

Delivering net zero for Scotland's buildings - Heat in Buildings Bill: consultation – Scottish Renewables Response

Introduction

Scottish Renewables is the voice of Scotland's renewable energy industry. Our vision is for Scotland to lead the world in renewable energy. We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry.

We represent over 360 organisations that deliver investment, jobs, social benefit and reduce the carbon emissions which cause climate change. Our members work across all renewable technologies, in Scotland, the UK, Europe and around the world, ranging from energy suppliers, operators and manufacturers to small developers, installers, and community groups, as well as companies throughout the supply chain.

In representing them, we aim to lead and inform the debate on how the growth of renewable energy can provide solutions to help sustainability heat and power Scotland's homes and businesses. Scottish Renewables welcomes the opportunity to respond to this consultation setting out the regulatory framework to decarbonise existing buildings in Scotland.

We would like to draw attention to a range of issues that we address below:

- We strongly support prohibiting the use of polluting heating systems in all buildings by 2045 or earlier, if possible, not "after 2045". It is imperative that this is clearly defined as being "by 2045".
- We also have concerns about the inclusion of bioenergy in the definition of polluting heating systems. Bioenergy can be a key part of a just transition in rural Scotland and it is inappropriate to define it as a polluting heating system, as sustainable biofuels are possible.
- Our members are supportive of these powers to require buildings within a Heat Network Zone to end their use of polluting heating systems by a given date. This will help to de-risk projects which will ultimately result in lower costs for homeowners and landlords.
- However, this is only part of the solution to ensuring demand for heat networks as these powers exclude public sector buildings. We urge the Scottish Government to bring the consultation mandating connections for public sector buildings forward.

Please find our response to the consultation questions below, where we have provided more detail on all these highlighted issues. Scottish Renewables and its members would be keen to engage further with this agenda and would be happy to discuss our response in more detail.

Consultation Questions

The Heat in Buildings Standard - covering heating and energy efficiency

1 To what extent do you support our proposal to prohibit the use of polluting heating systems in all buildings after 2045?

Somewhat support

Please include any additional comments below:

We strongly support prohibiting the use of polluting heating systems in all buildings by 2045 or earlier, if possible, not “after 2045”. It is imperative that this is clearly defined as being “by 2045”.

The ambiguous date of “after 2045” provides no policy certainty for home and building owners to decarbonise their heating source. Such uncertainty significantly increases the risk of the target being missed. Providing a fixed, unambiguous deadline will reinforce Scotland’s commitment to its 2030 and 2045 climate targets. A clear ‘stop date’ on allowing polluting heating systems also provides clarity of expectation amongst consumers.

The exact ‘stop date’ should be considered. A “by 2045” target naturally suggests a 31 December 2044 stop date. However, this may result in a wave of installations and corresponding increased demand on the electricity network during peak winter period. A spring/summer date would be more appropriate.

The revision of the original 2030 targets for transitioning a million homes and 50,000 non-domestic properties away from direct emissions heating has cast doubt on Scotland’s ability to meet the 2030 interim climate target of a 75% reduction in climate emissions.

As achieving net-zero by 2045 relies on the decarbonisation of heat in buildings, there is real concern that Scotland will fail to meet this obligation.

We also have concerns about the inclusion of bioenergy in the definition of polluting heating systems. The IPCC in its 2019 Refinement of the 2006 Guidelines for National Greenhouse Gas Inventories * stated:

"Bioenergy needs to be treated differently to gas boilers because biogenic carbon is different to fossil carbon – as described by the IEA and IPCC in their greenhouse gas emissions inventory”.

Bioenergy can be a key part of a just transition in rural Scotland and it is inappropriate to define it as a polluting heating system, as sustainable biofuels are possible. Biomass, for example, is currently an important low emission renewable heating option that is available to rural households, businesses and communities. Furthermore, bioenergy is already a useful tool in reducing fuel poverty in rural areas via

small scale heat networks. We believe that a blanket prohibition of all forms of bioenergy would be disproportionate.

* See 2.3.3.4 (Chapter 2, page 2.4) of the IPPC 2019 Refinement of the 2006 Guidelines for National Greenhouse Gas Inventories.

