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# Government support for heat networks – an update

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# Why heat networks in the UK?

- Lowest cost low carbon heat generally comes at scale – need a network to deliver the heat, particularly in urban areas
- Committee on Climate Change (CCC) central scenario for the 5th carbon budget shows heat networks serving 18% of buildings heat demand in 2050 (81TWh), saving 15.1MtCO<sub>2</sub>e/year
- Clean Growth Strategy analysis shows heat networks indicates 17-24% of buildings heat by 2050 in a range of illustrative scenarios
- An 8-10% annual growth rate is required even to meet the lower end of these trajectories (from 2% growth rates today).

## Technology mix in the Central scenario

Heat delivered by DH, by technology (TWh)

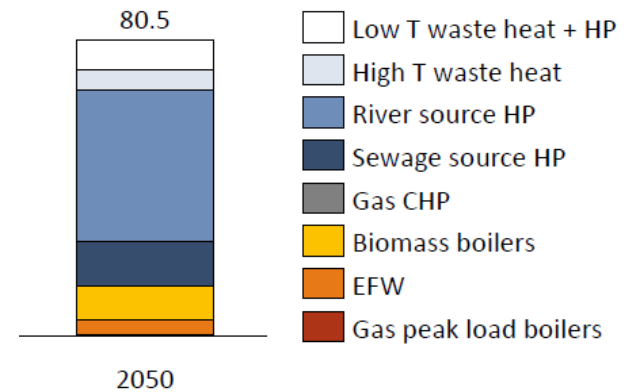
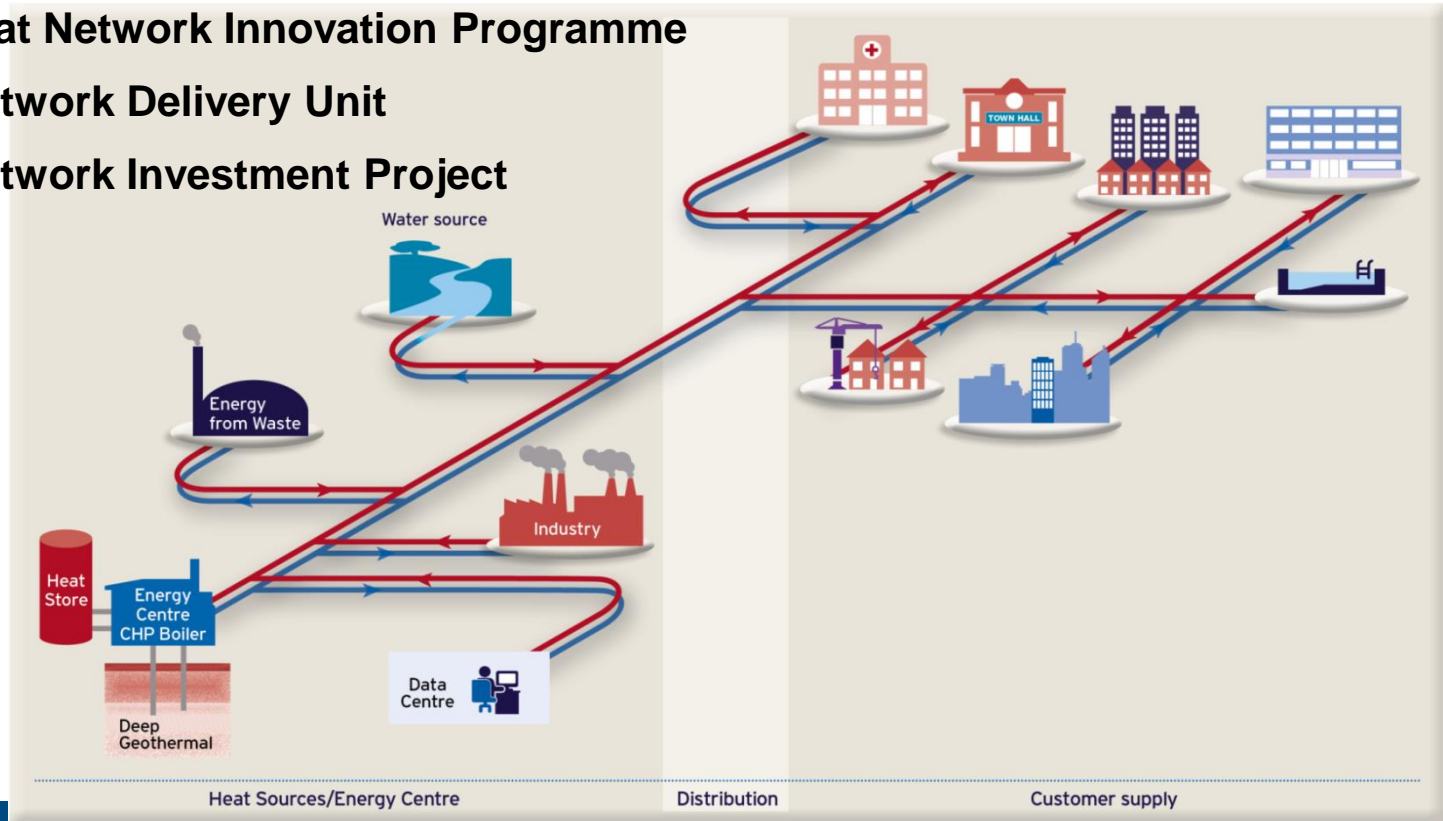


