Development of Heat Networks in the UK

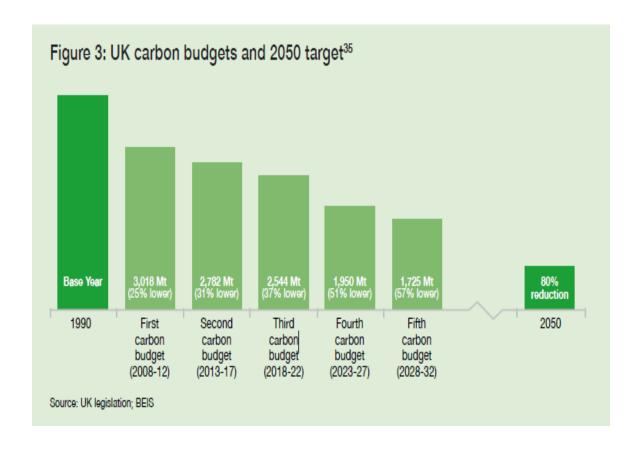
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Decarbonisation of Heat



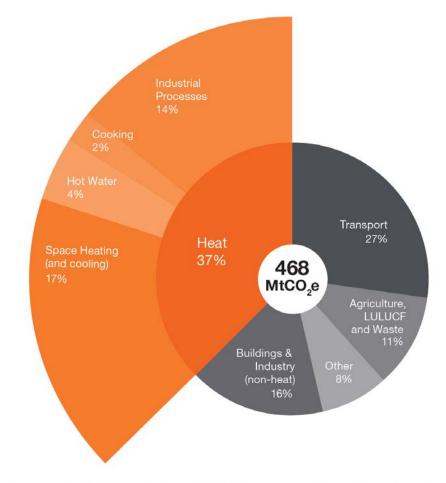


Figure 2.1 UK emissions in 2016 across different sectors⁴

(1))) Department for Business, Energy & Industrial Styrie

Decarbonisation of Heat

But...

Net Zero by 2050



Heat Networks have a key role to play in decarbonising heat

- The Clean Growth Strategy set out the vital role that heat networks will play in the long term decarbonisation of heat.
- Heat networks are expected to play a significant role in decarbonistation of heat.



Heat Networks have a key role...

Benefits of Heat Networks:

- A no regrets option which save carbon, now and in the future
- Can reduce consumer bills
- Offer energy system flexibility and resilience
- Cost effective, supports local growth and regeneration and offers an attractive investment opportunity

Government support – the story so far

Industry led schemes: Heat Trust and technical Code of Practice

Heat Metering & Billing Regulations

Heat Networks Delivery Unit (HNDU)

Heat Networks Investment Project (HNIP)





STATUTORY INSTRUMENTS

2014 No. 3120

ENERGY

The Heat Network (Metering and Billing) Regulations 2014

Made - - - - 20th November 2014

Laid before Parliament 26th November 2014

Coming into force in accordance with regulation 1

These Regulations are made by the Secretary of State, being a Minister designated for the purposes of section 2(2) of the European Communities Act 1972(a) in relation to energy and energy sources(b) in exercise of the powers conferred by section 2(2) of that Act.

PART 1

Introductory

Citation and commencement

 1.—(1) These Regulations may be cited as the Heat Network (Metering and Billing) Regulations 2014.

(2) Except as provided in paragraphs (3) and (4), these Regulations come into force on 18th December 2014.

(3) Regulation 9 comes into force on 31st December 2014.

(4) Regulations 4(4) and 6 come into force on 31st December 2016

Interpretation

In these Regulations—

"authorised person" means-

(a) the Secretary of State,

(b) the Scottish Ministers, or(c) a person authorised under regulation 10(2);

"billing" means the issuing of a bill;

"bill" means a demand for payment from a heat supplier to a final customer for the supply of

heating, cooling or hot water by that heat supplier;

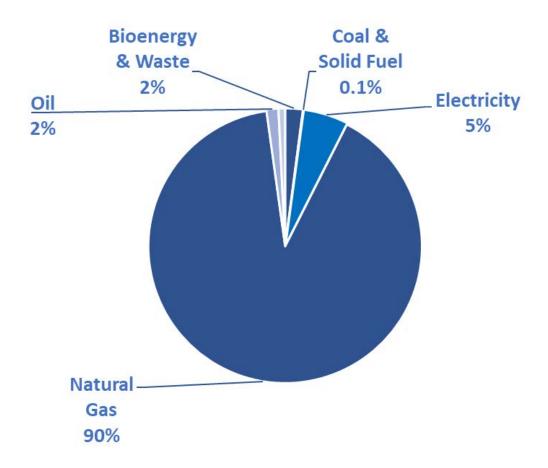
(a) 1972 c.68; section 2(2) was amended by the Legislative and Regulatory Reform Act 2006 (c.51), section 27(1)(a) and the European Union (Amendment) Act 2008, section 3(3), Schedule, Part 1.