2 To what extent do you agree that we should introduce a minimum energy efficiency standard to be met by private sector landlords by the end of 2028 (even if they are already using clean heating)?

Somewhat support

Please include any additional comments below:

We support the introduction of minimum energy efficiency standards for all tenures, thereby supporting the installation of clean heating systems. To drive cost efficiencies, industry needs a level playing-field for all clean heating systems. Minimum energy efficiency standards must not prioritise one type of heating over another and a technology-agnostic approach should be adopted. This will ensure that no preferential treatment is given to any one type of clean heating system. This will encourage diversity in the market, allowing for the most efficient and sustainable solutions to emerge.

Before the standards are introduced, a clear and accessible support mechanism for private sector landlords must be established and legislated. This includes financial incentives such as grants, tax rebates, low-interest loans, guidance on compliance, clear timelines and technical support services to facilitate the transition, ensuring landlords are well-prepared to meet the new requirements.

However, we are concerned that, in application of a 2028 deadline, no account has been made for the extreme variations in private rented sector (PRS) property across the sector in terms of the type of dwelling, location, the costs involved and the shortage of key skills required to undertake the necessary work, particularly in rural Scotland. In addition, there are ongoing issues over where responsibility lies with regard to mixed use buildings, such as housing on agricultural holdings.

The only support available to private sector landlords for energy efficiency measures is the Landlord Loan, however the terms of this loan favour urban landlords due to the costs of energy efficiency works being higher in rural areas due to the nature of the properties. These are more likely to be detached and are often larger properties of hard-to-treat traditional construction.

The existing Home Energy Scotland (HES) grant programme is working at full capacity and may not be able to scale up to meet the amount of demand proposed. The Scottish Government, in its 2022 Heat in Buildings Supply Chains Delivery Plan proposed a new supplier-led funding scheme to be delivered in Scotland, with the aim of allowing suppliers to develop compelling propositions which they can take directly to consumers. This would help to alleviate a complex grant system and ease the growing burden on the HES scheme. We urge the Scottish Government to consult on this scheme within the next year.

In addition, the consultation indicates that this standard will not be applied to non-domestic buildings, whereas the New Build Heat Standard will. It is important that future legislation does not exempt different types of buildings/occupiers. An exemption for non-domestic buildings does not fit the spirit of the consultation and will surely hinder Scottish Government 2030 and 2045 targets. Also, including a multitude of different rules will make the legislation more difficult to interpret and apply.

The Scottish Government may wish to consider an extended compliance framework or alternative standard(s) for non-domestic buildings. The definition of 'non-domestic building' will be key within the legislation to determine the extent of the extension (and corresponding impact on the 2030/2045 targets).

3 To what extent do you agree that we should introduce a minimum energy efficiency standard to be met in owner occupied homes (which still have a polluting heating system) by the end of 2033?

Somewhat support

Please include any additional comments below:

As per our answer in Q.2, we support the introduction of minimum energy efficiency standards for all tenures, thereby supporting the installation of clean heating systems. To drive cost efficiencies, industry needs a level playing-field for all clean heating systems so it is important that the minimum energy efficiency standards do not prioritise one type of heating over another and instead adopt a technology agnostic approach. This will ensure that no preferential treatment is given to any one type of clean heating system thus encouraging diversity in the market, allowing for the most efficient and sustainable solutions to emerge.

There needs to be consideration of the different archetypes of building and, as per our answer to Q.2, the route for accessing grants and loans for homeowners needs to be clear. A clear and accessible support mechanism for owner occupiers must be established. This includes financial incentives such as green mortgages, low-interest loans, equity loans, guidance on compliance, and support services such as energy advice and post-installation visits to facilitate the transition, ensuring owner occupiers are supported to meet the new requirements.

The existing Home Energy Scotland (HES) grant programme is working at full capacity therefore would not be able to scale up to meet the amount of demand proposed. The Scottish Government, in its 2022 Heat in Buildings Supply Chains Delivery Plan proposed a new supplier-led funding scheme to be delivered in Scotland, with the aim of allowing suppliers to develop compelling propositions which they can take directly to consumers. This would help to alleviate a complex grant system and help to ease the growing burden on the HES scheme. We urge the Scottish Government to consult on this scheme within the next year.

