

# Heat networks market study

## Statement of Scope

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## Contents

	<i>Page</i>
Summary .....	2
Introduction .....	3
Background on heat networks .....	5
Structure of the sector .....	7
Outcomes for consumers .....	7
Regulation of the sector .....	8
Previous work by other organisations.....	10
Which? .....	10
Citizens Advice .....	11
Scope of the market study.....	12
Definition of heat networks.....	12
Geographic scope.....	12
Areas on which we do not intend to focus.....	12
Themes we propose to consider .....	12
Theme 1: Transparency .....	13
Theme 2: Monopoly supply of heat networks.....	16
Theme 3: Outcomes for consumers .....	18
Evidence-gathering .....	20
Other context .....	20
Next steps .....	22
Invitation to comment on our market study notice .....	22
Annex – Use of information provided to the CMA .....	24
Why is the CMA asking for information? .....	24
What will the CMA do with the information I provide? .....	24

## Summary

1. Heat networks involve the generation and distribution of heat to buildings and consist of district heating and communal heating.<sup>1</sup> Such networks represent a small part of heat generation or energy consumption at present (500,000 final households served by 17,000 networks),<sup>2</sup> but may be used by up to 20% of households by 2030.<sup>3</sup> In policy terms, heat networks contribute to the Government's decarbonisation agenda.
2. A range of concerns have been raised directly with the CMA and more widely in relation to heat networks, underpinned by the overarching hypothesis that customers on heat networks are unable to switch supplier and may be locked into very long contracts - some for up to 25 years. These concerns include:
  - concerns around pricing due to a lack of competitive constraints;
  - the possibility of price increases once customers are locked in;
  - barriers to entry to other energy suppliers;
  - lack of transparency over prices before the purchase/rental of properties that use heat networks;
  - lack of transparency of bills during residency;
  - poor service and intermittent supply; and
  - the fact that heat network customers are not covered by equivalent consumer protections applicable to gas and electricity customers.
3. In recent years, several organisations have expressed concerns regarding the sector, including: concerns around cost; confusion about what was included in bills; frustration regarding poor customer service and complaints handling procedures; the inability to disconnect entirely from heat networks and switch supplier without incurring costs; and the lack of consumer protection measures.

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<sup>1</sup> District heating involves the distribution of heat energy from a central source through a network to multiple buildings for the purpose of supplying heat or hot water. Related to district heating is communal heating, where heat is supplied within a single building to multiple occupants, such as in a block of flats. Together they are known as heat networks. In this paper we use BEIS's definition of heat networks stated in the [Heat Network \(Metering and Billing Regulations\) 2014](#) and we propose to use this definition as the market study scope. Some networks may facilitate cooling.

<sup>2</sup> [Heat network metering and billing regulations](#). BEIS data, 2014.

<sup>3</sup> [The future of heating: meeting the challenge](#). DECC, 2013.

4. In light of these concerns, we are launching a market study to examine heat networks. We are proposing to examine three broad themes, relating to:
  - (a) **Transparency of information**, both prior to moving into a property and during residency;
  - (b) Concerns regarding the **monopoly supply of heat**, the inability of customers to switch and the potential misalignment of the incentives of the builders, operators and customers of heat networks; and
  - (c) **Outcomes for heat network customers**, including prices, service quality and reliability.
5. We will conduct our market study over the next year, gathering evidence from a wide range of stakeholders including heat networks providers, other government departments, local authorities and sector regulators and consumer groups.
6. Following evidence gathering and analysis, we plan to produce a report on heat networks setting out any concerns we identify. Where we find issues of particular concern, we may take further action during or after the end of the 12-month market study, such as opening consumer or competition enforcement cases and/or deciding that a market investigation reference is needed. Alternatively, we could make recommendations to regulators, industry or government, or decide that no further action is needed. We will publish an interim report with our initial findings and views on remedies, including whether a market investigation reference is needed, within six months of the launch of this market study.
7. We welcome input from interested parties at this stage, and have included some key themes and questions [below](#), to help inform responses. We would welcome responses by 12 January 2018. Please see the [case page](#) and invitation to comment for further information on how to submit a response.

## Introduction

8. This document sets out the purpose and scope of the CMA's market study into heat networks, provides some background on the sector, discusses the themes we propose to consider and identifies possible outcomes from the study. We invite submissions from interested parties on any of the issues

raised within this document and the accompanying Market Study Notice: Heat networks.<sup>4</sup>

9. The CMA's mission is to make markets work well in the interests of consumers, businesses and the economy. It achieves this by promoting and protecting consumer interests while ensuring that competition is fair and markets are competitive.
10. Market studies are one of a number of tools at the CMA's disposal to examine possible competition or consumer protection issues and address them as appropriate. They are examinations into the causes of why particular markets may not be working well, taking an overview of regulatory and other economic drivers in a market and assessment of patterns of consumer and business behaviour.
11. A market study begins with the publication of a Market Study Notice by the CMA. A Market Study Notice must be published where the CMA is proposing to carry out its functions under section 5 of the Enterprise Act 2002 (the Act)<sup>5</sup> for the following purposes:
  - To consider the extent to which a matter in relation to the acquisition or supply of goods or services of one or more than one description in the UK has or may have effects adverse to the interests of consumers; and
  - To assess the extent to which steps can and should be taken to remedy, mitigate or prevent any such adverse effects.<sup>6</sup>
12. Market studies can lead to a range of outcomes. One possible outcome would be to give a market a 'clean bill of health' if the initial concerns about consumer detriment are not substantiated by the information collected over the course of the study.
13. Where a market study finds that the market is not working well, the CMA may consider several options including:
  - Improving the quality and accessibility of information to consumers or promoting consumer awareness;

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<sup>4</sup> [Heat network market study](#).

