Heat Networks
Creating a Just Transition

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Working with leading technology partners

- Optimum efficiency, lowest energy cost



Metering Solutions

kamstrup



Hydronic Solutions

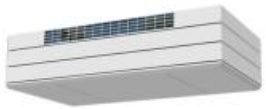
Danfoss



Next Generation
Large dT Heat Pumps

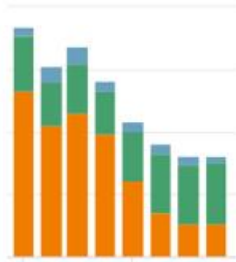
DELTA

THERMO NOVA
VARMEPUMPER



Mechanical ventilation
and heat recovery

AIRMASTER®



Energy Monitoring &
Management

EnergiRaven



Electric Boilers

DELTA

VÄRMEBARONEN



Hydronic Solutions

FloCon
Watchman



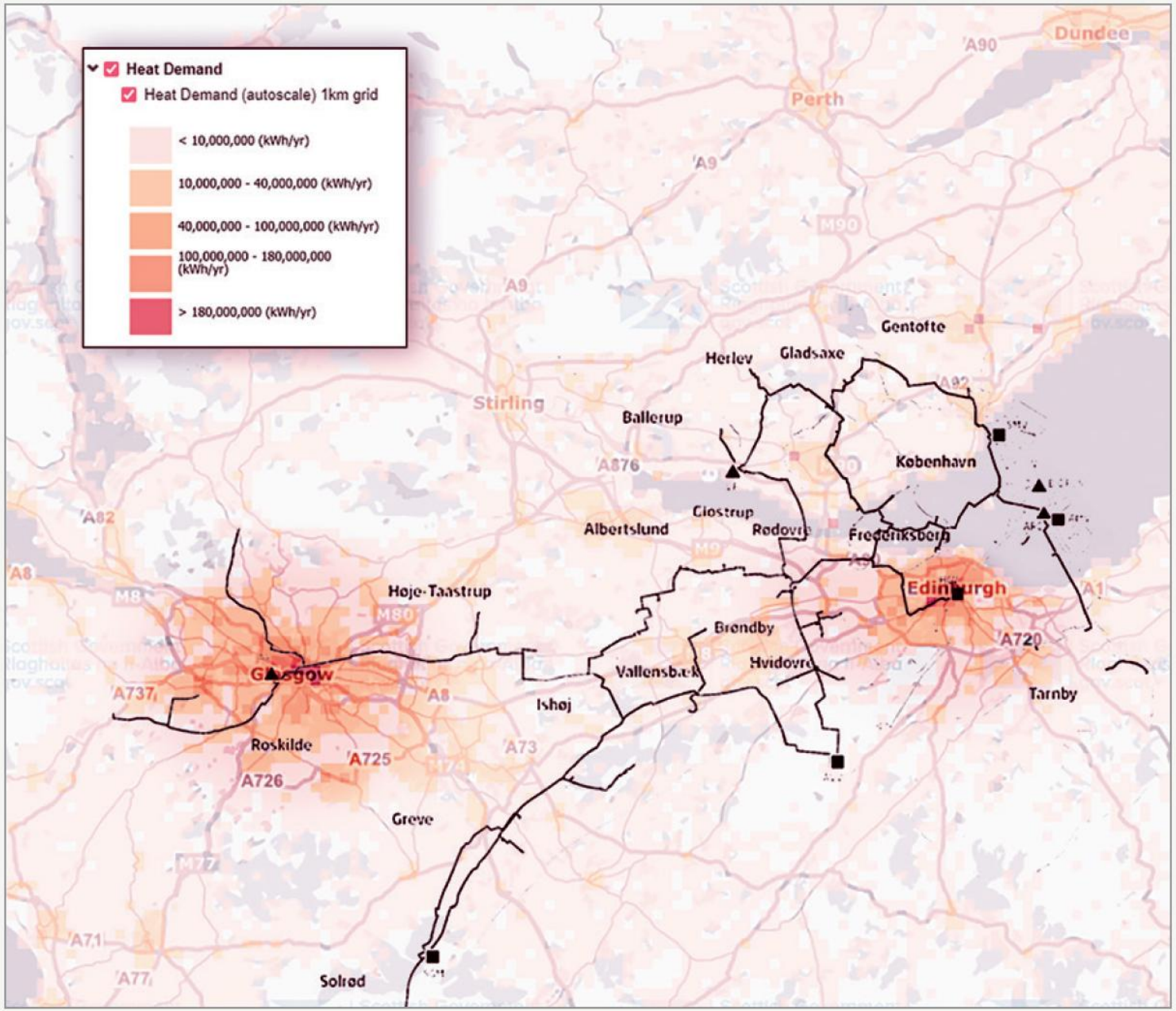
Heat network billing
solutions

KURVE
TECHNOLOGIES



CHP, heat pumps &
electric boilers

HYBRID
ENERGI



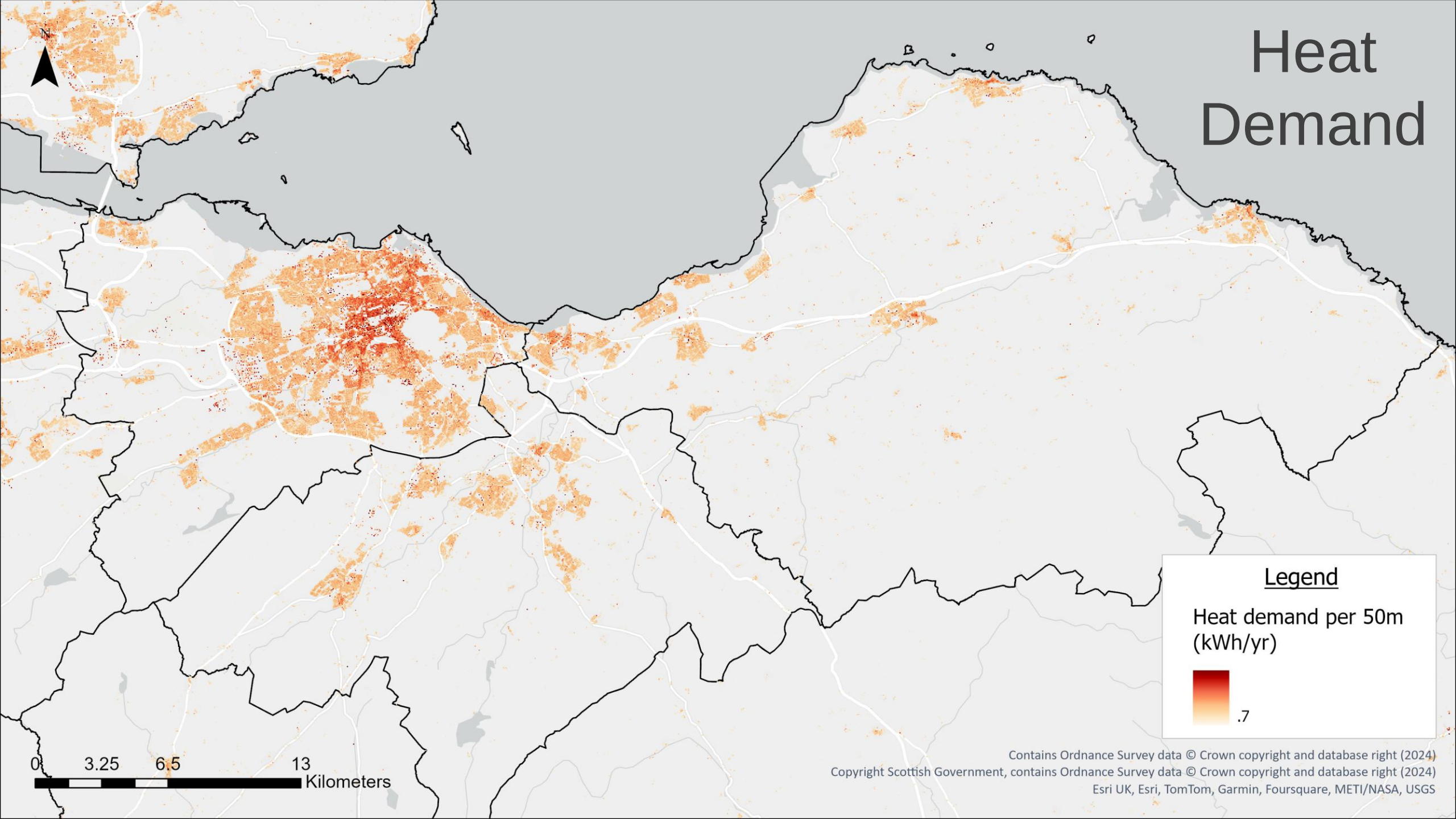
Proposed Heat Highway Example

This image shows an example of a Danish heat highway overlaid onto a heat map of Glasgow and Edinburgh. This illustrates how such a heat highway might connect two cities within the UK.

Heat map image courtesy of the Scottish Government.

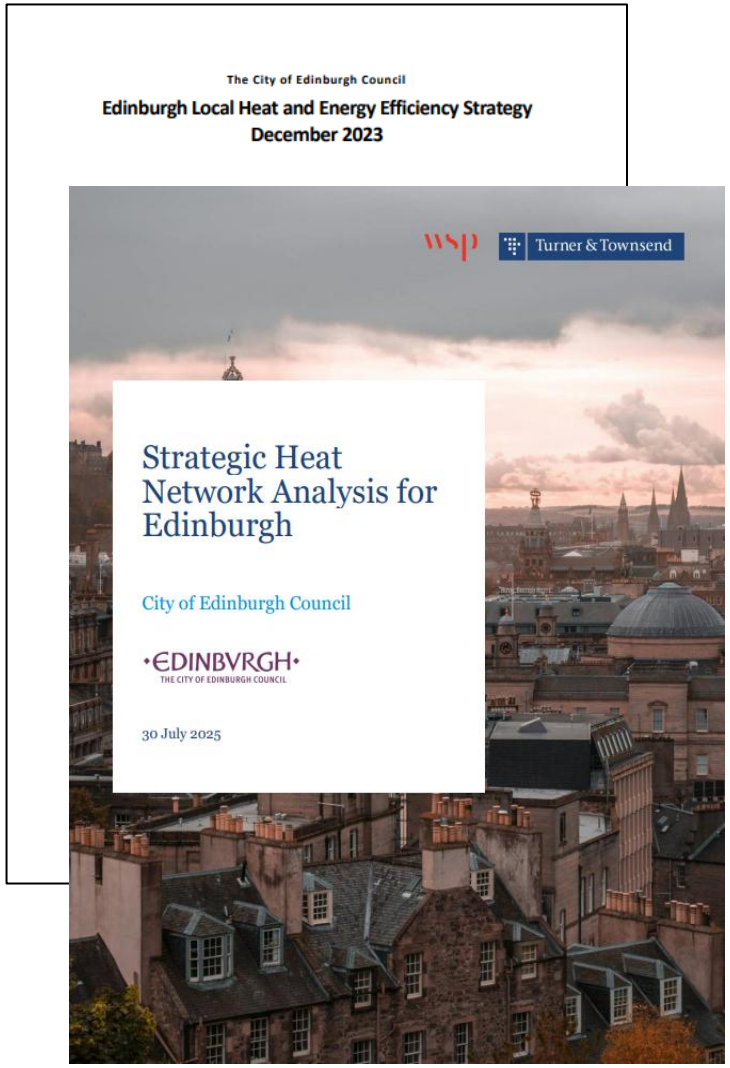
SE Scotland Regional Heat Network Vision