The way a building is designed and built is closely linked to the optimal way it should be heated. We need to avoid unintended consequences where new buildings may have more sustainable heating systems, but their design means they are less energy efficient and the materials they use for insulation have high levels of embodied carbon. See <https://www.leti.london/one-pager> for more on standards for carbon-neutral building design. In accordance with Policy 19(f) of NPF4, we encourage the Scottish Government to support developers to design buildings which promote sustainable temperature management, for example by prioritising natural or passive solutions such as siting, orientation, and materials.

There are concerns about the proposal that owner occupiers that have ended their use of polluting heating by 2033 will not have to meet the minimum energy efficiency standard but still have to meet the heat part of the standard. This may result in poor fabric efficiency for those buildings, which could render the clean heating system inefficient and push more households into fuel poverty.

In addition, from a networks point of view, this could result in unanticipated heat pump installations close to the cut off dates which could result in an unexpected large demand on electricity networks.

The consultation does not address the treatment of new buildings, as these were covered under the New Build Heat Standard. This opens up a question of should these minimum energy efficiency standards apply to new buildings earlier or will developers be allowed to construct new builds which meet the NBHS but do not meet the MEES between commencement and 2034?

4 Do you agree with our proposal to set a minimum energy efficiency standard that can be met by either installing a straightforward list of measures, or showing a good level of energy efficiency based on a reformed EPC fabric efficiency metric?

Somewhat support

Please include any additional comments below:

In our response to the first consultation on the New Build Heat Standard, we set out that industry favoured a list of measures to achieve a standard rather than a metric.

The current reliance on SAP is well known to be unfavourable to heat pump solutions and needs to be updated.

However, a standardised list could be misleading. More work needs to be done to identify which energy efficiency measures should be included for the different archetypes of the Scottish building stock.

5 What is your view on the initial proposed list of measures to meet the minimum energy efficiency standard?

Somewhat support

Please include any additional comments below:

The initial proposed list is limited and there are many more types of energy efficiency measures that could be included. We welcome news of a further consultation on the makeup of this list.

A list of acceptable technology solutions and exclusions would make compliance with the standard much easier.

A dedicated website hub with relevant information for developers, including UK and international case studies of new sustainable development together with suppliers working in this space, would be useful.

The solutions for the different archetypes of Scottish buildings are not well known, although the Scottish Government researched this in 2020 for domestic buildings - Low-carbon heating in domestic buildings: technical feasibility - report. We recommend this research is made more widely available to those who need it.

6 Do you think that properties for which most or all of the measures on the initial proposed list are not relevant should be required to meet an equivalent minimum energy efficiency standard?

D. Yes – they should be required to meet the standard and additional measures should be included on the list (such as solid wall insulation, solid floor insulation and flat roof insulation), but they should only be required to install some of these where feasible, and they should be allowed additional time to do so.

Please include any additional comments below:

As per our answer in Q.2, we support the introduction of minimum energy efficiency standards for all tenures, thereby supporting the installation of clean heating systems. To drive cost efficiencies, industry needs a level playing-field for all clean heating systems so it is important that the minimum energy efficiency standards do not prioritise one type of heating over another and adopt a technology agnostic approach. This will ensure that no preferential treatment is given to any one type of clean heating system. This will encourage diversity in the market, allowing for the most efficient and sustainable solutions to emerge.

7 Do you think that an alternative approach to setting the minimum energy efficiency standard is required?

No

Please include any additional comments below:

If the minimum energy efficiency standard is fit for purpose with good technical guidance and resourcing for impartial advice and support, an alternative approach should not be required.

8 Do you agree that the use of bioenergy should continue to be permitted in certain circumstances?

Yes, it should be permitted for those buildings already using it and for those buildings who have no other clean heating system available

Please include any additional comments below:

We are concerned by the wording in this question as it is not clear whether it is referring to individual bioenergy systems or bioenergy being used to power district heat networks. Bioenergy can act as a transition solution to move away from high carbon fossil fuels. Use of biomethane, a by-product of food waste, contributes to our circular economy goals. Biomethane can be considered sustainable when it is used close to its production and not transported over long distances.

