you feel you understand your role in the process for network investment?

Programme delivered by CATAPULT Energy Systems

Ready for RESP

How LAEP can influence network investment



David Lee

Practice Manager - Local Energy Systems Modelling

Programme delivered by CATAPULT Energy Systems

Whole System approach

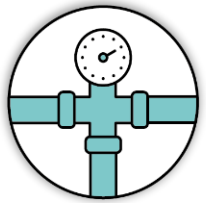
- The whole system approach is a key benefit of LAEP
- Allows an independent comparison of a full range of options.

- For networks, this means it considers:

Electricity networks



Gas & potential hydrogen networks



Heat networks



Whole System approach

- The downside is that the scale of LAEP limits in how much detail each of these can be considered.



- To manage this, our principles are:
    - The different networks should be considered to approximately the same level of detail.
    - We never aim to replace the level of analysis undertaken by network owners, such as a DNO. They are the experts and LAEPs should help enable them.

LAEP Network modelling

- The importance of considering networks and their costs in the LAEPs is that some technologies rely on these costs.
    - e.g. cannot make a fair consideration of hydrogen boilers, heatpumps and heat networks without it.



Ready for RESP

LAEP Network modelling

When considering electricity network costs, our approach is to:

1. Get data from networks on existing headroom or asset capacities
2. Model potential demand change required to decarbonise
3. Assess how these changes in demand will require reinforcement or new infrastructure
4. Cost it – for example using standard figures from Ofgem price control on the cost of reinforcing a length of feeder or adding capacity to a substation.

These are average figures and will not be correct for each local upgrade

Flexibility in LAEPs?

- Some LAEPs have considered flexibility in broad terms, for example EV or heat pump profiles with some load shifting.

- Rare to consider detailed local flexibility options
  - e.g. Demand Side Response from industry – although a LAEP has local detail it struggles to understand enough about the processes within sites.

- Usually we cost reinforcement (as the 'worst case' scenario) and identify that there is an opportunity for flexibility if it could be delivered at a lower cost than this.



Data for networks

- LAEPs produce a range of outputs, commonly including a report and web mapping.
- Generally make data available to networks separately, matching their requests
- Enables their own analysis and allow incorporation into their plans.
- Different networks are at different stages in their thinking about to use LAEP data, and different network operators ask for different things.
- Commonly they want numbers of technologies where and when in a local area, to then apply their own demand and reinforcement assumptions.



Any Questions?



