

Heat network zoning social research

Technical Annexes

Contents

Annex A: Methodology and questionnaire design	4
Phase one: deliberative workshops	5
Sampling approach	5
Recruitment figures	7
Fieldwork	8
Phase two: Surveys	18
Sampling approach	19
Questionnaire design	22
Survey fieldwork	22
Response statistics	23
Survey respondent characteristics	25
Analysis and reporting	29
Limitations	30
Annex B: Research questions	33
Topics to explore in workshops	33
All	33
Eligible Buildings	33
Social Housing Residents	34
Zone Local Authorities	34
Topics to explore via surveys	34
Eligible Buildings (private sector non-domestic buildings with ≥ 100 MWh annual heat loads)	34
Social Housing Residents	34
Potential Future Buildings (private sector non-domestic buildings with < 100 MWh heat loads and residential owner occupiers)	35
Annex C: Workshop materials	36
Workshop invitation letter – all bar social housing residents	36
Workshop invitation letter – social housing residents (long)	37
Workshop invitation letter – social housing residents (short)	38
Workshop invitation letter – Bristol City Council tenants	39

Workshop privacy notice_____	40
Introductory workshops information sheet _____	41
Deliberative workshops information sheet _____	43
Poll questions used in introductory workshops_____	45
Annex D: Survey materials_____	46
Survey invitation letter _____	46
Survey reminder letter _____	47
Survey privacy notice _____	48
Survey information sheet _____	50
Annex E: Survey questionnaires _____	53
Survey 1: Private non-domestic buildings (≥ 100 MWh) _____	53
Survey 2: Social housing tenants and homeowners_____	65
Survey 3 – Private non-domestic buildings (<100MWh)_____	77
Survey 4 – Owner-occupier private residents_____	89

Error! Bookmark not defined.

Annex A: Methodology and questionnaire design

These technical annexes accompany the Final Report of the Heat Network Zoning Social Research. The research was commissioned in April 2021 by The Department for Business, Energy and Industrial Strategy (BEIS) to assess the views of stakeholders who may be invited or mandated to connect to a heat network under prospective Heat Network Zoning policy.

This Annex A provides a detailed description of the research methodology, including approach to sampling, methods of data collection, methods of data analysis and information about limitations. Further Annexes (lettered B-E) include details of the research questions, workshop materials, workshop poll results, survey pack materials and survey questionnaires.

The Centre for Sustainable Energy (CSE), working in partnership with the ACE Research team at the Association for Decentralised Energy (ADE) and SE² Limited, undertook this social research project on behalf of BEIS between April and December 2021. The project used a mixed methods research approach, involving a first phase of deliberative workshops organised by stakeholder group followed by a second phase of postal questionnaires using a random sample design stratified by city for each of the sample groups.

The research questions this project set out to address were:

- To what extent would local authorities and eligible buildings in a Heat Network Zone support zoning and connection to the heat network? Does this vary between building type?
- What challenges do eligible buildings associate with creation of a Heat Network Zone and subsequent connection to the heat network?
- What challenges do local authorities foresee with Heat Network Zones and what is needed to ensure their successful implementation?
- Amongst tenants and leaseholders in social housing properties, what should be considered to minimise resistance to heat network connection?
- What are the views of owners of buildings that are currently out of scope of mandatory connection?

A complete list of research questions and topics explored in the two phases of the project and asked of different sample groups are reported in Annex B: Research questions.

In the first phase, introductory workshops provided participants with an introduction to what heat networks are and their relevance for heat decarbonisation and gave them an

opportunity to ask questions ahead of the deliberative workshops. The deliberative workshops, organised by stakeholder group, were facilitated so that participants addressed key questions about heat network zoning, developing and challenging their views on the issue.

The second phase comprised of four sample groups, with each receiving a different postal survey questionnaire¹:

- Private sector non-domestic buildings with large (≥ 100 MWh/yr) annual heat load
- Private sector non-domestic buildings with small (< 100 MWh/yr) annual heat load
- Domestic owner-occupiers
- Social housing tenants and homeowners in the social sector.

For each phase of the project, delivery was structured in three main activities:

- The development and delivery of a sampling approach to enable engagement with key identified stakeholder groups.
- Fieldwork to engage with stakeholders through both workshops and surveys.
- Analysis and synthesis of results.

The research was focused on six trial cities from the City Decarbonisation Delivery Programme (CDDP): Birmingham, Bristol, Leeds, Manchester, Newcastle and Nottingham.

Phase one: deliberative workshops

Sampling approach

Workshop participants were recruited from six trial cities: Birmingham, Bristol, Leeds, Manchester, Newcastle and Nottingham. Workshop participants were recruited from six stakeholder groups. These are outlined below:

- Local authority representatives
- Landlords or managers of public sector non-domestic buildings
- Housing developers
- Social housing providers
- Private sector non-domestic building owners or managers

¹ The sample groups were chosen with consideration to government proposals around which buildings are required to connect to a heat network within a heat network zone. All new buildings, large public sector buildings, large non-domestic buildings and large domestic buildings which already have communal heating or are undergoing major refurbishment are required to connect.

- Social housing tenants and homeowners in the social sector

A dataset produced as an output of the City Decarbonisation Delivery Programme (CDDP) was used to identify the building and property level addresses relevant for identifying workshop participants from the six trial cities. For each city, a combination of desk research and intermediary contacts (including local authority officers, social housing providers and other contacts) supported identification or onward inviting of workshop invitees via telephone, email and social media. A £40 shopping voucher was offered as an incentive to all participants from the social housing tenants and homeowners stakeholder group who attended both an introductory and deliberative workshop. The workshop recruitment process is laid out in more detail in Table 1. The privacy notice, invitation letters and information sheets used in the workshop recruitment process can be found in Annex C: Workshop materials.

Table 1: Workshop recruitment process

Phase	When	Information provided
Initial contact (email, phone, text, mailout)	Start of recruitment process	<ul style="list-style-type: none"> • Introduction to research • Invite (including available workshop slots and survey link)
Online sign-up form completed by invitee	Linked to from initial invite	<ul style="list-style-type: none"> • Name, city and contact details • Choice of workshop dates • Level of knowledge and reason for participation • Stakeholder type where applicable (e.g. leaseholder)
Workshop 1 and 2 calendar invites (via Outlook)	Upon sign-up	<ul style="list-style-type: none"> • Calendar placeholder with Zoom link
Workshop 1 information sheet (group email to all attendees)	24 hours before workshop	<ul style="list-style-type: none"> • Further details about research and workshop agenda • Data information • Specific Zoom link
Workshop 1	Workshop 1	<ul style="list-style-type: none"> • Workshop delivery
Workshop 2 information sheet (group email to all attendees)	24 hours before workshop	<ul style="list-style-type: none"> • Thanks for coming to introductory workshop • Specific Zoom link
Workshop 2	Workshop 2	<ul style="list-style-type: none"> • Workshop delivery

Thank you vouchers (for relevant sample groups)	Within 2 working days of workshop	<ul style="list-style-type: none"> • Send voucher
---	-----------------------------------	--

Recruitment figures

As shown in Table 2, the number of participants recruited for the deliberative workshops varied by stakeholder group. Recruitment also varied by city. Although all six trial cities were represented by at least one attendee, no recruited stakeholder group featured participants from all cities.

To maximise recruitment, introductory workshops were offered to all participants, but were not compulsory. As a result, the total number of participants at introductory workshops was slightly smaller than the totals at deliberative workshops indicated below.

Table 2: Deliberative workshop recruitment figures

Stakeholder group	Invites		Participants		City representation
	Target	Actual	Target	Actual	
Private sector non-domestic buildings with ≥100 MWh annual heat loads	24-30	133 invites via 17 contacts	18	3*	<ul style="list-style-type: none"> • Newcastle (2) • Leeds (1)
Housing developers undertaking projects	12-18	65 invites via 8 contacts	6	2*	<ul style="list-style-type: none"> • Bristol (2)
Landlords of non-domestic public sector properties	12-18	82 invites via 10 contacts	6	3	<ul style="list-style-type: none"> • Newcastle (2) • Manchester (1)
Social housing providers	12-18	72 invites via 15 contacts	6	6	<ul style="list-style-type: none"> • Newcastle (2) • Manchester (1) • Leeds (1) • Nottingham (2)
Local authority representatives	24-30	58 invites via 7 contacts	18	11	<ul style="list-style-type: none"> • Birmingham (2) • Bristol (4) • Manchester (2) • Leeds (2) • Newcastle (1)

Social housing residents – Tenants	18-24	45 invites via 12 contacts	12	14	<ul style="list-style-type: none"> • Newcastle (9) • Birmingham (2) • Bristol (1) • Manchester (1) • Leeds (1)
Social housing residents - Homeowners	18-24	20 invites via 12 contacts	12	1	<ul style="list-style-type: none"> • Newcastle (1)
Total	120-162	475 invites via 81 contacts	78	40	<ul style="list-style-type: none"> • Birmingham (4) • Bristol (7) • Leeds (5) • Manchester (5) • Newcastle (17) • Nottingham (2)

* A combined workshop was held for these two groups due to low sign-up numbers.

Fieldwork

Stakeholders were invited to attend an hour-long introductory workshop, followed by a two-hour long deliberative workshop. Multiple deliberative workshops were run for certain stakeholder groups to maximise attendance. The planned deliberative workshops for non-domestic private sector building owners and developers were combined due to low recruitment for these stakeholder groups. There were four introductory workshops in total, across all six stakeholder groups. More detail on the number of workshops carried out is given in Table 3.

Table 3: Number of workshops held by stakeholder group

Stakeholder group	Number of deliberative workshops
Local authorities	2
Social housing providers	1
Social housing tenants and homeowners	3
Private sector non-domestic building owners	1*

Non-domestic public sector building owners	1
Developers	1*
Total	8

* A combined workshop was held for these two groups due to low sign-up numbers.

The introductory workshops were designed to share headline information on climate change and heat decarbonisation, heat networks and zoning policy. The introductory workshops also gave participants a chance to ask questions and form connections with other stakeholders in their respective stakeholder groups. To maximise recruitment, introductory workshops were offered to all participants, but were not compulsory. A video recording of one of the introductory workshops was also made available to any participants who could not attend a workshop in person. A summary structure of the introductory workshops is provided in Table 4.

Table 4: Introductory workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction • Housekeeping
Pre-session quiz	<ul style="list-style-type: none"> • Brief Zoom poll*
Climate change	<ul style="list-style-type: none"> • Why is action needed? • Short video
Decarbonising buildings	<ul style="list-style-type: none"> • Why building decarbonisation is important? • Strategies: both energy-efficiency measures and new types of heating systems
Introduction to heat networks and zoning	<ul style="list-style-type: none"> • What are heat networks? • Short video • Cost comparisons • Consumer protection • What is zoning?
Q&A	<ul style="list-style-type: none"> • General Q&A
Post-session quiz	<ul style="list-style-type: none"> • Brief Zoom poll

Close	<ul style="list-style-type: none"> • Summary • Next steps • Thanks
-------	---

* See Annex C for poll questions asked.

The deliberative workshops were organised by stakeholder group, bringing together people with a shared ‘identity’ in terms of how they would potentially be involved in a heat network. These workshops helped delegates to develop their views about a potentially unfamiliar proposition. They were asked to consider and discuss their views on the importance of heating buildings in a low carbon way to address climate change; the implications for their building of being within a heat network zone; practical issues of connecting to a heat network; how bills could change; options to opt out; maintenance, billing and repairs issues; and reliability. A summary of each deliberative workshop is provided in the tables below (Tables 5 – 9).

Table 5: Local authority representatives deliberative workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction • Housekeeping • Participant introductions
Reflections	<ul style="list-style-type: none"> • Refresher on introductory workshop • <i>Did you have any burning questions after the introductory workshop?</i> • <i>Broadly how do you feel about heat networks?</i> • <i>What would you like to know more about?</i> • <i>What would you like to discuss further with officers from other lead local authorities that might shape heat network zoning policy?</i>
Heat networks and decarbonisation	<ul style="list-style-type: none"> • Quick reminder on relevance of heat decarbonisation • Zoom poll: <i>How would you rate the importance of heat decarbonisation of buildings in your city as a priority towards achieving city-wide net zero targets?</i>
Heat network zoning	<ul style="list-style-type: none"> • High level overview of heat network zoning policy • <i>Any questions of clarification?</i>
Support for HNZs	<ul style="list-style-type: none"> • <i>What are your views on designating parts of your city/city-region as a Heat Network Zone?</i>

	<ul style="list-style-type: none"> • <i>Why do you think this?</i> • <i>Which areas would you expect to be more appropriate to be heat zone areas? Why is this?</i> • <i>Follow up – similarities in types of area where this works?</i> • <i>Sceptical voices – main concerns</i> • <i>How has your view changed (e.g. through involvement in the City Decarbonisation Delivery Plan)?</i> • <i>Where moved from sceptic to pro, what has been persuasive?</i>
Support by building type	<ul style="list-style-type: none"> • <i>What do you think about connecting different building types?</i> • <i>Public & private non-domestic buildings</i> • <i>Different use types/ownership models</i> • <i>Social housing</i> • <i>Private housing – owner-occupied/private rental sector</i> • <i>New developments v existing homes</i>
Who should pay?	<ul style="list-style-type: none"> • <i>Who should cover the costs associated with heat decarbonisation and implementation of heat network zones?</i> • <i>What are your thoughts on different payment arrangements?</i>
Challenges?	<ul style="list-style-type: none"> • <i>What challenges do you foresee with implementing a Heat Network Zone in your area of responsibility?</i> • <i>What is basis for identifying these challenges? Previous experience?</i>
Implementation of HNZs	<ul style="list-style-type: none"> • <i>What is needed to ensure their successful implementation?</i> • <i>What has been learned from past heat network projects in city? Request examples of what helped implementation?</i>
Summary	<ul style="list-style-type: none"> • Summary • Next steps • Thanks

Table 6: Social housing provider deliberative workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction

	<ul style="list-style-type: none"> • Housekeeping • Participant introductions
Reflections	<ul style="list-style-type: none"> • Refresher on introductory workshop • <i>What was interesting to you as you reflected on the last workshop?</i> • <i>What has been your experience to date of heat networks?</i> • <i>What have been the positives? What difficulties have you encountered?</i> • <i>Broadly how do you feel about heat networks?</i> • <i>And how do you feel about heat network zones?</i> • <i>Which things do you find confusing? Which would you like to know more about?</i>
Heat network zoning	<ul style="list-style-type: none"> • High level overview of heat network zoning policy • <i>Any questions of clarification?</i>
Attitudes towards connecting to a heat network – what’s appealing?	<ul style="list-style-type: none"> • <i>Looking ahead, how do you feel about connecting your housing stock to a heat network within a heat network zone?</i> • <i>What considerations would be uppermost for housing providers in making the decision to connect?</i> • <i>What considerations would be uppermost when thinking about your residents’ perspective?</i> • <i>What is appealing?</i>
Attitudes towards connecting to a heat network – what’s challenging?	<ul style="list-style-type: none"> • <i>What challenges do you foresee with the creation of a Heat Network Zone and then connecting to it for your housing stock? Areas of uncertainty? Potential risk?</i> • <i>What are your main areas of concern?</i> • <i>How does the type, scale or location of the scheme influence your willingness to connect?</i>
How to encourage connection?	<ul style="list-style-type: none"> • <i>What can you do as Housing Providers to minimise or avoid these risks?</i> • <i>What can central government do to overcome barriers?</i> • <i>How far do you feel able to trust in the local authority to deliver the heat network?</i> • <i>What else would encourage you to connect?</i>
Mandatory connections	<ul style="list-style-type: none"> • <i>Zoom poll: How do you feel about potential mandatory connection of buildings in a heat network zone?</i> • <i>What are your reasons for view in poll?</i>