We support the continued use of sustainable bioenergy in properties where owners have already invested in the installation of bioenergy heating systems, which are contributing to Scotland's renewable energy targets and where in many instances properties will continue to be supported by the Renewable Heat Incentive payments. It is also likely that the owners/managers of these properties will have ruled out alternatives at the point they installed biomass heating for reasons related to either cost or technical feasibility – or both.

Sustainable bioenergy should also be allowed where electrification may not be a viable option, whether as a result of lack of local electricity network capacity, challenges with improving insulation performance of 'hard to treat' buildings or where physical characteristics of buildings present challenges to installing alternatives. Failure to allow this could leave many rural households and businesses behind without adequate, or financially feasible options to decarbonise.

We recommend that there should be an assessment against defined criteria to determine if a building is suitable for electrification or whether sustainable biomass may be a more appropriate alternative, taking into account technological, economic and environmental factors.

While heating technologies will improve over time, there is nothing inherent in the 2045 cut-off date which means that properties which require to use bioenergy before that time will somehow be able to access alternative options at that point.

We would also state that we believe that this will constitute a small number of properties and will not, therefore, compromise Ministers' ambitions to focus the use of biomass on negative emissions technologies, for example.

There may need to be differentiation between the different types of bioenergy (i.e. wood chips vs food waste) and the implications of those (i.e. one could potentially be net zero).

According to the Energy Saving Trust in their most recent report on wood fuel demand*, biomass not only contributed 3,730 gigawatt hours of useful heat output to the Scottish Government's renewable heat targets but "wood fuelled biomass systems in Scotland are estimated to have saved 1,624,000 tonnes of carbon dioxide equivalent (tCO₂e) in 2021" which was a 6% increase on the 2020 figures. It is hard to understand the possible rationale to phase out this type of heating before there is a competent alternative technology to take its place.

*<https://forestry.gov.scot/publications/1486-wood-fuel-demand-and-usage-in-scotland-2021-report/viewdocument/1486>

3. Property Purchases

9 To what extent do you support the requirement to end the use of polluting heating following a property purchase?

Somewhat support

Please include any additional comments below:

We understand the reasoning behind this question as there needs to be an additional mechanism beyond minimum energy efficiency standards to enable the push towards heat decarbonisation, especially in non-domestic properties where there are no minimum energy efficiency standards being proposed. Improving energy efficiency in isolation will not decarbonise heat.

We agree that the onus is best not put on the seller of the property, however, we are concerned that it will add a burden onto those purchasing properties. Buyers may not have additional funds to carry out remedial works and as such, appropriate support should be made available.

In addition, in terms of properties that may have recently replaced their heating systems before selling them, we are concerned about the potential carbon cost of replacing new gas boilers. As with all proposals being made by the Heat in Buildings Bill, good and freely available access to information will be essential so that buyers and sellers are clear on the requirements.

10 We are proposing to give those purchasing a property a 'grace period' to end their use of polluting heating. Do you agree with this proposal?

No, please provide reasons for your view.

Please include any additional comments below:

Some traditional buildings, such as tenements and multi occupancy multi use buildings, and buildings in conservation areas may need a longer grace period than other building types. We are aware of Scottish Government research on low-carbon heat solutions for domestic properties and limited

research on non-domestic properties. This research is necessary to understand the different types of buildings in the non-domestic sector.

Grace periods may need to apply to different types of people (for example, first time buyers or pensioners may receive a longer grace period than others). A standard grace period would be inappropriate because it assumes that every property transfer is taking place under the same circumstances. A “one size fits all” approach is not helpful as it fails to take into account specific circumstances of a property transaction or transfer.

An assessment tool that takes into account different building types would be useful so we welcome this potential.

11 To what extent do you support our proposal to apply a cost-cap where people are required to end their use of polluting heating following a property purchase?

Somewhat support

Please include any additional comments below:

This could be very useful to keep costs of new heating technologies realistic and affordable. There would need to be different cost-caps for specific energy efficiency measures and heating technologies separately.

12 Which of the following methods of applying a cost-cap do you support?

Another.

If another, please suggest below:

We are supportive of a cost-cap. We would welcome further consultation on more detailed proposals for the cap, which we note will require complex analysis. An observation we have based on the current proposals is that different archetypes of buildings that may result in caps applying differently in practice – for example, a flat cost-cap might allow more measures to be implemented in a newer building as opposed to an older building or in different types of non-domestic buildings.

