APSE Energy Summit 2024

Heat in Buildings & LHEES

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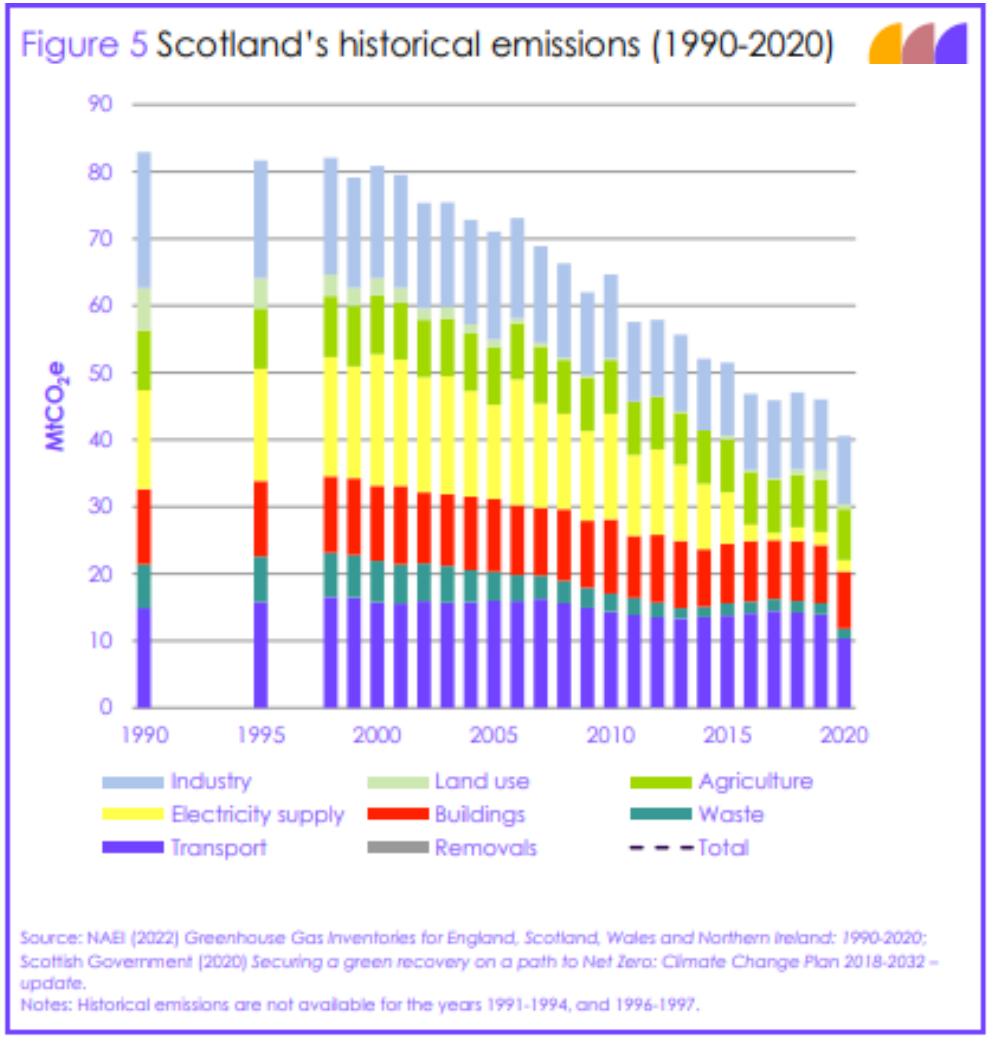
Context

- Net zero emissions by **2045.**
- The way we heat our homes, workplaces and other buildings is the **third-largest cause of greenhouse gas emissions** in Scotland.
- There is no way to meet our net zero target without **changing the heating systems** in the vast majority of our buildings.
- **Energy efficiency improvements** can reduce energy bills, address fuel poverty, make our homes healthier and more comfortable to live in, and enable clean heating systems to run efficiently.
- **By 2045** our homes and buildings no longer contributing to climate change
- Target for 2.6 TWh of thermal energy to be supplied by **heat networks** by 2027 and 6 TWh by 2030



Heat In Buildings

Delivery

- Advice, support and delivery schemes
- Heat network investment
- Public Engagement Strategy
- Supply Chain Delivery Plan
- Green Heat Finance Taskforce

Policy & Regulations

- Heat in Buildings Bill
- Social Housing Net Zero Standard
- New Build Heat Standards
- Heat network regulations
- EPC reform

What are Local Heat & Energy Efficiency Strategies?