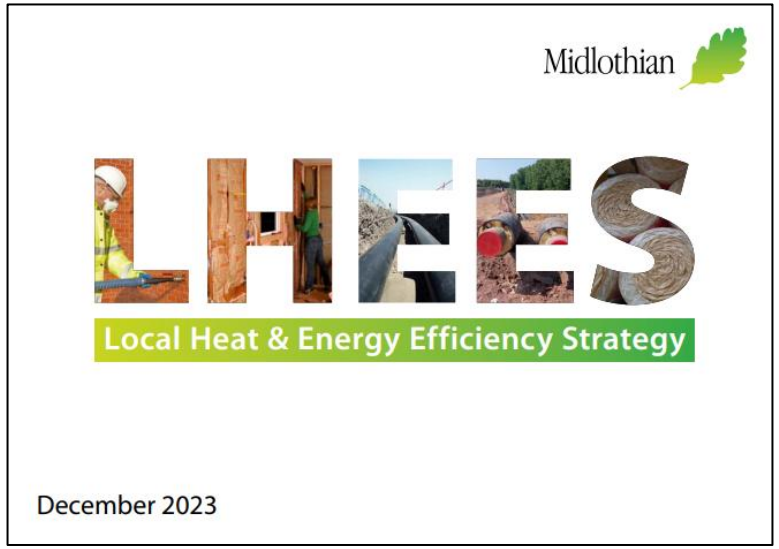
MARTIN HAYMAN

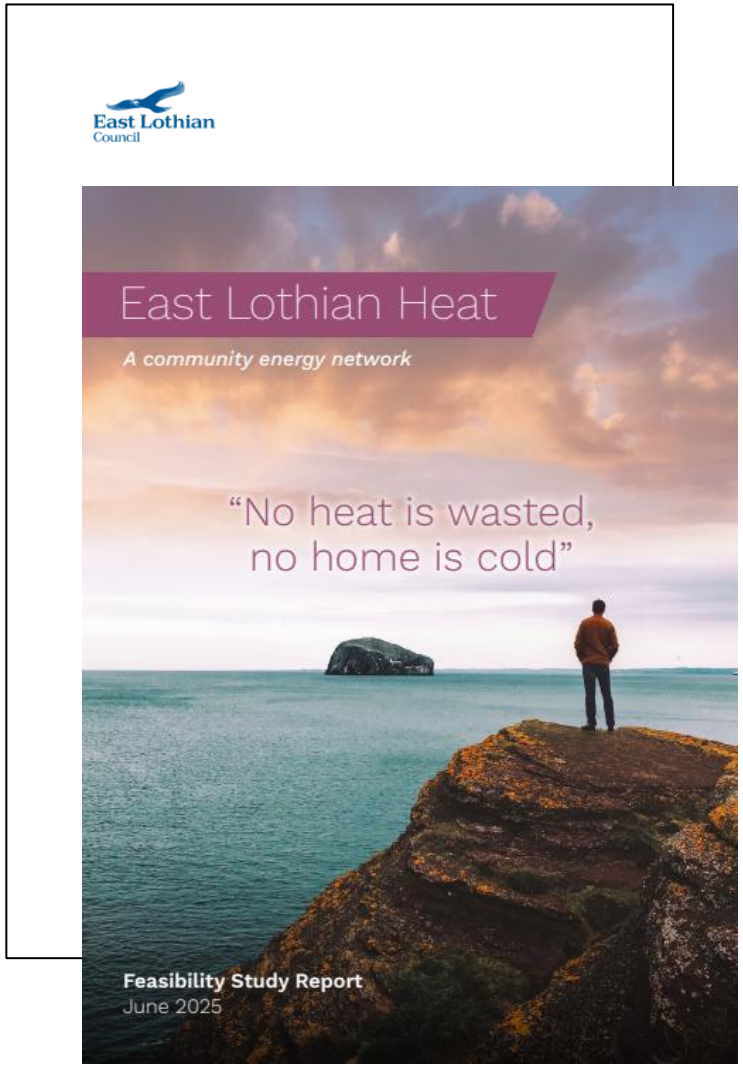


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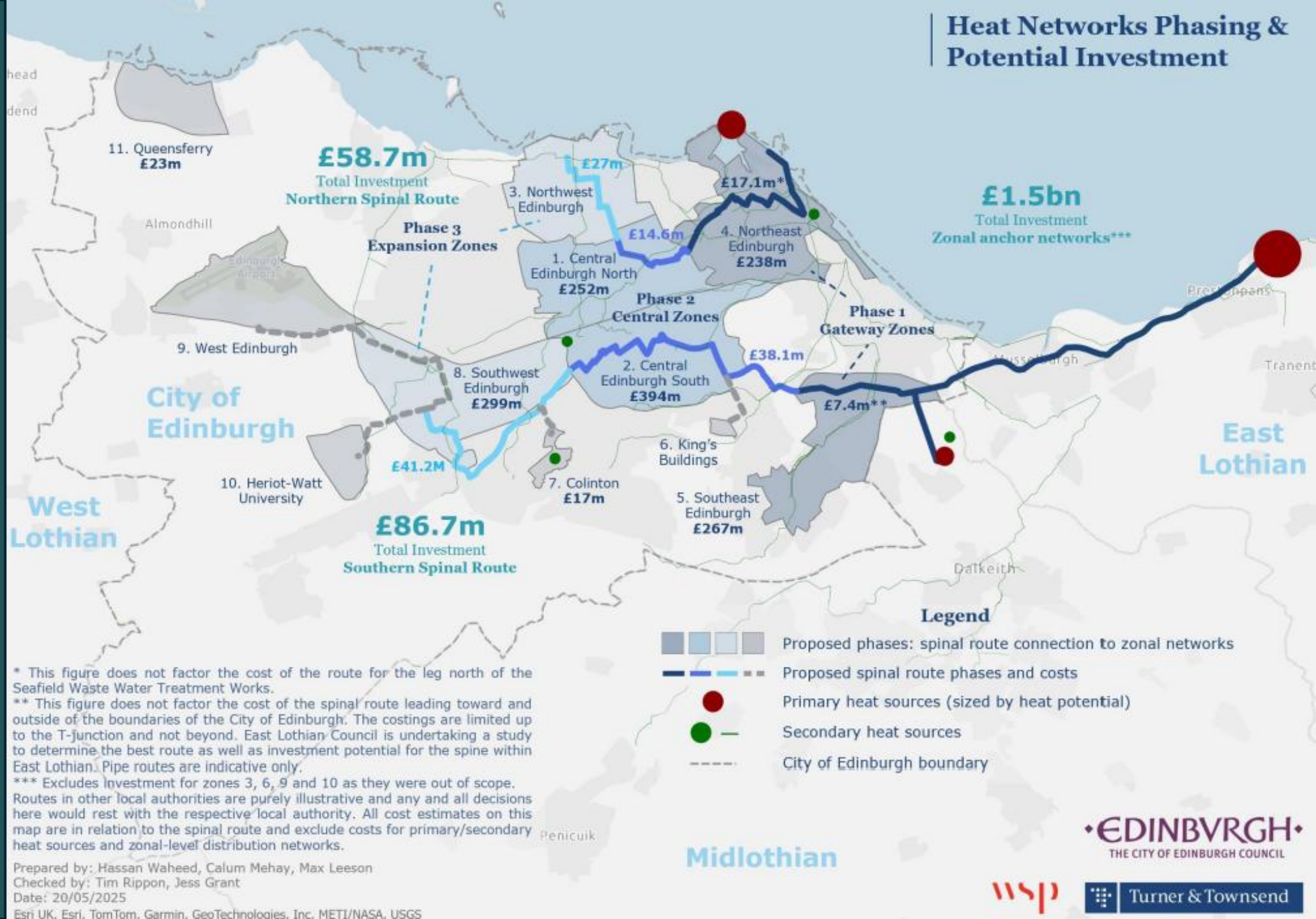
Edinburgh, Midlothian and East Lothian LHEES



