



**Department for Business, Energy and Industrial Strategy
consultation**

Heat networks: consultation on market framework

Submission from CIBSE

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CONSULTATION RESPONSE

Regulatory Framework overview

Q1. Do you agree with the inclusion of micro-businesses within consumer protection requirements?

Yes, but other non-domestic consumers than micro-businesses may also warrant protection – see response to Q2.

Q2. Do you agree that consumer protection requirements should not cover non-domestic consumers (other than micro-businesses)?

We appreciate non-domestic consumers do not benefit from such protections for gas and electricity, and heat networks should not be unfairly regulated. However, the fact is that heat customers are typically “captive” and may therefore benefit from consumer protection – for

example small non-profit organisations. We recommend this is kept under review; Ofgem would be well-placed to advise on the balance of regulation, consumer protection, and fair approach in comparison with other utilities. In addition, CIBSE CP1 (2020) provides some basic minimum standards for the treatment of non-domestic customers.

Q3. Do you agree with our proposed approach to a definition of heat network, including that it should cover ambient temperature networks but not ground source heat pumps with a shared ground loop? Are there network arrangements you think would not be covered by this and which should, or vice versa?

We agree that ambient temperature networks should be in the scope of the definition and regulations.

We do not agree that ground source heat pumps with a shared ground-loop and individual building or dwelling heat pumps should be excluded:

- These schemes have important potential to deliver low-carbon heating and cooling.
- While it may be that the issues found so far are different, there are still only a limited number of such schemes and problems could well emerge in the future.
- While consumers are able to change their energy (= electricity) supplier feeding the heat pump, they are still captive to that particular ambient loop and heat pump arrangement, and possibly commercially limited to certain heat pump manufacturers with certain product characteristics.
- Specific issues in these schemes may benefit from regulation (e.g. water quality, how heat “sharing” is accounted for, who benefits from it).
- It would seem odd to exclude them: the principle of consumer protection and minimum technical standards should apply to heat provision, for all consumers, especially when heat provision relied on significant initial capital investment by external parties who may not have long-term performance and consumer protection as their prime driver.

Proposed regulatory approach

Q4. Do you consider Ofgem to be the appropriate body to take on the role of regulator for heat networks? If not, what would be an alternative preference?

In principle yes, as Ofgem are already familiar with relevant issues, are a known “brand” for consumers to go to, and as it would facilitate consistency of approach between the gas, electricity and heat markets. However, this must be reliant on appropriate resources, including the development of skills and additional capacity.

This should cover the whole of the UK in order to standardise the regulator approach.

Another advantage is related to decarbonisation and long-term trends: fuel prices are currently not aligned with their carbon costs (especially, gas compared with electricity). This is very important as it currently provides a disincentive to investment in low-carbon solutions, and therefore very much undermines the consultation's intent for "cost effective low carbon outcomes". This ultimately needs to be reviewed in order that pricing signals become more closely aligned with carbon objectives, and Ofgem are well placed to ensure tariff structures are viewed as a whole, with consideration of carbon outcomes as well as impact on consumers including the most vulnerable.

Regulatory model options

Q5. Do you agree that the proposed regulatory model is appropriate for the regulation of heat networks?

In general we agree with the proposed regulatory model in Figure 4, including the Design-Build-Operate split. However, we think that **all** heat networks should be required to lodge details, as it is essential that the regulator knows where all the heat networks are, how large they are and who is responsible for building them and operating them.

Q6. Which entity should be responsible and accountable for regulatory compliance, particularly where the heat supplier and heat network operator are not the same entity? Please explain why you think this.

On balance, we think responsibility should be with the asset owners as those with the initial responsibility for design and build, but also the link to operation. This will help ensure incentives for performance throughout, and a link from design to operation.

We would add that if regulations are well designed and enforced, we expect that requirements will trickle through the owner – developer - operator – supplier chain through contractual arrangements between parties.

Q7. Do you agree that consumer protection requirements during the operation and maintenance project stage should be regulated, such as pricing, transparency and quality of service?

Yes

Q8. Should there be a de minimis threshold below which a) very small domestic schemes and/or b) non-domestic schemes with very few domestic consumers are exempted from any of the regulatory requirements proposed in this framework? Please explain why you think this.

No.