DSO

DISTRIBUTION SYSTEM OPERATOR

How your forecast informs our network investments Oct 2025

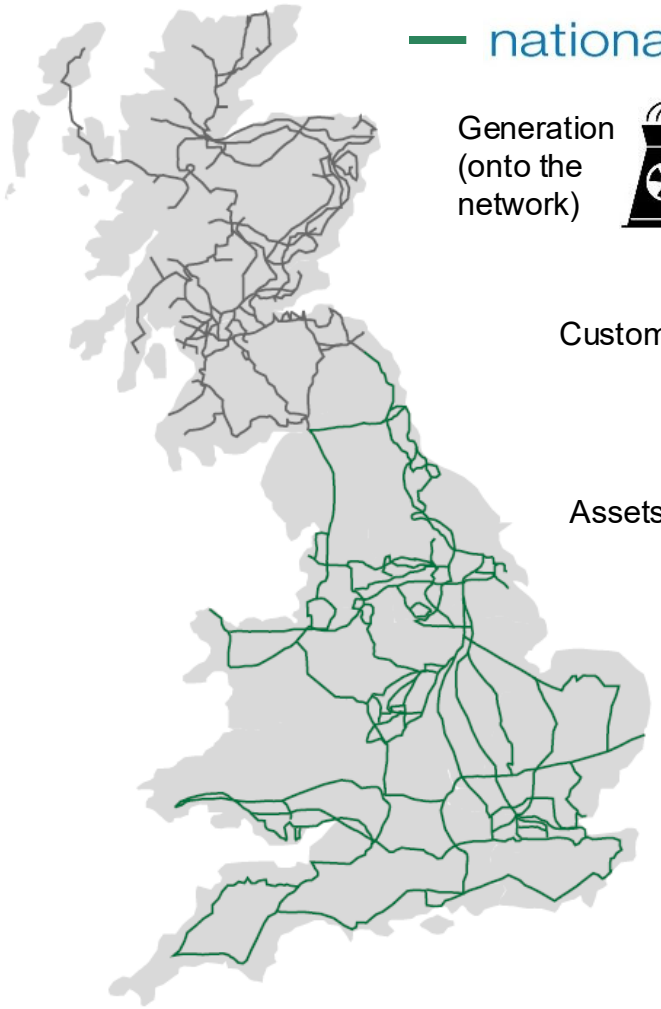
Venus Tam

Net Zero Associate, UK Power Networks



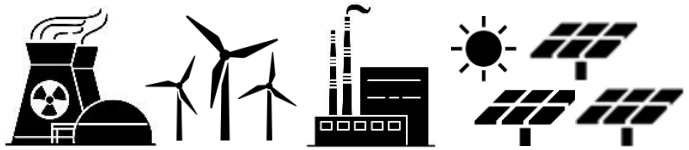
Electricity transmission, distribution and suppliers

1) Transmission Operator (TO)



nationalgrid

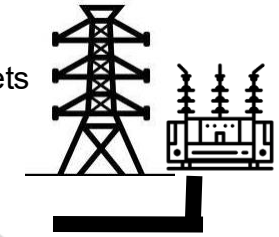
Generation (onto the network)



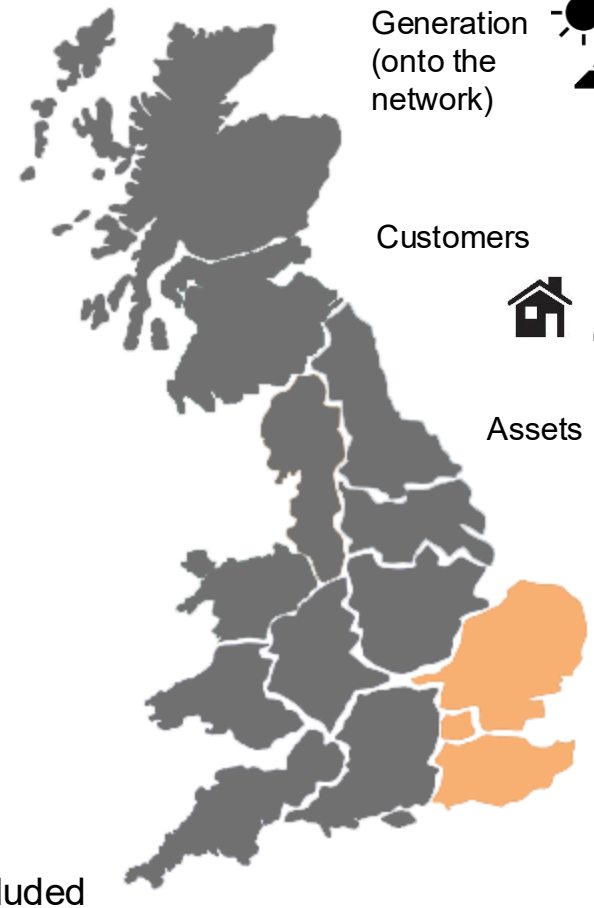
Customers



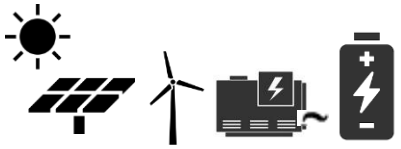
Assets



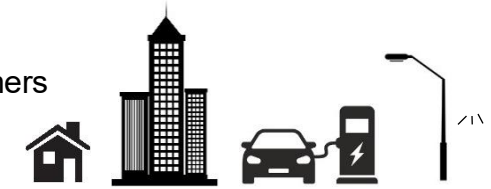
2) Distribution Network Operators (DNOs)



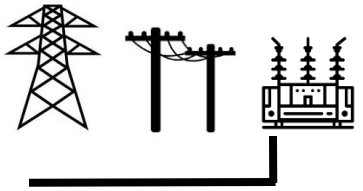
Generation (onto the network)



Customers



Assets



UK Power Networks
Delivering your electricity

3) Energy Suppliers



The cost of using the network is included in your energy bill – billed by the supplier

How can UK Power Networks DSO & DNO support you?

