

CMA response to Scottish Government consultation on district heating, April 2017

Introduction

1. The Competition and Markets Authority (CMA) is an independent non-ministerial UK government department, and the UK's primary consumer and competition authority. We work to promote competition for the benefit of consumers, both within and outside the UK. Our aim is to make markets work well for consumers, businesses and the economy.
2. As part of its work, the CMA has an advocacy function which recommends ways in which government policy can better promote competition in the interests of consumers. The *Enterprise Act 2002* gives the CMA the function of making proposals or giving information or advice to any public authority on matters relating to any of their functions. This includes the devolved administrations and local government across the UK.
3. We welcome the opportunity to respond to the Scottish Government's proposals on district heating as set out in its *CONSULTATION ON HEAT & ENERGY EFFICIENCY STRATEGIES, AND REGULATION OF DISTRICT HEATING*¹. Our response is based on relevant work that the CMA, and its predecessor bodies the Office of Fair Trading (OFT) and the Competition Commission (CC), have carried out, as well as complaints we have received from consumers of district heating.
4. Our response is divided into three parts. Paragraphs 6-31 consider the competition and consumer protection issues that consumers face in this sector and how these might be addressed. This part of our response might be considered a response to questions 8, 9, 13, 15, 15c, 25, 26, 32 and 33. Paragraphs 32-33 consider competition issues and investment incentives resulting from the proposals on connecting surplus heat sources to heat networks; this part of our response might be considered a response to questions 20, 22, 22b, 23 and 24. Paragraphs 34-36, answers question 5 on how to share and manage risk in the sector.
5. We would be pleased to stay engaged with the Scottish Government as it develops its policy on district heating, particularly in relation to any proposed consumer protection measures.

Competition and consumer protection (Qs 8, 9, 13, 15, 15c, 25, 26, 32 and 33)

CMA's understanding of the issues facing consumers in the District Heating sector

6. This sub-section draws on complaints to the CMA, evidence from other organisations such as Ofgem and Which?, and evidence from overseas to outline some of the problems that consumers of district heating may face.
7. The CMA understands that there are around 500,000 households (around 2%) in the UK who use district heating, although this may rise significantly in the coming years (potentially to 20% of

¹ [CONSULTATION](#), Scottish Government, January, 2017

households by 2030)² as both the UK and Scottish Governments look to promote the use of district heating.

8. As outlined in the Scottish Government's consultation document, district heating has the potential to deliver benefits in terms of the Scottish Government's decarbonisation agenda and climate targets, as well as reducing the cost of heating homes. However it is not without its risks, especially to consumers. The CMA has received several complaints from consumers of district heating. These complaints suggest that the following problems, which might raise potential competition and consumer issues, may arise:
 - Consumers have complained that they are tied into very long contracts (up to 25 years in some cases), with their only recourse being to switch to using electricity for heat and hot water (which is generally very expensive).
 - Consumers have complained that they face prices that are higher than they would be if they had used grid energy, in some cases even after taking into account the cost of installing and maintaining a household boiler.
 - Some complainants have alleged that information regarding the use of district heating in the development, or its cost, was not provided until they moved in or when they received their first bill. In addition, some complainants have alleged that they were not made aware that their property uses district heating until a late stage in the property purchase or rental.
 - Some of the pricing the CMA has seen involves complicated formulae which may be difficult for consumers to understand adequately.
9. In addition to the specific issues noted above, we note that Ofgem has identified in a 2015 research paper on non-gas markets in general (including district heating), the following consumer protection issues:³
 - Lack of consumer protection for consumers in debt / suffering financial difficulty.
 - No supplier of last resort, with suppliers having no obligation to ensure security of supply.
 - No formalised regulations on charging – introducing scope for price discrimination and limited options for payment methods.
 - No access to mandatory alternative dispute resolution or ombudsman.
 - No Priority Services Register type services or equivalent non-financial services to address consumer vulnerability.
10. Other organisations have also found evidence of consumers facing problems with district heating. In 2015 Which? carried out an analysis of prices paid by consumers on district heat networks.⁴ Its findings indicated that some district heating consumers may be paying considerably more than others, and that some consumers may be paying more than they would for grid energy.
11. There is also evidence from overseas of consumers facing high prices. In 2012 the German competition authority (the Bundeskartellamt) published a report on its sector inquiry into district heating. It found large differences in prices charged to district heating consumers,