<sup>5</sup> Under section 5 of the Act the CMA has the function of obtaining, compiling and keeping under review information about matters relating to the carrying out of its functions, with a view (among other things) to ensuring that the CMA has sufficient information to make informed decisions and to carry out its other functions effectively.

<sup>6</sup> Section 130A of the Act.

- Making recommendations to government to change regulations or public policy;
  - Taking consumer or competition enforcement action;
  - Publishing guidance to businesses on compliance with their obligations under consumer and/or competition law;
  - Encouraging businesses in the market to self-regulate;
  - Making a market investigation reference;<sup>7</sup> and / or
  - Accepting Undertakings in Lieu of making a market investigation reference.
14. At this stage, although we have heard of a number of concerns regarding heat networks, the CMA has not formed a view as to whether this may require further actions or recommendations to other government departments. Information gathered during this market study will help the CMA to determine whether further action is warranted.
15. Further information on market studies can be found in the following guidance documents: Market Studies Guidance on the [OFT Approach \(OFT519\)](#) and Market Studies and Market Investigations: Supplemental Guidance on the [CMA's Approach \(CMA3\)](#).

## Background on heat networks

16. Heat networks involve the generation and distribution of heat to buildings and consist of district heating and communal heating. District heating comprises a network of insulated pipes used to deliver heat,<sup>8</sup> in the form of hot water or steam, from the point of generation to an end user. Networks vary in size and length, carrying heat from just a few hundred metres between homes and flats, to several kilometres supplying entire communities and industrial and commercial areas. The distance of a network may be extended by adding more providers of heat, or 'heat sources', along the way.<sup>9</sup> In comparison,

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<sup>7</sup> Where the findings of a market study give rise to reasonable grounds for suspecting that a feature or combination of features of a market or markets in the UK prevents, restricts or distorts competition, and a market investigation appears to be an appropriate and proportionate response, the CMA may make such a reference, see section 131 of the Act.

<sup>8</sup> Or sometimes, cooling.

<sup>9</sup> [The ADE: What is district heating?](#)

communal heating systems serve one building with multiple occupants, such as a block of flats.<sup>10,11</sup>

17. About 2% of UK heat is supplied via heat networks to around 500,000 final customers via 17,000 networks.<sup>12,13</sup> However, BEIS has suggested heat networks may be used by up to 20% of households by 2030.<sup>14</sup> The Government announced in November 2015 that it would provide £320m of funding for heat networks over the following five years, expected to draw in up to £2 billion of additional capital investment. BEIS expects these grants to support up to 200 networks with 400,000 new homes under this programme, bringing the total number of homes close to 1 million excluding growth in networks not supported by the grant.<sup>15</sup>
18. Heat networks are more commonplace in Scandinavia, Eastern Europe, Germany, South Korea and major cities in the USA and Canada. There are also increasing levels of deployment in the growth regions of China. In Denmark, over 61% of customers receive their heat via networks.<sup>16</sup>
19. Heat networks form an important part of the government's plan to reduce carbon and cut heat bills. In its guidance on heat networks, BEIS states that, 'they are one of the most cost-effective ways of reducing carbon emissions from heating, and their efficiency and carbon-saving potential increases as they grow and connect to each other. They provide a unique opportunity to exploit larger scale – and often lower cost – renewable and recovered heat sources that otherwise cannot be used'<sup>17</sup>. As well as potentially reducing carbon emissions, DECC stated that, 'heat networks are an attractive option as they can offer efficiency gains compared with individual heating systems'.<sup>18</sup> DECC's modelling found that, 'heat networks using gas Combined Heat and Power (CHP) appear to be the least cost heating solution in the majority of areas where suitable'<sup>19</sup>.

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<sup>10</sup> According to the definition commonly used by stakeholders in the industry it is not necessary for the heat supply to be in the building, only that a single building is making use of the heat.

<sup>11</sup> In this paper, unless otherwise specified, we use the term 'heat networks' to refer to both district and communal heating schemes, as both present similar issues for consumers, albeit on a different scale.

<sup>12</sup> [The Heat Metering and Billing Regulations 2014 Notification Data](#).

<sup>13</sup> This may equate roughly to £300m of annual expenditure, on the assumption that each domestic customer spends an equivalent amount on district heating as the average domestic customer spends on gas.

<sup>14</sup> [The future of heating: meeting the challenge](#). DECC, 2013.

<sup>15</sup> [DECC settlement at the Spending Review 2015](#). An additional 400,000 homes would bring the total number of residences close to 1 million and this does not include additional, contemporaneous increases anticipated by projects not supported by the BEIS grants. DECC became part of BEIS in July 2016.

<sup>16</sup> [The future of heating: meeting the challenge](#). DECC, 2013.