- Long-term **plan for an entire local authority** area to decarbonise heat and improve energy efficiency
- Sets out how each **segment of the building stock** needs to change to reach net zero
- Identifies **strategic heat decarbonisation zones**, and sets out the principal measures for reducing buildings emissions within each zone
- **Prioritises areas for delivery** of heat decarbonisation action
- **Identifies opportunities** – investment for heat decarbonisation and energy efficiency and targeted government funding

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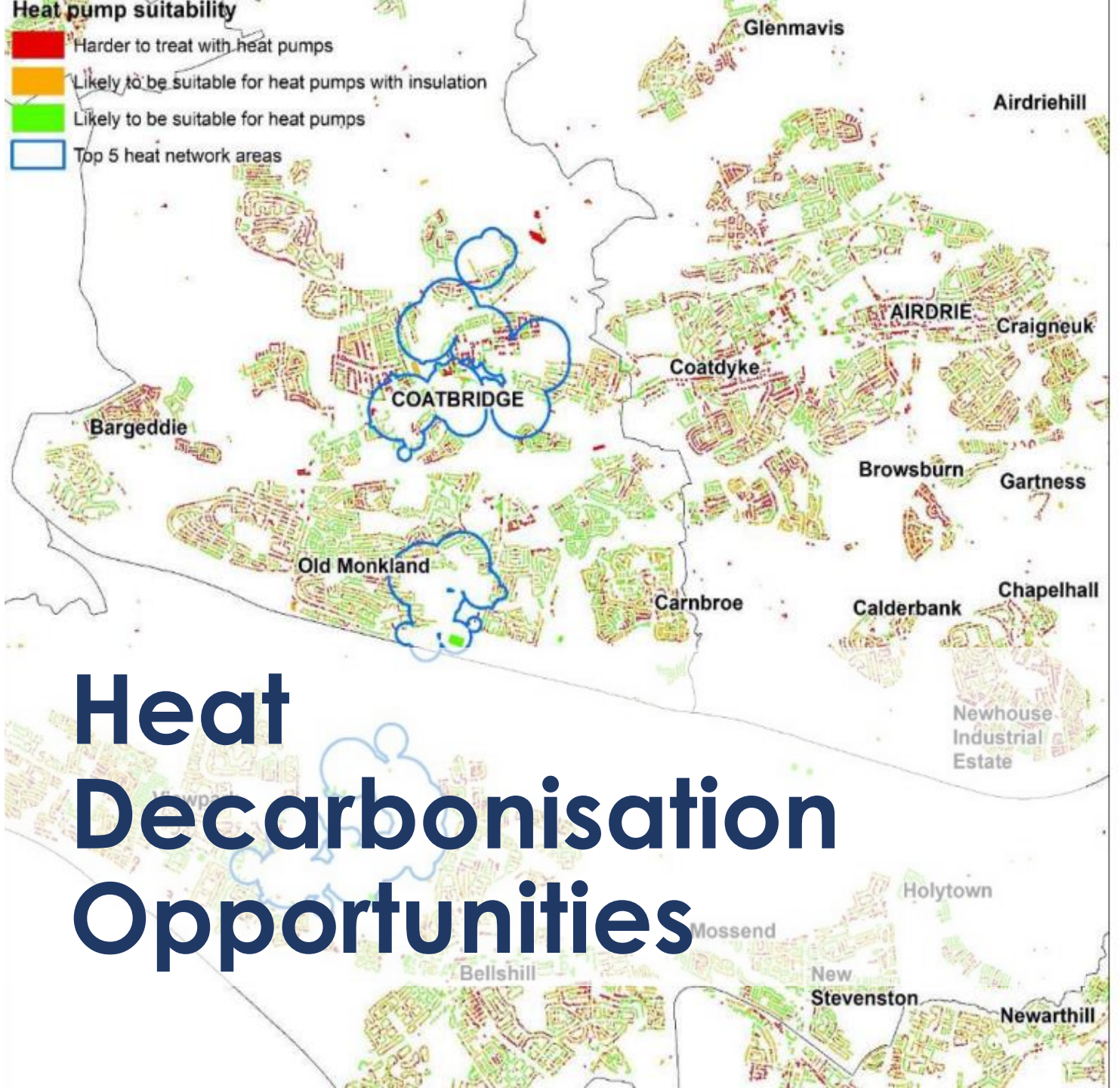
Heat Decarbonisation Opportunities

- Significant opportunities already exist for heat decarbonisation
- **North Lanarkshire** - potentially over 70k homes could be already suitable for new heat pumps installations without additional fabric measures
- **West Lothian** – 60% of on gas grid homes and nearly 1000 off gas grid homes are already suitable for a heat pump
- **Edinburgh** – nearly 10k off gas grid properties and over 100k on gas grid properties already suitable for a heat pump or connection to a heat network.
- LHEES provides us with a plan for where to target heat decarbonisation action