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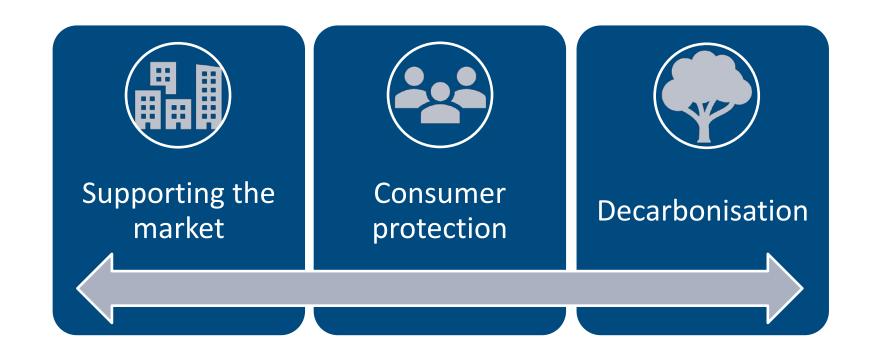
& Industrial Strategy

Decarbonisation of Heat Networks



- To meet net-zero we know that the heat network sector will have to grow and to decarbonise over the period to 2050
- The Future Homes Standard ensure that new build homes from 2025 are future-proofed with low carbon heating

Heat Network Market Framework





Supporting market growth & investment

Building HNs' reputation and regulatory certainty

- Introduction of regulatory framework equivalent to other critical infrastructure markets
- Driving up poor performing networks' outcomes

Reducing development burden and risks

- Consideration of rights and powers equivalent to other utilities
- Developing standardised project documentation and guidance

Improving investor understanding of costs and returns

- Publishing whole life cost of heat tool
- Sharing anonymised project data and learning from HNIP

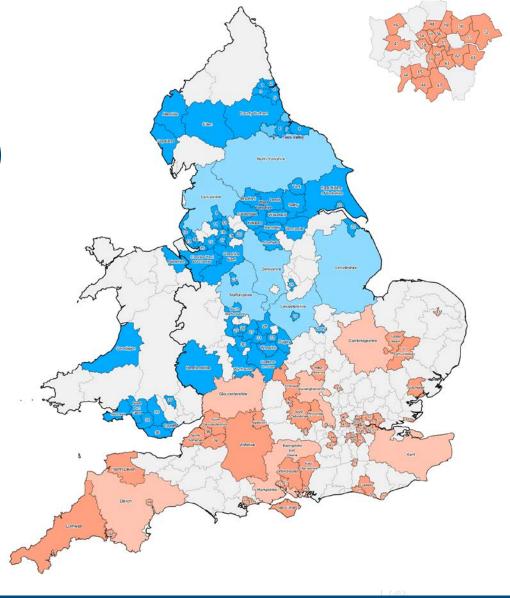
Supporting heat networks as local solution

- Promoting local development of heat (network) zones where appropriate
- How to ensure Building Regulations enable heat networks rather than act as barrier SAP and Part L

Buanasa, Energy & Industrial Strategy

Heat Networks Delivery Unit (HNDU)

- 9 rounds of <u>development</u> funding
- ~£20m in grants
- 50-67% funding available
- 140+ Local Authorities
- 220+ projects/ 500+ opportunities





How and who can HNDU help?

- Local Authorities in England or Wales
- Grant funding up to 67% of total external costs (100% for PM)
- All development stages up to procurement
- Funding objectives:
 - reduce carbon emissions v counterfactual
 - future proof for further decarbonisation

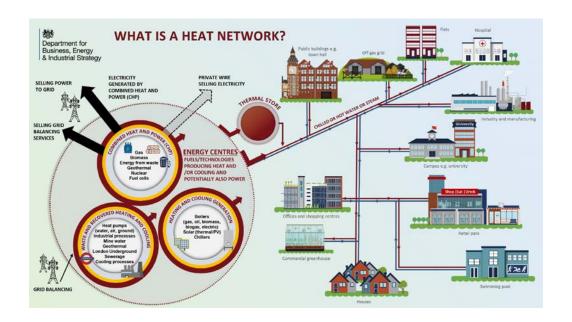


But it's not just about the money

Supported projects also receive guidance from HNDU

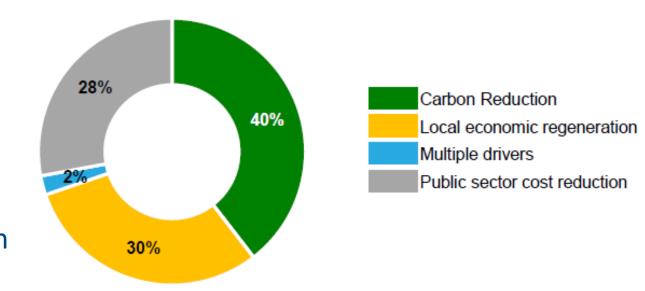
HNDU Project Leads have the following expertise:

- Project scoping and management
- Engineering and technical standards
- Consumer protection
- Governance models and contractual structures
- Financial sources and structuring
- Policy compliance and opportunities
- Public sector procurement
- Managing stakeholders
- Risk management



