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Heat networks Market Study
Competition and Markets Authority
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Vattenfall's input to CMA's Heat networks market study

Dear CMA,

We welcome the opportunity to feed into your market study focussing on heat networks. As one of the largest heat network investors, owners and operators in Europe, supplying around two million customers, we have significant experience and insight to share from our continental operations.

2017 has been a year of fundamental change for Vattenfall in the UK, during which we established a UK district heating business. We believe that in the UK, as in Europe, heat networks will play an important role in affordably decarbonising the building stock.

Last year we also acquired iSupply Energy, a Bournemouth-based domestic energy supplier with more than 150,000 GB customers, launched a 100% renewable industrial and commercial electricity supply business, secured an independent distribution network operators (IDNO) licence and are scoping entry into the electric vehicle charging market. This is in addition to our investment in excess of £3 billion in UK wind sector since 2008 and, as of early 2018, we operate more than 1GW of installed capacity.

We would welcome an opportunity to discuss our responses with you further. Please do not hesitate to get in touch if this would be of interest.

Yours Sincerely,

Mary Thorogood
Stakeholder Relations Adviser Vattenfall UK

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?

- There should be a clear, standardised methodology available to the consumer to ensure they are able to make appropriate comparisons between different options available to them when renting or buying. The methodology should cover cost and energy saving over an appropriate period, broader environmental concerns – i.e. air quality – and contribution to wider energy and security of supply goals. For example, for two similar properties – one with, one without a heat network – the consumer should be able to assess what is the cost and/or environmental saving available to them for each property before making any decision.
- The study should also take account of the low level of knowledge of heat networks and the wider heat landscape in the UK. For example, heat networks typically provide a guaranteed supply of heat, fully maintained with all systems replaced within its heat charges. The difference between ‘heat’ and fuel (likely gas) is something that is not normally considered by residential customers. This lack of knowledge of how heat networks and the wider market operate may result in consumers not fully understanding the options available to them. For example, the study should consider the charge for heat from a heat network must to include the cost of maintenance and replacement of plant items in the energy centre and the Heat Interface Unit (HIU) within dwellings. This HIU is equivalent to an individual boiler and in privately owned properties residents are responsible for maintenance and replacement of these systems. However, people are unlikely to account for the cost of repair and replacement on an annual basis and therefore believe the heat charges to be significantly higher. The heat charges need to include the maintenance and repair elements but these should always be lower than the gas boiler comparator.
- We believe the study should consider if these issues are fully explained to customers.
- We also believe that the study should consider who is able to provide this information to customers in advance of purchase or lease of property, as it may not be the energy supplier but the letting agent, landlord or seller.

2. To what extent are consumers able to assess and act upon information regarding heat networks prior to purchasing a property?

- We believe the study should consider who can provide what information to customers, at what point in the renting or buying process and once such information is available, with whom any action can be taken.

3. To what extent is information on the costs of heat networks made clear to customers in bills?

- We believe the study should consider the variety of different customer bills that are in the market as well as the how costs are apportioned to the fixed and variable elements of the tariff.
- The study should also consider the requirements of the Landlord and Tenants Act, which requires landlords to “keep in repair and proper working order the installations in the dwelling-house for space heating and heating water”, and this affects who is obliged to pay which parts of the bill.

4. Do you have views on our proposed approach to data collection and analysis?

- In paragraph 18, Denmark is referenced as an example of a market with high penetration of heat networks. We would recommend that this study also considers the market in the Netherlands, which we consider to be more comparable with the UK market in terms of commodity pricing and levels of regulation. In the Netherlands, as in the UK, heat networks compete with gas boilers to secure new customers.

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?

- Vattenfall support remedies that improve consistency across the industry and will lead to an improvement of the reputation of district heating.
- The study should take account of how future regulatory requirements need to consider additional costs to the network operators and the potential impact to consumer bills and the development of the industry. However achieving consistency through regulation is important.
- In Amsterdam, our network supplies 70,000 customers who all pay a single price for heat and we would be willing to provide information to the CMA on our operations across Europe as part of the study.
- Vattenfall support the introduction of an appropriate regulatory regime that covers pricing, billing, sustainability and reliability in particular. The regulatory regime should ensure that the cost of regulation to business is balanced by a reduction of risk for investors.

