Community Energy Scotland Heat in Buildings Consultation Response

Chapter 2: A 2045 Pathway for Scotland's Homes and Buildings

1. To what extent do you support the pathway set out for achieving the 2045 net zero target and the interim 2030 target?

We support the pathway and agree that a fabric-first approach is key to meeting the challenge of decarbonising heat. Reform of the EPC assessment process is long overdue and the current emphasis on a building's cost-based efficiencies is not an appropriate metric when assessing a building's heat losses and may even discourage the uptake of low carbon heat technologies which can be expensive to install.

The timescale represents a formidable challenge and while we welcome the requirement of all new buildings to use zero direct emissions heating and high levels of fabric energy efficiency, it is not clear why this will only take effect from 2024. Given the challenging timescales this date should be brought forward as early as possible.

2. What are your views on any risks of unintended consequences from this pathway?

Our most important comments on the negative unintended consequences are in question 38 where we discuss the idea of 'showcasing' and the inherent dangers in losing the inclusion and fuel poverty focus in that method of going forward. Also, and perhaps more importantly, in questions 52-56 where we discuss the unthinking reliance on old business models as soon as the Strategy turns to issues like supply.

There is a real danger here that the whole Net Zero and Just Transition visions are entirely sacrificed in the HiBs because the business modelling and lines of supply were left to the same old big players round the same old table. The Scottish Government must also take some responsibility for the high level of business collapse and volatile nature of business survival in the research and innovation drive which has produced the research for heat pumps, heat networks, green hydrogen and other tools simply being handed to the 'big players' in order to maximise supply. The business assumptions that bigger is better, pushing rivals to bust rather than co-operate is success, and that national contracts outstrip local contracting must be questioned if thriving local economies are to emerge from the HiBs. We would argue that local authorities, and even a new layer of democracy below local authorities, would be the best level to award contracts, monitor inclusion, and that local business friendly policy is tied to the 15 minute community and the needs of citizens to have thriving businesses on their doorsteps. If one outcome of the HiBs is the demise of out-of-town shopping, for example, through a 'polluter pays' tax on large inefficient buildings that

might be a sacrifice worth making to create thousands of local jobs serving local communities.

The Government needs to courage to make big business step back in order for local business to thrive and a more sustainable, local economy network thrive across Scotland in a Net Zero state.

In preparation of this response CES has done extensive reading of previous reports and recommendations many of which are cited below in our answers. The clearest unintended risk is that this will become, like all those other reports and recommendations, simply a collection of forgotten data and recommendations within which the really good ideas that could make net zero work are lost. The simplified pathway is appealing, but the devil is actually in the detail when trying to create massive social, political and economic change to Scotland's built infrastructure and the people who live in and use those buildings.

3. What are your views on our assessment of strategic technologies in low and no regrets areas to 2030?

The plan to prioritise low and no regrets technologies is sound. Heat pumps are a known quantity and likely to be a suitable option for many domestic and non-domestic buildings, even for many traditional buildings that are harder to heat. We welcome the decision to publish further research on heat pump performance in situ across Scotland as well as further modelling and analysis to better understand the relationship between energy efficiency levels and zero emissions heating systems as there is precious little data currently available. This will be crucial if we are to accurately assess performance for the Scottish climate and ensure users have adequately heated buildings, as well as value for money both in terms of up-front capital costs and running costs.

While hydrogen will no doubt play an increasingly important role in the longer term, heat pump rollout (in terms of both technical and supply chain considerations) should be prioritised until we better understand the feasibility and comparative costs of using hydrogen to heat homes.

We agree that it is important to consider the relationship of zero emissions systems with secondary technologies such as solar PV, solar thermal and thermal batteries. Thermal batteries in particular will allow for the decoupling of heat production and heat use and provide an element of flexibility to the distribution network which will be needed as it comes under increasing pressure from the electrification of both heat and transport. This will also introduce opportunities for users to take advantage of time of use tariffs and help reduce fuel bills.

4. What function should a new heat target serve?

To help monitor and track our progress and drive delivery efforts to meet net zero ambitions.

