

Fairer Scotland Duty (FSD) Assessment for New Build Heat Standard 2024

June 2023

Fairer Scotland Duty (FSD) Assessment

Title of Policy

The Building (Scotland) Amendment Regulations 2023
(New Build Heat Standard)

Summary of Aims and Expected Outcomes

The aim of the New Build Heat Standard (NBHS) is to prohibit the use of direct emissions heating systems in new buildings applying for a building warrant from 1 April 2024 onwards. Instead, where there is an installed heating system contained within the curtilage of a new building, it will be required to be a zero direct emissions heating (ZDEH) system i.e. one which produces negligible direct greenhouse gas emissions at the point of use. This requirement will also apply to specific types of conversions (however, only in certain circumstances).

It is expected that the following four key outcomes will be delivered through the introduction of the NBHS:

1. Heating in our new buildings no longer directly contributes to climate change;
2. The heating systems in our new buildings provide us with a reliable supply of heat;
3. Opportunities for retraining and upskilling of workforce across Scotland; and
4. Our indoor and outdoor spaces will have cleaner air.

Who will it affect?

The policy will directly affect developers (both domestic and non-domestic), manufacturers, installers, and the wider heating supply chain.

In addition, the policy will directly impact people purchasing new homes, and will indirectly affect those either living in or using new buildings – as well as those undertaking conversions of existing buildings (however, this is only where certain criteria are met).

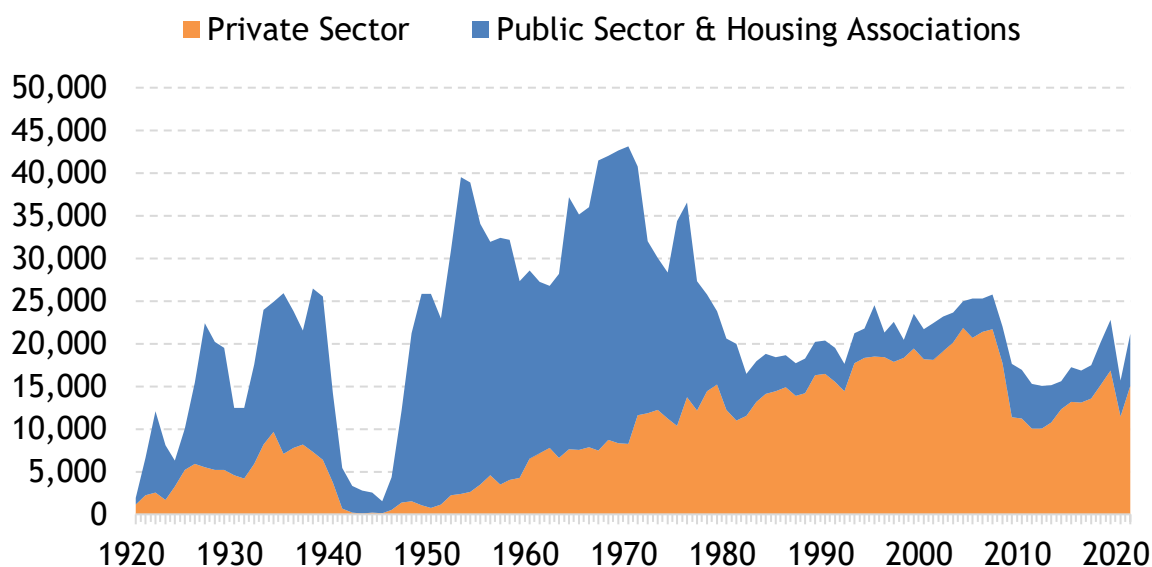
Summary of Evidence

Existing inequalities of outcome, caused by socio-economic disadvantage, in this specific policy area:

As the focus of this policy is concerned with the use of heating and cooling systems within newly constructed buildings, evidence on existing inequalities of outcome caused by socio-economic disadvantage in this specific area is limited. As

demonstrated below, the bulk of available data relates to Scotland's building stock as it exists *now*, and at a high-level (not specifically focused on new-builds).

Figure 1: New build home completions per annum, by sector (1920 to 2021)¹



Social rented sector

The contribution of the public sector and housing associations to new-build home completions has varied over time, as shown in Figure 1 above. In the past decade, the sector has contributed an annual average annual of 26%, with the private sector responsible for the remainder.

Private sector

There is limited data available surrounding the socio-economic status of those purchasing new homes.