<sup>17</sup> [Heat Networks Guidance, BEIS](#).

<sup>18</sup> [The future of heating: meeting the challenge](#). DECC, 2013, paragraph 2.30.

<sup>19</sup> [The future of heating Evidence Annex](#). DECC, 2013, paragraph A.37.



## Structure of the sector

20. A number of new schemes are under development.<sup>20</sup> The supply base is very diverse ranging from some large developers and energy companies operating multiple networks to many smaller players running a single scheme, as well as councils and housing associations. Some of these organisations own, operate and maintain schemes.
21. Final customers may include domestic residents of private and Local Authority residential developments, commercial customers such as shopping centres, industrial and public sector customers.
22. Contracts to operate schemes are usually let by a Local Authority or property developer through competitive tender. The schemes are commonly monopolistic in nature, with consumers signing long term contracts with suppliers (allowing suppliers to recover the up-front capital outlay required to build the network). Consumers may be tied into contracts for 25 years plus, with no option to switch supplier. In terms of substitutes, Which? notes that if a consumer decides to use an alternative type of heating such as an electric heater, they would typically have to pay a standing charge for their heat networks still, which may be significant.<sup>21</sup>

## Outcomes for consumers

23. There is little information available about the prices paid, reliability of supply and quality of service experienced by heat network customers in the UK. A key aim of our market study is to help fill this gap, as explained in paragraphs 61-71 below.
24. In 2015 Which? carried out an analysis of a sample of prices paid by consumers on metered district heat network schemes.<sup>22</sup> Which? found that data on prices paid was generally lacking, but following information requests to 51 schemes, it established that unit rates for district heat can vary between 6-15 p/kWh,<sup>23</sup> with some consumers paying considerably more than others.

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<sup>20</sup> See paragraph 17 for current estimate of heat networks.

<sup>21</sup> Which? found that metered customers universally thought their standing charges were too high. It quotes two customers who claimed to have hardly used their heating, but faced standing charges of £25 and £40 per month respectively. For comparison a typical domestic customer would spend around £50 on gas a month, of which the standing charge is about £7. This does not take into account the costs of boiler purchase or maintenance.

<sup>22</sup> [Turning up the heat: getting a fair deal for district heating users](#). Which? March 2015.

<sup>23</sup> By comparison, current retail gas tariffs are between 2-3 p/kWh, plus standing charge. However, like for like comparisons are difficult as gas tariffs do not take into account the full life maintenance and replacement costs that come with gas heating. See: [UK Power](#)

The average cost was £679 per year (equivalent to 11p/kWh<sup>24</sup>) of which 38% was made up of fixed charges.

## **Regulation of the sector**

25. There is no sectoral regulator with responsibility for heat. Non-gas fuels other than electricity - including district and communal heating - are outside the regulatory remit of Ofgem, the regulator for gas and electricity markets. Accordingly, heat network customers do not benefit from the many rights and protections afforded to electricity and gas customers. Some additional regulations and voluntary codes are in place, which are summarised below.

### ***Heat Network (Metering and Billing) Regulations 2014***

26. These regulations implement the requirements in the Energy Efficiency Directive<sup>25</sup> with respect to the supply of distributed heat, cooling and hot water.<sup>26</sup> They impose various requirements on “heat suppliers”, namely persons who supply and charge for the supply of heating, cooling or hot water to a final customer through communal heating or a district heat network, including the notification of certain information to the government about those networks.<sup>27</sup>
27. The regulations also impose billing requirements, namely that bills and billing information are accurate, based on actual consumption and compliant with minimum requirements (unless technically not possible or not economically justified). They require that heat suppliers provide a clear explanation of the information contained in a bill, including how the bill was calculated and specifying fixed and variable charges. They will also require the installation of meters on all affected properties (to the extent technically feasible and cost effective), subject to consultation on revised methodology for assessing cost effectiveness.

### ***Heat Trust Scheme***

28. Heat Trust is a voluntary consumer protection scheme for the heat networks sector. It was launched in 2015 and provides access to the Energy

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<sup>24</sup> Based on an assumed typical heat usage.

<sup>25</sup> [Directive 2012/27/EU of 25 October 2012 on energy efficiency.](#)

<sup>26</sup> [The Heat Network \(Metering and Billing\) Regulations 2014.](#) The regulations cover most district heat networks and communal heating in England, Scotland, Wales and Northern Ireland, including residential, commercial, industrial, public sector and other networks. The Regulations are enforced by the Regulatory Delivery Office BEIS (formerly the National Measurement and Regulation Office).

<sup>27</sup> Information required to be supplied includes: the location of the network; estimated total per calendar year of installed heating capacity; heat generated and supplied; number of final customers; name and address of the supplier; expected frequency and content of billing information.

Ombudsman.<sup>28</sup> There are five registered member participants, according to the website.<sup>29</sup> So far only around 50 networks are signed up to the Heat Trust.<sup>30</sup> Schemes involving third parties, eg housing associations, are not currently eligible to join.<sup>31</sup> The scheme rules set out a number of consumer protection standards, but pricing (eg the level of price charged or contract duration) is out of scope. Standards include provision of pre-contract information including tariffs, unit costs and standing charges. Heat Trust recently launched an on-line price comparison tool for heat network customers to provide an indication of the heating costs for a similar-sized property if it had a modern gas boiler.

