

Heat networks - thermal energy target 2035: Analysis of responses to the consultation

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1. Introduction

Background

The Heat Networks (Scotland) Act 2021 ("the 2021 Act") sets targets for the combined supply of thermal energy by heat networks, requiring this to reach 2.6 Terawatt hours (TWh) of output by 2027, and 6 TWh of output by 2030. These figures equate to approximately 3% and 8% of current non-electrical heat demand respectively.

Section 92(2) of the 2021 Act states that Scottish Ministers must, by 1 October 2023, lay a draft of a Scottish statutory instrument containing regulations specifying a 2035 target relating to the combined supply of thermal energy by heat networks in Scotland.

Consulting on the 2035 target was one of the actions set out in the Heat Networks Delivery Plan, which sits in the context of wider heat decarbonisation policy, in particular, the Heat in Buildings Strategy.

The consultation

The consultation on the 2035 target for the combined supply of thermal energy by heat networks opened on 16 December 2022 and closed on 11 March 2023. It can be found at:

[2035 target for the amount of heat to be supplied by heat networks - Scottish Government - Citizen Space \(consult.gov.scot\)](https://consult.gov.scot/2035-target-for-the-amount-of-heat-to-be-supplied-by-heat-networks-scottish-government-citizen-space)

Views were invited on the following three open questions relating to the target:

- What is your opinion of the proposal to set the 2035 target for the combined supply of thermal energy supplied from heat networks to “at least 7 TWh” of output?
- Are there particular considerations in setting this target that may help to reduce the depth and/or rate of fuel poverty?

Are there any other issues that you would like to highlight in relation to the 2035 heat network target?

The evidence gathered from this consultation will inform the legislation we will introduce to the Scottish Parliament for its approval.

Number and profile of respondents

In total, 28 valid responses to the consultation were received. 26 responses were received via the Scottish Government’s consultation hub (Citizen Space) and two were received via direct correspondence.

A breakdown of the number of responses received by respondent type is shown in the table below and a full list of organisations that responded to this consultation is provided in Annex A.

Respondent type	Total
Community group	2
Consumer Advice, Advocacy or Campaigning	2
Energy Services Company	3
Individual	5
Local Authority	10
Professional or Representative Body	5
All respondents	28

Analysis and reporting

The analyst team developed a qualitative coding framework based on key themes identified in responses to each question. This framework facilitated thematic analysis of the consultation responses.

The results of this analysis are presented in the remainder of this report. Chapter 2 summarises respondents' views on the proposed target (consultation questions 1 and 3). Chapter 3 summarises the issues raised by respondents' with respect to fuel poverty (consultation question 2).

Where appropriate, quotes from individuals and organisations have been included in this report, to illustrate key points and to highlight useful examples, insights, and contextual information. Specific organisations are named only if permission to do so was granted. Full responses to the consultation, where permission for publication was granted, can be found on the Scottish Government's website.

Limitations of the analysis

- Anyone may express their views in a public consultation. Individuals and organisations with an interest in the consultation topic are more likely to respond than those without. This self-selection means the respondents' views do not necessarily represent the views of the population.
- There are other instances where respondents make factual claims, but do not give evidence to support their statements. Here, we have used language to highlight that the comments are the belief or perception of the respondent.

2. Views on the proposed target

Support for setting a 2035 target

Overall, most respondents indicated that they supported the Scottish Government setting a 2035 target for the combined supply of thermal energy supplied from heat networks, viewing targets as an important component of creating the conditions required to deliver heat networks:

"Government targets are important for tracking success of policies and regulations and for signalling to industry that there will be opportunities in which to invest. This is particularly important for new and/or growing industries, such as heat networks." (Scottish Power – Energy Services Company)

One Local Authority did caution that setting a target could lead to heat network connections that aren't suitable, where another form of heat would be more appropriate. It was suggested that this could result in bad publicity or reputational damage, as well as potential affordability issues, with negative implications for fuel poverty (discussed further below).