² [The Future of Heating](#), DECC, 2013

³ [Insights paper on households with electric and other non-gas heating](#), Ofgem, December 2015

⁴ [Turning up the heat: getting a fair deal for district heating users](#), Which?, March 2015.

indicating that competition was not working well. In 2017 the Bundeskartellamt concluded an investigation into seven district heating suppliers for abusive pricing. The customers affected will benefit from reimbursements or future price reductions worth a total of circa €55 million.⁵ In 2010, the Swedish competition authority (the Konkurrensverket) concluded an investigation into the behaviour of a district heating provider accused of charging excessive prices.⁶ The investigation resulted in commitments from the defendant energy firm for greater transparency in price-setting for consumers, as well as voluntary price regulation. The Konkurrensverket also took the view that the market for distribution of district heating should be subject to price regulation.⁷

The nature of competition in the District Heating sector

The scope for competition based on consumer choice

12. This sub-section highlights how the nature of district heating means that there may be limited scope for consumers to get a good deal by exercising choice over their district heating provider.
13. District heating networks often require substantial upfront fixed costs of investment. Ofgem suggests the infrastructure could be prohibitively expensive to duplicate and may lead to inefficient over-capacity (but does note that other business models exist which allow competition on the generation side, involving large networks which require heat produced from multiple generation facilities, which can compete on price).⁸ This may result in a situation where heat networks resemble temporary natural monopolies and it may not be economically feasible for there to be more than one district heating network in a given district. Furthermore, district heating schemes may need predictable demand in order to reduce the cost of capital, which may drive the tendency for contracts to be exclusive and of a long duration.
14. Homes that are part of district heating networks are often not connected to mains gas, but instead are locked into long term contracts with district heating providers. This means that customers are not in a position to switch provider, either individually or collectively, and therefore district heating providers may face little competitive pressure to reduce their prices or maintain or increase the quality of their service. As a result, consumers may be at risk of facing high prices and poor service quality, and may be relatively powerless to change the situation. Whereas other energy networks such as gas transmission and distribution networks are price regulated, there is currently little regulation of district heating in the UK.
15. While it seems unlikely to be possible for consumers to be able to switch their provider for some aspects of district heating, namely the infrastructure that carries heat from a heat source into dwellings, there may be greater scope for consumer choice in other aspects of district heating, such as metering and billing, or the provision of heat itself. This could create incentives for providers to improve the service quality or reduce the prices of these aspects. Such a situation

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https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/14_02_2017_Fernw%C3%A4rme.html?nn=3591568

⁶ <http://www.konkurrensverket.se/en/news/the-swedish-competition-authority-has-reviewed-district-heating-prices-in-stockholm/>

⁷ Pages 423-426, <http://www.oecd.org/competition/abuse/49604207.pdf>

⁸ *Insights paper on households with electric and other non-gas heating*, Ofgem, 2015

would be similar to grid energy, where there is competition and consumer choice for some parts of the value chain, but the distribution and transmission infrastructure are a regulated monopoly. However, whether this is technically feasible, and whether the additional costs it may lead to in the short-term are justified by the benefits of an increase in competition, are likely to depend on the specific nature of each district heating scheme. Furthermore, this form of retail competition would not enable consumers to switch their heating infrastructure provider.

