Department for Energy Security & Net Zero

Ready for RESP:

Net Zero Planning Masterclass: Heat Networks



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, Eilidh Lockhart & Kala Rayner

Housekeeping



Please put questions / thoughts / challenges in the chat throughout so we can discuss later in the session.

Ready for RESP

AGENDA

1. Welcome and reminder on Ready for RESP programme (Chris Brierley)
2. Kieran Highman – Updates from NESO on RESP
3. Ella Sanders – DESNZ Heat Network Zoning updates
4. Eilidh Lockhart - Heat Networks and how it fits in with local energy planning
5. Q&A
6. Wrap up (Chris Brierley)

Programme delivered by CATAPULT Energy Systems

Ready for RESP

Literature review, stakeholder consultations, and Catapult experience collated

Library of evidence collated

Series of simple language guides
1: Ready for tRESP
2:Local Net Zero Plan Guidance
3: Local Government Resourcing plan
4:Ready for RESP

Hub engagement plan

Game style workshop to bring the interactions of local and regional stakeholder objectives together, demonstrating the value RESP and planning can provide.
Plus follow up in person regional sessions

Change Management training day

Deliver subject specific webinars (buildings, renewable generation, energy networks, transport, industry, hydrogen)

National stakeholder engagement plan

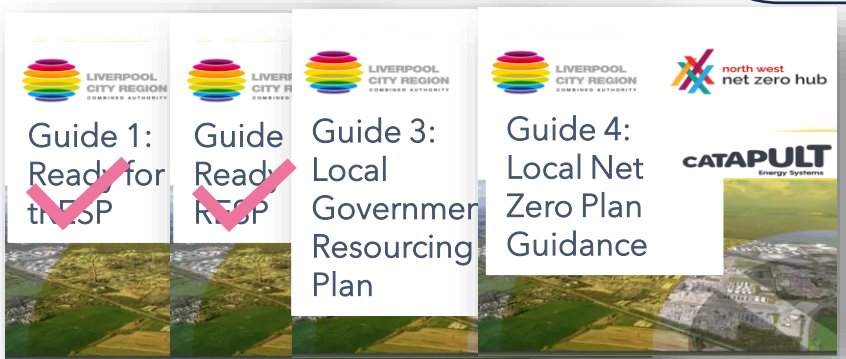
Disseminate guides with 3 interactive online briefing sessions for each region

LA survey and findings to understand regional readiness for Local Net Zero planning

Briefing notes to summarise Guide content for different audiences

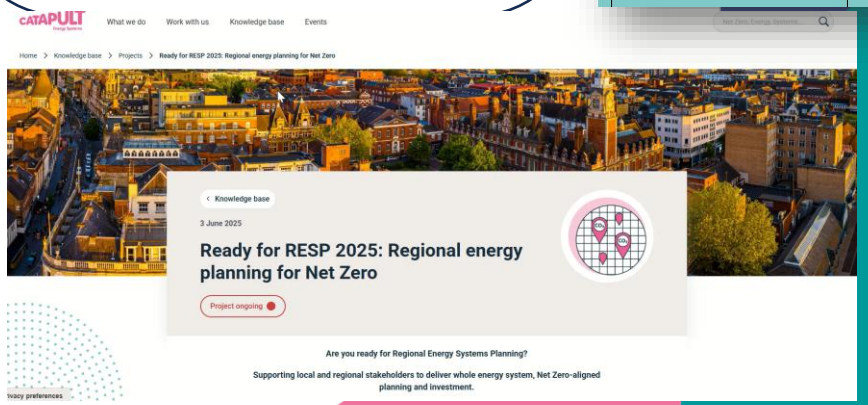
Outputs from each activity hosted on Net Zero Go





HEURISTIC

IMPACT FACTORY



A joined-up approach



National → Regional → Local

Ready for RESP

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

RESP timeline

Public

Transitional RESP (tRESP)

We're taking a collaborative approach to the development of tRESP. We've been sharing our work and inviting and taking on board comments since March 2025.

What is tRESP?

1. Serves as a transitional bridge to full RESP



2. Focused on strategic direction of electricity DNO (Distribution Network Operator) business plans
3. A request from Ofgem
4. Intended to drive consistency and ambition

Why now?

1. Urgent change: Energy sector transformation and CP30 demand immediate action
2. Unlocking value sooner: Full RESP won't be ready until 2027
3. DNO business planning dates are fixed: Next DNO regulatory period is fixed (2028-2033) and input is needed for business plans in 2026
4. Early stakeholder engagement to integrate national and regional needs within energy planning

NESO
National Energy System Operator

Ready for RESP

QUICK POLLS:

1. What are the positives from the RESP process so far?

2. What are your main concerns currently with the regards to the introduction of RESP and local councils' ability to input?

Programme delivered by CATAPULT Energy Systems

Public

Overview of Regional Energy Strategic Planning

2 December 2025

Kieran Highman, South West RESP Manager
kieran.highman@neso.energy

Presentation to Net Zero Hubs as part of Ready for RESP

NESO
National Energy System Operator

The What...

Our role

Working with the GB nations and regions to produce **eleven Regional Energy Strategic Plans (RESPs),** to ensure that local areas get the energy infrastructure they need to help meet local and national goals.



NESO National Energy System Operator

RESPs – why do we need them?

The Why...

1. **Local voices & needs** - ensure that local voices & needs are at the heart of the way we plan the energy system

2. **To drive investment** - ensure local areas get the energy infrastructure they need to realise local goals

3. **Ensure efficient network investment** - that keeps bills low by looking at the whole energy system

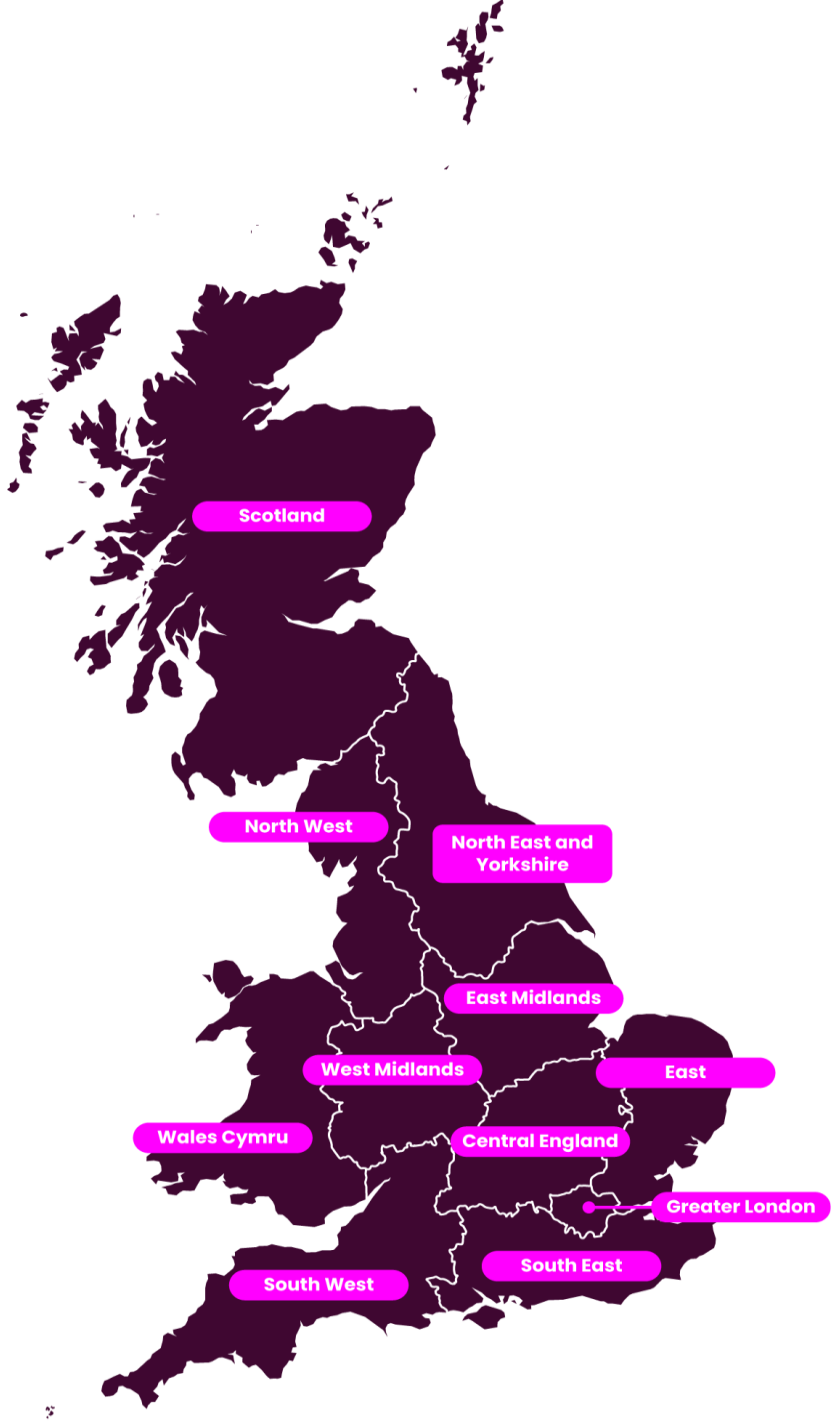


NESO
National Energy System Operator

RESP Nations & Regions

The Where...