	<ul style="list-style-type: none"> • <i>Can you envisage circumstances where you would seek an exemption to mandatory connection?</i> • <i>What would be the basis for any exemption from mandatory connection? How could this be proven as a legitimate reason?</i>
Who should pay?	<ul style="list-style-type: none"> • <i>Who should cover the costs associated with heat decarbonisation in general and implementation of heat network zones?</i> • <i>Which costs should be paid by the consumer? By the tax payer? By the Housing Provider?</i> • <i>If Housing Provider bears cost, how will that be passed on to consumer?</i> • <i>What should be the cost-recovery time frame?</i>
Energy efficiency and retrofit	<ul style="list-style-type: none"> • <i>Brief explanation of the energy efficiency requirements for a cost-effective heat network</i> • <i>What retrofit or tightened build standards do you envisage you'd need to undertake so that your new or existing stock was suitable to connect to a heat network?</i> • <i>Scale? Costs? How could be delivered? Implications for developer? Consumers?</i>
Summary	<ul style="list-style-type: none"> • Summary • Next steps • Thanks

Table 7: Social housing residents deliberative workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction • Housekeeping • Participant introductions
Reflections	<ul style="list-style-type: none"> • Refresher on introductory workshop • <i>What was interesting to you as you reflected on the last workshop?</i> • <i>Broadly how do you feel about heat networks?</i> • <i>And how do you feel about heat network zones?</i> • <i>Which things do you find confusing? Which would you like to know more about?</i>

Heat network zoning	<ul style="list-style-type: none"> • High level overview of heat network zoning policy • <i>Any questions of clarification?</i>
Attitudes towards connecting to a heat network – what’s appealing?	<ul style="list-style-type: none"> • <i>What about heat networks appeals to you?</i>
Attitudes towards connecting to a heat network – what’s challenging?	<ul style="list-style-type: none"> • <i>What would you be most concerned or worried about if a heat network was coming to your area?</i> • <i>What challenges do social housing residents foresee with connection of their home to a heat network?</i>
Costs	<ul style="list-style-type: none"> • <i>Who should cover the costs associated with heat decarbonisation and the implementation of Heat Network Zones? The consumer? The taxpayer? Or someone else?</i>
What would you want to know?	<ul style="list-style-type: none"> • <i>What questions do you have about heat networks and heat network zones?</i> • <i>What would you want to know if a heat network was coming to your area?</i> • <i>Zoom poll: Given what you now know, how supportive would you be for a heat zone to be introduced in your area?</i> • <i>Zoom poll: How attractive do you think connecting to a heat network will be compared to decarbonising your building’s heat supply through other means?</i> • <i>What would encourage you to support a heat network in your area?</i>
Summary	<ul style="list-style-type: none"> • Summary • Next steps • Thanks

Table 8: Public sector building representatives deliberative workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction • Housekeeping • Participant introductions

Reflections	<ul style="list-style-type: none"> • Refresher on introductory workshop • <i>Did you have any burning questions after the introductory workshop?</i> • <i>Broadly how do you feel about heat networks? Good idea, bit worried, want to know more – these types of things)</i> • <i>How do you feel about heat network zones?</i> • Zoom poll: <i>How would you rate the importance of heat decarbonisation of buildings in your city as a priority towards achieving city-wide net zero targets?</i> • Those with experience of heat supplied by a heat network: <i>What have been the positives? What difficulties have you encountered?</i>
HNZ policy	<ul style="list-style-type: none"> • High level overview of heat network zoning policy • <i>Any questions of clarification?</i>
Attitudes towards connecting to HNZ	<ul style="list-style-type: none"> • <i>How do you feel about connecting public buildings (such as a school, hospital, GP surgery, leisure centre) to a heat network within a heat network zone?</i> • <i>What considerations would be uppermost in making the decision to connect? What type of public buildings seem most favourable for connecting to a heat network?</i> • <i>What is appealing?</i>
Challenges of connecting to HNZ	<ul style="list-style-type: none"> • <i>What challenges do you foresee with the creation of a Heat Network Zone and then connecting to it for different types of public buildings? Areas of uncertainty? Potential risk?</i> • <i>What are your main areas of concern?</i> • <i>How would building type/use influence your willingness to connect?</i>
How to encourage connection	<ul style="list-style-type: none"> • <i>What can you do as landlord to minimise or avoid these risks?</i> • <i>What can central government or local authorities do to help overcome barriers?</i> • <i>How far do you feel able to trust in the local authority to deliver the heat network?</i> • <i>What would encourage you to connect?</i>
Mandatory connection	<ul style="list-style-type: none"> • Zoom poll: <i>How do you feel about potential mandatory connection of certain public buildings in a heat network zone?</i> • <i>What are your reasons for view in poll?</i>

	<ul style="list-style-type: none"> • <i>Can you envisage circumstances where a public building would seek an exemption to mandatory connection?</i> • <i>What would be basis for any exemption from mandatory connection How could this be proven as a legitimate reason?</i>
Who should pay?	<ul style="list-style-type: none"> • <i>Who should cover the costs associated with heat decarbonisation and implementation of heat network zones?</i> • <i>Which costs should be paid by the consumer? By the tax payer? By the developer?</i> • <i>If developer bears cost, how will that be passed on to consumer?</i> • <i>What should be the cost-recovery time frame?</i>
Energy efficiency and retrofit	<ul style="list-style-type: none"> • Brief explanation of the energy efficiency requirements for a cost-effective heat network • <i>What challenges do you envisage in achieving these standards for new or existing development?</i> • <i>Scale? Costs? How could be delivered? Implications for developer? Consumers?</i>
Summary	<ul style="list-style-type: none"> • Summary • Next steps • Thanks

Table 9: Private sector building representatives/developers deliberative workshop process plan

Session	Description
Welcome	<ul style="list-style-type: none"> • Purpose of workshop • CSE, ACE-R and SE² introduction • Housekeeping • Participant introductions
Reflections	<ul style="list-style-type: none"> • Refresher on introductory workshop • <i>Did you have any burning questions after the introductory workshop?</i>

	<ul style="list-style-type: none"> • <i>Broadly how do you feel about heat networks? Good idea, bit worried, want to know more – these types of things)</i> • <i>How do you feel about heat network zones?</i> • <i>Those with experience of heat supplied by a heat network: What have been the positives? What difficulties have you encountered?</i>
HNZ policy	<ul style="list-style-type: none"> • <i>High level overview of heat network zoning policy</i> • <i>Any questions of clarification?</i>
Attitudes towards connecting to HNZ	<ul style="list-style-type: none"> • <i>How do you feel about connecting your building(s) to a heat network within a heat network zone?</i> • <i>What considerations would be uppermost in making the decision to connect?</i> • <i>What is appealing?</i>
Challenges of connecting to HNZ	<ul style="list-style-type: none"> • <i>What challenges do you foresee with the creation of a Heat Network Zone and then connecting to it for different types of private buildings? Areas of uncertainty? Potential risks?</i> • <i>What are your main areas of concern?</i> • <i>How would building type/use influence your willingness to connect?</i>
How to encourage connection	<ul style="list-style-type: none"> • <i>What can you do as building representative/developer to minimise or avoid these risks?</i> • <i>What can central government or local authorities do to help overcome barriers?</i> • <i>How far do you feel able to trust in the local authority to deliver the heat network?</i> • <i>What would encourage you to connect?</i>
Mandatory connection	<ul style="list-style-type: none"> • <i>Zoom poll: How do you feel about potential mandatory connection of certain public buildings in a heat network zone?</i> • <i>What are your reasons for view in poll?</i> • <i>Can you envisage circumstances where a public building would seek an exemption to mandatory connection?</i> • <i>What would be basis for any exemption from mandatory connection? How could this be proven as a legitimate reason?</i>

Who should pay?	<ul style="list-style-type: none"> • <i>Who should cover the costs associated with heat decarbonisation and implementation of heat network zones?</i> • <i>Which costs should be paid by the consumer? By the taxpayer? By the developer?</i> • <i>If developer bears cost, how will that be passed on to consumer?</i> • <i>What should be the cost-recovery time frame?</i>
Energy efficiency and retrofit	<ul style="list-style-type: none"> • <i>Brief explanation of the energy efficiency requirements for a cost-effective heat network</i> • <i>What challenges do you envisage in achieving these standards for new or existing development?</i> • <i>Scale? Costs? How could be delivered? Implications for developer? Consumers?</i>
Summary	<ul style="list-style-type: none"> • <i>Zoom poll: Given what you now know, how supportive would you be for a heat zone to be introduced in your area?</i> • <i>Zoom poll: How attractive do you think connecting to a heat network will be compared to decarbonising your building's heat supply through other means?</i> • <i>Summary</i> • <i>Next steps</i> • <i>Thanks</i>

Polls were also conducted at both introductory and deliberative workshops to gauge a snapshot of the experience and attitudes of participants in relation to heat networks. The questions asked in these polls are included in Tables 5 -9 above.

Phase two: Surveys

The surveys aimed to generate quantified understanding of the attitudes and views of businesses and residents affected by heat network zoning policy. The surveys targeted four groups, with a tailored 8-page postal questionnaire for each group from the six trial cities.

- Owners, building managers, or businesses occupying private sector non-domestic buildings with large (≥ 100 MWh) annual heat loads. Identified as buildings which may be subject to mandatory connection to a heat network.
- Social housing tenants and homeowners. Identified as living in buildings which may be subject to mandatory connection to a heat network. It is assumed that a social housing provider is the building freeholder.

- Owners, building managers or businesses occupying private sector non-domestic buildings with small (<100 MWh) annual heat loads. Identified as potentially eligible in the future to connect to a heat network but not subject to mandatory connection.
- Owner occupiers. Identified as potentially eligible in the future to connect to a heat network but not subject to mandatory connection.

Sampling approach

The sample frames for the surveys consisted of all buildings or property addresses within modelled heat network zones across the six trial cities, as identified in the supplied dataset. The dataset listed Topographic Identifier (TOID), Unique Property Reference Numbers (UPRN), Unique Delivery Point Reference Number (UDPRN), postal address, building annual heat load, building main use and, for residential addresses, tenure type. It also identified whether a building was modelled as connected to a heat network and whether annual heat load is greater or less than 100 MWh AND building heat load.

Survey invites were addressed to The Building Owner or Manager (for non-domestic addresses) and to The Resident for residential addresses. No further instructions were included to direct to particular individuals within sampled addresses.

The sampling strategy for each of the four separate samples is set out below.

Survey 1: Private sector non-domestic buildings with ≥ 100 MWh annual heat load

A sample of 3,000 addresses was drawn, proportionate to the number of buildings in each city identified as lying within a modelled heat network zone. Each unique building appeared once in the sample.

The sample included all buildings modelled as connected to a heat network within a heat network zone ($n=2,669$). A random sample of those not selected (buildings modelled as lying within the zone but not connected) was drawn to achieve a sample of 3,000 buildings.

Table 10: Sampling figures for Survey 1 (private sector non-domestic buildings with ≥ 100 MWh annual heat load)

City	Contacts		Sample to draw	Estimated response @ 5%
	n	%		
Birmingham	1,101	23%	691	35
Bristol	596	12%	371	19

Leeds	686	14%	429	21
Manchester	1,491	31%	934	47
Newcastle	532	11%	336	17
Nottingham	380	8%	240	12
Total	4,786	100%	3,000	150

Survey 2: Social housing tenants and homeowners

A random sample of 4,000 addresses was drawn, proportionate to the number of eligible addresses in each city. All unique postal delivery point addresses within a single building modelled as connected within a heat network had an opportunity to be sampled.

Table 11: Sampling figures for Survey 2 (social housing tenants and leaseholders)

City	Contacts		Sample drawn	Estimated response @ 10%
	n	%		
Birmingham	29,733	28%	1137	114
Bristol	16,999	16%	650	65
Leeds	9,085	9%	348	35
Manchester	25,820	25%	988	99
Newcastle	13,793	13%	528	53
Nottingham	9,132	9%	349	35
Total	104,562	100%	4,000	400

Survey 3: Private sector non-domestic buildings with <100 MWh annual heat load

A random sample of 4,000 addresses was drawn, proportionate to the number of in scope addresses in each city. Each unique building appeared once in the sample. The sample

included only those buildings modelled as connected to a heat network within a heat network zone.

Table 12: Sampling figures for Survey 3 (private sector non-domestic buildings with <100MWh annual heat load)

City	Contacts		Sample to draw	Estimated response @ 5%
	n	%		
Birmingham	3,727	24%	939	47
Bristol	2,052	13%	517	26
Leeds	2,138	14%	539	27
Manchester	4,916	31%	1,239	62
Newcastle	1,336	8%	337	17
Nottingham	1,700	11%	429	21
Total	15,869	100	4,000	200

Survey 4: Owner-occupier private residents

A random sample of 3,500 addresses proportionate to the number of in scope addresses in each city. A tenure-type filter was applied to only include owner occupier addresses. All unique postal delivery point addresses within a single building modelled as connected within a heat network had an opportunity to be sampled.

Table 13: Sampling figures for Survey 4 (owner-occupier private residents)

City	Contacts		Sample to draw	Estimated response @ 10%
	n	%		
Birmingham	65,368	24%	845	85
Bristol	53,556	20%	693	69

Leeds	23,810	9%	308	31
Manchester	92,697	34%	1,199	120
Newcastle	18,527	7%	240	24
Nottingham	16,647	6%	215	22
Total	270,605	100	3,500	350

Questionnaire design

Eight-page postal survey questionnaires were tailored for each of the four sample survey groups. These were designed to generate quantifiable data about knowledge and attitudes to heat networks, building on the workshop findings.

An initial questionnaire outline was agreed between the CSE-led research team and BEIS. The CSE research team reviewed existing consumer attitudes surveys and previous related survey questionnaires. These included the English Housing Survey (EHS), BEIS Public Attitudes Tracker, Ofgem Consumer Surveys and a Heat Network Consumer Survey². Where possible, existing survey measures were used or adapted for the surveys. Where possible, similar questions and response options were used to make use of tried and tested questions and, in some cases, to make it easier for research users to consider responses in relation to trends in tracker surveys. Some tailored questions and response options were necessary to reflect the different choices available to different types of respondents. There were two rounds of review and input by BEIS before agreeing the questionnaires for the survey delivery. As the surveys were self-completed, it was important to keep the surveys as short and as simple as possible to avoid participant fatigue – which could result in higher survey non-completion rates and inaccurate responses. The survey questionnaires can be found in Annex E.

Survey fieldwork

The survey pack for each stakeholder group comprised an invitation letter, participant information sheet and eight-page postal questionnaire, with a push-to-web link address provided in the cover letter. The invitation letter was addressed to the building owner or

² MHCLG (2020) *English Housing Survey: Social rented sector, 2019-20*. Available at: <https://www.gov.uk/government/statistics/english-housing-survey-2019-to-2020-social-rented-sector>; BEIS (2021) *Public Attitudes Tracker (March 2021, Wave 37, UK)*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/985092/BEIS_PAT_W37_-_Key_Findings.pdf; Ofgem (2019) *Consumer Survey 2019*. Available at: <https://www.ofgem.gov.uk/publications/consumer-survey-2019>; BEIS (2017) *Heat Networks Consumer Survey*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/665444/HN_CS_Executive_Summary_-_FINAL.pdf.

manager/ resident. A push-to-web reminder letter was sent to a sub-sample of survey invitees for each stakeholder group.

For the two non-domestic surveys, details were included on the instructions on the first page of the questionnaire as to who in the building should respond to the survey. Recipients were asked to pass on the survey to someone else more appropriate if necessary.

The domestic survey questionnaires did not include explicit instructions on who should respond to the survey. This may have contributed to fewer responses if recipients felt unclear on whether they were the right person to respond to the questionnaire.

The questionnaires included questions about:

- The respondent, household, business and/or building
- Views about heat networks and heat network zoning policy, by asking the respondent to express their agreement or not with a series of statements
- Rating of importance of factors that may shape views about heat networks – with structured responses and open-ended ‘other’ response.
- Any other thoughts about heat networks; and
- Equality and diversity monitoring information section for social housing residents only.³

The surveys were sent out by post, with the option to complete the survey either online or by paper questionnaire. All recipients were invited to participate in a prize draw administered by the market research company QA Research in line with industry good practice guidelines. The privacy notice, invitation letters and information sheets used for the surveys are provided in Annex D.