### ***Heat networks Code of Practice***

29. This code sets standards covering the design, build and operation of heat networks.

### ***Obligations attached to grant funding***

30. The Government announced in November 2015 that it would provide £320m of funding for heat networks over the following five years. A number of conditions are attached to the award of this grant funding. These include requirements to: sign up to Heat Trust or demonstrate equivalent standards (for domestic customers); sign up to relevant technical standards; and self-assess against various criteria including carbon savings, customer experience and value for money. There is also an element of self-assessment to demonstrate that costs to consumers will be the same as, or lower than, a project-specific counterfactual.

### ***Regulatory developments***

31. In March 2017, the Association of Decentralised Energy (ADE) launched a Task Force to produce recommendations on how industry and Westminster can work together “to create a self-sustaining market for heat networks<sup>32</sup>”. In its statement of scope, the Task Force notes it will address two key issues: how to reduce the cost of investment, and hence the cost of heat to

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<sup>28</sup> <http://www.heattrust.org/>. The scheme is operated by Heat Customer Protection Ltd which is a not for profit company limited by guarantee and is sponsored by ADE.

<sup>29</sup> Listed as: E.ON Energy Solutions Ltd, SSE Heat Networks Ltd, Metropolitan King's Cross, East London Energy Ltd, Switch2 Energy Ltd.

<sup>30</sup> [The Heat Trust: Our Members](#).

<sup>31</sup> The membership application form states that Heat Trust protection is aimed at heat energy suppliers who contract with metered or unmetered domestic and micro business properties where the heat customer pays their supplier directly for their heat energy.

<sup>32</sup> [Association of Decentralised Energy statement of task force scope](#), 13 March 2017.

customers, and increase investment into the sector to meet BEIS objectives; and whether there is a role for policy or regulation to ensure customers receive good service and a fair deal. It is due to report in January 2018.

32. In November 2017, the Scottish Government consulted on local heat and energy efficiency strategies and regulation of heat networks in Scotland.<sup>33</sup> In particular, the Scottish Government is considering a new duty on Local Authorities to develop a heat strategy and a specific consent and licence for heat network developers. The consent could include certain development rights. The licence could include technical and operational quality standards and consumer protection.

## **Previous work by other organisations**

33. In recent years, several organisations have expressed concerns regarding the sector and made recommendations for reform, including the introduction of price regulation for heat network customers. In addition, a wide range of concerns have been raised directly with the CMA, underpinned by the overarching issue that heat network customers are locked into very long term contracts and are unable to switch supplier.

## **Which?**

34. In March 2015, Which? highlighted concerns that heat network customers have no opportunity to switch suppliers and no right to redress should service fail to meet expectations. A survey conducted by Which? suggested that a significant number of consumers were dissatisfied with their heat network, with cost being a chief concern. Which? noted concerns that consumers may have been mis-sold district heating, confusion about what was included in their bills and frustration regarding poor customer service and complaints handling procedures.
35. Which? found that new schemes are largely being installed in new build properties and hard to heat social housing.<sup>34</sup> The development in the latter may suggest that vulnerable consumers are disproportionately affected by the concerns raised in relation to heat networks.

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<sup>33</sup> *Scotland's Energy Efficiency Programme: Second Consultation on Local Heat & Energy Efficiency Strategies, and Regulation of District and Communal Heating*

<sup>34</sup> *Which? Report Turning up the heat: Getting a fair deal for district heating consumers*

36. Which? recommended that heat consumers receive clear, transparent price and billing information, that the government look beyond voluntary consumer protection, and that price regulation might be needed.<sup>35</sup>

### **Citizens Advice**

37. In 2016, Citizens Advice called on the CMA to launch an investigation in the sector “with a view to assessing the need for price regulation.”<sup>36</sup> Citizens Advice<sup>37</sup> identified a range of concerns regarding heat networks. First, it found that there was very little available data on existing heat networks meaning it was difficult for consumers to assess how well they work in practice and whether they offer good value. Second, it noted that there was a wide variation regarding the way in which heat customers are billed for their heat use, also noting that the cost of heat can vary widely due to the age of the scheme. Last, it expressed concerns that consumers have no route to redress if they have problems with their heat supplier.
38. In May 2017, Citizens Advice published a further report recommending a CMA market study, best practice on billing, prepayment meters and new government regulations for consumer protection.<sup>38</sup> This followed an analysis of responses from private heat suppliers in which Citizens Advice identified the following concerns: lack of clarity regarding the calculation of tariffs and the limited availability of tariffs; lack of choice in meter types regardless of consumer need; and consumers’ inability to disconnect entirely from heat networks and switch supplier without incurring substantial costs.<sup>39</sup>

### **Citizens Advice Scotland**

39. Similar concerns have been identified by Citizens Advice Scotland. Citizens Advice Scotland expressed a need for greater consumer protection measures for heat network consumers in Scotland, finding that the majority of suppliers interviewed had no plans to join the voluntary Heat Trust scheme, which provides for a range of consumer protections. It identified a number of statutory consumer protection measures that could be introduced through a licence for the supply of heat networks. These included measures around billing, metering, standards of service, access to redress and pricing.<sup>40</sup>

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<sup>35</sup> [Turning up the heat: getting a fair deal for district heating users](#). Which? March 2015.

