



HEAT IN BUILDINGS BILL

Changeworks' Consultation Response to the Scottish Government
March 2024

CHANGEWORKS.



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- Yes
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Changeworks

Changeworks is a leading consultancy, research, and programme delivery organisation, with over 35 years of experience of decarbonising Scotland's homes. We continue to invest in services that will enable householders to reduce both their energy bills and their carbon footprint. Improving the energy efficiency of Scotland's homes is key to alleviating fuel poverty, lowering carbon emissions and meeting our net zero targets. We have 10 years of experience delivering Area-Based schemes to local councils across Scotland. Changeworks urges the Scottish Government urgent action to transform Scotland's existing housing stock to help eradicate fuel poverty and meet Scotland's ambitious climate change targets.

Heat in Buildings Bill

Changeworks welcomes the Heat in Buildings Bill and the Scottish Government's commitment to consult on new heating and energy efficiency regulations. However, 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. We would welcome the potential for an earlier 'backstop' date and it is imperative that the Bill itself is scheduled as soon as possible. A recent survey¹ by Changeworks showed that 79% of respondents think climate change is a major problem that needs to be addressed. Householders need to have adequate access to both decarbonisation advice and funding to meet climate change targets.

Supporting Householders: Affordability and Capability

Amendments should be made to ensure that Scotland follows an equitable transition to decarbonisation. For the 2045 target to be met, both the installations needed to comply with the regulations and the end-use costs of fuel must be **affordable**. To install the appropriate measures to achieve this target, householders must be supported to build **capability**.

Householders should have **access to support** to:

- Understand the need to transition.
- Know what options are available to them.
- Understand which measures are appropriate for the home.
- Access sufficient resources to carry out the installations.

An **enabling support framework will be required**, including a **network of one-stop shops offering end to end support**, handholding where needed, and financial mechanisms that make warm homes with clean heating affordable to all. Changeworks proposes that the Existing Homes

¹ Changeworks commissioned a nationally representative survey of adults in Scotland in November 2023, managed by 56 Degree Insight.

Alliance's briefing² *'Making retrofit work: a customer journey with people at its core'* be used as a guideline in the development of this framework.

On Opportunity to Tackle Fuel Poverty

Changeworks is concerned by focusing exclusively on decarbonising heating, the proposals set out in the consultation are likely to push people (further) into fuel poverty. **It remains critical that we ensure a just transition and maximise the opportunities for reducing fuel poverty as we collectively tackle the climate emergency.** Delivery must be consistent with existing Scottish Government commitments, particularly as set out in the Fuel Poverty Act³. Scottish homes are some of the least energy efficient in Europe and the high rates of fuel poverty should be considered a crisis. Around 35% of Scottish households are in fuel poverty⁴, and over 50% of homes have an Energy Performance rating of D or below⁵. Recent analysis by the Energy and Climate Change Intelligence Unit (ECIU) found that, under Ofgem's price cap from January 2024, homes with poor insulation, with an EPC band F, will be on average around £730 a year worse off than homes with an EPC band C⁶.

Fuel poverty reduction and decarbonisation are intrinsically linked. Relying on oil and gas for home heating leads to higher, unaffordable energy bills and produces almost 13% of Scotland's carbon emissions⁷. The cost for the transition should be affordable for people in fuel poverty⁸, and the Standard should not increase the risk of fuel poverty for householders already experiencing this.

Rationale for the Heat in Buildings Standard

Not only is a focus on **energy efficiency** critical for reducing household energy costs, but it will also **minimise pressure on the grid**. We also support improvements in energy efficiency to homes for those that will be connected to heat networks. We don't yet know what the available options will be, but we do **need to ensure that the networks are operating efficiently**, especially if homes are connected to low flow networks.

The Heat in Buildings Bill should progress urgently to **provide certainty to supply chains** and provide clarity on implementation dates. Certainty is needed for installers, manufacturers and the wider supply chain **to adequately prepare, invest and upskill** to respond to the scale of electric heating installations, heat network connections, and fabric efficiency measures that will be required.

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

² [Making Retrofit Work - a customer journey with people at its core \(existinghomesalliancescotland.co.uk\)](https://existinghomesalliancescotland.co.uk)

³ [Fuel Poverty \(Targets, Definition and Strategy\) \(Scotland\) Act 2019 \(legislation.gov.uk\)](https://legislation.gov.uk)

⁴ [Written question and answer: S6W-14736 | Scottish Parliament Website](https://www.gov.scot)

⁵ [Energy efficiency in homes - Energy efficiency - gov.scot \(www.gov.scot\)](https://www.gov.scot)

⁶ [Energy & Climate Intelligence Unit | Energy bill price cap: poorly insulated homes to cost over £400 more to heat net year \(eciu.net\)](https://eciu.net)

⁷ [Chapter 2 A 2045 Pathway for Scotland's Homes and Buildings - Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot \(www.gov.scot\)](https://www.gov.scot)

⁸ [Full List of Recommendations – Section 3.2.3.3 Developing affordable energy supplies - A Scotland without fuel poverty is a fairer Scotland: report - gov.scot \(www.gov.scot\)](https://www.gov.scot)

Strongly Support

Changeworks supports the proposals to prohibit the use of polluting heating systems in all buildings after 2045. Last month, the EU's climate service announced that, for the first time, global warming exceeded the crucial threshold of 1.5C across an entire year⁹ (February 2023 to January 2024), bringing the world dangerously close to breaching the long-term temperature rise limit of 1.5 set out in the Paris Agreement (2015). As a result, legislation must become more ambitious to avoid global warming of 2° C, which is expected to push global conditions past any point that any human civilization had experienced, and to see dramatic alterations to the ability of the Earth's system to maintain the conditions that allow for human and other species' life¹⁰.

A clear 'stop date' on allowing fossil fuel combustion systems for heat is key for ensuring clarity of expectation amongst consumers. Section 2.6 of the consultation includes the following text: 'prohibit the use of polluting heat from 2045'. We strongly support prohibiting the use of polluting heating systems in all buildings *after* 2045 (or an earlier 'backstop' if possible), not *from* 2045.

We support introducing powers for other triggers, such as:

- Following the purchase of a property.
- Planned boiler replacement.
- Major renovation, requiring a permit.

These are key triggers if the Scottish Government is to uphold its 2030 interim climate target of reaching a 75% reduction in climate emissions. Introducing additional triggers will encourage **investment in the relevant technologies and heat networks** earlier, supporting the much-needed supply chain growth to make the proposals viable.

Changeworks supports the proposal that the prohibition on polluting heating will only apply to the main heating system used within the property. It is important that rural properties that are suitable for a clean (electric) heating system can supplement the system with an emergency heater, such as a woodstove or another non-electric emergency heat source. Rural areas should not be expected to only rely on electric heating, as it can take days or weeks for grid reconnection in locations with sparse populations. The distinct adverse weather conditions in much of rural Scotland are not considered in any existing policies¹¹. Permitting secondary (polluting) heating systems to remain in place is necessary to **provide energy security** when power cuts occur and **build climate resilience** as outages are becoming more frequently with climate change.

Regarding gas cookers, the backstop of 2050 should apply to avoid unnecessary maintenance of the gas grid, and to allow a 5-year grace period for properties identified as requiring additional time. Exemptions could be made for portable gas cookers to ensure energy

⁹ [Warmest January on record, 12-month average over 1.5°C above preindustrial | Copernicus](#)

¹⁰ [Why did the IPCC choose 2° C as the goal for limiting global warming? | MIT Climate Portal](#)

¹¹ [A-Perfect-Storm-Fuel-Poverty-in-Rural-Scotland.pdf \(changeworks.org.uk\)](#)

security and climate resilience. We expect that most households would disconnect from gas connections to avoid paying the standing charge.

Assessment Tool

There will be a need for additional advice and support to make it easy to comply with the regulations. **The Home Energy Scotland advice service should be scaled up and supplemented by a network of one-stop shops to support an end-to-end customer journey.**

An online assessment tool will play an important part of the customer journey, where possible. **In person home surveys and advice will need to be offered to those who cannot rely on online surveys or have 'hard-to-treat' homes with unusual fabric improvement requirements.** The private sector and some third sector organisations are starting to fill this gap (NESTA¹² and getaheatpump.org.uk¹³; Snugg¹⁴, and Changeworks EcoCosi service¹⁵).

Funding Support

The **Home Energy Scotland Grant and Loan scheme and the Warmer Homes Scotland scheme should remain in place** to support homeowners and private tenants with funding. However, the criterion should be reviewed and expanded. Presently, the Warmer Homes Scotland Scheme supports owner occupiers and private tenants who live in properties with particularly low energy efficiency, and that are in receipt of qualifying benefits or have older heating systems and are vulnerable due to age. However, **many residents on low or fixed incomes are unable to access Warmer Homes Scotland** currently, if they do not receive benefits, or have newer heating systems. Whilst the Home Energy Scotland scheme offers support, consideration should be given to those who do not qualify for the interest-free loan due to low income, unstable employment or poor credit. **Consideration should be given to mechanisms for those who do not qualify currently, but do not have the means to meet the regulations.**

The Scottish Government should consider developing alternative financing mechanisms for householder support to ensure that these households are not left behind. For example:

- The government could pay the interest on the loans directly to widen accessibility.
- Personal loans could be offered with regulated interest rates, modelled on the current student loan fixed-term pay back model.
- The government could explore offering a stake in property ownership to householders, mirroring private equity release schemes.