Response statistics

As shown in Table 14, response rates for the surveys varied from 2% to 7%. The target number of responses was not met for any of the surveys. Responses were received from all trial cities for all four surveys, with Bristol and Manchester the best represented overall. The following reported results are unweighted. Weighting by city resulted in 1-2 percentage point changes to responses to some questions. Some responses for Surveys 2 and 4 are excluded from these statistics as they were not completed by the target stakeholder group. More detail on these exclusions is provided in the relevant section of the Final Report.

³ Public Sector Equality Duty – Information on the protected characteristics of respondents to the social housing survey was collected on the legal basis of consent. This report provides summary statistics of respondents. More detailed analysis of responses by protected characteristic has been supplied to BEIS to inform any future equality impact analysis. It has not been published to avoid re-identification risks.

Table 14: Survey response statistics

Survey	Stakeholder group	Sent	Postal	Online	Total (rate)	Target (rate)
1	Private sector non-domestic buildings with large (≥ 100 MWh) annual heat loads	3000	40	27	67 (2.2%)	150 (5%)
2	Social housing tenants	4000	116	34	198 (5%)	400 (10%)
2	Social housing homeowners	4000	28	20	198 (5%)	400 (10%)
3	Private sector non-domestic buildings with small (< 100 MWh) annual heat loads	4000	77	35	112 (2.8%)	200 (5%)
4	Owner-occupiers	5000	242	95	337 (6.7%)	350 (7%)

Survey respondent characteristics

Private sector non-domestic buildings

Table 15 shows the distribution of private non-domestic respondents across the six pilot cities. All cities were well-represented in the sample, with a slight over-representation from Bristol, relative to its size.

Table 15: Private sector non-domestic survey respondents by city

City	Large non-domestic (heat load \geq 100MWh)	Small non-domestic (heat load < 100MWh)
	Responses	Responses
Birmingham	11	25
Bristol	8	29
Leeds	12	16
Manchester	19	24
Newcastle	9	8
Nottingham	8	10
Total	67	112

Most respondents were either tenant/leaseholder occupiers (49%) or owner-occupiers (45%); the remaining either managed a building on behalf of the owner (n=7) or owned a building occupied by other business(es) (n=3). Across both large and small non-domestic respondents, 80% reported that their business had been occupying the building long-term (5 years or more).

A significant majority of individuals responding to the survey were business owners or managers (73%); the second most common role in the sample was facility manager (11%). All respondents reported being responsible for decisions regarding energy and heating at the address for which they were completing the survey.

As shown in Table 16, most small non-domestic respondents represented the commercial, business and services sector (77%), while the most common sector amongst large non-domestic respondents was the general industrial sector (42%).

Table 16: Private sector non-domestic survey respondents by building type

Sector	Large non-domestic (heat load \geq 100MWh)	Small non-domestic (heat load < 100MWh)
	Responses	Responses
General industrial (e.g. factory)	27	9
Storage and distribution	9	3
Hotel, motel, guest house	1	3
Commercial, business & service (e.g. office, shop, day nursery, gym)	20	85
Local community or learning institutions	-	5
Other	8	6
Total	65	111

In terms of location, few respondents were near any existing or planned heat network (6 large non-domestic respondents, 21% of small non-domestic respondents). All small non-domestic respondents were identified in the CDDP as likely to be connected to a potential heat network within a heat network zone, whereas just over half (57%) of large non-domestic respondents. All buildings sampled were located within a heat network zone, as modelled through previous CDDP work. However, the sampling frame for large non-

domestic buildings was extended to include all large buildings within a modelled heat network zone, not only those large buildings modelled as likely to be connected to a potential heat network within a heat network zone.

Social housing tenants and homeowners

There were 173 eligible respondents from social housing households⁴. Of these, 48 self-identified as homeowners. Homeowners in the social sector refers to both: (a) leaseholders of dwellings owned by a social landlord; and (b) freehold owner occupiers of a dwelling in a building or housing estate where most properties are owned by a social landlord.⁵

Table 17 shows the distribution of social housing respondents across the six pilot cities. Birmingham, Bristol and Manchester were over-represented in the responses, whilst Leeds and Nottingham were under-represented. The research intended to sample in a way that would represent the different sample groups across the six trial cities evenly, however lower response rates meant that some sample groups and some cities were under-represented.

Table 17: Social tenant and homeowner survey respondents by city

City	Social housing tenants	Social homeowners
	Responses	Responses
Birmingham	26	8
Bristol	26	17
Leeds	11	4
Manchester	37	8
Newcastle	15	5
Nottingham	10	5
Total	125	47*

*There was no city information supplied for one social homeowner respondent

⁴ 29 respondents did not fall into either the social housing tenant or homeowner stakeholder group as they reported being private renters, having shared ownership, or as living rent free in another person's property. These respondents were removed from the analysis due to being ineligible.

⁵ See [Leasehold dwellings, 2019 to 2020 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/leasehold-dwellings-2019-to-2020).

The average household size amongst social housing tenant respondents (1.8) was smaller than the national average of 2.4⁶. Over half (61%) of respondents said they lived in a one-person household⁷. A higher proportion of respondent households (81% of households,) did not have children compared to the average for England (60% of all households)⁸. This evidence suggests that smaller household, and those without children, were more likely to respond to the survey.

Almost half of social housing tenants reported a household income below £15,999. Just over half (51%) of respondents said that they have recently been worried about paying their energy bills, higher than the national average of 40% of all households⁹. 44% of social tenant respondents reported a chronic health condition, and most of these (82%) said that their condition has a day-to-day impact.

Homeowners in the social sector who responded to the survey have a household size of 2.4, directly reflecting the national average (2.4). 28% (n=13) of homeowners had at least one child in the household, less than the national average (60%). Again, this evidence suggests homeowners without children were more likely to respond.

10% (n=5) of social homeowners reported an income below £15,999. The majority (73%) of homeowner respondents said that they had not recently been worried about paying energy bills. Reflecting this, over one quarter (28%, n=13) of homeowners in the social sector were modelled as being in fuel poverty (using the old LIHC definition), higher than the national average of 13%. Just over one third (34%, n=13) of homeowners reported a chronic health condition, and 46% (n=6) said that their condition impacted their daily lives.

Owner-occupiers

There were 337 eligible respondents to the owner-occupier survey¹⁰. Table 18 shows the distribution of owner-occupier responses across the six pilot cities. Bristol and Manchester were over-represented in the responses, whilst Nottingham and Newcastle were under-represented.

Table 18: Owner-occupier survey respondents by city

⁶ ONS (2021) *Families and households in the UK: 2020*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2020>

⁷ Ibid

⁸ ONS (2021) *Households by type of household and family*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/datasets/householdsbypetypeofhouseholdandfamilyregionsofenglandandukconstituentcountries>

⁹ BEIS (2021) *Public Attitudes Tracker (March 2021, Wave 37, UK)*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/985092/BEIS_PAT_W37_-_Key_Findings.pdf

¹⁰ The following participants responded to the owner-occupier survey but were excluded from the analysis: 15 households who self-identified as private renters, 4 social housing tenants, 1 shared ownership and 1 living rent-free in another person's property.

City	Responses
Birmingham	59
Bristol	90
Leeds	35
Manchester	96
Newcastle	27
Nottingham	30
Total	337

Comparison with national statistics shows that owner-occupier respondents had lower than average numbers of children in the household. Almost three quarters (71%) of respondents live with no children, compared with 60% for all English households¹¹. This suggests that households with children were less likely to respond. However, the mean respondent household size (2.51) was broadly in line with the UK average of 2.39¹². A minority (18%) of respondents reported that they have felt worried about paying their energy bills in the last three months.

Analysis and reporting

Analysis of workshop findings

Workshop summaries for each stakeholder group were written up from notes taken by a support facilitator, saved poll results and video recordings of each workshop session. These were reviewed and approved by a lead facilitator. Thematic summaries were then prepared which drew on these summaries and again were reviewed by a senior member of the workshop delivery team. Anonymous quotations from notes or recordings were included to illustrate key strands of opinion on key issues.

At an interim workshop in July 2021, BEIS staff had an opportunity to hear about and ask questions about findings from the first phase of the workshop and identify areas of interest to explore in the survey phase relevant to heat network policy development.

Analysis of survey results

Data tables were generated to show the survey results for each sample group. No weighting was applied to responses. Combined results were mostly used for reporting on

¹¹ Ibid

¹² Ibid

the large and small annual heat load non-domestic surveys, due to the small total number of responses. However, where there were statistically significant differences, responses by large and small non-domestic buildings were reported separately as were responses to questions which only applied to one of the groups. In reporting, actual numbers were reported alongside percentages. An anonymised set of raw data has been supplied to BEIS.

An internal workshop with BEIS staff in October 2021 enabled discussion of the salience of survey findings for heat network policy development. The results of this discussion contributed to the context and analysis plans of the final report.

The overall findings and results were written up organised by sector and type of building, with one chapter reporting findings regarding the role of local authorities in delivery of heat network zoning. Each chapter was drafted by a single author and was reviewed by a senior member of the research team. Revisions to the report has been made in response to two sets of feedback by BEIS staff.

Limitations

Uneven and insufficient recruitment of participants to attend the different stakeholder groups presented the most significant limitation to the workshops. Private sector non-domestic building owners, public sector non-domestic building representatives and developers proved the most difficult stakeholder groups to recruit from. This resulted in lower numbers participating in the workshops, with an uneven spread across the six pilot cities and an imbalanced spread of building types represented in the workshops. Of the three public sector non-domestic building representatives recruited, two represented health trusts and one was in education. Recruitment strategies involving local authorities as intermediary contacts and online searches proved unsuccessful, with most either not responding to or declining invitations due to competing priorities.

The effect of the low numbers in workshops means the views of those who participated in the workshops may not reflect the full range of views of the wider stakeholder groups represented or differences in experience and views in each of the cities.

In those workshops affected by low numbers, this made it harder to achieve lively deliberations about the questions under consideration, limited by the extent and diversity of what knowledge and experience participants had to draw on, their readiness to engage in discussion, and how far they differed in opinion. Having more participants from all the trial cities would likely have generated a greater range of views and helped to identify areas of disagreement or concern more fully. Nevertheless, the workshop findings are still useful in highlighting some of the issues requiring further research and policy attention. They also proved useful in helping to identify questions and possible response options to include in the surveys.

Survey response rates from private sector non-domestic buildings and social housing residents were low, as shown in Table 14. Whilst the survey was sent out to a random sample, the low response introduces self-selection bias, limiting the generalisability of the findings for homeowners in the social sector and for non-domestic buildings within proposed heat network zones.

Over 10% of the private sector non-domestic survey packs were returned as undeliverable. Analysis of these indicates this is due to a combination of business turnover and missing or incorrect business name details supplied. Addresses supplied by Royal Mail achieved a better delivery rate than those addresses supplied by local authorities.

Other factors affecting the response rate may be low rates of public awareness and understanding of heat networks, changes to work location patterns during the pandemic and delays to the public consultation on heat network zoning consultation with which the survey had originally been planned to coincide.

In the two residential surveys, respondents were asked to state their tenure type. Self-reported tenure type responses in the social housing residents survey included freehold owner, part own part rent, and private rental as well as social rental and leaseholder ownership. It is not possible to know which data on tenure are more accurate – the modelled data supplied or respondent's self-reported data. For the purposes of analysis, responses of those who self-identify as freeholders or leaseholders have been treated as a combined group of 'homeowners in the social housing sector'. For the social housing survey, the responses of those who self-reported their tenure as either part own part rent or private rent were excluded from analysis. The responses of those who self-reported as private renters in the social housing residents survey were also excluded from analysis.

The private rental sector is an important segment of the housing sector. It will be important for policy makers to gain insights regarding the views and attitudes of private landlords concerning heat network zoning. This study does not include insights regarding the views of private landlords of domestic properties. Given the different legislation and specific practical challenges for engaging with private landlords, CSE and BEIS agreed that it would be better to consider a separate study to investigate their views.

The survey questionnaires were purposely kept short to improve the likelihood of them being completed and returned. This meant that for many of the questions, respondents had to select responses that best fitted their own views. At least one open-ended response box was provided as an opportunity for respondents to write in their own words their views or concerns about heat networks. This means that the findings provide relatively limited insight about why people highlighted some concerns and not others.

Both the workshops and the surveys asked people to provide their views on things that about which most respondents don't have direct experience, namely heat networks and heat network zoning. The findings provide insights about what people think they may do

and what people think they might give importance to in considering their choices about connecting to a heat network. However, this is unlikely to directly translate into accurately predicting patterns of what people will actually do when faced with choices and making decisions in real life. Policy makers will need to use these findings in combination with other information, including findings from practice.

Annex B: Research questions

The overarching questions this project set out to address are:

- To what extent would local authorities and eligible buildings in a Heat Network Zone support zoning and connection to the heat network? Does this vary between building type?
- What challenges do eligible buildings associate with creation of a Heat Network Zone and subsequent connection to the heat network?
- What challenges do local authorities foresee with Heat Network Zones and what is needed to ensure their successful implementation?
- Amongst tenants and leaseholders in social housing properties, what should be considered to minimise resistance to heat network connection?
- What are the views of owners of buildings that are currently out of scope of mandatory connection?

In addition to these questions, two further questions were identified as important.

- Do those potentially affected by heat network zoning policies understand heat decarbonisation and why it is necessary to decarbonise heat?
- What are the views of those affected regarding who should cover the costs associated with heat decarbonisation and the implementation of Heat Network Zones?

Topics to explore in workshops

All

- Do participants understand heat decarbonisation and why it is necessary to decarbonise heat?
- Who should cover the costs associated with heat decarbonisation and the implementation of Heat Network Zones?

Eligible Buildings

- Extent to which eligible buildings would connect to the heat network.
 - What considerations would inform any decision?
 - If yes: What about heat networks are appealing to you?
 - If no: Why not and what could be done to encourage you to connect?
- Views on mandatory connection.

-
- Would eligible buildings be capable of proving exemption to connection if it applied to them?
 - Risks and challenges associated with connection for eligible buildings.
 - Do eligible buildings trust in the local authority to deliver the heat network?
 - To what extent would you need to undertake energy efficiency retrofit on your stock in order to facilitate district heating?

Social Housing Residents

- Do residents of social housing understand what heat networks are? Do they support creation of a heat network zone?
- What challenges do social housing residents foresee with connection of their home to a heat network?

Zone Local Authorities

- Do local authorities support designation of a space under their jurisdiction as a Heat Network Zone?
- What challenges do local authorities foresee with implementing a Heat Network Zone within their jurisdiction?
- What potential internal conflicts of interest do local authorities foresee in the implementation of heat network zones, what can be done to minimise these?

Topics to explore via surveys

Eligible Buildings (private sector non-domestic buildings with ≥ 100 MWh annual heat loads)

- Extent to which eligible buildings would voluntarily connect to the heat network.
 - Which considerations raised in the workshops emerge as most prevalent?
- What engagement or information would be most useful for encouraging voluntary connection to the heat network?
- Which risks and challenges associated with connection emerge as most prevalent?
- Levels of trust in the local authority.
 - What would promote greater trust?

Social Housing Residents

- Would social housing residents support creation of a heat network in their area?
 - If no: Why?

-
- What engagement and information would be most useful for encouraging residents to support building of the heat network?
 - Public Sector Equality Duty: Appropriate information should be collected as per the public sector equality duty.

Potential Future Buildings (private sector non-domestic buildings with <100MWh heat loads and residential owner occupiers)

- Would potential future buildings support the creation of a heat network zone in their area?
 - If no: Why?
- How do respondents feel about not being eligible to connect to the heat network at this time?
- What challenges would they face connecting in future?

Annex C: Workshop materials

Workshop invitation letter – all bar social housing residents

Invite line: Get involved – how could homes and business in [city] be heated in a net-zero future?

Dear [name] or [role name],

Want to learn more about a city specific approach to achieving net-zero and help inform Government policy? Curious about cleaner, greener alternatives to gas and oil boilers? Why not get involved by taking part in a pair of workshops about Heat Networks and the government's approach to rolling them out in cities in England.