DSO

Determines the best value network solution option for all customers: Right capacity, at the right place, at the right time, at the lowest cost.

Dedicated Local Net Zero team

Long-term decarbonisation planning

In pipeline over next 3+ years



"I want to create a local area energy plan that incorporates a network of fast EV chargers across my town centre by 2040"

DNO

Delivers new assets, manages connections, improves the health of the network, improves reliability and resilience, restores power after a fault.

Connections team

Ongoing projects

Ready-to-launch

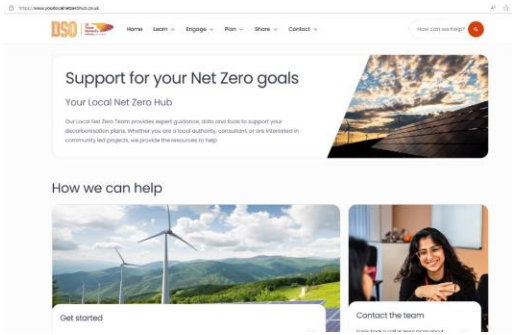
"I have a budget of £100,000 and want to connect 12 fast-charging electric vehicle chargers in our town hall car park"



Our Data and Digital tools

Your Local Net Zero Hub

- One-stop shop platform of all our support



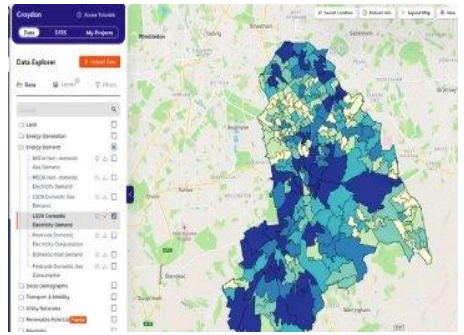
LAEP Open Data Page

- Access to over 170 free datasets
- Channel for you to request new dataset



LAEP+ Planning Tool

- Visualise key data
- Scenario modelling
- Simplify stakeholder consultation



ChargePoint Navigator

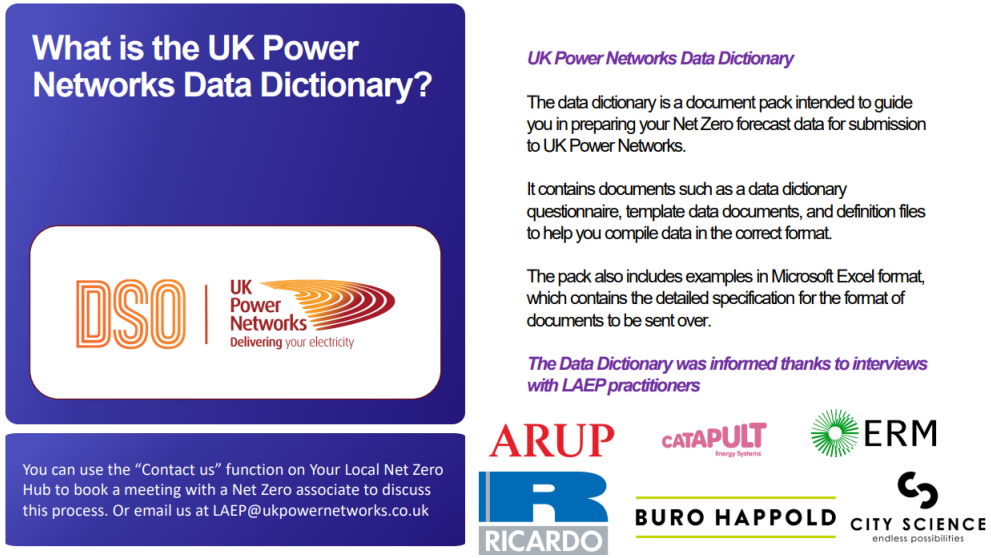
- Site selection
- Deployment monitoring



