Response to Energy Efficient Scotland Consultation

17 June 2019

Introduction

The Existing Homes Alliance is a coalition of 10 founding member organisations and 10 supporters representing housing, environment, anti-poverty, industry, and consumer groups.[1] We agree our policy positions by consensus and this consultation response reflects the collective and overarching views of our coalition. Some members are submitting their own consultation response on behalf of their respective organisations. In some instances, there might be minor variances in opinion on the finer details between members and the Alliance but broadly-speaking, the membership's view is represented here.

Key recommendations:

This consultation response makes the case that given the climate emergency and commitment to emission reduction targets of 70% by 2030, 90% by 2040 and net zero by 2045, the pace of delivery for Energy Efficient Scotland must be accelerated. We provide an alternative credible pathway (see appendix 1) to achieve EPC band C or above by 2030 for most properties. The key elements are:

- Statutory underpinning for Energy Efficient Scotland, including statutory targets of all homes (where technically feasible) are EPC band C by 2030 and zero carbon by 2045 (aligning with Scotland-wide targets for carbon neutral by 2040 and net-zero carbon by 2045).
- The route map should be based on two approaches: 1) deep retrofit where appropriate and feasible, helping to build demand and the supply chain; 2) an incremental approach setting out stages to achieve zero carbon over a longer time period, tailored to individual buildings (e.g. Building Passport).
- Government fuel poverty and area-based schemes should fund energy efficiency and low carbon heating measures and not fund fossil-fuel heating as a rule.
- High fossil fuel boilers (coal, oil and LPG) in off gas rural areas should be phased out from existing buildings from 2025 with appropriate financial support and advice on how to use effectively.
- Mandatory standards should be introduced for the owner-occupied sector, alongside an engagement campaign, advice, financial support and consumer protection. The regulatory requirements and support must be linked to affordability for the householder
- Grants and financial incentives should be provided to ensure a just transition to low carbon heat is guaranteed for everyone.

[1] Founding members: ALACHO, Changeworks, Chartered Institute of Housing Scotland, Citizens Advice Scotland, Energy Action Scotland, Energy Agency, Energy Saving Trust, SFHA, Shelter Scotland, and WWF Scotland www.existinghomesalliancescotland.co.uk

Pace of Delivery

1. With regards to achieving an accelerated delivery of the standards proposed, do you think mandatory action for owner occupiers would be required? Please provide a rationale for your answer.

We respond to this question in two parts: a) accelerated delivery of standards; and b) mandatory action for owner occupiers.

a) Accelerated delivery of standards

We strongly support a revision of the Energy Efficient Scotland Route Map to reflect the pace of delivery demanded by the 'climate emergency' and the Scottish Government's decision to legislate for a net-zero carbon target for 2045, and emissions reductions of 70% by 2030 and 90% by 2040.

The sense of urgency equally applies to the eradication of fuel poverty, and the commitment to remove poor energy performance as a driver of fuel poverty.

Therefore, we recommend the accelerated delivery of the standards in the Energy Efficient Scotland Route Map as follows:

All homes (where technically feasible) are net-zero carbon by 2045.

Rationale: This should be an ambition that should be examined as part of the revised EES route map and Climate Change Plan. It is only logical if Scotland is going to be net-zero carbon by 2045, the housing sector will need to be close to zero carbon by that date. We recommend using the terms net-zero carbon and zero carbon as in the UK CCC report, *Net-Zero: The UK's contribution to stopping global warming*[2]. The current Energy Efficiency Scotland Route Map uses the term 'near zero' which is not defined and is confusing.

All homes (where technically feasible) to be at EPC band C or above by 2030.

Rationale: We provide three key reasons why this target is needed and credible:

- New climate change targets mean a long-term standard of EPC band C by 2040, with only five years remaining to reach a net-zero carbon standard in most homes, is simply unrealistic. Regulation will therefore need to apply in the relatively near future, combined with a minimum of a 5 year foreshadow period, to give owner occupiers enough lead-in time to take action and make investment decisions about their property. This timescale fits within the context of the new Climate Change Plan targets.
- Early action - The UK CCC Net-Zero report (responding to the IPCC report on 1.5 degrees) emphasizes the need for action in the next 10 years to have a chance of meeting 1.5 degrees of warming.
- Supply chain confidence: results of a survey by the Existing Homes Alliance show the supply chain believe this target is achievable, given clear policy direction and support to fill gaps in certain trades and geographic areas. This explained in more detail in response to question 4.

Deep retrofit: A proportion of homes, to be determined based on technical and financial opportunity, are incentivized to undergo 'deep retrofit', reaching net-zero carbon in one intervention (with % programme targets for 2030 and 2040).