However, data on the all new-build Help to Buy (Scotland) Scheme² shows that for 2020/21:

- 79% of Help to Buy (Scotland) households were first time buyers in 2020/21.
- 46% of purchasers had previously been living with parents or relatives, 27% in a privately rented property, 19% had been previously living in a property they were paying a mortgage on, 6% had lived in social rented housing, and 2% in other accommodation.
- 62% of purchasing households had a gross household income between £30k and £50k per year.
- The average value of a Help to Buy property purchased in 2020/21 was £179,400, with the average Scottish Government stake being £26,500.

¹ [Housing statistics quarterly update: new housebuilding and affordable housing supply - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/housing-statistics-quarterly-update/new-housebuilding-and-affordable-housing-supply-2023/pages/10-to-15-completions-by-sector.aspx), Scottish Government (2023).

² [Help to buy \(Scotland\) Characteristics of Households Report: 2020-2021](https://www.gov.scot/publications/help-to-buy-scotland-characteristics-of-households-report-2020-2021/pages/1.aspx), Scottish Government (2021)

- Around four in five (79%) purchasers were households without any dependent children living in the household, with around a fifth (21%) having children.

However, it is important to highlight that the above figures only cover a small proportion of all new build home sales, and thus are not representative of the wider market.

With respect to the new-build residential market as a whole, statistics for Financial Year (FY) 2021/22 show that:³

- There were 11,552 new-build residential property sales, comprising 12% of overall residential property sales in Scotland over the period.
- The average price for a new-build residential property in Scotland was £253,445, a 14% increase when compared with the previous year, when the average price was £221,767; in the last 10 years the average price for a new-build residential property has increased by 52% compared with 37% across all residential properties.
- The average price of a residential property in Scotland was £176,342, whilst the average existing-build price was £172,551, almost 1/3 lower than the average new-build price.

Fuel poverty

The Scottish Government's Fuel Poverty Strategy was published in December of 2021,⁴ following the publication of the Heat in Buildings Strategy in October of the same year.⁵ The Fuel Poverty Strategy sets out policies and proposals for national government, local authorities, and third sector partners to help Scotland make strong progress towards the targets set out in the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019.

The latest Scottish House Condition Survey (SHCS)⁶ holds a series of key findings relating to fuel poverty. It should be noted that the latest SHCS pertains to 2019, and thus does not reflect the recent cost of living crisis. These include:

- In 2019, an estimated almost 25% (around 613,000 households) of all households were in fuel poverty. Just over 12% of all households (around 311,000 households) were living in extreme fuel poverty in 2019. Those households who are in *extreme* fuel poverty are a *subset* of those who are in fuel poverty.
- Fuel poverty and extreme fuel poverty have a strongly negative association with income, with rates increasing as weekly household income decreases. However, although low income is associated with fuel poverty, it is not equivalent to it. For example, 73% of fuel poor households in 2019 were also income poor, whilst the other quarter (27%) would not be considered income poor.

³ UK House Price Index: reports 2021 - GOV.UK (www.gov.uk), HM Land Registry (2022).

⁴ Tackling fuel poverty in Scotland: a strategic approach - gov.scot (www.gov.scot), Scottish Government (2021).

⁵ Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot), Scottish Government (2021).

⁶ Scottish house condition survey: 2019 key findings - gov.scot (www.gov.scot), Scottish Government (2020).

Taking into account the cost of living crisis, it is estimated that the fuel poverty rate for April 2023 is 37%, or 920,000 households. This is mainly driven by higher energy prices.

It is important to stress that the above fuel poverty statistics do not differentiate between newer buildings and Scotland's older building stock.

It is probable that those moving to a new-build property in the social rented sector would benefit from the higher levels of energy efficiency among new-build properties, which are associated with a reduction in fuel poverty. However, this could be outweighed in some cases by potentially higher running costs associated with the ZDEH system installed (when compared to a DEH alternative). Higher running costs are a driver of fuel poverty, especially in the Social Sector where incomes are lower. For a discussion of the difficulties in estimating the differences in running costs between DEH systems, such as gas boilers, and heat pumps (a ZDEH technology), please consult the NBHS Business and Regulatory Impact Assessment (BRIA).

Although not new-build specific, economic analysis feeding into the Cost of Living (Tenant Protection) Scotland Bill showed that housing costs as a proportion of net household income for those who owned a home outright and those who own a home with a mortgage is lower relative to those in the rented sector.⁷ Further to this, it also showed that the levels of financial vulnerability for households who owned outright (9%) and those who own with a mortgage (24%) is considerably lower than for those in the private rented sector (40%).