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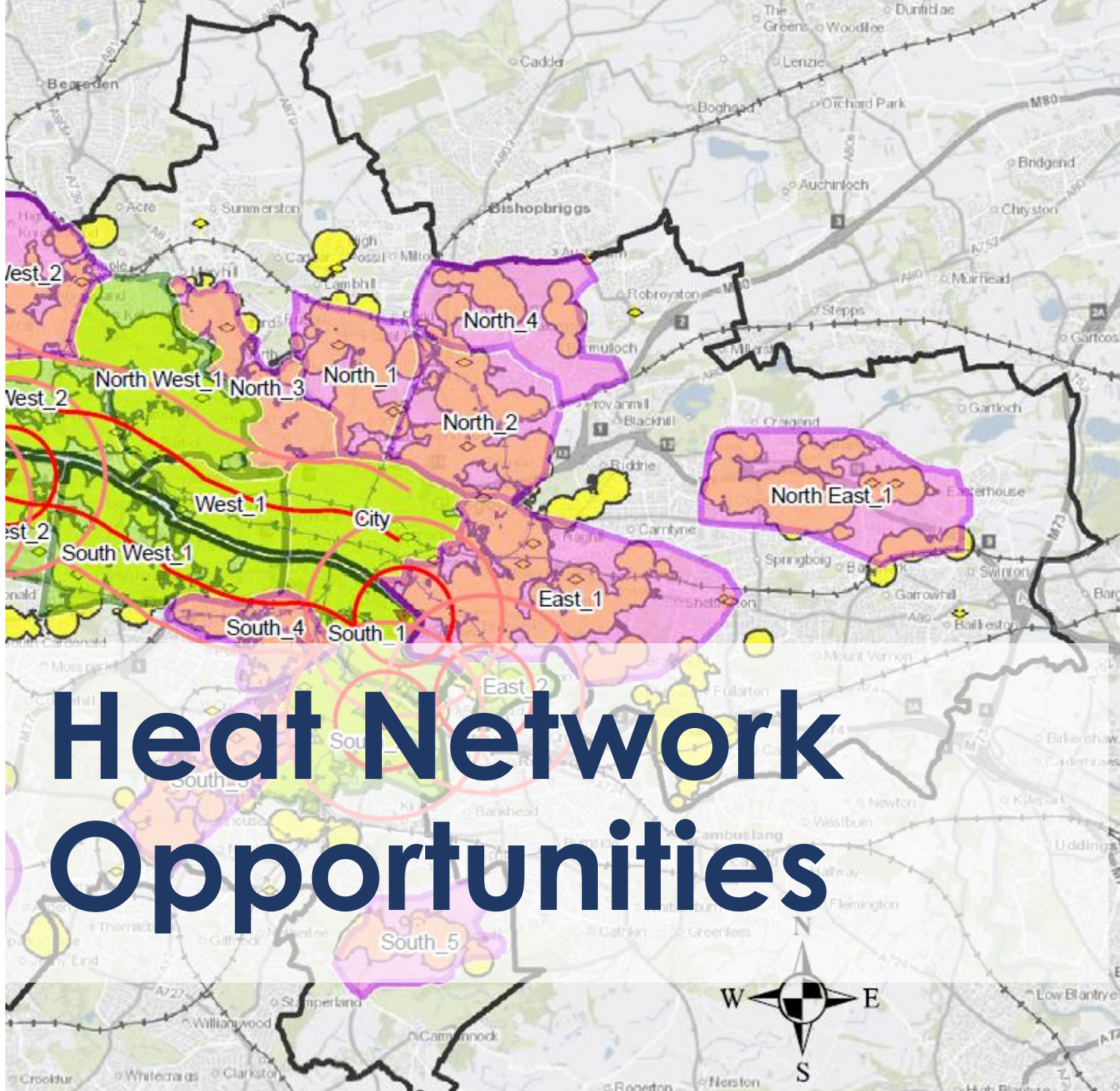
Heat Network Opportunities

- LHEES takes the first step looking at potential for heat networks – anchor load, linear heat density and gridded heat density.
- **Edinburgh** - 17 prospective heat network zones identified
- Collectively they represent 3.7 TWh/yr of heat demand
- **Glasgow** – potential for heat networks to supply between 1.31 – 4.4 TWh/yr of heat demand.
- Which is up to 70% of Glasgow's total heat demand and up to 47% of Glasgow's populations' heat requirements.



