

The background features a stylized illustration in green and blue line art. It depicts a house with solar panels on the roof, a tree, a sun with a lightning bolt, and various energy symbols like a leaf with an arrow and a double arrow. The scene is framed by a large, faint circular graphic.

# Scottish Government Heat In Buildings

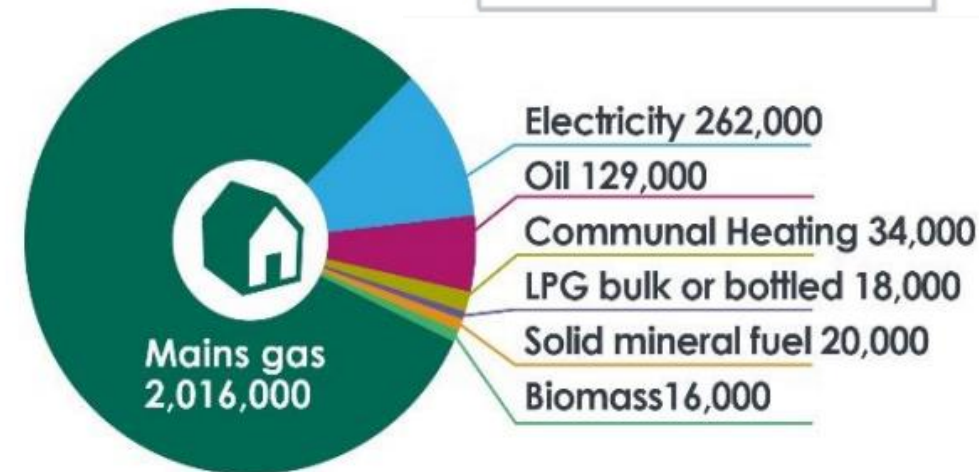
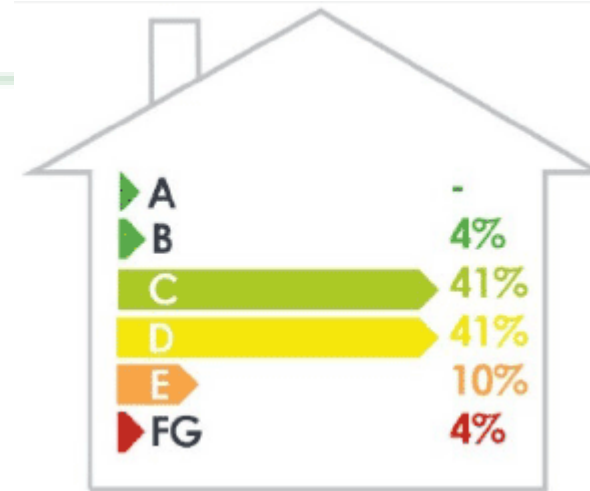
Amy Tickell  
Head of Heat in Buildings Investment  
Unit



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# Context

- Net zero emissions by **2045** and 75% reduction by **2030**.
- **By 2030** emissions fall by 68% against 2020 levels:
  - All homes EPC C or equivalent by 2033 (1.2m homes)
  - Vast majority off-gas homes switching to zero emissions heat (>170k homes)
  - 1m on-gas homes switching to zero emissions heat
  - Non-dom buildings switching to zero emissions alternatives
- **By 2045** our homes and buildings no longer contributing to climate change
- **By 2040** no more than 5% of households are in fuel poverty & 1% in extreme fuel poverty
- Target for 2.6 TWh of thermal energy to be supplied by heat networks by **2027** and 6 TWh by **2030**



## Climate Change Emission Reduction Targets (Scotland) Act 2019

- Legally binding targets - net zero emissions by 2045 and 75% reduction by 2030

## Heat Networks (Scotland) Act 2019

- Legally binding targets – 6TWh capacity by 2030

## Fuel Poverty (Targets, Definitions and Strategy) (Scotland) Act 2019

- Legally binding targets - in 2040 no more than 5% of households are fuel poor with <1% in extreme fuel poverty