We are unsure about the intent of the consultation, as two sentences seem contradictory (“*for schemes above the threshold this could include (...) additional requirements on consumer protection*”, which seems to contradict, lower down that same page, “*we expect all networks to be subject to the consumer protection elements of the regulatory framework*”). For the avoidance of doubt: we think all residential consumers should be protected. Where there is no choice over the source of heat then the presumption should be to regulate unless there is a very clear argument not to regulate – a precautionary protection approach.

In addition, performance standards should also apply to all: the cumulative carbon and environmental impact of small schemes is not negligible, and we know that decarbonising heat is one of the most significant challenges of achieving the net zero target, so we cannot afford a new generation of networks adding to future decarbonisation challenges.

In general, we urge caution against the use of thresholds, as these are well-evidenced in other regulations to attract gaming, loopholes and detrimental other threshold effects.

Q9. Should there be a size threshold above which larger schemes are subject to more detailed regulation and scrutiny? If so, what type of threshold would you consider most appropriate?

Possibly, but this threshold should not affect essential performance requirements such as decarbonisation, consumer protection, and health & safety. In particular, we do NOT agree with the proposal that decarbonisation requirements should only apply above a certain threshold, particularly with the current proposed threshold which would represent only 2% of the total number of heat network suppliers: we have serious concerns about the risk this would cause to lock-in high-carbon heat for decades to come.

A threshold may be appropriate to reduce burdens such as by offering a reduced “routine” level of scrutiny; in that case there should also be a clear mechanism such that, should there be consumer complaints or other causes of concern, the same level of scrutiny could be applied to schemes even if they are below the threshold. We would also recommend exploring additional criteria for the threshold e.g. in MWh of heat supplied, to better capture mixed-use schemes which may serve a limited number of domestic consumers but still represent high energy, carbon and consumer volumes.

In principle we are unsure there could be reason for lower regulations, but some detailed criteria may emerge where this may be appropriate, as long as it only applied to a small minority of consumers, and no vulnerable consumers – see response to Q8.

Q10. Should an optional licence be available for entities seeking rights and powers? If not, what other approaches could be considered?

No comment

Q11. Are there any other adjustments that could be made to the proposed model to enable it to work better?

We strongly recommend to look at regulatory options for existing heat networks; at the very least, when plant is replaced, significant works carried out, and possibly when significant changes are made to the contractual arrangements (e.g. change in network operator). There MUST be an ambition to help existing customers and improve the performance of existing schemes, including their impact on air quality and carbon emissions. We welcome the statement that government are looking at providing guidance on this, but we think it should go beyond guidance; CIBSE would be very happy to be involved and provide support to BEIS on this.

Q12. Are there circumstances in which transitional arrangements should be introduced? If so, in what circumstances might these apply and for what length of period?

There may be a need for transitional arrangements for schemes which are in construction or at an advanced stage of design, but we would recommend the transition period to be short and, wherever possible, for regulations to at least require schemes to demonstrate whether they could update their design to meet the regulations. We appreciate this may be seen as more of a burden than in other regulations, but networks are a huge investment of capital finances and resources (embodied carbon, materials etc), with very long-term consequences, so we think they really warrant proper planning and “doing it right first” if at all possible to avoid long-term negative impacts on policy objectives.

The more information government can provide about their thinking, and the earlier, the better, as parts of the industry will seek to meet regulations for risk mitigation and future-proofing.

Q13. Do you consider our proposed approach sufficiently flexible to accommodate emerging business models, including unbundling of different components of a heat network? If not, please suggest ways in which we could ensure alternative business models are not precluded.

No comment

Enforcement powers**Q14. How should government and the regulator ensure that enforcement action is proportionate and targeted? Are there particular considerations for not for profit schemes?**

This should generally follow the approach taken for other utilities and be backed by the Energy Ombudsman.

Enforcement always needs to bear in mind the likely consequences of penalties. Punitive financial penalties may be passed on to the end users i.e. the parties which this regulation is trying to protect, so care is needed to avoid this. Other forms of penalty will be needed, perhaps limiting the ability of an operator to obtain future licences, perhaps the ultimate sanction of having a licence withdrawn and therefore having to sell the interest to another operator in good standing – see also our response to Questions 16, 17 and 18. This would treat not-for-profit bodies in the same way as profit-making schemes.