- Scotland
- North East and Yorkshire
- North West
- East Midlands
- West Midlands



- Wales
- Central England
- East
- Greater London
- South East
- South West

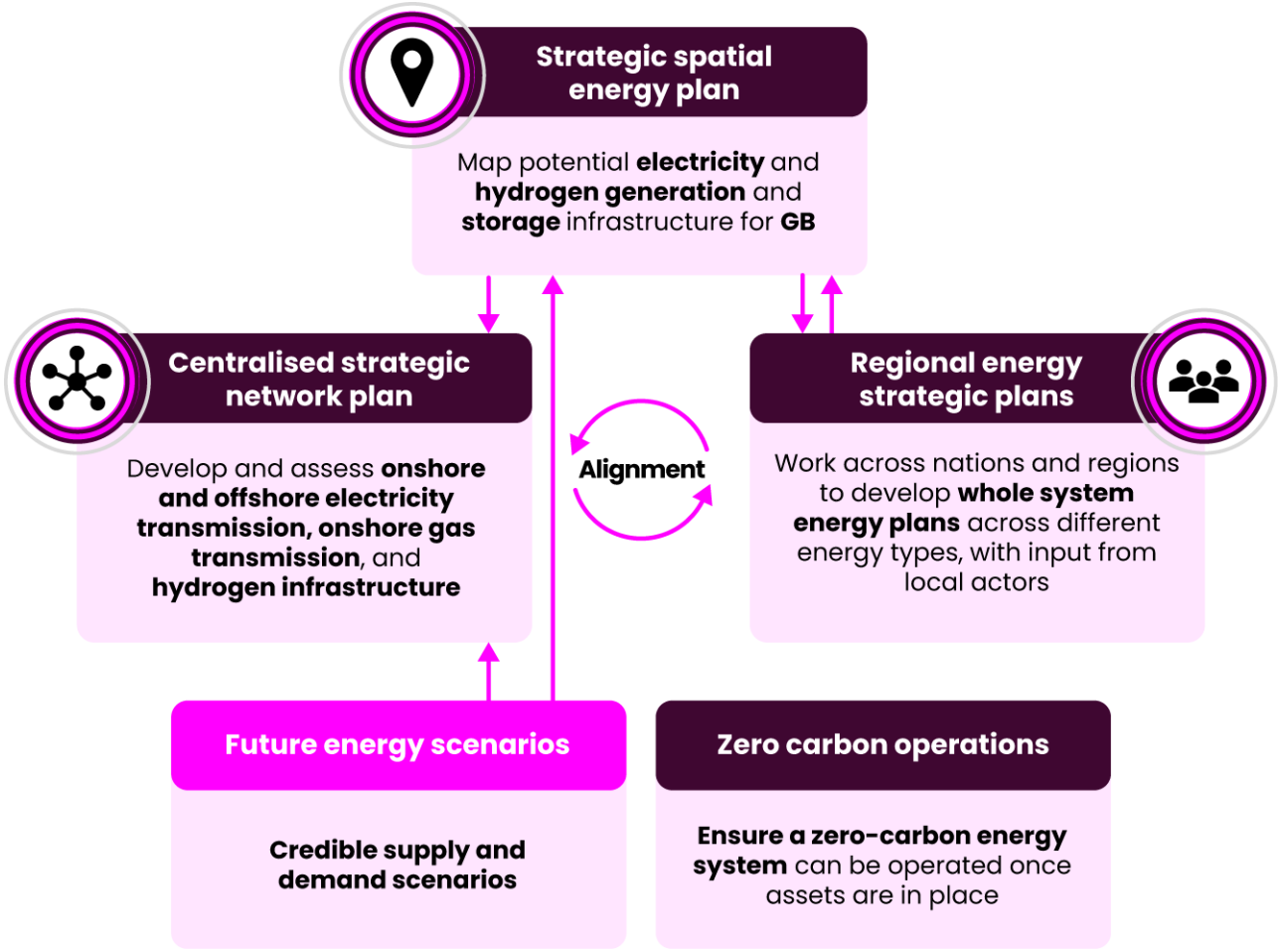
NESO National Energy System Operator

How we will work: Six guiding principles

The How...

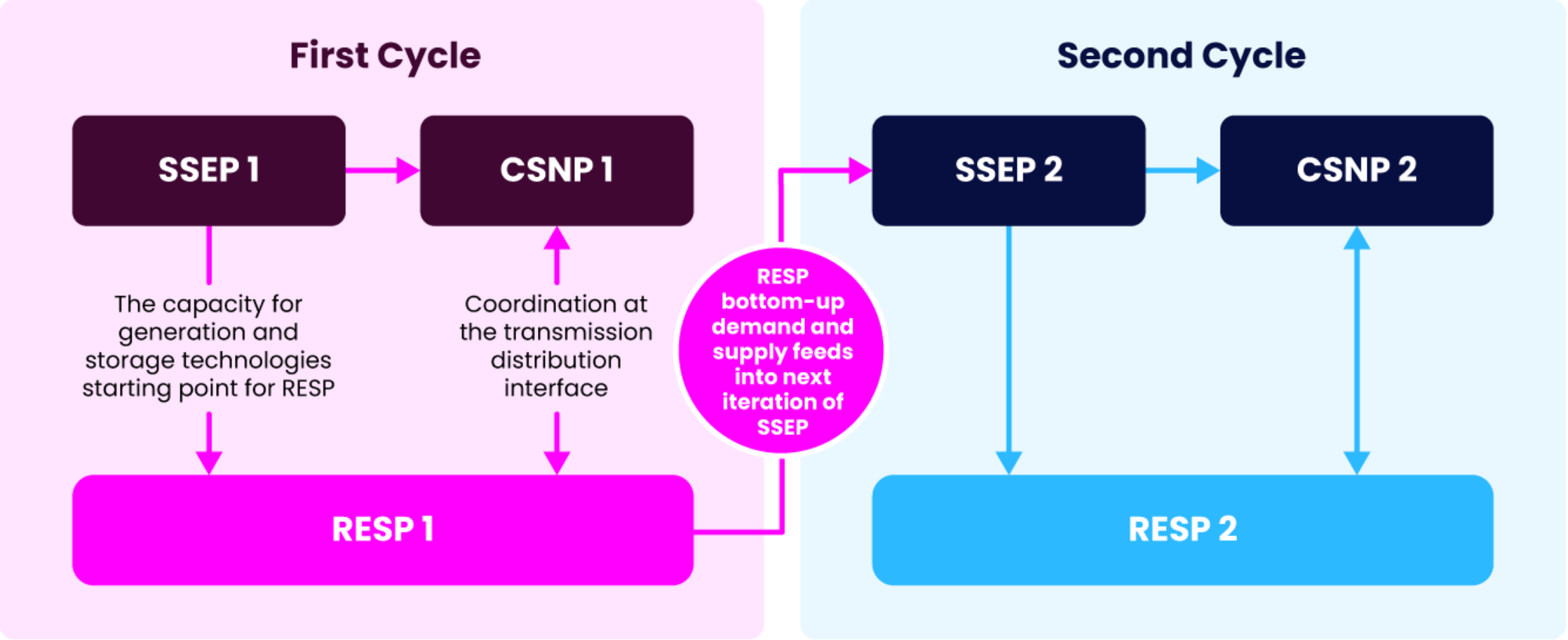
- Place based
- Whole-system
- Vision led
- Proactive
- Transparent & collaborative
- Fair

Strategic energy planning (SEP)



NESO
National Energy System Operator

Interaction with Strategic Energy Planning



Five components of a RESP

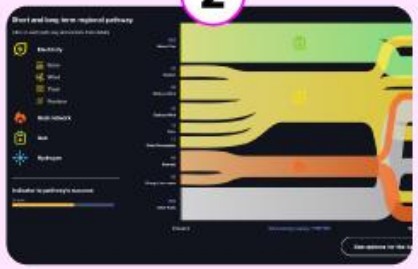
The What...