5. How do you think a new heat target should account for the need to deliver against our statutory fuel poverty targets?

The heat target should be set to ensure that we can feasibly meet our net zero targets and mitigate the negative aspects of climate change as soon as possible. It is not the job of the heat target to take into account fuel poverty targets – it is the job of government to set the necessary targets and then figure out a way to meet them while protecting vulnerable fuel customers.

A clear, integrated and cross-referenced set of multiple targets would give the indicators by which outcomes could be measured and the data required to prove that fuel poverty targets are met while the net zero targets are also being considered. An integration of government targets across health, inclusion, poverty, and net zero would enable all bodies involved to see and understand the targets to which they are working while maintaining the priority of net zero within that matrix.

6. Do you agree that a new heat target should apply to heat in buildings, distinct from industrial heat?

Yes.

7. What form should a new heat target take and why?

A target based on the proportion of heat demand delivered by low and zero greenhouse gas emissions technologies seems the most representative statistic. It has the advantage of being technologically agnostic and would therefore also take into account electrically powered heating systems such as storage heaters which may not currently be powered by green electricity but have the potential to in future. If it were to cover the 'lifecycle' of every fuel, from creation to use, it would also build in to the system a distinction between green hydrogen and the other forms of hydrogen being proposed.

8. At what level should the target(s) be set and for what date?

By 2030, a target of 50% of heat demand in domestic and non-domestic buildings delivered by low and zero greenhouse gas emissions technologies.

Chapter 3: People

9. What are the most significant actions we can take to ensure that Scotland's people and organisations are meaningfully engaged in the net zero heat transition?

If meaningful engagement is to be achieved, particularly in deprived communities, then there needs to be a fundamental shift away from the tendency to impose energy interventions on people toward an approach which helps them to understand their relationship with energy and how they might benefit. Most community interventions in deprived areas focus on simple activities which prioritise material needs particularly around reducing energy bills, and while this is important, much of the activity ends here. This is often a resource issue, as most funding programmes do not accommodate community energy activities which prioritise embedded, long-term engagement.

The following community-led measures should be considered to facilitate meaningful engagement and address at scale the behavioural change needed to drive heat decarbonisation:

- Introduce a national support programme with associated long-term funding support which would upskill community organisations and give them the capacity and confidence to engage people to help deliver more coordinated community action on reducing carbon emissions at scale.
- A Community Energy Demand Reduction Incentive that, if set correctly, could stimulate creative approaches to demand reduction activities. A pilot programme, targeting community anchor organisations across several different geographical areas could be developed by working groups of interested parties and linked specialists, and could consider the method & amount of payment, the basis for assessing demand reduction and the time period over which it would apply.
- Implementation of a large-scale, community-led bulk procurement and energy efficiency retrofitting scheme employing trained, local contractors and utilising trusted community anchor organisations to engage, lead and focus on recruitment of vulnerable and 'able to pay' households.

10. What in your view are the opportunities, if any, available to key organisations, such as local government, businesses and trade associations and community or other non-government organisations, in supporting this public engagement activity?

Community Anchor Organisations have significant potential to support public engagement activity as this will be crucial to help drive the behaviour change needed to encourage energy efficiency measures and low carbon heat technology uptake. Currently, the activities of these organisations are largely limited to advice and signposting to centralised schemes managed by Home Energy Scotland/EST/Warm Works etc and a lack of long-term funding means that community projects and services can often be transient.

While centralised services provided by the likes of HES offer a valuable core service, this approach has proven to be ineffective at tackling the more complex requirements of the 'able to pay' sector, and we believe that a more localised, collective approach which mobilises voluntary action will be a more effective way of driving the behaviour change needed to make Net Zero targets a reality. There needs to be a fundamental shift away from imposing energy interventions on local people toward an approach which helps them to understand their relationship with energy and how they might benefit. We strongly advocate for a fully funded national community capacity building programme to upskill community organisations and give them the capacity and confidence to engage people to help deliver more coordinated community action on reducing carbon emissions at scale.

