

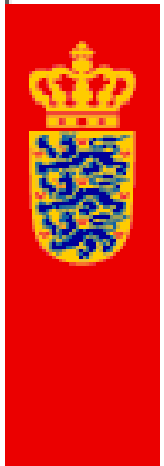
What do we want?

HEAT NETWORKS!

When do we want them?

NOW!

The PipeCo Concept for the UK Heat Networks market



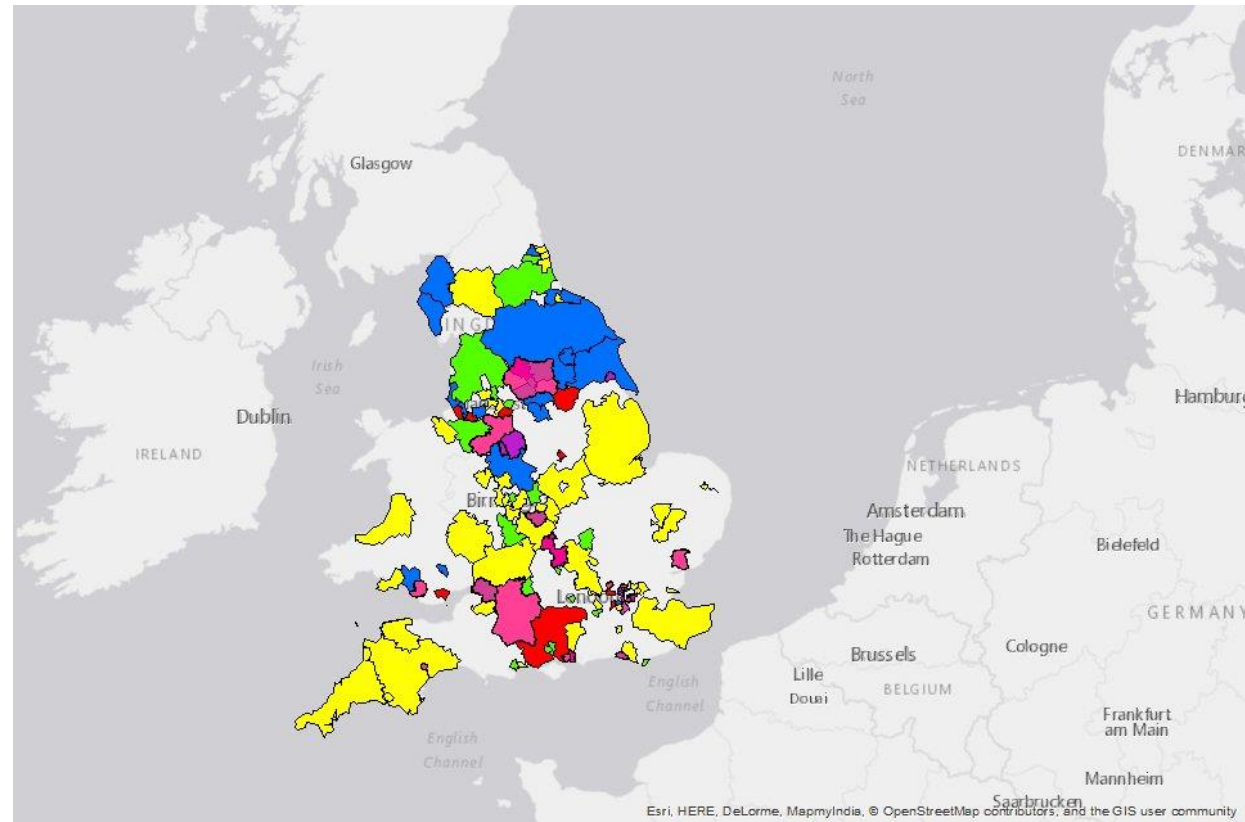
Ian Manders, Danish Embassy London & Dr Tanja Groth, the
Carbon Trust



Market overview

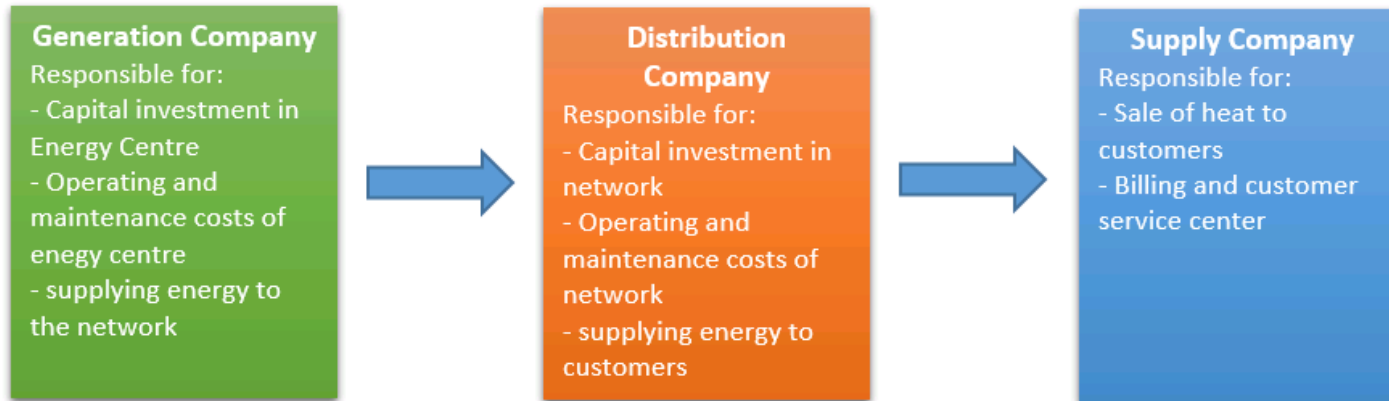
Map of successful
HNDU rounds 1-5
Local Authorities

- › Round 1 - red.
- › Round 2 - blue.
- › Round 3 - green.
- › Round 4 - yellow.
- › Round 5 – pink.