The above figures of housing costs and financial vulnerability suggest that those who own outright and those who own with a mortgage are less likely to be in financial vulnerability and, therefore, could be less likely to fall into fuel poverty. As the price required to purchase a new-build home is likely to require a household to hold a relatively high income (compared to the income required to purchase an existing-build property), this suggests that the level of financial vulnerability and, therefore, the likelihood of falling into fuel poverty, for those who can purchase a new-build home could be even lower.

Air quality

Poor air quality is a health inequalities issue⁸, due to the disproportionate effects on some members of the population such as people who are very young, the elderly, and those with pre-existing medical conditions.

The Scottish Index of Multiple Deprivation (SIMD)⁹ contains extensive and valuable data which can be used to explore evidence of links between socially deprived communities and air quality. The relationship between deprivation and air quality is complex, and it is not always the case that the most deprived areas will experience

⁷ [Cost of Living Bill: economic background - gov.scot \(www.gov.scot\)](http://www.gov.scot), Scottish Government (2022).

⁸ [Cleaner Air for Scotland Health Environment Working Group Report \(scottishairquality.scot\)](http://scottishairquality.scot), Scottish Government (2015).

⁹ [Scottish Index of Multiple Deprivation 2020 - gov.scot \(www.gov.scot\)](http://www.gov.scot), Scottish Government (2023).

the worst air quality. At the same time, those who generate the least air pollution are often those who suffer its effects most. Low access to economic opportunity often combines with poor health, low activity levels, and reduced access to affordable mobility, all of which have the potential to exacerbate the impacts of air pollution.

Air pollution is one amongst several ways in which deprived communities may experience poorer quality environments. There are well documented inequalities in the distribution of pollutants in the UK¹⁰.

Urban populations in the UK spend around 80-90% of their time indoors; the quality of the indoor air is therefore at least as important as that of outdoor air. Most enclosed spaces have a wide range of indoor emissions including from the use of combustion appliances such as gas and solid fuel cookers, boilers, and stoves¹¹.

Possible impacts of the policy/programme/decision, as planned, on those inequalities of outcome:

Fuel poverty

Note: All figures in this subsection are drawn from the 2019 SHCS, unless specified otherwise.¹² As such, the exact figures do not reflect the recent cost of living crisis. We may expect the fuel poverty rate to be higher now in the presence of higher energy prices.

We currently estimate the fuel poverty rate to be 37% or 920,000 households in April 2023.

As noted above, higher levels of fuel poverty are experienced by those using electricity for heating (43%) as opposed to direct emissions heating alternatives (31% or less). However, it should be noted that the vast majority of households that currently use electricity for heating in Scotland do not use highly efficient heat pumps, which would be expected to have lower fuel bills relative to direct electric systems.

Despite social housing being, on average, more energy efficient than private housing (respective mean Energy Efficiency Ratings of 68.5 versus 63.7), those in the social sector experience a higher rate of fuel poverty (37% versus 20% in the private sector). However, those in the private *rented* sector experience a rate of fuel poverty broadly similar to that in the social sector (36%). Those with a mortgage experience a relatively low fuel poverty rate of 12%, and thus discussing the “private sector” in aggregate terms (grouping the private rented and owner occupier sectors together) masks heterogeneity between private tenure types. Differences in fuel poverty between tenure type and sector are likely mainly driven by differences in income and energy costs, with 46% of those renting from a council or housing association and 34% of those in the private rented sector classed as being in relative income poverty.

¹⁰ [Impact on the Environment Scotland's Environment Air Quality, Health, Wellbeing and Behaviour Review \(environment.gov.scot\)](https://www.environment.gov.scot), IOM (2015).

¹¹ [Indoor Air Quality Report \(defra.gov.uk\)](https://www.defra.gov.uk), DEFRA(2022).

¹² [Scottish house condition survey: 2019 key findings - gov.scot \(www.gov.scot\)](https://www.gov.scot), Scottish Government (2020).

These compare with relative income poverty rates of 13% and 8% for those who own outright and those with a mortgage, respectively.¹³

Levels of fuel poverty experienced by occupants of newly built homes are unknown. However, across the overall dwelling stock, data suggests rates of fuel poverty are lowest amongst households living in relatively new dwellings (20% of households living in post-1982 dwellings) and dwellings with higher energy efficiency standards (20% in dwellings rated Energy Performance Certificate (EPC) band C or better). Current building standards require high levels of energy efficiency, with almost 94% of new-build domestic EPCs for which the date of assessment occurred between 2018 and 2022 falling into EPC band B.¹⁴ Furthermore, the prevalence of more efficient heating technologies (such as heat pumps) is low amongst existing dwellings relative to amongst new-builds; these will go some way to mitigating the higher unit cost of electricity. Overall, this suggests energy efficiency as a driver of fuel poverty may be less of a concern for new-builds than across the general housing stock. Nevertheless, the social rented sector has the highest rates of both energy efficient dwellings (56% EPC C or above in 2019) and highest rates of fuel poverty (37% in 2019) indicating that the price of the heating fuel and income remain important drivers of fuel poverty.