¹² [Nesta | UK innovation agency for social good](#)

¹³ [Get a Heat Pump](#)

¹⁴ [Snugg – Making Home Energy Efficiency Simple and Affordable](#)

¹⁵ [EcoCosi Whole Home Retrofit Service - Changeworks](#)

- Retrofit costs could be collected alongside council tax so the debt sits with the property not the owner. Consideration would need to be given for how this debt would transfer to the landlord in the case that the property was privately rented.
- Debt from retrofit costs could be associated with the meter, collected by the energy company and passed to retrofit enabling agency. This would need to be paid by the tenant. The Scottish Government could explore ensuring that bills are capped at current end-usage prices, and the amount paid that surpasses the 'real cost' of energy is used to repay the capital costs of the measures installed to comply with the regulations. This could be implemented alongside a social tariff for low-income householders¹⁶.

In Our View, priorities for the Scottish Government should be:

- **Scale up funding for Home Energy Scotland to provide advisory services and signposting for more detailed technical advice.**
 - This would include **updating the Home Energy Check to provide initial advice on heating technologies.** To understand what measures are necessary, an on-site visit for a heat loss calculation is required. Either upskilling is necessary, or another service will be needed to carry out this function.
 - Householders should be able to access detailed **advice about which fabric improvements are needed to maintain affordable bills with various clean heating systems.**
 - **Digestible information should be provided to householders about clean heating systems,** including which electric heating systems are adequately efficient (such as modern storage heaters and heat pumps, compared with older storage heaters and panel heaters, for example).
 - **How-to-use guides and digestible information should be provided about how to use clean heating systems in the home including how to manage and maintain systems in addition to tariff and metering advice and support.**
 - **Advice should be expanded to include information about heat networks so that advice services are equipped to help householders to navigate the options presented.** Householders that sit within identified Heat Network Zones should not be disincentivised to transition to clean heating systems in the interim or left behind in the transition. Householders within identified zones should be encouraged to adopt a heat pump (or alternative electric system) in the meantime, if the wait for a Heat Network connection is likely to be longer than the lifespan of a heat pump. Funding should be in place for people living within identified Heat Network Zones to access alternative clean heating.
 - **The qualifying criterion and the supportive mechanisms should be reviewed** to ensure that funding processes are structured in a way that is widely accessible.

¹⁶ [Solving the cost of living crisis: the case for a new social tariff in the energy market - National Energy Action \(NEA\)](#)

- **The Service Delivery Team should be reviewed as a priority**, as this process has received persistent feedback about poor customer service, delays and escalations, which is a **barrier to action and a reputational risk that may disincentivise householders from complying** with the regulations.
- Engage with stakeholders to develop a **one-stop shop infrastructure**, ensuring appropriate coverage across the country, catering for both digital and non-digital customer journeys.
- **Support the development of the supply chain, skills, and the development of the grid to ensure that a country-wide transition to electric heating is feasible.**
 - The supply chain needs **advance communication** that the demand is coming to adequately prepare, hire, train and invest.
 - More **investment in training and education** is needed to support the diversification of skill sets to meet future demand. Partnership opportunities should be explored with third sector organisations, training providers, local authorities, installers, support organisations, and organisations that offer skill and technological development.
 - **Work needs to be carried out to build a supply chain in the Highlands and rural areas of Scotland** specifically, where the current supply chain is not capable of meeting present demands for work¹¹.
 - To provide clarity around **quality standards for retrofit**, for quality assurance and consumer protection purposes.
- **Scale up funding for Warmer Homes Scotland** to deliver a fuel poverty programme with end-to-end hand holding to a greater number of households, helping to achieve fuel poverty targets.
- Ensure **ongoing maintenance and support for householders** is accessible after installations take place.
- Ensure that **those who need access to additional secondary heating for energy security reasons are both permitted and are not faced with disproportionate costs** which may increase the risk of fuel poverty (such as paying for both the primary electric heating system, and additional secondary heating system).
- **Accelerate the reform of Energy Performance Certificates (EPCs)** so they can be used by householders to meet the regulations and by the Scottish Government to measure impact and compliance.
- **Continue to build and improve EPC data and make it accessible online.**

Question 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)?

Strongly Support

We welcome the clarity that these proposals will provide for the private rented sector (PRS) – both landlords and tenants. **The earlier date of 2028 is justified in terms of achieving the Scottish Government’s commitment to eradicate poor energy efficiency as a driver of fuel poverty.** Privately rented properties have lower energy efficiency ratings, on average, than any properties of any other tenure type¹⁷. The proposals should not come as a surprise to the sector. However, clarity on finalised standards and requirements should be communicated as early as possible to ensure landlords have sufficient time to prepare for compliance.

Requirements to Meet the Energy Efficiency Standard (Even If Using Clean Heating)

Changeworks agrees that private sector landlords should be required to meet the minimum energy efficiency standard, regardless of heating type.

By requiring private landlords to meet energy efficiency standards, heat loss will be reduced. This should improve running costs for tenants, ensure that it is possible to heat the home adequately, improve environmental impact and reduce pressure on the grid. The private rented sector has high rates of fuel poverty and private tenants are not generally empowered or able to improve the energy efficiency in their homes. Generally, less efficient clean heating systems are the cheapest to install and are expensive to run. If landlords prioritise reducing the upfront capital investment costs over longer-term running costs, there is a risk that replacing polluting heating systems will increase fuel poverty.

Other Properties

Empty homes, investment properties, second homes and short term lets should be required to also meet the minimum energy efficiency standard ‘backstop’ date of 2028, so that the bill does not unintentionally incentivise private landlords to remove their property from the market in favour of leaving the property vacant or letting it out as a holiday home.

Protection for Private Tenants

Protection is required to ensure private tenants are not faced with unreasonable rent increases or eviction to enable upgrades. Where there is reduction in energy bills, there may be justification for rents being increased to support the cost of investment. However, tenants must be protected from landlords who may seek to increase rents unreasonably, or who plan to evict tenants so that they can re-let at a higher rental price.

¹⁷[Energy Efficiency - Scottish House Condition Survey 2021: Key Findings \(www.gov.scot\)](https://www.gov.scot/resources/documents/2021/06/17_Energy_Efficiency_-_Scottish_House_Condition_Survey_2021:_Key_Findings.pdf)

Protection for tenants should ensure that the requirements do not lead to an exacerbation of fuel poverty. Even where higher rent could be justified through improved living environments, this could lead to a rise in fuel poverty due to tenants being ‘priced out’ and engaging in increased self-rationing behaviours, despite lower energy bills, due to rent increases.

There are mechanisms currently in place in Scotland to protect tenants from landlords who may seek to increase rents unreasonably (current rent cap¹⁸ and the forthcoming tapering mechanism¹⁹). However, should these protections change, **the Scottish Government should ensure sufficient protections are in place that would ensure that any rent increases due to renovation are in proportion to energy savings.** Any rent increases following ‘upgrading works’ should be capped. We propose that the French model be considered as an example, whereby rent increases following work cannot exceed 15% of the actual cost of the renovations (including taxes). There is **a need to protect tenants from “renoviction” – where a renovation is undertaken by a landlord that requires the tenant to move out of the property.** Legislative action should be taken to ensure that landlords cannot evict tenants to complete the work, or deny tenants the right to move back to their flats after the improvements have taken place.

The energy efficiency standards should be extended to short terms lets, holiday homes, Air BnBs, and vacant investment properties, to ensure that adequate housing is available for residents. There is a risk that if the standards are only applied to private landlords, the Bill could result in further saturation of the housing market because private landlords may prefer to invest in alternative business models.

Support for Private Landlords

Without the right incentives we could see a range of unintended and adverse outcomes for tenants, from cheap retrofits that dramatically increase home running costs, to evictions as landlords choose to leave the market. Therefore, **it is critical that landlords are provided with support.** Registered private landlords can currently access low interest loans for installing energy efficiency and renewable heating systems. Private landlords with tenants in fuel poverty can currently access grant funding via Warmer Homes Scotland if they are in receipt of eligible benefits or are a vulnerable age with an older, inefficient heating system. **Interest-free loans should continue to be available support landlords to meet the standard. However, whilst Warmer Homes Scotland grant funded upgrades should continue in the short term, this would no longer be adequate once the regulation is in place.**

A network of one-stop shops to support homeowners through the process of upgrading homes should be created. These services should be available to private landlords as well as owner occupiers, with costs being eligible for grant/loan funding where appropriate, ensuring end to end support and quality assurance (such as Changeworks EcoCosi service).

We recommend that the Scottish Government develops alternative financing mechanisms for the meeting the regulations (See our response to Question 1). However, it is essential that

¹⁸ [Changes from 1 April 2024 - Cost of living: rent and eviction - gov.scot \(www.gov.scot\)](https://www.gov.scot/changes/2024/04/01/cost-of-living-rent-and-eviction)

¹⁹ [Continuing rent protection for private tenants - gov.scot \(www.gov.scot\)](https://www.gov.scot/changes/2024/04/01/continuing-rent-protection-for-private-tenants)

Scottish Government works with the finance sector to ensure that supporting landlords to meet upfront capital costs does not transfer costs to the tenant.