[2] Net-Zero: The UK's contribution to stopping global warming, UK CCC, May 2019

Rationale: Given the challenge of getting all homes (where technically feasible) to zero carbon by 2045, it makes sense to support faster action where this is appropriate in terms of the building typology and energy savings that can be achieved. This would involve a 'deep retrofit' – or a whole-house - approach, taking the property to net-zero carbon in one intervention. The Scottish Government should incentivise these pioneering approaches, to encourage both owner occupiers and landlords to undertake this approach on voluntary basis. It should take account of that fact that in rental properties, tenants may have to be decanted whilst retrofit work is undertaken, and therefore permission would need to be sought from tenants, as well as support to be re-housed.

This means the route map should support two strands: 1) deep retrofit where appropriate and feasible, helping to build demand and the supply chain; 2) an incremental approach setting out stages to achieve zero carbon over a longer time period, tailored to individual buildings. This offers a realistic approach which encourages improvements in all homes, while developing confidence and affordability for deep retrofit approaches to be taken up more widely over time.

There are several examples where this is already happening:

- Energiesprong in Nottingham social housing[3]: The Energiesprong approach creates zero carbon housing by turning old, leaky housing into super insulated homes that can gather as much energy from renewable sources as the household will need for heat and electricity needs. They use off-site construction to improve quality and minimise disruption. The retrofit is financed in large part through the energy savings.
- Indu-Zero[4]: Strathclyde University is a partner in the North Sea Region INDU ZERO project. The project aims to produce standard renovation packages at an industrial scale (at least 15,000 per year) containing various components that are necessary to make homes sustainable, such as insulation material for walls and roofs, heat pumps, solar panels, energy converters and ventilation systems. The aim is to be able to offer the total package of measures for half the current price.
- Renfrewshire Council: With support from the Scottish Government, Renfrewshire Council is exploring approaches to undertaking deep retrofit works in urban areas. The purpose is to identify the most effective measures for different households and construction types and test if it is more cost-effective to undertake deep retrofit, rather than demolition and building replacement properties.

Other examples are provided in a report to the Existing Homes Alliance which was funded by the European Climate Foundation. The report, *Scoping study for a Warm Homes Programme*[5], provides recommendations for demonstrating deep retrofit approaches in tenements, the private rented sector and rural cottages, as well as proposals for innovative financing mechanisms to support deep retrofit.

We agree with the target dates for the PRS (see questions 7-9). However, we have the following suggestions for how the proposals for enforcement could be improved:

- adequate resourcing of local authorities to undertake the enforcement role
- support for tenants during period of enforcement action

[3] https://www.energiesprong.uk/projects/nottingham
[4] https://northsearegion.eu/indu-zero/
[5] Scoping study for a Warm Homes Programme, a report to the Existing Homes Alliance Scotland by Changeworks, January 2019, http://existinghomesalliancescotland.co.uk/policy/the-potential-for-deep-retrofit-in-scotland/.

- potential for tenants to raise issues regarding compliance
- the fine is not enough to act as a deterrent because the fine is less than the cost of compliance in some cases and rent penalty notices could be explored as an alternative or complementary measure
- make it illegal for letting agents to let properties that are not compliant and/or those responsible for marketing rental properties would be banned from marketing properties that were not compliant with the regulations.

We are also concerned that there is a risk some landlords could unfairly pass on the cost of the energy upgrade to the tenant through increased rent over and above what might be compensated through fuel bill savings. We encourage the government to work with landlords and tenants' organisations to come up with measures to address this concern.

We agree with the targets in EESSH 2 although we have serious concerns about the lack of funding to support social landlords to achieve these standards. It is not a 'just transition' if social housing tenants, who are already vulnerable, are expected to shoulder the costs of the retrofits through their rents. This puts tenants at risk of falling into 'rent poverty' which is clearly unacceptable. Instead, social landlords should receive funding support to meet these stretching standards.

Priority for fuel poor households (see questions 5-6) We continue to support priority assistance to fuel poor households within the context of bringing forward the long-term standard for all homes to be EPC C by 2030. Priority assistance should mean that fuel poor households are eligible for grants to upgrade to (and where appropriate beyond) EPC C from now. We also believe 'priority' should mean homes of fuel poor households should aim to reach net-zero by 2040 (where technically feasible) to encourage deep retrofit approaches, in the context of all homes needing to be net-zero by 2045).

Credible pathway: We have produced an alternative EES route map based on our proposals which we believe provides a credible pathway to EPC band C by 2030 and net-zero carbon by 2045. (attached).

We understand the government will be undertaking additional research and modelling to inform the route map. This is welcome and we recommend that, given we are in a climate emergency, the starting point should be how – not if - an accelerated target can be met. We believe the new emission targets of 70% by 2030, 90% by 2040 and net zero by 2045 demand this level of ambition.