Another key driver of fuel poverty is low household income. The average new-build residential property price in 2021/22 was £253,445, with this comparing to £172,551 for an existing-build. Considering the additional cost premium associated with newly built homes of 47%, it can be assumed that household income would – generally – need to be higher in order to afford this. This further suggests the fuel poverty rate in newly built private homes may be smaller relative to in older buildings.

Fuel poverty may remain a concern for some households, particularly those in new social housing. However, the higher levels of energy efficiency required for new-builds, both for fabric and heating system, will continue to be a mitigating factor.

Housing costs

Another potential impact may be on new-build house prices, if developers choose to pass on the price differential between DEH and ZDEH systems on to consumers. This could pose an additional barrier to low-income households purchasing a new-build property.

However, there are numerous factors which determine house prices (from land valuations to wider housing market and economic conditions), so this is difficult to predict or measure.

Air quality

¹³ [Poverty and Income Inequality in Scotland 2019-22 \(data.gov.scot\)](#), Scottish Government (2023).

¹⁴ [statistics.gov.scot : Domestic Energy Performance Certificates - Dataset to Q4 2022](#), Scottish Government (2022).

The issue of air pollution caused by high levels of emissions has been explored recently and highlighted with the attribution of air pollution as a cause of death.¹⁵ Domestic heating involving oil or wood is a highly polluting sector in the UK for fine particulate matter (PM_{2.5}).¹⁶ In-building emissions that are produced from the combustion of fossil fuels include carbon dioxide, methane, nitrous oxides, and particulate matter.¹⁷

Alternative approaches to the policy/programme/decision:

UK approach

The UK Government is introducing similar requirements from 2025, through their Future Homes Standard (FHS)¹⁸ and Future Buildings Standard (FBS)¹⁹. Similar to the NBHS, the FHS will require new-build homes to be “*future-proofed with low carbon heating and world-leading levels of energy efficiency*”. These proposals are envisaged to come into force in 2025 and represent the actions that will be taken in reserved matters. While heat is devolved, regulation of gas, electricity, and heating oil is reserved – and, without action at a UK-level (such as the prevention of new gas grid connections for new-builds), we must take action within the competence of Scotland’s fully devolved building regulations.

International alignment

Progress towards delivering Scotland’s 2045 net zero targets aligns with European Union (EU) law under the European Climate Law²⁰.

Furthermore, the existing Energy Performance of Buildings Directive (EPBD)²¹ has already been transposed and currently requires that all new buildings be “*nearly zero-energy buildings*”.

The draft recast of the EPBD²² is targeting a zero emissions building stock by 2050. The European Commission is seeking to introduce requirements that, as of 2030, all new buildings must be zero-emission buildings, with new public buildings having to be zero-emissions starting from 2027. Annex III of the draft recast lays out that a

¹⁵ [Air pollution: Coroner calls for law change after Ella Adoo-Kissi-Debrah's death - BBC News](#)

¹⁶ [Chief Medical Officer's annual report 2022: air pollution - GOV.UK \(www.gov.uk\)](#), Department of Health and Social Care (2022).

¹⁷ [Direct greenhouse gas emissions from low and zero carbon heating systems \(climatexchange.org.uk\)](#), ClimateXChange (2022).

¹⁸ [The Future Homes Standard: changes to Part L and Part F of the Building Regulations for new dwellings - GOV.UK \(www.gov.uk\)](#)

¹⁹ [The Future Buildings Standard - GOV.UK \(www.gov.uk\)](#)

²⁰ “*Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter.*” Source: Article 2(1) of [Regulation \(EU\) 2021/1119 of the European Parliament and of the Council](#).

²¹ [Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings \(recast\) \(legislation.gov.uk\)](#)

²² [Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the energy performance of buildings \(recast\) COM/2021/802 final. EU \(2021\)](#)

“zero-emission building shall not cause any on-site carbon emissions from fossil fuels.” Therefore, the requirements of these regulations will help to ensure EU alignment in this area.