Question 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

Changeworks somewhat **supports the proposal** for the Scottish Government to introduce a minimum energy efficiency standard to be met in owner occupied homes by the end of 2033. **However, we recommend that this be extended to households that have decarbonised their heating, as well as those that still have a polluting heating system.**

In order to reduce carbon emissions, from both electric and fossil fuel sources, homes should first reduce their heat loss, which should be done by taking a 'whole building' approach to retrofit, and by taking a fabric first approach as a minimum. **Homeowners should be incentivised to improve the energy efficiency of the property at the same time or in advance of having a clean heating system installed, to reduce costs and disruption.** For those homes that choose not to decarbonise their heating system until a heat network connection is available, investing in energy efficiency will **reduce carbon emissions and improve health and wellbeing** in the meantime.

It is important to apply the same minimum energy efficiency standard to all tenures (private-rented, owner-occupied, vacant and short term let properties) for the following reasons:

- There is no unintended incentive for private landlords to leave the PRS to avoid regulation.
- Encourages action in multi-tenure properties and supports whole building approaches.
- Supports a just transition so all people benefit from living in a warm, affordable to heat home.
- Mitigates the risk that the Bill will unintentionally increase or push occupiers into fuel poverty.
- Enables homeowners to make their homes 'renewable ready' so that their zero-emissions heating system will be as efficient and affordable to run as possible.
- The grid will not be able to support the demands for electricity if those with clean heating systems are exempt.

Requiring owner occupiers to meet the minimum energy efficiency standard also reduces a level of complexity to the current proposals - that householders are exempt from energy

efficiency requirements if they have not yet decarbonised their heating system but are waiting for a possible heat network connection. Furthermore, there is a public interest case for requiring homes that are connecting to heat networks to have met the energy efficiency standard, on the grounds that homes with poor energy efficiency could reduce the capacity for additional buildings to connect within each heat network zone.

This approach would **better enable energy efficiency requirements to be met in multi-tenure buildings**, as the efficiency of certain fabric measures (such as wall and flat roof insulation) is dependent on a 'whole building' approach to retrofit.

The electrical grid will not be able to support the electricity demand if those with clean heating systems are exempt. Heat loss through the fabric of the property will result in a greater electricity demand per household, which would require greater investment in the grid infrastructure and production of electricity from wind turbines and solar, and a restructuring of the wiring systems that deliver electricity to homes. A focus of the bill must be demand minimisation²⁰; Without country-wide improvements in fabric efficiency, current levels of investment cannot deliver the level of electricity production and grid expansion required to support electric heat in all of Scotland's homes.

Reducing Fuel Costs and Fuel Poverty

The Bill should not exacerbate fuel poverty for householders in Scotland and should work alongside the targets of the Fuel Poverty Act³ (as far as reasonably possible, no household in Scotland is in fuel poverty by 2040, and at a minimum no more than 5% of households in Scotland are in fuel poverty by 2040). By not requiring owner-occupiers to meet the energy fabric efficiency standard if they have already transitioned to a clean heating system indicated that the Bill is not aligned with the Fuel Poverty Act, which is a key gap in the legislation and a failure of the proposals.

A key priority for the bill should be increasing people's health, comfort and ability to pay. The proposed requirements do not adequately reduce end-use fuel costs. Requiring that owner occupiers improve the fabric efficiency of their homes by 2033 regardless of heating type is an important **step towards the reduction of fuel poverty in Scotland**. This will reduce end-use fuel costs for properties with (or transitioning to) electric heating systems and heat network connections. Changeworks acknowledges that a requirement to improve the efficiency of the home will create a cost burden on homeowners. However, evidence from the market suggest that homes which are energy efficient are more valuable, so this is not an unreasonable expectation. Funding support, alternative financing mechanisms, and cost-caps should apply to ensure that this is an achievable target.

Consumer Protection

Reduction in energy usage should somewhat protect householders (consumers) against volatile energy markets. For most properties, it should be noted that the minimum efficiency target we propose (120kwh/m²year space heating demand) (See our response to Question 2)

²⁰ BRE Client Report - Development work relating to a potential new metric for Scottish Energy Performance Certificates (www.gov.scot)

should be achievable without drastic upgrades and about 40% of Scottish homes already meet this target²⁰.

Agricultural Tenancies

We agree that the standard should apply to agricultural tenancies. In 2019 the Scottish Government introduced the requirement for agricultural tenancies to meet the Repairing Standard by 2027 with eight years allowed for compliance²¹. The intention was to introduce energy efficiency standards separately as part of the regulations for the PRS. Therefore, the sector has had ample time to plan and finance the upgrade of their properties. We support the intention that the proposed trigger points (See our response to Question 13) would require action by the buyer of an estate for all the domestic properties, including agricultural tenancies.

Question 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?

Strongly Support

Changeworks strongly supports the proposal to set a minimum energy efficiency standard that can be met through showing a good level of energy efficiency based on a reformed EPC fabric efficiency metric. We recommend this route over demonstrating that homeowners have installed a straightforward list of measures, as this does not offer the technical detail to fully evaluate the energy efficiency and decarbonisation level of a property. Accelerated EPC reform will be required to achieve this. If the Bill follows either a 'EPCs' or 'Sampling' approach to monitoring whether people are meeting the requirements set, EPC reform will need to be accelerated regardless.

BRE research showed that when installing the measures suggested in the list, a clear majority (around 66%) of Scottish homes could achieve this good level of energy efficiency²⁰. However, that leaves 34% of homes who would fall short. **Whilst the interim 'list of measures' approach is simple to communicate, this would not reflect where an owner has adopted a different approach to improving the energy efficiency of their home, or apply to 'hard to treat' properties.** For example, a homeowner could have carried out work that exceeds the fabric efficiency standard but excludes one of the measures on the list. Different measures will be more suitable, appropriate and affordable for different types of homes, so a one size fits all approach is not adequate guidance for homeowners.

We do not recommend a simplified list of measures be provided to homeowners as actions alongside a reformed EPC metric, as this would be more confusing for householders. For example, homeowners of properties with solid walls may assume the government is asking them to install secondary (cavity) walls, rather than being exempt from this requirement. Householders are

²¹ [Housing standards - Agricultural holdings and tenant farming guide - gov.scot \(www.gov.scot\)](https://www.gov.scot/housing-standards-agricultural-holdings-and-tenant-farming-guide)

already familiar with the EPC system and there is an imbedded public understanding of the visual information that the EPC presents.

Just Transition and Fuel Poverty

Harder or more costly to treat properties may be automatically exempted from the requirements through loopholes if a 'list of measures' approach is taken. This would be unacceptable as this would put **pressure on the grid** through increased demand, and householders and properties would be 'left behind'. The Scottish Government should uphold its commitment to a Just Transition²².

If hard to heat properties are considered to have 'met' regulations because the measures contained on the list cannot be installed and appropriate measures are considered 'unfeasible', householders will remain in fuel poverty. **Heating will remain unaffordable, and demand will not have been minimised for those living in the least energy efficient homes.** If property owners install clean, electric heating (in line with the requirements), **the Bill will push people into fuel poverty.** This is especially concerning if funding is not accessible for those living in properties considered to have met the standard.

Technical Considerations and Quality Assurance

A simplistic 'list of measures' approach may increase the risk of harm to buildings and health if inappropriate measures are installed. If inappropriate measures are installed in underheated homes, this will likely lead to increases in **condensation and to inadequate ventilation**, posing significant health risks to occupiers²³. Householders experiencing fuel poverty are at greater risk, as they are more likely to underheat homes for financial reasons. Recommendations for measures should be presented on a (reformed) EPC that incorporates a risk assessment of properties, carried out by suitability qualified professionals with an understanding of building pathology.

If the 'interim' approach is oversimplified, there is a significant risk to creating longer term problems within the building. Fixing one problem with a property (rather than taking a whole building approach) often causes issues elsewhere within the property. This has occurred multiple times previously in Government funded insulation schemes. Demonstrating a good level of energy efficiency based on the reformed EPC fabric efficiency metric would provide a more complete picture of the home. This metric approach is preferable as it has the potential to provide a greater degree of accuracy about thermal performance, taking account of the individual characteristics of the building, helping households make the right choices for their home.

The technical nature of retrofit should be taken into consideration and installations should be carried out by **registered installers for quality assurance** reasons. **We recommend that professionals be required to follow a national retrofit standard, based on a robust quality assurance framework.** This will result in better outcomes for occupiers and 'future proof' the legislation. Lack of quality assurance and consumer protection under previous national schemes,

²² [Just transition - Climate change - gov.scot \(www.gov.scot\)](https://www.gov.scot)

²³ [Health effects of damp and mould - Understanding and addressing the health risks of damp and mould in the home \(gov.co.uk\)](https://www.gov.co.uk)

such as the Universal Home Insulation Scheme (UHIS), have resulted in a legacy of poor-quality installations, which are still being addressed through current Area-Based schemes.

EPC Data

Another benefit of this approach is that **this would strengthen the EPC data available in Scotland**. A richer, more accurate database of EPC data is central to improving and accelerating Scotland's decarbonisation. Acquiring this data will enable Scotland to improve upon standards in the future, by enabling the identification of areas or building types that require targeted support. In order to acquire this data, and for monitoring and improving upon the approach going forward, all properties should be required to have a pre-installation (reformed) EPC certificate and a post-installation (reformed) EPC certificate carried out.