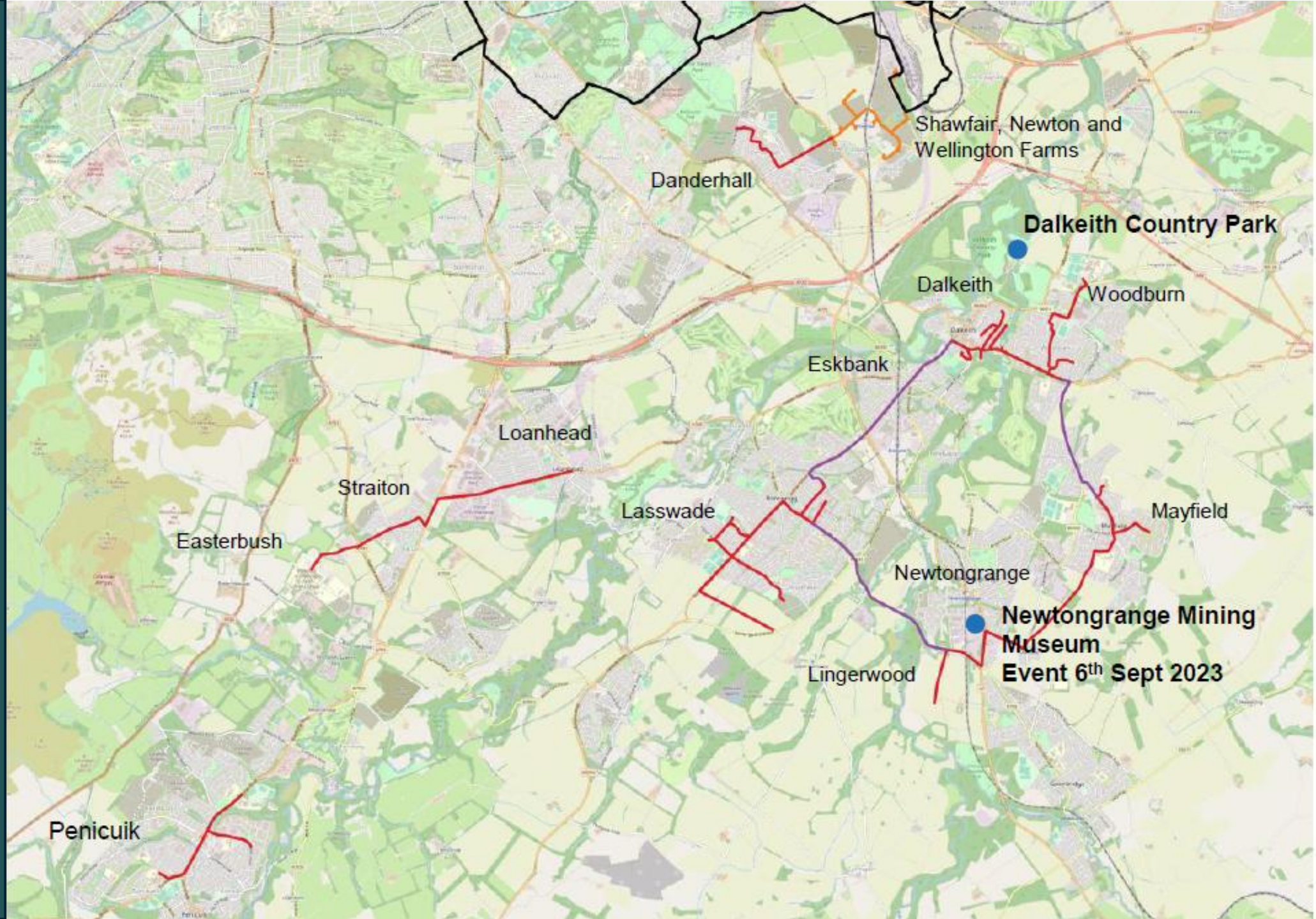




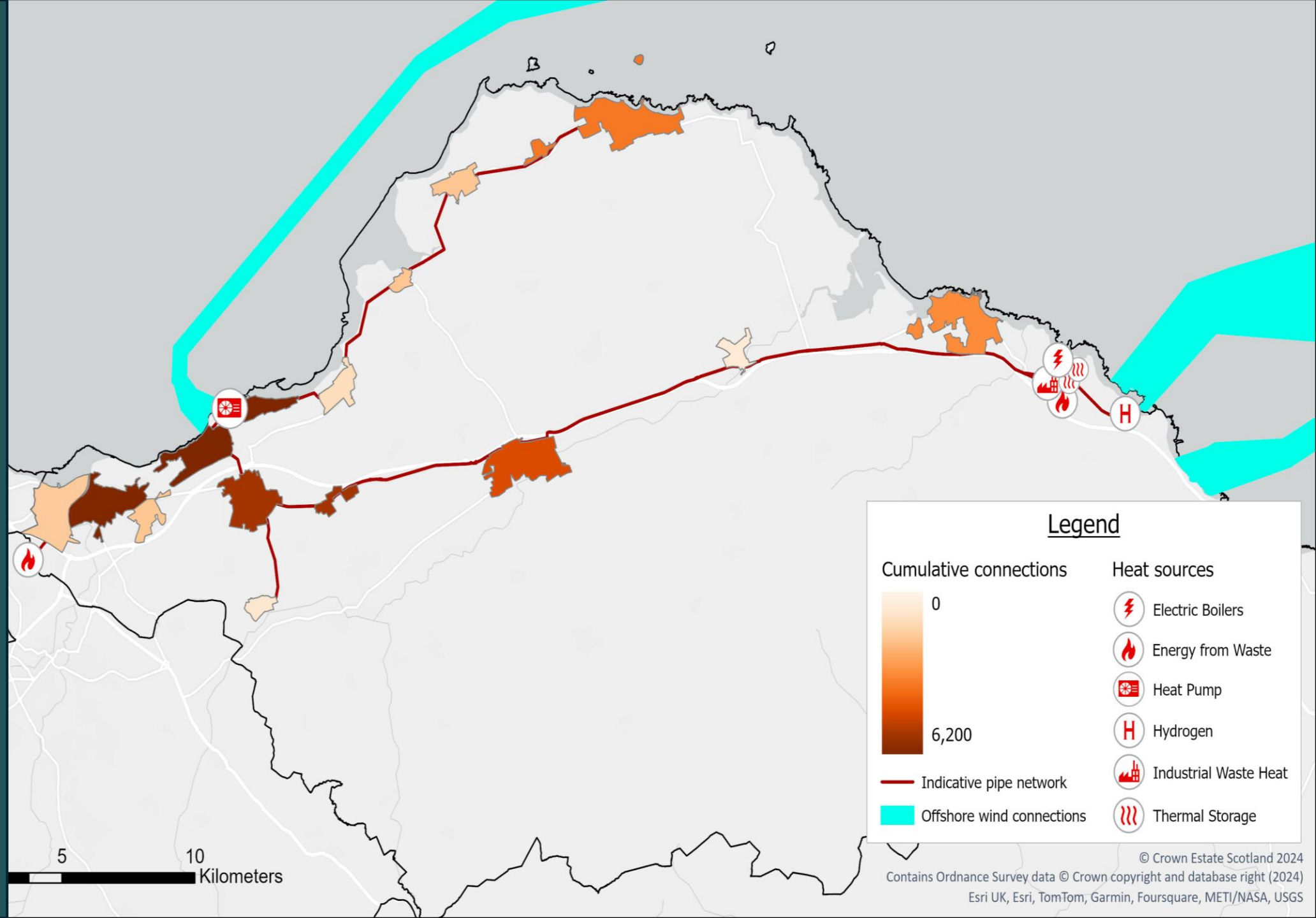
Edinburgh LHEES



Midlothian LHEES



East Lothian LHEES