The Regional Energy Strategic Plan

1. **Nations and Regions Context**



2. **Pathways**



3. **Consistent Planning Assumptions**



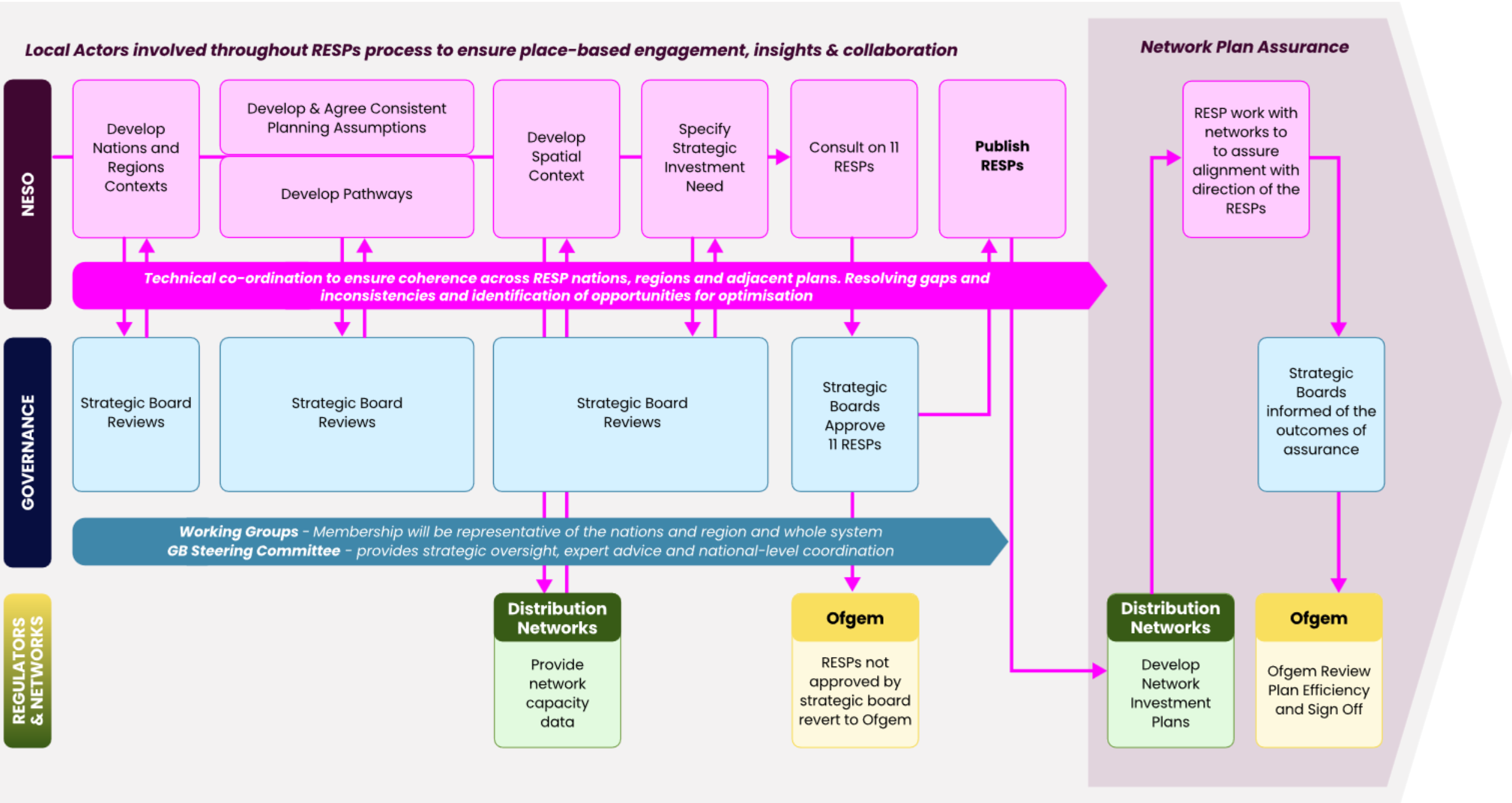
4. **Spatial Context**



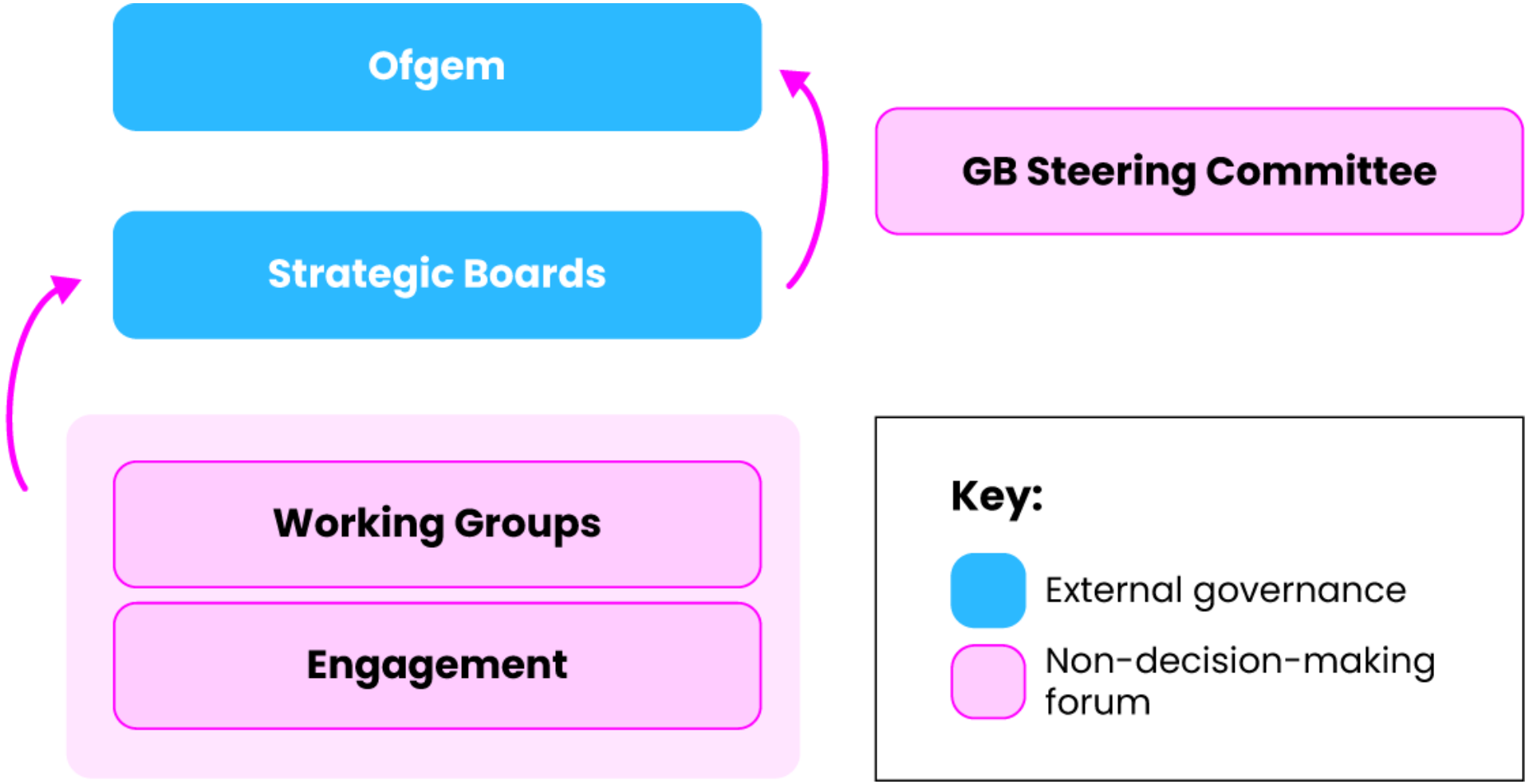
5. **Specification of Strategic Investment Needs**



NESO
National Energy System Operator


Local Actors involved throughout RESPs process to ensure place-based engagement, insights & collaboration
Network Plan Assurance
NESO
GOVERNANCE
REGULATORS & NETWORKS
Develop Nations and Regions Contexts
Develop & Agree Consistent Planning Assumptions
Develop Pathways
Develop Spatial Context
Specify Strategic Investment Need
Consult on 11 RESPs
Publish RESPs
RESP work with networks to to assure alignment with direction of the RESPs
Technical co-ordination to ensure coherence across RESP nations, regions and adjacent plans. Resolving gaps and inconsistencies and identification of opportunities for optimisation
Strategic Board Reviews
Strategic Board Reviews
Strategic Board Reviews
Strategic Boards Approve 11 RESPs
Strategic Boards informed of the outcomes of assurance
Working Groups - Membership will be representative of the nations and region and whole system
GB Steering Committee - provides strategic oversight, expert advice and national-level coordination
Distribution Networks
Provide network capacity data
Ofgem
RESPs not approved by strategic board revert to Ofgem
Distribution Networks
Develop Network Investment Plans
Ofgem
Ofgem Review Plan Efficiency and Sign Off

Governance

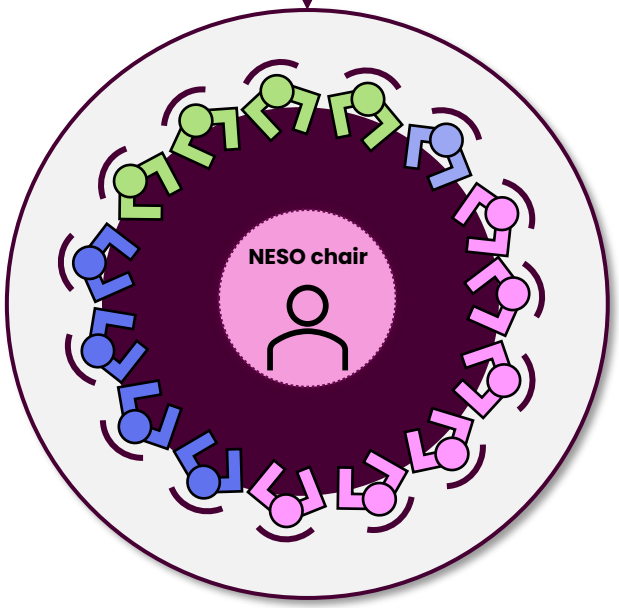

Ofgem
Strategic Boards
Working Groups
Engagement
GB Steering Committee
Key:
External governance
Non-decision-making forum

Strategic Boards Composition and Membership

Strategic Board Members

1	**NESO Chair**	• NESO will chair and perform all management functions for the strategic boards
3–6	**Network Companies**	• As per Ofgem Policy Framework all Network Companies in Wales can sit on the Strategic Board
Up to 6	**Local Government**	• Up to 6 representatives from across Local Government in Wales can sit on the board
1	**Welsh Government**	• Welsh Government sit on the board for Wales
Up to 4	**Cross Sector Actors**	• Up to 4 cross sector actors who play a significant role in energy planning will sit on the Board • NESO will decide these, from a pool of applicants to complement the membership groups above for a wider whole system perspective

Up to 16 Total Members



NESO
National Energy System Operator

Appointment of Members to Strategic Boards

Local Government (Up to 6)

1. NESO writes to Chief Executives of Local Authorities, or partnership bodies to nominate attendees
2. Local Authorities provide nominated candidates based on capacity, capability and role. These can be officers or politicians as best meets local needs.

Distribution Networks

1. NESO writes to Chief Executives of Networks asking for nominations. It has been established already that all Networks in Wales will sit on the board.
2. Networks provide nominations

Cross Sector Actors (Up to 4)

1. NESO develops a candidate pack
2. NESO advertises roles and launches a targeted application process
3. Individuals submit applications, that articulate why they are a good fit for the board

NESO Final Decision on Board Members

NESO will consider the nominations and confirm the final board membership in consideration of the following criteria:

- Is there appropriate **whole system** representation, based on local needs?
- Is there adequate **place-based** representation?
- Is there a **fair balance** of members within each group? (e.g. representation of both urban and remote elements of the region or nation, a range of sectors)

NESO National Energy System Operator

Local Actor Support



Public Sector

- Local authorities (upper tier and lower tier)
- Strategic authorities
- UK, Scottish and Welsh government bodies
- Protected landscape bodies
- Wider public sector
- Sub-national transport bodies



Community and third sector

- Community energy groups
- Community action groups
- Energy and fuel poverty NGOs
- Other NGOs

NESO
National Energy System Operator

Local Actor Support

Wave 1

- **Broad support that could be relevant** to many local actors
- Focused on **initial RESP development**
- Already in delivery, or for delivery early next year.