Q15. Do you agree that imposing fines and removing a licence/authorisation are an appropriate and adequate set of enforcement actions for the regulator of the heat network market?

Yes, with the caveats and additional information from our answer to Q14

Q16. Do you agree that the regulator should have powers to impose penalties at the entity level which are proportionate to its size, in a scenario where there are repeated or systemic failures across multiple schemes owned or operated by the same entity?

It depends what the “entity” is (which is yet to be determined, as per question 6). We would encourage penalties that also take account of the number of consumers affected.

As noted under Q14, care is needed to ensure that the fines do not end up on consumers bills but come from other funds e.g. dividend payments or Directors bonus schemes.

Q17. Do you agree that the regulator should have powers to revoke an authorisation for single networks owned or operated within a group scenario, so that the entity would still be authorised or licensed to operate those networks within the group that remain in compliance? If not, what alternative approach might the regulator take?

Yes, at least at first step. Entities should however be investigated on their other schemes and, if found to fail compliance on several schemes, we would encourage the revoking of entity-wide authorisations. There must be clear signals that enforcement will be strong, and therefore strong incentives to comply.

Q18. If compliance issues are more widespread within the group of networks owned or operated by the same entity, do you agree that the regulator should be able to revoke the authorisation or licence for the entity as a whole covering its entire group of networks? If not, what alternative approach might the regulator take?

Yes, as per response to Q17

Q19. Do you agree that individual domestic consumers should have access to ombudsman services for redress? Do you have any views as to which ombudsman is best placed to provide this function for heat networks?

Yes, we agree. In a similar way as we agree Ofgem would be well-placed as the regulator, we think the Energy Ombudsman would be well-placed to be the ombudsman, provided they are given appropriate resources; this would seem logical and would help ensure consistent approaches across the heat, electricity and gas markets.

The consultation refers to the Housing Ombudsman as alternative option – we assume this refers to the new Homes Ombudsman which government consulted upon in summer 2019. We have no objection in principle to this, but our preference in principle would be the Energy Ombudsman. Furthermore, and importantly, we have serious concerns about the current proposed scope of the Homes Ombudsman¹, which is proposed limited to new homes and does not clearly address issues such as in-use performance. This needs to be addressed (in any case, but even more so if its scope increases to heat networks).

Step-in Arrangements

Q20. Do you agree that step-in arrangements are necessary both to cover the risk of stranded consumers and as a deterrent against sustained failure to meet the regulatory requirements? If not, why?

Yes. In a similar approach as with other utilities, there should be a Supplier of Last Resort.

Q21. Do you have any examples of approaches we should be considering as we develop the step-in arrangements?

No comment

Protecting consumers

Transparency

Q22. Do you agree that the provision of minimum information would help consumers in making decisions at pre-contractual stages of property transactions?

Yes, as long as it is provided in an appropriate form for the consumers involved, including clarity of language. We recommend referring to the Heat Trust as example.

Q23. Do you agree that heat suppliers should be responsible for developing information and guidance for prospective consumers? If yes, what minimum information should be included?

Yes. We have added comments on the proposed information:

¹ CIBSE response to Homes Ombudsman consultation, August 2019 <https://www.cibse.org/getmedia/79b8c991-63a9-4b66-88ba-1cae7907dd56/New-Homes-Ombudsman-Consultation-CIBSE-response.pdf.aspx>

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- *the age and type of heat network system* - yes
 - *the contractual arrangements in place* – yes, in a language and amount that is understandable and meaningful to non-specialist
 - *a summary of terms of service* - yes, in a language and amount that is understandable and meaningful to non-specialist
 - *price information, including estimates of annual costs* - yes, along with a simple and meaningful comparison e.g. comparison with similar home heated by individual heating systems in the area, based on the average of a basket of prices (e.g. gas heating, heat pump heating); and impact of low / medium / high heat consumption on total bills, so that people are able to understand and query the level of standing charges.
 - in addition: environmental impact: carbon emissions and air polluting emissions (NOx, Particulate Matters), along with a simple and meaningful comparison e.g. comparison with similar home heated by individual heating systems. Consumers should also be provided information on how to monitor and benchmarks their heat energy use, with different levels of granularity depending on their level of interest.
 - in addition: point of contact for queries and for operation & maintenance issues, and information on an escalation procedure for conflict resolution.