11. In your opinion, could any of the proposals set out in this strategy unfairly discriminate against any person in Scotland who shares a protected characteristic? (age, disability, sex, gender reassignment, pregnancy and maternity, race, sexual orientation, religion or belief)

Nothing obvious which pertains to any specific category other than to bear in mind that many groups cited here will be more likely to be on a low income and in fuel poverty and

therefore could be disproportionately affected by the imposition of any proposed changes. We are encouraged that the Scottish Government has acknowledged the inherent tension between reducing heat-based carbon emissions and their commitment to ending fuel poverty, particularly given the high capital and running costs associated with many low carbon heating systems, but this will need to be addressed explicitly in the delivery rollout and appropriate financial support must be provided to those who need it.

12. In your opinion could any of the proposals set out in this strategy have an adverse impact on children's rights and wellbeing?

See answer to Q11.

13. What further action can we take to support people to make informed choices on the energy efficiency and heating options available to them?

We would welcome a Scottish Government review of existing Energy Efficient Scotland provision for homes and businesses offered via HES and Energy Efficiency Business Support in order to:

- improve clarity and strengthen integration with local community hubs;
- open up eligibility as far as possible;
- have consistent offerings across the country whilst still recognising that particular measures may be required in certain regions;
- and ensure that community groups are empowered to assist residents in their areas with the application, assessment and installation processes as well as bulk procurement schemes.

14. What is your view on the current level of support and advice provided through existing services such as Home Energy Scotland and the Energy Efficiency Business Support service?

Many householders have found the referral and application processes offered through Home Energy Scotland to be confusing and time consuming due to the complexity and range of support offered in different local authority areas. HES intended role as a 'one-stop shop' to help identify what measures an individual might be eligible for has not always been effective or clear enough to encourage householders to apply for funding.

The referral process is particularly problematic in more remote and rural areas where homeowners have reported waiting for assessment visits from installers who never appear, or decline to quote because of the distance to travel or complexity of the work required for the building. Local installers and contractors whose core work is not in energy efficiency may not be accredited to participate, despite being better placed to do so, or may not have resources to bid in national tendering schemes (which are often awarded to larger firms that can deliver nationally, at scale).

15. Are there any further suggestions that you could provide on how the customer journey through these delivery services could be improved, in light of the ambitions set out in this strategy?

As highlighted in Q14, a review of the current Energy Efficient Scotland provision should be carried out with a view to streamlining and simplifying the referral and application process. This is essential if householders are to be encouraged to take up the support being offered at an early stage. As highlighted in Q10 the role of Community Anchor Organisations and Third Sector facilitation should be supported as they improve strategy delivery.

16. What are the most appropriate steps we can take within our powers to ensure sufficient consumer protection for supported energy efficiency or zero emissions heat installations?

See previous responses.

17. Do you have views on whether we should adopt the use of the UK government's TrustMark quality assurance framework?

In principle we would support the use of the UK TrustMark framework, however we would note that the costs associated with such a verification process could have a negative impact on small, local businesses particularly in rural and island areas where work is less abundant, and where accreditation costs may not be justifiable.

18. In your view, is there any further action that we, or other key organisations (please specify), can take to protect those on lower incomes, and those in or at risk of falling into fuel poverty, from any negative cost impact as a result of the zero emissions buildings transition?

Responsibility for the production of a large volume of no longer fit for purpose housing, especially subsequent to the changes in the 1980s and the shift from rental/council housing to low cost home-ownership, has resulted in a large number of houses on the gas grid which are actually quite high polluters. The legislative changes to ensure future new build are net zero are welcomed, but arguably some form of levy or tax on those construction companies which built low grade housing in the previous decades might be seen as part of a 'Just Transition'. The principle that the 'polluter pays' might also lead to levies on Supermarkets, warehousing and out of town shopping or retail complexes, places where revenue could be raised to enable those at most risk of fuel poverty to be included in the Just Transition.