Wave 2

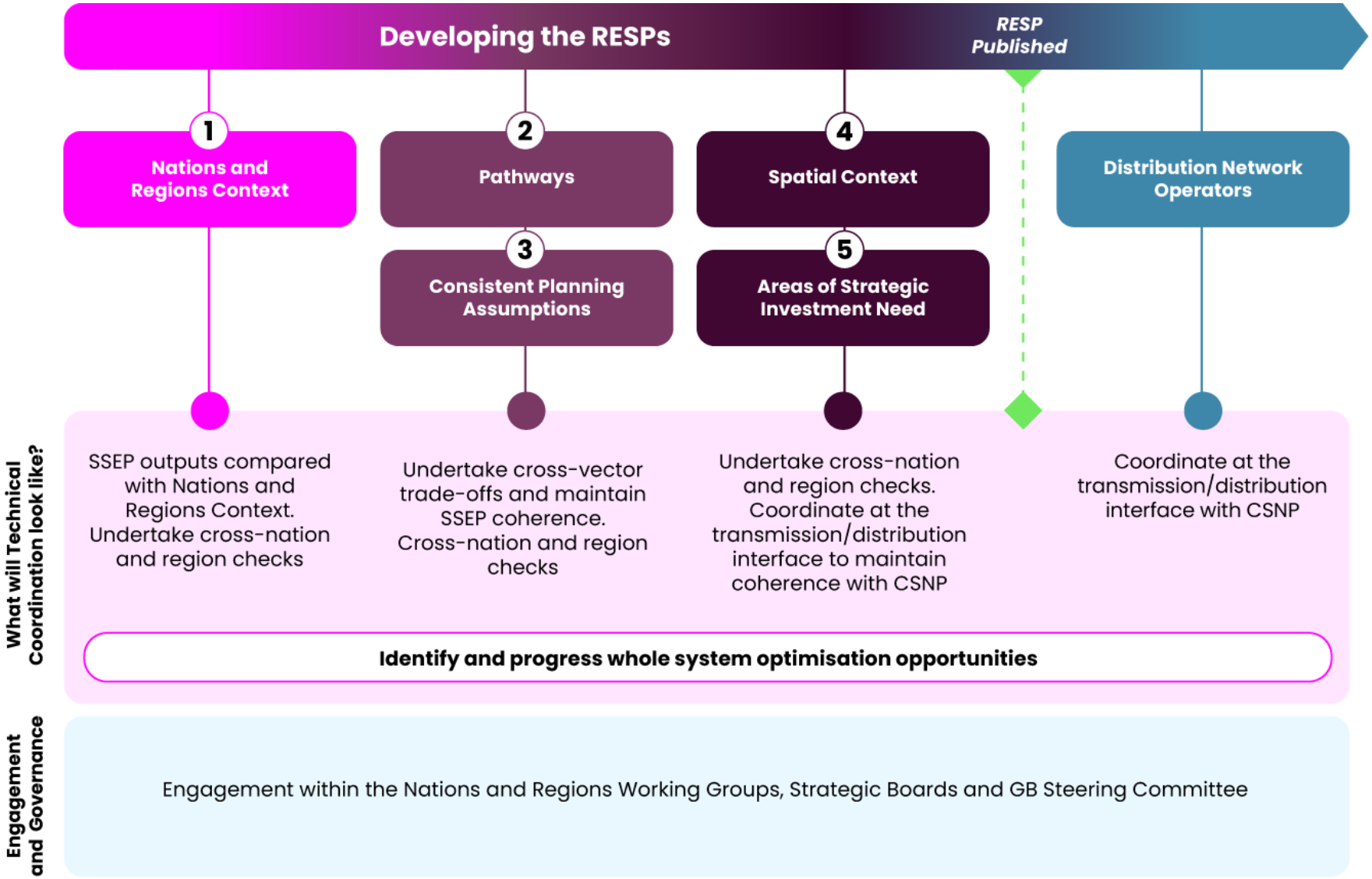
- **More detailed and targeted** against RESP delivery
- **To address more nuanced needs, and needs emerging** from tRESP and/or this consultation.

Wave 3

- To support local actors in **using the outputs** of RESP
- Support established towards the end of delivery of the first RESPs
- Will reflect RESP development taking place in the meantime

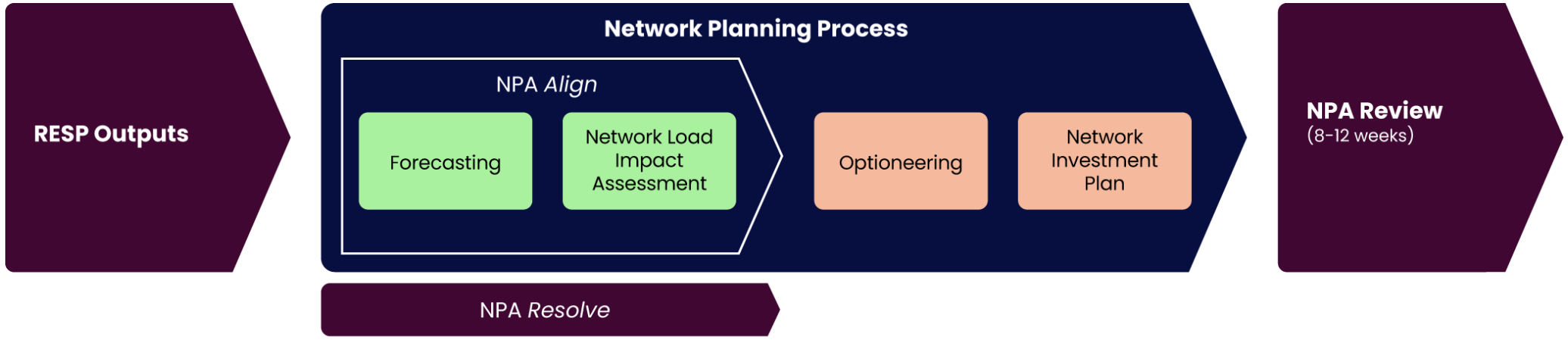
NESO
National Energy System Operator

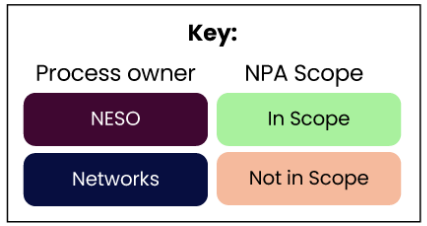
Technical Coordination



NESO National Energy System Operator

Network Planning Assurance





NESO
National Energy System Operator

Societal & Environmental Consideration

Societal Considerations

Energy is vital to enabling national, regional and local priorities such as economic growth, job creation, social programmes and community initiatives.

Our societal approach will focus on supporting the decision making of strategic boards.

We propose translating the outputs of the RESPs into indicative societal impacts that reflect the nations and regions priorities.

Ensure compliance with Public Sector Equality Duty (PSED)

Types of impacts we may consider:

Environmental indicators

- Air quality
- Ecosystem services & Biodiversity
- Visual pollution, cultural values

Socio-economic indicators

- Community health
- Local Employment
- Fuel poverty

Environmental Considerations

The protection and enhancement of the environment goes hand in hand with meeting net zero targets.

We have reviewed current environmental approaches and legislation to understand what is required for the RESPs. We have determined that:

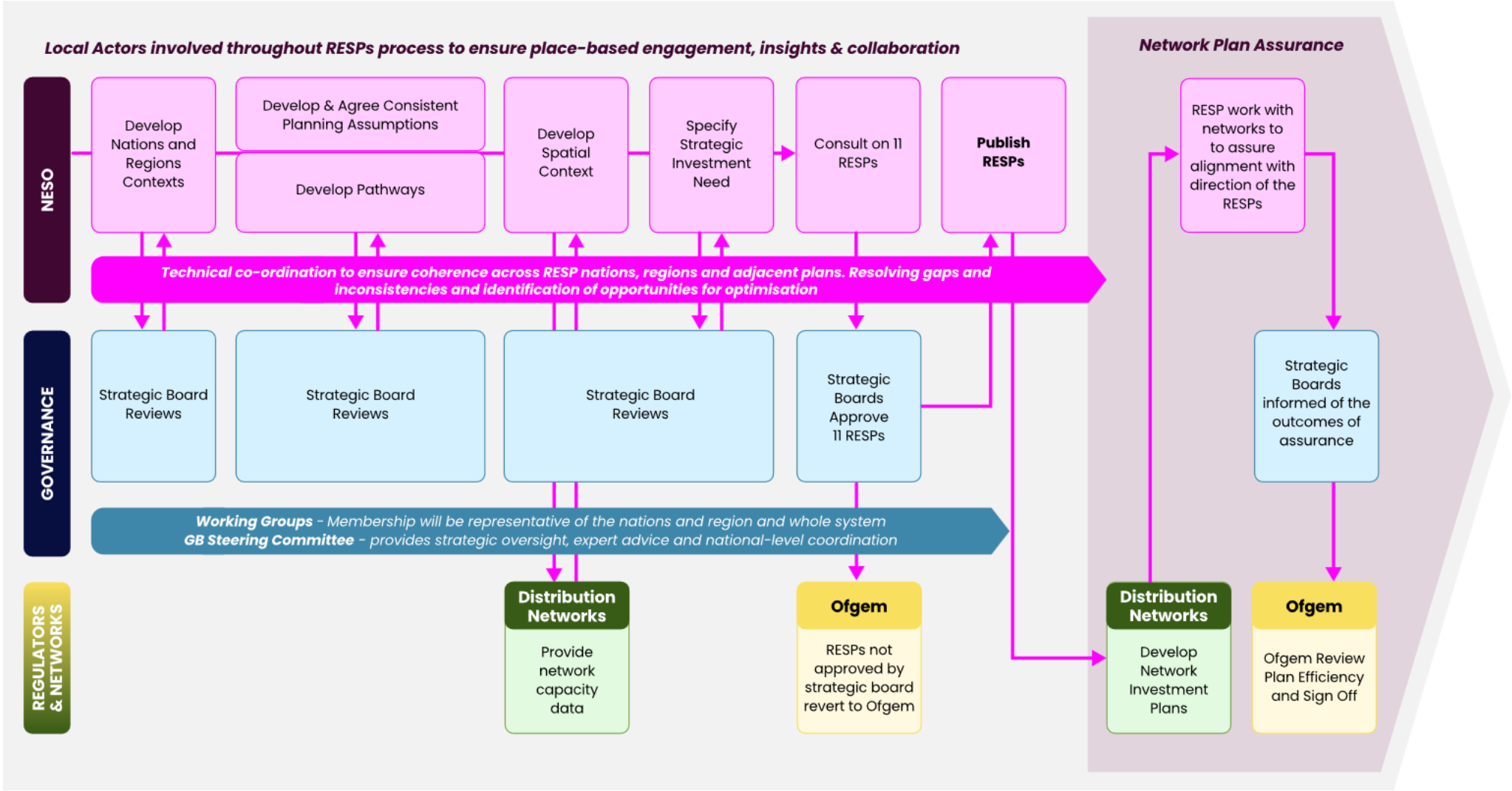
- An HRA is not required for the RESPs and will apply to other competent authorities who are either adopting their own plans or consenting specific projects.
- An SEA is not required as the RESPs will not be prescriptive enough to constrain future decision-making, they will only influence it.

