

CBx RESEARCH

LOW CARBON HEAT NETWORKS

Phase II

BACKGROUND

Heat networks have the potential to supply cost effective low carbon heat to households and businesses. The UK Government has pledged £320m of capital support to heat network investment in the UK. How much of this funding should be diverted to improve existing networks?

Phase I climaxed in the "Low Carbon Heat Networks – How to optimise an existing system for improving performance" Report. This identifies post-implementation measures that various stakeholders can implement if they have an underperforming heat network across technical, contractual and behaviour areas.

The report received positive feedback from industry and a CBx Roundtable resulted in furthering the discussion on existing networks and need to influence policy, creating Phase II.

PHASE II – AIMS

1. To create an evidence-based user toolkit on narrowing the performance gap between the design and operation of heat networks.
2. To influence policy to support the efficient design and optimal operation of existing heat networks, benefiting all stakeholders.
3. To help optimise the efficiency of heat networks, which can help bring online more heat networks and so mitigate the effects of traditional carbon-based energy.

PHASE II - Overview

Phase II intends to create an evidence-based user toolkit which is supported by case studies, targeted training sessions, and cross-collaborative workshops.

Four live **case studies** will provide quantitative and qualitative data from the application of Phase I recommendations, and capture pre- and post-implementation fixes data. This data could not only support the current research findings but provide greater understanding for clients and developers of networks going forward.

CBx will conduct **workshops** to facilitate collaboration and understanding between the needs of stakeholders, and three **targeted training** sessions led by industry experts based around the post-implementation fixes areas of Technical, Contractual and Behavioural fixes.

Moreover, CBx aims to **influence policy** to support the efficient design and optimal operation of heat networks to the benefit of all stakeholders. This can involve application at planning policy level to incentivise the correct approach.

CBxchange believes that this research project has the potential to not only improve energy and cost efficiencies for operators and owners, bring online more network but also to help reach government heat and renewable energy targets.

WHO IS CBx?

CBx is for organisations and individuals involved in the design, engineering and development stage through to operational management of properties. We are supported by over 100,000 of the UK's leading property and building energy performance organisations.



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PROGRAMME

The heat network research will kick off April 2017 and will run for 12 months. Members will attend a kick off meeting and then one meeting every quarter to discuss progress. Meetings with individuals will be necessary to talk specifically about data and to perform an assessment on heat networks.

1. CASE STUDIES

These case studies aim support the Phase I findings in practise and provide greater understanding for clients and developers of networks going forward. A minimum of 6 months – 1 year of data collection pre-and post-implementation is desired. However, this will depend on the amount of existing data that is available to assess and the timeline between the fixes implementation.

Key points include:

1. Collection of data and information related to the design and performance of the existing heat network
2. Evaluation the performance of heat network
3. Identification measures needed to improve the performance and operation
4. Developing costed implementation packages and KPIs
5. Implementing recommendations
6. Measuring and evaluate against KPIs
7. Providing a report of results

2. TRAINING

Three training sessions to cover technical, contractual and behavioural post-implementation fixes. This area has had interest from Phase I participants both in terms of Training Leaders and from Training attendees. This area is suited to those who have limited knowledge of heat networks – good practice; good design, monitoring and evaluation (POE), operation and maintenance, contracting (contractual challenges/benefits/solutions).

3. WORKSHOPS

The aim of the workshops are to bring together parties across the life cycle of a heat network involved in the funding, design, operation, maintenance and use of specific heat networks. It was found that often there is a lack of communications and understanding between heat network roles. Workshops will be designed to discuss a set of issues with the aim to generate a set of solutions which can be actioned and assessed. In facilitating cross collaboration, there should be a wider awareness of needs, challenges and benefits.

Phase II Objectives

1. To develop case studies implementing Phase I recommendations aimed at improving heat network performance.
2. To collect pre- and post- quantitative and qualitative data from district and communal heat network case studies.
3. To facilitate cross collaboration and understanding between stakeholders across the lifecycle of networks through workshops
4. To provide tailored training sessions based on the three core recommendations of Technical, Contractual and Behavioural fixes.

Audience:

This project aims to bridge the information gap experienced by stakeholders across the life cycle of heat networks, including:

- Architects
- Developers
- Engineers
- Owners and Operators
- Construction
- Technology Suppliers
- End-Users
- Developers
- Housing Associations
- Local authorities
- Energy Services Companies
- Residents
- Community groups

Get Involved:

Do you have an existing network you wish to optimise; expertise in technical, contractual, or behavioural areas; or wish to know more information, please contact CBx Programme Manager, Emma Bleach at emma@cbxchange.org or call on 01344 388 014.

"Heat networks are for the future. They're going to be a key component of how the UK decarbonises its heat.... This [CBx's] report asks a new and exciting question about all these existing networks... can be a real catalyst for this work, and I warmly commend it"

Dr Alan Whitehead, MP Southampton Test and Shadow Minister for Energy & Climate Change