



Department for
Business, Energy
& Industrial Strategy



Triple Point
HEAT NETWORKS
INVESTMENT MANAGEMENT

BHIVE

BHIVE Place-based Investing

November 2021



Agenda

BHIVE Place-based Investing

Sam Shea	John Saunders	Andrew Cripps	Harry Penberthy & Lauren Bright	Richard Turner
Introduction and welcome	BEIS' work to support market growth	The heat network opportunity	Place-based investing – what is it and why should you get involved	Access opportunities via BHIVE
10:00-10:05	10:05-10:15	10:15-10:30	10:30-10:45	10:45-10:50

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Ending 31st March 2023

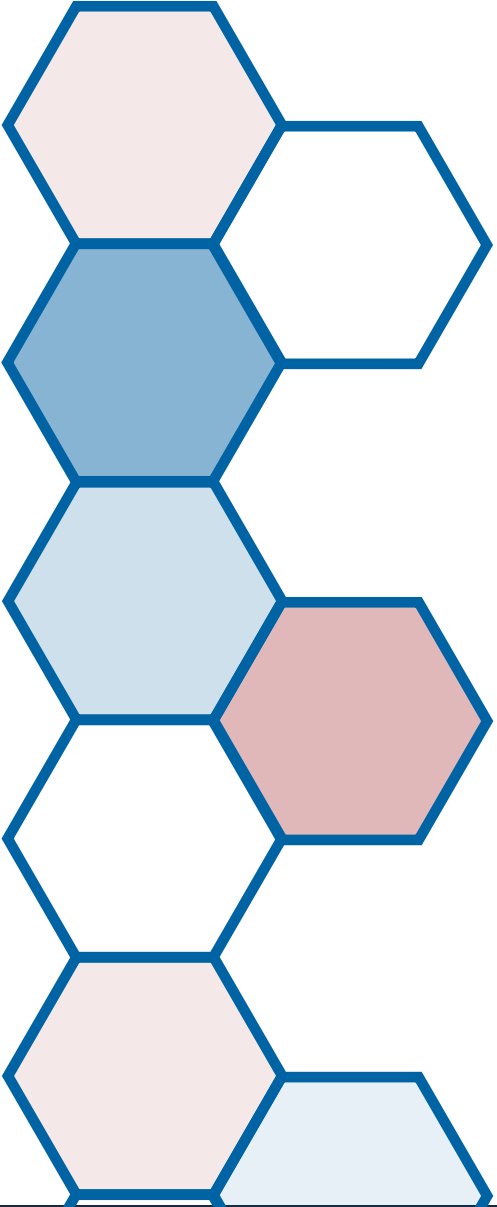
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BEIS' work to support market growth

John Saunders

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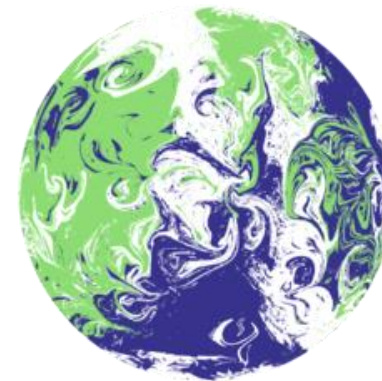
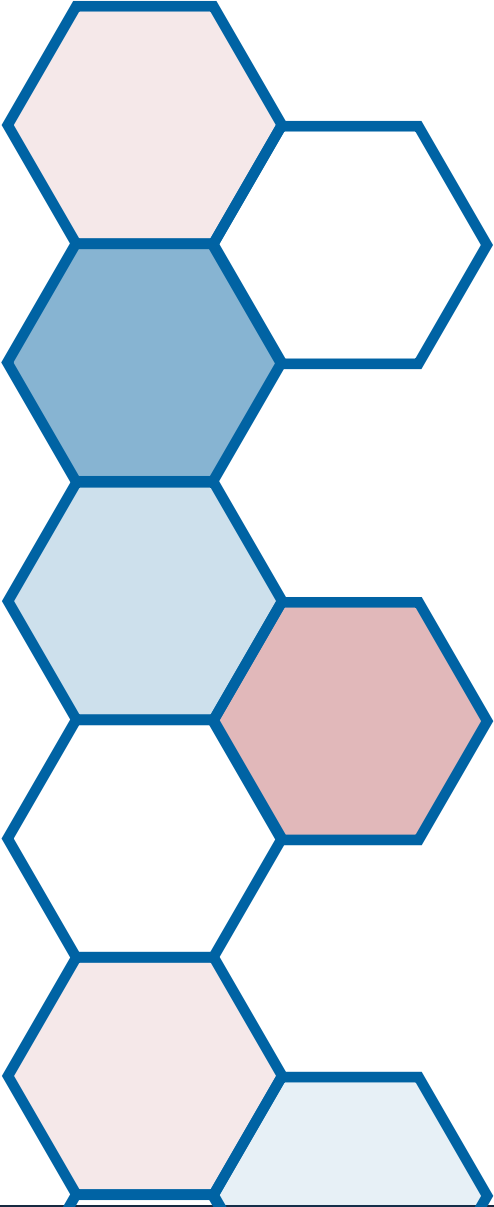
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UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH ITALY

“Heat Networks are proven scalable options for decarbonising heat and will play substantial roles in any Net Zero scenario, so we need to build the market for them now.”

“Heat networks will be a key technology in areas of high-density heat demand and where there are large low carbon heat sources.”

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Heat Networks – today to 2050

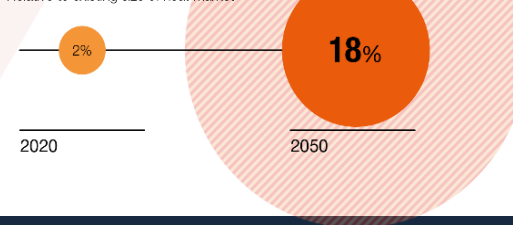
- Heat networks **currently provide 3% of UK heat demand** and with Government support **could provide 20% of heat demand by 2050** in a least-cost pathway to meeting carbon targets.
- They can unlock otherwise inaccessible large-scale renewable and recovered heat sources such as waste heat from industry and heat from rivers and mines, as well as provide cooling in a changing climate.
- They can interact with the energy system more effectively than building level solutions, through load shifting, demand side response and economies of scale.