Key evidence gaps:

There is a clear gap in evidence relating to socioeconomic information on the occupiers of newly built homes (for example, those less than one year old), as most of the data relates to Scotland’s existing building stock. This complicates matters as almost a fifth of Scotland’s stock of homes are pre-1919, and a further 11% date back to between 1919 and 1944.²³

In an effort to address this gap, the following question was asked as part of the initial Scoping Consultation²⁴:

- *“By introducing this Standard, what challenges or opportunities might result for households on low incomes (for example, around affordability or access), and how can the Scottish Government best take account of these?”*

This question was drafted with input from colleagues in the Office of the Chief Social Policy Adviser (OCSPA).

92 responses to this consultation were received, and respondents included:

- Citizens Advice Scotland
- Community Energy Scotland
- Development Services, Falkirk Council
- Dumfries and Galloway Council
- East Ayrshire Council
- East Dunbartonshire Council
- Fife Communities Climate Action Network
- Glasgow City Council
- North Ayrshire Council
- North Lanarkshire Council
- Osprey Housing
- Perth & Kinross Council
- Rural and Islands Housing Association Forum
- Scottish Borders Council
- Scottish Federation of Housing Associations
- Shetland Islands Council
- South Lanarkshire Council
- The Energy Poverty Research initiative, 100% Renewable UK, & Common Weal (joint response)
- West Dunbartonshire Council and Strategic Housing Partners
- West Lothian Tenants Housing Network

An independent analysis of the responses received was carried out by Why Research, and a summary of the findings is as follows below.

Challenges

²³ [Scottish house condition survey: 2019 key findings - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/10-introduction.aspx), Scottish Government (2020).

²⁴ [New Build Heat Standard: scoping consultation - Scottish Government - Citizen Space](#)

- Concerns were raised about potential increased energy costs and bills with an impact on affordability of energy.
- Related points were made about the negative effects on fuel poverty, in terms of encouraging inappropriate heating sources - which may be cheaper to install but more expensive to run - and the lack of access to new-build properties by those considered to be fuel poor.
- Other challenges postulated by small numbers of respondents were the possibility of higher rents and other associated property costs.

Benefits

- Conversely, a majority of respondents foresaw that lower energy use in housing would be a major benefit for low-income households.
- Greater efficiency was visualised as resulting in a reduction of costs, no future retrofitting being necessary, and a reduction in fuel poverty as long as standards are implemented effectively.
- Other advantages cited for low-income households by small numbers of respondents were an improvement in health standards (due to better air quality and thermal comfort) and the possibility of local community ownership via local heat networks or systems.

Suggestions

- Some respondents stated that it would help if developers were allowed flexibility to meet the NBHS through the use of various technologies.
- It was suggested that the Scottish Government could protect the most vulnerable via policy drivers and/or financial support or subsidies, although there were also references to a need to reduce the current imbalance in fuel pricing.
- There were references to the need for educating consumers around the use and benefits of ZDEH technologies.

The above responses were, in some cases, similar to those expressed by respondents whose remit might principally be to represent people experiencing socioeconomic disadvantage:

- There were concerns about the current disparity between gas and electricity prices.
- The improved efficiency of certain ZDEH systems (such as heat pumps) compared to more traditional direct emission heating (DEH) systems was welcomed.
- Support was called for in educating homeowners to use new, unfamiliar systems through expert technical support.
- It was noted that new energy efficient homes may only be available to those with the means to access, inadvertently excluding those most at risk of experiencing fuel poverty.
- There were also conflicting views on the impacts on tenants' rents. From representatives of those in the social housing sector, it was noted that the potential for unreasonably raising rents should be guarded. Rent increases,

though, could be seen to be acceptable should households have access to reduced bills or the ability to self-generate energy.

Involving communities of interest (including those with lived experience of poverty and disadvantage):

In an effort to involve communities of interest in this process, a ‘consumers’ themed workshop was also held 16 February 2021. This workshop purposefully had a strong socioeconomic focus.

To reach out to as many groups with an interest in this area as possible, colleagues from the Scottish Government’s Heat in Buildings Consumer Policy Unit and OCSPA shared an invitation to the workshop with their relevant stakeholders. 11 external attendees were present at the workshop, including representation from local authorities and housing associations based across Scotland.

Specific questions relating to socioeconomic impacts included the following:

- How can we ensure that all socioeconomic groups in all regions across Scotland will benefit from the transition to zero emissions heating?
- How should we monitor and respond to any impacts on fuel poverty (positive or negative)?
- What particular barriers to understanding or accessing information might there be for disadvantaged groups, and how can these be overcome?

The findings from the workshop were broadly similar to the feedback received from the consultation.

Summary of Assessment Findings

Options to strengthen impact on inequalities of outcome:

Fabric first approach

As identified within the consultation feedback, increased energy bills are a key concern for stakeholders and a critical driver in tackling levels of fuel poverty.