16. Where individual consumer switching is not technically possible, there may be scope for collective consumer switching. However, high collective switching rates may be very difficult to achieve as they are likely to require coordination between a large number of consumers. In June 2006, the CC published the findings of its market investigation into the supply of domestic bulk liquefied petroleum gas (LPG)⁹. The investigation found that there was a low rate of consumer switching and so imposed remedies on the market to facilitate greater levels of switching. CMA monitoring found that in 2016, the switching rate for single tank LPG customers had risen to 3.72%, but for metered estates (where consumers are more likely to need to coordinate) the switching rate rose only to 1.14%.

The scope for indirect competition (or ‘competition for the market’)

17. This sub-section outlines the possibility, but also the challenges, of consumers getting a good deal by exercising choice over which property they move into.
18. Where consumers are unable to switch provider, good outcomes for consumers could, in theory, be delivered due to the competitive pressure that district heating providers face at the time that a provider is chosen to install the necessary infrastructure. Such competition might occur, for instance, where a housing developer is choosing a district heating provider or, in future, where Scottish local authorities run competitive tenders to award a district heating concession. In theory, housing developers or local authorities may be in a position to ensure through contractual terms that consumers get a good deal in terms of the price and quality of the service they receive.
19. However, developers will only be incentivised to negotiate district heating contracts that offer favourable terms to consumers if they believe that consumers will take those terms into account when choosing which property to buy or rent. This would in turn require consumers to be in a position to **access, assess and act** upon relevant information on the heating options that they face prior to choosing a property. The complaints that we have received as well as our understanding of this and similar sectors suggest that there are several reasons why such consumer decision making may be difficult in this setting:
 - Consumer **access** to, and ability to **assess**, information: Sufficient information on the implications of district heating may not be available, such as information on contract duration and exclusivity, and comparable information on relative pricing of district heating and other energy options. This may be particularly the case in the sale of existing homes that are connected to district heating networks, as sellers, landlords and estate agents may not face incentives to provide accurate information. Further, it may be inherently difficult to

⁹ [Market investigation into domestic bulk LPG](#), Competition Commission, 2006

provide, and for consumers to assess, information on the quality of service of district heating providers before choosing a property.

- Consumer ability to act on relevant information: If a consumer is looking for a property in a given locality, a district heating scheme that covers the whole of this locality may effectively remove any possibility of a consumer exercising choice on the basis of heating provision. More broadly, given the multiple factors that individuals consider when choosing where to live and the relative (large) size of the overall transaction or anticipated rent, some consumers may simply not take the cost of heating the new home into account when choosing between properties. In addition, social housing tenants may not be able to exercise much choice at all over where they live, meaning that they are even less able to choose a property on the basis of its heating provision.

20. Furthermore, while consumer decision making may not work well in this setting, the proposals in the consultation for concession holders to be given exclusivity rights for the provision of district heating, and to forcibly connect buildings to district heating networks, will clearly reduce or remove entirely any element of consumer choice, and hence reduce or remove the potential for consumers to create competitive constraints of any sort on district heating providers. In addition, local authorities (and other public bodies), as opposed to developers, do not face a financial incentive to respond to consumer pressure, but should be expected to have the interests of consumers at heart.
21. Overall, consumers may not be in a position to take into account and act upon relevant information on heating provision when choosing a home. This in turn may weaken the incentives on those (such as housing developers) who select district heating providers to choose the provider who will offer the best deal to consumers. Instead they may be incentivised to choose a district heating provider on the basis of lowest upfront cost or fastest delivery (both of which are reasonable considerations, but may be over weighted in the criteria for choosing a provider at the expense of the consumer interest).
22. In summary, there are good grounds to believe that consumers have no or limited ability to exert any direct or indirect competitive constraint on district heating providers. In light of this, it is important, particularly in the context of the proposals to create exclusivity rights for concession holders and to forcibly connect some buildings, that the Scottish Government work to ensure that consumers are able to get a good deal in terms of the prices they pay and the service they receive as district heating is expanded across Scotland.