Potential investment

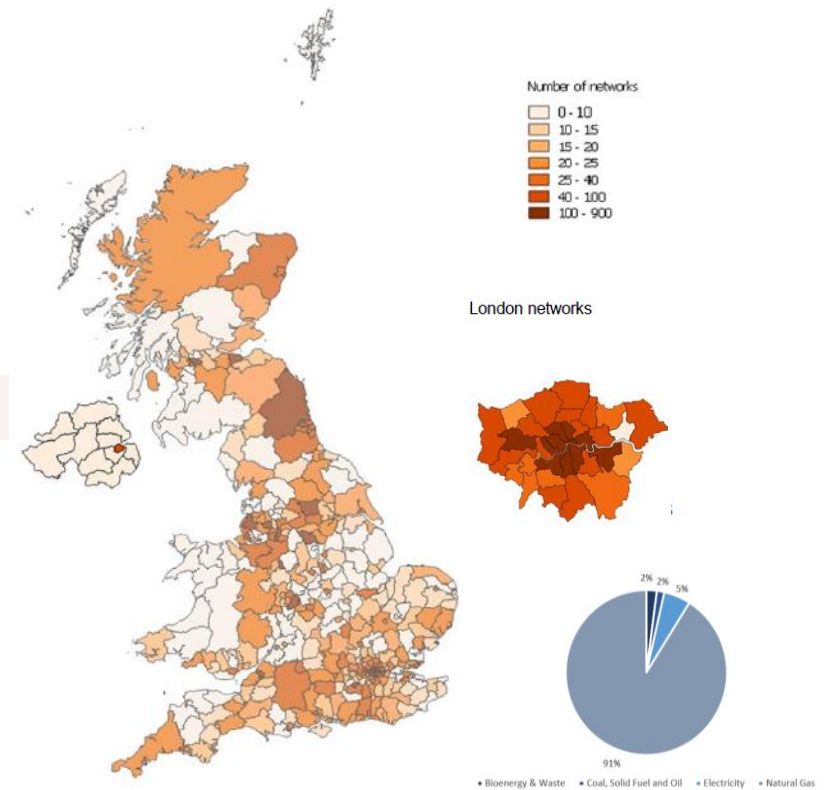
- The investment potential presents between £13 billion to £22 billion by 2050 and is considered **the biggest HN investment opportunity in Europe**



% heat from heat networks
Relative to existing size of heat market



+10%
annual growth



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The Heat Network Transformation Programme

Since 2013, **HNDU** support local authorities in England & Wales in early heat network project development.

From 2017, **HNIP** offers gap funding to heat networks projects in commercialisation & construction funding, accelerating market growth.

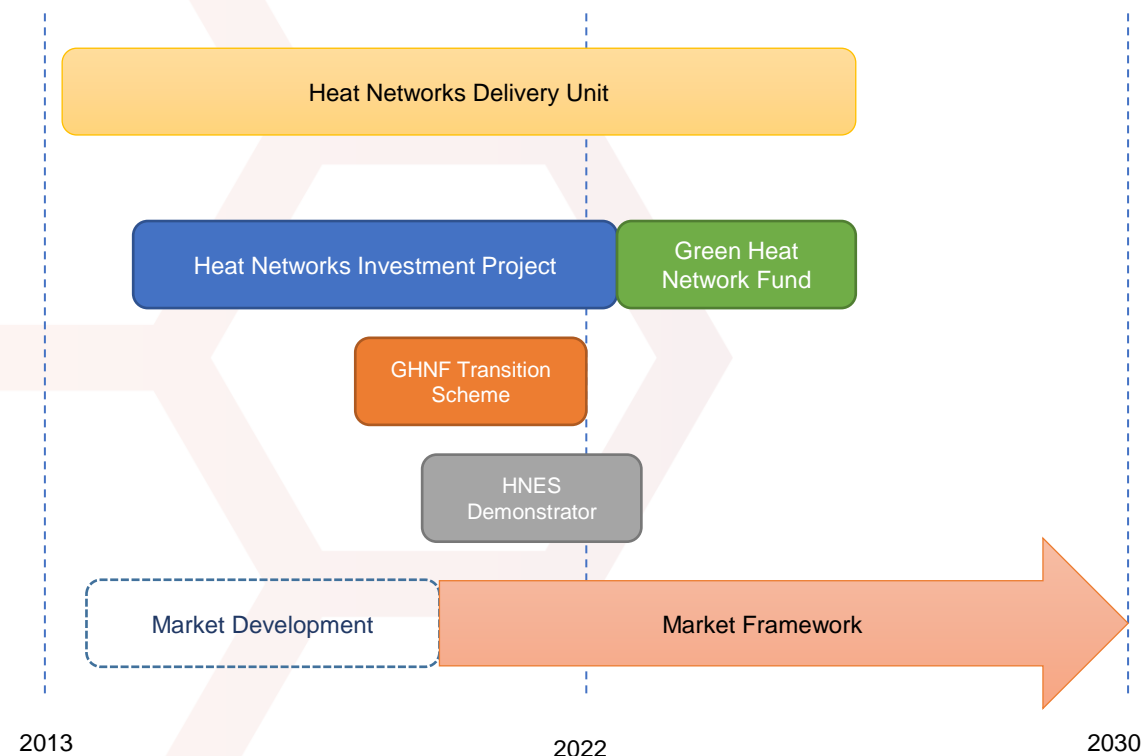
From June 2021 – December 2021, the **GHNF Transition Scheme** will offer projects commercialisation funding to help the transition from HNIP to GHNF.