The Scottish Government is addressing this by taking a ‘fabric first’ approach as the NBHS will build on the work of the Building Regulations Energy Standards Review²⁵ which, from February 2023, has introduced new measures to further improve targets for energy demand - and associated carbon emissions - in new buildings to deliver further improvements in energy performance.

²⁵ [Scottish Building Regulations: Proposed changes to Energy Standards and associated topics, including Ventilation, Overheating and Electric Vehicle Charging Infrastructure - Scottish Government - Citizen Space \(consult.gov.scot\)](#), Scottish Government (2021).

This includes improved building fabric performance in our new homes, avoiding the need for costly retrofit in the future, contributing towards removing poor energy efficiency as a driver of fuel poverty, and making homes more affordable to heat.

In January 2023, a further review of energy standards was announced: “*the Scottish Government will make subordinate legislation within two years to introduce new minimum environmental design standards for all new-build housing to meet a Scottish equivalent of the Passivhaus standard, in order to improve energy efficiency and thermal performance.*”²⁶ Proposals will be developed in discussion with the construction sector during 2023.

Technology agnostic regulation

It has been the Scottish Government’s intention to ensure that the regulations are technology neutral. Developers will, therefore, have flexibility in determining what the most appropriate ZDEH technology to be installed is.

Mandating particular technologies was not an option explored further by the Scottish Government due to devolved competency limitations.

Reserved regulation

As part of the Review of Electricity Market Arrangements (REMA),²⁷ the UK Government consulted in 2022 on a range of issues and options related to electricity market reform across a number of market dimensions, including wholesale markets, mass low-carbon power, flexibility, capacity adequacy, and system operability, as well as on several programme design and cross-cutting issues. The actions taken as part of this review in the future may ease the implementation of the NBHS in terms of capacity.

Adjustments to address inequalities associated with particular groups, communities of interest or of place, who are more at risk of inequalities of the outcome:

As previously identified within this document, those in the social rented and private rented sectors experience higher levels of fuel poverty compared to other groups. Furthermore, those in the social rented sector are particularly vulnerable as they have both the highest rates of energy efficiency (56% EPC C or above in 2019) and highest rates of fuel poverty (37% in 2019) indicating that for them the price of heating fuel and income are the key drivers of fuel poverty. Already existing mitigation measures are detailed below.

Proposed changes:

Following the completion of this assessment, no further changes to the NBHS regulations themselves are being proposed.

²⁶ [Meeting of the Parliament: 10/01/2023 | Scottish Parliament Website](#), Scottish Parliament (2023).

²⁷ [Review of electricity market arrangements - GOV.UK \(www.gov.uk\)](#), DESNZ and BEIS (2022).

We have considered the key points raised previously within this document, and mitigation measures already exist (or are planned) for the issues identified:

Support for the social rented sector

Although the data obtained does not differentiate between newer and older buildings, it does highlight that those living in social rented accommodation are more likely to experience fuel poverty as opposed to those who own privately with a mortgage (37% vs 12%).²⁸

The Scottish Social Housing Charter²⁹ - which has been in place since 2012 – requires social landlords to meet various outcomes and standards that Scottish Ministers set. This includes tenancy sustainment, so that social landlords ensure that (a) tenants get the information they need on how to obtain support to remain in their home and (b) suitable support is available, including services provided directly by the landlord and by other organisations.

Social landlords also provide tenants with support and advice on their fuel bills and energy providers, will give or access energy advice from specialist organisations, and will access funds for projects that support their tenants to reduce fuel poverty.

Additionally, social landlords have a strong record of reinvesting rental income in their housing stock to improve its condition and energy efficiency, and preference is given to taking a ‘fabric first’ approach. This means that landlords prioritise measures to reduce the heat use of buildings as an essential first step towards net zero housing. This helps to address fuel poverty in the shorter term, and helps to reduce the cost impact of the switch to renewable energy in the longer term.

It is also important that landlords work to keep rents affordable – and social landlords have a responsibility to ensure any investment is cost-effective and the new target for net zero heat in social housing will recognise their discretion in these decisions.³⁰

Furthermore, through our Affordable Housing Supply Programme, the Scottish Government continues to support affordable housing providers who wish to install ZDEH systems, and many providers are already installing these systems in both rural and urban settings across Scotland.

For homes delivered with grant funding through the Affordable Housing Supply Programme, an additional quality benchmark of £4,000 for the installation of ZDEH has been in place since October 2021, and will continue to form part of the grant application process.

²⁸ [Scottish house condition survey: 2019 key findings - gov.scot \(www.gov.scot\)](#), Scottish Government (2020).