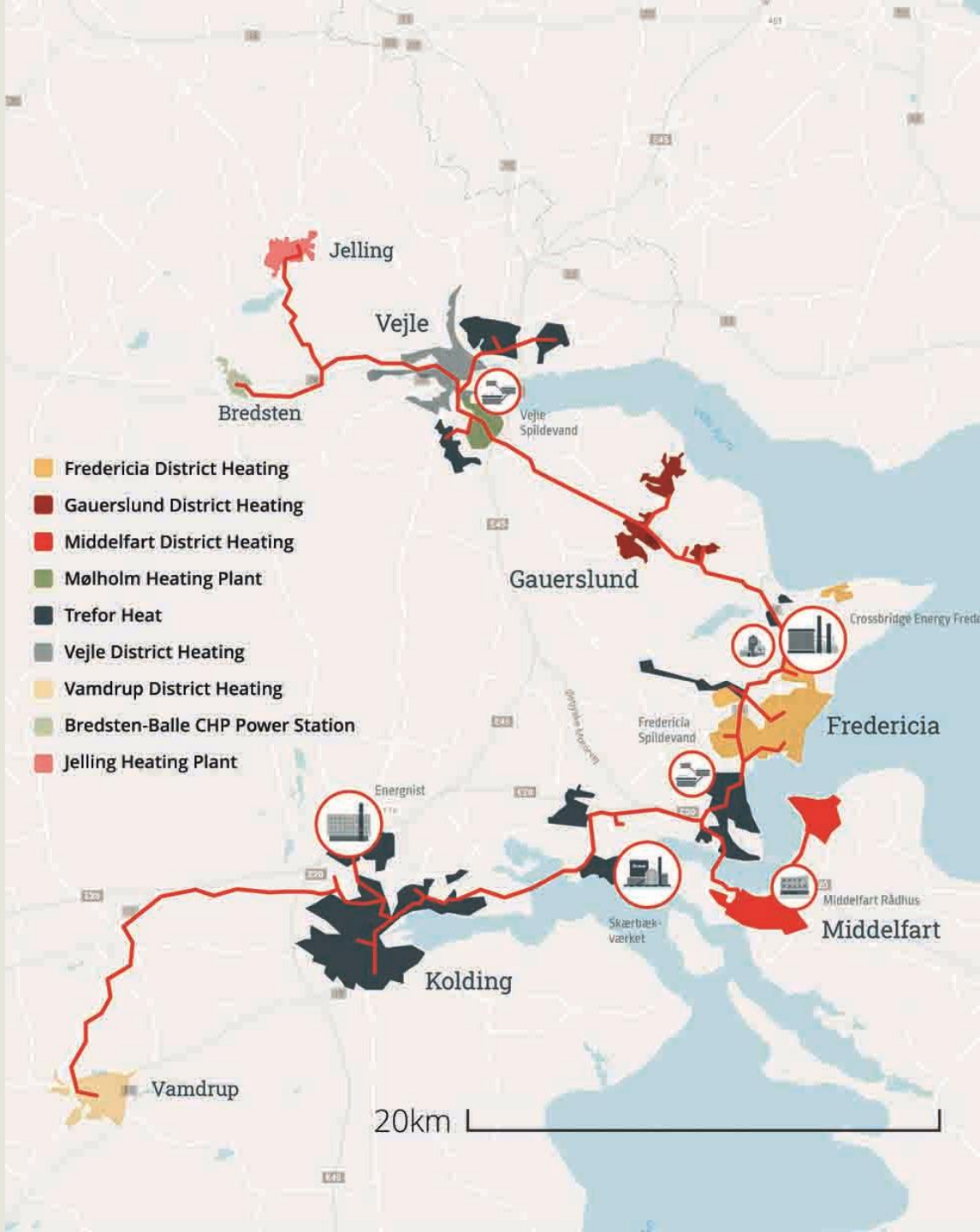
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Triangle Region Heat Transmission Company (TVIS)