# Heat in Buildings outcomes

## National Performance Framework

Economy

Environment

Communities

Health

Fair work and business

Poverty

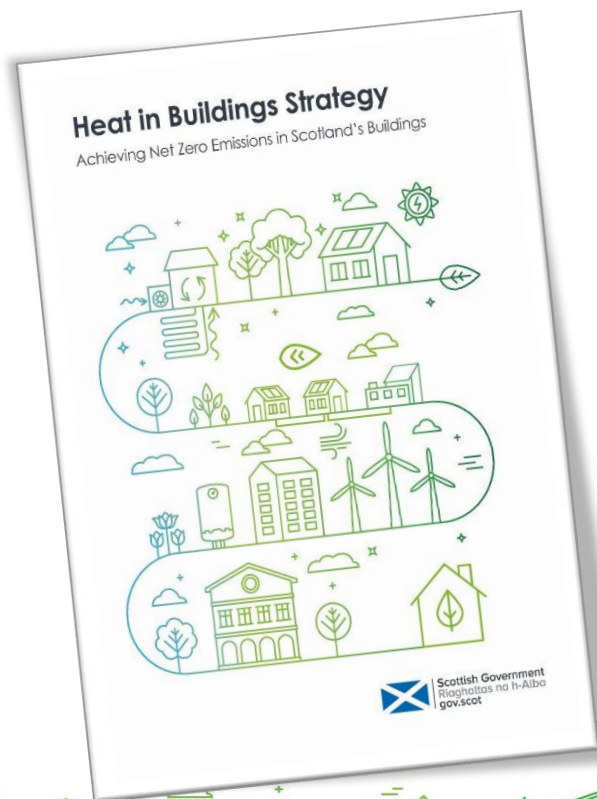
“Heating our buildings no longer contributes to climate change”

“We have reduced our demand for heat and poor energy efficiency is no longer a driver of fuel poverty”

“Electricity and non-electrical fuels are produced from sustainable sources”

“Our heating systems enable the flexible and stable operation of our energy networks”

“Our indoor and outdoor spaces are filled with clean air”



“The systems we use are smart and resilient and provide us with a reliable source of heat, and efficiently use Scotland renewable energy resources”

“We have a secure supply chain with high value, local, sustainable jobs across Scotland and people have been helped to transition to new secure jobs as part of the transition”

“The cost of heating our homes and business is affordable and those occupying them have a high level of comfort”