²⁹ [Scottish Social Housing Charter November 2022 - gov.scot \(www.gov.scot\)](#) Scottish Government (2022).

³⁰ “We will aim to bring forward the review of [the Energy Efficiency Standard for Social Housing 2] EESSH2 with a view to strengthen and realign the current standard to meet wider net zero requirements.” [Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot \(www.gov.scot\)](#) Scottish Government (2021).

The affordable housing investment benchmarks will be adjusted to account for inflation on an annual basis, with the Scottish Social Housing Tender Price Index (SSHTPI) being used for this purpose. The next set of benchmarks will, therefore, be published in the fourth quarter of the current financial year using data to December 2022 - these will then come into effect at the start of the next financial year.

In February 2023, it was announced that all new homes delivered with grant funding through the Affordable Housing Supply Programme will be prohibited from installing DEH systems from 1 December 2023 (unless there is a building warrant already in place by this date or where the social landlord considers there is a compelling reason why a ZDEH system would not be appropriate). This ambition was signalled in the Scottish Government's Housing to 2040 Vision³¹ and effectively requires the NBHS to be met through the Affordable Housing Supply Programme 4 months ahead of regulations.

Public engagement and education

The Scottish Government has committed to develop a Heat in Buildings Public Engagement Strategy (PES).³² The strategy, which will be published in 2023, will aim to increase awareness and understanding of the heat transition – including why it is important and the benefits to be gained.

We will also continue to raise the profile and access to our advice and support schemes through effective year-round public information campaigns. As part of this, we will continue to ensure that those in vulnerable circumstances, in particular those in or at risk of fuel poverty, are made aware of important energy efficiency support available through the successor scheme to Warmer Homes Scotland, to be launched in 2023. In this way, our campaign and marketing activities will remain flexible over the duration of the heat transition to take account of changes in external factors, such as the current Cost of Living crisis.

On 16 December, we launched a Call for Evidence process – consisting of a short series of stakeholder discussion sessions that ran until February – to explore the challenges and opportunities for increasing public engagement, and how best we can build on good practice approaches and existing activities from a national to local level to increase the reach and impact of our messaging.

Insights from these discussions are being used to inform development of the final Heat in Buildings Public Engagement Strategy.

For example, through the Call for Evidence stakeholders have reaffirmed the importance of drawing on a range of trusted messengers to ensure that communications are consistent, coordinated, wide-reaching, and resonate with different local groups and communities over time. This will form a key part of our

³¹ [Housing to 2040 - gov.scot \(www.gov.scot\)](https://www.gov.scot) Scottish Government (2022)

³² *"Building on the Climate Change Public Engagement Strategy, we are developing a bespoke public engagement strategy for heat in buildings."* [Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot \(www.gov.scot\)](https://www.gov.scot) Scottish Government (2022)

strategic approach to dissemination of messaging, with consideration to be given to how best intermediaries - including grassroots organisations - can be best supported in engaging their direct audiences on the heat transition.

The reality that there is no one-size-fits-all approach to heat and energy efficiency retrofit was also highlighted through the Call for Evidence, which means that communicating the steps that people will need to take must reflect different circumstances. The 'consumer journey' (and hence, information and advice) for people moving into a new-build property that is already equipped with a ZDEH system will be different to someone living in an older property that must undertake retrofit works directly. For example, owners of new buildings will have a more immediate need for specific information on how to use a heat pump, and 'myth busting' around potential negative impacts of heat pump technology in the home. An obligation already exists for written information to be provided to the building owner/occupier regarding the operation and maintenance of the building services and energy supply system. This also includes a Quick Start Guide, which should assist the home owner by identifying all building services installed, the location of any controls, and providing information on how systems should be used for optimum efficiency.³³

The accessibility of these different types of public engagement activities, including associated information provision (where, when, how), will be a high priority to ensure that a diverse range of people across Scotland are aware of, understand, and can act on the heat transition in a streamlined way that works for them. This work will be led by our new national public energy agency, Heat and Energy Efficiency Scotland (HEES), which launched in a virtual form, in-house to the Scottish Government, in October 2022.³⁴

Operating costs of ZDEH technologies

Actual operating costs of ZDEH technologies will depend on a number of factors including how energy is used, the energy efficiency of the property and of the heating system, and on prevailing energy prices. However, the higher operational efficiencies of technologies such as air source and ground source heat pumps could mitigate the higher unit cost of electricity.