We propose for the first RESPs to leverage the relevant geospatial datasets from the SSEP.

We will also **embed environmental considerations** by considering environmental assessments, regulations, and outcomes or commitments from existing environmental reports within the nations and regions.

NESO National Energy System Operator

End-to-end Process



Timeline

Nov 2025	Dec 2025	Jan 2026	Feb 2026	Mar 2026	Summer 2026
RESP Methodology					
17th: consultation launch		16th: consultation closes		End-March: proposed final Methodology submitted to Ofgem and DESNZ	Final RESP Methodology + 'you said, we did report'
	Deep-dive Webinars - Round 1 (25th Nov -3rd Dec)		Deep-dive Webinars - Round 2 (if required)		
			RESP Forums – Winter 2025/26		RESP Forums – Summer 2026
tRESP					
		Final tRESP published			

NESO National Energy System Operator

RESP Forums – Winter 2026

Nation / Region	Date	Time
North West	3rd February	13:00-14:30
South East	5th February	10:00-11:30
London	5th February	14:00-15:30
North East & Yorkshire	9th February	14:00-15:30
South West	10th February	14:00-15:30
Wales	10th February	10:00-11:30
East of England	11th February	11:00-12:30
West Midlands	11th February	13:30-15:00
East Midlands	12th February	13:00-15:00
Central England	12th February	14:00-15:30
Scotland	12th February	11:00-12:30



Forum 4 Agenda

(subject to change)

- Updates on wider RESP activities
- Final tRESP
- RESP Methodology Update
- Strategic Energy Planning Update
- Next Steps

NESO
National Energy System Operator

How to respond to the consultation

1. Please submit your response by **11.59pm on 16 January 2026**
2. Please submit your response via the **Qualtrics platform:**

English:

Cymraeg:

3. If you are not able to submit your response via Qualtrics, please contact box.consultations.resp@neso.energy by 9 January 2025, at the latest.
4. Responses are saved as you progress through the form, so you don't have to complete all questions at once. **Please note that they are only saved when you go to the next page of the survey.**
5. You will be able to download a copy of your responses as a PDF at the end.
6. FAQs will be published on the RESP Methodology consultation section of the NESO website
7. If you have any questions, please email: box.consultations.resp@neso.energy

NESO National Energy System Operator

Further information on RESP

Look out for future Forum dates

NESO newsletter sign up

RESP web pages

Contact the RESP team

box.resp@neso.energy

NESO
National Energy System Operator

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 / comments



Ready for RESP

QUICK POLLS:

3. How would you rate your level of experience in heat networks?
   (1 – no knowledge, 5 – expert)

4. Are heat networks a priority for your region?
   (1 – not at all, 5 – very high priority)

5. What are the challenges your local authorities are facing in relation to heat network planning and feasibility?

Programme delivered by
CATAPULT Energy Systems

Ready for RESP

Heat Networks – what next

Ella Sanders

Engagement Lead – Heat Networks

north west net zero hub

Programme delivered by CATAPULT Energy Systems

Department for Energy Security & Net Zero

What is heat network zoning?

Heat network zoning is the process of identifying and designating geographic areas as heat network zones and then developing heat networks within them. Conditions within zones will ensure uptake of connection to the heat network.

Zoning will establish areas where heat networks are expected to provide **the most affordable low-carbon heating solution.**

The Energy Act 2023 is being used to establish the regulatory framework for heat networks in Great Britain and to introduce heat network zoning in England through secondary legislation. Heat network zoning will support the key aims of the Energy Act, to transform the UK's energy system by **strengthening energy security, supporting the delivery of net zero,** and **ensuring household bills are affordable in the long-term.**

Heat network zoning - GOV.UK

Department for Energy Security & Net Zero

Support for heat network zoning

→ **The government supports heat networks as a crucial component of heat supply in towns and cities, with potential to make up 20% of the heat market by 2050.**

→ Heat network zoning gives towns and cities the tools to accelerate the development of heat networks, mitigating risks related to the construction and operation of new or expanded heat networks.

→ This gives developers and investors greater certainty about the number of likely connections to networks.

→ By identifying areas where heat networks are often the lowest cost low-carbon heating solution, greater clarity and confidence is given on the best locations for heat networks.

→ **Zoning unlocks the benefits of heat networks across more of the country, helping to deliver stable heating bills, support greater energy security for the UK, deliver local jobs, support net zero targets, and provide the public health benefits of clean energy supply.**

Department for Energy Security & Net Zero

Timeline

In 2023, a consultation was launched to gather feedback on proposals for how heat network zoning policy will be rolled out in towns and cities in England.

All consultation feedback has been carefully considered and used to help inform the development of the secondary legislation for zoning.

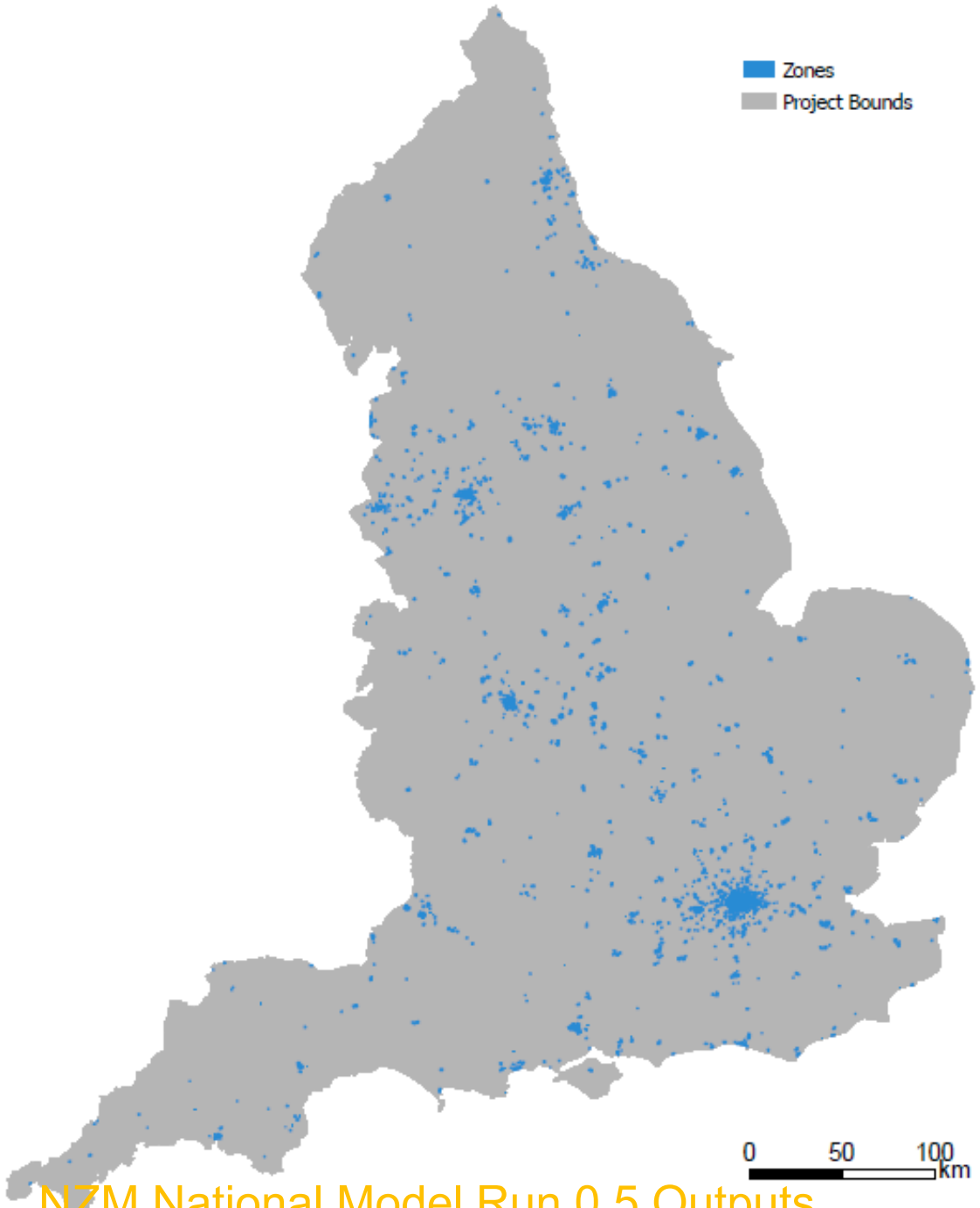
The consultation response will detail how this feedback has been considered, along with any new policy developments since 2023 that will be carried forward. We expect the response this calendar year.