Level of ambition

There were mixed views on whether setting the target at "at least 7 TWh of output" is sufficiently ambitious.

Several respondents stated that they viewed the proposed 2035 target as a "sensible" and "credible" approach, in line with current advice and evidence on existing usage and potential demand:

"The proposed target appears to strike a good balance between ambition and feasibility and is consistent with the advice received from the CCC [Climate Change Committee]". (Consumer Advice, Advocacy or Campaigning Organisation)

For some respondents, this is seen as striking the right balance between being ambitious enough to act as "a strong facilitator of decarbonising the built environment", whilst remaining attainable (Scottish Property Federation – Professional/Representative Body).

For several other respondents, however, the target of "at least 7 TWh of output" is too low and lacks sufficient ambition. Scottish Power (Energy Services Company) noted that the level of the proposed 2035 target is not in line with the trajectory set by the 2027 and 2030 targets, and suggested that a more ambitious target can be justified. Dumfries and Galloway Council cautioned that the target proposed by the Scottish Government "fails to provide enough stimulus to starting the drive to creating more sustainable heat networks across Scotland".

Two respondents provided specific recommendations for an alternative target:

- Scottish Government should set a 2035 heat network target of between 8 and 9 TWh. (Scottish Power – Energy Services Company)

- The target should be set at least at 12.5 TWh in order to maximise the potential of provision of functional heat networks. (Broom, Kirkhill and Mearns Kirk Community Council)

A small number of respondents indicated that the target was too ambitious. One individual argued that, given the current rate of increase in heat network output (2018 – 2022), the future projected rate is simply unrealistic:

“In the 4 years from 2018 to 2022 there was an increase of 0.22 TWh in output which if maintained over the next 12 years to 2035 would result in a total output of 4 TWh. To meet the target output would need to increase by 0.4 TWh per annum a 7 fold (sic) increase on current rates. The 7 TWh is on this basis unrealistic.”

Another individual was critical of the target due to a perception that there is no strategy to meet it.

A Community Group stated that “step changes required for the interim targets are most challenging”. However, this organisation also suggested that as public awareness and acceptance of heat networks grows, so too will demand, and, therefore, the 2035 target should be met with ease.

Regional variation

Despite general support for an overall “at least 7 TWh” (equivalent to 9% current heat consumption) national target for Scotland as a whole, the majority of respondents highlighted that this should not translate as a blanket “at least 7 TWh” (equivalent to 9%) target for every area as heat networks are more viable in some places than others.

In particular, many respondents expressed the view that the opportunities for cost-effective heat networks are considerably greater in large urban areas with dense populations and large industries to provide multiple potential anchor loads, than in rural areas with dispersed populations and little or no access to appropriate anchor loads:

“The different geographies across different authority areas will have a real impact on deliverability of any target set and cognisance should be given to this – perhaps different targets for rural, urban and island areas, or a minimum target reflecting challenges in deliverability associated with rural/island areas, with expectation to increase where feasible.” (Local Authority)

It was, therefore, suggested that the expected contribution of each area to the national target should reflect the local context and the region’s ability to support viable heat networks. Several respondents (Local Authorities and a Professional/Representative Body) proposed that the geographic spread of target liability should be in line with the First National Assessment of potential heat network zones, with more responsibility to contribute to the target given to regions with denser populations.

Respondents also suggested that a phased approach should be adopted, whereby denser, more rapidly expanding areas are expected to meet targets sooner than rural regions with slower forecasts for population increase and, therefore, new-build sites.

Relative vs absolute target

Multiple Local Authorities and a Professional/Representative Body suggested that it is more appropriate to set the target as a percentage of heat demand (9%), rather than as an absolute figure for heat supplied (7TWh).

The primary reason given by respondents for this view was a concern that there may be a greater reduction in heat demand than predicted as a result of energy efficiency regulations and improvements. The consequence of this would be that 7TWh would represent more than 9% of total demand and, therefore, would be a less feasible target to achieve. It was suggested that capping the target at 9% of demand would avoid this scenario. Additionally, it was suggested by one respondent that this percentage would be an easier figure for the majority of people to understand.