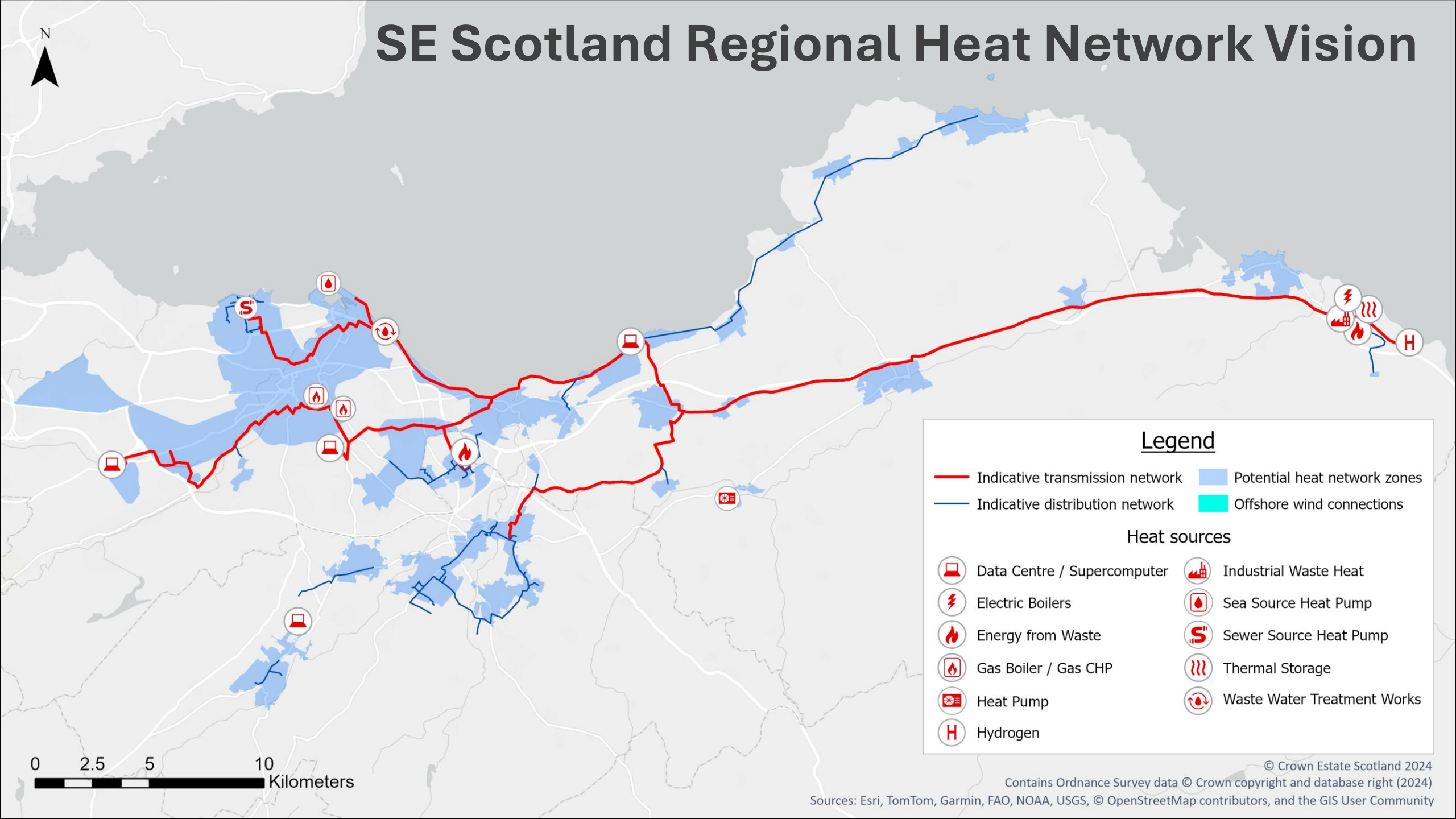
TVIS is responsible for entering into agreements with local heat suppliers so that the heat demand in their four owner municipalities is covered. They are also responsible for the heat transmission highway in the Triangle Region, which consists of a 123km piping system.

Since its inception in 1983, TVIS has through sector integration and industrial clustering been able to deliver low-cost waste heat to nine independent district heating companies, supplying over 60,000 consumers spread over seven municipalities.

EnergiRaven | SAV



SE Scotland Regional Heat Network Vision



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East Lothian
Community Benefits

Solution by 2031

+1,500 GWh/y

Total consumers: ~100,000

Largest heat network in the UK also allowing for exporting heat to:

- Edinburgh 350 GWh
- Midlothian 350 GWh

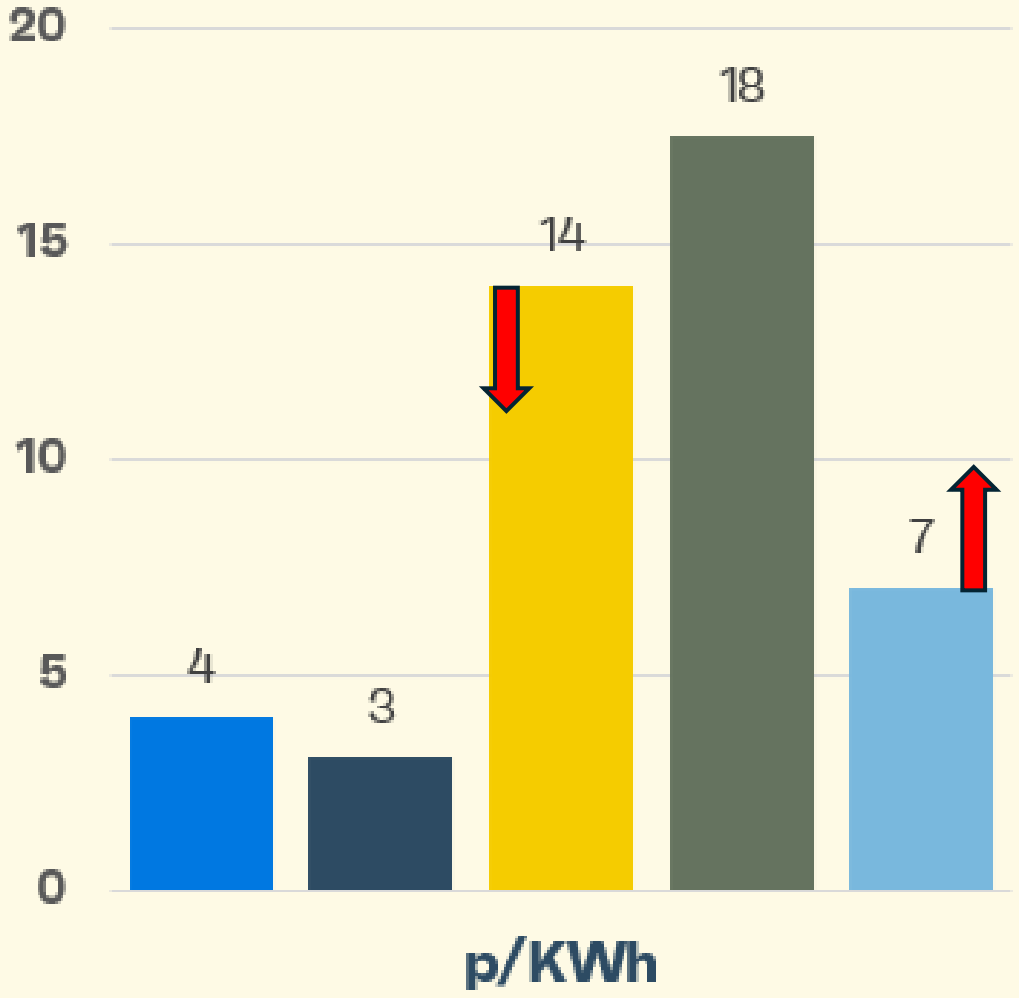
Further possible heat production to connect

Future hydrogen · Waste to energy · Other?