What is a Heat Network?

Heat networks (also known as district heating systems) supply heat from a central source to customers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city, or be fairly local supplying a small cluster of buildings. Heat network zones are a proposed approach to rolling out heat networks in areas in which they are the best solution for reducing carbon emissions from heating buildings.

What is the Research Project?

[The Department for Business, Energy and Industrial Strategy](#) (BEIS) is working to develop a policy to introduce Heat Network Zones in cities across England as a way to reduce carbon emissions from homes, businesses and public buildings. This research aims to understand the perspectives of residents, building owners and businesses in six cities (Birmingham, Bristol, Greater Manchester, Leeds, Newcastle and Nottingham) which might be suitable for Heat Network Zones in the future.

The [Centre for Sustainable Energy](#), [ACE Research](#) and [SE²](#) are conducting research on behalf of the [Department for Business, Energy and Industrial Strategy](#) (BEIS).

You are invited to take part in a set of two online workshops to learn about heat networks and heat network zones, and share your views:

- Introductory workshop on [date] [time]. This will explain key information about heat network zones.
- Deliberative workshop on [date] [time]. You will discuss a series of questions about heat network zones.

Spaces are limited and will be provided on a first-come, first-served basis. To confirm your place please fill out the [short survey here](#), including your contact details so that we can send you a link to join the workshop. By completing the survey you give consent for CSE to process your data for the purpose of this research project. The attached privacy statement sets out more information on how we will keep your personal data safe.

Once registered, all attendees will receive an information sheet with more details about the research and workshops.

Kind regards,

[name]

Workshop invitation letter – social housing residents (long)

Invite line: Get involved and get paid £40 - how could homes in [city] be heated in a net-zero future?

Dear [name] or [resident],

Want to learn more about a city specific approach to achieving net-zero and help inform Government policy? Curious about cleaner, greener alternatives to gas and oil boilers? Why not get involved by taking part in a pair of workshops about Heat Networks and the government's approach to rolling them out in cities in England.

What is a Heat Network?

Heat networks (also known as district heating systems) supply heat from a central source to customers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city, or be fairly local supplying a small cluster of buildings. Heat network zones are a proposed approach to rolling out heat networks in areas in which they are the best solution for reducing carbon emissions from heating buildings.

What is the Research Project?

[The Department for Business, Energy and Industrial Strategy](#) (BEIS) is working to develop a policy to introduce Heat Network Zones in cities across England as a way to reduce carbon emissions from homes, businesses and public buildings. This research aims to understand the perspectives of residents, building owners and businesses in six cities (Birmingham, Bristol, Greater Manchester, Leeds, Newcastle and Nottingham) which might be suitable for Heat Network Zones in the future.

The [Centre for Sustainable Energy](#), [ACE Research](#) and [SE²](#) are conducting research on behalf of the [Department for Business, Energy and Industrial Strategy](#) (BEIS).

You are invited to take part in a set of two online workshops to learn about heat networks and heat network zones, and share your views:

- Introductory workshop on [date] [time]. 1 hour Zoom workshop. This will explain key information about heat network zones.
- Discussion workshop on [date] [time]. 2 hour Zoom workshop. You will discuss a series of questions about heat network zones.

Attendance at both workshops is required. All participants will be given a £40 [One4all](#) voucher following the conclusion of the second workshop.

Spaces are limited and will be provided on a first-come, first-served basis. To confirm your place please fill out the [short survey here](#), including your contact details so that we can send you a link to join the workshop. By completing the survey you give consent for CSE to process your data for the purpose of this research project. The attached privacy statement sets out more information on how we will keep your personal data safe.

Once registered, all attendees will receive an information sheet with more details about the research and workshops.

Kind regards,

[name]

Workshop invitation letter – social housing residents (short)

Residents wanted for two research workshops - £40 shopping voucher for participants!

Would you be interested in taking part in two paid online workshops about how buildings in [city] will be heated in a low-carbon future?

The [Centre for Sustainable Energy](#), [ACE Research](#) and [SE²](#) want to hear from residents in [city] who may be impacted by Heat Network Zones.

You are invited to take part in a set of two online sessions to share your views:

- Workshop 1 – [date] [time].
- Workshop 2 – [date] [time].

All residents will be given a thankyou £40 shopping voucher after the second workshop.

Book your place by filling out the [short survey here](#). Be quick - places are limited and first-come, first-served!

If you have any questions, please email XXX at XXX@cse.org.uk.

Workshop invitation letter – Bristol City Council tenants

Hi XXX,

You have previously been in touch with an advisor from the Centre for Sustainable Energy for energy-related advice.

Would you be willing to help us by taking part in two paid online workshops about how buildings in Bristol will be heated in a low-carbon future?

The [Centre for Sustainable Energy](#), [ACE Research](#) and [SE²](#) want to hear from residents in Bristol who may be impacted by Heat Network Zones.

You are invited to take part in a set of two online sessions to share your views:

- Workshop 1 – [date] [time].
- Workshop 2 – [date] [time].

All residents will be given a thankyou £40 shopping voucher after the second workshop.

(To participate you need a computer or smartphone and internet access to be able to join the Zoom meetings).

Book your place by filling out the [short survey here](#). Be quick - places are limited and first-come, first-served!

We will send out more information before the first workshop, but if you have any questions at all please do feel free to contact me by phone or email.

Workshop privacy notice



Privacy notice

Under the General Data Protection Regulation (GDPR), we have a duty to notify you of the personal data that we hold, why we need it and how we are going to use it.

We are legally allowed to collect the data mentioned below from you as we are carrying out this research as a public task in the public interest.

If you have any worries or questions about how your personal information is handled, please contact XXX (Project Manager) at XXX@cse.org.uk

For workshop participants

We will collect your name and contact details when you register for the workshops. We will use this data to contact you with details about taking part in the sessions.

During the workshops themselves, we will record discussions between facilitators and participants. We will use this data to inform what questions to ask in a follow-up survey questionnaire that will constitute a secondary part of this research. This data will also inform a planned public consultation on heat network zones and a research report.

After the workshops, any personal contact details collected will be deleted on completion of the research project. CSE will store workshop recordings securely for 12 months after the end of the project, after which they will be deleted. Workshop participants will not be identified in reports or any other outputs from the research.

Introductory workshops information sheet



Dear workshop participant,

Information Sheet: Research to understand stakeholder views on Heat Network Zones

Intro workshop [number]		
[date]	[time]	[Zoom link]

Thank you for your interest in this research conducted by the Centre for Sustainable Energy (CSE), ACE Research and SE². This project is funded by the Department for Business, Energy and Industrial Strategy, the government department responsible for energy policy. The research aims to understand the perspectives of residents, building owners and businesses in six cities across England: Birmingham, Bristol, Leeds, Manchester, Newcastle and Nottingham in areas which might be suitable for Heat Network Zones in the future.

The research will inform government thinking towards developing a Heat Network Zoning policy for England.

Heat networks (also known as district heating) supply heat from a central source to consumers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city, or be fairly local supplying a small cluster of buildings. Heat network zones are areas in which heat networks are the appropriate solution for decarbonising heat.

You will learn more about heat networks and heat network zones in the first introductory workshop.

What will the introductory session cover?

The introductory workshop will last approximately one hour. The sessions will be hosted on Zoom. You can join the workshop by clicking the link at the top. Please join the session five minutes before the scheduled start time to ensure a timely start.

The introductory session will cover:

- An introduction to net-zero, heat decarbonisation, heat networks and the zoning policy.
- What is a Heat Networks Zone?
- Why might my home or building be included in a Heat Network Zone?
- Benefits and drawbacks of heat networks.
- Opportunity to ask questions and make connections with fellow [stakeholders] from your home city and the other pilot cities.

What will I be asked to do in the second deliberative workshop?

In the second workshop, you will be asked to respond to and discuss with others a series of questions about your understanding and views about heat network zones, what is appealing or worries you about heat network zones, who should cover associated costs and possible challenges

for connecting to a heat network. After you have attended the introductory workshop, you will receive another information sheet with further details and joining instructions for the second deliberative workshop.

How the information will be used

We will send a set of summary points from the workshops to the government policy team responsible for heat network zoning policy. They will refer to the information as they finalise materials for a public consultation on heat network zone policy options. The workshop results will be written up in a research report. The policy team will use the report findings to help in further development of heat network zone policy.

Keeping your personal data secure

All workshops will be recorded. CSE will store the recording securely for 12 months after the end of the project, after which it will be deleted. Workshop participants will not be identified in reports or any other outputs from the research. CSE will also keep a record of participant name, address and email address for the purpose of contacting participants about the workshops only. Contact email addresses will be deleted on completion of the project.

No workshop recordings will be shared with the Department for Business, Energy & Industrial Strategy.

For further information

To learn more about heat networks ahead of the session, watch this short video on YouTube <https://www.euroheat.org/knowledge-hub/district-energy-explained/>.

Information on gov.uk at <https://www.gov.uk/guidance/heat-networks-overview>.

If you want to contact us about your personal information held by CSE, or if you have any questions about the research, please send your query to:

XXX@cse.org.uk

A member of the team will respond to your email within 1 working day.

Deliberative workshops information sheet



Dear workshop participant,

Information Sheet: Research to understand stakeholder views on Heat Network Zones

Deliberative workshop: [sample group]		
[date]	[time]	[Zoom link]

Thank you for your interest in this research conducted by the Centre for Sustainable Energy (CSE), ACE Research and SE². This project is funded by the Department for Business, Energy and Industrial Strategy, the government department responsible for energy policy. The research aims to understand the perspectives of residents, building owners and businesses in six cities across England: Birmingham, Bristol, Leeds, Manchester, Newcastle and Nottingham in areas which might be suitable for Heat Network Zones in the future.

The research will inform government thinking towards developing a Heat Network Zoning policy for England.

Heat networks (also known as district heating) supply heat from a central source to consumers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city, or be fairly local supplying a small cluster of buildings. Heat network zones are areas in which heat networks are the appropriate solution for decarbonising heat.

What did the introductory session cover?

The hour-long introductory session covered:

- An introduction to net-zero, heat decarbonisation, heat networks and the zoning policy.
- What is a Heat Networks Zone?
- Why might my home or building be included in a Heat Network Zone?
- Benefits and drawbacks of heat networks.
- Opportunity to ask questions and make connections with fellow [stakeholders] from your home city and the other pilot cities.

If you missed it, or want a recap, a recording of the introductory session can be viewed [here](#).

What will this deliberative workshop cover?

This second workshop will last approximately two hours. The session will be hosted on Zoom. You can join the workshop by clicking the link at the top. Please join the session five minutes before the scheduled start time to ensure a timely start.

During the workshop, you will be asked to respond to and discuss with others a series of questions about your understanding and views about heat network zones, what is appealing or worries you

about heat network zones, who should cover associated costs and possible challenges for connecting to a heat network.

How the information will be used

We will send a set of summary points from the workshops to the government policy team responsible for heat network zoning policy. They will refer to the information as they finalise materials for a public consultation on heat network zone policy options. The workshop results will be written up in a research report. The policy team will use the report findings to help in further development of heat network zone policy.

Keeping your personal data secure

All workshops will be recorded. CSE will store the recording securely for 12 months after the end of the project, after which it will be deleted. Workshop participants will not be identified in reports or any other outputs from the research. CSE will also keep a record of participant name, address and email address for the purpose of contacting participants about the workshops only. Contact email addresses will be deleted on completion of the project.

No workshop recordings will be shared with the Department for Business, Energy & Industrial Strategy.

For further information

To learn more about heat networks ahead of the session, watch this short video on YouTube <https://www.euroheat.org/knowledge-hub/district-energy-explained/>.

Information on gov.uk at <https://www.gov.uk/guidance/heat-networks-overview>.

If you want to contact us about your personal information held by CSE, or if you have any questions about the research, please send your query to:

XXX@cse.org.uk

A member of the team will respond to your email within 1 working day.

Poll questions used in introductory workshops

How urgent do you think it is that we tackle climate change? 1 = not all urgent, to 10 = extremely urgent

To what extent do you understand the term 'decarbonisation of heat' and how it might impact your building? 1 = very little, to 10 = a lot

How much do you know about district heating networks? 1 = nothing, to 10 = a lot

To what extent has today's session improved your understanding of heat zones, heat networks and why we need them? 1 = very little, to 10 = a lot

Given what you now know, how supportive would you be for a heat zone to be introduced in your area? 1 = not supportive, to 10 = extremely supportive

How attractive do you think connecting to a heat network will be compared to decarbonising your building's heat supply through other means? 1 = not attractive, to 10 = extremely attractive

Non-domestic <100MWH (not mandatory)

Annex D: Survey materials

Survey invitation letter

[The Building Owner or Manager/The Resident]

[address line 1]

[address line 2]

[address line 3]

[postcode]



Department for
Business, Energy
& Industrial Strategy

Date:

ID:

Dear Sir/Madam,

This is an invitation to take part in the Heat Network Zones Survey, which the Centre for Sustainable Energy, with QA research, is carrying out for the Department of Business, Energy and Industrial Strategy (BEIS). This survey is your opportunity to share your views about connecting homes and buildings to heat networks.

Please read through the information sheet about heat networks in your survey pack before you fill in the questionnaire. As a thank you for taking part you will be asked if you would like to be entered into a prize draw to win one of three cash prizes (see the back cover of the questionnaire for full terms and conditions). To take part, please fill in the enclosed questionnaire and post it back in the pre-paid envelope provided by **15 September 2021**. The survey should take no more than 15 minutes to complete.

You can also complete the survey online, by going to:

<https://surveys.qaresearch.co.uk/hnzgroupone.asp> (or by scanning the QR code on the questionnaire enclosed) and enter the following password <<password>> when prompted to do so. This is so that only one survey is completed for each address.

BEIS aims to publish a Heat Network Zoning Consultation over the summer. To find out more about the public consultation or heat networks please visit

<https://www.gov.uk/guidance/heat-networks-overview>.

This survey is being administered by QA Research, a market and social research company. All research is carried out in line with the Market Research Society Code of Conduct and your answers will be completely confidential. More information on how we will use your personal data is available in the privacy notice on the other side of this letter. If you have any questions or difficulties completing the survey, or require a larger print version, please contact XXX at XXX@qaresearch.co.uk. You can also ask a friend, family member or carer to help you.

On behalf of BEIS, I would like to thank you in advance for your help with this important research.

Non-domestic <100MWH (not mandatory)

Yours sincerely,

[signature]

XXX

Evaluation and Research Lead, Strategic Heat Intervention

Survey reminder letter

[The Building Owner or Manager/The Resident]

[address line 1]

[address line 2]

[address line 3]

[postcode]



Department for
Business, Energy
& Industrial Strategy

Date:

ID:

Dear Sir/Madam,

You were recently invited to take part in the Heat Network Zones Survey, being carried out by the Centre for Sustainable Energy, with QA research, on behalf of the Department of Business, Energy and Industrial Strategy (BEIS). Heat networks are an important part of the path to achieving net-zero carbon emissions by 2050. This survey will help us better understand the priorities and concerns of residents and businesses about connecting homes and buildings to heat networks.

We have extended the closing date for responses to Wednesday 22 September 2021. As a thank you for taking part you will be asked if you would like to be entered into a prize draw to win one of three cash prizes (see the back cover of the questionnaire for full terms and conditions).

Respond online: Go to: <https://surveys.garesearch.co.uk/xxx.asp> or scan the QR code below and enter this password - <<password>> - when prompted to do so.

By post: Complete the questionnaire in the original survey pack and post it back in the pre-paid envelope provided by **22 September 2021**. The survey should take no more than 15 minutes to complete.

Need some more help? If you have any questions or require a larger print version, please contact XXX at XXX@garesearch.co.uk or call XXX during normal office hours. You can also ask a friend, family member or carer to help you.

This survey is being administered by QA Research, a market and social research company. All research is carried out in line with the Market Research Society Code of Conduct. Your answers will be completely confidential. More information on how we will use your personal data is available in the privacy notice on the other side of this letter.