<sup>36</sup> [District heating networks – analysis of information request](#). Citizens Advice, January 2016.

<sup>37</sup> [District heating networks Analysis of information requests January 2016](#).

<sup>38</sup> [District heat networks 2](#). Citizens Advice, May 2017.

<sup>39</sup> District heat networks 2 Analysis of responses from private heat suppliers May 2017.

<sup>40</sup> Different Rules for Different Fuels: Exploring Consumer Protection in the District Heating Market 2017/18-01.

40. In May 2017, Citizens Advice Scotland<sup>41</sup> recommended to the Scottish Government to introduce price controls and a statutory licence for heat network suppliers covering consumer protection and efficiency standards.

## **Scope of the market study**

### **Definition of heat networks**

41. Heat networks involve the generation and distribution of heat to buildings and consist of district heating and communal heating. District heating comprises a network of insulated pipes used to deliver heat, in the form of hot water or steam, or cooling from the point of generation to an end user. Networks vary in size and length, carrying heat from just a few hundred metres between homes and flats, to several kilometres supplying entire communities and industrial areas. In comparison, communal heating systems serve one building with multiple occupants, such as a block of flats.<sup>42</sup>
42. We will focus on the provision of heat networks to domestic consumers. This will include domestic residents of large commercial housing developments and blocks of flats.

### **Geographic scope**

43. Our market study will cover the whole of the United Kingdom. We will consider the provision of heat networks in England and each of the devolved nations. Heat policy is a devolved policy matter, and, while there may be common issues relating to heat network across the four nations, we will take into account relevant differences with regard to each nation's policy framework.

### **Areas on which we do not intend to focus**

44. We do not intend to focus on commercial customers such as shopping centres, industrial and public sector customers. Our scoping work has identified concerns for residential consumers rather than businesses, and we have not received complaints from the latter.

### **Themes we propose to consider**

45. To help structure our study, we have identified three key themes that we propose to investigate, drawing both on the concerns that have been

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<sup>41</sup> [Different Rules for Different Fuels](#), Citizens Advice Scotland, May 2017.

<sup>42</sup> See footnote 10.

expressed by other institutions, and those that have been addressed directly to the CMA. These themes are:

- (a) **Transparency of information**, both prior to moving into a property and during residency;
  - (b) Concerns regarding the **monopoly supply of heat**, the inability of customers to switch and the potential misalignment of the incentives of the builders, operators and customers of heat networks; and
  - (c) **Outcomes for heat network customers**, including prices, service quality and reliability.
46. In this section, we summarise the key issues we propose to explore under each theme and the evidence we propose to collect and analyse to help form our conclusions. We also identify some potential remedies that we may consider, should concerns be substantiated. We stress that at this stage we have formed no conclusion as to whether such remedies will be required.
47. We would welcome views on whether these are the right themes and potential remedies to be considering and whether there are other issues and/or remedies that we should consider.

### **Theme 1: Transparency**

48. Consumers need to be able to access, assess and act upon relevant information on heating options in order to provide an adequate competitive constraint on suppliers. Price transparency is a prerequisite for this, and we propose to assess the extent of price transparency in relation to heat networks, both at the point of purchasing / moving into a property and during residency.

#### ***At the point of purchase / prior to moving in***

49. The CMA has received several complaints that suggest information pre-transaction can sometimes be poor, resulting in confusion regarding: the simple fact that a heat network is the source of heat; the length of the contract; and likely prices and planned increases.
50. We will consider the extent to which consumers are able to access, assess and act upon relevant information on the heating options that they face prior to choosing a property. We will consider whether consumers are receiving sufficient information on matters such as contract duration and exclusivity, and whether they are receiving appropriate information on the relative pricing of heat networks and other energy options.

51. We will also wish to assess the extent to which, even if prices are transparent, customers are likely to take these into account when choosing between properties, given the multiple factors that individuals consider when choosing where to live and the relative size of the cost of heating within the overall property purchase or rent.

### ***During residency***

52. We have heard concerns that bills presented to heat network customers can be opaque. Opaque bills may make it difficult for consumers to understand the charges, challenge the supplier or compare alternatives. Which? reported that consumers were frustrated over the lack of transparency in their bill.<sup>43</sup>
53. We also note that many of the services and standards that exist for gas and electricity customers are not in place for heat network customers. Instead, consumers are covered by general consumer protection, competition and contract law as well as tenancy law where relevant. As a result, in non-gas markets in general (including heat networks), there is a number of potential gaps in consumer protection. These gaps may have the capacity, when combined with other market features in the supply of heat, to make heat network consumers vulnerable at certain times or in certain circumstances.<sup>44</sup> In particular, there are no formalised regulations or standardisation of charging, and an absence of standards for:
- frequency of bills
  - what is included in the bill and how the information is presented
  - RPI uplifts
  - estimation of how wholesale costs affect consumer price
  - payment methods
  - meter types (prepayment, smart meters)
  - disconnection charges and payments for system maintenance even if not taking heat

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<sup>43</sup> The Heat Network (Metering and Billing) Regulations 2014 now require heat suppliers to provide a clear explanation of the information contained in a bill, including how the bill was calculated and specifying fixed and variable charges. They do not, however, state which costs should be included in a bill, such that tariffs may be difficult to compare across schemes.