The following scenarios or research questions are suggested:

Modelling

- Recalibrate the modelling to align with the new climate change targets
- Model the impact of additional triggers, for example major refurbishment and boiler replacements.
- Model the impact of the UK CCC proposals from their UK Housing: Fit for the Future report to see how this affects the results.

Research

- Explore regulatory precedent to estimate the potential impact that the foreshadow of regulation will have on the market, resulting in an increase of voluntary take up of measures.
- Calculate the benefit in terms of emissions reduction of accelerating the target from 2040 to 2030.
- Estimate costs to the public purse of different options of eligibility for grants and incentives.
- Test assumptions regarding new technologies and reducing costs.

- Test assumptions regarding economies of scale – which would be much greater if all properties have a 2030 target.
- Calculate wider benefits to health, local economy, energy generation to assess cost effectiveness for the public purse.

b) Mandatory action for owner occupiers

The consultation document notes that 'without further stimulus it is likely that the rate of homes achieving EPC Band C will drop below the rate we've seen in recent years as the number of 'easy wins' diminishes'. It also notes that even with regulation at the point of sale there will still be 'a backlog of dwellings needing to be upgraded in 2040, even if regulation begins in 2025 instead of 2030'.

So, neither 'business as usual' approaches *nor* business as usual existing approaches PLUS regulation at the point of sale will achieve the proposed EPC C standard in all homes by 2040 let alone by 2030.

This leads us to conclude that in order to increase 'business as usual' rates:

- regulation is required, using more than one route or trigger
- a huge escalation in support for the owner/occupied sector is needed in advance of regulation coming into force to support voluntary action

We cannot underestimate the need for the introduction of regulation to be accompanied by a well-resourced programme of education, engagement, incentives and robust consumer protection. This should be timed to coincide with a foreshadowing period before regulations came into force, thereby ensuring enforcement would only be required in a small number of cases, and householders feel supported, informed, and rewarded for acting. More detail is provided in our answer to question 3.

We note the results of a survey on consumer attitudes to Energy Performance Certificates and the regulation of energy efficiency, published by Citizens Advice Scotland[6]. Key findings included:

- 62% of homeowners supported a mandatory standard of EPC band C by 2040, with support marginally reduced to 59% if the standard was introduced in 2032.
- Of those who supported regulation, 77% were in support for environmental reasons. Saving on fuel bills (71%) was another strong motivator, along with making the home more comfortable (63%).

These results seem to show the mood is shifting amongst the public towards accepting the need for regulation to help achieve climate and other goals. However, this should be considered alongside the earlier deliberative research[7] from Citizens Advice Scotland which found resistance to the idea. We recommend further research in this area, with careful framing of the questions and choices within the context of the climate emergency. We also recommend an action research project on the 'framing' of energy efficiency and regulation, as proposed in our report on this topic.[8]

[6] Scottish consumer attitudes to Energy Performance Certificates and the regulation of energy efficiency, Citizens Advice Scotland, May 2019.
[7] https://www.cas.org.uk/publications/warming-scotland-energy-efficiency-putting-consumers-first

[8] The right frame of mind: Engagement for domestic energy efficiency in Scotland, Existing Homes Alliance, January 2019 http://existinghomesalliancescotland.co.uk/policy/the-the-right-frame-of-mind-engagement-for-domestic-energy-efficiency-in-scotland/

2. What trigger points, e.g. sale, renovation, etc. could be used to require owner occupiers to undertaken energy efficiency improvements?

We believe that the climate emergency and impact on inequalities from fuel poverty mean that all policy levers must be brought into play. As noted in our answer to question 1, the government's modelling for this consultation also makes it clear that regulation only at the point of sale would not be enough on its own – due to turnover rates – to achieve the number of upgrades required.

Therefore, we need to consider other triggers to encourage and require owner occupiers to upgrade the energy performance of their home. In all cases, there should be allowances for exceptions due to technical feasibility or excessive cost.

Major refurbishment: We have called for the introduction of minimum energy performance standards at the point of major refurbishments for several years (Existing Homes Alliance paper to the Scottish Government's Regulation for Energy Efficiency in the Private Sector (REEPS) working group – 2014 see appendix 2). This would make sense because it is at the time of major refurbishments that it is easiest and most economical to undertake energy performance improvements and ties in with the homeowners' desire to improve the overall home. In this case, enforcement would be through the existing building warrant procedures.

Point of sale: the introduction of standards at the point of sale uses another logical trigger for undertaking energy performance upgrades. The seller would have the option to pass on the obligation to the buyer, which would be taken into account in the negotiation of the sale. This has the advantage of paying for the improvements through the equity of the house. The conveyancing process could be used to facilitate compliance, with Home Reports making clear if the property complies or not.