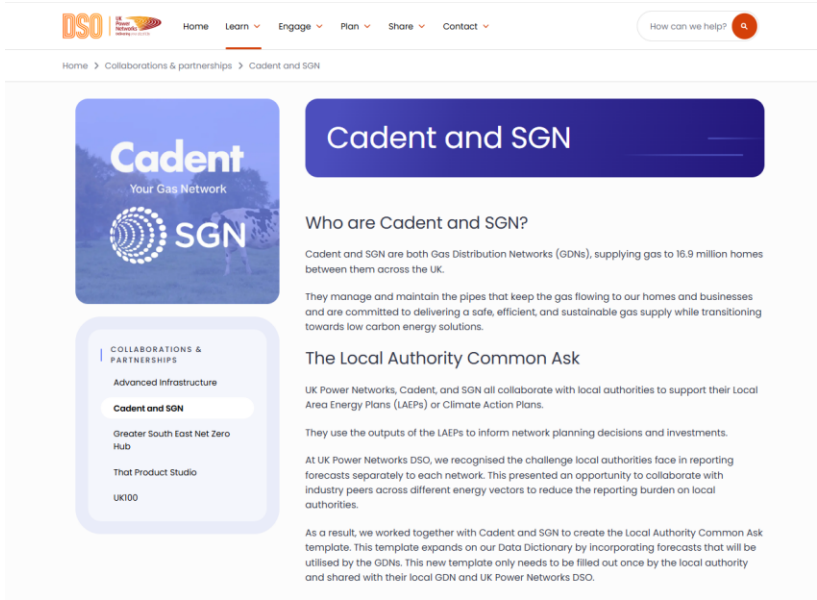
Key:
LAEP: Local Area Energy Plans

Local Authority Common Ask – Simplify forecasts sharing across networks

2024 - Data Dictionary



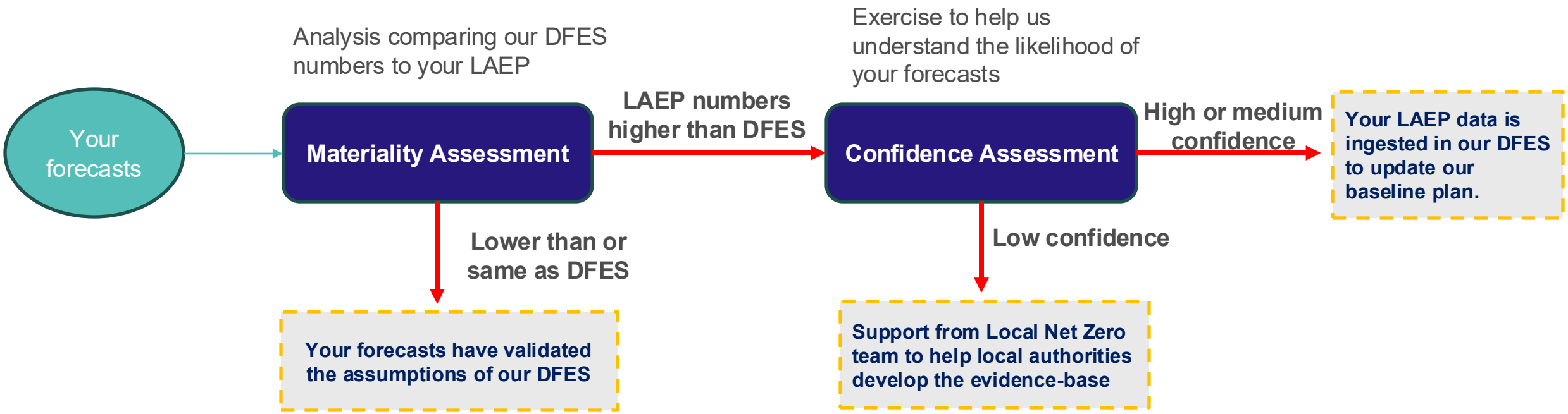
2025 – Common ask with Cadent and SGN



Work in Progress:

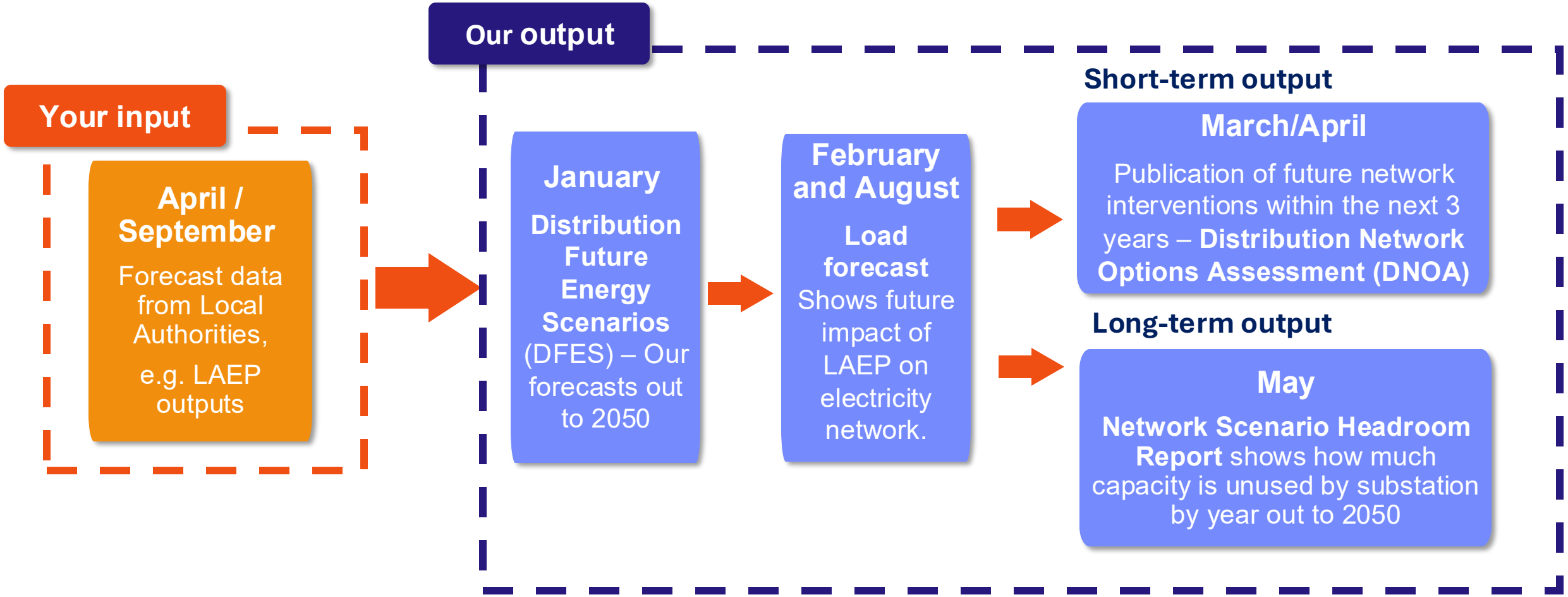
Collaboration with other DSOs for a common ask template to simplify sharing of data for our shared local authorities

LAEP Support Framework



Key:
LAEP: Local Area Energy Plans
DFES: Distribution Future Energy Scenarios

Your forecasts have shaped our network investments

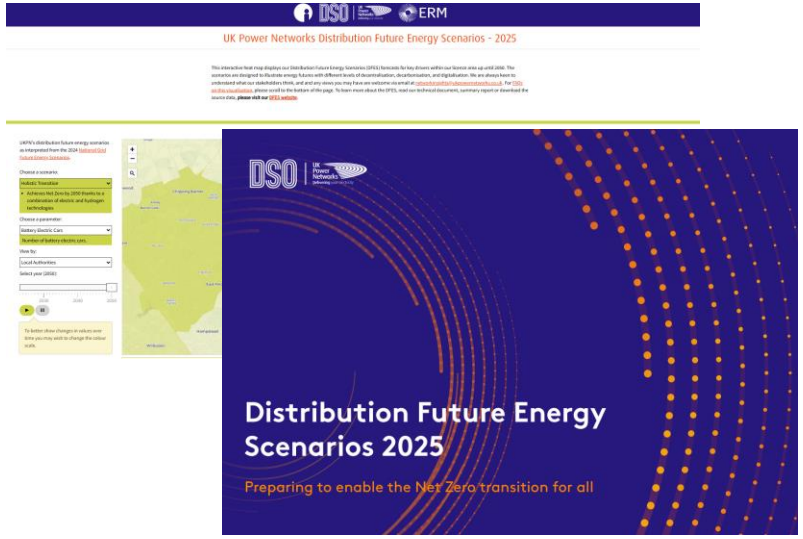


Accelerating investment in 70 local substations in 2025

DFES is informing tRESP

UK Power Networks have been working closely with Local Authorities to integrate local intelligence to shape our strategic network planning input, the **Distribution Future Energy Scenarios (DFES),** which will be reflected in the **transitional Regional Energy Strategic Plan (tRESP**) pathways.