Addressing the potential for consumer harm

23. This sub-section outlines our views on the consumer issues that the Scottish Government should take into account when developing policy, the importance of getting the right framework for consumers in place in advance of investment decisions being made, the arguments for some form of price control (whether through regulation or contractual terms), and the possibility, but also the challenges, of ensuring that consumers can get a good deal through either the licensing regime, or competition in the awarding of concessions.

24. In our view, in developing further its plans for expanding district heating in Scotland, the Scottish Government should consider how it can address¹⁰ the following issues:

- How to ensure that prospective consumers, including those who choose to switch to district heating, those forcibly connected to district heating networks, and individuals who move into a property (whether buying or renting) that is connected to district heating, have timely access to clear and accurate information on the pricing and service standards of district heating providers, as well as of alternative sources of energy including grid energy.
- Whether there is scope for consumers, individually or collectively, to switch between different district heating providers. As noted in paragraph 15, there may be greater scope for competition in some parts of the district heating value chain than in others.
- How to ensure that consumers receive clear, accurate and intelligible pricing and billing information.
- How to ensure that district heating customers, especially (but not only) those where switching is not technically or practically feasible, are able to get a good deal in terms of the price they pay and the service they receive, whilst also seeking to minimise the cost of capital for district heating infrastructure providers.
- How to ensure that there is an adequate system of consumer redress for the event that consumers face problems with their provider that cannot be satisfactorily resolved between the consumer and their provider. This is especially important in the context of consumers who are unable to switch.
- Whether it is possible to align the incentives of those (such as developers or local authorities) who choose district heating suppliers with the interests of the end consumer. The timely provision of accurate information may form part of the answer to this.

25. It is likely to be valuable to establish the right framework for consumers prior to investments being made in district heating schemes. In its 2010 report into infrastructure ownership, the OFT outlined how the ownership of infrastructure assets can convey significant market power, often necessitating intervention from competition authorities or sector regulators¹¹. However, the OFT also emphasised the risk that ex post interventions can chill future investment or raise the cost of capital, especially where market power resulted from an initially competitive process. This concern was illustrated in the context of the M6 toll road where the road operator held pricing power owing to the inelastic demand of drivers with a high willingness to pay to avoid congestion on other roads. However, given that the initial contract explicitly allowed the operator to raise prices, and the investors took the initial risk in terms of construction costs and uncertainty over future revenues, the OFT concluded that ex post intervention by a competition authority could chill future investment in similar projects. This underlines the importance of the regulatory environment being predictable to business, and highlights the advantages, in terms of the potential to reduce the cost of capital, of establishing the right measures to ensure consumers can get a good deal in advance of investment decisions being made. It would be undesirable to face a choice between continuing consumer detriment or making ex post interventions that may chill future investment or raise the cost of capital.

¹⁰ It should be noted that addressing these issues does not guarantee that there will be no potential consumer or competition law concerns, or that the market will work well for consumers.

¹¹ [Infrastructure ownership and control](#), OFT, 2010

26. We recognise that, given the characteristics of the sector, there may be arguments for some form of price control, whether by contract or by regulation. We will look carefully at the findings of the taskforce recently launched by the Association for Decentralised Energy,¹² which will consider how the consumer protection challenges inherent in the industry might be addressed, and how it might be possible to build on voluntary consumer protection schemes such as the Heat Trust (whose requirements include service standards and billing information requirements).¹³ We note the Scottish Government's statement that "the prices operators charge, financial returns they make and other licensing details, would require further investigation and would be subject to further policy development and consultation", and in our view the proposals for competitive tenders in the award of concessions and the proposed licensing regime may both present opportunities to ensure that consumers are able to get a good deal in terms of both price and service quality.
27. The proposed licensing regime may present an opportunity for the Scottish Government to ensure consumers are able to get a good deal. Were the Scottish Government to choose this option, it should note the value of the licensing regime's operation being independent of government. The independence of Ofgem and other utility regulators helps to reduce regulatory uncertainty for providers, thereby reducing their cost of capital.
28. Competitive tenders for the award of concessions (competition *for* the market) may also present an opportunity to ensure that consumers are able to get a good deal.¹⁴ However, the Scottish Government should be aware that whilst vigorous competition for the market can ensure downward pressure on costs, if the provider who is awarded the concession effectively holds a monopoly position, they are still likely to seek to exploit that position by charging monopoly prices (if they are able to).¹⁵
29. In running concession competitions, the Scottish Government should ensure that competition works as effectively as possible to deliver good outcomes for consumers and taxpayers. For competition to work as effectively as possible, various conditions need to hold, such as:
- There must be sufficient number of credible bidders in the market. In general, the greater the number of bidders, the more vigorous competition will be, and the better the outcomes that can be achieved.¹⁶
 - Bidders are incentivised to compete, not collude. If bidders form (illegal) agreements not to compete vigorously, the benefits of competition are reduced or removed entirely.¹⁷