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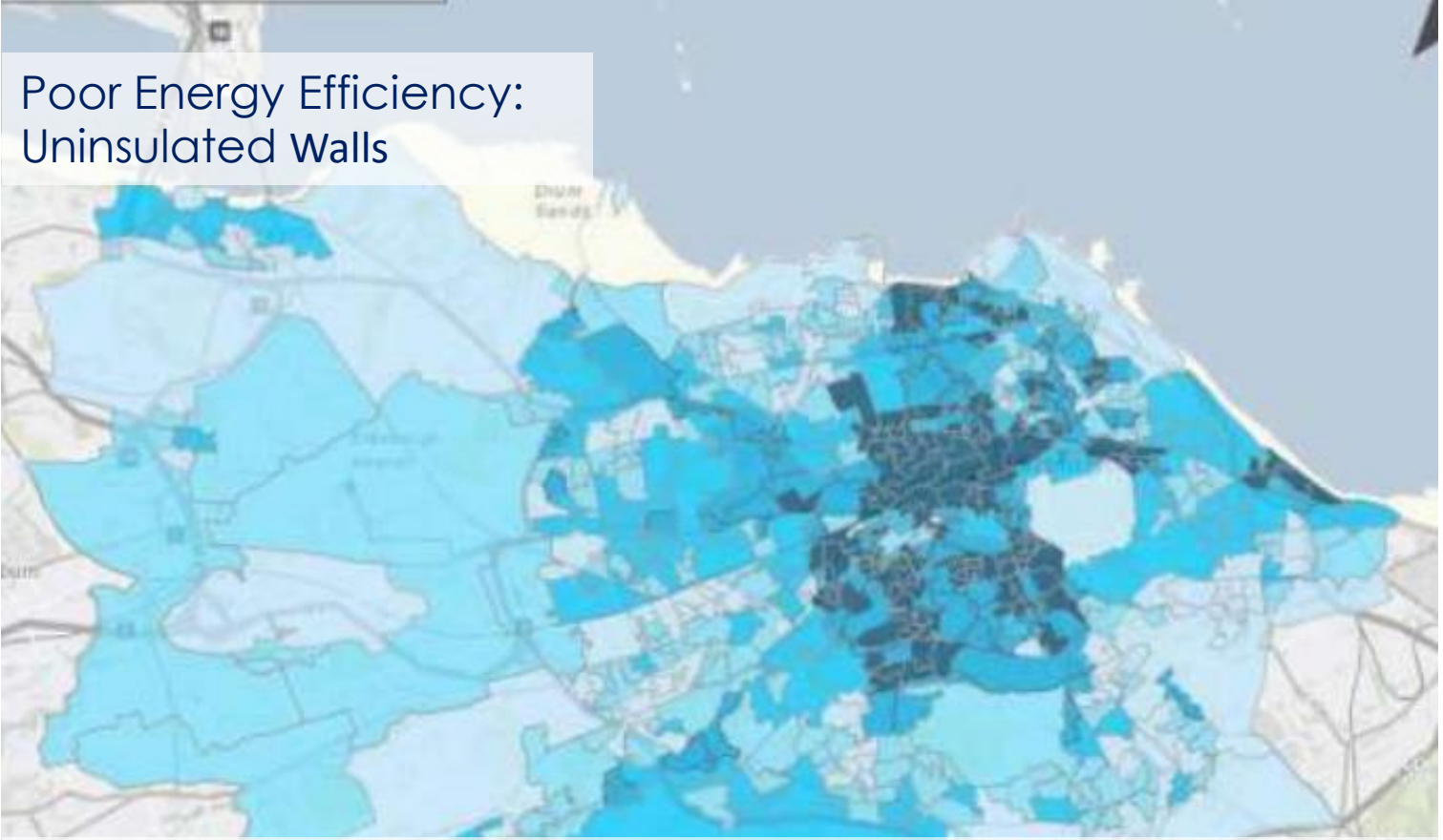

Energy Efficiency Retrofit Opportunities

- Sets out how many properties need energy efficiency improvements – wall insultation, loft insulation, double/triple glazing?
- Where are those properties?
- **Highlands** – over 11.7k properties need upgraded loft insulation, over 8k need double/triple glazing and over 53k have uninsulated walls (left)
- **Edinburgh** – 25k properties need upgraded loft insulation, over 51k need double/secondary glazing
- **Comhairle Nan Eilean Siar** – nearly 3k properties need their loft insulation upgraded

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Opportunities For Collaboration

- LHEES are a starting point, setting the local direction.
- Not a replacement for detailed project planning or feasibility studies.
- Area based approach highlights opportunities to work collaboratively.
- LHEES acts as a node to bring different stakeholders together.
- By working together the benefits of economies of scale can be harnessed.
- Collaborative approach creates opportunities to make projects in more rural/remote areas economically viable.
- Large projects can also bring In expertise to support delivery.

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Next Steps

- **Challenging context –** public finances, regulatory uncertainty, local supply chains
- **Heat networks** – engagement, project development, strategic planning
- **Delivery programmes** – Area Based Schemes, social housing, public sector
- **Public engagement** – raising awareness, local authorities as trusted messengers
- **Next iteration** – evaluating LHEES, improving, evolving to meet needs

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