Boiler replacements - natural boiler replacement at end-of-life offers a good opportunity to engage homeowners and encourage them to install more efficient boilers, or low carbon alternatives – as well as the emissions standard.

In off-gas areas, we believe that public funding (grants or loans) should not support new or replacement oil and LPG boilers in off-gas areas (with allowance for exceptions) but should fund low carbon heat technologies or low carbon ready technologies (heat pumps, heat networks). These installations should go alongside energy efficiency upgrades to reduce energy demand and enable the low carbon heating technology to maximise the impact in terms of emissions reductions and fuel bill savings.

We also recommend the phasing out of high fossil fuel boilers (coal, oil and LPG) heating in existing buildings from 2025. This date fits with the current Climate Change Plan which implies most off-gas grid buildings will have switched to low-carbon heat by 2032, and the need to give consumers and supply chains to prepare. This could be implemented through Part 6 of the Scottish building regulations (point of replacement and point of major refurbishment) through an emissions standard. This could be tightened over time as required to meet the 2045 standard. In this way, consumers would be able to choose how to meet the standard.

The Energy Efficient Scotland building performance standards would align with the emissions standard and act as a backstop to ensure all properties are captured. The Energy Efficient Scotland assessment will need to recognise low carbon heat in terms of emissions reductions. Advice and financial support will be required to support this transition.

Boiler replacements – on-gas: Given the average lifetime of a gas boiler is 12 years, this would suggest that we should make significant progress of reducing reliance on gas from 2028 (for a carbon neutral target of 2040). This means adopting the 'hybrid first' timeline recommended by the UK CCC of rolling out hybrid heat pumps in on-gas buildings in the next decade pending a decision on how to decarbonise on-gas buildings fully.[9]

As we plan this transition, we can learn from the shift to condensing boilers which was achieved through a combination of incentives and regulation – and essentially has removed inefficient gas boilers from the marketplace.

What about hydrogen? We support the 'hybrid first' approach because it is likely to have greater public acceptance, feasibility and leaves open the possibility for continuing to use the gas grid with other fuels in the future. However, it is important to note that the UK CCC concluded that the wholescale transition of the UK gas grid from natural gas to hydrogen is extremely unlikely to be cost-effective. This is because the required production would be implausibly large, whether from natural gas (therefore imports) or from renewables. But if "used selectively, alongside widespread electrification and improvements to energy efficiency, hydrogen has potentially valuable roles in replacing natural gas (e.g. for heating buildings on colder winter days, industrial process heat and back-up power generation) and liquid fuels (e.g. in heavy transport)."[10]

The UK CCC also notes that "the sunk costs of having an extensive gas grid do not automatically mean that it will be lower cost to switch it over to hydrogen and use it in boilers as we do with natural gas at the moment. Our analysis finds that the costs of a range of pathways for heat decarbonisation are similar, including those in which the gas grid has a much-reduced role or is decommissioned."[11]

Tenements: Special consideration should be given to trigger points for upgrading common areas of flats (noting that the common areas may include e.g. external walls where insulation is most readily applied). Incentives/regulation could for example apply:

- When area-based schemes offer support and when fuel poor residents would otherwise not benefit from improvements etc.
- When the tenement co-owners are undertaking other whole building actions – e.g. structural works or roof repairs.
- Where more than half the EPCs for the flats in the building have a rating below D

The recent publication from the cross-party Working Group on Maintenance of Tenement Scheme Property is relevant here, which comes up with solutions to aid, assist and compel owners of tenement properties to maintain their buildings, which also apply to energy efficiency upgrades.[12]

Other triggers which should be considered for raising awareness and/or standards:

- window replacement
- local authority maintenance action not specifically triggered by energy efficiency
- granting of planning consent

[9] UK Housing: Fit for the Future? UK CCC, 2019
[10] Hydrogen in a low carbon economy, UK CCC, 2018
[11] Ibid.
[12] https://www.befs.org.uk/policy-topics/buildings-maintenance-2/

- receipt of public grant assistance for any improvement e.g. adaptation for accessibility; empty homes initiative.

3. When should mandatory energy efficiency targets be introduced for the owner-occupied sector? Should they be introduced before 2030?

We have argued for the introduction of mandatory energy performance standards for the owner/occupied sector for several years so that homeowners could realise the same benefits of warm, dry homes as those in social housing.

We have also argued for a **statutory target** for the vast majority of homes to achieve EPC band C or above by 2030. We now think it is appropriate to also explore a target for 2045, aligned with the overall Climate Change Bill targets.