DFES 2025 – Q1 2025



Incorporated local area energy plans (LAEPs) covering 32 areas to accelerate 70 network investments

DFES 2026 – Q1 2026

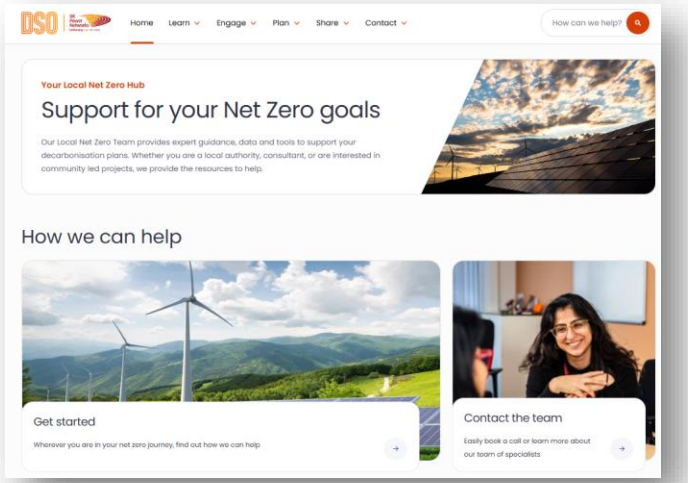
We are developing the DFES to include:

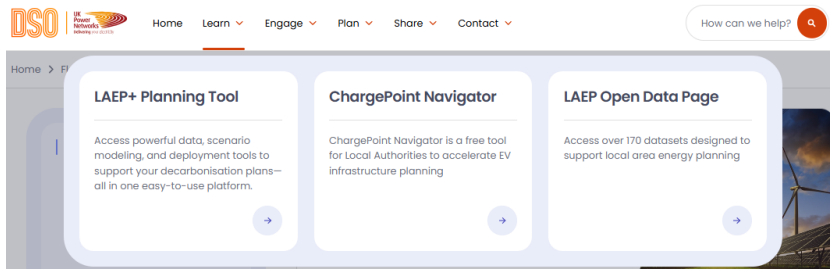
- Enhanced housing information from local authorities.
- Additional LAEPs that have completed this year.

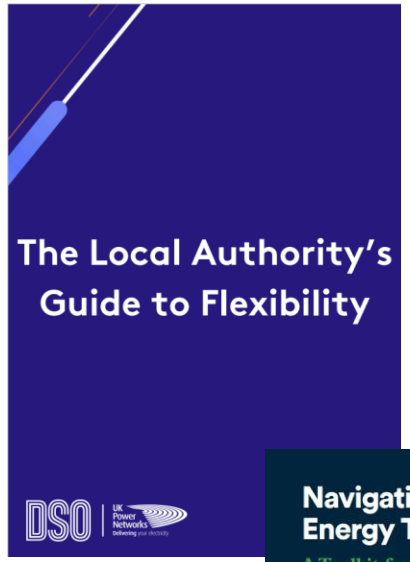
tRESP – Q1 2026

Collaboration between UK Power Networks and NESO:
The updated DFES with new local inputs on housing and other LCTs will be shared with NESO in advance to inform tRESP.