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

Somewhat Oppose

Changeworks does not believe that the initial proposed list of measures to meet the minimum energy efficiency standard is a suitable or adequate approach, for the reasons set out above (Question 4). Instead, the government should set a minimum energy efficiency standard that can be met through showing a good level of energy efficiency based on a reformed EPC fabric efficiency metric. Minimum energy efficiency standards should be varied by archetype, and based upon space heating demand or a heat loss measurement. The (reformed) EPC should be used to set targets for properties which are based on space heating demand range of 71-120 kWh/m²year, which presents realistic targets across all housing stock²⁰²⁴.

We recommend that target space heating demand range should vary by construction type, scaling up ambitions for property types where this is possible. This is paramount to meeting net zero targets. **We recommend that target ranges should be set (between 71 – 120 kWh/m²year), and clear guidance produced for each construction type, and property types with different form factors.** (For example, granite bungalows versus cavity flats will have very different fabric efficiency figures and suitable measures). This approach would also be beneficial in potentially mitigating all properties for which only the less ambitious target (120kWh/m²year) is achievable, eliminating the need for a simplistic 'one size fits all' list of measures to be provided as an alternative decarbonisation route.

EPC Reform

- EPC reform must be accelerated. The reformed EPC needs to be ready and rolled out to assessors well in advance of regulation.

²⁴ [A blueprint for retrofitting the UK's homes to meet the climate challenge - A policymaker's summary of the LETI Climate Emergency Retrofit Guide](#)

- EPC reform must ensure homeowners have a better understanding of the condition and performance of their homes.
- Inconsistencies in the ways that EPC assessments are performed should be addressed.
- Details of why and how assessors came to decisions regarding ‘assumed’ insulation measures should be recorded and clarified.

Any challenges with understanding the metrics should be addressed through public engagement.

To ensure a fairer approach to meeting the minimum energy efficiency standard, pre-install and post-install (reformed) EPC assessment costs should be met for those in fuel poverty.

Question 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?

Somewhat Support

Changeworks does not believe that the initial proposed list of measures to meet the minimum energy efficiency standard is a suitable or adequate approach, for the reasons set out above (Question 4 and 5).

If the Scottish Government were to adopt a ‘list of measures’ approach to setting the minimum energy efficiency standard, the government should as a minimum provide a list for measures appropriate for each property type *and* construction material.

Minimum performance criterion would need to be established for all of the measures suggested, for quality assurance purposes.

We recommend that professionals be required to follow a national retrofit standard, based on a robust quality assurance framework.

The government should **review the use of the vague terminology ‘where feasible’ within the legislation and offer further guidance of which measures are appropriate in specific circumstances.** This is likely to encourage many exemptions and cheap to install, inefficient measures. This is a particular risk in the private rental sector, as landlords may not be invested in the of running costs for electric heating in houses that are inadequately or poorly insulated, due to loopholes in the guidance. Likewise, homeowners without the means or will to install good quality insulation measures and heating systems may carry out the minimum requirements and take advantage of loopholes where possible. Even those with the empowerment to make their own decisions about the fabric and heating system may not realise that inadequate fabric and heating efficiency levels are likely to push the household into fuel poverty.

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

Yes

We believe that the most appropriate approach would be meeting the standard through achieving a heat demand/fabric efficiency rating as proposed in the reformed EPC consultation²⁵.

As detailed in our answer to Question 4, we believe that the fabric efficiency metric provides a much greater degree of accuracy and will contribute to a better understanding of our homes – both at a national level for monitoring purposes, but also at the householder level.

We recommend the government set a minimum energy efficiency standard that can be met through showing a good level of energy efficiency based on a (reformed) EPC fabric efficiency metric. Minimum energy efficiency standards should be varied by archetype, and based upon space heating demand or a heat loss measurement (not a cost-based measurement).

As we have set out in our response to question 5, we recognise that some properties that are in better condition, have had measures installed and/or are built of inherently more energy efficient constructions, may meet the target (120kwh/ m²year) or require minimal measures to do so. **We recommend that target ranges should be set (between 71 – 120 kWh/ m²year), and clear guidance produced for each construction type, and property types with different form factors.** (For example, granite bungalows versus cavity flats will have very different fabric efficiency figures and suitable measures). The measures most appropriate for each property should be included on (reformed) EPC reports.

‘Hard to treat’ properties should only be required to meet the less ambitious target (120kWh/m²year), eliminating the need for a simplistic ‘one size fits all’ list of measures to be provided as an alternative decarbonisation route. This alternative approach follows a just transition principle, by reducing the risk of automatically exempting the least energy efficient properties from the requirements. It is not acceptable to ‘leaving people behind’ and permit households under the regulations to continue living in cold and damp homes and fuel poverty.

Question 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.

Changeworks agrees that the use of bioenergy should continue to be permitted in certain circumstances. We understand that existing and new systems connected to a bioenergy heat network are considered as Zero Emissions Direct Heating as set out in the Heat Networks

²⁵ [Energy Performance Certificate \(EPC\) reform: consultation - gov.scot \(www.gov.scot\)](https://www.gov.scot/consultations/energy-performance-certificate-epc-reform)

(Scotland) Act²⁶. However, due to the adverse impacts on air quality associated with the burning of biomass for bioenergy, transitioning to alternative clean heating systems, such as heat pumps, should be actively promoted.

Permitted circumstances should be limited to buildings with existing individual bioenergy systems, where it can be evidenced that the bioenergy is produced from a sustainable source. Biomethane should be considered when it is used close to its production and not transported over long distances. The Scottish Government should consider how fuel sources used for bioenergy systems will be identified, as there is no reporting requirement for this at present and limited data available.

We anticipate that there will be very few buildings for which no other clean heating system is available. Where this is the case, permitting the use of bioenergy could be done through an exceptions process, which should be established by the Scottish Government through further consultation with key stakeholders.

Consideration would need to be given to ensure that those who must rely on bioenergy for heating are not 'left behind' from the transition or face increased fuel poverty from the proposals. The introduction of a **social tariff** would offer a sustainable solution by providing financial support to households that need it most¹⁶.

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

Strongly Support

We strongly support the proposal to introduce a requirement to end the use of polluting heating following a property purchase. The proposed backstop date of 2045 will not be enough to encourage action and achieve the interim statutory target of a 75% emissions reduction by 2030²⁷. Several European countries, such as the Netherlands, are already using regulation to phase out polluting heating and benefiting from a rapid uptick in installations²⁸, with a big boost to manufacturing, jobs and training.

The time of purchase is a sensible trigger for the following reasons:

- **This is a time when the buyer will already be considering renovations** and upgrades to the home – so installing energy efficiency and heat measures can be incorporated into these plans making it less disruptive and more cost-effective.
- **The buyer has access to the equity in the home** by a) negotiating a lower sales price to allow for the costs of meeting the standard; and/or b) including the costs as part of the mortgage.

²⁶ [Heat Networks \(Scotland\) Act 2021 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2021/12/section/1)

²⁷ [Update to the Climate Change Plan 2018 - 2032: Securing a Green Recovery on a Path to Net Zero \(www.gov.scot\)](https://www.gov.scot/publications/updates-to-the-climate-change-plan-2018-2032/pages/10/)

²⁸ [110,000 new heat pumps installed in 2022 in the Netherlands - European Heat Pump Association \(ehpa.org\)](https://ehpa.org/news/110000-new-heat-pumps-installed-in-2022-in-the-netherlands/)

By placing the obligation on the buyer, it means the buyer can choose whether or not to buy a property that will require compliance with the regulation. The seller can choose to comply with the regulation in advance of the sale as a way to make the property more attractive to buyers or can choose to leave the obligation with the purchaser.

The requirement to end the use of polluting heating should not apply in the case of a property that is in a heat zone but has not yet had notification that a connection to a heat network is available. However, householders that sit within identified Heat Network Zones should not be disincentivised to transition to clean heating systems in the interim or left behind in the transition. **Householders within identified zones should be encouraged to adopt a heat pump (or alternative electric system) in the meantime,** if the wait for a Heat Network connection is likely to be longer than the lifespan of a heat pump. Funding should be in place for properties within identified future Heat Network Zones to access alternative clean heating.

The Scottish Government should provide and clearly communicate a start date for this 'property purchase' trigger, which gives adequate notice. This requirement should come into effect by 2028, at the latest. Research has shown that there is much scope for the cost of clean heating systems like electric heat pumps to fall over time²⁹ which will make the switch easier and more attractive to households.

Question 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?

Yes - The grace period should be two years

We support providing a grace period of two years to end the use of polluting heating following the purchase of a property. This is a helpful measure which will allow homeowners and landlords to get advice, quotes, and the best design possible for their home.

A grace period of two years will be essential in allowing the supply chain to grow appropriately. The grace period should not be extended, as this would prevent the Scottish Government from upholding its 2030 interim climate target of reaching a 75% reduction in climate emissions and may inhibit or delay supply chain growth and tackling the climate emergency.

Limiting the grace period to two years may also **encourage households to undertake the work as part of other upgrades and renovation work** that often take place shortly after the purchase of a property. It should be clearly communicated to homeowners that any redecoration or new flooring should take place after the installation of a heating system and relevant fabric improvements (such as floor and internal wall insulation).