There's a wide range of charities across Scotland which work to mitigate fuel poverty, usually in conjunction with EST and WarmWorks, but there's some significant gaps in the support provision and many of these smaller charities have very tight margins and little by way of extra staff capacity for resolving the bigger issues of price redistribution/market fairness. It would be helpful to them if further funding be made available either through the Redress Scheme or through another avenue to support their work and if the fragility of the funding of these organisations was taken into account by the Scottish Government when looking to gather data or promulgate their Net Zero messages to ordinary citizens.

EAS produced a report in [down_to_the_wire_-_technical_report_-_eas_gcu_dr_fraser_stewart.pdf (theclaymoreproject.com)](theclaymoreproject.com) which outlined the steps needed to ensure that citizens with electric only heating systems were not penalised unfairly, and the recommendations in that report still stand today. To pull out a few and summarise

- face-to-face and in-home energy advice by 'trusted intermediaries' operating from services with strong local and social recognition.
- a common message but with a local context – sorting out the confusing messages
- The current tariff market is creating disengagement amongst householders
- Innovations are out-pacing regulatory and legislative change

They also raised the point that 'The current remedies to inequalities and fairness in the energy markets concentrate on a form of individual price control applied to a consensus around vulnerabilities. These safeguard tariffs or 'price caps' will impact on households on pre-payment meters and those currently eligible for the Warm Home Discount. Progress in untangling the complexity of the electricity retail market appears so far to have focused on so the called 'restricted meters'. The implementation of remedies in this area has generated significant confusion and this is unduly impacting on Scottish consumers.'

19. What are your views on our approach to phasing out funding for fossil fuel heating systems by 2024 where it is not detrimental to our fuel poverty objectives? Do you think that this could be achieved any sooner than 2024, and if so how?

When the Scottish Government is rightly pushing the construction industry to end the installation of fossil fuel heating systems by 2024 (a deadline which in our view should be brought forward), it doesn't seem credible or consistent to still be offering support to retrofit oil and gas boilers. Ultimately, if the 2040 targets are to be met, any such boiler will ultimately have to be ripped out before that – possibly with Government support, again. This seems a waste of an opportunity and a waste of resources. The Government needs to be setting an example to industry, landlords and homeowners by demonstrating that zero emissions heating systems, combined with deep retrofit and insulation work, will save households money. If the calculations suggest that a particular home would have higher running costs with a heat pump alone compared to a gas boiler, then other measures must be taken in addition. Government support for fossil fuel heating systems should end by March 2022 at the latest.

20. What changes can be made to the Strategy to help maximise positive impacts and minimise negative ones on people experiencing fuel poverty and other vulnerable groups?

Chapter 4 Place

21. What are your views on how we can support place-based deployment of zero emissions heat within our delivery programmes?

We strongly welcome the Scottish Government's acknowledgement of communities as important players in helping to drive the decarbonisation of heat and the required behaviour change associated with this, and we welcome the continued commitment to support community energy projects via the continuing CARES programme.

In principle, we support the integration of heat decarbonisation with community initiatives such as Community Climate Action Hubs, but would emphasise the need for these hubs to be properly financed to enable dedicated local staff resource and to ensure that they are truly community led to encourage buy-in from local people.

22. What is your view on how best to engage, and support, local communities in the planning and implementation of the heat transition in their area?

We encourage the Scottish Government to provide sufficient long-term funding to local community organisations which will provide much needed capacity to act. We would also like to see support for communities to develop strong working partnerships with local authorities by carving out a clear role for them within the LHEES process as well as with DNOs and Scottish Government delivery providers. A process of devolving further powers within local government to smaller areas or 'hubs' would enable a holistic planning and implementation approach in heat transition which harmonised across food, health, social work, local economies etc.

23. What role do you think community anchor organisations could play in supporting the heat transition?

Community Anchor Organisations have significant potential to drive the step change that is required in energy efficiency and local supply by harnessing local knowledge, trust, visibility and expertise to implement collective measures. We believe that a more localised, collective and finely- tuned approach, is demonstrably more effective at changing behaviour, mobilising voluntary action and encouraging uptake of measures than the centralised advice and delivery model.