We suggest referring to the CIBSE Code of Practice (CP1, 2020) and the Heat Trust for guidance on this.

Q24. How can we ensure new consumers receive or have access to information about the heat network before moving into the property?

This could be required to be provided along with the Energy Performance Certificate (EPCs), which are required for all sales and new rentals; if the heating fuel was selected as heat network, then agents / housebuilders etc should be required to provide the additional information.

Q25. Do you agree that the market framework should regulate and enforce the provision of information during residency?

Yes. There would be much more limited benefit in regulating it at the transaction point, if the information could later become lacking, once consumers are “captive”.

Pricing

Q26. Do you agree that the regulator should have powers to mandate and enforce price transparency? Can you foresee any unintended consequences of this?

Yes we agree.

We do not foresee unintended consequences, and certainly not any that would warrant NOT enforcing transparency.

Q27. What are the current barriers to publishing and maintaining accurate information on fixed charges, unit rates and tariffs? What are the main reasons for information on pricing not being available at present?

No comment

Q28. Do you agree that there should be clear, consistent rules on what costs should be recovered through fixed and variable charges?

Yes. It may be that this could be relaxed in the future once the market is more established, better regulated and more competitive, when different models may be developed which would suit different companies and not disadvantage consumers.

Q29. Do you agree that the regulator should have powers to undertake investigations on pricing and to enforce directions and remedy actions, where there is sufficient evidence that these could lower prices for consumers?

Yes.

Q30. Do you agree that price regulation in the form of a price cap or regulation of profits should not be implemented at this point in time? Please explain your answer.

No comment

Q31. What might cause price regulation to become an appropriate intervention in future? What evidence would be required to demonstrate this?

We would recommend, as a minimum, monitoring complaints to the Ombudsman, carrying out spot checks, and monitoring consumers at risk of fuel poverty more closely. This should indicate whether price regulation will be needed.

Quality of Service Standards

Q32. Do you agree that consumers on heat networks should have comparable levels of service and protection as consumers in other regulated utilities? How do we ensure the associated compliance costs of such protections remain proportionate?

Yes, we agree.

A significant number of households are in fuel poverty, and this can be exacerbated by tariffs on heat networks. The scale of the issue, and the hardship households face as a result, should justify significant compliance and enforcement efforts. To help the market prepare and lower compliance costs, government should make their plans clear, with a known direction of travel, and continued engagement with the industry.

Q33. Do you agree that minimum standards should be outcome-based to allow the regulator scope to implement these flexibly and proportionately depending on the size and nature of different schemes? Are there other ways these outcomes could be achieved?

Yes.

Technical Standards

Q34. Do you agree that all new schemes should be subject to minimum technical standards (once developed), given the potential impact on system performance and end consumers?

Yes.

We strongly recommend that this should also be looked at for existing heat networks; at the very least, when plant is replaced, significant works carried out, and possibly when significant changes are made to the contractual arrangements (e.g. change in asset owner, change in network operator). There MUST be an ambition to help existing customers and improve the performance of existing schemes, including their impact on air quality and carbon emissions. We welcome the statement that government are looking at providing guidance on this, but we think it should go beyond guidance. As an initial starting point, the operational and customer protection stages 6 & 7 of CIBSE CP1 should apply retrospectively to existing networks. CP1 does not set absolute targets but does require operators to carry out certain things and produce certain documentation, which are therefore reasonable to apply to existing networks to help get them to perform better over time. In addition, performance requirements should gradually be introduced. CIBSE would be very happy to be involved and provide support to BEIS on this.

Q35. How could we ensure the impact of minimum technical standards on new small communal networks is proportionate?

To help the market prepare and lower compliance costs, government should make their plans clear, with a known direction of travel, and continued engagement with the industry. If standards are developed in collaboration with the industry, and are made available early, the market has been proven to adapt.

This is also why a focus on performance outcomes (including carbon and air quality) is helpful: scheme developers can determine on a case by case basis the most suitable solution for their scale and context.