¹² http://www.theade.co.uk/-industry-launches-new-district-heating-task-force-welcomed-by-government_4626.html

¹³ <http://www.heattrust.org/index.php>

¹⁴ However, the OFT's 2010 report on infrastructure ownership also notes that competition *for* the market is not necessarily a direct replacement for competition *in* the market (i.e. competition based on consumer choice). See paragraphs 8.23 – 8.24, *Infrastructure ownership and control*, OFT, 2010

¹⁵ As noted in paragraph 11, it may be possible to take action under competition law to address abusive (high) prices. However it may be preferable to avoid this situation arising in the first place.

¹⁶ In *Assessing the impact of public procurement on competition* (2004), the OFT noted that "A rule of thumb is that more bidders make for more intense competition, resulting in lower prices and better quality" (page 8)

¹⁷ The OFT (2004), on pages 9-10, noted that collusion is more likely where the market is characterised by, among other things, market concentration; high barriers to entry; a high ratio of fixed to variable costs; frequent interactions between competitors; price transparency; and stable, regular and predictable demand.

- Buyers (local authorities or developers) are able to access and assess information. Where the buyer has access to robust information on bidders and their products, they are likely to make better choices; and bidders have a stronger incentive to provide what the buyer wants. Equally, good information for bidders makes it easier for them to tailor their bids well, and reduces any informational advantages that some bidders may have.¹⁸
- The playing field is free of distortions and allows all to compete on a fair basis. Certain bid processes or practices may give artificial advantages to the incumbent supplier, or to suppliers of a certain type (e.g. public sector bidders). An artificial advantage is one where a bidder has a greater chance of winning, not on the basis of the higher quality of their product or their (lower) costs, but on factors that are not relevant to their ability to provide the good or service in question.¹⁹

30. Finally, the Scottish Government should also consider how the ability of consumers to get a good deal will be maintained or improved at the end of the concession period if protections for consumers are built in to concession contracts.

31. We would be pleased to stay engaged with the Scottish Government as it develops its thinking in this regard, particularly in terms of consumer protection measures it proposes to take.

Surplus heat and associated issues (Qs 20, 22, 22b, 23 and 24)

32. The Scottish Government's intention to facilitate greater use of surplus heat in district heating networks clearly has the potential to increase energy efficiency. The CMA notes that where surplus heat can be provided to a heat network at a cost that is equal to or less than a heat network's alternative sources of energy (and hence economically efficient), it is likely that supply can be arranged on a voluntary basis. Therefore, whilst the CMA recognises that there may be benefits for heat networks having greater long-run certainty over heat sources, the "directive approach" proposed in the consultation (for situations where terms of supply for surplus heat cannot be agreed voluntarily) may not be necessary to ensure efficient use of surplus heat.

33. Furthermore, the "directive approach" may risk chilling future investment in industrial plants. In deciding where to locate new plants, industrial firms may take into account anticipated revenue they may earn from selling surplus heat to local heat networks. As a result, industrial firms may choose locations with higher land prices where they believe that revenue from selling surplus heat will outweigh the additional cost of land. However, if firms perceive a risk that they will be forced to sell their surplus heat to local heat networks below the market price, they may choose not to consider this possible efficiency in their decision regarding the location of new plants. This could result in less surplus heat being available to heat networks, increasing the cost of heat, which ultimately is likely to be passed on to consumers.