Additionally, the proposal for a purchase-price based cap should take into account the date of last sale of the property as the last purchase price may not reflect current market value.

13 To what extent do you support the proposal that the Scottish Ministers should be given powers to extend the circumstances in future (beyond a property purchase) in which people could be required to end their use of polluting heating? This could be, for example, preventing the installation of new fossil fuel boilers when replacing the heating in your home or business premises?

Somewhat support

Please include any additional comments below:

Due to the length of time it takes for primary legislation to conclude and regulations to be passed, we agree that Scottish Ministers should be given powers to extend circumstances in future in which people could be required to end their use of polluting heating systems. However, these circumstances would need to be consulted on at that point.

Distress purchase of another gas boiler needs addressed; it needs to be easier for the consumer to choose to install a low-carbon heating system.

4. Connecting to Heat Networks

14 To what extent do you support our proposal to provide local authorities (and Scottish Ministers) with powers to require buildings within a Heat Network Zone to end their use of polluting heating systems by a given date?

Strongly support

Please include any additional comments below:

Our members are supportive of these powers to require buildings within a Heat Network Zone to end their use of polluting heating systems by a given date. This will help to de-risk projects which will ultimately result in lower costs for homeowners and landlords. However, care must be taken that there are no unintended consequences on just transition principles whilst doing so.

There needs to be further clarification on how this would interact with the Heat Networks (Scotland) Act 2021. There must be stronger evidence and guidance forthcoming from the Scottish Government, especially in relation to zoning.

We are concerned that the removal of ring-fencing of LHEES funding in the draft 2024/25 Scottish Budget puts the next stage of LHEES development at risk. We are also concerned that the ongoing resource requirement for delivering LHEES has not been sufficiently addressed. For example, the Local Authority Cost Strategy is not expected to be published until the full regulatory framework is in place.

We disagree with the proposal in 4.17 'These homes and non-domestic buildings will be required instead to meet the Heat in Buildings Standard when a heat network becomes available – either by connecting to the network or by choosing to install another clean heating system.' Through offering alternatives to heat networks, this will undermine the customer base for heat networks disincentivising developers to invest. It will also create reverse cherry picking where individual buildings or household exist outwith a zone, undermining future opportunities to expand a heat network. Building owners should not be mandated to replace their fossil fuel heating systems when they are within a zone, in order to ensure alignment with heat network development.

15 To what extent do you support our proposal to provide powers to local authorities (or Scottish Ministers) that require developers to connect new buildings within Heat Network Zones to a heat network?

Strongly support

Please include any additional comments below:

We strongly support this proposal, which is consistent with Policy 19 of NPF4. Policy 19 (a) mandates that development proposals within or adjacent to a Heat Network Zone, as identified in a Local Development Plan, be designed and constructed for connection to the existing heat network. In addition, policy 19 (c) stipulates that development proposals must be designed and constructed to enable cost-effective future connections.

This approach aligns with policy 19's strategic objectives, promoting sustainable development, enhancing energy efficiency and supporting Scotland's transition to zero direct emissions heating systems. Enabling local authorities to enforce these requirements is vital to ensure that new developments contribute positively to Scotland's 2030 and 2045 climate targets. This proposal offers a proactive approach to urban planning and development, ensuring that new buildings are future-proofed and integrated into Scotland's evolving energy infrastructure.

However, this is only part of the solution to ensuring demand for heat networks as these powers exclude public sector buildings. We urge the Scottish Government to bring the consultation mandating connections for public sector buildings forward. Such buildings including schools and hospitals are crucial to heat network development due to their potential as anchor loads.

The decision to compel a building owner to change their heating system needs to make commercial sense; practicalities and commercial considerations need to be given weight. This aligns with NPF4's emphasis on development that is cost-effective.

We are concerned at this statement in the consultation document,

"All heat networks will be required to generate most of their heat from renewables or bioenergy by 2045, so they are one of the systems that some of us will be able to use that meet the Heat in Buildings Standard".