The **GHNF** is a 3-year capital grant making scheme which will run from April 2022 – 2025.

The **HNES** Demonstrator is a one year grant scheme. It will support performance uplifts to existing heat network or communal heating projects where outcomes for customers and operators are sub-optimal. BEIS intends to launch a multi-year HNES Main Scheme in 2022/23 subject to further funding.

As well as driving new investment, we want a long-term market framework, that is attractive to investors alongside a robust consumer protection framework.

Following our zoning trials across 6 cities in England, we believe that zoning can play a very significant role in growing the sector. Our Consultation on Zoning closes on 19 November 2022.



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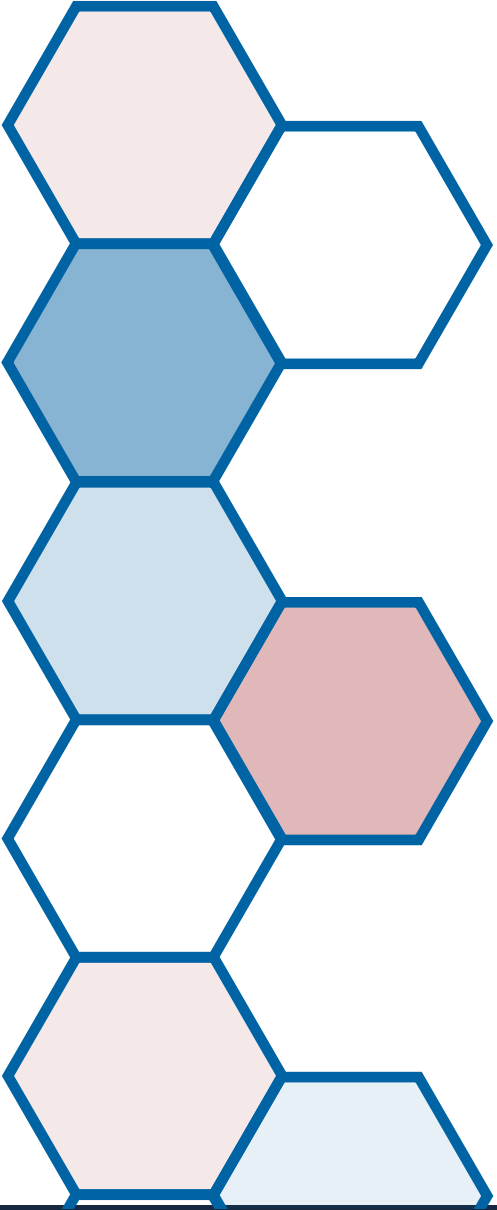
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The heat network market opportunity

Andrew Cripps

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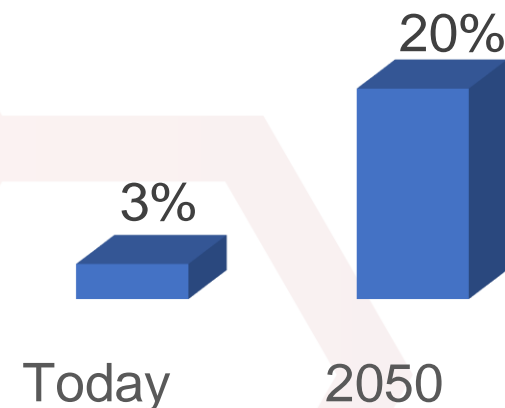
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Significant Potential

There are currently over 14,000 heat networks in the UK, providing heating and hot water to approximately 480,000 consumers.



But with Government support, zoning and investment from the private sector, they could meet 20% of heat demand!

They are a key part of a least-cost pathway to meeting carbon targets

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Zoning: How might it work?

Warning – this is my
opinion about what may
happen – not policy

- Imagine a Local Authority area – in blue
- Some of it is higher heat density – in orange
- Potential best solution for low carbon heat:
 - Heat networks in orange zone
 - Heat pumps in blue zone



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How might it work?

- Now find a heat source – yellow – e.g. EFW plant
- In the Heat Network, Zoning powers are granted to make success more likely.



Figure 15: Indicative heat network zoning output

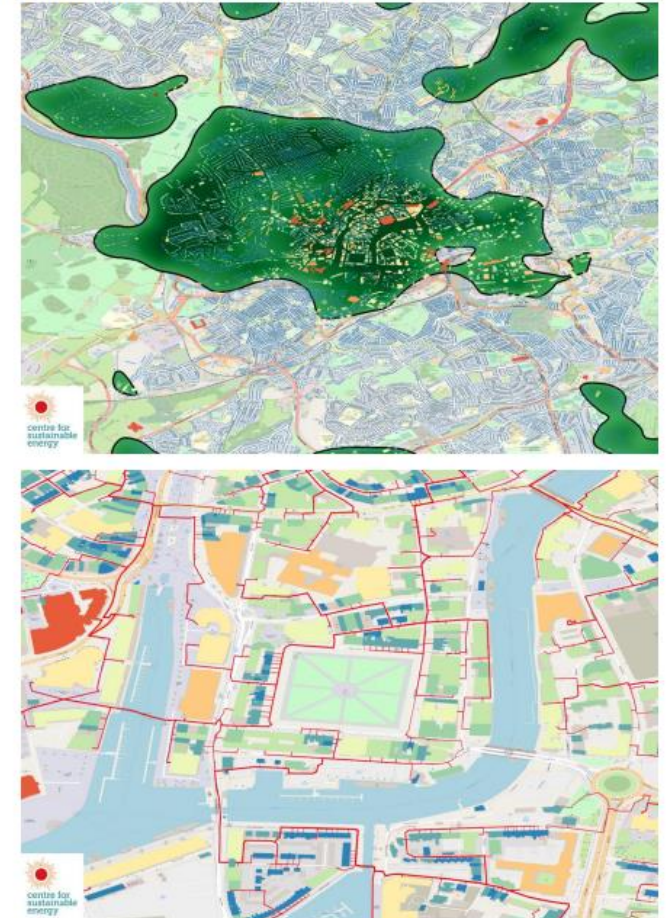


Figure 15 is an indicative heat zoning output undertaken on behalf of Bristol City Council. The green zones reflect areas of the city where heat networks are theoretically the lowest-cost option to achieve heat decarbonisation based on current parameters and assumptions.