BEIS aims to publish a Heat Network Zoning Consultation in the autumn. To find out more about heat networks please visit <https://www.gov.uk/guidance/heat-networks-overview>.

Non-domestic <100MWH (not mandatory)

On behalf of BEIS, I would like to thank you in advance for your help with this important research.

Yours sincerely,

[signature]

XXX

Evaluation and Research Lead, Strategic Heat Intervention

Survey privacy notice

Privacy notice – Connecting to a Heat Network survey

This notice explains who we are, the personal data we collect, how we use it, who we share it with, and what your legal rights are. You should keep this for your reference. Do not return it with your completed questionnaire.

About

The data controller for this research is the Department for Business, Energy and Industrial Strategy (BEIS), a ministerial government department. The Centre for Sustainable Energy (CSE) is an independent national charity that works to help people change the way they think and act on energy. CSE has been commissioned by BEIS to undertake this research. Qa Research (Qa) is a market and social research company sub-contracted by CSE to collect survey responses; Qa is a member of the Market Research Society.

What personal data will be collected?

BEIS, CSE and Qa do not hold or have access to any personal data for the purpose of inviting you to take part in the survey, only addresses and type of property (non-domestic/domestic, private or social housing).

Qa may collect the following data as part of the survey: age, household income, household size, and may collect the following special category data; disability, ethnicity, religion, gender identity, sexual orientation. If you choose to enter the prize draw, Qa will collect your name and contact details.

What is the legal basis for processing your personal data?

The legal basis for processing your personal data is your consent to take part in the Heat Network Zone survey. If you wish to withdraw your consent at any time, please see the section below covering 'Your Rights'.

How will my personal data and survey responses be used?

CSE will use your personal data and responses solely for the purpose of this research and to produce research findings for BEIS. Aggregated data tables and an anonymised dataset at participant level will also be shared directly with BEIS. Survey respondents will not be identified in reports or any other outputs from the research. Qa will only use your address,

Non-domestic <100MWH (not mandatory)

name and contact details to check that one survey is completed per household/ business and to administer the prize draw.

How will my personal information be kept?

Survey responses will be stored securely by CSE and Qa for 12 months after the end of the project, after which they will be deleted. CSE and Qa take their information security responsibilities seriously and apply security measures to ensure your information is protected from loss, theft or misuse. These measures include appropriate physical security of offices and controlled access to computer systems. All of your personal data used and collected for this survey will be stored in data centres and servers within the UK.

Your rights

You have the right to access your personal data within the period that CSE and Qa hold it. If you want to contact BEIS about data they hold on you, please see details below. Providing responses to this survey is entirely voluntary and is done so with your consent. You have the right to withdraw your consent at any time. You have the right to rectify any incorrect or out-of-date personal data about you which we may hold. If you want to exercise your rights, please contact us at the addresses below. If you have concerns about how we have processed your personal data, you have the right to contact the Information Commissioner's Officer (ICO) at: casework@ico.org.uk.

Who can I contact about this survey and/or my personal data?



Department for
Business, Energy
& Industrial Strategy



Survey information sheet

Heat Networks Survey – Information sheet

Climate change

Scientists have observed that increasing amounts of greenhouse gases (especially carbon dioxide) in our atmosphere has led to some unusual recent changes in the earth's climate. While there are natural fluctuations in the earth's temperature, scientists are telling us that temperatures are rising faster than at any other point in history.

This is linked to the greenhouse effect. Our atmosphere traps heat from the sun. Increasing amounts of greenhouse gases means there is more heat from the sun trapped in our atmosphere. This is warming our planet. This process is called climate change.

The impacts of climate change will be significant and felt globally. The UK Climate Impacts Programme (UKCIP) predict that in the UK we will see:

- Average temperature rise, with warmer, wetter winters and drier, hotter and longer summers.
- An increase in severe weather events like flooding, droughts, heat waves and severe gales.
- A 40cm increase in sea levels by 2100, leading to further coastal erosion and flood risks.
- Changes to UK farming in terms of where and what crops are grown and available.
- UK wildlife under threat as their environment changes due to temperature changes.

What does this mean for you?

In 2019, the UK government became the first major economy in the world to pass laws to end its contribution to climate change by 2050. This means that the UK needs to bring all greenhouse gas emissions to net zero by 2050.

To achieve this, we will all need to make changes to limit our greenhouse gas emissions. This could be changes to your home or where you work and how you travel. Actions to tackle climate change can have benefits for you and wider society. For example:

Non-domestic <100MWH (not mandatory)

- Making improvements to the buildings we live and work in can make them more comfortable to be in and more affordable to run.
- New jobs creation – recent research suggests that the UK construction industry will need another 350,000 working in the sector in the next decade.

Decarbonisation

Carbon dioxide is present in the Earth's atmosphere and acts as a greenhouse gas. The UK has made great progress in reducing the amount of carbon dioxide we release into the atmosphere when generating electricity. There is now less power generated from coal and more from renewable technologies such as wind and solar. This activity is called decarbonisation.

One of the big challenges for the UK now is reducing the amount of carbon dioxide we release when we heat our buildings – the decarbonisation of heat. The government are considering lots of options for replacing heating systems that release carbon dioxide, such as gas boilers, with lower carbon producing alternatives.

One option they are considering is increasing the number of heat networks in operation in the UK.

What are heat networks

A heat network is a system of insulated pipes, often laid underground, which transport heat to more than one end user. While many heat networks are powered by natural gas, there are lots of different technologies and fuels that can be used to generate heat. This includes biomass (wood) and electric heat pumps. Heat networks have been used successfully for decades to provide both heating and cooling for buildings.

The UK government has stated that heat networks will be used more widely to heat our homes and businesses. They can supply heat at lower cost, at lower carbon and at scale. They can also use waste heat from other buildings, such as waste incinerators. They currently supply around 2% of UK heat demand – the UK Climate Change Committee thinks this should increase to over 17% by 2050.

There are two types of heat network:

- **Communal heat networks:** systems that heat lots of properties within one building, such as a block of flats.
- **District heat networks:** systems that involve a local energy centre that supplies heat and hot water to customers in more than one building. They can range in size from a few hundred metres supplying just a few homes to several kilometres of pipe supplying heat and hot water to multiple buildings in a development.

Heat networks are operated by one company. This means that buildings connected to heat networks are unable to switch their heating and/or hot water supplier in the same way as they can for other utilities such as gas or electricity. This will be a familiar arrangement for many and is very common in the water sector.

Heat network zoning

Heat networks can't be introduced everywhere. In order to work effectively, we need to look at areas where there are lots of buildings with lots of heat or cooling demand.

Non-domestic <100MWH (not mandatory)

The UK Government is considering the introduction of policies to create heat network zones. These zones would be areas where it would be cost effective and technically feasible to decarbonise heating in buildings through a heat network. In these areas, there would be plans to improve the energy performance of buildings, by adding insulation, and then heating those buildings through a district heat network.

There are current trials to look at heat network zoning in six English cities. These are Bristol, Birmingham, Greater Manchester, Leeds, Newcastle and Nottingham.

What does this mean for you?

If the government decides to implement heat network zones, your building may be eligible to connect to a heat network in the future.

This would require some changes to your home or workplace. For example, a heat interface unit (HIU) would need to be installed. This unit – which looks like a boiler – brings hot water and heat from the main heat network into the property.

Annex E: Survey questionnaires

Survey 1: Private non-domestic buildings (≥100 MWh)

This survey should be filled out by the person at your organisation with responsibility for decisions regarding energy usage or heating at this address. If you are unable to answer questions about energy usage or heating at this address please pass the survey onto someone in the organisation that is responsible for making these decisions. See response options to Q1. for suggested appropriate respondents. We appreciate you making the effort to pass it on promptly.

Thank you for your interest in this survey about heat network zones.

This survey is part of a research project being carried out by the Centre for Sustainable Energy (CSE) with QA research, on behalf of the Department for Business, Energy and Industrial Strategy. All completed questionnaires will go directly to Qa research. Qa research will share the full set of responses with CSE. Your answers will be kept anonymous by Qa research and CSE. For more information about the research, please see the attached information sheet.

The research will be carried out according to the Market Research Society's Code of Conduct. Taking part is voluntary. It should take between X and Y minutes to complete.

Please answer the questions by putting an X in the boxes. Only write in answers when the survey asks you to, and make sure you write clearly. Any guidance for answering specific questions is included in *italics*. Any useful background information is in **bold**. Once you have completed the survey, just put it in the envelope provided to send it back.

All the information you give will be kept completely confidential and reported anonymously. For further details about how we will use and store your data, please see the attached privacy notice.

Complete and return your survey as soon as possible, but no later than **15 September 2021**.

Save time – do it online! You can also complete the survey online, by going to:

<https://surveys.garesearch.co.uk/xxxxxxx> and enter <<password>> when prompted to do so at the start of the survey. This will enable us to make sure that each household only completes one survey and so Qa can locate your data if you wish to withdraw permission to taking part and/or GDPR consent to taking part.

You will be asked to enter your password, which is on the letter included with this survey.

Non-domestic <100MWH (not mandatory)

£1,000 up for grabs!

Everyone who completes this survey will be given the opportunity to be entered into a prize draw, with a pot of £1,000 and three chances to win! 1st prize = £500, 2nd prize = £250, 3rd prize = £250. The draw will be administered by Qa Research. Full terms and conditions are available on the back page of this questionnaire.

Thank you!

Section 1: Your building and existing heating set-up

1. Position of person completing survey: *Please choose one answer only.*

- | | |
|--|--|
| <input type="checkbox"/> Business owner or manager | <input type="checkbox"/> Facility manager |
| <input type="checkbox"/> Commercial property manager | <input type="checkbox"/> Other (please write in) |

2. Are you responsible for decisions regarding energy and heating at this address and able to answer questions about this? – Yes / No If no please pass on to someone who is able to.

3. Building ownership: Does you or your company? : *Please choose one answer only.*

- | | |
|--|---|
| <input type="checkbox"/> Own and occupy the building | <input type="checkbox"/> Occupy as tenant |
| <input type="checkbox"/> Own the building but it is occupied by other businesses(es) | <input type="checkbox"/> Manage on behalf of non-occupying building owner |
| <input type="checkbox"/> Occupy as leaseholder | <input type="checkbox"/> Manage on behalf of occupying building |
| | <input type="checkbox"/> Other (please write in) |

4. What is the building's main use?

- | | |
|---|--|
| <input type="checkbox"/> B2 – General industrial (e.g. factory) | <input type="checkbox"/> E – Commercial, business and service (e.g. office, shops, day nursery, gym, takeaway) |
| <input type="checkbox"/> B8 – Storage or distribution | |
| <input type="checkbox"/> C1 – Hotel, guest house, motel | |
| <input type="checkbox"/> F – Local community or learning institutions (e.g. indoor swimming pool, museum) | <input type="checkbox"/> Something else (write in - e.g. cinema, bingo hall) |

5. How long have you occupied your current building?

- | | |
|---|--|
| <input type="checkbox"/> Less than one year | <input type="checkbox"/> 1-2 years |
| <input type="checkbox"/> 2-5 years | <input type="checkbox"/> 5 years or more |

6. What is the building's EPC rating?

- | | |
|---|----------------------------|
| <input type="checkbox"/> A (the most efficient) | <input type="checkbox"/> C |
| <input type="checkbox"/> B | <input type="checkbox"/> D |

Non-domestic <100MWH (not mandatory)

- ☐ E
- ☐ F

- ☐ G (the least efficient)
- ☐ Don't know

7. What fuel or heat source is used to heat this building? *Please choose all answers that apply.*

- ☐ Gas
- ☐ Electricity
- ☐ Heat network
- ☐ Heat pump
- ☐ Oil

- ☐ Combined heat and power (CHP)
- ☐ Solar thermal
- ☐ Other (please specify)

8. How much attention does your business pay to the cost of heating your building?

- ☐ A lot
- ☐ A fair amount
- ☐ Not very much

- ☐ None at all
- ☐ Don't know

How important is it to your business that you are able to switch heating or hot water suppliers? *Please choose one answer only.*

- ☐ Very important
- ☐ Moderately important
- ☐ Slightly important

- ☐ Not at all important
- ☐ Don't know
- ☐ Prefer not to say

9. Has your business ever switched or considered switching energy supplier for this building?

- ☐ Switched supplier in the last year
- ☐ Switched supplier more than a year ago
- ☐ Considered switching, but have not switched

- ☐ Never considered switching
- ☐ Unable to switch / not our choice
- ☐ Unsure

10. Now thinking about your heating system. Which of these statements comes closest to the view of your business?

- ☐ We have replaced my heating system in the last 3 years and would not be likely to replace until more time has passed
- ☐ I will only replace my heating system when my current one

- ☐ breaks down or starts to deteriorate
- ☐ I would consider replacing my heating system while it is still working
- ☐ Not my decision to make because my business is a commercial tenant

Non-domestic <100MWH (not mandatory)

☐ Don't know

Section 2: Climate change and renewable heat

11. How concerned, if at all, is your business about climate change, sometimes referred to as 'global warming'?

☐ Very concerned

☐ Fairly concerned

☐ Not very concerned

☐ Not at all concerned

☐ Don't know

12. Does your organisation have any formal plans or commitments for reducing emissions or environmental impacts, such as a low-carbon action plan?
Yes/No/Don't know.

13. Which of the following types of commercial heating systems had you personally heard of before today? *Please tick all that apply.*

☐ Biomass

☐ Deep geothermal

☐ Heat pumps (ground, air or water source)

☐ Heat network (district heating or communal heating)

☐ Solar thermal

☐ Combined heat and power (CHP) systems

☐ None of these

☐ Don't know

☐

Section 3: Information needs

14. What would you want to know more about to feel confident that connecting to a heat network is the right choice for your building? *Please select all that apply*

☐ It is the most suitable low carbon low cost heating option compared to alternatives

☐ Timeframe for connecting

☐ The costs are easy to understand

☐ No or minimal interruptions to building heat supply

☐ Maintenance and repairs arrangements

Non-domestic <100MWH (not mandatory)

- ☐ Metering and billing arrangements for building occupants
- ☐ Contractual protections for commercial users of heat service
- ☐ Heating system can also be used to cool building when needed
- ☐ Other (please write in)

15. Which of the following would you most trust to provide information, advice or recommendations about connecting to a heat network? *Please select up to three.*

- ☐ National government (e.g. BEIS, Ofgem)
- ☐ Consultants (e.g. The Carbon Trust)
- ☐ Local council
- ☐ Property manager
- ☐ An industry body (e.g. The Association of Decentralised Energy)
- ☐ An energy supplier
- ☐ A heat network provider (e.g. an Energy Services Company)
- ☐ A tradesperson or professional (e.g. building maintenance, plumber, builder, or architect)
- ☐ Friends and family
- ☐ None of these
- ☐ Don't know
- ☐ Other (please state)

Section 4: Benefits of connecting to a heat network within a designated heat network zone

There are a variety of direct benefits for you and wider benefits from creating heat networks at scale in heat network zones.

16. Please rate how important these direct benefits of heat networks are to you.

	Importance				
	Very important	Fairly important	Not important	Not at all important	Don't know
Lower heating bills					
Increased building comfort					
Increased productivity					

Non-domestic <100MWH (not mandatory)

Cost-effective way to reduce carbon emissions from heating					
Increase the asset value of the building					
Improve the relationship between building owners and the occupants					
Contribute to business net zero targets					

17. Please rate how important these wider benefits of heat networks are to you.

	Very important	Fairly important	Not important	Not at all important	Don't know
Tackle climate change					
Contribute to Government net zero targets					
Create new green jobs					
Efficient way to use waste heat					
Enable use and distribution of cheap sources of low carbon heat					
Catalyst for local growth					

Section 5: Concerns about heat networks

As a relatively unfamiliar form of heat supply in this country, it is understandable that building owners may have some concerns too.