This is in direct opposition to the Heat Networks Delivery Plan which was published in 2022. It set out that existing heat networks needed to move to renewable sources of heat within one to three years of a license being granted and that most of the heat for new networks is to be provided from low and zero emissions sources of heat, from the point that the regulatory system is in place.

Leaving the move to renewable sources of heat or bioenergy to as late as 2045 is not the action one would expect in a climate emergency.

We have concerns over some terminologies used in the consultation. For example, describing heat networks merely as “clean heating systems that people will be able to use to comply with the Heat in Buildings Standard” oversimplifies the complexity and infrastructure required. Compliance with the Heat in Buildings Standard should be clearly defined as connecting to an existing network, rather than having to install new ones.

In addition, different types of heat networks, including those without individual meters per property; should be recognised in future regulations/guidance.

The financial and logistical challenges of decommissioning the relevant gas network must be carefully managed in sync with the overall development, considering the broader implications for existing gas and power networks as well due to reduced demand. This includes the continued use of gas for cooking in addition to heating.

Optimal solutions for new buildings may be overlooked if only a limited number of heating solutions, are considered, potentially stifling innovation. In addition, a new building not connected to a heat network, could inadvertently hinder the expansion of the network, creating physical barriers between other buildings and the heat network.

Behaviour change is needed, some building owners may prefer to develop their own heating solutions, rather than connect to an existing heat network. It is therefore important to facilitate an understanding of the entire process required to integrate buildings into the heat network effectively.

There may also be scenarios where, within a designated Heat Networks Zone, it may be appropriate for the developer to install temporary boilers in buildings, with the understanding that connection to district heating is forthcoming.

Clarity is also needed over who has the powers over wayleaves to install the heat network pipes - whether this responsibility falls to local authorities or developers themselves. We are aware that regulations have still to be developed from the Heat Networks Act, but there is an urgent need for these regulations to be introduced to prevent ongoing development overtaking policy.

16 To what extent do you support our proposal to require occupiers of non-domestic properties to provide information about unused heat on their premises?

Strongly support

Please include any additional comments below:

We support this proposal and would recommend it go further and also require building owners as well as occupiers to provide information about unused heat on their premises.

We agree that more accurate data is required.

To maximise the usability of data, any obligation on building owners/occupiers to provide this information must be accompanied by common measurement and reporting standards as well as clear definitions of what constitutes 'unused heat' or 'waste heat'.

The proposals in the consultation do not suggest how this proposed obligation will work in practice. Follow-up questions we have include:

- What will trigger a request for information?
- What form should the request take? Will it be a standard form?
- What is the timeframe for providing the information?
- Who is information to be provided to? Is it privately to developers or should it be to a central body?
- Should it be publicly accessible? Transparency can lead to innovative solutions to utilise unused heat.
- How will buildings in multiple ownership/with multiple occupiers be dealt with?

17 To what extent do you support our proposal to potentially require buildings with unused heat to provide this to a local heat network?

Strongly support

Please include any additional comments below:

Despite the potential benefits, waste heat may not always be fully accessible for integration into heat networks due to methods that reduce waste heat before it can be utilised externally. For example, buildings might implement energy efficiency measures that reduce the waste heat produced, opting to use their own excess heat internally. Any residual heat should be made available to a heat network.

The obligation for heat networks to accept waste heat introduces considerations of cost implications, particularly in adjusting or equalising the temperatures to work with other sources of heat. Policy 19(d) of NPF4 mandates that national and major developments capable of generating waste or surplus heat in areas of heat demand are supported, provided they do not negatively impact residential amenities. These developments must produce a "Heat and Power Plan" detailing the use of energy recovered from the development, which will be used to produce electricity and heat, which aligns with the broader strategy of utilising waste heat efficiently.

Research by ClimateXChange in 2020 identified almost 2 TWh of waste heat across approximately 932 sites in Scotland predominantly in remote and inaccessible areas. The challenge includes ensuring that the waste heat, such as from data centres, is of an appropriate grade and economically viable. The largest waste heat potential is estimated to be in the distillery and wastewater treatment sectors.

European Union policy is moving towards greater utilisation of waste heat, with the aim for heat networks to be powered entirely by renewable sources, waste heat or a combination of the two by 2050:

(Article 26 Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (recast) (Text with EEA relevance) September 2023). This sets a precedent for Scotland to enhance the strategic importance of waste heat in achieving decarbonisation and net-zero targets.