On the issue of scale we would also, as elsewhere in the consultation, stress the significance of the cumulative environmental impact of heating installations, even if individually they are relatively small. We cannot afford a large number of small installations to jeopardise energy,

carbon and air quality outcomes, particularly as, due to their very nature (= large number of small disperse installations) they would then require significant efforts in the future to improve.

Q36. Do you agree that regulated entities should demonstrate they are compliant through an accredited certification scheme?

Yes, this seems reasonable and we agree it is likely to be more efficient and appropriate than, for example, requiring the regulator to oversee compliance directly.

Note: CIBSE is a registered charity which exists to deliver public benefit in accordance with charity law and its royal charter. It owns a certification body, CIBSE Certification Ltd, which has independent governance to maintain its impartiality. CIBSE Certification Ltd has had no part in the preparation of this submission, and in particular the answer given to this question.

Q37. What do you consider to be the most appropriate approach to setting the technical standards?

We welcome reference to CP1. In addition, we would note it would need additional consideration of low-temperature networks, including ambient loops.

We would very much welcome a discussion with BEIS about this.

Q38. Are there examples of the roll out of technical standards or the introduction of compliance schemes which you consider particularly relevant from other markets or technologies?

One good example is the introduction of condensing boilers, with a carefully planned joint approach between government and industry, including the installers, to get everyone ready. Condensing boilers went from 15% market for condensing to 85% in less than a year, with no public backlash, no coverage in the daily tabloids, and significant success in achieving the carbon abatement targets of the overall policy.

We would also highlight efforts made to follow up on the implementation of policy in order to gather lessons and gradually improve schemes, as happened for example with the RHI². This is essential in order for policy objectives to be met.

Rights and powers

² For example, the analysis commissioned by BEIS (RHI Evaluation: Synthesis, A report by Frontier Economics, Revised, September 2017) to analyse the take-up of the RHI, and the analysis by the Energy Saving Trust on heat pumps, which was used to inform subsequent stages of the RHI (Heat Pump Field Trial Reports: Phase 2: Heat is On, 2013 ; Phase 1: Getting Warmer, 2010).

Q39. Do you agree that a (licensed) heat network entity should be classified as a statutory undertaker?

yes

Q40. Do you agree that the proposed rights and powers should be given to heat network entities which meet the terms of our proposed licensing system?

Yes

Q41. Is it reasonable to assume that the proposed rights and powers would only be relevant to district heat networks (not communal networks)? If not, please explain why.

No comment

Q42. What impacts will the proposed rights and powers have on the development and extensions of heat networks? And what impacts do you think these rights will have on the operator's ability to maintain and repair heat networks?

No comment

Access rights

Q43. Do you agree that licensed heat network entities should be granted statutory access rights?

yes

Q44. Do you agree that the process should be similar to that for electricity and gas companies, in that the licensed heat network entity will have to make an application to the responsible minister for the easement and that any compensation arrangements will be determined by the Tribunal Service?

Yes

Q45. Do you agree that these access rights would primarily be used to install and maintain pipework, or do you anticipate that they would be used for other purposes?

Yes, but they may also be useful to access controls, meters, and more generally data and comms cables.

Street works

Q46. Would you consider the ability to apply for a street work permit a considerable benefit compared to a Section 50 Street Works licence? If so, in what way?

No comment

Q47. Do you have any experience of applying for a Section 50 Street Works licence? Did you find this delayed either construction or repair and maintenance work required?

No comment

Rights to lay pipes under the roadway

Q48. Do you agree that heat networks should be given equivalent powers to other utilities to install and keep heat network pipes underneath roadways? Are you aware of any potential unintended consequences?

yes

Permitted development

Q49. Do you agree that licensed heat network developers should be granted permitted development powers similar to other statutory undertakers? Are you aware of any potential unintended consequences?

We agree with the principle when it comes to maintenance and repairs of existing schemes, and possibly for pipework in new schemes. However, there are some aspects which justify a consultation period:

- the works themselves, the energy centre and the network in operation have impacts on the local community (e.g. noise, visual impact, amenity space, street trees, air quality etc)
- the consultation period can be useful to identify opportunities for joint utilities work, to limit overall costs and disruption.

While we do not want to create undue burden on heat networks compared to other utilities, there are specific characteristics of heat networks (e.g. energy centre, on-site generation) which do warrant different treatment. PDRs should not put at risk stakeholder engagement on these important aspects.