Fig 1. Modelling for CCC by Element Energy

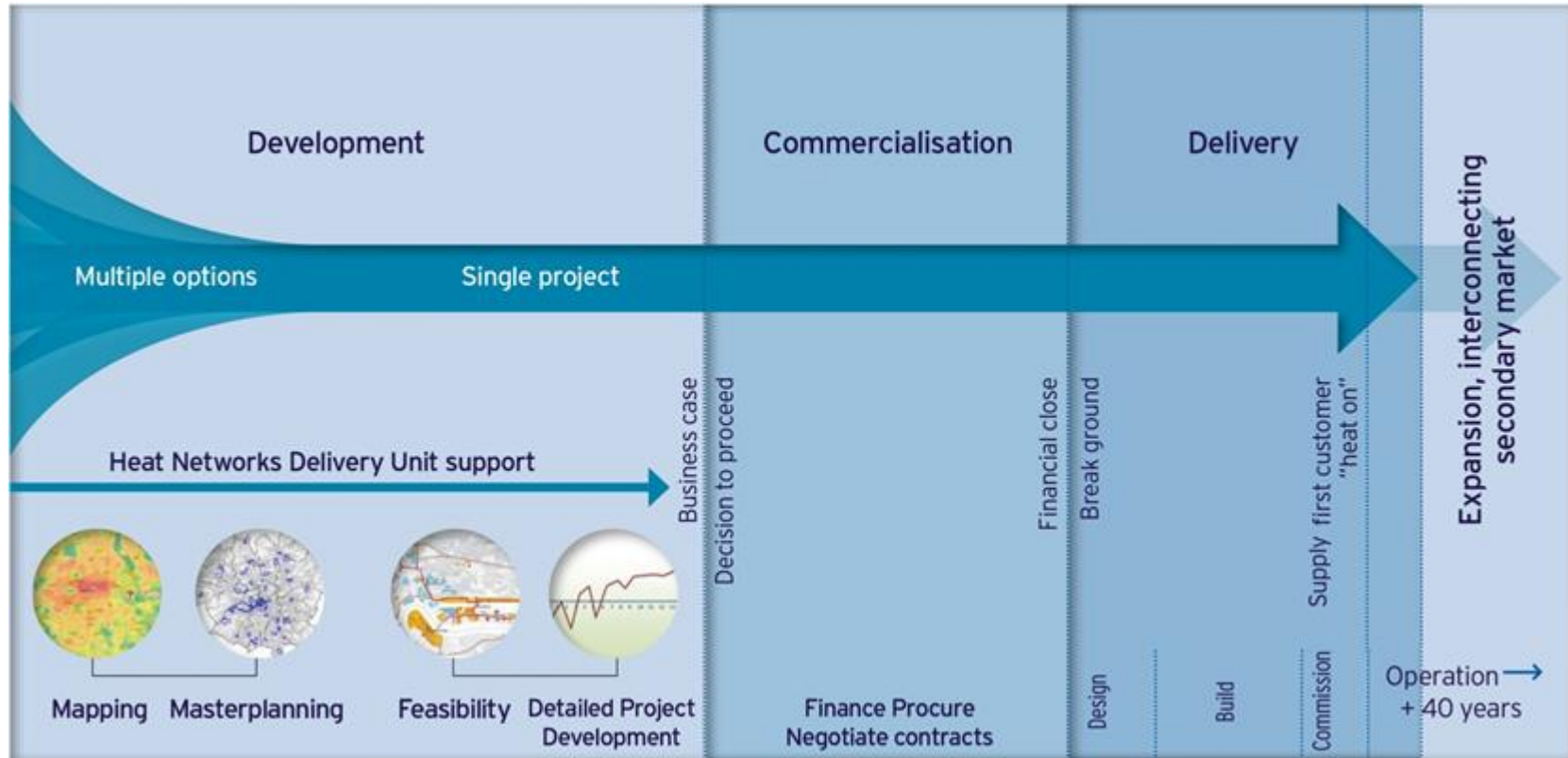
- Today: Over 17,000 communal and district heating systems have notified under the EED regs, supplying around 10TWh per year (around 2% buildings heat)