Some traditional buildings, such as tenements and multi-tenure buildings, and buildings in conservation areas may need a longer grace period than other building types. We recommend the **development of an assessment tool** that takes into account building type, construction type and

²⁹ [How to reduce the cost of heat pumps \(nesta.org.uk\)](https://www.nesta.org.uk/resources/publications/how-to-reduce-the-cost-of-heat-pumps)

geographical position (including the strength of the regional supply chain) to inform criterion for permitting extensions. However, properties that are more difficult to retrofit should not be exempted from this requirement.

Question 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

A cost-cap on the upfront capital costs to install the measures needed to comply with the Bill could be used to ensure that costs to householders are reasonable. However, ‘expensive to upgrade’ or ‘hard to reach’ individuals should not be left behind in the clean energy transition; The cost-cap should not be used for exemption of requirements, or to downscale ambition. This would result in properties remaining cold, damp, and draughty, and would place the occupants in or at risk of fuel poverty and reliant on increasingly out of date heating systems. If a cost-cap is applied to the upfront capital costs, it should be used to ensure that meeting the standard is affordable, and **extra funding or supportive financial instruments should be provided to those who exceed a cost-cap limit.** The Scottish Government should consider developing alternative financing mechanisms for householder support to ensure that these households are not left behind (See our response to Question 1).

The consultation suggests that a cost cap could be useful so that mortgage lenders know the maximum costs their customers will face. Changeworks recommends that this would be more effectively addressed by **an estimate for the costs to install a clean heating system in the particular property, calculated through a (reformed) EPC**, as costs will vary according to the type and level of fabric efficiency.

If the Scottish Government decides to adopt a ‘list of measures’ approach, without requiring householders to carry out fabric efficiency measures (and instead *recommends* fabric improvements), then **a secondary fuel bill cost-cap needs to be considered for those that cannot afford to improve the fabric efficiency of their homes**, cannot access funding to do so, or have particularly difficult to treat properties. The bill should not increase the risk of fuel poverty, and householders should not be ‘punished’ with unaffordable bills for transitioning to clean heat. If people who own hard to treat properties move to an electric heating system, then the regulations may result in increased fuel costs, disincentivising compliance. If this is the case, an **end-use price cost-cap** should be introduced to ensure that households who have been pushed into fuel poverty through compliance do not pay above the fuel poverty threshold. We recommend that this end-use cost cap be applied to any properties that must remain on bioenergy or gas (left behind in the transition) in the event that gas prices increase due to the nationwide shift towards electric heating³⁹. This approach would be consistent with the targets set out in the Fuel Poverty Act³ and would as a minimum ensure that the Bill doesn’t push people into fuel poverty.

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

Another

As is set out under Question 11, the cost-cap on the upfront capital costs to install the measures should not be used for exemption of requirements or to downscale ambition. This would result in properties remaining cold, damp, and draughty, and would place the occupants in or at risk of fuel poverty. If a cost-cap is used, it should be used to ensure that meeting the standard is affordable.

The Scottish Government should consider developing alternative financing mechanisms for householder support to ensure that these households are not left behind. For example:

- The government could pay the interest on the loans directly to widen accessibility.
- Personal loans could be offered with regulated interest rates, modelled on the current student loan fixed-term pay back model.
- The government could explore offering a stake in property ownership to householders, mirroring private equity release schemes.
- Retrofit costs could be collected alongside council tax so the debt sits with the property not the owner. Consideration would need to be given for how this debt would transfer to the landlord in the case that the property was privately rented.
- Debt from retrofit costs could be associated with the meter, collected by the energy company and passed to retrofit enabling agency. This would need to be paid by the tenant. The Scottish Government could explore ensuring that bills are capped at current end-usage prices, and the amount paid that surpasses the 'real cost' of energy is used to repay the capital costs of the measures installed to comply with the regulations. This should be implemented alongside a social tariff for low-income householders³⁰.

A means tested approach to the cost-cap

A one size fits all cap for a person without means testing or personal circumstances is not equitable **Changeworks does not recommend a purchase price-based cost-cap** be used, as this is inequitable. Average property prices vary significantly across Scotland. If a purchase price-based cost-cap were to be adopted, this would further 'push out' people who live in expensive areas. Property prices are already very high in certain regions in Scotland (such as the City of Edinburgh³¹), resulting in local people no longer being able to afford to live in their region. A purchase price-based cost-cap should not be used, as this is not equitable and does not follow the principle of a just transition. Similarly, basing the cost-cap on property size does not translate to the real costs of installations, as this doesn't consider the fabric efficiency of the property.

Ideally, the Scottish Government should set a means tested cost-cap on a sliding scale, set at a central point (based on average income or property retrofit price). This would be a more

³⁰ Solving the cost of living crisis: the case for a new social tariff in the energy market - National Energy Action (NEA)

³¹ UK House Price Index Scotland: January 2023 - GOV.UK (www.gov.uk)

equitable approach, as householders that are more able to pay for the upfront capital costs of the installations would be required to do so, and households that cannot afford to pay would be able to access financial support. This mechanism could also be used by property owners to calculate what level of grant assistance they are eligible to receive in advance.

If the Scottish Government does take a means tested approach to the cost-cap, the methods of applying cost-caps should be variable between clean heat installations and fabric improvements at a minimum.

Variable approach to the cost-cap

If the Scottish Government does not adopt a means tested approach to the cost-cap, Changeworks recommends that the **cost-cap for installing a clean heating system should be a flat-rate**. While the price of heat pumps, for example, is generally higher in rural areas, the homeowner should not be penalised for regional variance in installation costs. This has been a significant barrier to decarbonisation in remote rural areas¹¹. Thus, the price-cap should be applied throughout Scotland, supported by additional funding or alternative financing mechanisms for householder support.

Changeworks recommends a **size-based cost-cap should be implemented for fabric improvements**, if the requirement of meeting the energy efficiency standard is to be met by all private landlords, owners of empty homes, second homes and short term lets by the end of 2028 is to be introduced (in accordance with our recommendations – see Question 2). As we have detailed in our response to Question 3, Changeworks recommends that the requirement of meeting the energy efficiency standard should also be applied to all owner occupiers and agricultural tenancies, regardless of heating system type, by the end of 2033. If these requirements are legislated for, a size-based cost cap should be introduced, as fabric improvement costs such as floor insulation, cavity and solid wall insulation, loft and roof insulation are calculated based on size.

Question 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.

Strongly support

Changeworks strongly supports giving Scottish Ministers powers to extend the **circumstances in the future in which people could be required to end their use of polluting heating**. The proposals to phase out polluting heating and the property purchase trigger are not enough to encourage a sufficient number of households to switch to clean heating to meet Scottish statutory climate targets²⁷. Introducing additional trigger points will encourage investment in the

relevant technologies and heat networks earlier, supporting the much-needed **supply chain growth** to make the proposals viable.

Other Trigger Points

- Planned boiler replacement.

Planned boiler replacement should be considered a ‘trigger point’ for replacing polluting heating systems with a clean heating system. This should be enforced if the Scottish Government plans to cut off gas supply to homes in 2045.

Consideration will need to be given to whether this would be exempted if a property owner plans to connect to a heat network in the future.

Challenges surround enforcement of this trigger point, as there is currently no onus placed on households to report changing their heating system to the government. If enforcement penalties were to be introduced (which Changeworks recommends as a last resort) this would likely disincentivise reporting.

- Major renovation work which requires a permit

This would be appropriate as we recommend that the heating system should be replaced (with an appropriate clean system) when major renovation work is carried out, **following the ‘whole house/building’ approach to retrofit**. As there is an established authority involved, enforcement of this requirement would be feasible. Similarly to the ‘planned boiler replacement’ trigger suggested above, consideration will need to be given to whether this would be exempted if a property owner plans to connect to a heat network in the future. There may, of course, be reasons for major renovation work being necessary. Where this is the case, exceptions could be made on a case-by-case basis, with the onus on the property owner to prove that replacing the heating system at the same time is not an affordable option (with funding support).

Accessible funding for installing a clean heating system following these proposed trigger points would need to be made available.

Question 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

Changeworks strongly supports that powers be provided to local authorities and Scottish Ministers to require buildings within a Heat Network Zone to end their use of polluting heating systems by a

given date. However, there needs to be further clarification on how this would interact with the Heat Networks (Scotland) Act²⁶. There must be stronger evidence and **guidance from the Scottish Government**, especially in relation to zoning. Not only would this offer **clarity to homeowners**, but it would also give greater certainty to **potential heat network developers** about potential future customers, thereby de-risking projects. This de-risking has the potential to result in lower costs for homeowners and landlords.

We believe that local authorities should have the flexibility to apply the power at different times for different building types – for example, potentially requiring non-domestic or larger buildings to end their use of polluting heating first to ensure appropriate anchor loads for networks.

In the meantime, **all homes within prospective or indicative Heat Network Zones (HNZ) should be exempted from ending their use of polluting heating until such time as a heat network is available for connection** (although alternative clean heating options should be promoted, and funding support should be accessible in the interim). The Scottish Government should support the acceleration of heat networks, so an early steer on timelines can be made available to homeowners. Although this approach would result in more homes being exempted from the point of purchase requirement, research suggests that low carbon heat networks are likely to be the most convenient and cost-effective option for people living flats in more densely populated urban areas, since they reduce the space required for equipment and can harness economies of scale³². This may be a preferable option for many over other forms of electric heating, especially where heat pumps may not be suitable.