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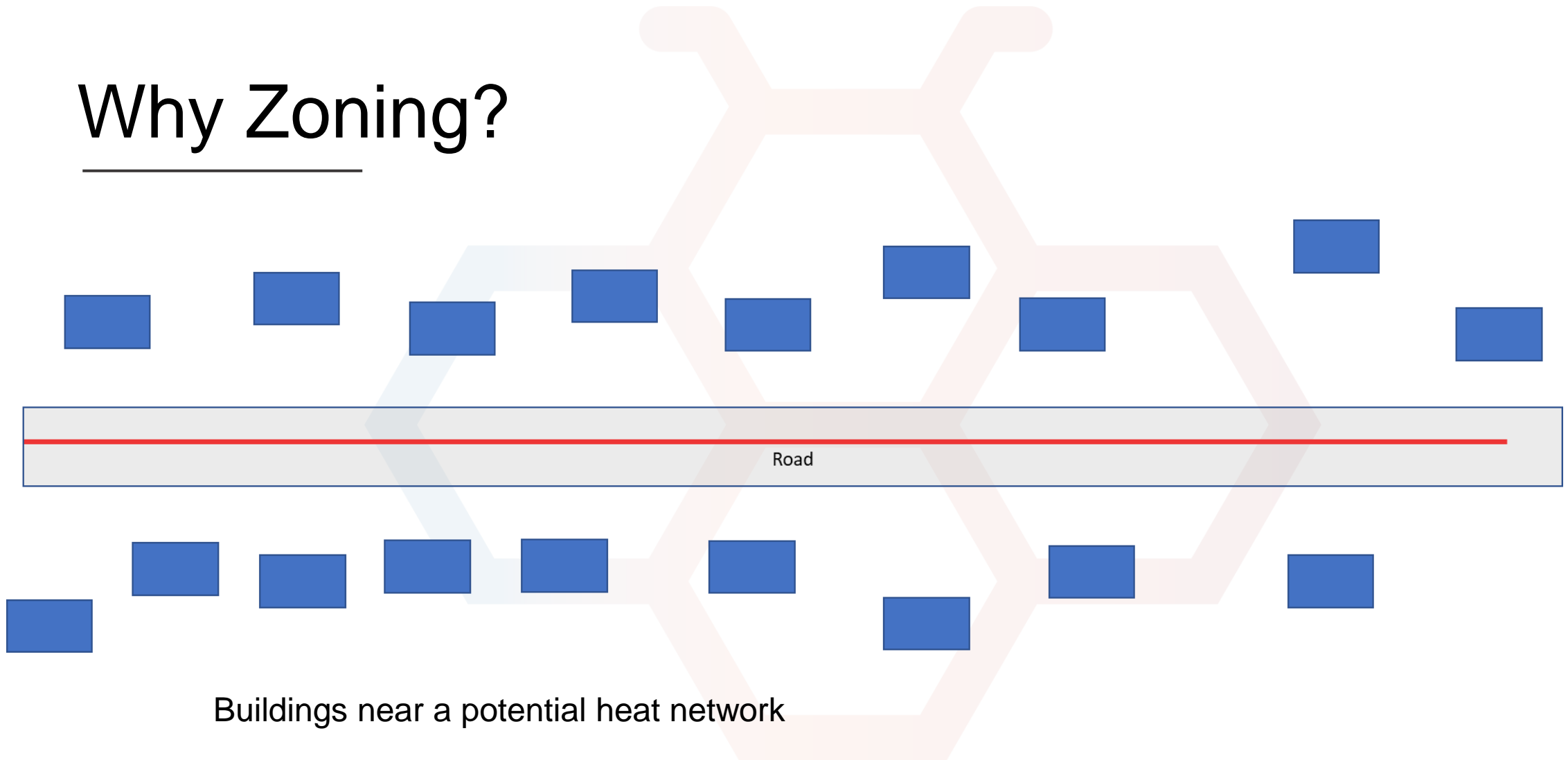
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Why Zoning?