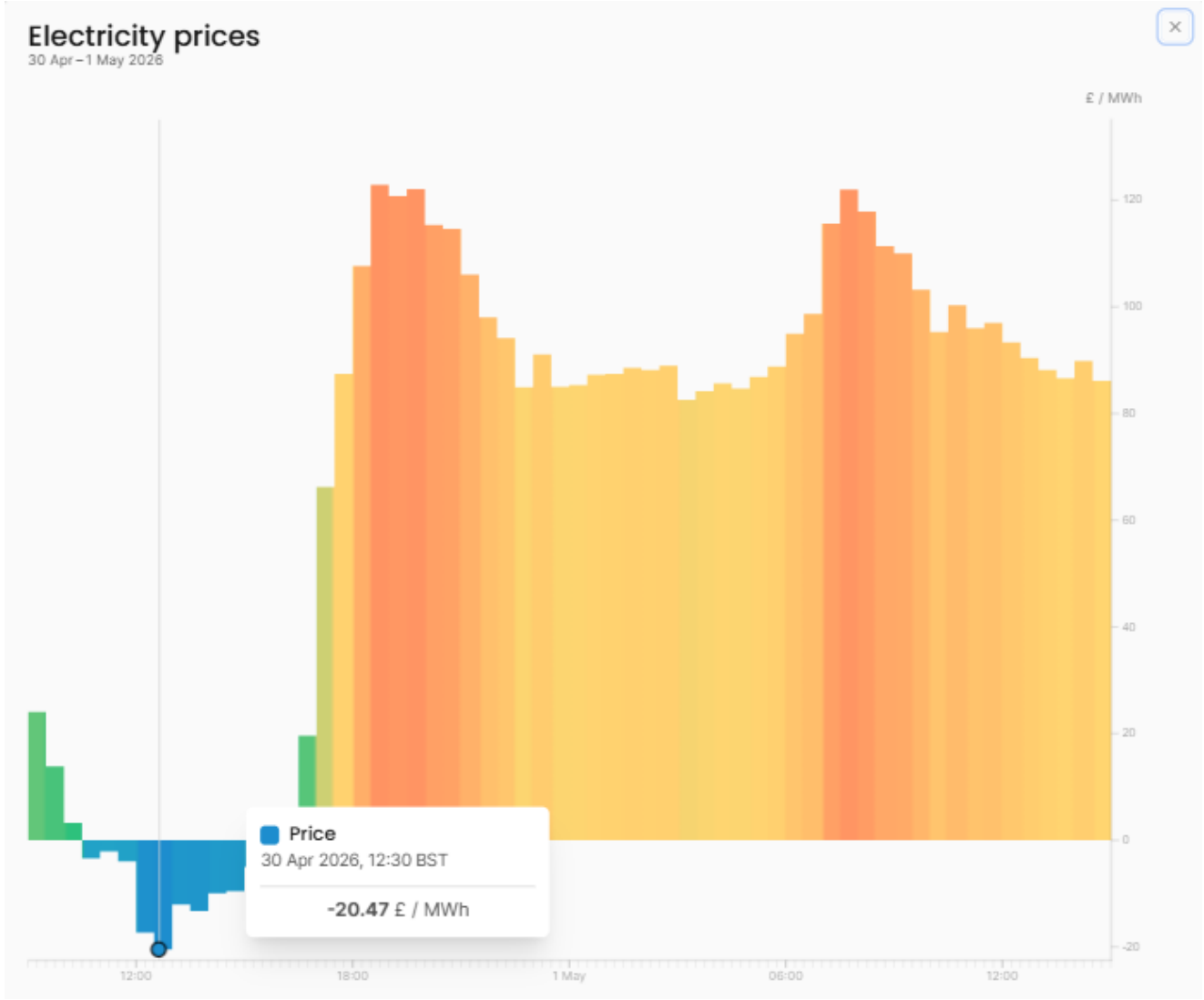
Feasibility results

Heat price per unit



- ELHN: Transmission heat price
- Benchmark: Kalundborg-Copenhagen transmission line
- ELHN: Distribution heat price
- Alternative heat price: Individual Air Source Heat Pumps
- Benchmark: Natural gas for heating Edinburgh

30th April -1st May – wholesale electricity prices



https://app.electricitymaps.com/map/zone/GB-NIR/live/fifteen_minutes

Heat Networks with strategically scaled thermal storage can flex heat production with the electricity grid.

Blue – grid balancing service with electric boilers and solid-state controls for instant reaction.

Green/Yellow – general heat production via Heat Pumps.

