



The UKDEA

Response to the

Competition and Markets Authority

HEAT NETWORKS MARKET STUDY

12th January 2017

ABOUT THE UK DISTRICT ENERGY ASSOCIATION

The partners, owners and operators of the largest district energy schemes in the UK have aligned themselves in the creation of the UK District Energy Association (UKDEA); with the aim of not only promoting district energy as a means to deliver significant carbon savings, but also to establish a direct link between the Government, GLA and the industry's small market base.

The Association is a not for profit, non-trade association of companies and public sector organisations involved in district energy schemes of all sizes, from community based 'micro district energy' schemes to city wide district heat energy networks. The UKDEA has attracted leading players in the industry with a current membership comprising around 150 organisations from across the sector.

Through Full and Associate membership, the UK District Energy Association's aim is to represent current and potential owners, developers, consumers, partners, operators, product suppliers and interested parties of District Energy schemes throughout the UK.

THE UKDEA RESPONSE TO CMA's Heat Network Market Study

Please find our response overleaf to the questions raised by the CMA

It is important to note that we cannot respond regarding specific schemes but have provided general responses on our understanding of our members schemes and our view of the market

**CMA Questions for Heat Networks Market Study
Modified by UKDEA to aid members understanding/responses**

UKDEA responses are shown below in green

Theme 1: Transparency

1. What information are consumers on your heat networks or those you are involved with given before their decision to buy or rent a property connected to your heat network?

We understand that those members who are heat suppliers provide their customers with an information leaflet, setting out the details of their supply. This is to ensure that they are aware that prior to purchase or rent they full understand that they are connected to a district heating system and in many cases the tariff which is to be used.

2. To what extent are consumers able to assess and act upon information regarding your heat networks or those you are involved with prior to purchasing a property connected to one of your schemes ?

As detailed above we understand that it is common practice amongst our members to provide a customer information leaflet prior to purchase or rent which will provide details of both the fixed and variable tariffs and indication of the expected annual costs for a typical dwelling. If you would like to receive copies of these please let us know and we can speak to specific members.

3. To what extent is information on the costs of heat supplied from your networks or those you are involved with made clear to customers in their bills?

As far as we are aware all of our members operate in accordance with the Heat Metering and Billing Regulations. In doing so they will provide clear details on their customers bills of the consumption in that period with opening and closing readings, the prevailing unit charges the total unit charge and the fixed month charge

4. Do you have views on our proposed approach to data collection and analysis as set out in Paragraph 56-58 ?

We are very concerned that with the very tight response window of the 12th January that unless that supplier has managed to submit a response within this window or the CMA has contacted that particularly supplier to obtain their view, the CMA will not be aware of the many schemes operating with a relatively low market visibility with very good practices. The UKDEA would be pleased to provide links to these schemes, to ensure that the CMA not only takes a wide variety of views from customers and customer groups, but also has a fair and representative sample of suppliers views. Indeed we would be pleased to co-ordinate a heat supplier workshop with the CMA. Particularly as the heat suppliers will generally be the ones who have to implement/suffer the impact of any potential remedies being proposed by the CMA.

5. Do you think that the potential remedies we are considering are appropriate? (Paragraphs 59 and 60 as shown overleaf)

Generally we are supportive of this approach, but we would caution the CMA in extending any existing energy and gas regulations in this area to heat network customers without an extensive review for appropriateness and their extent. The heat network sector is still in its development phase and to directly apply any regulations from a very mature industry is not reasonable and could significantly stifle market growth and prevent access for new players. This should only be considered following extensive consultation to understand the benefits which would be achieved for customers compared to the good practices currently being shown by our members which already offer transparency to customers both pre-sale and during occupation.

- What are the potential benefits / risks in implementing such remedies ?
- How should they be designed to maximise benefits?
- Are there other remedies that we should be considering?

Theme 2: Monopoly supply

1. Do you believe that heat networks exhibit natural monopoly characteristics (high fixed costs; economies of scale; barriers to further local entry to compete for existing customers)? what steps do you take to avoid customer detriment as a result of this natural monopoly

Heat Networks are naturally monopolistic in two ways:

- Unless heat networks are developed to a scale as they are, for example, in Copenhagen which is effectively a city wide heat utility with multiple heat suppliers feeding heat into one combined network, heat networks are by nature unavoidably monopolistic in terms of the heat supplier
- In the UK to create a heat network the heat supplier will have to invest in both a heat network and a heat source and even with a waste heat source they will need to make significant investment in top up and back up plant. This significant investment by its nature requires long term energy supply contracts (over which the capital can be recovered) if fair heat prices are to be charged to end consumers.

This is not the case, for example in the electricity supply industry. Where due to the maturity of the existing infrastructure, to connect a new customer will only require an extension and potentially reinforcement of the existing network which is recovered via an upfront connection charge to that customer. Therefore the requirement for long term energy supply contracts is not required for those established alternative energy supplies, with existing generation and relatively local distribution assets.