Department for Energy Security & Net Zero

NZM Purpose

The National Zoning Model (NZM) is being developed to support & inform Heat Network Zoning Policy by:

- Supporting the identification of **heat network zones** in England
- Identifying areas where heat networks are expected to be the **lowest cost, low carbon solution**
- Applying an efficient, standardised and high-quality approach
- Enabling easy updates to modelling to reflect relevant changes in the energy landscape



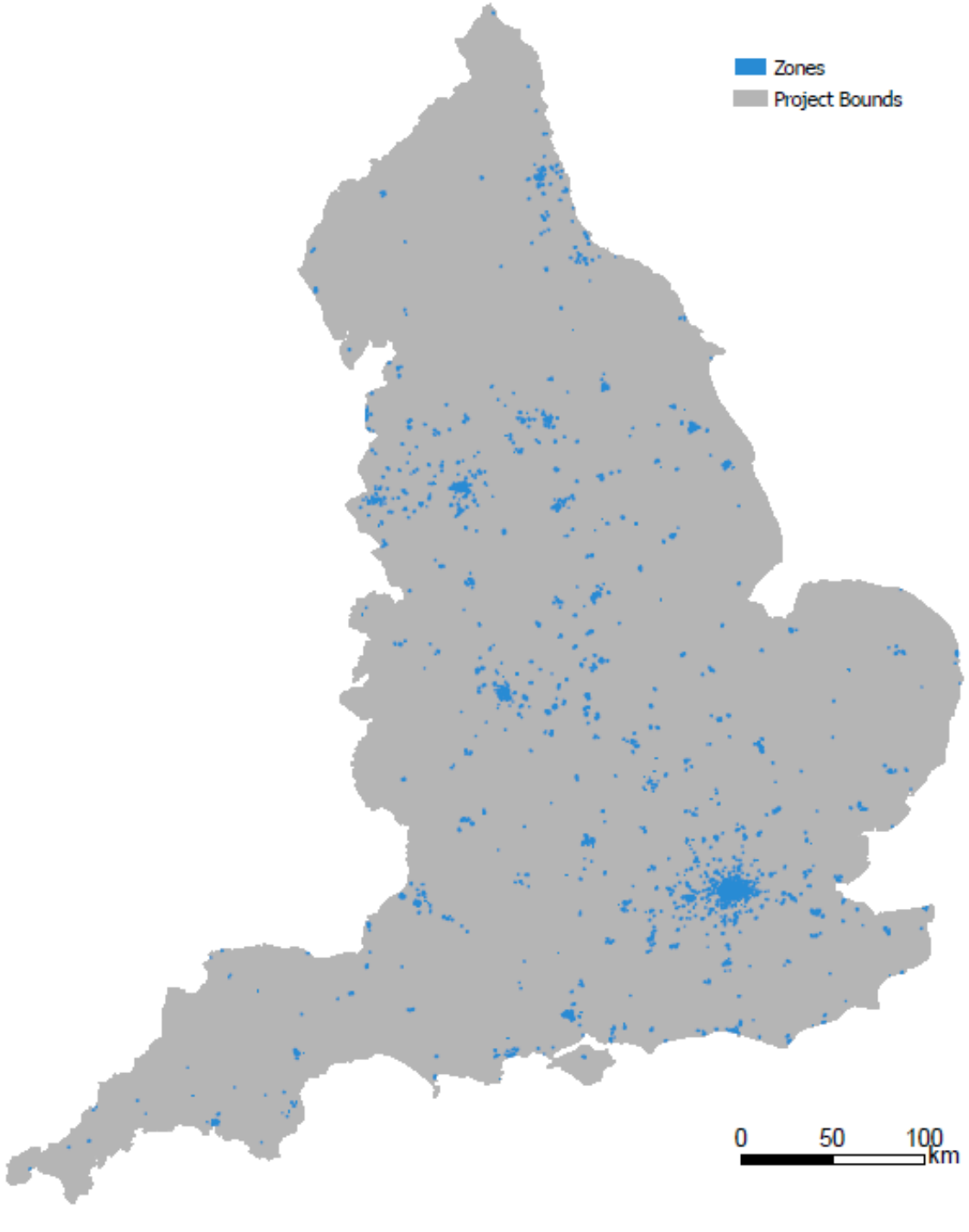
NZM National Model Run 0.5 Outputs

Department for Energy Security & Net Zero

NZM Significance

The NZM is an important tool that reduces risks and speeds up processes through:

- Applying the same approach to identifying zone opportunities, making them **comparable & consistent**
- Providing **consistent data** to local stakeholders who will carry out zone refinement and designation
- Giving market & public **confidence** in output
- **Reducing human error** in modelling calculations which is easily auditable
- **Improving efficiency** by automating calculations & being adaptable to change without having to rework manual approaches



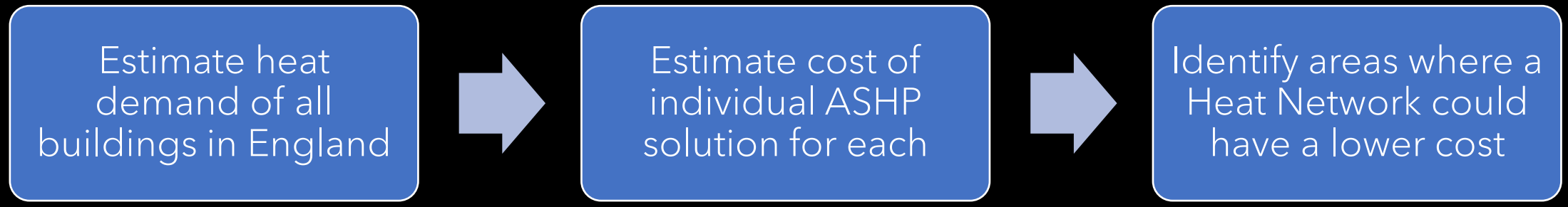
Department for Energy Security & Net Zero

National Zoning Model

Zoning policy seeks to support the delivery of heat networks where they are expected to offer the **lowest cost** low carbon heating solution to **buildings** in England.

Five National Model Runs (NMRs) have taken place since 2023, which incorporate new features and improvements to the NZM.

The National Zoning Model supports the policy by using standardised assumptions to identify potential zones, as below.



Department for
Energy Security
& Net Zero

NZM and LAEPs

The National Zoning Model is still in development but the model run outputs can be used to support Local Area Energy Planning.

- ✓ Reducing consultant time
- ✓ Enabling Local Authorities to be informed clients and project sponsors
- ✓ Ensuring consistent information and approach throughout England for all Local Authorities
- ✓ Supporting local policy by informing Local Plans and Spatial Development Strategies and Frameworks



Department for Energy Security & Net Zero

Market regulation

Regulation will impact everyone in the UK, not just England and not just in zones as with other key updates. The market framework will introduce:

- A licensing regime for operators, heat will now be treated as a utility meaning operators will have similar rights to a DNO for example
- Ofgem as the new heat regulator from 27 January 2026 and give them the powers to intervene on unfair pricing. ***Prior to this Heat Trust was set up as a voluntary regulator encouraging the implementation of the HN Code of Practice.***
- A new consumer advocacy and support function carried out by the Energy Obudsman, Citizens Advice and Consumer Scotland, launched in April 2025
- Mandatory technical standards through the Heat Network Technical Assurance Scheme.



Department for Energy Security & Net Zero

Zoning Implementation Lead Role

The **Energy Act 2023** provides the powers for government to implement heat network zoning in England. **Heat network zoning** will fundamentally transform the development of heat networks in towns and cities across England. Zoning Leads will help to enable this by undertaking the following:

- Stakeholder Engagement
- Change Management
- Awareness and Vision Communication
- Local Context Application
- Intelligence Gathering

Working with **LAs** and **CAs** to navigate the digital and modelling elements of Zoning (once live).

Working collaboratively as a team across the **5 Hubs** and in support of Zoning Co-ordination Bodies (once appointed).

Working alongside the **Heat Networks Delivery Unit** team at DESNZ.

Department for Energy Security & Net Zero

Zoning Implementation Team



Ella Sanders
North West

Ella.Sanders@liverpoolcityregion-ca.gov.uk



Lauren Kemp
North East & Yorkshire

Lauren.Kemp@westyorks-ca.gov.uk



Thiru Annamalai
Midlands

Thiru.Annamalai@nottinghamcity.gov.uk



Elli Nikolaidou
South West

Elli.Nikolaidou@westofengland-ca.gov.uk



Emma-Jane Danielsson
Greater South East

Emma-Jane.Danielsson@gsenetzerohub.org.uk

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 / comments



Ready for RESP

Heat Networks and local area energy planning

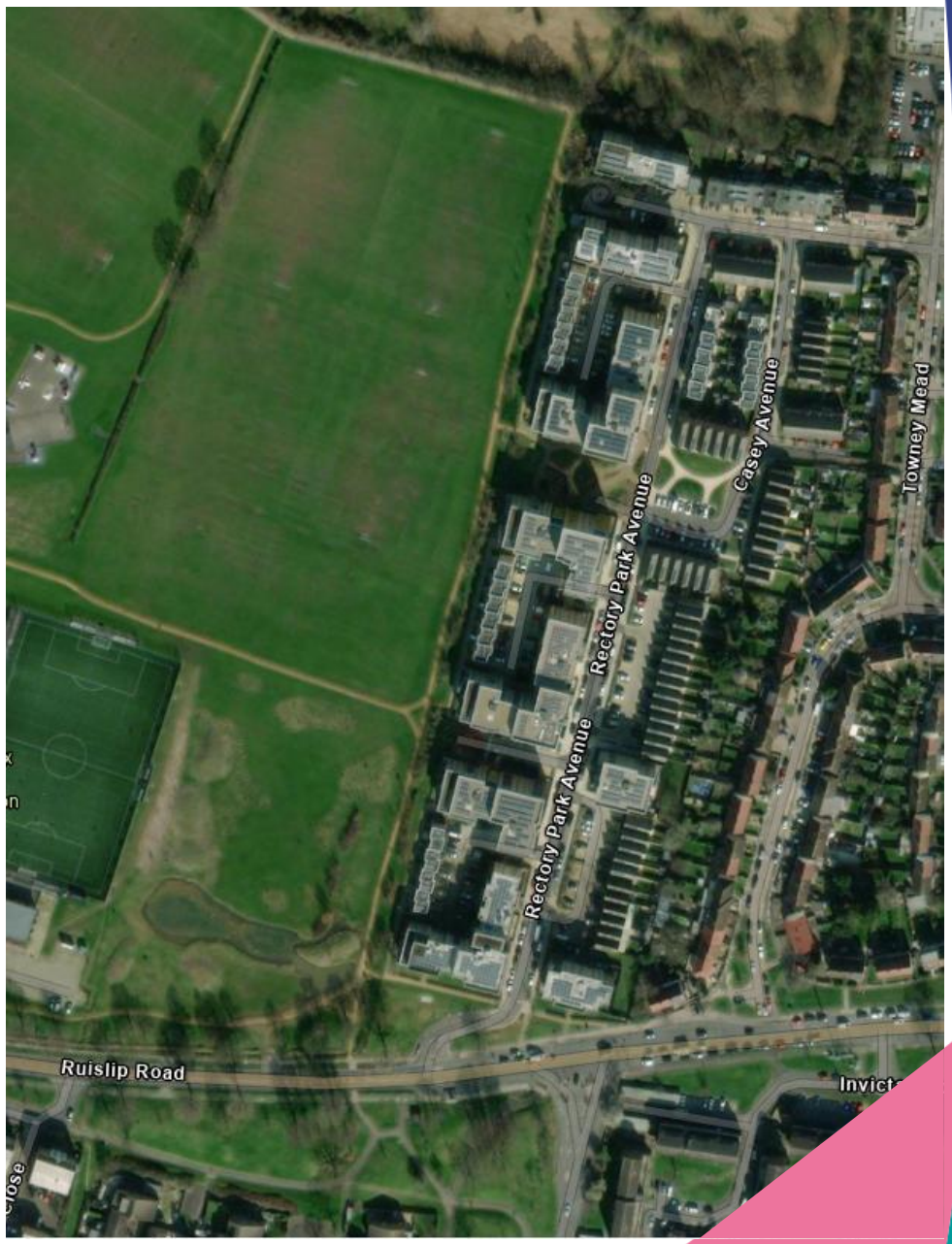
Eilidh Lockhart
Modelling Consultant
Modelling Team