Q50. In addition to permitted development rights specified (install or replace pipes or electricity cabling; erect small temporary structures and small ancillary buildings, machinery or apparatus), are there any other activities to which a permitted development right should apply?

Access rights for data cabling, as per Q45.

Consultation rights

Q51. Do you agree that the administrative burdens of being statutory consultees would be disproportionate for heat networks?

No comment

Q52. Beyond improving the guidance on non-statutory consultees, do you think that there are any other areas of government guidance that could be improved to ensure that heat networks are more routinely consulted on relevant development in their areas?

No comment

Linear obstacle rights

Q53. Do you believe that licensed heat network developers should be given equivalent rights to cross linear obstacles? Can you provide examples of where such rights would be beneficial to heat network development?

No comment

Decarbonisation of heat networks

Q54. Do you agree that consumers should have access to information on the energy performance and percentage of low-carbon generation of their network?

Yes. As this is a specialised area, this would only be truly useful if it is made accessible to non-specialists, including a comparison with on-site low carbon solutions and best-in-class low-carbon networks. Government may need to provide very clear guidance on how such information is to be provided if it is to be of any use and not just a burden or tick-box exercise. COIBSE CP1 (2020) includes performance KPIs, including carbon.

Q55. Do you agree that regulation is necessary to encourage decarbonisation of heat networks over the period to 2050? Are there alternative means by which government could act to support the decarbonisation of heat networks?

Yes, we very much agree. This should apply to all networks. As mentioned in our response to Q9, we strongly disagree with the proposal that decarbonisation requirements should only apply above a certain threshold, particularly with the proposed threshold capturing only 2% of the total number of heat network suppliers: this seems very much contradictory to decarbonisation objectives.

There is little detail provided in the consultation but we are unsure about the proposal that regulation “*would be based on each heat network reporting its heat source technology*”; the technology itself would only provide partial and unreliable information – in particular, it may

operate in a very inefficient manner even if in theory it was low-carbon. Regulation must be based on:

- How much heat has been delivered (to the end consumer, to take account of distribution losses and other inefficiencies)
- Carbon and air quality emissions for that heat delivered, based on metered fuel and electricity inputs.

Regulations should not steer towards particular technologies but set performance criteria in terms of carbon and air quality emissions, and schemes which offer flexibility to adopt a range of future low-carbon sources and systems should be encouraged; low-temperature systems and 5th generation networks which offer the option for heat sharing between consumers offer particular advantages.

In addition (not instead of):

- Government should remove the current dis-incentives to the decarbonisation of heat networks, in particular the factors used in Building Regulations Part L which skew the assessment of carbon performance and provide an artificial support to higher-carbon heating solutions. We have serious concerns about these factors, and have raised them as part of our response on Part L and the Future Homes Standard³.
- Connection to heat networks as part of planning applications should only be required if the heat network offers carbon benefits (to the scheme and/or the surrounding area), now and in its projected lifetime. It should be subject to a detailed appraisal and feasibility study, given the significant initial capital expenditure (in finances, material resources, and embodied carbon). Exceptions should only apply if there are very certain and robust plans in place for decarbonisation within a small number of years (say, 3-5); there should be guidance on what these plans entail and on guarantees to ensure they will be put in place – CIBSE would be happy to work with BEIS on this.
- More generally, and not only for heat networks, there needs to be review of energy prices as the current discrepancy between cost impact and carbon impact of gas and electricity can be a barrier to investment in low-carbon solutions.

Waste-heat sources

Q56. How could the Environmental Permitting Regulations be amended to ensure that waste-heat sources connect to networks when it is cost-effective and feasible to do

³ CIBSE response to Part L and Future Homes Standard, February 2020 <https://www.cibse.org/getmedia/b365476d-1a0c-4ac4-a133-3e6aab84bbe6/Part-L-and-FHS-Consultation-CIBSE-Response.pdf.aspx>

so? What do you consider are the main barriers for waste heat sources to be connected to heat networks?

No comment

Q57. Which sources of industrial and commercial heat could government bring within the scope of the Environmental Permitting Regulations in addition to the sources already being identified?

No comment

END

Please do not hesitate to contact us for more information on this response.
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