The PipeCo as an investment concept

› The CIBSE Heat Networks Code of Practice



Ownership options

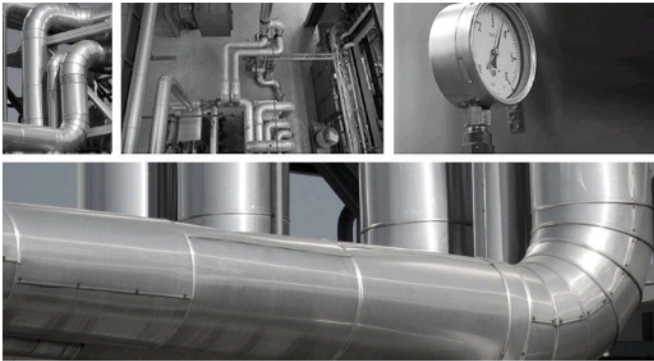
Company	Generation Company		Distribution Company		Supply Company
	Ownership	Operator	Ownership	Operator	Operator
A	Commercial	Commercial	Commercial	Commercial	Commercial
B1	Municipal	Municipal	Municipal	Municipal	Municipal
B2	Municipal	Commercial	Municipal	Commercial	Municipal
C	Joint Venture	Joint Venture	Joint Venture	Joint Venture	Joint Venture
D1	Commercial	Commercial	Municipal	Municipal	Commercial
D2	Commercial	Commercial	Municipal	Municipal	Municipal
E1	Municipal	Municipal	Commercial	Commercial	Commercial
E2	Municipal	Municipal	Commercial	Commercial	Municipal
F	Community	Community	Community	Community	Community

How does the PipeCo connect heat networks with investors?

The PipeCo: an alternate approach to financing heat networks

29 February 2016 | [Viewpoint](#)

District heating is booming in the UK, but to pose a serious alternative to the gas network a different funding model is needed, according to Ian Manders and Tanja Groth



The UK Chancellor's Autumn Statement in November last year **dedicated over £300 million of funding for 200 heat networks** which are expected to generate enough heat to supply the equivalent of over 400,000 homes and leverage £2 billion of private capital investment.

While the new government funding is welcome, much more must be done to make heat networks a viable alternative to the UK default of individual boilers fed by the gas distribution network. Unfortunately, the history of district heating in the UK has been a cycle of mini-boom and bust as various government grant schemes were initiated and then withdrawn. In our present political climate, to achieve district heating at scale a new financial model is required which is viable without long-term government handouts.

In the UK the term “*district heating*” has been a catch-all description ranging from two or more buildings sharing the same heat source, up to city-wide distribution systems with hundreds of properties such as already exists in Sheffield, Birmingham, Southampton and Woking. District heating at scale is more commonplace in eastern and northern European cities and heat supply may be regulated in a manner similar to other energy utilities.


The situation in the UK is different. Unregulated and under the radar, UK district heating scheme start-ups are small and considered as discrete projects, often based on a housing estate, a campus or a group of public buildings.

How does a Heat Network work?

A heat network consists of two separate assets – distribution (pipes) and generation (energy centre). In Denmark, where district heating supplies over 60 percent of household heating, local authorities and communities own 56 percent of all generation assets and 91 percent of all distribution assets with commercial ownership of the remainder.

The split in ownership means a mix of low or zero carbon heat generation can be used depending on availability and cost, including heat pumps, waste heat from thermal electricity generation (Combined Heat and Power), combustion of municipal waste and biomass, and ejected heat from industrial processes.

- £2bn is more than the existing players can leverage, especially in the next 5 years
- “Attracting invests at the scale needed remains, however, a challenge, especially at the local level, mainly due to lack of awareness and expertise in small-scale financing (add something on district heating).”
- Slide from Paul Voss presentation - leaked paper on the Energy Union from 2015



Whilst reasonable steps have been taken to ensure that the information contained within this publication is correct, the authors, the Carbon Trust, its agents, contractors and sub-contractors give no warranty and make no representation as to its accuracy and accept no liability for any errors or omissions. All trademarks, service marks and logos in this publication, and copyright in it, are the property of the Carbon Trust (or its licensors). Nothing in this publication shall be construed as granting any licence or right to use or reproduce any of the trademarks, services marks, logos, copyright or any proprietary information in any way without the Carbon Trust's prior written permission. The Carbon Trust enforces infringements of its intellectual property rights to the full extent permitted by law.

The Carbon Trust is a company limited by guarantee and registered in England and Wales under company number 4190230 with its registered office at 4th Floor Dorset House, Stamford Street, London SE1 9NT.

Published in the UK: 2016.

© The Carbon Trust 2016. All rights reserved.