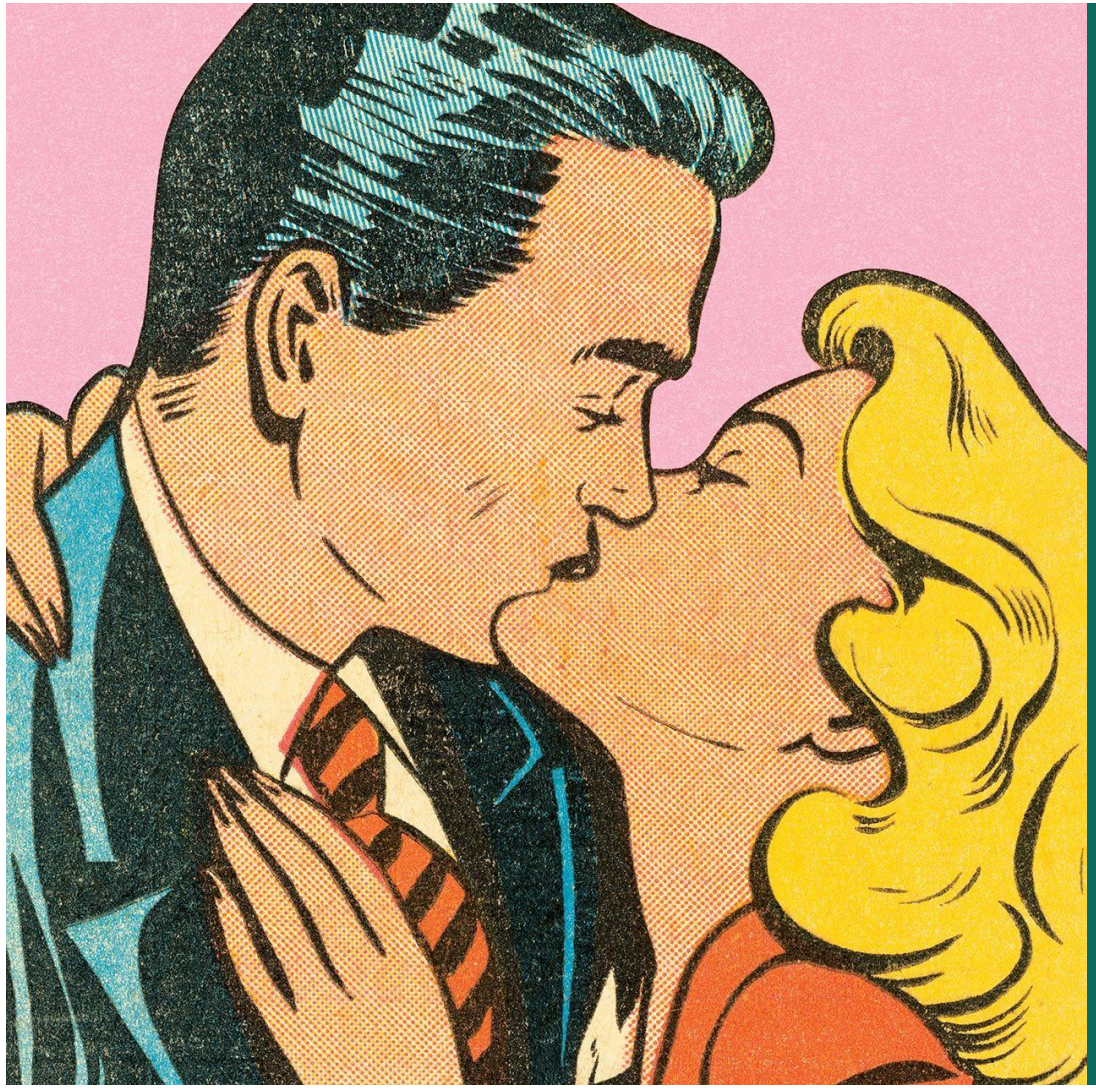
Red – avoid heat generation and instead discharge thermal storage.



Waste on an Industrial Scale

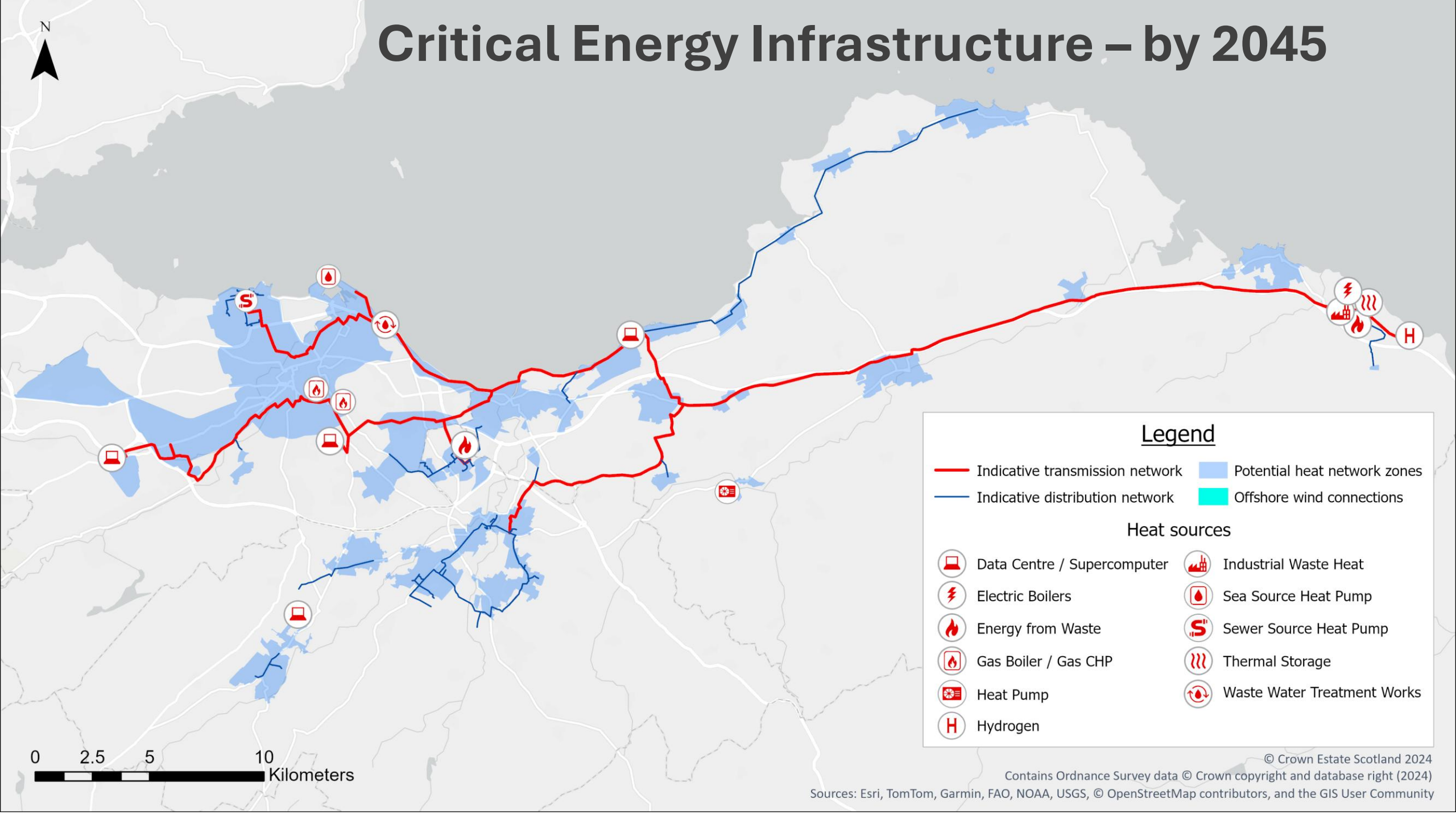


KISS – Keep It Simple Stupid





Critical Energy Infrastructure – by 2045



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“No heat is wasted, no home is cold”

Delivery Priorities

- Lothian Heat CIC established in October 2025
- Partnerships agreed with East Lothian Council and City of Edinburgh Council
- Recruiting a Development Team
- Prioritise heat network projects where heat is readily available
- Develop the business case for the regional supply and transmission network
- Work with Transition Finance Scotland to unlock investment
- Develop a Delivery Model that results in the cheapest possible heat for residents

https://lothianheat.org

Let’s create a Just Transition

Thank you for listening

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