Need for review following LHEES and BARs

Respondents noted the importance of ensuring that the target is reviewed once Local Heat and Energy Efficiency Strategies (LHEES) are completed and Building Assessment Reports (BARs) data and formal designation of heat network zones has been completed in line with the Heat Networks (Scotland) Act and associated regulations:

“The reliance on the data sets and information to be obtained through the LHEES programme will link the actual deliverables back to hard data [but] it will be difficult due to the tight timescales associated with the LHEES programme and the burden that it places on Local Authorities. The opportunity to review the 2035 figure as outlined within the consultation document is important, and hopefully will when the information is obtained provide a mandate for a more ambitious figure to be set.” (Dumfries and Galloway Council)

Another Local Authority went further than this, suggesting that the ongoing work on LHEES may mean that it is too early to set a target for 2035 at all at this stage. The proposal to wait to set a target for 2035 was also made by an individual who suggested that “...it would be beneficial to consult on a new 2035 target closer to 2027 as this would allow the Scottish Government to evaluate the progress to date and understand what barriers still need to be overcome”.

Building-level considerations

In addition to the need to consider the implications of population density for the viability of heat networks, respondents also highlighted the need to consider building-specific issues.

In particular, the challenge posed by historic or listed buildings in the roll-out of heat networks was identified by several respondents. It was noted that many town centres

are conservation areas with listed buildings. As a result, care will need to be taken that provision of heat networks will not negatively impact the quality of these community assets. It was proposed that this will require consultation with the Planning profession and Historic Scotland over acceptable methods of introducing Heat Networks into historic or listed buildings, and is likely to incur additional costs.

Respondents highlighted that the LHEES process should not divert away from the most appropriate building-level solutions, even where these fall within an area designated as a heat network zone. This includes considering building use, for example, the relative viability of heat networks for commercial office space compared to residential developments.

Scottish Property Federation (Professional/Representative Body) highlighted that relying on single-source heating could be a particular issue for some buildings (e.g., hospital and school buildings), and that electric batteries and smart thermal storage should be introduced alongside/as part of heat networks to "...help build resilience in buildings that have a high electrical demand." The same organisation also noted that, in the case where heat networks are run on renewable energy, it will be essential to provide backup to such systems. They stated: "There should be a contingency plan for this and investment into micro solutions will accelerate the process."

BEAMA (Professional/Representative Body) argued for a more nuanced approach to be taken in determining which homes should be deemed suitable for conversion to a heat network:

"The consultation states that all homes heated with direct electric heating should be considered suitable for conversion to a heat network. In reality there are more factors that should determine whether a home would benefit from conversion to a heat network than just whether they are heated with a direct electric system. For example, many newer electric heating systems are far more efficient and beneficial to consumers..."

Relatedly, several respondents called for more clarity on exactly what is within scope for the target, and what would 'count' as a heat network. Specific queries were raised as to whether Sheltered Housing complexes would be included, and whether sports facilities or schools with annex buildings all supported by one heat source would count.

Finally, a Local Authority noted the lack of alignment between the targets for different building tenures (e.g., social housing, private domestic buildings, and non-domestic buildings), with "each tenure having different energy standards to meet at different times". This respondent highlighted the challenge that this presents for heat networks that incorporate multiple tenures, as different buildings will not have the same incentive to connect to the network at the same point in time.

Infrastructure challenges

The most frequently cited infrastructure-related challenges relating to delivery of the target were those concerning the impact on Scotland's road and footway networks.

Specific challenges highlighted here included the physical disruption and associated increase in demand on planning services, as well as the challenge of managing public expectations related to these disruptions. A number of Local Authorities and a Professional/Representative Body gave an iteration of the following response:

“The ability of the road and footway network to absorb the additional infrastructure required by Heat Networks will also require careful planning and design. There is a clear role for the Scottish Roadworks Commissioner and the Joint Utilities/Roads Authorities groups in this work. Managing public expectations in relation to any disruption caused by the installation of any necessary infrastructure will also need to be factored in by the Scottish Government and the associated National Public Energy Agency.”