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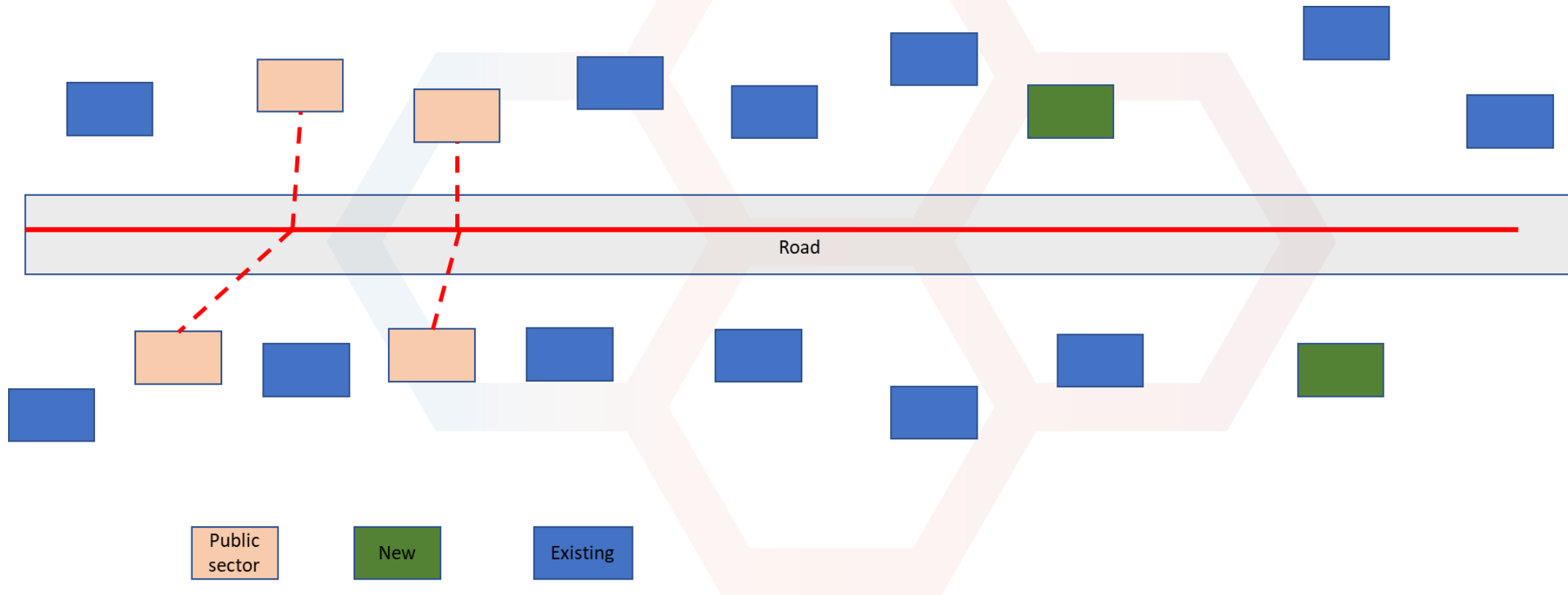
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If we only connect some buildings...



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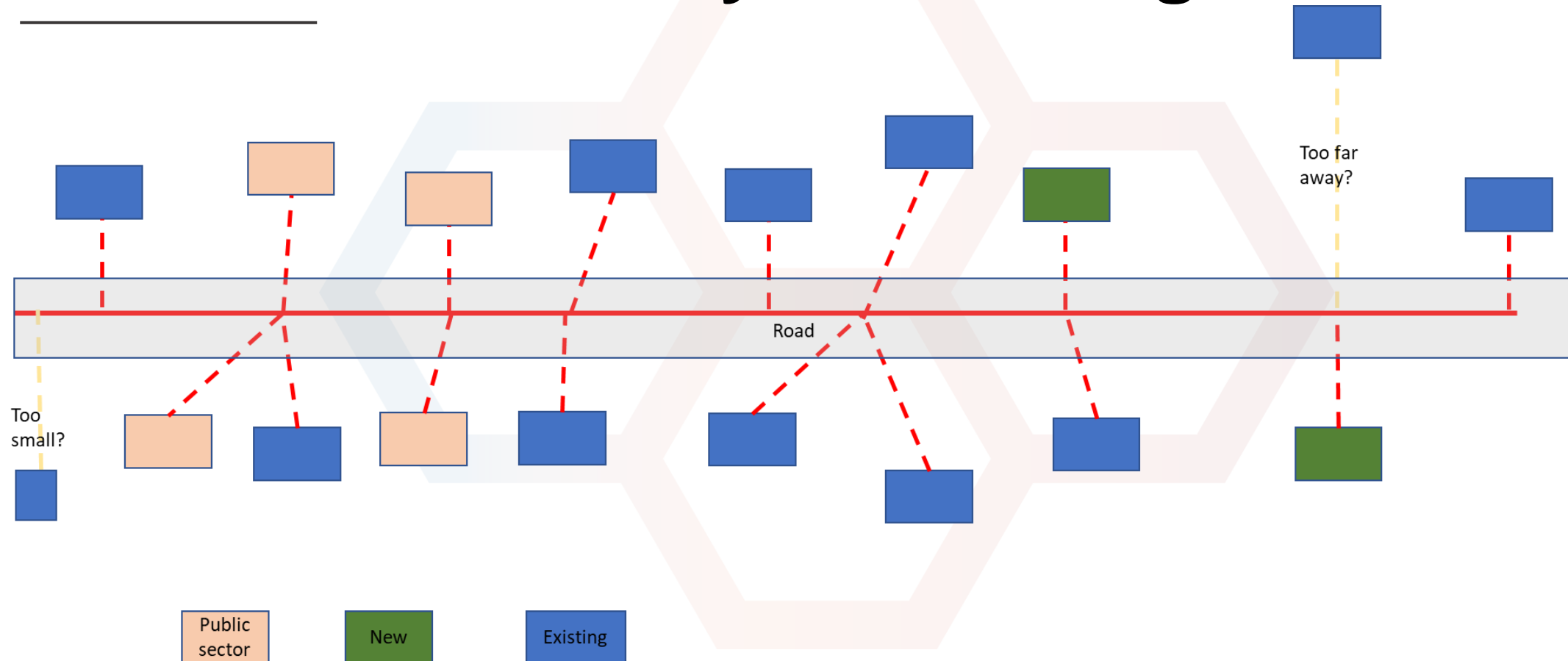
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If we connect nearly all buildings



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Unlocking that potential

- Many observers think zoning and compulsion are vital to drive transformation, providing
 - Demand certainty
 - Appropriate powers
- Potential for obligation for:
 - Customers to connect to the network
 - Sources to supply heat to the network
 - Network to supply heat to customers
- These all make schemes more investable.
- It also means new opportunities could be unlocked sooner.



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Process

- Define a zone
- Identify local heat source
- Select a developer
- Build out the network

Heat network zoning

Closing date: 19 November 2021

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There is lots to resolve...

Consultation closed last week which considered many issues

- Who will do what?
- What powers are needed?
- Which buildings are included and how do some 'opt out'?
- How will customers be protected?
- What regulations and who regulates?
- Who will pay for what?