Robust Local Heat and Energy Efficiency Strategies

Early identification of Heat Network Zones, alongside robust delivery plans is essential.

This will enable homeowners to plan and make informed decisions about switching to clean heating, including decisions about any interim measures they may want to take in advance of connection to a heat network.

However, we are concerned that the early Local Heat and Energy Efficiency Strategies (LHEES), whilst identifying prospective Heat Network Zones, do not provide the level of confidence needed by homeowners to make informed decisions. There is a significant difference between being identified as being part of an indicative Heat Network Zone and knowing that within the next decade a heat network will be available for connection. **Ongoing work to collate LHEES Heat Network Zones should be accelerated**³³, as a number of Local Authorities have not yet published their plans, and there is not yet a central database containing this information or zone map.

There may be some **areas that would be suitable for heat networks but are not currently within Heat Network Zones** – such as some pockets of flatted properties. To date there also appears to be a focus on urban heat networks, with demand for heat networks in rural areas potentially being overlooked. Heat network zoning must also give recognition to the role of different

³² [Affordable Warmth: Next steps for clean heat in Scotland \(wwf.org.uk\)](http://www.wwf.org.uk)

³³ [Local authorities urged not to delay LHEES delivery plans \(changeworks.org.uk\)](http://changeworks.org.uk)

types and sizes of heat networks. To maximise resilience and choice, consideration should be given to the role of smaller systems/share ground-loops as well as larger centralised network.

Local authorities will need sufficient resources, not only to prepare LHEES, but also to deliver them. We are concerned that the pressures on local authority funding may result in LHEES progress stalling. We are also concerned that the ongoing resource requirement for delivering LHEES has not been sufficiently addressed.

Communication

There is an urgent need for clear communication from the Scottish Government and local authorities on the future role of heat networks. There is a high level of confusion in relation to the switch to clean heating, with many people for whom heat networks will be the most appropriate solution, being under the impression that they are going to be required to install a heat pump.

Exemptions

There may be instances where heat networks are exempted from requirements. Whilst this should not be encouraged, the **impacts of such exemptions upon neighbouring properties** (within a block of flats, for example) should be considered.

Question 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

Changeworks strongly supports the proposal to provide powers to local authorities and Scottish Ministers that require developers to connect new buildings to a heat network, wherever possible. In London, the model is already driving heat network expansion; Energy firm Vattenfall is partnering with developers to oversee the development of two separate heat networks in London, the largest of which Vattenfall anticipates will provide 75,000 homes with clean heat by the 2030s³⁴.

Ambition should be scaled up to include all buildings – not just new builds - to progress the network to a stage where heat network connection is a viable option for householders within the timelines proposed. We recommend that all key anchor loads within a designated heat network zone should be required to connect. This is essential to trigger private investment in heat networks. Without this requirement, there may not be clear signalling to potential investors that networks will be utilised. Without this, investment and financing may not be adequate to support the development of networks.

³⁴ [Vattenfall Heat increases pace of delivery for London heat networks \(sustainableconstruction-now.com\)](https://www.sustainableconstruction-now.com)

Furthermore, we recommend **public sector buildings should be mandated to connect to heat networks within heat network zones**. The Scottish Government should bring forward the relevant consultation date for this proposal. Public sector buildings such as schools and hospitals are crucial to heat network development as many should be required as anchor loads.

The wording used in the consultation should be amended, to provide greater clarity to householders. For example, the way heat networks are described as “clean heating systems that people will be able to use to comply with the Heat in Buildings Standard” suggests that people may be able to comply with the Bill by *installing* a heat network, as opposed to *connecting to an existing network*. Lack of clarity and unfamiliarity with the heat network infrastructure may lead to householders discounting this option.

The government should work to **provide adequate consumer protection for householders** buying energy delivered through heat networks. If financing is provided by the government for heat network connections, developers should remove the price of the infrastructure from the price of the properties. It should be ensured that additional profits are not being made here (via public spending or private investment). Developers could, for example, be charged a connection fee. Additionally, the government should give consideration to how the network operator can ensure that the cost remains the same for the end user (occupant).

Consideration should be given to the fact that some innovative heat network models do not rely on individual metering of households. These alternative energy systems should be factored into the development of the Bill, associated regulations and guidance produced.

Question 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

Changeworks strongly supports the proposal to require building owners of non-domestic properties to provide information about unused heat on their premises.

The definition of non-domestic properties should be clearly defined **to include industrial facilities**, such as grid transformers and other thermal energy emitting infrastructure which are not technically properties.

Information should also be provided about actions taken to reduce excess thermal energy, as methods may be employed by producers of excess heat to reduce thermal waste. We recommend that it should be required for companies to report any actions taken to reduce thermal energy, as the excess thermal energy could be better utilized in a heat network zone.

Question 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

Changeworks strongly supports that the Bill should require buildings with unused heat to provide this to a local heat network. To progress the network to a stage where heat network connection is a viable option for householders within the timelines proposed, further requirements should be introduced.

We recommend that **waste heat should be used as a secondary generation within network zones**. All waste heat generators that produce unused thermal energy (over an appropriate threshold) should be required to connect to a local heat network. The definition of 'buildings' should be clearly defined to include industrial facilities, such as grid transformers and other thermal energy emitting infrastructure.

We recommend that the Scottish Government **incorporate waste heat strategically into its climate mitigation strategies**, following the EU model. In 2023, the EU set a 2050 target for all heat networks to be either 100% renewable or waste heat³⁵. There is estimated to be 1,677 GWh of waste heat across 932 sites in Scotland³⁶. The largest waste heat potential is estimated to be in the distillery and wastewater treatment sectors. Utilising waste heat has the potential to both increase the viability of heat networks, and to reduce costs for end users. This should be considered as reducing risks of fuel poverty should be at the core of Scotland's decarbonisation strategy.

Consideration should be given to the **risk that waste heat is not currently fully available to heat networks as methods may be employed by producers of excess heat to reduce thermal waste**. For example, the building may install energy efficiency measures to reduce the waste heat to an extent that only enough excess thermal energy is produced for their own use. Any actions taken by companies to reduce thermal energy should not be permitted where the building/ infrastructure is in a heat network zone. Exemptions should be applied where reducing excess heat is a safety precaution.

Question 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

Monitoring is essential to ensure that sufficient progress is being made towards achieving both emissions reduction and fuel poverty targets. **It is critical to understand whether regulation is working, contributing to the achievement of fuel poverty targets, and whether the regulations, support and/or enforcement need to be strengthened.** We recommend that the

³⁵ 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.

³⁶ [Potential sources of waste heat for heat networks in Scotland \(climatexchange.org.uk\)](#)

Bill be monitored in a similar approach to a health service intervention, in order to ensure the best outcomes are being produced for occupiers.

We believe that the best way to monitor progress is through requiring the submission of EPCs, alongside a sampling approach to a proportion of buildings (linked to the Scottish House Condition Survey). Sampling a proportion of the buildings to ensure that people are meeting the Standard is necessary for the government to assess whether the legislation is effective and producing the intended policy outcomes.

Although requiring the submission of EPCs will result in a cost to homeowners, we recommend that a (reformed) EPC based fabric efficiency rating (based on space heat demand / heat loss) should be used to set the fabric efficiency targets (with varied targets dependent on property and construction type). We also recommend that all property owners comply with the targets before the end of 2028 (private landlords, empty homes, second homes and short term lets) and the end of 2033 (for owner-occupiers and agricultural tenancy). If these recommendations are to be adopted, all property owners would be required to submit post pre- and post-installation (reformed) EPCs. **The pre-installation (reformed) EPC would be required for property owners to find out which target range (within the energy efficiency standard) they should be aiming for in order to comply, and the appropriate measures and heating systems for their particular property.**

We recommend that post-installation (reformed) EPCs should be carried out to monitor compliance, assess the effectiveness of the Heat in Buildings Standard, ensure that measures are producing the intended outcomes, build up a much-needed wealth of detailed housing stock data, and enable property owners to better be understanding their properties. Requiring householders to submit (reformed) EPCs after installations also paves the way for Building Renovation Passports, which could form a core part of how we manage and maintain our homes in the future.

The submission of an installation certificate as an alternative route to monitoring through EPC submissions, as suggested in the Consultation, would be inadequate. Changeworks recommends that monitoring and impact evaluation need to be conducted. If the government misses carbon reduction targets due to inadequate monitoring practices, climate mitigation goals will be missed.

Furthermore, **if monitoring is not properly designed and does not give a true reflection of compliance, any decision making processes informing enforcement will be flawed.** People should not be undeservedly punished due to inadequate monitoring practices. Further, insufficient monitoring of compliance could mean that many slip through the cracks and get away with poor quality installations yet officially meet the standard. This would not be sufficient to meet climate targets, and would not exemplify a 'just transition' approach to climate mitigation.

Monitoring should take place either on representative samples of housing stock (across building types, construction technologies, and installations), or by installation project.