The UKDEA does not believe that these natural characteristics of our sector should be seen as negatives, but are simply facts of creating low carbon heat networks to decarbonize our urban areas. Especially as it is widely recognized that district energy

networks offer the best opportunity do to this. Instead we believe that this should be accepted as a principle, and focus instead put on ensuring there is sector wide delivery of those solutions which prevent negative impact to customers from such a monopoly. These solutions are as we have set out in our response that our members already follow, to address the natural monopoly through transparency and fair pricing etc....

2. To what extent are consumers on your network able to switch from their current heat network provider to alternative heat network operators or to alternative heat sources? What are the key factors (contractual and / or technological) impeding consumers from switching? How do you address the issue that customers may not be able to switch ?

As set out in Point 1 above, once heat networks are constructed the need for long terms contracts is largely driven by the need to recover the significant initial investment. Therefore offering customers the opportunity to switch would completely undermine this business model which underpins our sector and effectively prevent the rapid growth of heat networks and the environmental benefits they deliver as set out above.

Furthermore customer should not need to seek to switch suppliers, if they are supplied with heat from an organization following good practice in terms of service delivery, transparency and fair pricing as we see from our members.

In practical terms how could switching work ?

- For the majority of networks in the UK, as set out in response to the question above they are not large enough to support multiple heat suppliers ?
- If the block of apartments (typically connected to heat networks) has been built with no gas network the consumers could not switch to individual gas boilers without a major retrofit to that block for gas supplies and the boilers/flues etc.. (if space even existed). As well as the major H&S consideration of installing gas in high rise blocks which would need to be taken into account.
- In terms of switching to electricity, any electrical infrastructure in such buildings would never have been designed to take a heating and hot water load and therefore also would need a complete upgrade, if indeed that is practicable

Therefore practically speaking, without a major retrofit how would or could switching take place ?

3. How do commercial and financial “drivers” incentives at different levels in the value chain affect the decisions of builders, operators and residents?

The drivers we see for delivering heat networks are generally delivering decarbonization of urban areas typically through planning or similar instruments. The UKDEA is concerned that there are number of developments that are constructed as a result of such drivers where the energy supply costs to consumers are not considered at all or only very late in the project. This generally results in consumers being charged whatever cost results from the collection of systems, plant and

equipment that have been installed, without any thought as to whether this is fair or reasonable. This is known as the cost recovery methodology

Instead in the development of new heat networks we recommend the use of the cost avoidance methodology where prices are set when the network is first considered, where practicable, to be comparable to the alternative costs of heat to consumers (e.g. the Heat Trust Cost Calculator). This will then drive the projects decision making process to ensure the resulting district energy system can be operated to deliver these charges.

To be clear we do not support in any respect the cost recovery methodology we see practiced, particularly on smaller developments. Where due to a lack of thought or even recognition of the issue that consumer charges need to be considered at the outset (typically due to inexperienced developers/their design teams who have limited experience or knowledge of district energy) consumers are simply charged whatever the systems may end up costing to operate. This outcome typically leads to high consumers charges, as the resultant lack of thought or care often means that poor design practices are followed, resulting in inefficient design of plant and infrastructure.

Good practice both in terms of system design and then subsequent operation (i.e. to ensure, that the low or zero carbon plant generates the expected proportion of heat and heat losses are minimized etc...) must be followed to ensure that a heat price can be set in at a level which is in line with the cost avoidance methodology.

The UKDEA would be pleased to share further with the CMA what it sees as the essentials of good practice in these areas.

4. Do you have views on our proposed approach to data collection and analysis as set out in Paragraph 68 ?

We believe that this approach makes sense but we would be keen to work with the CMA to ensure that our knowledge and that of our members in this area can be included within this work stream.

5. Do you think that the potential remedies we are considering are appropriate? (Paragraphs 69 to 71 as shown overleaf)

No we do not.

We do not understand how it would be possible implement contractual remedies on existing schemes, especially in view of the significant investment and long term contracting arrangement and potential alternative solutions. This could significantly damage the operation of existing schemes and result in no operator being prepared to take on that network (no supplier of last resort) if the existing heat supplier suffered financial difficulties and resultant collapse of their business as a result of such steps. Therefore any such measures would need to be considered carefully.

Please also see our earlier comments regarding monopolies.

We do however have some thoughts about how competitive switching on a scheme by scheme basis could be achieved for those smaller discrete networks where we believe cost recovery is being practiced and an element of savings could be delivered. We would be keen to discuss these ideas with the CMA

- What are the potential benefits / risks in implementing such remedies
- How should they be designed to maximise benefits?
- Are there other remedies that we should be considering?

Theme 3: Outcomes

1. Do you believe your heat network prices reasonable, and is quality of service and reliability adequate, when compared with alternative heat sources and/or operating costs and how have you set these ?

Yes if set in accordance with the cost avoidance principles we have set out above

2. Do you have views on our proposed approach to data collection and analysis as set out in Paragraph 73-74 ?

As set out above, we would be pleased to co-ordinate a heat supplier workshop with the CMA.