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Building on HNIP: Creating a self-sustaining market

The Heat Networks Investment Project (HNIP) is a major Government project which is investing up to £320m of capital funding in heat network projects, leveraging more investment.

The aims:

1. Increase the volume of strategic, optimised and low-carbon heat networks built through provision of central Government funding which will draw in significant additional investment;
2. Improve the quality of heat networks that meet local infrastructure and consumer needs; and
3. Build the capability of project sponsors and the supply chain to develop heat networks of the right type and quality.

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And its working...

- Total CAPEX of schemes awarded HNIP funding exceed £600 million
- These heat networks will expand and / or decarbonise thousands of homes and hundreds of non-domestic buildings over the next 15 years
- Significant carbon savings to be realised
- Over £250 million has been offered by HNIP* so far

* subject to funding agreements and conditions being met

Some of the schemes that have been awarded funding



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Low carbon solutions already being deployed



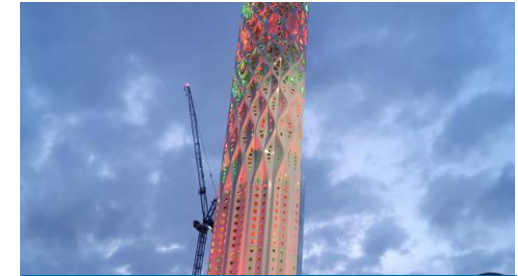
Energy from Waste -
Enfield



Mine Energy – South
Seaham



Energy from Waste -
Leeds



Gas CHP – Manchester



Ground Source Heat
Pumps – Cambridgeshire



Air Source Heat Pumps –
Solihull



Energy from Waste – SE
London



Mine Energy – Gateshead

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Unlocking further development

Heat networks are expandable. They support new housing / commercial developments in addition to existing properties enabling further growth and regeneration.

Could form the seed of Heat Network Zones

35,000

New Direct Jobs

Heat Networks
Industry Council

The heat networks industry can play a big role in helping the UK reach our net zero carbon targets and at the same time attract up to £30-50bn investment into the industry and create around 20-35,000 new direct jobs. We are growing and by 2050, this is our vision.

Substantial Wider Benefits

Upskilling

Estimated demand (according to CITB)

Over 1-4 years: 9,500 additional FTE per year, predominantly specialist and technical skills

Community Engagement

Villages, cities and communities have been coming together to enable ambitious schemes to be developed to tackle local issues e.g. reliance on fossil fuels

Transition to low carbon heat

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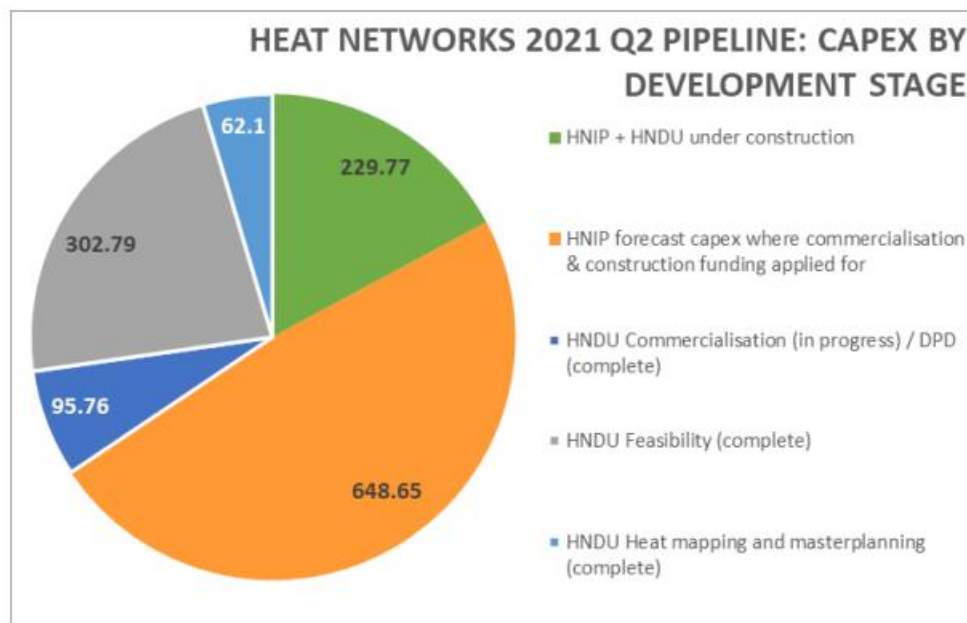
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A growing pipeline with more to come!

2021 Q2 Active Capex Pipeline: £1,339m of which £230m is under construction and £649m relates to HNIP projects for which applications have been made:



Publicly available at: gov.uk/government/publications/hndu-pipeline

Who will be running these networks?

Where will these jobs be?

Its all to play for

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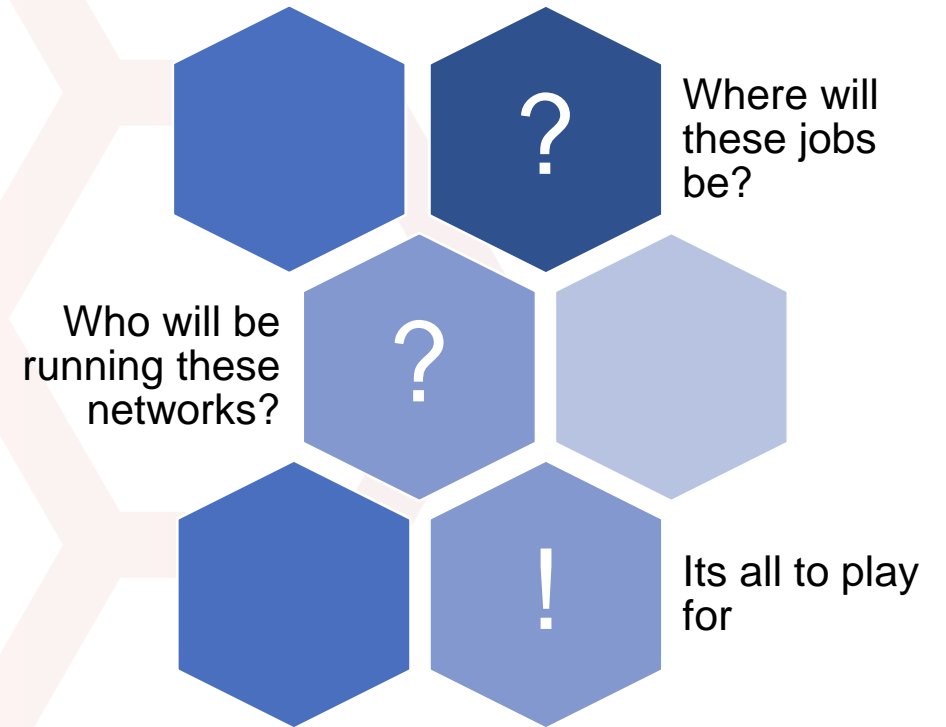
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How big could the market be?