18. Please rate how important these possible areas of concern are to you.

Non-domestic <100MWH (not mandatory)

	Very important	Fairly important	Not important	Not at all important	Don't know
Cost-related concerns (see next section of survey)					
Regulation of heat networks					
Disruption associated with connecting to a heat network (lost productivity)					
Not being able to switch suppliers					
Performance and reliability of heat network					
Availability of a suitable low carbon heat supply					
Suitability for specific building (including broader retrofit concerns)					

19. Are there any concerns you have that are not listed above? Please write in (optional)

Section 6: Paying for the costs of connecting to a heat network

The creation of heat networks involves several different types of costs. These are:

- Install costs – the cost of the equipment that heats the building & the installation costs
- Running costs – the cost of running the heating system in any one year (fuel, heat, metering & billing, maintenance)
- Enabling costs – additional costs to enable the heating equipment to function within a building e.g. fabric costs
- Replacement costs – costs borne over the natural replacement cycle of the system
- Energy system costs – wider energy system costs e.g. upgrades to the local electricity network, connection cost

Non-domestic <100MWH (not mandatory)

20. Who should contribute or pay in full for these different types of costs? (Please enter an x in all that apply)

	Taxpayer	Building owner	Leaseholder	Tenant	Don't know
Install costs					
Running costs					
Enabling costs					
Replacement costs					
Energy system costs					

21. How important is it for you to know about the share of the upfront installation, enabling and connection costs you would be expected to pay as the building owner? *Please choose one answer only.*

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Not important at all |
| <input type="checkbox"/> Moderately important | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Fairly important | |

22. Please comment on what would help with financial planning considerations (e.g. having a clear timeline for different types of buildings to connect)? [Open text box]

Section 7: Overall views on heat network zones and willingness to connect

The local authority may have overall responsibility for delivery of heat network zones in their area. However, the design, construction, operation and maintenance of heat networks may be delivered by the private sector or via public-private partnerships.

As an eligible building you are likely to be offered the opportunity to connect to a heat network in the future. This would be a voluntary choice of the building owner.

23. How far do you agree with the statement: I trust my local authority to oversee/deliver heat network zones in this area?

Non-domestic <100MWH (not mandatory)

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree

- ☐ Strongly disagree
- ☐ Don't know

24. How likely do you think you will be to join a heat network like this if you were given the opportunity? *When answering, please assume you would pay no more than you do at present and that the heat supply would be from renewable (low or zero carbon) sources.*

- ☐ Very likely
- ☐ Fairly likely
- ☐ Not very likely

- ☐ Already joined one
- ☐ Neither likely nor unlikely
- ☐ Don't know

25. If you are not willing to connect, what would be your preferred alternative form of low carbon heating for your building in the future?

- ☐ Heat pump (e.g. air, ground or water source)
- ☐ Hybrid heat pump

- ☐ Other electric (e.g. storage heaters)
- ☐ Other (please state)
- ☐ Don't know

26. If you are **not** willing to connect, what is the main reason for your answer?

- ☐ Prefer individual building based heating solution
- ☐ Unwilling to commit to long term contract
- ☐ Desire to avoid a monopoly supplier of heat

- ☐ Already connected to a heat network
- ☐ Building does not use heat
- ☐ Other reason (please state)
- ☐ Don't know

27. What, if anything would strengthen your support for heat networks?

- ☐ More information about the suitability of a heat network compared to other alternatives

- ☐ Assurance that the heat network will use low or zero carbon sources of heat
- ☐ Financial or other incentives
- ☐ Anything else (please state)
- ☐ Don't know

Section 8: Prize draw

28. Finally, would you like to be entered into a free prize draw to win one of three cash prizes?

Non-domestic <100MWH (not mandatory)

The draw will be administered by Qa Research. To enter, you must give your consent and provide your name and contact details so Qa can contact you if you win, to arrange payment/delivery of the prize. Your contact details will not be used for any other purpose and will be securely stored by Qa for 12 months after completion of the research. Winners have the right to remain anonymous.

(Please tick one box only)

Non-domestic <100MWH (not mandatory)

- ☐ Yes I consent to being entered into the draw, please go to Q31
- ☐ No I would not like to be entered. Thank you, please return the questionnaire.

29. If you answered 'yes' to Question 30, please provide the following information:

My name is:

.....

My telephone number is:

.....

My email address is:

.....

Terms and Conditions of prize draw:

1)The closing date is 30th September 2021 2)Late entries will not be accepted. 3) In the event that the survey closing date is extended due to a poor response rate, the closing date for the prize draw will be extended to the end of September. 4) There is one prize of £500 and two further prizes of £250. 5)One entry per person. 6)Entries on official questionnaire only 7)Entries from a similar survey will also be included in this prize draw. 8)The winners will be drawn at random within one week of the closing date and notified by the contact details provided. 9)Qa will attempt to contact winners by phone three times and if on record, by email two times. If contact is not made within seven working days, Qa reserves the right to draw a new winner at random. 9)Winners will receive their prize within 6 weeks of the draw being held. 10)The decision of Qa Research is final and no correspondence will be entered into.

Thank you for taking the time to complete this survey. Please return by Wednesday 15th September in the FREEPOST envelope provided, there is no need to use a stamp. If your envelope is missing please send to:

Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1
9WB

Non-domestic <100MWH (not mandatory)

Survey 2: Social housing tenants and homeowners

Thank you for your interest in this survey about heat network zones.

This survey is part of a research project being carried out by the Centre for Sustainable Energy (CSE) with Qa research, on behalf of the Department for Business, Energy and Industrial Strategy. All completed questionnaires will go directly to Qa research. Qa research will share the full set of responses with CSE. Your answers will be kept anonymous by Qa research and CSE. For more information about the research, please see the attached information sheet.

The research will be carried out according to the Market Research Society's Code of Conduct. Taking part is voluntary. It should take between X and Y minutes to complete.

Please answer the questions by putting an X in the boxes. Only write in answers when the survey asks you to, and make sure you write clearly. Any guidance for answering specific questions is included in *italics*. Any useful background information is in **bold**. Once you have completed the survey, just put it in the envelope provided to send it back.

All the information you give will be kept completely confidential and reported anonymously. For further details about how we will use and store your data, please see the attached privacy notice.

Complete and return your survey as soon as possible, but no later than **15 September 2021**.

Save time – do it online! You can also complete the survey online, by going to:

<https://surveys.garesearch.co.uk/xxxxxxx> and enter <<password>> when prompted to do so at the start of the survey. This will enable us to make sure that each household only completes one survey and so Qa can locate your data if you wish to withdraw permission to taking part and/or GDPR consent to taking part.

You will be asked to enter your password, which is on the letter included with this survey.

£1,000 up for grabs!

Everyone who fully completes this survey will be given the opportunity to be entered into a prize draw, with a pot of £1,000 and three chances to win! 1st prize = £500, 2nd prize = £250, 3rd prize = £250. The draw will be administered by Qa Research. Full terms and conditions are available on the back page of this questionnaire.

Thank you!

Non-domestic <100MWH (not mandatory)

Consent

By completing this survey and returning it I give my consent to taking part and for my answers to be used for research purposes.

Section 1: About your home energy use

1. Do you (or your household) own or rent the home that you live in? *Please choose one answer only.*

- | | |
|--|--|
| <input type="checkbox"/> Own home on a freehold | <input type="checkbox"/> Rent from private landlord |
| <input type="checkbox"/> Own home on a leasehold | |
| <input type="checkbox"/> Part own and part rent (shared ownership) | <input type="checkbox"/> Live rent-free in another person's property |
| <input type="checkbox"/> Rent from council/housing association | |

2. Through which of the following ways do you heat your home? *Please choose all answers that apply.*

- | | |
|---|--|
| <input type="checkbox"/> Gas central heating | <input type="checkbox"/> Electric portable heaters |
| <input type="checkbox"/> Other boiler central heating (e.g. oil or LPG) | <input type="checkbox"/> Gas fires |
| <input type="checkbox"/> Electric radiators | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> Storage heating | |

3. Thinking about your gas and electricity supplier have you switched your supplier for either or both of these?

- | | |
|---|--|
| <input type="checkbox"/> I switched supplier in the last year | <input type="checkbox"/> I considered switching, but I have not switched |
| <input type="checkbox"/> I switched supplier more than a year ago | <input type="checkbox"/> I have never considered switching |
| | <input type="checkbox"/> Unsure |

4. How much do you agree or disagree with the following statement: 'I want to be able to switch my heating and hot water supplier'. *Please choose one answer only.*

- | | |
|---|--|
| <input type="checkbox"/> Strongly agree | <input type="checkbox"/> Tend to disagree |
| <input type="checkbox"/> Tend to agree | <input type="checkbox"/> Strongly disagree |
| <input type="checkbox"/> Neither agree nor disagree | <input type="checkbox"/> Prefer not to say |

5. Over the last three months how worried, if at all, have you been about paying your energy bills?

- | | |
|---|---|
| <input type="checkbox"/> Very worried | <input type="checkbox"/> Fairly worried |
| <input type="checkbox"/> Not very worried | <input type="checkbox"/> Not at all worried |

Non-domestic <100MWH (not mandatory)

Section 2: Climate change and heat networks

You may find it helpful to read the information sheet before answering the questions in this section.

6. How concerned, if at all, are you about climate change, sometimes referred to as 'global warming'?

- | | |
|---|---|
| <input type="checkbox"/> Very concerned | <input type="checkbox"/> Not at all concerned |
| <input type="checkbox"/> Fairly concerned | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Not very concerned | |

7. Have you ever lived in a home with a heat network (also known as district heating)?

- | | |
|------------------------------|-------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> No | |

8. From what you knew, or had heard about heat networks before today, what is your overall view about them? *Please only answer if you have heard of a heat network before today.*

- | | |
|---|--|
| <input type="checkbox"/> Very positive | <input type="checkbox"/> Very negative |
| <input type="checkbox"/> Fairly positive | <input type="checkbox"/> Never heard of heat networks before today |
| <input type="checkbox"/> Neither positive or negative | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Fairly negative | |

Section 3: Information needs

In the future, your landlord may be invited to connect the building you live in to a heat network. The heating and hot water supply to your home would then be provided via a heat network. This would only be the case where connecting to a heat network offers the cheapest suitable form of low carbon heating for residents.

9. What would you want to know more about to feel confident that connecting to a heat network is the right choice for your home? *Please select all that apply.*

- | | |
|--|---|
| <input type="checkbox"/> Yearly heating costs are the same or less than for my current heating | <input type="checkbox"/> It is a safe way to heat my home |
| | <input type="checkbox"/> The costs are easy to understand |

Non-domestic <100MWH (not mandatory)

- | | |
|--|--|
| <input type="checkbox"/> The costs are fairly shared | <input type="checkbox"/> Shared parts of the building (e.g. stairs, hallway) do not overheat or get too cold |
| <input type="checkbox"/> Service charges are reasonable | |
| <input type="checkbox"/> Heating is metered so I know I am only paying for the heating I use | <input type="checkbox"/> There is good consumer protection |
| <input type="checkbox"/> Provides an uninterrupted heat supply | <input type="checkbox"/> There is a clear complaints process |
| <input type="checkbox"/> Repairs are done quickly | <input type="checkbox"/> There is additional support for vulnerable consumers |
| <input type="checkbox"/> It is easy for me to control the heating in my own home | <input type="checkbox"/> Other (please specify) |

10. Which of the following would you most trust to provide information and advice about what connecting to a heat network would mean for you? *Please select up to three.*

- | | |
|---|---|
| <input type="checkbox"/> National government (e.g. BEIS, Ofgem) | <input type="checkbox"/> Energy Savings Trust or Citizens Advice) |
| <input type="checkbox"/> A government-backed advice service (e.g. The Simple Energy Advice Service) | <input type="checkbox"/> An energy supplier |
| <input type="checkbox"/> Local council | <input type="checkbox"/> A heat network provider (e.g. EON, SSE, Switch 2) |
| <input type="checkbox"/> Housing provider (eg tenant & leaseholder engagement officer) | <input type="checkbox"/> A tradesperson or professional (e.g. plumber, builder) |
| <input type="checkbox"/> A non-government organisation (e.g. The | <input type="checkbox"/> Friends and family |
| | <input type="checkbox"/> None of these |
| | <input type="checkbox"/> Don't know |
| | <input type="checkbox"/> Other (please state) |

Question For leaseholders only. *Please only answer this question if you marked 'Own as leaseholder' x at q1:*

11. How important is it for you to know about the share of the costs of connecting your home to a heat network you would be expected to pay as the leaseholder? *Please choose one answer only.*

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Not at all important |
| <input type="checkbox"/> Fairly important | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Not very important | |

Section 4: Your views on connecting to a heat network

Non-domestic <100MWH (not mandatory)

You may find it helpful to read the information sheet before answering these questions.

12. Please rate how important these identified wider benefits of heat networks are to you.

	Importance				
	Very	Fairly	Not very	Not at all	Don't know
Heat networks are an important way to decarbonise heat supply to homes and other buildings					
Heat network zones will only use low or zero carbon sources of heat					
Heat networks can have lower heating costs and so help to reduce fuel poverty					
Heating bills from heat networks are, on average the same or cheaper than gas heating systems					
Heat network zones will create new local 'green' jobs and contribute to local economic growth					
Heat networks provide a safe and reliable heat supply					

Non-domestic <100MWH (not mandatory)

(Optional) Any other benefits, <i>please write in below and rate:</i>					
---	--	--	--	--	--

13. Please rate how important these possible areas of concern are to you.

	Importance				
	Very	Fairly	Not very	Not at all	Don't know
How much leaseholders will be expected to contribute toward the connection costs where their home is in a building owned by a social housing provider					
Concerns about the regulation of heat networks					
Concerns about disruption within my home associated with connecting to a heat network					
Concerns about disruption within my building or in the local area while the heat network is installed					

Non-domestic <100MWH (not mandatory)

Concern about not having a choice of supplier for heating and hot water					
Any other concern (please write in and rate):					

Section 5: Views on paying for heat networks and consumer protection

14. How important is it for you that... *Please choose one answer only for each row.*

	Importance				
	Very	Fairly	Not very	Not at all	Don't know
Your supplier provides an estimated annual cost for your bills					
A choice of payment and billing options is available (e.g. pre-payment option, set up a direct debit, pay in a shop, pay via a web app)					
A choice of billing frequencies is available (e.g. weekly, monthly or quarterly)					
There is a clear complaints process in case of any problems					
You can speak to your supplier over the phone when things go wrong					

Non-domestic <100MWH (not mandatory)

15. How would you feel if your housing provider switched your heating system over to a heat network? *When answering, please assume you would pay no more than you do at present and that the heat supply would be from renewable (low or zero carbon) sources.*

☐ Very supportive

☐ Strongly opposed

☐ Fairly supportive

☐ Don't know

☐ Neutral – don't mind

☐ Opposed

16. Please use the box below to write in any further comments you have on the potential for the heating and hot water supply to your home to be provided via a heat network in the future.

Section 6: Information about you

This section asks for some information about you, including health, ethnicity, religion and sexual orientation, for research purposes. As with all the questions, this will be kept completely confidential. It will not be used to identify you as an individual.

I agree to provide information about my health, ethnicity, religion and sexual orientation for research purposes ☐

By ticking the checkbox you agree that you are willing to take part in the survey and provide information about your health, ethnicity, religion and sexual orientation as above for research purposes. Please note you do not have to answer the below questions to be eligible for the prize draw.

17. How many adults are in your household? *Please answer in numerical format, e.g. 2.*

18. How many children (under 18) are in your household? *Please answer in numerical format, e.g. 2.*

19. What is your household income?

☐ Under £15,999 per year

☐ £31,000-£60,000 per year

☐ £16,000-£30,999 per year

☐ Over £60,000 per year

☐ Prefer not to say

Non-domestic <100MWH (not mandatory)

20. What is your age? (please write in)

☐ Prefer not to say

21. Do you have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?

☐ Yes

☐ No

☐ Prefer not to say

22. Does your condition or illness/do any of your conditions or illnesses reduce your ability to carry out day-to-day activities?