In a long-term vision of heat networks being used to decarbonise heat and meet net-zero targets and ambitions, waste heat needs to have greater significance than it does here currently. We believe the Scottish Government needs to view heat networks in a more strategic way.

The integration of waste heat from industrial activities and sector coupling with the electricity grid could contribute significantly to reducing peak demand. Use of heat pumps in conjunction with waste heat in heat networks can lower overall our electricity demand and consumption, offering a solution to current electricity constraints.

However, a clear definition of what waste heat is and what grade of heat it is are essential, as not all waste heat is suitable for heat networks due to temperature constraints. Not all waste heat will be available, for example, distilleries are likely to use their own waste heat, limiting availability for external networks.

5. Monitoring and Enforcement

18 We will need to have a way to monitor if people are meeting the Heat in Buildings Standard, and discussed two options for this. Which do you support?

A combination of the two

Please include any additional comments below:

A combination of both EPCs and sampling would work best. People are familiar with EPCs or home or building reports. Sampling would create additional much needed data for the heat sector.

19 We will need to have a way to enforce the Heat in Buildings Standard. We discussed possible options to help achieve compliance. What are your views on these ideas?

I do not support any form of enforcement

Please include any additional comments below:

We believe that enforcement should only be used as a last resort. We support funding and supportive measures instead. It may be the case that market mechanisms would be preferred with penalties to be re-considered closer to the 2045 deadline.

20 To what extent do you support our proposals to modify the Standard or exempt certain people from the need to meet the Heat in Buildings Standard?

Somewhat support

Please include any additional comments below:

The legislation should recognise the different archetypes of building. The standards could work well for individual family homes but might not be as effective in high-density buildings such as tenements or student accommodation.

A one-size- fits all approach may not be feasible. The standards should be flexible enough to account for the unique challenges and opportunities presented by different types of buildings but must also be as simple as possible to ensure compliance and a level playing field for different types of buildings.

21 Which people, businesses, or types of buildings, if any, should be eligible for a modified standard or exemptions?

Please include any additional comments below:

Buildings where it will be difficult to meet the Heat in Buildings Standard, for example, buildings in conservation areas or Multi Use Multi Occupancy buildings should be eligible for either a modified standard, a longer period of time to meet the Standard or exemptions.

Consideration should be given to whether some flats that are currently outwith heat network zones should be exempt in light of known challenges installing clean heating solutions in some flats.

22 To what extent do you support our proposals to give certain people extra time to meet the Heat in Buildings Standard?

Somewhat support

Please include any additional comments below:

The consultation states that ministers intend to 'give extra time in the period to the 2045 backstop to those already using bioenergy to meet the clean heat requirement of the Heat in Buildings Standard' but does not state how much additional time will be given. For the avoidance of doubt, we would call on ministers to allow biomass systems to run up to the backstop of 2045, and to allow properties where biomass is the only cost-effective or technically feasible option to be allowed to use sustainable biomass beyond that point.

While heating technologies will improve over time, there is nothing inherent in the 2045 cut-off date which means that properties which require to use bioenergy before that time will somehow be able to access alternative at that point. We would also state that we believe that this will constitute a small number of properties and will not, therefore, compromise ministers' ambitions to focus the use of biomass on negative emissions technologies, for example.

23 Which people, businesses or types of buildings, if any, should be eligible for extra time? Please include any additional comments below:

The consultation notes that Scottish Ministers intend to give extra time in the period to the 2045 backstop to (1) those already using bioenergy to meet the clean heat requirement of the Heat in Buildings Standard, and (2) those homes and businesses which are moving from polluting heating, but which have no clean heating solutions available to them, which could apply until cleaner alternative fuel or technology options become available.

As we said in our answer to Q22, we would call on ministers to allow biomass systems to run up to the backstop of 2045, and to allow properties where biomass is the only cost-effective or technically feasible option to be allowed to use sustainable biomass beyond that point.

6. Public Sector Buildings

24 To what extent do you support our proposal to require all buildings owned by a Scottish public authority to be using clean heating systems by 2038?