We see 3 key areas where CAOs are well placed to contribute:

- Community buying schemes: achieving economies of scale by bulk purchasing of goods or services to improve quality and reduce costs. These would also have the potential for reducing complexity when it comes to buying or installing equipment which residents may not be familiar with e.g. heat pumps.
- Community partnerships with commercial energy service companies: reduce or eliminate the capital cost of installation of energy efficiency measures and low carbon heating for householders by negotiating leasing agreements with commercial entities.
- Community installation companies: well established groups setting up subsidiary installation companies, building up a local client and skills base then bulk purchasing & installing both energy efficiency and heating measures using local installers.

24. In your opinion, what steps can we take to ensure that policies set out in this strategy do not unfairly impact Island and other remote communities?

A start would be to recognise that island and remote communities face unique issues based on their locations and these must be taken into account prior to implementation. This may require a bespoke strategy for these communities and/or flexibility around delivery frameworks.

25. What is your view on the timescales proposed for LHEES?

The timescale seems appropriate bearing in mind the pilot programmes will need to be evaluated ahead of rollout, however we would note that any action taken now is already too little too late given the historic inaction and lack of urgency around the decarbonisation of heat.

26. Do you agree with the approach to LHEES set out above? If not, please give reasons to support this.

Broadly, yes. A statutory approach is essential to ensure that local action is carried out across Scotland in a standardised way using a tested methodology, however it is crucial that LAs are adequately funded to ensure they have the capacity and knowledge to carry out this work. We note that LHEES development will be led by LAs through extensive engagement with local communities which we welcome, however, we feel that failing to explicitly carve out a role for CAOs in the delivery of these plans is a missed opportunity.

27. What are your views on what Permitted Development Rights might help enable in the heat transition, in addition to those we have already included in the Permitted Development Right s review programme?

No comment.

Chapter 5. Preparing our Energy Networks

28. In your view, is there further act ion that can be taken to ensure that our electricity systems are ready for heat decarbonisation? If yes, please provide further information.

Demand for electricity will increase significantly as heat pumps and EVs replace fossil fuel heating systems and petrol/diesel vehicles. The ability of the DNOs to meet this demand will rely to a great extent on energy users understanding the concept of flexibility and its benefits to drive the necessary behaviour change required to flatten peaks in demand. It is vital that consumers are made aware of the benefits of flexibility, not only to reduce pressure on the networks, but to take advantage off time of use tariffs which can help to keep their fuel bills lower.

Innovative flexibility projects are currently being trialled but further work needs to be done, particularly at scale, to provide a fuller understanding of how wider EV and heat pump adoption will impact the networks. Community organisations are ideally placed to partner on such projects as they are uniquely placed to communicate the need for, and benefits of, flexibility and to recruit participants to take part. DNOs have a vested interest in helping drive forward these projects and we believe that investment in community flexibility innovation can play a significant role in the heating decarbonisation transition.

Ofgem must be given a new remit, explicitly noting our legally binding Net Zero targets, and recognising the role they should have in protecting the energy costs of future consumers – not just present ones. This would allow them to enable networks to invest ahead of

contracted need, ensuring that the networks will be ready for the rollout of EVs and electrified heating. We can't end up in the situation we faced with renewable electricity connections in the past decade; we don't have the time for years of connection delays.

29. What are your views on the changes set out above for the electricity networks and are there further act ions that could be taken by government, the regulator or industry that would make these more cost effective? Please provide evidence to support any suggest ions.

We agree that a holistic approach to managing the heat and transport transition is crucial for a successful rollout. Partnership working and sharing of information between DNOs, Scottish Government and Local Authorities delivering LHEES will be essential to monitor and accommodate heat pump and EV uptake at both local and national level.

30. In your view, what changes are needed to ensure that those least able to pay, including those in fuel poverty, are not unfairly impacted by the transition in our electricity and gas networks?