The Scottish Government has, however, introduced measures to help homeowners and occupiers with energy bills, such as:

- Tripling the Fuel Insecurity Fund to £30m for 2023/24³⁵ to ensure it continues providing support to those in greatest need throughout 2023/24;
- Introducing a £1.4m Islands Cost Crisis Emergency Fund, which will support those in our island communities who traditionally see higher costs for food and fuel; and
- Replacing the UK Government's Cold Weather Payment with our new Winter Heating Payment, which provides a stable, reliable and annual £55, helping

³³ [6.8 Written information - Building Standards technical handbook 2017: domestic buildings - gov.scot \(www.gov.scot\)](#) Scottish Government (2022)

³⁴ [Heat and Energy Efficiency Scotland - mygov.scot](#) Scottish Government (2022)

³⁵ [Budget statement: 2023 to 2024 - gov.scot \(www.gov.scot\)](#) Scottish Government (2022)

around 400,000 low-income individuals with their heating expenses each winter.

More generally, energy policy (including energy price setting) is mostly reserved, but we will continue to engage with Ofgem, the UK Government, and energy suppliers to ensure the needs of Scottish energy consumers - especially those in or at risk of fuel poverty - are represented in any decision making.

We have consistently called upon the UK Government to provide additional support for vulnerable households, and have been clear that this should be funded through taxing significant windfall gains, rather than passing on the cost to taxpayers.

Supply chain and upskilling opportunities

Through our Heat in Buildings Supply Chains Delivery Plan,³⁶ we have set out practical steps we are taking to support the growth of the green heat sector to overcome supply chain constraints and fill the skills gap.

We recognise that training is not equally available across all geographic areas and that, in some instances, people need to travel considerable distances to access specific training. Furthermore, training is often less accessible to those from poorer backgrounds or households, and it's poorer households in rural areas that are most likely to be prevented from accessing by travel costs. For this reason, we have invested in a mobile training centre for heat pump installation, accessible to any college in Scotland while being hosted by South Lanarkshire College, which will be capable of delivering on-site training in rural areas across Scotland.

Above and beyond this, the Climate Emergency Skills Action Plan (CESAP)³⁷ remains central to our ambitions to create a future workforce that can support a Just Transition to a net zero economy. The CESAP focuses on both immediate action as well as the longer-term systemic change that will need to take place by 2045.

The principles of a Just Transition have, therefore, been embedded throughout the development of the CESAP and will be at the heart of its implementation. Going forward, we will work closely with sectors to ensure that the interventions meet the needs of both the people and places who will be affected by the jobs and skills implications of the transition in that sector.

Geographical considerations

Rates of fuel poverty and extreme fuel poverty are higher in rural areas relative to urban areas (29% versus 24%, respectively).³⁸ However, as previously noted, it is

³⁶ [Towards an Industry for Green Heat: heat in buildings supply chains delivery plan - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/heat-in-buildings-supply-chains-delivery-plan/pages/1-to-100.aspx), Scottish Government (2022)

³⁷ [Climate emergency skills action plan 2020-2025 pdf \(skillsdevelopmentscotland.co.uk\)](https://www.skillsdevelopmentscotland.co.uk/publications/climate-emergency-skills-action-plan-2020-2025-pdf), Skills Developments Scotland (2022)

³⁸ [Scottish house condition survey: 2019 key findings - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/1-to-100.aspx), Scottish Government (2022)

difficult to determine what percentage relates specifically to occupants of new buildings.

Recently concluded research, undertaken on behalf of the Scottish Government, considered the challenges and opportunities of delivering the requirements of the NBHS in islands and remote locations across Scotland³⁹. The research found that islands and remote communities have been early adopters of ZDEH technologies and, overall, these areas do not face more significant barriers than in other parts of Scotland. This research and considerations for islands communities is explored further within the accompanying Island Communities Impact Assessment (ICIA)⁴⁰.

Furthermore, as the NBHS will be implemented using the Scottish Government's fully devolved building regulations, building standards are applied equally across all Scottish local authority areas.

Sign-off

Name: Sue Kearns

Position: Deputy Director Heat in Buildings Policy and Regulation

³⁹ [Projects \(climatexchange.org.uk\)](https://climatexchange.org.uk/projects)

⁴⁰ [New Build Heat Standard 2024 Island's Communities Impact Assessment – gov.scot \(www.gov.scot\)](https://www.gov.scot), Scottish Government (2023)



© Crown copyright 2023



This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at www.gov.scot

Any enquiries regarding this publication should be sent to us at

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

ISBN: 978-1-80525-721-9 (web only)

Published by The Scottish Government, June 2023

Produced for The Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA
PPDAS1246842 (06/23)

W W W . g o v . s c o t