Strongly support

Please include any additional comments below:

This needs to happen much sooner than 2038. There needs to be greater transparency across all the different sectors to encourage collaboration. For example, buildings in the public sector such as universities could be building heat networks collaboratively with local authorities and the private sector.

25 We are considering the following further duties on public sector organisations to support planning for the transition by 2038. Please tell us which option(s) you would support.

- Placing a new duty on public sector organisations which would, from 2025, prevent them from replacing a polluting heating system with another (unless impractical)
- Creating a new duty for each public body to develop and implement a plan to decarbonise their buildings
- Placing a new statutory reporting duty on public sector organisations to demonstrate progress towards their 2038 objective (with the potential for the 2038 then to be non-statutory)

Please include any additional comments below:

Any additional duties need to dovetail with existing duties under the Climate Change (Emissions Reductions Targets) (Scotland) Act 2019.

7. Amendments to existing legislation

26 Do you agree with our proposals to include powers in the proposed Heat in Buildings Bill to change the current requirement in legislation for a narrowly-defined renewable heat target?

Yes

Please include any additional comments below:

First, there is a lack of good data for measuring progress in heat decarbonisation. There should be better data collection on heat pump installations and connections to heat networks in the Scottish Government's energy efficiency and fuel poverty schemes.

The previous renewable heat target of 11% of heat (Climate Change Scotland Act 2009) to be met by renewables (other than electricity) was not met, the best progress was approx. 6.5%. Progress made towards this target was met primarily by biomass heating. Moving away from biomass in homes and non-domestic properties will no doubt impact our renewable heat progress, therefore there needs to be careful consideration of how to measure renewable heat.

Modifying the renewable heat target to take account of heat provided via electricity (heat pumps) and heat provided from electric boilers and heat networks is crucial, else we will not meet any target.

The Heat in Buildings Strategy in 2021 set out a provisional target for renewable heat of at least 22% by 2030. We question why this provisional heat target was not adopted then.

The consultation paper notes that the Scottish Government desires to make the renewable target more understandable and that it would help to measure policy progress and provide certainty for industry. It needs to be far more visible than it currently is. Annual progress reports are good, and the work carried out by Energy Saving Trust collecting the data for the heat target is very useful.

27 Do you agree that the Heat Networks (Scotland) Act 2021 should be amended in light of the passage of the Energy Act 2023?

Don't know

Please include any additional comments below:

It is not yet clear how exactly Ofgem's authorisation processes as the heat networks regulator are going to differ from the Heat Networks (Scotland) Act 2021 but there are already diverging viewpoints. For example, in the Ofgem/DESNZ consumer protection consultation, the terminology of "suppliers"

and “operators” differs from Scottish legislation. Both terms appear to have different obligations compared to the Heat Networks (Scotland) Act 2021.

To ensure an even playing field across Scotland and England for those companies working in the UK, Scotland may need to change its definitions, however we are aware that the discussions are ongoing between Ofgem and the Scottish Government.

28 Are there any further amendments to the Heat Networks (Scotland) Act 2021 that the Scottish Government should consider?

Please include any additional comments below:

Industry discussions during the Heat Networks (Scotland) Act 2021 Stakeholder Engagement Groups’ work on zoning and building assessment reports regulations highlighted a missing yet essential component of the zoning guidance – that an economic analysis is not carried out prior to the zones being designated. Zones are primarily defined based on linear heat density. Therefore, zones may not be in the most cost-effective place for heat networks. There is apparently no mechanism for this in the primary legislation, as it was removed when the Bill was going through the Scottish Parliament. This is crucial for the development of heat networks.

There may be potential for including that type of economic analysis through permitting or licensing but these regulations have not yet progressed.

These necessary regulations urgently need to be consulted on and passed into law. We need to scale up work on heat networks and progress the work on all the regulations as quickly as possible.

There may be properties such as high rise domestic buildings that could be good anchor loads for a heat network yet lie outside zones and therefore outwith the powers being awarded to local authorities. A mandate may be needed in these circumstances, this is a limitation of the Heat Networks (Scotland) Act 2021 and corresponding guidance. Isolated tower blocks are likely to be in areas outside zones. Zoning needs to be far more strategic than is currently the case.

Mandating public sector buildings should be an element of the Bill and not held back a few years by a requirement for a further consultation.