The clean energy transition needs to be fair to everyone, with financial support available to ensure the poorest households are not penalised by the switch from fossil fuels to renewables. Those on the lowest incomes tend to live in poorer quality homes that require more energy than they should leading to higher fuel bills. A fabric first approach to reduce energy demand is fundamental to addressing issues of fuel poverty across Scotland's existing housing stock. However, we know that for homes currently heated by mains gas, low carbon heating is at present more expensive. While there is financial support available from SG for low carbon heating systems via HES and EST, much of this is in the form of loans which those in fuel poverty are least able to afford to repay. The need for a credit check removes a significant section of the population from eligibility for an interest free loan. Financial support in the form of non-repayable grants should be considered for those who need them.

31. What are your views on the changes set out above for the gas networks?

We support the continued commitment to seek evidence for the use of increased hydrogen and biomethane within the current mains gas network, recognising that the benefits of this are not likely to be significantly impactful in the short term, but agree that this could form an important element of Scotland's long-term strategy in the decarbonisation of heat. Green hydrogen (produced via electrolysis) should be the focus of this research. We do not believe blue hydrogen (via methane reformation and CCS) is an appropriate or feasible 'intermediate' solution given the poor progress thus far in the development of CCS technology which has proven to be very costly. Better to leave it in the ground where it belongs and focus on proven low carbon technologies.

32. Are there further actions that could be taken by government or industry that you think would make the changes set out more cost effective? Please provide evidence to support any suggest ions.

No comment.

33. What evidence can you provide on the potential for heat networks in Scotland that can help inform a new ambition for deployment within the final Heat in Buildings Strategy?

No comment.

34. What evidence can you provide on the potential for heat derived from energy from waste to qualify as low or zero emissions?

No comment.

35. What views do you have on mechanisms to support this and the use of wider sources of waste heat?

No comment.

36. With the sustainable market for heat networks described above in place by the early-2020s, are there any further gaps that must be filled to support subsequent delivery of heat networks? If so, what are these and are there particular types of organisation that would be key in filling these?

A key issue which has not been addressed by the SG's approach to heat network delivery, is acknowledgement of the lack of consumer awareness and confidence in heat networks which are still an emerging solution in the UK. Public awareness is very low with only 2 in 10 households having ever heard of heat networks and this is symptomatic of a broader lack of awareness around low carbon heat technologies in general. The case must be made to the wider public about the benefits of connecting to a heat network if widespread adoption is to occur at pace. Community groups are ideally placed to work alongside LAs to build trust in, and awareness of, both heat networks and low carbon heat technologies in general.

Chapter 6. Kick-starting Investment in the Transition

37. What are your views on the range of act ions identified above to kick start the investment in the transition over the next 5 years?

The financial investment is welcome, but, in reality, there has been money available previously for Heat in Buildings and it has been poorly used or not taken up. The tension in government schemes to centralise funding awards bodies and to focus on interest free loans as the primary driver means that the application for, and, accessing of, funding has been a barrier in itself. An analysis of the speed of processing applications, the ease of making an application, and the projected funding types might be helpful in assessing how much of this money will be quickly and directly spent on meeting the Heat in Buildings targets (see points 48-50).

Education and behaviour change need time and, for many, an inter-personal approach is the only method that brings results which will allow community members to opt for change. Community-led models of change-persuasion, such as the work of Greener Kirkcaldy in Fife are likely to make more of a difference to individuals in the harder to reach groups than application forms and a bureaucratic 'front door' across the threshold of which many of

Scotland's citizens may not freely choose to tread. Funding for facilitative Third Sector organisations is key to this but not readily apparent in the range of actions set out in this consultation paper. If the goal is to 'kick-start' a greener Scotland with better, warmer, homes then use of the third sector to build trust using established relationships, and to facilitate community uptake is essential.

For Community Energy Scotland's work in the highland, rural and island areas of Scotland an understanding of rural poverty, isolated poor housing stock and limited social housing available is necessary before investment in better buildings and reduction of energy use. A focus on the alternatives to oil and LPG needs to be prioritised, and the funding available, and funding criteria, requires to be flexible enough for the specific needs of the rural low-income households. The funding criteria must be written in such a way as to include a population which currently has a very high per capita carbon footprint for very low heat values.