Monitoring practices should ideally commence at least 6 weeks before the installation of measures to establish a baseline performance of the properties sampled. Monitoring should **incorporate a range of data collecting techniques, such as energy usage, environmental sensors (which measure CO2 levels, humidity, and temperature), and lived experiences.** This can be

gathered through pre-installation and post-installation surveys. Lived experience data is key to ensuring that the projects are making a tangible difference to people's lives, reducing fuel poverty, and can supplement the technical data with necessary context for thorough evaluation, such as householder behaviours. It would be possible for homeowners to sign up for monitoring at the point of applying for funding (although this shouldn't be a requirement to access).

Consideration should be given to enabling EPC costs to be incorporated into financial support, reducing upfront costs where possible. Those at risk of fuel poverty should not have to pay for pre-installation or post-installation EPCs.

Question 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 Support a Mixture of the Above Options

Changeworks strongly supports a mechanism for enforcement (as a last resort), and our view is that enforcement methods should vary by tenure.

Changeworks recommends that extra council tax increases could be applied for those that own the properties. Landlords, owners of second homes, vacant properties, and short term lets should face civil penalties. Any additional income from enforcement mechanisms should be spent on supporting property owners to comply with the regulations. Council tax increases should under no circumstances be applied to private landlords, as it would be unjust for the tenant to be punished for the landlords non-compliance. This is not in line with a just transition and has strong potential to increase fuel poverty, of which private tenants are already at greater risk. 30% of private rented sector households were fuel poor in 2021¹⁷. In comparison, 9% of those with a mortgage and 14% of those who own their home outright were assessed to be fuel poor¹⁷. These percentages are likely to have risen significantly across all tenures since 2021.

Whilst market and financial product mechanisms may have a role to play, these cannot be relied upon in lieu of active enforcement practices. There is no indication that home/building insurance would adjust to reflect the Heat in Buildings Standard. There is the potential that mortgage lenders may adjust mortgages to lend the money to homeowners to enable the financing of fabric improvements and new heating systems. However, according to the 2011 census data, 45% of owner-occupied homes in Scotland were owned outright³⁷. As the proportion of households that own their property outright increases with age, this percentage have increased due to the ageing population³⁸. Some people with mortgages are retired, on a fixed income, or face other circumstances that mean taking on additional debt is not an option.

Additional monitoring and enforcement processes should be put in place for the Scottish Government to enforce the Standard at the trigger points proposed. The proposed trigger point of the purchase of a property, and the trigger point suggested in our response to Question 13

³⁷ 2011 Census: Key Results from Releases 2A - National Records of Scotland ([scotlandscensus.gov.uk](https://www.scotlandscensus.gov.uk))

³⁸ Scotland's Census 2022 - Rounded population estimates | Scotland's Census ([scotlandscensus.gov.uk](https://www.scotlandscensus.gov.uk))

(that property owners be required to install a clean heating system when carrying out major renovation work requiring a permit from the council) would be relatively straightforward to enforce, as reporting practices are also established.

If the Scottish Government follow our recommendation of the ‘planned boiler replacement’ trigger (outlined in our response to Question 13), consideration should be given to how boiler replacement practices would be monitored and reported. This may be difficult to encourage without introducing additional regulatory framework, as the tenure-based enforcement mechanisms outlined above would disincentivise transparency. We suggest the Scottish Government explore the possibility of legislating on trading standards to ensure that installers are disincentivised to replace boilers with polluting heating systems.

Enforcement as a Last Resort

Enforcement mechanisms, while essential, should be used a last resort. The focus should be on encouraging and enabling compliance through information, advice and financial support.

There are other avenues that should be explored to encourage compliance. These include:

- Effective awareness raising (of obligations and benefits)
- Easy to access advice and support (through a digital platform and a network of one-stop shops)
- Range of financial support mechanisms (both for individuals and place-based approaches)

The Scottish Government should clearly communicate to people that running costs will increase (for gas fuel especially) if the regulations are not met. We expect that as a higher proportion of Scotland’s housing stock disconnect, it is likely that gas system costs will be reallocated to remaining customers in order to sustain profits³⁹.

Consideration should be given by policymakers to ensure that any council tax increases or fines are not more appealing than improving the fabric and heating measures in the first place, but that any financial punishments don’t just further punish those who can’t pay.

There should be mechanisms (through alternative financing, extensions where needed and adequate funding support) to ensure that those who can’t pay upfront are given true opportunities for compliance.

Question 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?

³⁹ [Impact of Decarbonisation on Gas Distribution Costs – ACEEE Report June 2023 \(californiageo.org\)](#)

Somewhat Support

Some flexibility to meet the standard may be necessary in some limited circumstances, but this **should be limited to avoid creating too many loopholes which reduces the amount of activity (and carbon reduction) driven by the standard.** As we have suggested, the energy efficiency requirements should be based on recommendations made on individual (reformed) EPCs, and targets should be varied (between 71-120kwh/m²year) depending on the building and construction type. The higher (less ambitious) end of the target should be achievable for 'harder to treat' properties. There are likely to be cases where extensions and/or modifications will apply, and these should be considered by the Scottish Government on a case-by-case basis.

Where households have a limited ability to pay for upgrades, this should trigger more financial support from Government rather than an exemption, which should be a last resort. We believe that **an appeals process is a better way to modify/exempt some people from the standard, rather than the creation of exemption criteria.** There should be an easy to navigate process to evidence the need for an exemption, with support available for vulnerable households. Where exemptions are granted, they should be either an **'abeyance' (delay) or 'variance' (modification of the standard)** and not a permanent exemption. All should be time-limited given both technological and personal circumstances can change quickly, and it should be ensured that sale of the property is not prevented. Going forward, heat pump systems are likely to become more affordable as innovation and investment grows³². As such, the need for modifications/exemptions on the basis of cost is likely to reduce over time.

The bill should ensure that no households are 'exempted' from transitioning to electric heating. Wider **exemptions would not support climate targets,** and could be counterproductive for homeowners, since they would lock lower income households into higher long-term costs (energy bills) to avoid short term costs (to fit clean heating). In this situation, it would be better to **provide the support needed** for property owners to comply with the regulations. This supports a **just transition,** as it ensures that people who cannot afford to meet the requirements are not 'left behind'²². This is essential in ensuring that the Bill does not exacerbate risks of fuel poverty.

Exemptions would also reduce the impact of 'signalling' that supports investment in growing the supply chain and can also have a dampening effect on scaling of new and innovative technologies. However, financial support needs to be in place so that meeting the requirements is a possibility for all, as the bill should not result in the taking on of unaffordable debt to pay (which would also increase the risks of fuel poverty).

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

Technical

- Changeworks acknowledges that there are some situations where it is sensible to apply an exemption, such as in cases where there are **definite plans for demolition or major renovation** in the near future, and where there are grid constraints which would not allow

connection of a heat pump. Alternative options for a modified standard should be **considered on a case-by-case basis**.

- **Changeworks does not support the assumption that certain types of buildings would be eligible for a blanket modified standard or exemption because they are difficult to heat.** This would leave people behind, and householders would, as a result, be left in fuel poverty and cold homes that pose a risk to health²³. Those in fuel poverty would likely be **pushed into deeper fuel poverty by being left behind**, as the end-use costs of gas are expected to rise as gas system costs will likely be reallocated to remaining customers³⁹. The Scottish Government should uphold its commitment to a Just Transition²² and the targets established in the Fuel Poverty Act³²².
- **If the Scottish Government legislates that buildings with an *archetype category* be exempted or permitted a modified standard, there would be a number of challenges involved in identifying such properties.** There is limited data available for a number of atypical (and harder to heat) properties. The Scottish Government should consider how such buildings would be identified, such as traveller sites, mobile homes, homes using certain fuel types for bioenergy systems, moored houseboats that do not hold permanent licenses. Significant work would need to be done to link up current datasets to identify properties, especially if these are to be relied upon to measure compliance.

Individual and Household

- We do not think it is wise to try to identify certain individual characteristics which would qualify someone for an exemption. **The solution should be extra financial support, an alternative financing mechanism, extensions, or modifications**, and needs to be tailored to the individual's barrier to compliance.
- There should be an **easy to navigate** process to evidence the need for a modification or extension to the Standard. For vulnerable households, support should be provided to go through the appeals process.
- **Changeworks does not support the proposal for a blanket exemption to be applied for first time buyers.** First-time buyers are not a homogenous group and will have different needs. Furthermore, this blanket exemption could mean these properties (and the owners) are left behind in transition especially if they are repeatedly sold to first-time buyers. We are concerned about the proposal for a blanket exemption for first-time buyers. Some properties tend to be repeat first-time buyer properties, therefore if exempt, there is a risk that these properties will never be improved. This could result in first-time buyers only being able to access unimproved properties, with them being left behind in the transition. This exemption would also create complications in determining who is classified as a first-time buyer (for example, in the case of joint mortgages). Rather than being exempt, we think that additional support should be available to ensure installing clean heating is affordable, and consideration should be given to allowing **additional time** to comply.
- The Scottish Government should consider developing **alternative financing mechanisms for householder support** (See our response to Question 1). The Home Survey could include information for potential buyers about the costs needed for the property to comply with the standard, and inform buyers about alternative financing mechanisms.
- **Changeworks does not support the blanket exemption for individuals who move more than once before 2045.** Individual circumstances and needs will vary considerably

within this group, and this exemption would not enable Scottish homes to decarbonise and the rate and scale required to reach climate targets. The Scottish Government should instead consider developing alternative financing mechanisms for householder support to ensure that these households are not left behind. We outlined examples under Question 1 that would tie any debts from the upfront cost of compliance with the standard to the property, rather than the individual, to be paid through the meter, for example.