Programme delivered by
CATAPULT Energy Systems

Ready for RESP

Heat Networks in Local Area Energy Planning

- Local Area Energy Plans (LAEPS) involve testing out multiple different future options for the energy system in a local area
- First step in considering heat networks in LAEPs is to identify potential networks to test
- Areas of high potential for heat networks are characterised by a high demand for heat per metre of pipe (known as linear heat density)
  - Pipes are expensive
  - Heat losses in transporting the heat over longer distances are higher
  - The higher the heat density, the more commercially viable the heat network



Identifying areas of high heat density

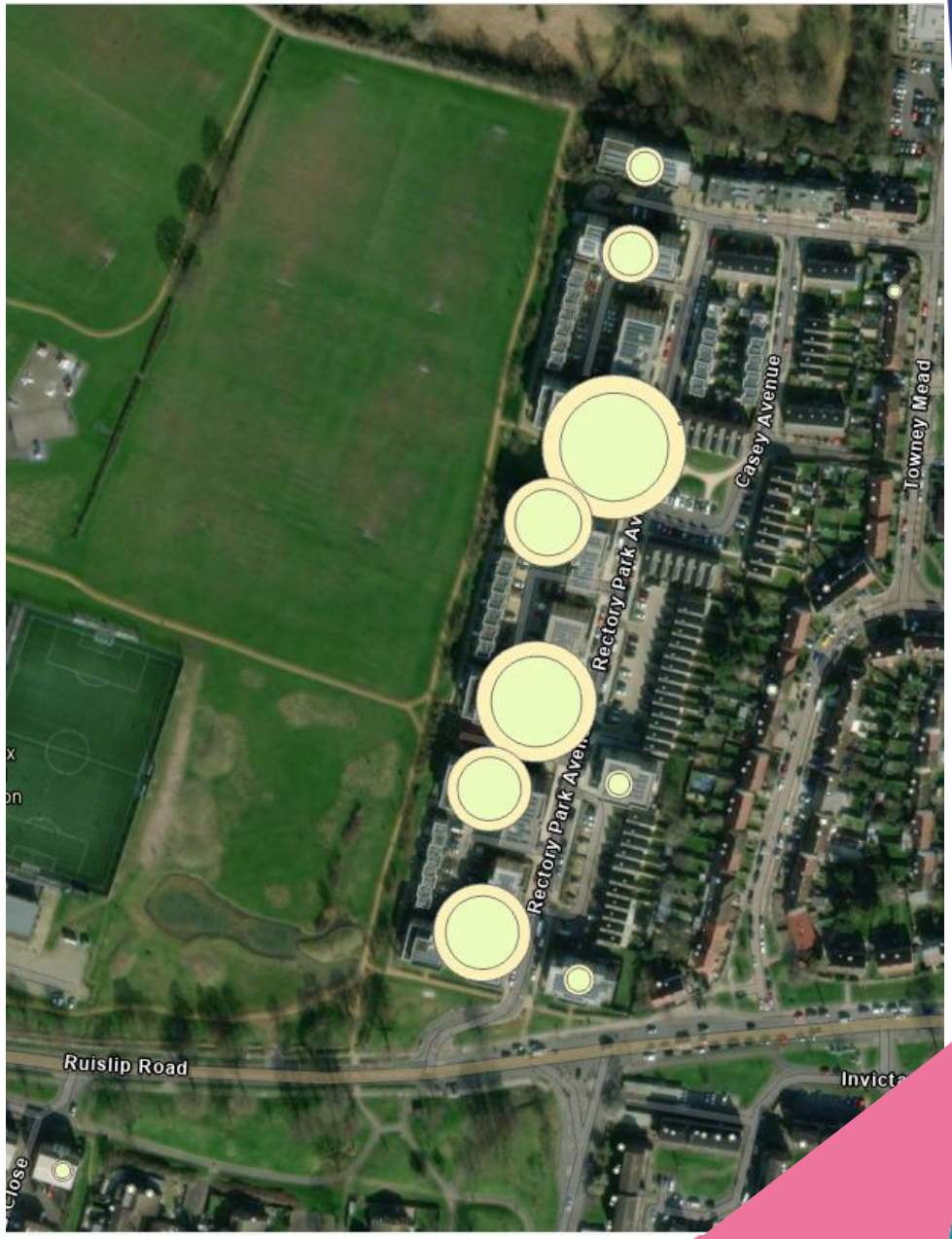
- Create ‘bubbles’ to represent different buildings, with the size of the bubble being proportional to the annual heat demand of the building
  - Divide the heat demand by a constant and use this as the radius of the bubble.
- Produce the bubbles for a range of constants and identify overlapping bubbles for each value
  - Where the bubbles overlap indicates there is enough heat demand close enough together to support a cost-effective network
  - If bubbles don’t overlap the buildings are likely too isolated to achieve a network with the required linear heat density
- The higher the constant used, the smaller the bubbles, and the stricter the limit on how high the heat density needs to be
- The constant roughly equates to the minimum linear heat demand of a network suggested by the process
  - If a building has an annual heat demand of 50MWh and we want a network with at least a linear heat density of 5MWh/m then it is ‘worth’ extending the network by 50/5 i.e.10m to reach this building without dropping below the 5MWh/m threshold



Ready for RESP

Identifying areas of high heat density

- Create ‘bubbles’ to represent different buildings, with the size of the bubble being proportional to the annual heat demand of the building
  - Divide the heat demand by a constant and use this as the radius of the bubble.
- Produce the bubbles for a range of constants and identify overlapping bubbles for each value
  - Where the bubbles overlap indicates there is enough heat demand close enough together to support a cost-effective network
  - If bubbles don’t overlap the buildings are likely too isolated to achieve a network with the required linear heat density
- The higher the constant used, the smaller the bubbles, and the stricter the limit on how high the heat density needs to be
- The constant roughly equates to the minimum linear heat demand of a network suggested by the process
  - If a building has an annual heat demand of 50MWh and we want a network with at least a linear heat density of 5MWh/m then it is ‘worth’ extending the network by 50/5 i.e.10m to reach this building without dropping below the 5MWh/m threshold



Identifying areas of high heat density

- Create ‘bubbles’ to represent different buildings, with the size of the bubble being proportional to the annual heat demand of the building
  - Divide the heat demand by a constant and use this as the radius of the bubble.
- Produce the bubbles for a range of constants and identify overlapping bubbles for each value
  - Where the bubbles overlap indicates there is enough heat demand close enough together to support a cost-effective network
  - If bubbles don’t overlap the buildings are likely too isolated to achieve a network with the required linear heat density
- The higher the constant used, the smaller the bubbles, and the stricter the limit on how high the heat density needs to be
- The constant roughly equates to the minimum linear heat demand of a network suggested by the process
  - If a building has an annual heat demand of 50MWh and we want a network with at least a linear heat density of 5MWh/m then it is ‘worth’ extending the network by 50/5 i.e.10m to reach this building without dropping below the 5MWh/m threshold



Identifying areas of high heat density

- Create ‘bubbles’ to represent different buildings, with the size of the bubble being proportional to the annual heat demand of the building
  - Divide the heat demand by a constant and use this as the radius of the bubble.
- Produce the bubbles for a range of constants and identify overlapping bubbles for each value
  - Where the bubbles overlap indicates there is enough heat demand close enough together to support a cost-effective network
  - If bubbles don’t overlap the buildings are likely too isolated to achieve a network with the required linear heat density
- The higher the constant used, the smaller the bubbles, and the stricter the limit on how high the heat density needs to be
- The constant roughly equates to the minimum linear heat demand of a network suggested by the process
  - If a building has an annual heat demand of 50MWh and we want a network with at least a linear heat density of 5MWh/m then it is ‘worth’ extending the network by 50/5 i.e.10m to reach this building without dropping below the 5MWh/m threshold



Potential Networks

- For each constant used, if the overlapping bubbles contain a minimum number of buildings, then this is a potential heat network that we consider
- Identify buildings that are contained within the overlapping bubbles and estimate an energy centre location for each potential network
- The energy centre is where heat is produced for the network, we assume this is at the centre of the network