A different Professional/Representative Body also suggested that “the cost and carbon impact of this disruption” be taken into account when setting future heat network targets.

The second most common infrastructure-related issue raised was that of the technical difficulty of rolling out heat networks across multi-stage new developments. The following comment, a close variation of which was submitted by multiple Local Authorities and a Professional/Representative Body, summarises the challenge:

“The staged way in which developments tend to emerge can cause issues for linking to a heat network due to technical issues relating to the rate of build on individual large sites, many of which may take many years to reach a size for a heat network to become a viable proposition. Due to the need for varying pipeline bore requirements for lower and higher heat demand, it may prove to be unviable to serve parts of yet to be completed developments.”

It should be noted that most of these respondents also highlighted that new build developments do present an opportunity for new heat networks:

“New build developments can be potential opportunities for the deployment of heat networks, particularly where these are integrated as mixed use developments, are close to connectible high heat demand buildings and there are committed developers on board e.g. Housing Associations.” (Local Authority)

Finally, the Scottish Property Federation (Professional/Representative Body) suggested that a lack of building-specific heat network technology is a barrier to building more heat networks in Scotland; heat networks may not be viable for many building types.

Public sector resourcing and capacity

A number of Local Authorities and Professional/Representative Bodies highlighted that the delivery of the target requires considerable scaling-up of heat network activity, which has significant resourcing and skills implications, particularly for local authorities.

Related to this point, many such organisations called for more resources to be made available to support the delivery of the target, identifying the availability of flexible government funding and investment as critical to achieving the target.

One practical suggestion for support for Local Authorities that was given by two respondents was to establish a national procurement framework that Local Authorities can use to access support on heat network development.

Several respondents highlighted specific cases for tailored support, including, areas where heat networks are likely to cost more due to low population density and greater spread of buildings. One respondent suggested that direct financial assistance for specific technologies, such as geothermal heat, could help support delivery of heat networks in certain areas. Two respondents noted that it would be helpful to provide funding to encourage heat from waste heat and water bodies, which will have a material impact on the amount of energy supplied by other sources (such as electricity or hydrogen).

Whilst noting this need for more resourcing for heat networks, many respondents stressed that this must not be at the expense of funding for other heat and energy improvements and technologies, particularly the fabric first approach:

“Investment and planning needs to be appropriate for Heat Networks and must not divert funding or focus away from fabric first and other deliverables seeking to address the considerations within the LHEES, whether this is addressing fuel poverty or reducing energy use in buildings.” (Local Authority)

Respondents also noted the importance of clarifying the role of the private sector in the design and delivery of heat networks. The City of Edinburgh Council warned that a reliance on private sector funding may risk the development of heat networks that seek to “maximise profit rather than affordable warmth, duplicating the worst characteristics of the existing electricity and gas networks”/. However, Fife Council also noted that, for existing buildings, the infrastructure and capital costs could make the return on the investment longer than the predicted lifespan of some buildings.

Gaps in supply chain and labour market

In addition to the need for investment in upskilling and resourcing Local Authorities, some respondents also identified risks to delivery of the target due to resourcing challenges in the wider supply chain and labour market.

Respondents noted that the upscaling of heat networks will put increased demands on all stages of the supply chain, including design, installation, commissioning, and maintenance, which are already facing skills and supply gaps. This was noted as a particular issue in the Highlands, where respondents perceived a lack of training opportunities.

The lead times associated with upskilling the workforce were identified as a potential challenge for meeting the targets on time. One organisation (Consumer

Advice/Advocacy/Campaigning) suggested that there needs to be consideration of how the necessary skills can be brought into Scotland to address current gaps.