We think the EPC band C target (as it is based on modeled data) should be complemented by emissions data for the housing sector which is provided on an annual basis by the UK Government. RdSAP, the assessment tool for EPCs, is good for benchmarking, but does not give a 100% accurate estimate of energy/carbon performance. Over time it is anticipated that there will be technology to better enable assessment of actual building performance (e.g. smart meter enabled checks of the building fabric) and these innovations should be encouraged by government.

We believe the owner occupiers regulations at point of sale and at major refurbishment should be introduced from 2020, with enforcement in the relatively near future (e.g. from 2025), allowing for a minimum five-year foreshadow period. Any regulatory requirements must be linked to affordability for the householder. The standard should be set at EPC band C at the point of sale (with allowance for exceptions similar to the PRS) with ability to pass obligation on to new owner to be fulfilled within 12 months. Engagement and standards should also be applied at the triggers noted in question 2.

The introduction of regulations **must** be accompanied by:

- Independent advice, communications, pro-active engagement, consumer protection and financial incentives. Everyone should have a clear and achievable route for compliance.
- Big engagement campaign to maximise period of foreshadowing regulation and minimising any need for enforcement.

This proposal would bring expectations for the owner-occupied sector into alignment with the Private Rented Sector. We believe this would bring the following benefits:

- Savings through economies of scale (bigger pipeline of work)
- Remove issue of ‘blockers’ in mixed tenure buildings and areas
- No incentive to take property out of PRS to avoid standards
- Near parity for housing sector – removes confusion and replaces with fairness.

In terms of a backstop date for owner occupiers, we think this would be difficult if not impossible to enforce. Instead, we need to use the other triggers and the market to influence compliance.

In terms of **engagement**, we produced a scoping study[13] which recommends a 're-framing' of energy efficiency communications. The report found that existing communications tend to "concentrate on more 'do-able' behaviour change" which can send people into a 'cul-de-sac', because people believe they have 'done their bit'. These communications may be inhibiting the uptake of the more intensive home energy efficiency measures now needed.

The report goes on to recommend re-framing engagement using a moral and altruistic case for action to strengthen motivations for change for environmental/well-being issues, alongside messages that appeal to comfort or 'saving money.

The report also recommends re-framing of how information is presented on Energy Performance Certificates in order to more clearly highlight where homes are 'sub-standard' in terms of energy-efficiency. This is one example of how policy measures can be used to support the re-framing.

In summary, we believe now is the time for Energy Efficient Scotland to set out a clear and credible pathway to introduce regulations to ensure the vast majority of homes reach EPC band C by 2030. This pathway (see attachment to this submission) would include:

- Clear signal of intent to regulate, setting out substantial lead in time.
- Set regular review dates to assess progress during foreshadow period.
- Development of regulations starts in 19/20 to complete as soon as possible so homeowners are clearly informed about future expectations.
- Development of independent advice, communications, pro-active engagement, consumer protection and financial incentives. Everyone should find there is a clear and achievable route for compliance.
- Big engagement campaign to maximise period of foreshadowing regulation
- The aim should be that enforcement will be largely unnecessary.

We are concerned that without these elements in place we are relying on 'business as usual' rates of improvement, and the consultation acknowledges that these will most likely be unable to deliver the existing targets, let alone net-zero by 2045.

Impact of pace of delivery on the supply chain

4. From a supply chain perspective, do you think bringing forward the timescales for the Programme would have a positive or negative effect on quality, skills & capacity and consumer protection? Please provide a rationale, and evidence where possible.

We have conducted a survey of the supply chain and delivery bodies to ask their views on this question. Based on the results of the survey with a small number of businesses and industry bodies, we are confident the supply chain is prepared to deliver on an accelerated timescale. However, this depends on 1) the government setting out a firm, long-term route map of standards alongside support, incentives and engagement campaign with multi-year funding commitments and 2) the government provides appropriate support in training and skills development where there are gaps in certain trades and geographic areas.

[13] The right frame of mind: Engagement for domestic energy efficiency in Scotland, Existing Homes Alliance, January 2019 http://existinghomesalliancescotland.co.uk/policy/the-the-right-frame-of-mind-engagement-for-domestic-energy-efficiency-in-scotland/

We acknowledge the survey is a small sample size but nevertheless the results are compelling and suggest further work, including market research, is urgently needed to comprehensively understand and respond to potential supply chain gaps. This should include partnerships with businesses and trade bodies to deploy the most appropriate interventions, as we do not believe that given the urgency for action, supply chain issues should be allowed to be a limiting factor.

Key findings of the survey[14] (full analysis attached and available on our website):

The survey was sent to 78 suppliers and delivery agents, of which 20 responded (26% response rate).

In addition, the Sustainable Energy Association provided a detailed response which supported the main themes which are outlined below.