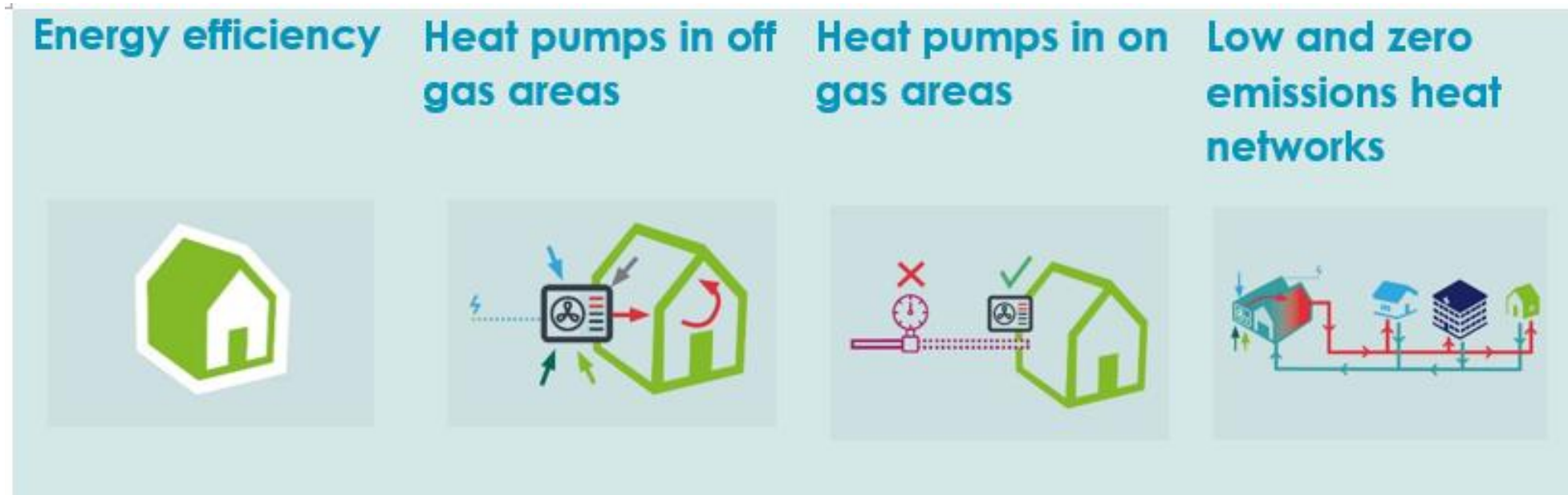


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# The Journey to Net Zero – Strategic Technologies

We need to very rapidly increase deployment of low regrets strategic technologies – to ensure over 1 million homes, and equiv. 50,000 non domestic buildings, are converted to zero emissions heating systems by 2030



Other technologies, such as hydrogen, may develop through the 2020s but are **unlikely to play a large part in reducing emissions before 2030**





# Heat In Buildings Programme

## Delivery Programme:

- Heat and Energy Efficiency Scotland – agency
- £1.8bn commitment to 2025-6
- Advice and support schemes for domestic and non-domestic
- Heat network investment
- Public engagement: strategy, marketing
- Supply chain delivery plan
- Finance work stream

## Regulations Programme:

- Domestic zero emissions heating regulation
- Non-domestic regulation
- New build heat standards
- EPC reform
- Heat network development
- Social Housing



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# Green Heat Finance Taskforce

- Total investment required for homes and buildings to reach net zero by 2045 in excess of **£33 billion**
- Taskforce to explore and identify **innovative financing mechanisms** to help individuals and organisations make their properties warmer, greener and more efficient
- **Report and recommendations due in Autumn 2023** with interim findings.



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# Public Sector Targets

- Bute House Agreement sets out commitment to “developing and agreeing through consultation of a series of phased targets starting in 2024, with the most difficult buildings being decarbonised by 2038.
- We intend to publicly consult on whether the target should have any form of statutory underpin.
- Alongside that, we want to work with colleagues across the public sector about what the target means in practice and how we can encourage and monitor progress towards it, and will look to align reporting with other requirements such as climate change duties.





# What are Local Heat and 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
- **Provide a strategic plan** which can be used to target government funding and private investment for heat decarbonisation and energy efficiency investment
- An LHEES is structured in two parts:
  - A Local Heat and Energy Efficiency Strategy
  - A Local Heat and Energy Efficiency Delivery Plan