<sup>44</sup> [Insights paper on households with electric and other non-gas heating](#). Ofgem, December 2015.



- compensation for service interruption
54. We will explore the extent to which it is difficult for consumers to interrogate the bill to understand the charges, challenge the supplier or compare against alternatives.
  55. Other possible gaps in consumer protection include the fact that, unlike gas and electricity customers, heat network customers cannot take their complaint to the Energy Ombudsman<sup>45</sup> to resolve their dispute if the operator has not signed up to Heat Trust. We also note in regard to supporting consumers in debt, that operators who are not members of Heat Trust have no obligation to enter into a payment plan with customers or to take into account a customer's ability to pay, as is the case with gas and electricity customers.<sup>46</sup>

### ***Evidence and analysis***

56. In assessing the extent of transparency at the point of purchase and during residency, we will look to gather pre-transaction information and billing and tariff examples from suppliers. We will also look to conduct original research, potentially involving case studies, focus groups and / or interviews, to assess the extent of this issue, as well as drawing on evidence gathered by others, including the recent BEIS survey<sup>47</sup> of heat network customers.
57. Although, the CMA has received several complaints that suggest information pre-transaction can be poor, we will look to gather more comprehensive evidence. The CMA will analyse the BEIS customer survey where relevant. We will also collect evidence through interviews, case studies and/or focus groups with customers from a number of different types of district heat network. This will be supported by the information network operators provide to prospective customers.
58. In respect of **transparency during residency**, Citizens Advice<sup>48</sup> and Citizens Advice Scotland<sup>49</sup> have both called for statutory protection measures on billing and metering. This is based on the complaints they receive, their assessment of tariffs and discussion with stakeholders. Again, interviews, case studies and/or focus groups with customers will bolster this evidence. These will focus on aspects relating to receiving communications (bills, price changes), attention paid, the impact on decisions and trust. Specific questions might

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<sup>45</sup> [Consumer, Estate Agents and Redress Act, 2007](#).

<sup>46</sup> [Consumer Vulnerability Strategy: Debt and Disconnection](#).

<sup>47</sup> Heat Networks Consumer Survey, Research Report, BEIS, December 2017

<sup>48</sup> [District heating networks Analysis of information request, January 2016, District heat networks 2](#).

<sup>49</sup> [Different Fuels, Different Rules](#).

include the ability to gauge heat use and cost, and the ability to compare with equivalent properties and neighbours (a common complaint).

### ***Potential remedies***

59. Were we to find a problem in relation to pre-transaction transparency, a range of information remedies may be appropriate, including for example, a requirement that property developers provide all the pre-transaction information necessary for consumers to understand the existence of a heat network and the ongoing cost and duration of the contract. In addition, to the extent to which existing information provided pre-transaction is misleading, there may be scope for consumer enforcement follow-on work in this area.
60. In relation to transparency of billing during residency, a potential remedy would be the development of a regulatory regime that would provide customers with sufficient transparency over metering and billing. This might take the form of extending existing energy and gas regulations in this area to heat network customers.

### **Theme 2: Monopoly supply of heat networks**

61. Our consideration of this theme will focus on three issues:
  - (a) The extent to which heat networks exhibit natural monopoly characteristics;
  - (b) The extent to which customers are constrained from switching supplier and, if so, the nature of these constraints; and
  - (c) The potential misalignment of the incentives of the builders, operators and customers of heat networks.

### ***Natural monopoly characteristics***

62. The substantial, upfront fixed costs of heat networks may lend them some of the characteristics of natural monopolies, in that it may not be economically efficient for there to be more than one heat network in a given area. Furthermore, heat networks may need predictable demand in order to reduce the demand risk and thus cost of capital, which may drive the tendency for contracts to be exclusive and of a long duration. We will assess the extent to which the presence of high fixed costs is leading to these effects and whether there are differences between different types of schemes (eg between district and communal heating) and/or between different parts of the heat supply chain.

### ***Constraints on customer switching***

63. We will wish to consider the extent and nature of constraints on switching supplier experienced by customers of heat networks. We will wish to consider both contractual and technological constraints.
64. In relation to contractual constraints, lengthy contracts with the supplier of heat networks may leave customers unable to switch supplier, or may impose substantial costs on the customer for doing so. We will review contracts to assess the extent of such constraints.
65. Furthermore, we will assess the extent of technological constraints on switching. Homes that are part of a heat network may not, for example, be connected to alternative forms of energy such as mains gas. Lack of access to alternative means of energy may mean that customers are not in a position to switch provider individually or collectively, irrespective of contractual constraints.

### ***Misaligned incentives***

66. In heat supply, the consumer is unlikely to be involved in the decision to choose a heat network for a development. It is usually the property developer or other third party such as a local council, that makes the investment decision. Once built, the developer may then sell or contract out the operation of the system.
67. The property developer's incentive may be to choose the cheapest system to install, which may not be the cheapest or most efficient system to operate. Further, the developer may not be incentivised to consider the long-term costs or opportunities for competition or growth of the network. This misalignment of incentives may result in overall costs borne by the customer being higher than would otherwise be the case, and limit the incentives for stakeholders to choose the optimal investment, design, technology, and scale of heat networks.