Respondents included installers of energy efficiency and heating installations, businesses that manufacture and/or maintain heating systems, and organisations that deliver energy efficiency and heating programmes.

EPC band C by 2030 is achievable

90% of those who responded said that it is achievable to reach EPC band C for the vast majority of homes by 2030 and that their businesses could expand to meet the growth in demand.

"The key success to delivery against the target is clarity and consistency. Set the target, confirm it will not change and the supply change will deliver. "

Business growth opportunities are ready to be seized:

Respondents are projecting growth in their business of 15% - 30%, with one saying "in a stable funding regime managed growth of 100% is feasible".

More apprenticeships are needed

Several noted the need to develop more skills through apprenticeships, and the need to send "clear signals to technology suppliers so that training and recruitment can be accelerated."

70% of respondents thought there was a need for further training in their business to deliver the standards and expand into new areas.

Funding for skills development is vital, but so is the setting of long-term standards and high-profile leadership and support from government.

"Historically, the installers and manufacturers have operated in a boom and bust cycle. This does not give the installers in particular the required level of confidence to invest in people and machinery. A long-term clear plan from government would allow confidence to grow and investment to be made."

Technologies are readily available

90% of those who responded said that the technologies to meet EPC band C are available now – "we are happy with our current capabilities to meet EPC band C."

[14] Existing Homes Alliance Supply Chain Survey, June 2019
http://existinghomesalliancescotland.co.uk/policy/supply-chain-ready-to-deliver-on-epc-band-c-for-homes-by-2030/

Impact on Fuel Poverty and Climate Change

5. In your view, how would accelerating Energy Efficient Scotland help, and/or how would it hinder, plans to address fuel poverty?

We know there are four drivers of fuel poverty – income, energy costs, energy performance of the home and how energy is managed. All four drivers must be addressed in a coherent, integrated way. The government is already committed to removing poor energy efficiency of the home as a driver of fuel poverty.

As noted in our answer to question 1, we believe accelerating the Energy Efficient Scotland route map is essential to addressing fuel poverty as well as climate change. There is no reason why a household should be living in fuel poverty and suffering negative health impacts because their home is not adequately insulated and/or they have inefficient heating. All homes – even traditional buildings – have scope to improve their energy performance.

Expecting fuel poor households to wait 20 years before poor energy performance no longer is a cause of fuel poverty is unnecessary and damaging to people's lives. Therefore, we propose that government energy efficiency and fuel poverty programmes (e.g. Area-based Schemes and Warmer Homes Scotland) should aim to achieve EPC band C or above by 2030 (see answer to question 1). This avoids the need to return to the same area for further retrofit – which would result in further costs and disruption.

The consultation raises four potential and/or perceived risks of accelerating delivery for fuel poor households. The following table sets out how we think each risk can and should be addressed.

Risks to fuel poor of accelerating delivery on energy performance targets. (as set out in this EES consultation)	**Existing Homes Alliance proposed solution**
Force homes to install low carbon heat technologies that will be more expensive to run.	This is not about forcing householders but supporting them to upgrade to warm, low carbon and affordable to heat homes. Running costs: These technologies are cheaper to run and cleaner than high fossil fuel heat (oil, LPG, coal) and electric heaters. If replacing gas, they can be slightly more expensive to run – in this case there should be support to cover any rise in fuel bills or maintenance costs as a result of the change in heating system. It is worth noting that there will be options in the future to combine heat pumps with storage and use a flexible tariff, which will be lower the cost significantly. Installation costs: Low carbon heating can have higher installation costs. Therefore, fuel poor households should receive grants to cover installation costs of low carbon heat, energy efficiency and ventilation measures. In addition, funding support in the form of loans, grants (and/or replacement for the Renewable Heat Incentive) should be available to those at risk of falling into fuel poverty.

	In all cases low carbon heating must be installed alongside energy efficiency measures, draughtproofing and appropriate ventilation. Advice and support from Home Energy Scotland and local energy advice organisations should be available to hand-hold homeowners through the process and provide 'after care' to guide use of the new technologies.
Shorter timescale running ahead of market so not able to take advantage of reduced costs due to innovation	The technologies to reach EPC band C are already available for the vast majority of properties. In our survey, 70% of respondents expected the capital costs of technologies to reduce but this is linked to the growth in demand. If the vast majority of homes have to reach EPC band C by 2030, this will increase the pipeline and opportunities for economies of scale. It is worth noting that cost reductions for low carbon heating will not be comparable to the solar industry because a significant proportion of the installation cost for heating is labour (design and fitting). The consultation document does not provide any evidence to suggest when costs will reduce, and why one would not expect them to reduce over the next decade.
Forced to take decisions on heating systems prematurely, leading to stranded assets and multiple interventions in space of 20 years	The suggestion that we would be 'forcing' people to 'take decisions on heating systems prematurely' is not correct. First, we propose that fuel poor households receive grant support to transition to low carbon heat, so they are not left behind with a stranded asset. Self-funding households should also be able to tap into financial support (loans, cashback, tax incentives). Second, the UK CCC has set out a credible decarbonization pathway for off-gas grid and on-gas grid properties that aligns with the expected timescale for future decisions on the gas grid.[15] This pathway relies on available technologies and will not result in stranded assets. The pathway includes: • Low regret options: energy efficiency, renewable heat in off-gas properties • Roll out of hybrid heat pumps in on-gas areas from 2020-2035 • District and communal heat where appropriate • Decision on use of gas grid in mid-2020's • Roll out of appropriate technologies for on gas properties based on UK policy for gas grid, hydrogen.