Why LA's are key to the delivery of Heat Networks & low carbon heat

- Key local property asset owners
- Local relationships with key stakeholders
- They have a responsibility for and understanding of their local areas
- They are looking at decarbonisation



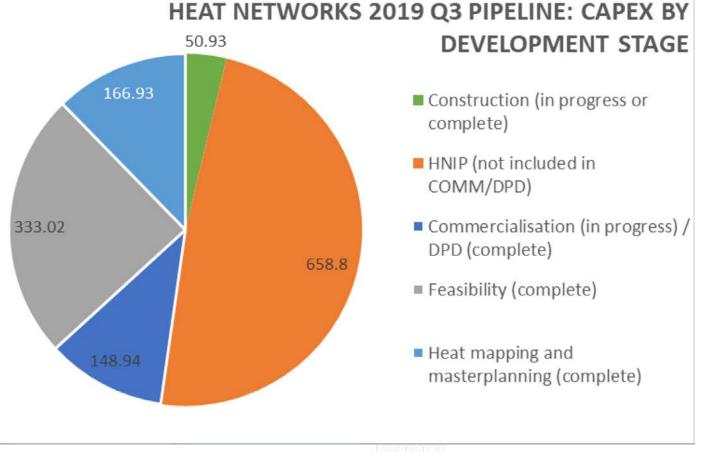
HEAT NETWORKS INVESTMENT PROJECT (HNIP) HEAT NETWORKS DELIVERY UNIT (HNDU) ENERGY MAPPING & DETAILED PROJECT TECHNO-ECONOMIC FEASIBILITY COMMERCIALISATION **CONSTRUCTION OPERATION** MASTERPLANNING DEVELOPMENT Preferred Option(s) Multiple Options Development of Heat Network ITT specifications Financial Close – Break Ground Operate & Maintain. **BASELINE ACTIVITIES** Possible Short- and long-term strategic heat Detailed technical appraisal and Commercial modelling, legal Finance, procure, **Build & Commission** refinancing, network masterplanning economic viability assessment structuring, financial modelling, negotiate contracts acquisitions, procurement strategy, business case aggregation, unbundling **EXTERNAL PROJECT MANAGEMENT SUPPORT**

ADDITIONAL ACTIVITIES - Further technical de-risking, detailed design and/or work required to meet local planning conditions



Heat Network Pipeline

- 2019 Q3 Capex pipeline
- £1.358m total
- £51m is under construction
- £658.8 of HNIP projects



Department for Business, Energy 3. Industrial Stratess



HNDU actively supported projects

Region	At Funding / Tender	HNDU Active Support		Total
North East		5	1	6
North West	12	2	12	24
Yorkshire and The Humber	8	3	6	14
East Midlands	1	L	1	2
West Midlands	3	3	6	9
East of England	9)	2	11
London	8	3	2	10
South East	8	3	2	10
South West	14	1	6	20
Wales	3	3	3	6
Tatal	7.	. 1	44	442

Total	71	41	112
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Business, Energy & Industrial Strategy

Mine Water projects supported by HNDU

Name of Scheme	Local Authority	Region	Development Stage
Seaham Garden Village	County Durham	North East	Feasibility
Sunderland	Sunderland	North East	DPD (option)
Gateshead Birtley	Gateshead	North East	Feasibility
Oldham Town Centre	Oldham	North West	Feasibility
Wigan Town Centre	Wigan	North West	Feasibility (option)
Barnsley (6 opportunities ID)	Barnsley	North West	HM&MP
Keele University	Newcastle-u-Lyme	West Midlands	Feasibility (option)
Coventry	Coventry	West Midlands	Feasibility
Bridgend	Bridgend	Wales	Feasibility
Ebbw Vale	Blaenau Gwent	Wales	Feasibility
Bristol (across city)	Bristol	South West	Feasibility

HNDU applicants?

Brett Hagen Heat Networks Delivery Unit, BEIS

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Round 9

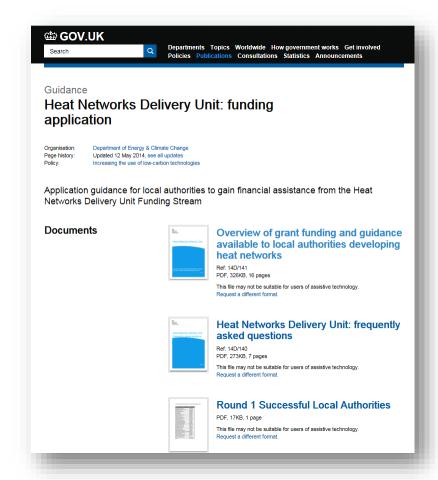
Round 9 is now closed until April 2020!

For further information please contact:

Heat Networks Delivery Unit

E: hndu@beis.gov.uk

T: 0300 068 8125



Top tips for a great application

- Buy in from all levels within your LA
- Clear objectives
- Project management capacity has been considered
- Please ensure all required documents are included
- Get in touch if you have any queries



HNDU Stages