### ***Evidence and analysis***

68. Our analysis under this theme will focus on understanding the cost structure of the sector, the nature of financial flows and the key contractual relationships between property developers, operators and customers. Given the number of suppliers in the sector (around 2,000), and the potential for diversity and complexity of different suppliers' operating models, we propose to collect and analyse costs from a number of representative case studies in the first instance. We will compare this with heat costs from equivalent gas

and/or electricity heat costs. We will develop a greater understanding of the value chain and identify whether there is a lack of competitive pressure or transparency at important stages. In particular, we will seek to understand on what basis Local Authorities, Housing Associations and private sector builders tender out the building and operation of the network and whether this is based on final price to heat consumer or cost to the provider. We will also seek to understand the contractual chain and how the contracts are negotiated.

### ***Potential remedies***

69. Were we to find problems, potential remedies could include requirements to amend contractual provisions which unduly restrict the right of customers to switch, or impose excessive costs on them for doing so.
70. We may also consider remedies that would take the form of introducing competition *for* the market, distinguishing between natural monopoly and potentially competitive segments of heat networks. This could, for example, involve considering how network deployment is tendered out and whether this could be separated from the heat network provision (and other ancillary services like billing and metering), which could be allocated via a periodic tendering process. We note that, given the wide range of operators in the sector, and the need to ensure that any tendering processes were carried out in a way that met the needs of final consumers, careful consideration would need to be given to the practicability of such an approach.
71. Finally, we note that where individual consumer switching is not technically possible, there may be scope for collective consumer switching. This may be more appropriate in the case of communal heating i.e. where the consumers all live in one or two blocks of flats.

### **Theme 3: Outcomes for consumers**

72. As a result of one or more of the potential concerns identified above, heat network providers may face little competitive pressure to offer reasonable prices, reliable supply and high quality of service. This could potentially have harmful effects for heat network customers, resulting in excessive prices, inadequate heating and poor quality of service. The lack of price and quality regulation for heat networks in the UK may add to this effect.

### ***Evidence and analysis***

73. While we have heard concerns that the prices paid by heat network customers may be excessive, there is little systematic data on prices. A major focus of our work will therefore be to gather and analyse data on heat network

prices. We anticipate that this will be a challenging task, given the large number of suppliers in the sector (estimated to be around 2,000)<sup>50</sup> and propose therefore to analyse a representative sample of prices from a number of different network types in the first instance to improve our understanding of the level and range of prices paid by consumers.

74. To investigate whether heat networks can be more expensive for consumers than gas heating or other alternatives, an assessment would need to be made of the appropriate conversion factor between heat tariff and alternative fuel tariffs or prices (to take account of factors such as boiler cost, maintenance and cost considerations). The recent BEIS survey of heat network consumers will also be relevant here.

### ***Potential remedies***

75. Were we to find that outcomes for some heat network customers are poor, we would consider to what extent addressing the potential issues identified under the first two themes above would be likely to improve these outcomes. If we were to conclude that addressing these problems directly would bring insufficient improvement to outcomes, or do so insufficiently quickly, we would need to consider the case for remedies to control outcomes directly. This might take the form of either or both of:

- (a) rules on how prices are set, whether by reference to cost, previous prices, or benchmark price levels; and
- (b) rules on how providers should set and monitor quality of service for users of heat networks.

76. We recognise that this may be a challenging task, given the wide variety of heat networks and the large number of suppliers in the sector and we would welcome views on a practicable mechanism for implementation of any remedies.
77. As part of any such remedy, we would also need to consider how to set rules which are effective in controlling prices for the natural monopoly elements of heat networks, both in order that the remedies are effective, and also possibly to support the separation of the potentially competitive elements, as is the case in respect of gas and electricity.

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<sup>50</sup> The Heat Metering and Billing Regulations 2014 Notification Data

## Evidence-gathering

78. In addition to considering responses from interested parties to this statement of scope document, we expect to gather evidence through the following methods:
- Issuing information requests to key parties
  - Conducting original quantitative and qualitative research on heat networks
  - Analysing data from regulators and market research firms
  - Drawing together and evaluating existing research on heat networks
  - Inviting users of heat networks to submit information to the CMA about their experiences using a web form
  - Obtaining and reviewing heat network contracts
  - Meeting key interested parties including through roundtable meetings
79. As the study progresses, we may choose to use other means of seeking additional information. Information and updates about this study will be added to the heat networks case page on a regular basis.

## Other context

80. A market delivers efficient outcomes for consumers when it works well for consumers and suppliers. We will therefore consider the potential for the market study to support the sustainability of this market for all stakeholders, including current and potential suppliers.<sup>51</sup> For example, in addition to examining consumer confidence and understanding of the market, the CMA will also be mindful of confidence on the supply side and the risk of chilling investment. This may be particularly relevant in this sector given the growth predicted. The CMA will have regard to the future sustainability of the sector, with effective market processes fit to facilitate timely investment of the optimal scale. This should help to ensure that the market delivers dynamic, sustainable, efficient heat networks over the long term including positive impacts on the environment, outcomes for consumers and sustainable business models.

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<sup>51</sup> Some stakeholders have raised concerns around the supply of heat networks. For example, see pp 50-51, The future of heating: meeting the challenge. DECC, 2013.