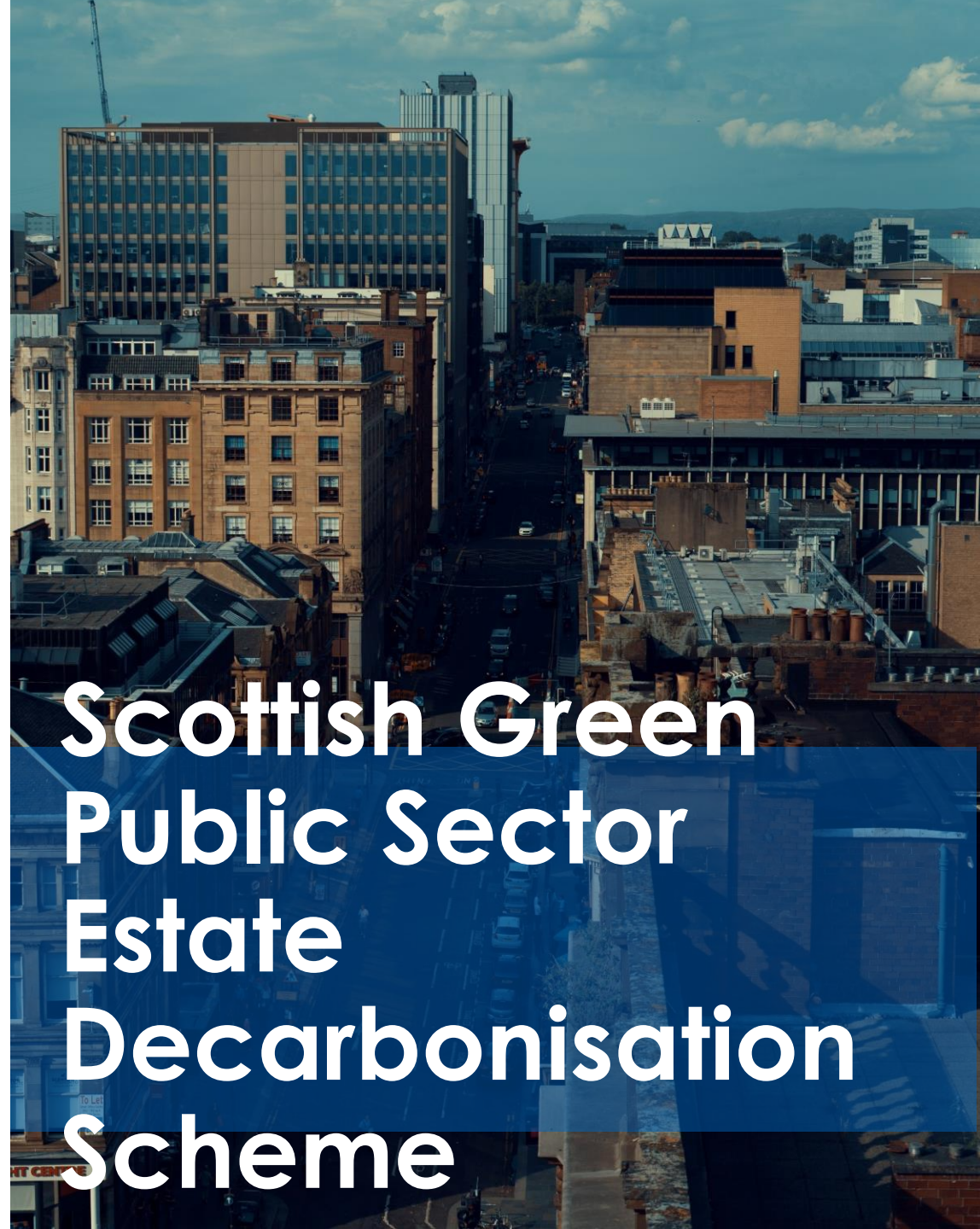


- Identifying Local Opportunities – Strategic / collaboration
- Draw on local knowledge
- Provides an evidence base
- Recognises geographic variability – one size doesn't fit all
- Help target support – fuel poverty
- Economy of scale
- Support local energy network planning
- Initial scoping of heat networks.



## Summary: What is LHEES about?

- The Scottish Government has made £200 million available over the next five years to support the decarbonisation and increased energy efficiency of existing public sector buildings across the country.
- The Scheme is the main government-led capital funding mechanism to support decarbonisation of buildings owned by the public sector.
- The scheme comprises three support elements for public sector bodies:
  - The Scottish Public Sector Energy Efficiency Loan Scheme;
  - The Scottish Public Sector Non-Domestic Energy Efficiency (NDEE) Frameworks and Project Support Unit (PSU);
  - The Scottish Central Government Energy Efficiency Grant Scheme.