Quality assurance, regulation and consumer protection

A range of organisations (a Local Authority, an Energy Services Company and a Consumer Advice/Advocacy/Campaigning Organisation) flagged the importance of maintaining the quality of heat networks as the roll-out is scaled up. Therefore, a robust regulatory system should be in place to ensure heat networks are safe, fit for purpose and fair for consumers. One Local Authority suggested this should include an accreditation system for installers, which is appropriate for small local businesses.

It was noted that regulation is also important for the longer term running of heat network systems to ensure network operators are maintaining systems that are able to provide reliable and affordable heat and are safe for consumers in the long-term.

It was also identified that there needs to be an appropriate and robust consumer redress system for when things go wrong (Consumer Advice/Advocacy/Campaigning Organisation). One individual suggested that there is a need for a legislation to transfer rights (where and when required) from commercial developers to Local Authorities to take control over operation of a heat network if there are any issues.

Public engagement

General public apathy towards, and non-engagement with, heat networks was identified by one Local Authority as a potential barrier to achieving the target.

An individual suggested that heat networks may be more acceptable to the public than heat pumps, as they do not have the same requirements for internal and external space within private properties, and do not have the same concerns regarding noise. However, Dumfries and Galloway Council highlighted that the transition away from individual heating systems to collective networks is a change for private home owners, and one that present an obstacle to the roll-out.

Ensuring the robust regulation and consumer protections discussed in the previous section was identified as one important mechanism for building consumer trust and facilitating the roll-out of heat networks:

“...a robust regulatory system is central to build and maintain consumer trust. Building consumer trust in heat networks is of particular importance for the first wave of projects across Scotland, as these will enable subsequent waves of projects to be developed”.
(Scottish Power – Energy Services Company)

Further to this, Dumfries and Galloway Council flagged the need to demonstrate the benefits of heat networks:

“...the opportunity needs to be taken to demonstrate ... the benefits that could be realised through being integrated into a heat network, particularly the costs and savings that may be achieved through such schemes.”

A Local Authority proposed that a national marketing campaign would help local campaigns to market heat networks. SSE (Energy Services Company) suggested that it would be helpful for the target to be translated into a more accessible illustration of the size and scale of the roll-out, such as the number of buildings to be supplied by heat networks.

Prioritisation of net zero target

Several respondents flagged the importance of aligning heat network targets with the 2045 Net Zero target, and that addressing climate change should be the primary focus of the roll-out of heat networks.

Linked to this, respondents identified that the heat network target should explicitly reference a requirement for new heat networks to be powered using renewables or other low or zero emissions sources of heat, to ensure that future projects do not contribute to greenhouse gas emissions.

Alignment with planning process

RTPI Scotland (Professional/Representative Body) noted their support for the Heating and Cooling policy set out in that the National Planning Framework 4, which requires alignment with the area's Local Heat and Energy Efficiency Strategy and encourages connection to existing and planned heat networks. Other respondents suggested there was scope for the roll-out of heat networks to be supported through better alignment with the planning process and incorporation into local development plans and regional spatial strategies.¹

One respondent flagged the risk of conflict with local planning priorities. For example, areas that are seeking to reduce high density housing as part of a longer-term regeneration programme.

Some specific suggestions were made by respondents relating to planning and zoning regulations. For example, Scottish Power (Energy Services Company) suggested that installation of heat network apparatus such as boreholes and pipework, should be permitted under grey spaces (i.e., public footpaths and roadways) as are permitted for public water, gas and electricity network infrastructure. Additionally, they argued that heat network apparatus be included in the Scottish Community Apparatus Data Vault as per other utility infrastructure.

It was also suggested that there would be value in a planning process that considered how a number of potential networks in one area could be linked or expanded to create a larger, single network.

¹ Since this consultation was closed, further guidance has been published by the Scottish Government to support the integration of LHEES consideration into local development planning. <https://www.gov.scot/publications/local-development-planning-guidance/>

Partnership working

Several Local Authorities and Professional/Representative Bodies stated that multiple organisations and partners, such as other social housing providers and public bodies, need to be committed to the targets in order to achieve them.