### ***Theme 1: Transparency***

1. Are consumers given sufficient information on heat networks before their decision to buy or rent a property that has a heat network?
2. To what extent are consumers able to assess and act upon information regarding heat networks prior to purchasing a property?
3. To what extent is information on the costs of heat networks made clear to customers in bills?
4. Do you have views on our proposed approach to data collection and analysis?
5. Do you think that the potential remedies we are considering are appropriate? What are the potential benefits / risks in implementing such remedies and how should they be designed to maximise benefits? Are there other remedies that we should be considering?

### ***Theme 2: Monopoly supply***

1. Do heat networks exhibit natural monopoly characteristics (high fixed costs; economies of scale; barriers to further local entry to compete for existing customers)?
2. To what extent are consumers able to switch from their current heat network providers to alternative heat network operators or to alternative heat sources? What are the key factors (contractual and / or technological) impeding consumers from switching?
3. How do commercial and financial incentives at different levels in the value chain affect the decisions of builders, operators and residents?
4. Do you have views on our proposed approach to data collection and analysis?
5. Do you think that the potential remedies we are considering are appropriate? What are the potential benefits / risks in implementing such remedies and how should they be designed to maximise benefits? Are there other remedies that we should be considering?

### ***Theme 3: Outcomes***

1. Are heat network prices reasonable, and is quality of service and reliability adequate, when compared with alternative heat sources and/or operating costs?
2. Do you have views on our proposed approach to data collection and analysis?
3. Do you think that the potential remedies to control outcomes directly are appropriate? What are the potential benefits / risks in implementing such remedies and how should they be designed to maximise benefits? Are there other remedies that we should be considering?

## Next steps

### Invitation to comment on our market study notice

81. The CMA welcomes submissions on the market study from interested parties by no later than 12 January 2018. We particularly welcome responses to the key themes and issues set out in paragraph 4.
82. To respond to this invitation to comment, please email or post your submission to:  
  
**Email:** [heatnetworks@cma.gsi.gov.uk](mailto:heatnetworks@cma.gsi.gov.uk)  
  
**Post:** Heat networks Market Study  
Competition and Markets Authority  
7th floor  
Victoria House  
37 Southampton Row  
London WC1B 4AD
83. In providing responses, please say whether you are an individual or a business (or represent consumer or business interests).
84. Please note that while we are interested in hearing about consumer issues in the supply of heat networks, we are unable to provide consumers with advice on individual complaints. The reporting page provides links to sources of advice, information and support.
85. For transparency and to help debate, we intend to publish on our website summaries of the evidence we receive. We may also include such information in our interim and final report.
86. Our intention is to publish an aggregated and anonymised summary of submissions by individuals relating to personal experiences and specific complaints. However, if you prefer, you can indicate that you would like your response to be published in full.
87. We intend to publish responses from businesses or other organisations. If you are responding on behalf of a business or other organisation (including those representing consumer or business interests), in providing responses:
  - Please supply a brief summary of the interests or organisations you represent, where appropriate.
  - Please consider whether you are providing any material that you consider to be confidential, and explain why this is the case. Please provide both a



confidential version and a non-confidential version (for publication) of your response.

88. The Annex sets out how the CMA may use information provided to it during the course of this market study.
89. A possible outcome of this market study is enforcement action using either our consumer or competition powers. Therefore, the information provided to us will help us to assess whether heat network suppliers are complying with the relevant consumer and competition law and determine whether enforcement action is appropriate or not, and may potentially be evidence that we use in specific enforcement work that we commence.

## **Annex – Use of information provided to the CMA**

1. This note sets out how the CMA may use information provided to it during the course of this market study.

### **Why is the CMA asking for information?**

2. The information you provide will help us better understand how well the heat networks market is working for customers, and for fairly-competing businesses (for further details of the issues considered see the statement of scope).

### **What will the CMA do with the information I provide?**

3. Your information will inform our final market study report. The report will set out our findings and any proposed remedies to any problems we find.
4. Where appropriate, we may also use information you provide to take enforcement action, using our competition or consumer powers, against Heat Network provider(s) or may share your information with another enforcement authority (such as local authority Trading Standards Services) or with another regulator for them to consider whether any action is necessary.
5. We may only publish or share information in specific circumstances set out in legislation (principally Part 9 of the Enterprise Act 2002). In particular, prior to publication or any such disclosure, we must have regard to (among other considerations) the need for excluding, so far as is practicable:
  - (a) any information relating to the private affairs of an individual which might, significantly harm the individual's interests; or
  - (b) any business of an undertaking which, if published or shared, might, significantly harm the legitimate business interests of that business.
6. We will redact, summarise or aggregate information in published reports where this is appropriate to ensure transparency whilst protecting legitimate consumer or business interests.
7. **If you wish to submit information either in writing or verbally that you consider confidential and therefore do not wish us to publish or share, please let us know when you contact us with your reasons.**
8. Any personal data you provide to us will be handled in accordance with our obligations under the Data Protection Act 1998 and with other legislation designed to protect individual privacy.

9. Further details of the CMA's approach can be found in [Transparency and Disclosure: Statement of the CMA's Policy and Approach \(CMA6\)](#).