# Scottish Green Public Sector Estate Decarbonisation Scheme

# Scottish Central Government Energy Efficiency Grant Scheme

- The scheme offers capital grant funding support to enable the delivery of heat decarbonisation and energy efficiency projects across the public sector.
- This funding is targeted towards Scottish Central Government organisations that have previously had limited access to borrowing funds for this type of work.
- The fund also provides resource support to build a pipeline of investment-ready projects in future years.
- Up to £5 million worth of capital funding, and up to £60k worth of pre-capital funding per applicant per year.
- As a minimum, the Scottish Government will invest capital funding support of £30 million and resource funding support of £1.5 million in 2023/2024.



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- The framework is designed to support public bodies calling off from the frameworks in securing value for money through works and services that will maximise energy savings, cut fuel bills and reduce carbon emissions in non-domestic public sector buildings in Scotland.
- A non-domestic energy efficiency project retrofits public and third sector buildings with energy efficiency assets. These may include, but not limited to, prefabricated energy centres; combined heat and power units; energy efficient boilers; communal heating; voltage management units; controls outstations; luminaires, lighting controllers and other lighting assets. These projects save energy and maintenance costs; are self-funding; reduce carbon emissions and improve the environmental comfort of the buildings.
- The role of the NDEE PSU is to support users of the NDEE frameworks to develop documentation and issue tenders for available services and support framework public bodies through the implementation of their retrofit projects. Funding of up to £50,000 is available for support from the PSU.