☐ Yes, a lot

☐ No

☐ Yes, a little

☐ Prefer not to say

23. Choose one option that best describes your ethnic group or background?

White

☐ English/Welsh/Scottish/Northern Irish/British

☐ Irish

☐ Gypsy or Irish Traveller

☐ Any other White background, please describe

Mixed/Multiple ethnic groups

☐ White and Black Caribbean

☐ White and Black African

☐ White and Asian

☐ Any other Mixed/Multiple ethnic background, please describe

Asian/Asian British

☐ Indian

☐ Pakistani

☐ Bangladeshi

☐ Chinese

☐ Any other Asian background, please describe

Black/African/Caribbean/Black British

☐ African

☐ Caribbean

☐ Any other Black/African/Caribbean background, please describe

Other ethnic group

☐ Arab

☐ Any other ethnic group, please describe

☐ Prefer not to say

24. What is your religion?

☐ No religion

☐ Christian (including Church of England, Catholic, Protestant and all other Christian denominations)

☐ Buddhist

☐ Hindu

☐ Jewish

☐ Muslim

☐ Sikh

☐ Any other religion, please describe

Non-domestic <100MWH (not mandatory)

☐ Prefer not to say

25. What is your sex?

☐ Female

☐ Non-binary

☐ Male

☐ Prefer not to say

26. Is the gender you identify with the same as your sex registered at birth?

☐ Yes

☐ No, enter gender identity

☐ Prefer not to say

27. Which of the following options best describes how you think of yourself?

☐ Heterosexual or Straight

☐ Gay or Lesbian

☐ Bisexual

☐ Other

☐ Prefer not to say

Thank you for taking the time to compete this survey.

Please return it using the FREEPOST envelope supplied, as soon as possible and by 15 September at the latest.

There is no need to use a stamp. If you cannot find, or did not receive, the pre-addressed envelope, please send to: Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1 9WB

Section 7: Prize draw

28. Finally, would you like to be entered into a free prize draw to win one of three cash prizes?

The draw will be administered by Qa Research. To enter, you must give your consent and provide your name and contact details so Qa can contact you if you win, to arrange payment/delivery of the prize. Your contact details will not be used for any other purpose and will be securely stored by Qa for 12 months after completion of the research. Winners have the right to remain anonymous.

(Please tick one box only)

☐ Yes I consent to being entered into the draw, please go to Question 31

☐ No I would not like to be entered. Thank you, please return the questionnaire.

29. If you answered 'yes' to Question xx, please provide the following information:

My name is:

.....

Non-domestic <100MWH (not mandatory)

My telephone number is:

.....

My email address is:

.....

Terms and Conditions of prize draw:

1)The closing date is 15th September 2021 2) Late entries will not be accepted. 3) In the event that the survey closing date is extended due to a poor response rate, the closing date for the prize draw will be extended to the end of September. 4) There is one prize of £500 and two further prizes of £250. 5)One entry per person. 6)Entries on official questionnaire only 7)Entries from a similar survey will also be included in this prize draw. 8)The winners will be drawn at random within one week of the closing date and notified by the contact details provided. 9)Qa will attempt to contact winners by phone three times and if on record, by email two times. If contact is not made within seven working days, Qa reserves the right to draw a new winner at random. 9)Winners will receive their prize within 6 weeks of the draw being held. 10)The decision of Qa Research is final and no correspondence will be entered into.

Thank you for taking the time to compete this survey. Please return by Wednesday 15th September in the FREEPOST envelope provided, there is no need to use a stamp. If your envelope is missing please send to:

Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1
9WB

Non-domestic <100MWH (not mandatory)

Survey 3 – Private non-domestic buildings (<100MWh)

Thank you for your interest in this survey about heat network zones.

This survey is part of a research project being carried out by the Centre for Sustainable Energy (CSE) with Qa research, on behalf of the Department for Business, Energy and Industrial Strategy. All completed questionnaires will go directly to Qa research. Qa research will share the full set of responses with CSE. Your answers will be kept anonymous by Qa research and CSE. For more information about the research, please see the attached information sheet.

The research will be carried out according to the Market Research Society's Code of Conduct. Taking part is voluntary. It should take between X and Y minutes to complete.

Please answer the questions by putting an X in the boxes. Only write in answers when the survey asks you to, and make sure you write clearly. Any guidance for answering specific questions is included in *italics*. Any useful background information is in **bold**. Once you have completed the survey, just put it in the envelope provided to send it back.

All the information you give will be kept completely confidential and reported anonymously. For further details about how we will use and store your data, please see the attached privacy notice.

Complete and return your survey as soon as possible, but no later than **15 September 2021**.

Save time – do it online! You can also complete the survey online, by going to:

<https://surveys.garesearch.co.uk/xxxxxxx> and enter <<password>> when prompted to do so at the start of the survey. This will enable us to make sure that each household only completes one survey and so Qa can locate your data if you wish to withdraw permission to taking part and/or GDPR consent to taking part.

You will be asked to enter your password, which is on the letter included with this survey.

£1,000 up for grabs!

Everyone who completes this survey will be given the opportunity to be entered into a prize draw, with a pot of £1,000 and three chances to win! 1st prize = £500, 2nd prize = £250, 3rd prize = £250. The draw will be administered by Qa Research. Full terms and conditions are available on the back page of this questionnaire.

Thank you!

Non-domestic <100MWH (not mandatory)

Section 1: Your building and existing heating set-up

1. Position of person completing survey: *Please choose one answer only.*

- | | |
|--|--|
| <input type="checkbox"/> Business owner or manager | <input type="checkbox"/> Facility manager |
| <input type="checkbox"/> Commercial property manager | <input type="checkbox"/> Other (please write in) |

2. Are you responsible for decisions regarding energy and heating at this address and able to answer questions about this? – Yes / No If no please pass on to someone who is able to.

3. Building ownership: Does you or your company? : *Please choose one answer only.*

- | | |
|--|---|
| <input type="checkbox"/> Own and occupy the building | <input type="checkbox"/> Occupy as tenant |
| <input type="checkbox"/> Own the building but it is occupied by other businesses(es) | <input type="checkbox"/> Manage on behalf of non-occupying building owner |
| <input type="checkbox"/> Occupy as leaseholder | <input type="checkbox"/> Manage on behalf of occupying building |
| | <input type="checkbox"/> Other (please write in) |

4. What is the building's main use?

- | | |
|---|--|
| <input type="checkbox"/> B2 – General industrial (e.g. factory) | <input type="checkbox"/> E – Commercial, business and service (e.g. office, shops, day nursery, gym, takeaway) |
| <input type="checkbox"/> B8 – Storage or distribution | |
| <input type="checkbox"/> C1 – Hotel, guest house, motel | |
| <input type="checkbox"/> F – Local community or learning institutions (e.g. indoor swimming pool, museum) | <input type="checkbox"/> Something else (write in - e.g. cinema, bingo hall) |

5. How long have you occupied your current building?

- | | |
|---|--|
| <input type="checkbox"/> Less than one year | <input type="checkbox"/> 1-2 years |
| <input type="checkbox"/> 2-5 years | <input type="checkbox"/> 5 years or more |

6. What is the building's EPC rating?

Non-domestic <100MWH (not mandatory)

- | | |
|---|--|
| <input type="checkbox"/> A (the most efficient) | <input type="checkbox"/> E |
| <input type="checkbox"/> B | <input type="checkbox"/> F |
| <input type="checkbox"/> C | <input type="checkbox"/> G (the least efficient) |
| <input type="checkbox"/> D | <input type="checkbox"/> Don't know |

7. What fuel or heat source is used to heat this building? *Please choose all answers that apply.*

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Gas | <input type="checkbox"/> Combined heat and power (CHP) |
| <input type="checkbox"/> Electricity | <input type="checkbox"/> Solar thermal |
| <input type="checkbox"/> Heat network | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> Heat pump | |
| <input type="checkbox"/> Oil | |

8. How much attention does your business pay to the cost of heating your building?

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> A lot | <input type="checkbox"/> None at all |
| <input type="checkbox"/> A fair amount | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Not very much | |

How important is it to your business that you are able to switch heating or hot water suppliers? *Please choose one answer only.*

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Not at all important |
| <input type="checkbox"/> Moderately important | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Slightly important | <input type="checkbox"/> Prefer not to say |

9. Has your business ever switched or considered switching energy supplier for this building?

- | | |
|--|--|
| <input type="checkbox"/> Switched supplier in the last year | <input type="checkbox"/> Never considered switching |
| <input type="checkbox"/> Switched supplier more than a year ago | <input type="checkbox"/> Unable to switch / not our choice |
| <input type="checkbox"/> Considered switching, but have not switched | <input type="checkbox"/> Unsure |

10. Now thinking about your heating system. Which of these statements comes closest to the view of your business?

- | | |
|---|---|
| <input type="checkbox"/> We have replaced my heating system in the last 3 years and would not be likely to replace until more time has passed | <input type="checkbox"/> I will only replace my heating system when my current one breaks down or starts to deteriorate |
|---|---|

Non-domestic <100MWH (not mandatory)

☐ I would consider replacing my heating system while it is still working

☐ Not my decision to make because my business is a commercial tenant
☐ Don't know

Section 2: Climate change and renewable heat

11. How concerned, if at all, is your business about climate change, sometimes referred to as 'global warming'?

☐ Very concerned
☐ Fairly concerned
☐ Not very concerned

☐ Not at all concerned
☐ Don't know

12. Does your organisation have any formal plans or commitments for reducing emissions or environmental impacts, such as a low-carbon action plan? Yes/No/Don't know.

13. Which of the following types of commercial heating systems had you personally heard of before today? *Please tick all that apply.*

☐ Biomass
☐ Deep geothermal
☐ Heat pumps (ground, air or water source)
☐ Heat network (district heating or communal heating)

☐ Solar thermal
☐ Combined heat and power (CHP) systems
☐ None of these
☐ Don't know
☐

Section 3: Information needs

14. What would you want to know more about to feel confident that connecting to a heat network is the right choice for your building? *Please select all that apply*

☐ It is the most suitable low carbon low cost heating

option compared to alternatives

Non-domestic <100MWH (not mandatory)

- | | |
|---|---|
| <input type="checkbox"/> Timeframe for connecting | <input type="checkbox"/> Contractual protections for commercial users of heat service |
| <input type="checkbox"/> The costs are easy to understand | <input type="checkbox"/> Heating system can also be used to cool building when needed |
| <input type="checkbox"/> No or minimal interruptions to building heat supply | <input type="checkbox"/> Other (please write in) |
| <input type="checkbox"/> Maintenance and repairs arrangements | |
| <input type="checkbox"/> Metering and billing arrangements for building occupants | |

15. Which of the following would you most trust to provide information, advice or recommendations about connecting to a heat network? *Please select up to three.*

- | | |
|--|---|
| <input type="checkbox"/> National government (e.g. BEIS, Ofgem) | <input type="checkbox"/> A heat network provider (e.g. an Energy Services Company) |
| <input type="checkbox"/> Consultants (e.g. The Carbon Trust) | <input type="checkbox"/> A tradesperson or professional (e.g. building maintenance, plumber, builder, or architect) |
| <input type="checkbox"/> Local council | <input type="checkbox"/> Friends and family |
| <input type="checkbox"/> Property manager | <input type="checkbox"/> None of these |
| <input type="checkbox"/> An industry body (e.g. The Association of Decentralised Energy) | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> An energy supplier | <input type="checkbox"/> Other (please state) |

Section 4: Benefits of connecting to a heat network within a designated heat network zone

There are a variety of direct benefits for you and wider benefits from creating heat networks at scale in heat network zones.

16. Please rate how important these direct benefits of heat networks are to you.

	Importance				
	Very important	Fairly important	Not important	Not at all important	Don't know
Lower heating bills					
Increased building comfort					

Non-domestic <100MWH (not mandatory)

Increased productivity					
Cost-effective way to reduce carbon emissions from heating					
Increase the asset value of the building					
Improve the relationship between building owners and the occupants					
Contribute to business net zero targets					

17. Please rate how important these wider benefits of heat networks are to you.

	Very important	Fairly important	Not important	Not at all important	Don't know
Tackle climate change					
Contribute to Government net zero targets					
Create new green jobs					
Efficient way to use waste heat					
Enable use and distribution of cheap sources of low carbon heat					
Catalyst for local growth					

Section 5: Concerns about heat networks

As a relatively unfamiliar form of heat supply in this country, it is understandable that building owners may have some concerns too.

Non-domestic <100MWH (not mandatory)

18. Please rate how important these possible areas of concern are to you.

	Very important	Fairly important	Not important	Not at all important	Don't know
Cost-related concerns (see next section of survey)					
Regulation of heat networks					
Disruption associated with connecting to a heat network (lost productivity)					
Not being able to switch suppliers					
Performance and reliability of heat network					
Availability of a suitable low carbon heat supply					
Suitability for specific building (including broader retrofit concerns)					

19. Are there any concerns you have that are not listed above? Please write in (optional)

Section 6: Paying for the costs of connecting to a heat network

The creation of heat networks involves several different types of costs. These are:

- Install costs – the cost of the equipment that heats the building & the installation costs
- Running costs – the cost of running the heating system in any one year (fuel, heat, metering & billing, maintenance)
- Enabling costs – additional costs to enable the heating equipment to function within a building e.g. fabric costs

Non-domestic <100MWH (not mandatory)

- Replacement costs – costs borne over the natural replacement cycle of the system
- Energy system costs – wider energy system costs e.g. upgrades to the local electricity network, connection cost

20. Who should contribute or pay in full for these different types of costs? (Please enter an x in all that apply)

	Taxpayer	Building owner	Leaseholder	Tenant	Don't know
Install costs					
Running costs					
Enabling costs					
Replacement costs					
Energy system costs					

21. How important is it for you to know about the share of the upfront installation, enabling and connection costs you would be expected to pay as the building owner? *Please choose one answer only.*

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Not important at all |
| <input type="checkbox"/> Moderately important | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Fairly important | |

22. Please comment on what would help with financial planning considerations (e.g. having a clear timeline for different types of buildings to connect)? [Open text box]

Section 7: Overall views on heat network zones and willingness to connect

The local authority may have overall responsibility for delivery of heat network zones in their area. However, the design, construction, operation and maintenance of heat networks may be delivered by the private sector or via public-private partnerships.

As an eligible building you are likely to be offered the opportunity to connect to a heat network in the future. This would be a voluntary choice of the building owner.

23. How far do you agree with the statement: I trust my local authority to oversee/deliver heat network zones in this area?

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree

- ☐ Strongly disagree
- ☐ Don't know

24. How likely do you think you will be to join a heat network like this if you were given the opportunity? *When answering, please assume you would pay no more than you do at present and that the heat supply would be from renewable (low or zero carbon) sources.*

- ☐ Very likely
- ☐ Fairly likely
- ☐ Not very likely

- ☐ Already joined one
- ☐ Neither likely nor unlikely
- ☐ Don't know

25. If you are not willing to connect, what would be your preferred alternative form of low carbon heating for your building in the future?

- ☐ Heat pump (e.g. air, ground or water source)
- ☐ Hybrid heat pump

- ☐ Other electric (e.g. storage heaters)
- ☐ Other (please state)
- ☐ Don't know

26. If you are **not** willing to connect, what is the main reason for your answer?

- ☐ Prefer individual building based heating solution
- ☐ Unwilling to commit to long term contract
- ☐ Desire to avoid a monopoly supplier of heat

- ☐ Already connected to a heat network
- ☐ Building does not use heat
- ☐ Other reason (please state)
- ☐ Don't know

27. What, if anything would strengthen your support for heat networks?

Non-domestic <100MWH (not mandatory)

☐ More information about the suitability of a heat network compared to other alternatives

☐ Assurance that the heat network will use low or zero carbon sources of heat
☐ Financial or other incentives
☐ Anything else (please state)
☐ Don't know

Section 8: Prize draw

28. Finally, would you like to be entered into a free prize draw to win one of three cash prizes?

The draw will be administered by Qa Research. To enter, you must give your consent and provide your name and contact details so Qa can contact you if you win, to arrange payment/delivery of the prize. Your contact details will not be used for any other purpose and will be securely stored by Qa for 12 months after completion of the research. Winners have the right to remain anonymous.