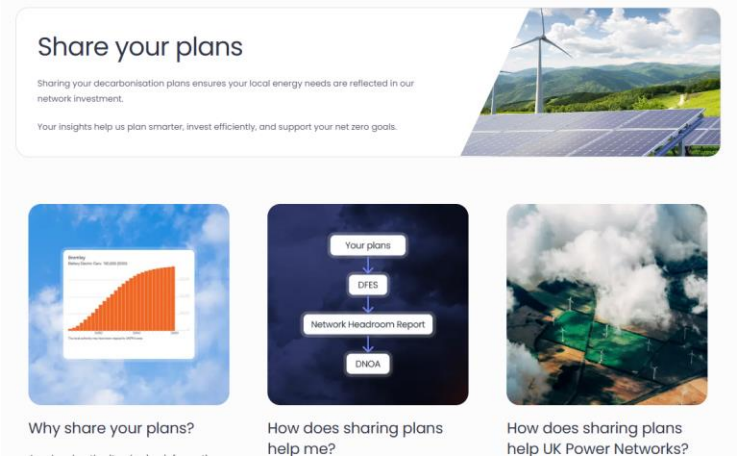
More resources from Your Local Net Zero Hub

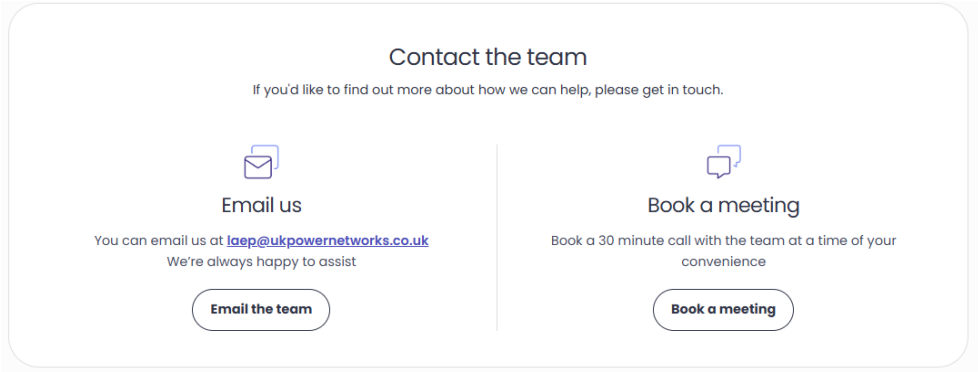


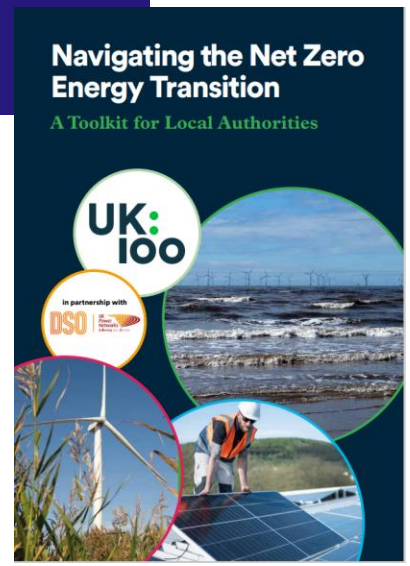




What we offer:
Tools and training
Advice and support







www.yourlocalnetzerohub.co.uk

DSO

DISTRIBUTION SYSTEM OPERATOR



Thank you

Email us at:
LAEP@ukpowernetworks.co.uk

UK Power Networks
Delivering your electricity

Department for Energy Security & Net Zero

Greater South East Net Zero Hub

MIDLANDS NET ZERO HUB

north east & yorkshire NET ZERO HUB

north west net zero hub

South West NET ZERO HUB

Ready for RESP

Any Questions

on RESP, tRESP or LAEP, DFES and local data



Programme delivered by

CATAPULT Energy Systems

Coming up next

- Masterclass - Heat networks webinar – TBC
- RESP Guidance – Mid November
- NESO: Bridget Hartley conversation - TBC
- Jan/Feb 2026 - Regional sessions

Ready for RESP

QUICK POLL:

- How well did todays session meet your expectations?
- What resources would help you better prepare for and understand your role in RESP?

Programme delivered by CATAPULT Energy Systems

Department for Energy Security & Net Zero

Greater South East Net Zero Hub

MIDLANDS NET ZERO HUB

north east & yorkshire NET ZERO HUB

north west net zero hub

South West NET ZERO HUB

Ready for RESP

Thank you

Any questions/comments please email us:
Anna.Stegman@es.catapult.org.uk or
Chris.Brierley@es.catapult.org.uk

Programme delivered by

CATAPULT Energy Systems