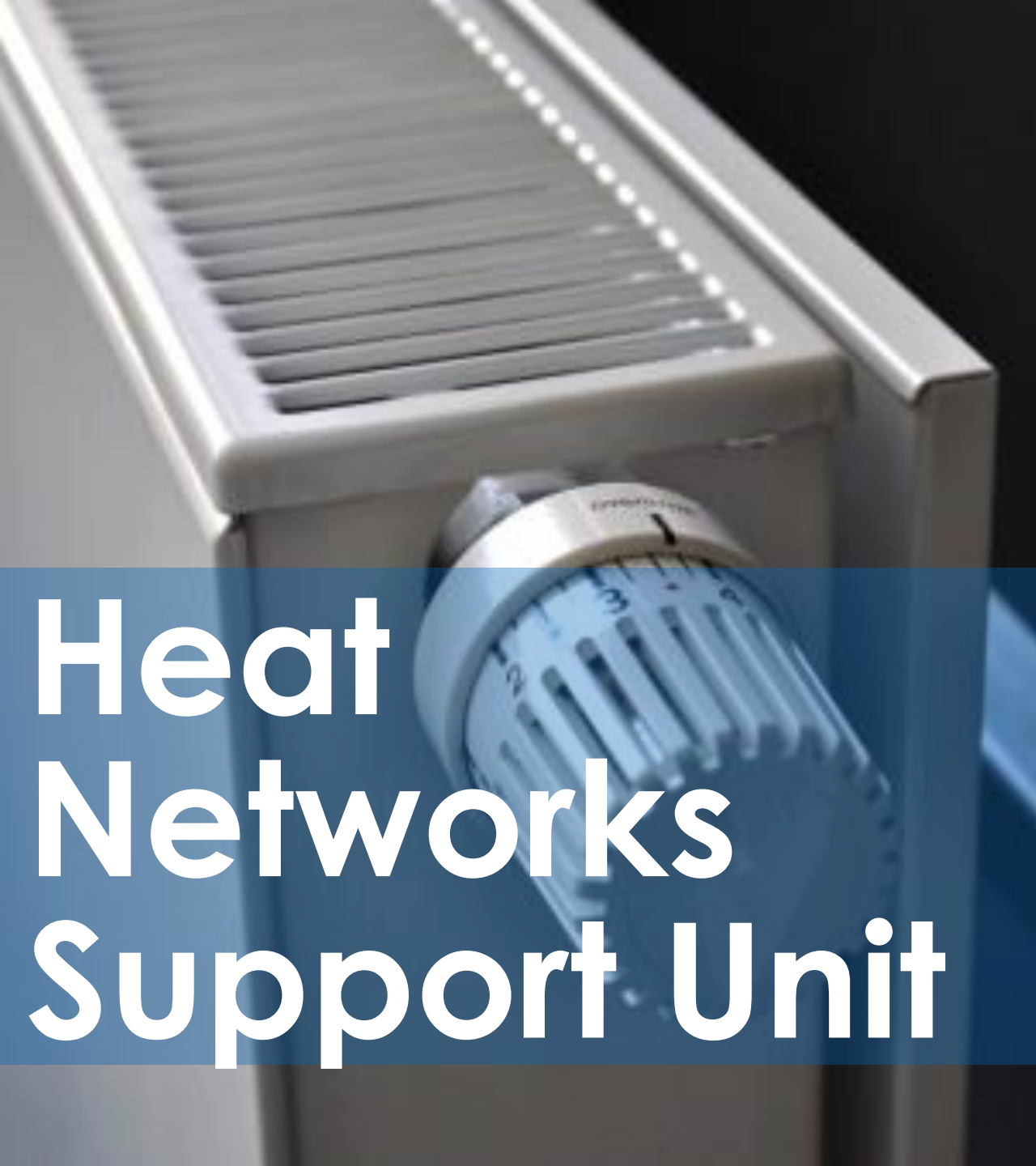


# Scottish Public Sector Non- Domestic Energy Efficiency Framework and Project Support Unit

- This loan scheme offers zero-interest loans to the public sector to enable them to undertake spend-to-save retrofit energy efficiency improvement projects to help them towards achieving net zero carbon in their estates.
- Loans can be offered to all Scottish public sector organisations which are subject to the Public Bodies Duties in the Climate Change (Scotland) Act 2009. This includes 32 local authorities, universities, and some non-departmental public bodies.
- A zero-interest loan to finance up to 75% of the costs of energy saving projects meeting the eligibility criteria is available through this scheme.
- The Scottish Government also announced the Scotland Public Sector Heat Decarbonisation Fund in July 2023 which will offer up to £20 million in grants to local authorities, universities and arm's-length external organisations for decarbonising their buildings.
- The scheme will be delivered by Salix Finance and forms part of the £200 million already committed to the public sector for energy efficiency and renewable heating over the next five years.



# Scottish Public Sector Energy Efficiency Loan Scheme



# Heat Networks Support Unit

- The **Heat Network Support Unit (HNSU)** offers **advice, guidance and grant funding to local authorities** and wider public sector for the pre-capital stages of heat network project development.
- Partnership between **SG, Scottish Futures Trust** (commercial experts) and **Zero Waste Scotland** (technical experts) as core partners.
- **Grant funding is available** to cover:
  - 100% of a detailed feasibility study (access to consultants also available)
  - 50% match funding for OBC and commercialisation costs
- Currently **supporting 15 projects** across Scotland
- High interest & limited funding for FY23/24 - applications are encouraged as soon as possible.



# Heat Networks in Scotland

## Heat Networks Today

- Estimated that there are over 800 heat networks in Scotland, serving over 25,000 customers.
- The majority of heat networks in Scotland are Gas CHP.
- Heat Networks are in both public and private ownership.
- An unregulated sector
- Heat networks are currently a niche solution due to the prevalence of mains gas.

## Heat Networks in 2030

- Supply 6TWh of heat – equivalent to about 400,000 homes being connected.
- Majority powered by renewables or waste/surplus heat, with only legacy systems using gas as the primary heat source.
- A regulated sector
- Significant private sector involvement in ownership and operation