SSE (Energy Services Company) also noted that there will need to be strong and collaborative relationships between The Scottish Government, Local Authorities and the private sector. Therefore, effective partnership working, skills and information sharing, and meaningful community engagement were identified as central to achieving the heat network target. RTPI Scotland (Professional/Representative Body) stated their support for the role of Heat Networks Partnerships (HNPs) for co-ordinating support across the built environment professions, viewing this as an important delivery vehicle.

3. Fuel Poverty

A key consideration in setting policy targets for heat networks is ensuring that doing so does not cause fuel poverty, or exacerbate existing fuel poverty for new heat network customers. To this end, this consultation asked respondents to reflect on whether there are any specific fuel poverty considerations that need to be addressed as new legislation is implemented.

A range of responses were received. Most respondents noted that fuel poverty is a multi-faceted challenge and, therefore, requires multiple solutions. In terms of fuel poverty, a focus on heat networks is not seen as important as ensuring a ‘fabric first’ approach is taken to building retrofit and build. Yet, while heat networks were not necessarily seen either as a solution to, or a cause of, fuel poverty, they were argued to be capable of both exacerbating and alleviating the problem. These positions are detailed below.

Fabric first approach is necessary for reducing fuel poverty

Some Local Authorities and a Professional/Representative Body made clear that fuel poverty is mainly a problem of heat demand and stated that setting a target for heat network output does not, therefore, do anything to address existing fuel poverty issues. Rather – in line with concerns raised more generally in this consultation – many respondents (including Local Authorities, a Consumer Advice/Advocacy/Campaigning Organisation, a Professional/Representative Body, and individuals) argued that, because heat demand is directly related to thermal efficiency of buildings, it is critical to maintain a focus on a ‘fabric first’ approach to ensuring heat networks do not cause or exacerbate fuel poverty.

In line with other statements made in this consultation, it was generally argued that a fabric first approach should be taken regardless of whether heat network capacity increased. However, where heat networks are installed, increasing the energy efficiency of homes heated by heat networks reduces the heat requirements of those homes. Some respondents stated that, in their view, this would not only make heat produced by the networks “go further” (Consumer Advice/Advocacy/Campaigning Organisation), but also reduce individual heating bills, increase home comfort and can improve health (Local Authority).

Heat networks can help mitigate fuel poverty

Although heat networks were not seen as a primary means of addressing fuel poverty, many respondents highlighted that heat networks have the potential to reduce it.

One individual highlighted a specific positive example from Glasgow:

“The Wyndford estate findings show a good relationship between the development of heat network and fuel poverty. According to SSE, the lives have improved, comfort levels have increased, carbon

emissions have fallen and jobs and economic value have been created”.²

Reduced/more stable bills

Many respondents who suggested heat networks could reduce fuel poverty stated that this was because heat networks often reduce bills. According to one Community Group, prior to the recent spike in energy prices, 90% of district heat networks in the UK operated at the same or lower costs to consumers than conventional heating systems. A Local Authority cited the Lerwick District Heat Scheme (Shetland Heat Energy and Power - SHEAP) as an example of a heat network providing lower-cost heat than other viable alternatives in the area.

Some respondents specified that the reason heat networks can result in lower bills is that they are typically more efficient than individual boilers. For example:

“Large scale, standardised district heating systems that can provide demand and supply side services to the electricity grid at scale while also fulfilling its obligation to provide heat to its customers will be a profitable enterprise. The ability to provide cooling services to industrial users by accepting waste heat into its networks from multiple sources will generate revenue for this service while also reducing its primary fuel costs. The ability to generate revenue from a portfolio of services reduces the overall cost of heat. System design is critical to achieving this. This approach is by definition, more fuel efficient than current heating arrangements based on gas distribution. The long service life of the system >50 years will also reduce overall costs.”