- If zoning leads to success...
 - Investment of £2-3 billion per year could be possible
- Design, pipes, installation, HIUs, meters, controls, maintenance all needed



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Local Government Delivery

Benefits of partnering with Local Authorities:



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PLACE BASED IMPACT INVESTING

*Harry Penberthy
Lauren Bright*

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PLACE BASED IMPACT INVESTING

Levelling Up
communities
through investing for
local, social value
creation.

Definition

“Investments made with the intention to yield appropriate risk-adjusted financial returns as well as positive local impact, with a focus on addressing the needs of specific places to enhance local economic resilience, prosperity and sustainable development.”



Place-Based Impact Investment Forum

Mobilising capital for local
real-economy needs



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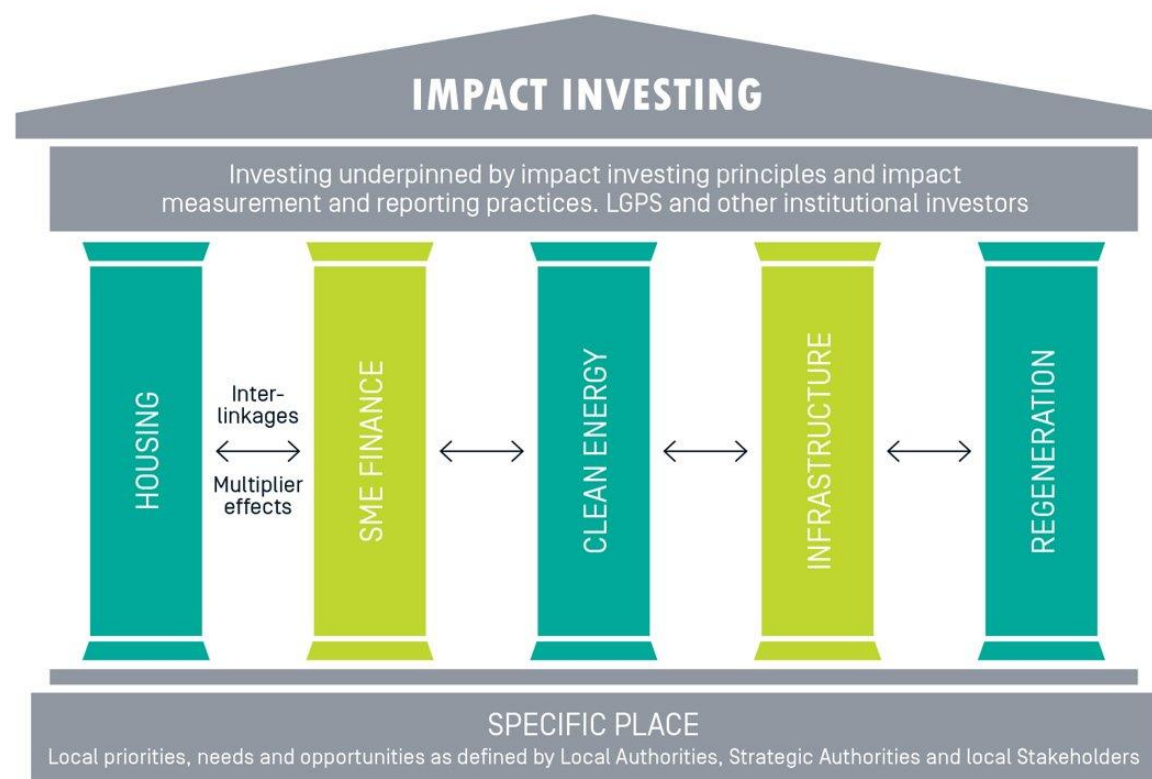


PLACE BASED IMPACT INVESTING

Start with place:

Impact investment is calibrated to local priorities and objectives set out in economic development plans

The Architecture of Place-Based Impact Investing



Pillars equate to Asset Classes and Policy Domains which offer investable opportunities (financial returns) that align with positive social outcomes – inclusion and sustainability (social returns)

Source: The Good Economy.