¹⁸ The OFT's 2014 [market study](#) into public ICT procurement found that suppliers may be taking advantage of information asymmetries between suppliers and buyers; for instance aspects of confidentiality clauses may prevent public sector buyers from comparing prices and hence obtaining value for money

¹⁹ The OFT's 2010 report [Competition in Mixed Markets](#) noted that Royal Mail enjoys an artificial advantage over private delivery companies owing to its VAT exemption, but also suffers from an artificial disadvantage from having to offer a universal service at a single price, an obligation which private operators do not face.

Risk management (Q5)

Q5: what are the key principles or approaches that should inform how our regulatory approach manages risk for district heating across the whole system?

34. The Scottish Government might like to take into account the following considerations in its approach to managing the risks associated with district heating networks
35. As noted above in paragraph 25, the OFT found in its 2010 report that interventions by competition authorities or regulators in infrastructure markets where firms' market position has been achieved on the basis of a competitive process can risk chilling future investment because it can create uncertainty about the regulatory environment. Reducing regulatory risk for district heating providers may help to encourage investment and reduce their cost of capital, which in turn, may help to reduce prices for consumers. Regulation may always cause some uncertainty for business, but there are several ways in which this can be reduced:
- Regulation, its application and the use of regulatory sanctions should be both consistent and transparent. Consistency between different regulatory bodies, as well as consistency of enforcement both across the country and of the regulated businesses will contribute to creating a predictable regulatory environment. Transparency and clarity over regulatory objectives and requirements, as well as over the consequences of non-compliance will also help to reduce regulatory uncertainty.
 - Where the application of regulation is liable to come under political or other pressure, the political independence of regulators may help to generate confidence that regulation will be applied in an objective way, further aiding the creation of a predictable regulatory environment.
36. Some risks associated with district heating are likely to be largely, or to some extent, within the control of district heating providers. This might include the construction risk, operational risk and performance risk identified in the consultation document. If the government offers to underwrite these risks, this may reduce the incentive on district heating providers to manage and mitigate these risks effectively themselves.

Annex - Questions responded to

Q5: what are the key principles or approaches that should inform how our regulatory approach manages risk for district heating across the whole system?

Q8: what are your views on taking district heating zones, or parts of district heating zones, and establishing an exclusive concession for either private- or public-sector heat network developers to fulfil that part of the LHEES? How will this alter the risk profile of DH development?

Q9: what considerations should inform the design of concessions (target users, envisaged network growth, concession duration etc.)?

Q13: what should happen to long-term ownership of heat network assets, post-concession?

Q15: what are your views on the proposed power to compel existing buildings to connect to DH networks?

Q15c: Do you agree that this socio-economic assessment at project level should include an assessment of impacts on consumers of requirements to connect?

Q20: what are your views on requiring existing industrial plant, with the potential to supply surplus heat, to make data available to public authorities?

Q22: Do you agree that in some circumstances (if requested), compulsory mediation is needed?

Q22b: Do you agree that if compulsory mediation was not successful, than a more directive approach should be used?

Q23: what are your views on requiring new industrial plant to be DH ready?

Q24: what would be the most appropriate way of ensuring that new industrial buildings connect to DH networks? What role can zoning within LHEES play in this?

Q25: Do you agree that as DH becomes more widespread it will need to become a licensed activity?

Q26: What technical standards and consumer protection measures should be part of standard DH licence conditions? How should these relate to existing schemes?

Q32: what are your views on the best approach in ensuring that potential customers understand the differences as potential customers of a heat network, and who do you think is best placed to convey these messages?

Q33: Please provide any evidence you have regarding: (a) analytical skills, resources and techniques that could support the development of LHEES, particularly where these are not currently used by local authorities?