Rural Households

- We agree that rural and remote households will often face additional costs and complexities in meeting the standard. **We support the current approach of providing an uplift in the grant provided to help address these extra costs and this should be maintained.** Cost-caps should also enable rural households who face higher installation costs⁴⁰ to comply with the Standard proposed, as long as adequate support is provided beyond an identified, reasonable cost. The cost-cap should not be used to exempt, as this will not produce the levels of decarbonisation needed to meet climate change targets, and will 'leave people behind', contracting the approach of a just transition.
- Some properties will be geographically positioned in areas that make meeting the Standard difficult, due to challenges in accessing the supply chain⁴⁰. In these circumstances, extensions should be permitted. **Exemptions on the basis of remote rural location should not be considered**, as the proportion of households in remote rural areas in extreme fuel poverty is around three times the proportion in accessible rural areas and in the rest of Scotland¹¹ above. We recommend that **investment** from the Scottish Government should be prioritised to support **development and drive the rural supply chain**.

Historic and Environmental Considerations

- Changeworks recommends an urgent **review of planning restrictions on energy efficiency measures and ZDEH technologies for listed buildings and conservation areas** with the aim of facilitating compliance with the Heat in Buildings Standard. It is not reasonable given the climate crisis and fuel poverty concerns that these households are left behind.
- It is important that properties within a conservation zone are not given blanket exemptions, as there remain a number of actions which can be taken to improve the energy efficiency of such properties, which **should not be considered a homogenous category**. Changeworks urges that the fabric efficiency target ranges (See our response to Question 5) should be followed for such properties, and modified standards should be permitted on a case-by-case review basis.

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

Somewhat Support

⁴⁰ [Scottish Fuel Poverty Advisory Panel \(2022\) Recommendations to Scottish Government.](#)

As we have outlined in our response to Question 21, Changeworks do not think it is wise to try to identify certain individual characteristics which would qualify someone for an extension, although extensions are preferable to exemptions.

The Scottish Government should take a **case-by-case approach** to identifying cases for extensions but should prioritise the provision of alternative solutions such as additional funding support or an alternative financing mechanism. The solution needs to be tailored to the individual's barrier to compliance and ensure that nobody is left behind.

As outlined previously, there should be an **easy to navigate** process to evidence the need for a modification or extension to the Standard. For vulnerable households, support should be provided to go through the appeals process.

If people are permitted extra time to comply with the standard, **consideration needs to be given to what this may mean for other households within the building**. Changeworks recommends following a whole building approach to the installation of measures, and permitting households extra time may impact upon the ability of other flats within a block to comply with regulations.

Question 23: Which people, businesses or types of buildings, if any, should be eligible for extra time?

People

- Changeworks do not think it is wise to try to identify certain individual characteristics which would qualify someone for an extension, although extensions are preferable to exemptions (See responses to Questions 21 and 22).
- The Scottish Government **should first ensure that support has been provided** to enable the property owner to comply within the deadlines. Solutions should be tailored to individuals and specific barriers to action. Householders should have **access to support** to understand the need to transition, know what options are available to them, understand which measures are appropriate for the home and to access sufficient resources to carry out the installations.
- An **enabling support framework should be established**, including a **network of one-stop shops offering end to end support**, handholding where needed, and financial mechanisms that make warm homes with clean heating affordable to all. Changeworks proposes that the Existing Homes Alliance's briefing⁴¹ *'Making retrofit work: a customer journey with people at its core'* be used as a guideline in the development of this framework.
- Rural and remote households will often face additional costs and complexities in meeting the standard. **We support the current approach of providing an uplift in the grant provided to help address these extra costs and this should be maintained. Exemptions on the basis of remote rural location should not be considered**, as the proportion of households in remote rural areas in extreme fuel poverty is around three times the proportion in accessible rural areas and in the rest of Scotland¹¹ above

⁴¹ [Making Retrofit Work - a customer journey with people at its core \(existinghomesalliancescotland.co.uk\)](https://existinghomesalliancescotland.co.uk)

Businesses

- Businesses should not be eligible for extra time to meet the regulations.

Types of Buildings

- **Changeworks does not recommend the categorisation of certain types of buildings as eligible for extensions (see our response to Question 21).**
- If extensions were permitted for homes that are difficult to heat, **this approach would leave people behind, and householders would, as a result, be left in fuel poverty and cold homes that pose a risk to health²³.** Those in fuel poverty would likely be pushed into deeper fuel poverty by being left behind, as the end-use costs of gas are expected to rise as gas system costs will likely be reallocated to remaining customers³⁹. The Scottish Government should uphold its commitment to a Just Transition²² and the targets established in the Fuel Poverty Act³²².
- **Extensions should only be permitted as a last resort**, as allowing properties extra time for compliance may prevent neighbouring properties (such as flats within a block) to take action if a whole building approach to retrofit is followed (which Changeworks recommends).
- **If the Scottish Government legislates that buildings with an *archetype category* be given extra time to meet the regulations, there would be a number of challenges involved in identifying such properties.** There is limited data available for a number of atypical (and harder to heat) properties. The Scottish Government should consider how such buildings would be identified and how compliance would be assessed.
- Changeworks recommends an urgent **review of planning restrictions on energy efficiency measures and ZDEH technologies for listed buildings and conservation areas** with the aim of facilitating compliance with the Heat in Buildings Standard. It is not reasonable given the climate crisis and fuel poverty concerns that these households are left behind.

Question 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

While Changeworks' expertise is the decarbonisation of domestic properties, we recognise the key role public buildings will have in the heat transition. They can:

- De-risk heat network proposals by providing the anchor heat load.
- Reduce costs of connection to a heat network for homeowners and landlords by spreading the upfront capital costs.

- Provide leadership in the heat transition and demonstrate the benefits to others.

In order to effectively lead by example, public sector bodies should be required to meet the Net Zero Public Sector Buildings Standard⁴² at an earlier date than 2038. This is currently a voluntary standard (for new and major renovations) for publicly owned buildings, though required if receiving public money. Consideration should be given as to how this standard could be extended to buildings which are leased by the public sector.

There needs to be greater transparency across all 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.

Question 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.

- A) Placing a new duty on public sector organisations which would, from 2025, prevent them from replacing a polluting heating system with another (unless impractical);**

Changeworks supports Option A: Placing a duty on public sector organisations to prevent them from replacing a polluting system with another polluting system from 2025. Points B and C on new duties should be captured through the new statutory guidance for public bodies duties under the Climate Change Plan (currently under development).

Question 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

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.

- 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. Enhanced visibility is needed for information on progress to be accessible. We recommend that the Scottish Government commit to **annual reporting**.
- The previous renewable heat target of 11% of heat (Climate Change Scotland Act 2009⁴³) to be met by renewables (other than electricity) was not met, and progress was estimated to be approximately 6.4%⁴⁴. Progress made towards this target was met primarily by biomass heating. As Scotland transitions away from biomass fuel, the **methods for establishing and reviewing targets should be reviewed as a priority**.

⁴² [Net Zero Public Sector Buildings Standard - The Standard August 2023](#)

⁴³ [Climate Change \(Scotland\) Act 2009 \(legislation.gov.uk\)](#)

⁴⁴ [Renewable heat target and action: 2021 update - gov.scot \(www.gov.scot\)](#)

- In order for adequate measurement to take place to determine progress against a set target, a **mechanism for data collection** on heat pump installations and connections to heat networks is essential.

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

Yes

We agree the Heat Networks (Scotland) Act 2021 should be amended in light of the passage of the Energy Act 2023 to ensure consistency in terms of definitions. It is not yet clear how exactly Ofgem’s authorization processes as the heat networks regulator are going to differ from the Heat Networks (Scotland) Act 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.

However, there is a need to ensure alignment across the UK to ensure a level playing field for companies operating across the UK. To achieve this, Scotland may need to change its definitions. This will be dependent upon ongoing discussions between Ofgem and the Scottish Government.

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

Heat Network Zones

The Scottish Government should consider amending the Heat Networks (Scotland) Act to require **new developments that are located within a Heat Network Zone to be heat network ready.**

Industry discussions during the Heat Networks (Scotland) Act’s Stakeholder Engagement Groups’ work on ‘Building assessment reports and heat network zoning’⁴⁵ 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 no process for economic analysis included 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** and an economic analysis component of the zoning guidance should be legislated for as a priority.

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 out with the powers being awarded to local authorities. A mandate may be appropriate in these circumstances. Isolated tower blocks are likely

⁴⁵ [Heat Networks Regulations Advisory Group - gov.scot \(www.gov.scot\)](http://www.gov.scot)

to be in areas outside zones. The strategic approach to zoning should be reviewed with a view to overcome this challenge.

Mandating public sector buildings that are required for heat networks should be an element of the Bill. This should not be delayed by a number of years by a requirement for further consultation.

Changeworks has been leading the way in delivering high impact solutions for low-carbon living for over 35 years.

Get in touch with the team to discuss how we can help you.

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