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PLACE BASED IMPACT INVESTING

Characteristics of PBII

The five traits that define and distinguish Place Based Impact Investing as an investment approach:



1 Impact intentionality (In response to the holistic needs of a community)



2 Definition of place



3 Stakeholder engagement



4 Impact measurement, management and reporting



5 Collaboration

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Benefits of District Heating perfectly align with the aims and objectives of PBII

-
- ENERGY CENTRES**
FUEL/TECHNOLOGIES
PRODUCING HEAT/POWER
CONSUMING AND POTENTIALLY ALSO POWER
- GRID BALANCING
- PRIVATE WIRE SELLING ELECTRICITY
- COMBINED HEAT AND POWER (CHP)**
Gas, Biomass, Energy from Waste, Geothermal, Nuclear, Fuel Cells
- WASTE AND RECOVERED HEATING AND COOLING**
Heat Pumps (Water, Air, Ground), Industrial Processes, Mine Water, Geothermal, London Underground, Sewerage, Cooling Processes
- HEATING AND COOLING GENERATION**
Boilers (Gas, Oil, Biomass, Biogas, Electric), Solar (Thermal, PV), Chillers
- THERMAL STORAGE
- PUBLIC BUILDINGS (e.g. SCHOOLS)
- OFFICE AND SHOPPING CENTRES
- COMMERCIAL GREENHOUSE
- HOUSES
- RETAIL PARK
- CAMPUS (e.g. UNIVERSITY)
- CHILLED OR HOT WATER ON DEMAND
- OFF GAS GRID
- PLANT
- HOSPITAL
- INDUSTRY AND MANUFACTURING
- SWIMMING POOL

PLACE BASED IMPACT INVESTING

"PBII is a force for good that can contribute to the long-term challenge of making inclusive and sustainable development a reality in all areas of the UK."

www.impactinvest.org.uk

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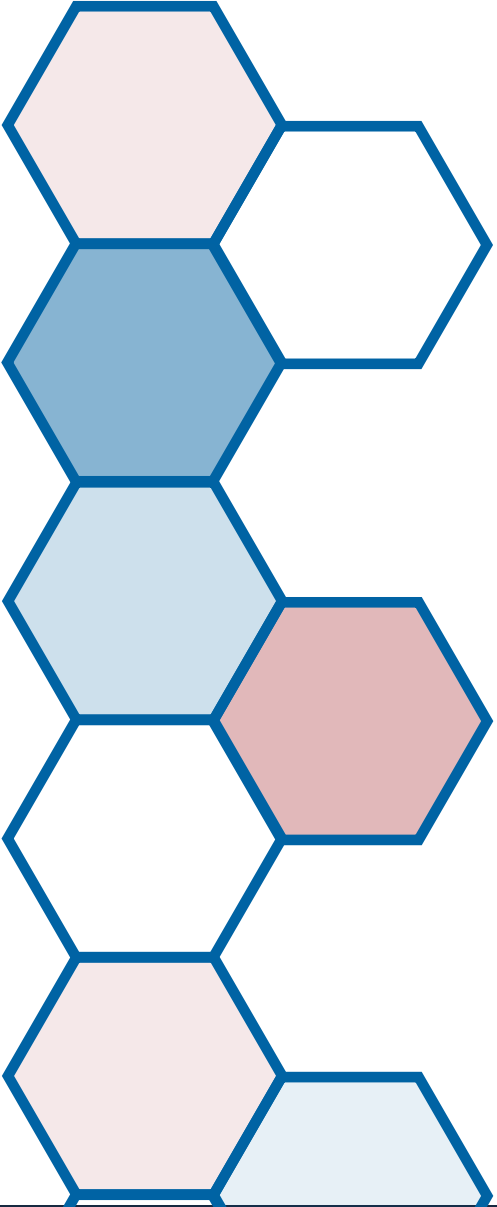
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Access opportunities via BHIVE

Richard Turner

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What is **BHIVE**?

- **PCR-compliant** procurement platform – **Dynamic Purchasing System**
- **Potential value of £150m**
- Allows **public sector heat network owners/developers** in **England and Wales** to procure **asset finance, equity investment and equity investment-related services** for their heat network projects
- **Separate from the Heat Network Investment Project** and is designed to work alongside HNIP and the **Green Heat Network Fund**
- Runs to **March 2023** but option for BEIS to extend for up to 2 years
- **BEIS** is the Administering Authority. Triple Point manage the DPS as agent

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Why have we established BHIVE?

- Market growth will require **significant private capital**
- Supports the delivery of a **self-sustaining heat network market**
 - Standardised Due Diligence Set (SDDS)
 - Sales, Operations and Maintenance Set (SOMS)
- Efficient way for:
 - public sector bodies to **access private capital and skills** through an PCR compliant platform
 - funders to **access opportunities**

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Who can use it?

- Available to all **Public Sector Bodies in England and Wales**. This includes:
 - Central Government Departments, Arm's Length Bodies and Executive Agencies
 - Non-Departmental Public Bodies
 - Devolved administrations
 - Local Authorities
 - NHS bodies
 - Universities, colleges, schools, further education providers
- **Existing** heat networks – opportunity to raise/re-cycle capital
- Heat network **extensions** – opportunity to raise capital to fund major expansion
- **New** networks – opportunity to access development skills and funding for new networks

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Benefits of BHIVE



ACCESSIBILITY

BHIVE will provide an efficient route for Contracting Authorities to access funding and funding-related services for their heat network projects



FLEXIBILITY

BHIVE will provide a range of skills and experience alongside funding, and will potentially facilitate the creation of a secondary investment market



STANDARDISATION

BHIVE will help to reduce the timescales and costs of funder due diligence and approvals and make for a more efficient fund raising process



VALUE FOR MONEY

BHIVE will provide the means for Contracting Authorities to access the most economically advantageous terms for their project

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(2020/S 240-594964)

1 King William Street
London EC4N 7AF

T: +44 (0)20 7201 8990
E: BHIVE@tp-heatnetworks.org



Further guidance:

- **BHIVE Customer Guidance:**

- <https://tp-heatnetworks.org/bhive/>

- **Standardised Due Diligence Set:**

- *Using the Standardised Due Diligence Set* (Annex 5 of BHIVE Customer Guidance)
 - *Standardised Due Diligence Set* - <https://www.gov.uk/government/publications/standardised-due-diligence-set-sdds-for-heat-networks>
 - Provides an overview of how financial investors carry out due diligence to identify and assess risks in heat network projects

Administering Authority
BEIS

Managing Agent
Triple Point Investment
Management LLP

Duration
Ending 31st March 2023

Further Information
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