3. Do you think that the potential remedies to control outcomes directly are appropriate? (Paragraphs 75 to 77 as shown overleaf)

Any regulatory approach should concentrate on the core elements of fair price, transparency and good standards of service. Any Government regulator for the industry should only be considered on achieving these outcomes and must recognize the nascent state of the industry, and the very different financial structures and dynamics of developing heat networks, compared to extending existing established utilities. Without taking this into account and focusing only on these key issues, lasting damage could be made to this sector which is still in its development stage.

We also firmly believe that focusing on switching, simply because the potential does not exist or is likely to, will reduce investor confidence in district heating and/or result in increased consumer costs from separation of elements within networks.

We believe that benchmark pricing is the correct methodology as illustrated by examples such as the Heat Trust Cost Calculator which has brought standardization and transparency to such an approach.

- What are the potential benefits / risks in implementing such remedies
- How should they be designed to maximise benefits?
- Are there other remedies that we should be considering?

These are the views of the UKDEA are not the views of specific members.

As the UKDEA is committed to enabling greater use of district energy where this is beneficial, we welcome any opportunities to engage further on this or any other district energy related work stream.

Appendix 1: UKDEA Members

Organisations who founded the ukDEA

Birmingham City Council
Cofely District Energy Limited (Now ENGIE)
Enviroenergy Limited
Southampton City Council
Thameswey Ltd
Veolia Environmental Services Limited

ukDEA Full Members in addition to Founder Members

Coventry City Council
E.ON Energy Solutions Limited
GTC Limited
Leicester City Council
Manchester City Council
Newcastle City Council
Newport City Homes
Shetland Heat, Energy & Power Limited
SW Energy Limited
Switch2 Energy Limited
Viridor Waste Management Limited
Vital Energi Utilities Ltd

ukDEA 118 Associate Members

2G Energy Ltd	Flexenergy Ltd	Mibec Limited
3D Technical Design Ltd	Frese District Heating	Micronics Ltd
Aecom Ltd	Frontline Energy & Environmental Ltd	Mittel Fjärrvärme AB.
Albion Water Management Limited	Gardiner & Theobald LLP	MVV Environment Ltd
Altecnic Ltd	Gebwell Oy	MWA Technology Ltd
Amarc DHS srl	GENeco	NetThings Ltd
AMCO Pipe UK Ltd	Gowling WLG (UK) LLP	Norton Rose Fulbright
Ameresco Ltd	Grant Thornton UK LLP	Orchard Partners London Ltd
Armstrong Fluid Technology Ltd	Grundfos Pumps Limited	Peel Utilities Holdings Limited
Baystar Ltd	GT Energy Ltd	Pegler Yorkshire Group Ltd
Belimo Automation UK Ltd	Helec Ltd	Powerpipe Systems AB
BH EnergyGap LLP	Hoval Limited	Prepago Platforms Ltd
British Gas New Heating Ltd t/a British Gas	HSF B.V.	Prepayment and Billing Solutions Ltd
Brugg Pipesystems AG	Hydro-X Water Treatment Ltd	PT Contractors Ltd
Canusa Systems, A Division of ShawCor UK Ltd	iCON Infrastructure LLP	Rhico Ltd
Cenergist Limited	INPAL Energy Ltd	REHAU Ltd
Clancy Docwra	Insite Energy Ltd	Rockhopper Infrastructure Services LLP
Clarke Energy Ltd	Institute of Energy, Cardiff University	SAV Systems Limited
Climate Integrated Solutions Ltd	International Construction Design & Management Ltd	Secure Meters (UK) Ltd
COHEAT Ltd	Isambard Ltd	SET ehf (Iceland)
Complete HVAC Services Ltd	isoplus A/S	SHEco Renewable Systems Ltd
CPV Ltd	ITM Power	SK Solar Solutions Ltd
Crown House Technologies Limited	Itron, Inc	Star Renewable Energy Limited
Dalsia Brunata	Junifer Systems Limited	Strand Energy Ltd
Data Energy Management Services Ltd	Kamstrup Instrumentation Ltd	Sustainable Energy Limited
Desmi Ltd	Kantor Energy Ltd	Sweco UK Ltd
Diehl Metering Limited – Sappel	Kara Energy Systems B.V.	SWEP International Limited
DMS Metering Solutions Limited	Kelvion Ltd	Sycous Limited
Durotan Limited	Kinect Energy UK Limited	Thermaflex Isolatie B.V.
DWF LLP	L&Q Energy	Thermal Integration Limited
Edina UK Limited	Larkfleet Limited	Treco Ltd
Eneteq Services Ltd	LC Energy Ltd	TrentENERGY Ltd
ENERPIPE GmbH	Linn Energy Ltd	UK Metering
ENWA Water Technology UK	Logstor A/S	University of East Anglia
Evinox Energy Ltd	London Borough of Barking and Dagenham	Uponor Limited
Fichtner Consulting Engineers Ltd	London Borough of Sutton	Vexve Oy
Finning (UK) Ltd	Macquarie Bank Limited (London Branch)	Watts Industries UK Ltd
Flamco Limited	McDermott Group Ltd	Weiss A/S
Flatt Consulting Ltd	Meters UK Ltd	Woodward Energy Consulting Ltd
		Zero Carbon Solutions Ltd