[15] UK Housing: Fit for the future? UK CCC, 2019

2040 is more in line with the longer-term decarbonisation of the heat supply and will more readily enable optimisation across demand reduction and supply, so more cost-effective.	The UK CCC report makes clear that decarbonization of the heat supply needs to happen more quickly and has outlined a credible pathway to achieve this. 2040 would be out of step and not meet demands for early action on emissions and to address fuel poverty.

6. With regards to reducing the emissions associated with the supply of heat, what are your views on consideration of energy efficient improvements alongside changes to heating systems?

We believe it is very important to achieve highly insulated properties (where technically feasible) with good ventilation for a healthy, low carbon and affordable to heat home. Highly insulated properties have a lower heat demand, which means renewable technologies can meet the heat requirements at a lower cost (as the capacity and output does not have to be as large).

It is vital that the energy efficiency measures are installed correctly with close attention to detail in order to maximise the benefit and avoid any negative consequences to the fabric of the building due to cold bridging or gaps. We recommend the advice given in the Sustainable Renovation Guide (Scottish Ecological Design Association and Pebble Trust) which emphasizes quality of installation, appropriate measures, and working closely with the householder to understand their needs and help them manage their energy use after the installation, maximizing the impact of any new technologies.

7. What are your views on using change of tenancy as a trigger to require the increased standard?

We support the proposal for using change of tenancy as a trigger to require the minimum standard of EPC band C. We welcome the decision to consult on this now, so landlords are given a long lead in time to plan renovations to their property(s).

As noted earlier, it is essential to plan the introduction of this regulation alongside support and attractive incentives to increase engagement and minimize the need for enforcement action.

We recommend working with interested landlords to pilot – on a voluntary basis - new approaches on deep retrofit (taking the worst performing properties to net-zero in one intervention) and new ways of financing retrofit – for example, a 'comfort as a service' approach. This is explored as a possible demonstration project in our scoping report on deep retrofit.[16]

8. What are your views on using 1 April 2025 as the date to start applying the minimum standard of C when there is a change in tenancy?

We support using 1 April 2025 as the date to start applying the standard at the change of tenancy.

We also support putting in place a backstop requirement for all PRS properties (with allowance for exceptions) to meet the EPC band C standard by 2030.

9. With regards to providing a useful tool to landlords planning and executing improvement works, what are your views on basing any cap of required works on a definition of cost-effectiveness and technical feasibility?

[16] Scoping study for a Warm Homes Programme, a report to the Existing Homes Alliance Scotland by Changeworks, January 2019, http://existinghomesalliancescotland.co.uk/policy/the-potential-for-deep-retrofit-in-scotland/.

It is impossible to answer this question without understanding how the government would define and apply the terms cost-effective and technically feasible. As a start, we suggestion the following points for consideration:

Technically feasible: Technically feasible should mean the measure can be installed and achieve the desired impact, without any negative knock-on impacts. The measure must also be appropriate to the specific property so that it is sensitive to historic or cultural features. At the same time, we support a review of planning guidelines and restrictions related to conservation areas and listed buildings to ensure they are appropriate and necessary in light of the latest understanding on traditional buildings and energy use and recently adopted climate targets.

The feasibility will need to be based on a professional technical assessment of the building in order to ascertain what improvement works are right for the building, in the given location, and what, if any, additional measures are needed to ensure the work is done well and unintended consequences are avoided.

Cost-effective: The consultation has used the term simple payback, defined as: 'the annual fuel bill savings divided by the capital cost of the package of upgrades.' The consultation also notes that: 'more complex payback calculations could adjust for replacement costs of measures with shorter lifetimes, amongst other refinements.'

It is also important to consider the question 'cost-effective for whom' – the landlord, tenant, homeowner, or the public sector. This will help determine how society can fairly distributes the cost burden of the low carbon transition.