# The need for pre-capital heat network support

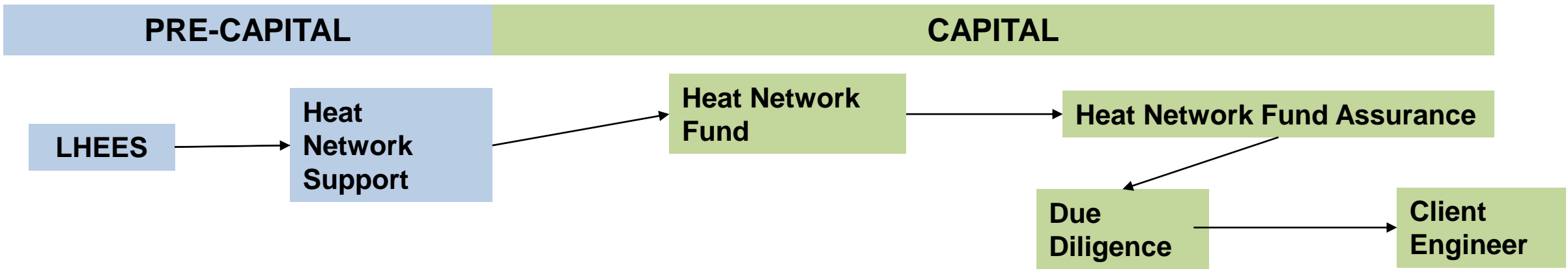
- **Gap in the heat network pipeline:** The current pipeline of projects identified and underway will not meet the required output to meet our targets.
- **Gap in public sector's capacity and knowledge:** Most of the public sector, in particular LAs, in Scotland currently lack the skills, knowledge and resource to deliver successful heat networks, particularly during the feasibility and business case building stages.
- **Lack of standardised way of developing Heat Network projects:** standardisation can lead to faster delivery and better value for money
- **Need to raise the commercial profile of heat networks in Scotland**



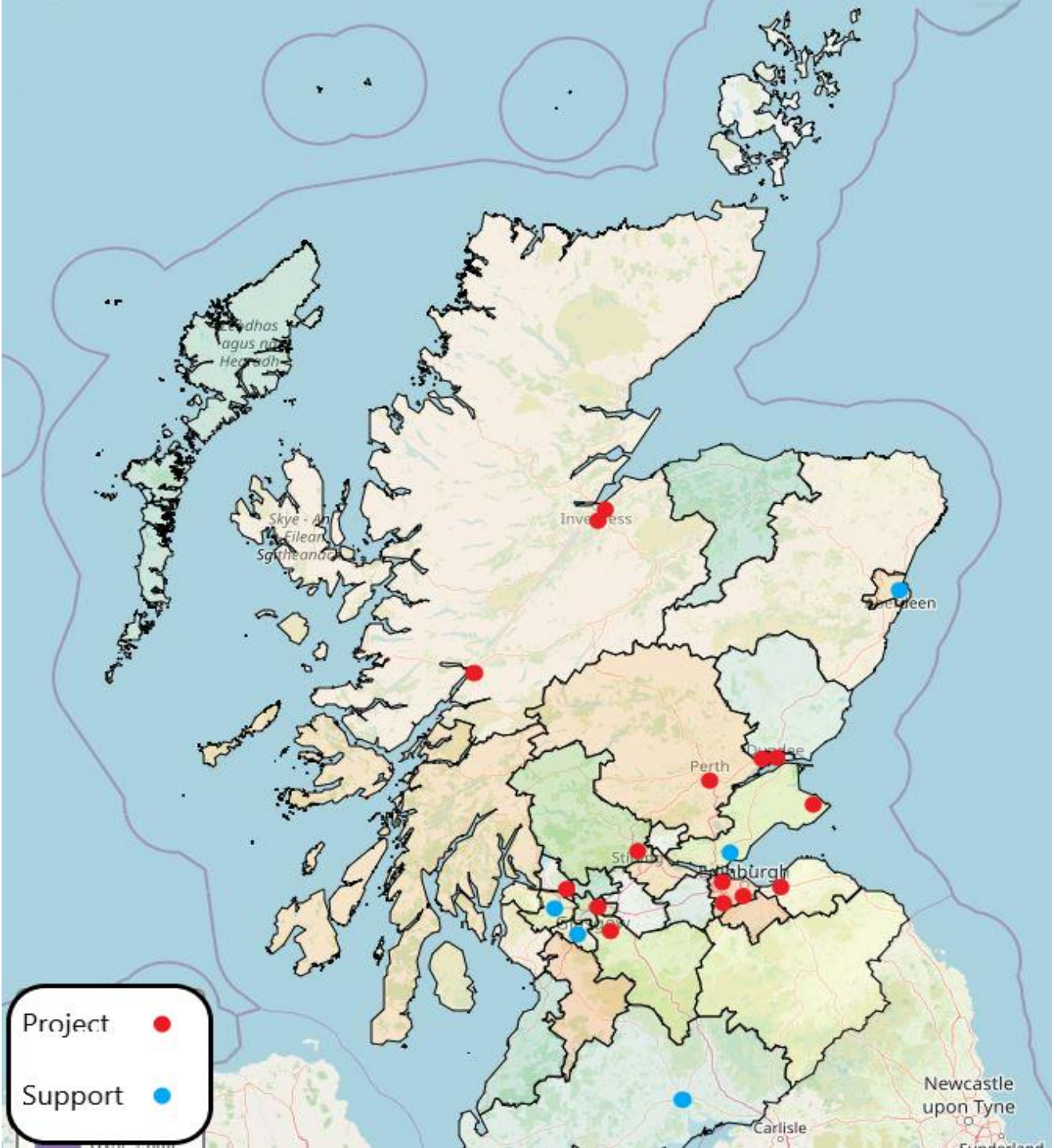
- The Heat Network Support Unit (HNSU) is designed to address these gaps.
- **Its functions will fall predominantly under 3 pillars:**
  - Stakeholder Engagement
  - Knowledge sharing and capacity building
  - Grant funding for pre-capital stages
- The Heat Network Support Unit is intended for use by Local Authorities and other public sector organisations.
- The Heat Network Support Unit is sponsored by the Scottish Government (SG), with **Scottish Futures Trust (SFT) and Zero Waste Scotland (ZWS)** as core partners.
- The HNSU will form **part of the Centre of Expertise** of the National Public Energy Agency.