# Government support: the story so far

- Industry led schemes: Heat Trust and technical Code of Practice
- Heat Metering & Billing Regulations
- £7m Heat Network Innovation Programme
- Heat Network Delivery Unit
- Heat Network Investment Project



# Heat Network Development & Delivery



**Certain types of funding and support are available across the project life cycle, subject to eligibility requirements: HNDU and/or HNIP**

# Heat Networks Delivery Unit: Developing a pipeline of projects for investment

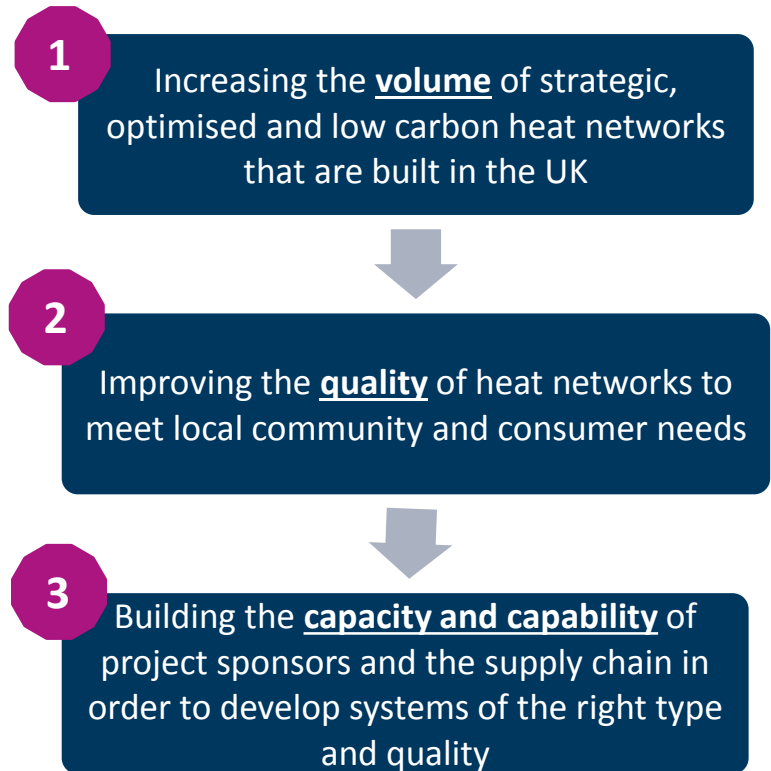
- HNDU is a team of specialists providing guidance to local authorities to support the deployment of heat networks
- To date £16m worth of funding for feasibility and pre-build development has been allocated across since 2013
- HNDU is now supporting over 200 heat projects in 131 local authorities
- Potential schemes ranging from £2m to £60m+, new build and retrofit, public and private sector connections
- Technology agnostic so a variety of heat sources
- Common IRR varies between 0-15% with majority at 5-9%.



# Heat Networks Investment Project: Helping to create a self-sustaining heat networks market

- Our aim is to support development of good quality heat networks through provision of £320m of gap funding by 2021, leveraging around £1bn of private and wider capital investment.
- HNIP has so far generated significant interest in the UK market, including from private equity, pension funds, energy suppliers, major construction firms and large European heat providers.
- Pilot scheme run in 2016-17 for public sector, provided £24m of funding for nine projects
- Plan to launch main scheme in autumn 2018

We aim to do this in three main ways:

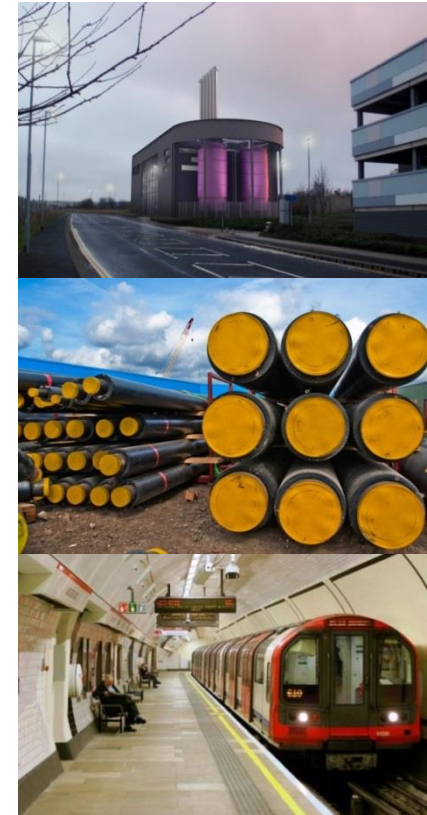


# HNIP: Eligibility Criteria

In the pilot, funding was provided for generation and/or distribution systems (plus secondary & tertiary systems in some circumstances) that met following criteria:

1. Projects must connect two or more buildings
2. There must be no technical or contractual impediment to future expansion / interconnection of the network
3. The heat source must be >50% renewable energy, 50% recovered heat, 75% CHP **or** 50% combination heat generated over the lifetime of the primary generation source
4. Projects must meet Heat Networks (Metering and Billing) Regulations 2014
5. Projects must meet Combined Heat & Power (CHP) Quality Assurance standards
6. Projects must be a member of Heat Trust or equivalent consumer protection scheme

**Note: under review for the main scheme**



# HNIP: Successful pilot projects

Recipient	Project Name	Amount Awarded	Technology	Project type
Sheffield City Council	Sheffield District Energy Network development	£5.73m (£2.23m grant & £3.5m loan)	EFW/Biomass power plant	Expansion and interconnection of two heat networks
Camden Council	Somers Town Energy (Phase 2)	£1.05m grant	Gas CHP	Expansion of an existing heat network
Manchester City Council	Manchester Civic Quarter Heat Network	£2.87m grant	Gas CHP	New heat network
Colchester Borough Council	Colchester Northern Gateway	£3.51m grant	Heat Pump	New heat network
London Borough of Waltham Forest	Wood Street South	£1m grant	Gas CHP	New heat network
London Borough of Barking & Dagenham	Becontree	£1.08m grant	Gas Boiler	New heat network
Westminster City Council	Church Street District Heating Scheme	£2.56m grant	Gas CHP	New heat network
Crawley Borough Council	Crawley Town Centre Heat Network	£1.4m grant	Biomass & Gas CHP	New heat network
Manchester City Council	St Johns heat network	£5m loan	Gas CHP	New heat network
<b>Total</b>		<b>£24.21m</b>		



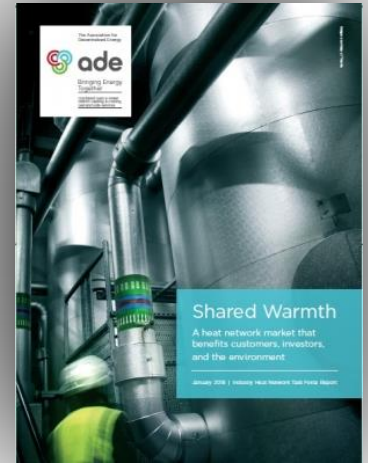
# HNIP: What is the main scheme likely to offer?

- **Applicant types:** can apply directly for capital
  - **Pilot** public sector
  - **Main scheme** + private and third sector likely
- **Funding mechanisms:**
  - **Pilot** loans and grants
  - **Main scheme** examining combination of grants & different types of loan products
- **Application assessment / compliance requirements:**
  - May alter in light of learning from the pilot
- **Delivery body:**
  - **Pilot** application processing and financial administration
  - **Main scheme full** examining wider functions: including scoring & bringing in additional funds



# Next steps for Government

- Further interventions may be necessary beyond HNIP capital to help deliver sustainable and subsidy-free market growth.
- Following publication of recommendations from an industry task force in Jan 2018 we will examine the measures required to put in place a long term market framework that reduces risk for investors and protects customers.
- In developing our approach we will work together with key stakeholder groups and will build on the results of the following key sources of evidence:
  - The **BEIS heat networks consumer survey** (Dec 2017) which received over 5,000 responses
  - the **ADE Industry Taskforce** (Jan 2018) recommendations “Shared Warmth”
  - the **CMA market study into domestic heat networks** which is due to report in Dec 2018



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