38. Do you agree with the strategic funding priorities set out above?

The strategic priorities 1, 2, and 4 set out a welcome priority for those least able to pay, for rural and island areas and for innovation. The priority 3 of showcasing is less demonstrably part of a just and fair transition as it may lead to the investment in 'white-elephants' or the syphoning of government funds by organisations that are actually in the able to pay bracket due to some argument that they would bring good 'PR'. These things can be fraught with danger, as the showcase buildings may pose a risk to the future of the strategy if the government is too closely allied to those projects which fail; we can't predict this because we cannot see what the unintended consequences might be.

39. In your view, should equal funding be allocated across these priorities or should certain priorities be weighted in terms of impact for Scotland?

Following the argument above, the priorities 1, 2 and 4 should be prioritised, in that order. In terms of direct government and local authority investment the first priority, 'Supporting those least able to pay' should be the largest financial investment. Again, we would argue that the investment in the Third Sector facilitative organisations that support those least able to pay would be a reasonable and logical part of that investment.

40. What are the opportunities and challenges we face in maximising our £1.6 billion investment?

It seems this budget is low compared to the very real challenges faced in reaching the targets. According to Citizen's Advice Scotland: "Despite energy efficiency being designated a national infrastructure priority in 2015, central funding has remained the same and existing support schemes haven't seen the uptake of energy efficiency measures at the pace and scale required to meet the target". They argue that the current range of financial incentives is not sufficient to encourage people, especially owner occupiers, to upgrade their homes, who need more support to take action, especially fuel poor households. They suggest that the total investment required to bring Scotland's homes up to EPC 'C' will be £11.1bn compared to the government's £8bn estimate and that the SG's contribution to this

cost should double, from an annual budget of £119m to £256m. In addition, CAS' key asks include a new major public information and awareness campaign and a 'one stop shop' for advice, information and consumer redress. CAS highlights the social and economic benefits of upgrading the energy efficiency of homes, including preventing ill health and premature death from cold homes leading to savings for health services and lower bills. In the wake of COVID, we could now add greater resilience to global shocks and a highly beneficial basis for job creation to this list of benefits. Investment in energy efficiency measures is generally considered to create more jobs than new energy generation, because of the relatively high levels of labour intensity. Manufacture and installation of equipment and materials also has the potential to boost local labour markets but requires provision of training to local workforces owing to the relatively specialist skills involved

41. What are your views on the role of government funding over the next five years? For example, should it be focused towards significant increases in the volume of renewable heat and energy efficiency measures installed or more targeted at specific priority groups or technologies?

It must be accepted that lines need to be drawn somewhere for the best use of funding to resolve these issues. In the 'Next Steps' report Community Energy Scotland argues that a centralised advice and delivery model "has gone a good way to achieve the 'easy wins' but is not effectively addressing more complex requirements or the 'able to pay' sector; but a more localised, collective and finely- tuned approach, which is demonstrably more effective at changing behaviour, mobilising voluntary action and encouraging uptake of measures, is more complex to organise – and could be more expensive. It would be a mistake, though, to take an 'either/or' approach as it also seems clear that the two approaches could complement each other more effectively than at present. Investing in community led approaches could also help reinforce community resilience & the post-COVID recovery." [.Next-Steps-in-Community-Energy-Full-Paper-Final-25-08-20.pdf (communityenergyscotland.org.uk)]

The need for investment in renewable heat and new technologies cannot be laid aside entirely in favour of community education and reduction of heat loss. The proportion of government investment in this area might be smaller as it is possible to attract private investment and UK investment into innovations. At Community Energy Scotland we also invest time and energy into making sure those technologies are implemented in an inclusive way and that the fuel poor are not 'left behind' by technological advance. Again, funding for Third Sector facilitative bodies may ensure that the three priorities, 1, 2, and 4 are not separated into 'silos' but instead all the measures to implement a Heat in Buildings Strategy are inclusive and carry with them a responsibility to all investors and interested parties to maintain a priority for inclusion of lower income households.