(Please tick one box only)

Non-domestic <100MWH (not mandatory)

- ☐ Yes I consent to being entered into the draw
- ☐ No I would not like to be entered. Thank you, please return the questionnaire.

29. If you answered 'yes', please provide the following information:

My name is:

.....

My telephone number is:

.....

My email address is:

.....

Terms and Conditions of prize draw:

1) The closing date is 15th September 2021 2) Late entries will not be accepted. 3) In the event that the survey closing date is extended due to a poor response rate, the closing date for the prize draw will be extended to the end of September. 4) There is one prize of £500 and two further prizes of £250. 5) One entry per person. 6) Entries on official questionnaire only 7) Entries from a similar survey will also be included in this prize draw. 8) The winners will be drawn at random within one week of the closing date and notified by the contact details provided. 9) Qa will attempt to contact winners by phone three times and if on record, by email two times. If contact is not made within seven working days, Qa reserves the right to draw a new winner at random. 9) Winners will receive their prize within 6 weeks of the draw being held. 10) The decision of Qa Research is final and no correspondence will be entered into.

Thank you for taking the time to complete this survey. Please return by Wednesday 15th September in the FREEPOST envelope provided, there is no need to use a stamp. If your envelope is missing please send to:

Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1
9WB

Non-domestic <100MWH (not mandatory)

Survey 4 – Owner-occupier private residents

Thank you for your interest in this survey about heat network zones.

This survey is part of a research project being carried out by the Centre for Sustainable Energy (CSE) with Qa research, on behalf of the Department for Business, Energy and Industrial Strategy. All completed questionnaires will go directly to Qa research. Qa research will share the full set of responses with CSE. Your answers will be kept anonymous by Qa research and CSE. For more information about the research, please see the attached information sheet.

The research will be carried out according to the Market Research Society's Code of Conduct. Taking part is voluntary. It should take between X and Y minutes to complete.

Please answer the questions by putting an X in the boxes. Only write in answers when the survey asks you to, and make sure you write clearly. Any guidance for answering specific questions is included in *italics*. Any useful background information is in **bold**. Once you have completed the survey, just put it in the envelope provided to send it back.

All the information you give will be kept completely confidential and reported anonymously. For further details about how we will use and store your data, please see the attached privacy notice.

Complete and return your survey as soon as possible, but no later than **15 September 2021**.

Save time – do it online! You can also complete the survey online, by going to:

<https://surveys.qaresearch.co.uk/xxxxxxx> and enter <<password>> when prompted to do so at the start of the survey. This will enable us to make sure that each household only completes one survey and so Qa can locate your data if you wish to withdraw permission to taking part and/or GDPR consent to taking part.

You will be asked to enter your password, which is on the letter included with this survey.

£1,000 up for grabs!

Everyone who fully completes this survey will be given the opportunity to be entered into a prize draw, with a pot of £1,000 and three chances to win! 1st prize = £500, 2nd prize = £250, 3rd prize = £250. The draw will be administered by Qa Research. Full terms and conditions are available on the back page of this questionnaire.

Non-domestic <100MWH (not mandatory)

Thank you!

Consent

By completing this survey and returning it I give my consent to taking part and for my answers to be used for research purposes.

Section 1: About your home energy use

1. Do you (or your household) own or rent the home that you live in? *Please choose one answer only.*

- | | |
|--|--|
| <input type="checkbox"/> Own home on a freehold | <input type="checkbox"/> Rent from private landlord |
| <input type="checkbox"/> Own home on a leasehold | |
| <input type="checkbox"/> Part own and part rent (shared ownership) | <input type="checkbox"/> Live rent-free in another person's property |
| <input type="checkbox"/> Rent from council/housing association | <input type="checkbox"/> Other (please specify) |

2. Through which of the following ways do you heat your home? *Please choose all answers that apply.*

- | | |
|---|--|
| <input type="checkbox"/> Gas central heating | <input type="checkbox"/> Electric portable heaters |
| <input type="checkbox"/> Other boiler central heating (e.g. oil or LPG) | <input type="checkbox"/> Gas fire |
| <input type="checkbox"/> Electric radiators | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> Storage heating | |

3. Thinking about your gas and electricity supplier have you switched for either or both of these?

- | | |
|---|--|
| <input type="checkbox"/> I switched supplier in the last year | <input type="checkbox"/> I considered switching, but I have not switched |
| <input type="checkbox"/> I switched supplier more than a year ago | <input type="checkbox"/> I have never considered switching |
| | <input type="checkbox"/> Unsure |

4. How much do you agree or disagree with the following statement: 'I want to be able to switch my heating and hot water supplier'. *Please choose one answer only.*

- | | |
|---|--|
| <input type="checkbox"/> Strongly agree | <input type="checkbox"/> Tend to disagree |
| <input type="checkbox"/> Tend to agree | <input type="checkbox"/> Strongly disagree |
| <input type="checkbox"/> Neither agree nor disagree | <input type="checkbox"/> Prefer not to say |

5. Over the last three months how worried, if at all, have you been about paying your energy bills?

- | | |
|---|---|
| <input type="checkbox"/> Very worried | <input type="checkbox"/> Fairly worried |
| <input type="checkbox"/> Not very worried | <input type="checkbox"/> Not at all worried |

6. Now thinking about your heating system. Which of these statements comes closest to your view?

Non-domestic <100MWH (not mandatory)

- | | |
|---|---|
| <input type="checkbox"/> I will only replace my heating system when my current one breaks down or starts to deteriorate | <input type="checkbox"/> I would consider replacing my heating system while it is still working |
| | <input type="checkbox"/> Not my decision to make because I'm renting the property |
| | <input type="checkbox"/> Don't know |

7. If you were to consider replacing your heating system while it is still working, which of these would be the more important consideration in changing your heating system?

- | | |
|--|--|
| <input type="checkbox"/> Saving money on what you spend on bills at present | <input type="checkbox"/> Having a more reliable heating system than my current one |
| <input type="checkbox"/> Switching to a more environmentally friendly heating system | <input type="checkbox"/> Other reason (please write in) |
| | <input type="checkbox"/> None of these |
| | <input type="checkbox"/> Don't know |

Section 2: Climate change and heat networks

8. How concerned, if at all, are you about climate change, sometimes referred to as 'global warming'?

- | | |
|---|---|
| <input type="checkbox"/> Very concerned | <input type="checkbox"/> Not at all concerned |
| <input type="checkbox"/> Fairly concerned | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Not very concerned | |

9. Which of the following types of household heating systems have you heard of before today? *Please tick all that apply.*

- | | |
|---|---|
| <input type="checkbox"/> Electric storage heaters | <input type="checkbox"/> Heat networks (also known as district heating or communal heating) |
| <input type="checkbox"/> Ground source heat pumps | <input type="checkbox"/> Hydrogen heating |
| <input type="checkbox"/> Air source heat pumps | <input type="checkbox"/> None of these |
| | <input type="checkbox"/> Don't know |

10. Have you ever lived in a home with a heat network (also known as district heating)?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

Non-domestic <100MWH (not mandatory)

☐ Don't know

11. From what you knew, or had heard about heat networks before today, what is your overall view about them? *Please only answer if you have heard of a heat network before today.*

- ☐ Very positive
- ☐ Fairly positive
- ☐ Neither positive or negative

- ☐ Fairly negative
- ☐ Very negative
- ☐ Don't know

Section 3: Information needs

It is possible that in the future, your home may be considered to be part of a heat network zone and you may be invited to connect to a heat network. This would only be the case where connecting to a heat network offers the cheapest suitable form of low carbon heating for residents.

12. What would you want to know more about to feel confident that connecting to a heat network is the right choice for your home? *Please select all that apply.*

- ☐ Yearly heating costs are the same or less than for my current heating
- ☐ It is a safe way to heat my home
- ☐ The costs are easy to understand
- ☐ The costs are fairly shared
- ☐ Service charges are reasonable
- ☐ Heating is metered so I know I am only paying for the heating I have used

- ☐ Provides an uninterrupted heat supply
- ☐ Repairs are done quickly
- ☐ It is easy for me to control the heating in my own home
- ☐ Shared parts of the building (e.g. stairs, hallway) do not overheat or get too cold
- ☐ There is good consumer protection
- ☐ There is a clear complaints process
- ☐ There is additional support for vulnerable consumers

13. Which of the following would you most trust to provide information and advice about what connecting to a heat network would mean for you? *Please select up to three.*

- ☐ National government (e.g. BEIS, Ofgem)
- ☐ A government-backed advice service (e.g. The Simple Energy Advice Service)
- ☐ Local council

- ☐ A non-government organisation (e.g. The Energy Savings Trust or Citizens Advice)
- ☐ An energy supplier
- ☐ A heat network provider (EON, SSE, Switch 2, etc.)

Non-domestic <100MWH (not mandatory)

- | | |
|--|---|
| <input type="checkbox"/> A tradesperson or professional
(e.g. plumber, builder, or architect) | <input type="checkbox"/> None of these |
| <input type="checkbox"/> Friends and family | <input type="checkbox"/> Don't know |
| | <input type="checkbox"/> Other (please state) |

14. Which of the following ways would you prefer to use to learn more about connecting to heat network? *Please select all that apply.*

- | | |
|---|---|
| <input type="checkbox"/> Internet, websites, or webinar | <input type="checkbox"/> Face to face |
| <input type="checkbox"/> Video (e.g. YouTube) | <input type="checkbox"/> Group event |
| <input type="checkbox"/> Social media | <input type="checkbox"/> Telephone advice |
| <input type="checkbox"/> Podcast | <input type="checkbox"/> Combination of these |
| <input type="checkbox"/> Direct mail | <input type="checkbox"/> Don't know |

Section 4: Your views on connecting to a heat network

You may find it helpful to read the information sheet before answering these questions. You may be offered the opportunity to connect to a heat network in the future. This would be your voluntary choice as the building owner.

15. Please rate how important these identified wider benefits of heat networks are to you.

	Very important	Fairly important	Not important	Not at all important	Don't know
Heat networks are an important way to decarbonise heat supply to homes and other buildings					
Heat network zones will only use low or zero carbon sources of heat					
Heat networks contribute lower heating costs and so contribute to reducing fuel poverty					

Non-domestic <100MWH (not mandatory)

Heating bills from heat networks are, on average the same or cheaper than gas heating systems					
Heat network zones construction, operation and maintenance will create new local 'green' jobs and contribute to local economic growth					
Heat networks provide a safe and reliable heat supply					
(Optional) Any other benefits, <i>please write in below and rate:</i>					

16. Please rate how important these possible areas of concern are to you.

	Very important	Fairly important	Not important	Not at all important	Don't know
Disruption within my home associated with connecting to a heat network					

Non-domestic <100MWH (not mandatory)

Disruption within my building or in the local area while the heat network is installed					
Not being able to switch suppliers					

17. Are there any concerns you have that are not listed above? Please write in (optional)

18. Please select the **three most important** considerations that would encourage you to connect to a heat network. (*Tick three boxes only*)

- ☐ Robust information that is the lowest cost low carbon heat option for your home
- ☐ Clear upfront information about the cost to connect your home (see section 5)
- ☐ Assurances that it will not affect your ability to get home insurance cover
- ☐ Assurances that it will not affect the saleability or value of your home
- ☐ Knowing that it will result in lower heating costs than your current heating costs
- ☐ Other (please write in)

19. How likely do you think you will be to join a heat network like this if you were given the opportunity? *When answering, please assume you would pay no more than you do at present and that the heat supply would be from renewable (low or zero carbon) sources.*

- ☐ Very likely
- ☐ Fairly likely

- ☐ Not very likely
- ☐ Not at all likely

Section 5: Paying for the costs of connecting to a heat network

The creation of heat networks involves several different types of costs. These are:

- Install costs – the cost of the equipment that heats the building & the installation costs
- Running costs – the cost of running the heating system in any one year (fuel, heat, metering & billing, maintenance)

Non-domestic <100MWH (not mandatory)

- Enabling costs – additional costs to enable the heating equipment to function within a building e.g. fabric costs
- Replacement costs – costs borne over the natural replacement cycle of the system
- Energy system costs – wider energy system costs e.g. upgrades to the local electricity network, connection cost

20. Which of the different types of cost, if any, would you expect to have to contribute to paying as the home-owner, leaseholder or tenant (whichever applies to you)? *Please select all that apply.*

- ☐ Install costs
☐ Running costs
☐ Enabling costs
☐ Replacement costs

- ☐ Energy system costs
☐ No costs
☐ Don't know

21. If you decided to connect to a heat network in the future, how important would the following billing and customer service considerations for you? *Please choose one answer only for each row.*

	Importance				
	Very	Fairly	Not very	Not at all	Don't know
Your supplier would provide an estimated annual cost for your bills					
A choice of payment and billing options would be available (e.g. pre-pay option, set up a direct debit, pay in a shop, pay via a web app)					
A choice of billing frequencies would be available (e.g. weekly, monthly or quarterly)					
There would be a clear complaints process in case of any problems					

Non-domestic <100MWH (not mandatory)

You could speak to your supplier over the phone when things go wrong					
--	--	--	--	--	--

22. Please use the box below to write in any further comments you have on the potential for the heating and hot water supply to your home to be provided via a heat network in the future.

--

Section 6: Information about you

This section asks for some information about you, including health, ethnicity, religion and sexual orientation, for research purposes. As with all the questions, this will be kept completely confidential. It will not be used to identify you as an individual.

I agree to provide information about my health, ethnicity, religion and sexual orientation for research purposes ☐

By ticking the checkbox you agree that you are willing to take part in the survey and provide information about your health, ethnicity, religion and sexual orientation as above for research purposes

23. How many adults are in your household? *Please answer in numerical format, e.g. 2.*

24. How many children (under 18) are in your household? *Please answer in numerical format, e.g. 2.*

25. What is your household income?

☐ Under £15,999 per year

☐ £31,000-£60,000 per year

☐ £16,000-£30,999 per year

☐ Over £60,000 per year

☐ Prefer not to say

26. What is your age? (please write in)

☐ Prefer not to say

Non-domestic <100MWH (not mandatory)

Thank you for your time and support in completing this survey. Please return it in the FREEPOST envelope supplied,

Thank you for taking the time to complete this survey.

Please return it using the FREEPOST envelope supplied, as soon as possible. There is no need to use a stamp. If you cannot find, or did not receive, the pre-addressed envelope, please send to: Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1 9WB

Section 7: Prize draw

27. Finally, would you like to be entered into a free prize draw to win one of three cash prizes?

The draw will be administered by Qa Research. To enter, you must give your consent and provide your name and contact details so Qa can contact you if you win, to arrange payment/delivery of the prize. Your contact details will not be used for any other purpose and will be securely stored by Qa for 12 months after completion of the research. Winners have the right to remain anonymous.

(Please tick one box only)

-
- ☐ Yes I consent to being entered into the draw, please go to Question 31
☐ No I would not like to be entered. Thank you, please return the questionnaire.

28. If you answered 'yes' to Question 30, please provide the following information:

My name is:

My telephone number is:

My email address is:

Terms and Conditions of prize draw:

1) The closing date is 15th September 2021 2) Late entries will not be accepted. 3) In the event that the survey closing date is extended due to a poor response rate, the closing date for the prize draw will be extended to the end of September. 4) There is one prize of £500 and two further prizes of £250. 5) One entry per person. 6) Entries on official questionnaire only 7) Entries from a similar survey will also be included in this prize draw. 8) The winners will be drawn at random within one week of the closing date and notified by the contact details provided. 9) Qa will attempt to contact winners by phone three times and if on record, by email two times. If contact is not made within seven working days, Qa reserves the right to draw a new winner at random. 9) Winners will receive their prize within 6 weeks of the draw being held. 10) The decision of Qa Research is final and no correspondence will be entered into.

Thank you for taking the time to complete this survey. Please return by Wednesday 15th September in the FREEPOST envelope provided, there is no need to use a stamp. If your envelope is missing please send to:

Freepost RTRH-GSXR-XZXX, Qa Research, Merchant House, 11a Piccadilly, York, YO1 9WB