Carbon Recycled Energy Limited (Energy Services Company)

Another organisation (Consumer Advice/Advocacy/Campaigning) stated that heat networks can also make bills more stable and predictable, further mitigating fuel poverty: “District heating can contribute to fuel poverty reduction targets through its ability to provide stable and predictable prices for energy over an extended period...” The same organisation also suggested that heat networks could “...reduce worry for households about breakdowns or repairs”.

A Local Authority and a Professional/Representative Body both believed that that running heat networks on renewable fuels could further reduce bills, stating that renewable energy is cheaper than energy from fossil fuels.

Wider positive benefits

Beyond reducing and/or stabilising the cost to consumers, wider benefits were also noted. Two respondents (Fife Council; Consumer Advice/Advocacy/Campaigning Organisation) suggested that the money customers saved on fuel bills could be spent on other goods and services locally, thereby boosting the local economy. The

² See: [wyndford-report.pdf \(sse.com\)](#)

same Consumer Advice/Advocacy/Campaigning Organisation also noted that the creation of heat networks may create local employment opportunities.

Heat networks may exacerbate fuel poverty

Many respondents voiced concern that, without due care, connecting consumers to heat networks may increase their risk of fuel poverty.

A concern that was also highlighted elsewhere in the consultation is the risk of the cost of setting up new heat networks being passed on to consumers. Multiple Local Authorities and a Professional/Representative Body highlighted how this may be particularly detrimental to households already experiencing fuel poverty, and could risk pushing others into fuel poverty who are not already.

Other organisations (Local Authority; Citizens Advice/Advocacy/Campaigning organisation) expressed concern that, because heat networks can limit the heating/cooling options available to households connected to them, fuel poor households may not be able to move to cheaper options if necessary.

Other heat network challenges

Broom, Kirkhill and Mearns Kirk Community Council argued that new heat networks are only suitable for new build properties. They stated that, because low income (fuel poor) households often live in older, possibly poor-quality tenements and flats, it is unlikely that heat networks will be an option for them.

In line with responses to other questions in this consultation, geographical considerations were also raised with respect to the challenge of fuel poverty. One individual asserted that fuel poverty is worse in remote rural areas than in urban centres. Relatedly, one Local Authority highlighted the risk that funding be focused on “urban and central belt consumers”, which could distract from rural consumers who are often more at risk from fuel poverty.

Conversely, Dumfries and Galloway Council suggested that fuel poverty is more likely in urban centres. But, because such areas may better lend themselves to heat networks (according to the respondent), heat networks were thought to have a potentially positive impact on fuel poverty.

Considerations that may help mitigate HN-associated fuel-poverty risks

Funding support/fuel price interventions

Many respondents (including individuals and Local Authorities) highlighted that, in general, raising awareness of the funding that is already available to support households with heating costs (e.g., via Home Energy Scotland and Local Energy Scotland) is a necessary step to reducing fuel poverty. This was seen as an initiative that is separate to – and more important than – a focus on delivering heat networks.

It was also suggested that more (well-advertised) funding is required in this space, specifically to mitigate costs associated with connecting to a heat network. Funding targeted at supporting the installation of heat networks in social housing was highlighted as particularly necessary by both a Professional/Representative body and Scottish Power (Energy Services Company). Scottish Power stated the following:

“It is therefore vital that long-term funding is made available to facilitate the development and construction of heat networks in existing and new social housing areas including those homes that may have been bought by residents and who find themselves unable to invest in upgrading their property. We support the £300 million that has been set aside for the Heat Network Fund in this parliamentary term, and we would recommend that additional and comparable levels of funding are made available in the next term. Funding support should taper, whereby early projects should receive greater percentages of subsidy to ensure a sustainable market is created. Medium to longer term funding can then be reduced and/or focused to ensure that the pipeline of projects for those most in need is not damaged due to lack of funding.”

Related to this, two individuals argued for the continuation of fuel bill subsidy programmes and the fuel price cap.

Others (Local Authority; Scottish Property Federation – Professional/Representative Body) suggested that a necessary intervention is the rebalancing of electricity and gas prices (an area of policy reserved to the UK government), particularly if future heat networks are to run on renewable energy. They argued that a move to lower electricity prices would, by extension, also mitigate fuel poverty.