# Heat Network Delivery Flow



LHEES	Heat Network Support	Heat Network Fund	Due Diligence Contract	Client Engineer Contract
Local Authorities are now required by statute to develop and publish Local Heat and Energy Efficiency Strategies (LHEES) by the end of 2023.	The Heat Network Support will fund the procurement of consultancy and advisors to support with Feasibility Studies, Outline Business Cases (OBC) etc.	£300 million available over this parliamentary session to support the development and roll out of zero emission heat networks across Scotland	Before capital grant is awarded, the due diligence contractor will perform detailed checks on the financial and technical information provided by applicants to ensure it is accurate. The contractor also identifies key risks and recommends appropriate mitigations.	The client engineer provides continued technical advice which is often essential as heat networks are technically difficult and often need to adapt to changing circumstances.



## Heat Network Support Unit – Projects and Support to date

- 15 projects actively supported through grant funding and capacity building functions.
- Projects across Scotland spanning 10 Local Authority areas
- 13 projects in Detailed Feasibility Stage
- 2 projects in OBC stage
- Capacity building to organisations in additional 4 Local Authority areas to identify and initialise projects

# Scotland's Heat Network Fund



- On 21<sup>st</sup> of February, we launched Scotland's Heat Network Fund
- This fund builds on the highly regarded Low carbon Infrastructure Transition Programme which is now closed.
- Total budget of **£300 million** capital for the length of this parliament- grant to be drawn down by March 2026
- Grants for the funding gap of the project up to 50% of the eligible capital costs
- Projects must demonstrate alignment with key policy objectives including the **reduction of GHG emissions** and **eradicating fuel poverty**
- This fund is open throughout the year and will run through this parliamentary session.



# Any questions?

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