Theme 2: Monopoly supply

6. Do heat networks exhibit natural monopoly characteristics (high fixed costs; economies of scale; barriers to further local entry to compete for existing customers)?

- New heat networks are monopolies only regulated by their contracts, contracts which are required to secure the investment needed in new infrastructure. Contract terms are agreed at the outset of a new project, often between a developer or local authority and network operator, so the study should consider the consistency, or lack of, across the industry in such terms and the ability to standardise these.
- Long term contracts (circa 25+ years) provide the security needed to repay investment in the network, and how this is balanced with competition needs to be considered in the study.
- The regulated monopoly approach is similar to our other markets in the Netherlands and Germany where contracts are of a similar length. In Sweden, which is a more mature market i.e. the initial investment in the pipework has been paid off, contract lengths are shorter and the market is more competitive. We believe the study should consider these precedents.

7. 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?

- Due to the fact that heat networks are natural monopolies, unless a second heat network is running side-by-side, the opportunity to switch is not available to consumers. Nor is it in anyway cost effective to do so.
- The potential for Third Party Access has been studied in other countries. This is where consumers are allowed to choose their supplier viz-a-viz electricity or gas. The conclusions of such studies (Germany, Sweden) have shown that for heat networks it would probably result in technical problems and higher costs.
- More so than the production of electricity, heat is location-dependent. With high transport losses, meaning that grids will always be local and local producers will have a lot of market power. As a result effective competition between producers will be unlikely.
- In the instance of market failure, strict regulation or government execution would be the more obvious remedy.

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

- The study should consider that the developer needs to address their planning and building regulation obligations to find a low carbon solution for the development.
- Both these set of regulations play a very significant part in the decision to build a heat network, and are in place because of the national imperative to decarbonise our heat supply.

9. Do you have views on our proposed approach to data collection and analysis?

- Vattenfall supports the collection and use of data, including that from its European experience, where transparent data reporting is a requirement.

10. 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?

- Imposing remedies that ensure customers have the right to switch will undermine the business case for heat networks. As described in question 6, allowing some customers to switch will increase the proportion of fixed costs that the remaining customers are required to pay and likely increase the charges for remaining customers. The study should therefore consider whether the ability to switch or disconnect should only be a recourse if recourse for a particular issue has not been possible through the energy ombudsman.
- We believe the study should consider if a more appropriate remedy is ensuring that customers are aware of what is included and excluded from their bill and whether this is less than or more than a gas boiler comparator. When bills are higher than the gas boiler comparator, there should be recourse available to reduce the charges from the heat network.
- Competition after a heat network has been installed is very difficult to achieve because the supplier needs to control the heat supply from the energy centre to the network. There can only be competition in heat supply when the network becomes large enough to require multiple heat sources. Networks in the UK are very far away from this point and therefore the study should consider other solutions.

Theme 3: Outcomes

11. Are heat network prices reasonable, and is quality of service and reliability adequate, when compared with alternative heat sources and/or operating costs?

- We believe that the study should consider if the price of heat networks is reasonable only when it is lower than the gas boiler comparator.
- The study should take care not to conflate the provision of a fuel source (e.g. gas or oil) with the provision of heat.
- The study should also consider the difference in heat costs between a tenant, owner and private landlord.

The study should consider the tax treatment of gas in comparator countries, for example the Netherlands or Denmark, and its role in pricing and driving take up of heat networks. A strong carbon pricing signal will ensure heat network solutions operate on a level playing field with other heat supply solutions, for example gas. The CMA should look for evidence around how

much tenants are being charged for heat and their awareness of rights under the landlords and tenants act with respect to maintenance and replacement costs.

12. Do you have views on our proposed approach to data collection and analysis?

- As stated in response to question 4, Vattenfall would recommend that the CMA gather data from the Netherlands, Sweden, Germany and Denmark in order to provide a comparison against practises in the UK.
- The heat network market in these countries is much more developed than that of the UK and the UK market can learn from successes and failures of practices in these countries.

13. 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?

- Vattenfall suggest the study should consider remedies that include standardisation of prices and benchmark pricing. This would likely improve the reputation of heat networks and improve consumer trust of operators.