In our view, there will need to be a cost-effectiveness test for the individual homeowner or landlord, which determines how much is fair to expect 'self-funding' households to pay; and another cost-effectiveness test which will guide government policy on how much the public sector should finance to deliver public benefit (in terms of eradicating fuel poverty, improving health, reducing carbon emissions, pump prime the market, etc).

The following points should be considerations:

- Changes in costs and savings over time.
- Subsidies/incentives.
- Include / adjust for replacement and maintenance costs over the whole-life of the system.
- Take account of overall costs of reaching net-zero using the Building Passport approach.
- Actual costs for a particular property rather than average costs.
- Wider public benefits such as emissions reduction, health and energy security (and avoided costs of generation).

We note the recently released Climate Exchange research on cost-effectiveness which can help inform the discussion.

Impact on Supply Chain: Skills and Capacity

Considering the recommendations made by the Quality Assurance Short Life Working Group:

10. The Short Life Working Group have made recommendations which they believe represent the actions required to ensure that Energy Efficient Scotland will achieve consistently high levels of quality, health and safety and consumer protection. Do you agree? If not, what more or less should be done?

In principle, we support the recommendations of the Quality Assurance Short Life Working Group and its focus on industry engagement, customer care and technical skills and capacity.

Our survey revealed 70% of respondents supported the introduction of a Quality Mark accreditation requirement for all suppliers to the Energy Efficient Scotland programme. However, there was concern that this requirement is not overly burdensome and not duplicate existing systems such as PAS 2030 and PAS 2035.

We recommend the impact of the PAS is evaluated over 2019/2020 in order to provide much needed information on how the implementation has gone, in time for the next revision.

11. Do you have any views on how this can be achieved whilst at the same time ensuring maximum participation from suppliers across Scotland regardless of their size and geographical location?

No response

12. What do you think the role of Scottish Government should be in ensuring the quality criteria are consistently met?

No response

Heat Networks

13. Taking the above into account, what further incentives could drive further heat demand onto networks?

For district heating and smaller heat networks, there is a continuing need for public subsidy (grant, loan and incentives) to 'de-risk the project and make it attractive for investors.

For off gas areas in particular, we share here our response to a similar question in the call for evidence on low carbon heat in off gas areas:

The Alliance believes there should be more focus on the opportunities for **small heat networks** which can provide a low carbon, cost effective solution in rural off-gas areas, linking non-domestic and domestic buildings to heat a small number of buildings that are relatively close to each other, for example in a rural off-gas grid village.

The Energy Efficient Scotland programme – working closely with local authorities and community groups - could provide an ideal way to further encourage the use of this solution by:

- Giving priority to the identification of and planning for the best opportunities for heat networks in rural off-gas areas
- Awareness raising amongst the various decision-makers (homeowners, businesses, schools)
- Provide advice and facilitation of design and procurement of communal heating approaches.

There are many examples of heat networks installed in small villages or estates in rural, off-gas grid areas. These examples show that heat networks can be economic where buildings are close together and the costs of pipes and groundworks can be spread across more users.

Off-gas grid homes in urban areas are usually large blocks of flats on electric heat that are suitable for a heat network. Housing Associations have led the way with heat networks in these areas to reduce operating and maintenance costs.

For district heating and heat networks more generally, we need:

- A legislative framework for regulation of district heating
- Provision of specialist support for developers and potential and existing customers
- Support to build up the supply chain amongst local contractors through training/skills academies.
- Zoning – introducing 'concessions' for good quality schemes to operate within certain allocated zones where district heating is cost effective to help to stimulate investment in heat network infrastructure.

14. Taking the above into account, what further assistance could support the growth of approximately-sited, low carbon heat networks?

As above, we share our response to a similar question in the low carbon heat call for evidence:

Given the imperative of early action in the next decade, and the recognition of off-gas decarbonisation as 'low regrets' option by the Scottish Government and the UK CCC, a key objective of LHEES should be to prioritise the take up of low carbon heat in off-gas areas. Like the proposed district heating zones, we think the LHEES should identify off-gas areas as **low carbon heat zones** – and state which are appropriate for heat networks.

This 'zoning' should be used to give these areas greater priority for support like area-based programmes and raise awareness amongst consumers and businesses that high-carbon heating systems within them will need replacement with low carbon systems in the near term. The zoning would also suggest that gas network extensions would not be appropriate in those areas.

Delivery programmes such as Warmer Homes Scotland and ABS (providing energy efficiency and low carbon heat) should be supplemented with 'Local Heat Partnerships' to engage with communities and facilitate the uptake of low carbon heat and coordination of businesses and homeowners to develop heat networks where appropriate.

Make it mandatory for public sector buildings to connect to existing or planned district heat networks when replacing the heating system of existing buildings. This would help drive the development and expansion of such heat networks.