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### Local Heat & Energy Efficiency Strategies (LHEES)

Scot Gov led: "LHEES are at the heart of a place based, locally-led and tailored approach to the heat transition. These local strategies will underpin an area-based approach to heat and energy efficiency planning and delivery."

[Local heat and energy efficiency strategies and delivery plans: guidance - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultations-petitions/embedded/Local-heat-and-energy-efficiency-strategies-and-delivery-plans-guidance-2023.pdf)



**LHEES contents**

- LHEES
  - Background information
  - Baseline analysis of building stock
  - Generation of Strategic Zones and pathways
- Delivery Plan
  - Delivery Areas
  - Short-term actions

*'Big' projects are favoured (essential) on grounds of economies of scale.*

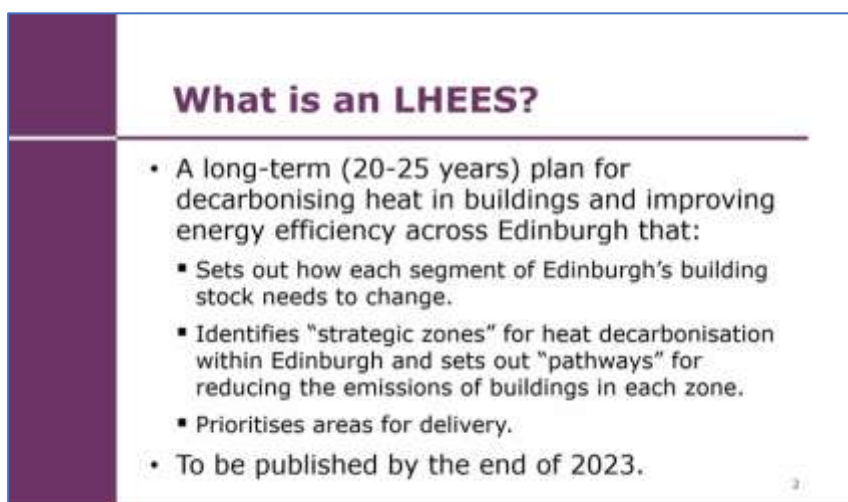
*Dynamics are difficult: 'decommission' from cheap gas to 'commission' dearer electricity.*

*Logistics are very challenging: map, identify, dig and install, 'persuade people on board'.*

*Finances are hugely challenging: little new money; public sector financial cupboards 'bare'; private sector long-term finance has to be brought in; no standard 'financing model'.*

Scot Gov Green Finance Taskforce takes the lead:

[Heat in Buildings: Green Heat Finance Taskforce - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultations-petitions/embedded/Heat-in-Buildings-Green-Heat-Finance-Taskforce-2023.pdf)



**What is an LHEES?**

- A long-term (20-25 years) plan for decarbonising heat in buildings and improving energy efficiency across Edinburgh that:
  - Sets out how each segment of Edinburgh's building stock needs to change.
  - Identifies "strategic zones" for heat decarbonisation within Edinburgh and sets out "pathways" for reducing the emissions of buildings in each zone.
  - Prioritises areas for delivery.
- To be published by the end of 2023.

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## LHEES Considerations

Theme	Consideration	Description
Heat decarbonisation	Off-gas grid buildings	Transitioning from heating oil and LPG in off-gas areas
	On-gas grid buildings	On-gas grid heat decarbonisation
	Heat networks	Decarbonisation with heat networks
Energy efficiency and other outcomes	Poor building energy efficiency	Poor building energy efficiency
	Poor building energy efficiency as a driver for fuel poverty	Poor building energy efficiency as a driver for fuel poverty
	Mixed-tenure, mixed-use and historic buildings	Mixed-tenure, mixed-use buildings, listed buildings, and buildings in conservation areas

## Key targets and regulations

- Decarbonise the heating of **all** buildings in Scotland by 2045.
- All residential properties to achieve a minimum EPC rating of 'C' by 2033.
- All privately-rented homes in Scotland to achieve a minimum EPC rating of 'C' by 2028 (2025 for homes marketed to new tenants).
- All social housing to achieve a minimum EPC rating of 'B' by 2032.
- All homes in Scotland to use zero direct emissions heating systems by 2045.
- Prohibiting the use of direct emissions heating systems in new buildings in Scotland from 1 April 2024.
- All publicly owned buildings to use zero direct emissions heating systems by 2038.

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Home Energy Scotland a 'go-to' for guidance.

## Energy efficiency

- All new homes are required to be built to net zero carbon standard under City Plan 2030.
- Various schemes support the retrofit of existing privately-owned homes, including:
  - Home Energy Scotland
  - Area Based Schemes
  - Warmer Homes Scotland
  - ECO4 / Great British Insulation Scheme

Replace 81% of current primary heat source for buildings!!

## Decarbonising heat

Primary heat fuel	No.	%
Mains gas	2,016,000	81%
Electricity	262,000	11%
Oil	129,000	5%
Communal heating	34,000	1%
LPG bulk or bottled	18,000	1%
Solid mineral fuel	20,000	1%
Biomass	16,000	1%

What are the options?

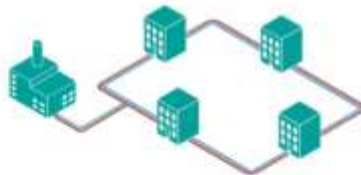
- Heat pumps
- Direct electric heating
- Hydrogen
- Heat networks

'Obvious solution', if the building blocks are in place close to the outset.

Much more difficult if the 'jigsaw' has to be prised from a myriad of existing 'connections'.

## Heat networks

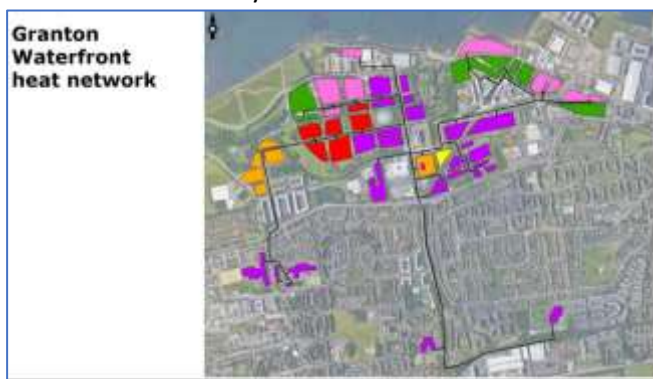
- Heat from a central source is distributed to multiple buildings.
- Viability is often contingent on "anchor loads" with large, regular demand, e.g. schools or hospitals.
- Emerging regulatory regime.



Looks 'straightforward enough' and 'all worked out' on paper; largest potential is within the city centre. But the engineering (and financial) challenge is massive. The potential for disruption is clear.



Granton is a relatively clean 'canvas'.



Look for the draft LHEES for Edinburgh later this year; then to 'consultation' in 2024 on the 'recommended zones'.

Here is the big question for city residents, looking out over the next 10 years.

As a household approaches a decision point on when and how to replace a gas boiler, at what stage in the future, in its immediate locality, will the householder know of the option to join a local heat network, or indeed the compulsion to do so. That 'option' or 'forced adoption' will govern the domestic heat investment decision that has to be made at the point of 'renewal', with big financial consequences one way or another.

**What will the LHEES actually do?**

- Identify potential heat network zones within which operators can receive exclusivity.
- Set out a pathway for decarbonisation for buildings in Edinburgh.
- Identify initial areas of focus / projects for the Delivery Plan (covering 2024 to 2026).
- Explore mechanisms and models for delivering the scale of investment required.

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