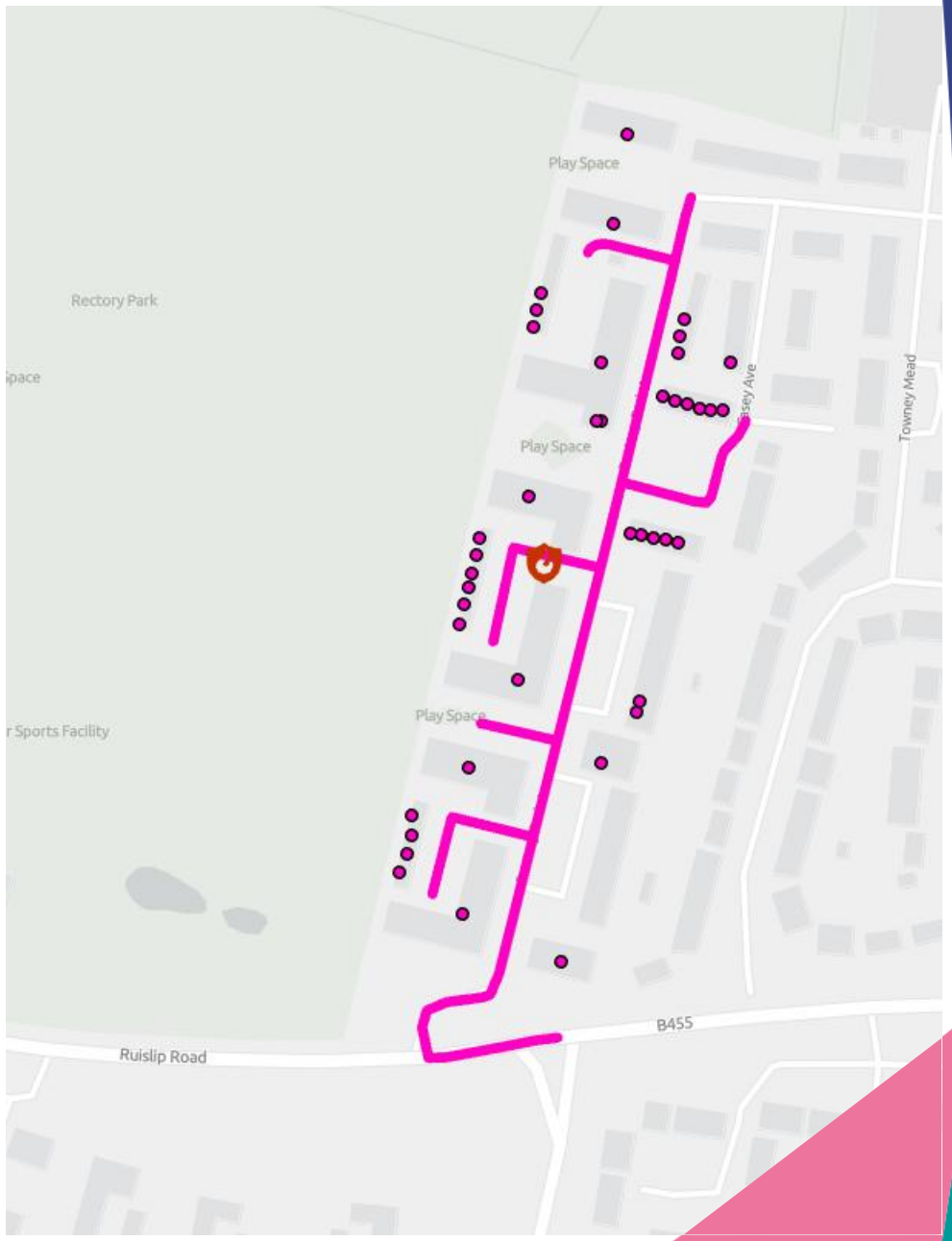
Calculating Pipe Routing

- We now need to estimate the cost of these networks
- An important aspect of cost is the length and size of pipes required
- Use the road network as a high-level estimate of potential routes
- Find the shortest route between every building and the energy centre via the road network



Calculating Pipe Routing

- We now need to estimate the cost of these networks
- An important aspect of cost is the length and size of pipes required
- Use the road network as a high-level estimate of potential routes
- Find the shortest route between every building and the energy centre via the road network



Costing the network

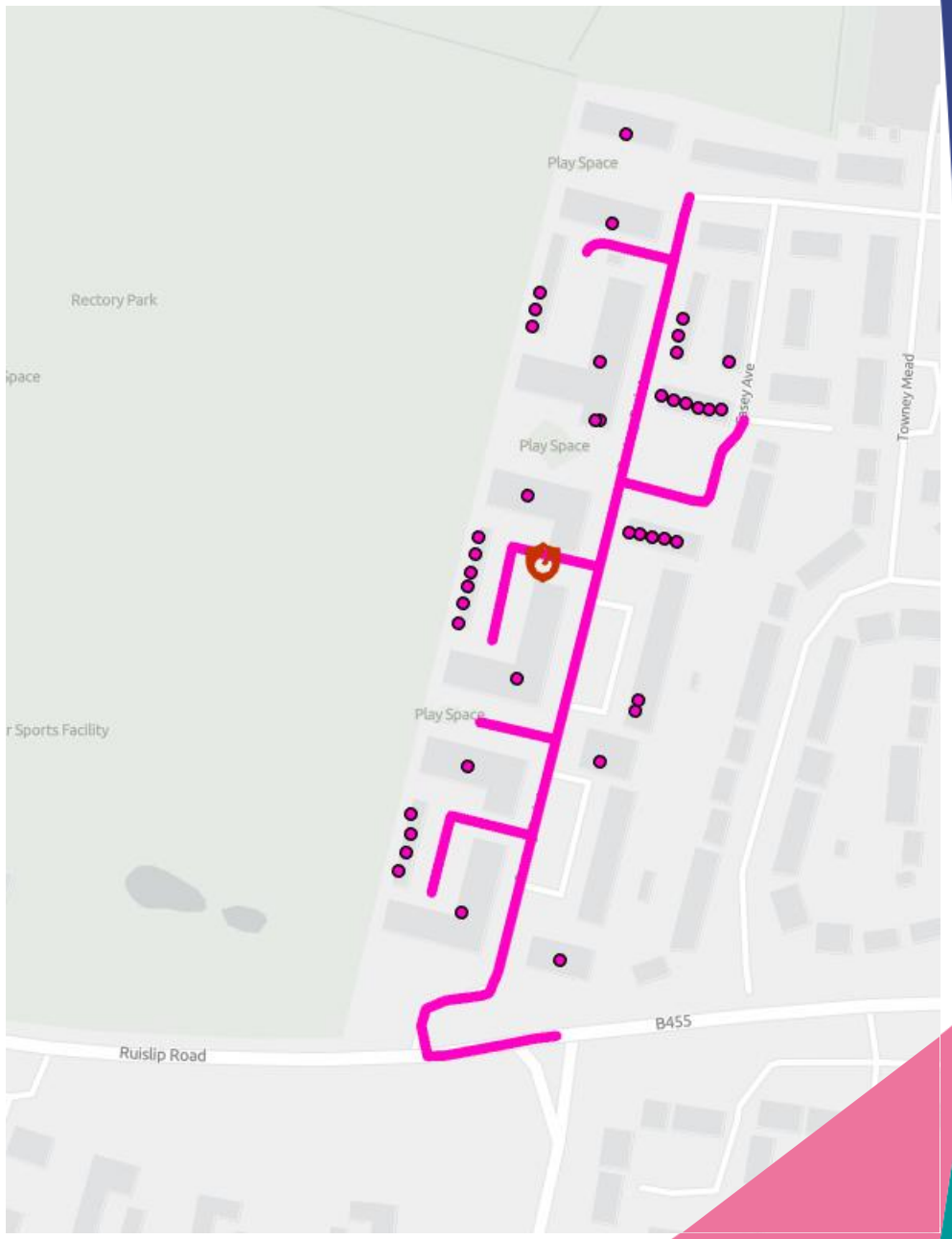
For each pipe, calculate the heat that it is required to carry, and so the required size of the pipe. Generally, networks consist of large central pipes that branch of to smaller and smaller pipes.

Size energy centre technologies that can meet the peak heat demand on the network, accounting for losses in the pipes.

As standard we assume large scale air source heat pumps produce the heat for each potential network.

Calculate the overall cost of the network

- Accounting for the energy centre technology cost, the pipe cost, the heat exchanger costs and building level costs e.g. to get heat from the network into the building



Incorporating heat networks into LAEP process

- We have now created and costed potential heat networks in the local area. At this point, we can remove any particularly bad performers in terms of cost per MWh of heat delivered
- The remaining networks are put into a pool of potential options.
- We run thousands of 'simulations'
  - In each we select different heating technologies for each building (including heat networks), different levels of fabric retrofit, different types of renewable generation deployed and different future options for electric vehicle charging.
  - Given these selections we assess the network impacts and cost of upgrading – e.g. converting gas network to hydrogen in certain areas and upgrading the electricity network
  - Calculate the overall cost and carbon implication of each simulation
  - Compare the cost and carbon implications to identify 'effective' simulations – those that reduce carbon at relatively low cost
- The number and size of heat networks deployed in the effective simulations is used to identify likely levels of heat networks in the local area, and which heat networks are likely to be most feasible
- Factors that tend to influence this include:
  - How constrained is the grid? Heat networks usually have a lower overall peak demand than many individual heat pumps so can reduce the required network upgrades
  - How high is the linear heat density of the network?
  - How diverse is the demand connected to the network? Pipe and heating technology size is dictated by the peak demand on the network. A flatter profile of demand means more annual heat demand for the same peak demand, and so more heat delivered by the same technologies.

Existing and Planned Heat Networks

Where there are existing heat networks, our pool of future options includes these networks either remaining the same size or, if there are suitable levels of demand surrounding the network, these networks extending outwards.

If there are planned networks, these are also included in the future pool of networks. If the probability of build is high, we can force them to be deployed in every simulation.

We can also force any potential network that overlaps with the planned network to always include all of the buildings on the planned network, such that they can be seen as a possible future extension of the planned network.



Outputs from the DESNZ zoning work

DESNZ zones are incorporated in the process by adding them into the pool of overlapping bubbles like the one shown on the right. The routing and costing method is then the same for them as for other potential networks.

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 / comments



What's coming next

- Guides and e-learning
  - Guide to Local Decarbonisation Planning and e-learning coming soon (Dec)
  - Guide to Local Authority Resourcing requirements coming soon (Jan)

- Regional Round Table briefings – (TBC Jan)

Question:

6. What is currently missing / required to help the Hubs / Local Authorities engage fully in the RESP process ? (Aka what additional support/info do you need?)

Feedback on todays webinar

7. How well did this webinar meet my expectations?
(1 – not at all, 5 – completely)

8. What could we do to improve these sessions?

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