Other fuel considerations

Two respondents, including SSE (Energy Services Company) highlighted the importance of heat network fuel source in determining fuel prices, and therefore a heat network's impact on fuel poverty. SSE stated: “Heat Networks with the right fuel source should be lower cost for consumers than a typical low carbon (typically Air Source Heat Pump) counterfactual.”

Active engagement with fuel poor consumers and relevant organisations

The need to actively engage fuel-poor households and the organisations that provide them with support (i.e., housing associations, registered social landlords) in the design and delivery of new heat networks was also raised more than once by a range of respondents (a Local Authority; a Consumer Advice/Advocacy/Campaigning Organisation; an Energy Services Company). This was deemed necessary in order to maximise heat networks' potential benefits for fuel poor customers (fuel saving,

comfort, heating control, etc.). Specific suggestions for achieving this included co-design of heat networks – a key tool for ensuring ‘user-centred design’:

“[We stress] the importance of involving users in all aspects of heat network development. We reiterate our support for active engagement and, wherever possible, co-design with consumers. Affected consumers must be deeply integrated into efforts to expand the prevalence of heat networks in Scotland. Clear two-way channels of communication, information transparency (incl. pricing and performance metrics) and user-centred design are all essential elements to the success of heat network services. These processes should develop in-step with progress against the legislated target to enable heat networks to deliver competitive efficiency-based savings for consumers and, thereby, contribute to alleviation of fuel poverty.”
(Consumer Advice/Advocacy/Campaigning Organisation)

Improved regulatory context/ensuring regulatory alignment

Some respondents highlighted the need to ensure regulatory alignment between heat network legislation and other relevant policy and legislation, including that related planning, to fuel poverty and the Just Transition. This was seen as particularly important because the ‘Just Transition’ process will be continuously evolving, and includes a range of interconnected, non-linear processes (Consumer Advice/Advocacy/Campaigning Organisation).

The aforementioned Consumer Advice/Advocacy/Campaigning Organisation suggested that an “overarching framework” that integrates just transition priorities (including fuel poverty) into relevant Scottish Government policy and decision making is required. They argued that without this, emissions reduction objectives may be prioritised over fuel poverty objectives. RTPI Scotland (Professional/Representative Body) stated that the planning system could play a central role in helping deliver such a joined up approach:

“RTPI Scotland see the planning system as fundamental in orchestrating such approaches and should hold a pivotal role in enabling the delivery of heat networks and aligning them with wider regeneration efforts to maximise the benefit of interventions. This includes other policy ambitions associated with regeneration such as Community Wealth Building and inclusive growth.”

Related to this, the need for a robust heat network-specific impact assessment process was highlighted. The importance of including fuel poverty measures within this was emphasised by respondents.

“While the Scottish Government has a practice of undertaking individual impact assessments for several key factors, fuel poverty is not specifically incorporated into this practice. [We] would welcome efforts to embed fuel poverty within an integrated impact

assessment process.”
(Consumer Advice/Advocacy/Campaigning Organisation)

As was emphasised in response to other questions in this consultation, the need to ensure that strong heat network-related consumer protection measures are in place was highlighted again, in relation to fuel poverty. This issue was raised separately by a Local Authority, a Consumer Advice/Advocacy/Campaigning organisation, and a Professional/Representative Body. Such protections were seen as necessary for both fostering consumer confidence in heat networks (Scottish Property Federation - Professional/Representative Body), and ensuring that consumers – particularly fuel poor households – are not stuck in unaffordable heat network contracts (Local Authority). It was, however, noted that developing such measures lie outside the remit of the Scottish Government (reserved competency). One Consumer Advice/Advocacy/Campaigning Organisation suggested that heat networks should be approved only if they reduce costs to consumers.

Other considerations

One individual argued that making heating more efficient in general would reduce poverty. They suggested that the Scottish Government should give households free thermometers to help them monitor and manage their energy usage.



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