42. What are your views on how we can use our funding to leverage and encourage private sector and other forms of investment?

It may be that in order to encourage the private sector, and potential private investment, the Scottish Government would be in danger of diluting the principles set out in priorities 1, 2, and 4. This is something which would need closely monitored.

If private investment were brought on board, then it would have to be clear that the inclusion priorities of 1 and 2 were monitored and reported upon as real and verifiable outcomes of the work required to be done to fulfil the aims of the Heat in Buildings Strategy as a whole.

There is a need to ensure that new work generated by the just transition to sustainable buildings is locally sourced, and provides local jobs. A system of local procurement always brings up difficulties in terms of accepting the tender of the lowest price, and these tensions cannot be easily resolved. If we are serious about the revival of local economies as a means to provide resilience, then structures need to be put in place to ensure local firms are able to be competitive. These may then run contrary to the priorities of share-holder companies and private investment which has an in-built bias towards profit alone.

Equally the rural and island communities can struggle to find suitably trained and skilled builders and fitters to retrofit their buildings, the expense of shipping building materials and the high proportion of pre-1915 buildings still in use in remote rural areas means that there are additional challenges in meeting the second strategic priority. A procurement system which had a local charter or local business friendly structure within it would be beneficial to ensuring that the Scottish Government doesn't find its investments transferred very rapidly into large companies that operate on a multi-national level.

It would be extremely important that co-operation with private investment was to the benefit of the people who live in Scotland, those who are most vulnerable, and to the completion of the targets set out in this document. A change of the power-balance between private investment and government investment which ensured the priorities of the latter would need to be brought about, and the incentives of the private investors would need to be secured by more than financial profit. Many investors do understand the need for an 'ethical dividend' to their investments and will market investment products with an ethical portfolio. A clear and detailed set of criteria for potential investors on ethical grounds may well be acceptable to both parties if the right investors are sought from the start.

43. What are your views on the effectiveness of our existing delivery programmes in supporting different client journeys, including for those in or at risk of fuel poverty? (for example, landlords, home owners, non-domestic building owners – public and private, domestic and non-domestic tenant s). In your opinion, are there any gaps in support?

It is clear from the Strategy document in Chapter 4 that community involvement is an important part of the toolkit available to tackle fuel poverty. We would argue that the existing delivery programs have been moderately successful, especially through Warmer Works, in some urban areas, and in the central belt, however, there is a great deal more that could be done. In rural areas where, to quote the report on p. 40 "We know that the

prevalence of fuel poverty is higher in remote rural (43%) and remote small towns (34%)." It is our view that many energy, electricity, or climate driven initiatives miss the harder to heat lower income homes. There has been scope for small local charities such as Thaw in Orkney or Tighean Innse Gall in the Western Isles to work with home owners and tenants in a way that is conducive to more applications to Warmer Works and the other funding available but the reality of the remote rural and remote small town lower income households is that they require outreach by other local people in order to be persuaded of the need to retrofit their housing or replace a heating system.

The use of 'certified' engineers, fitters, or builders may also contribute to difficulties in remote rural locations as it is difficult to get human resource with the correct certification on-site and local firms may find the certification process difficult to negotiate or expensive to access. It may be that a remote rural legislative clause which enables local firms to estimate for these contracts where travel distance for the nearest certified firm may be demonstrated as a potential cause for delay.

44. Is there any action we can take to further tailor our support to meet the ambitions set out in this strategy, including in relation to fuel poverty? (Please include any evidence you may have to show what this might achieve.)

At CES we believe that Third Sector facilitation, through existing local contacts such as Community Energy, Community Development Trusts and other bodies would be the key way to enable further uptake of the funding and support available from the Scottish Government. This is not an area where government alone is enough to achieve the rate of change required to lift remote rural and remote small towns out of their position of being left behind by the current work that has been done. Third Sector facilitation could also enable landlords, Community Energy Projects, and Community Development Trusts to work together to solve some of the more intractable problems of rural social housing and lower rent housing. There would need to be an agreement or understanding that a tenanted home improved under these schemes would remain a tenanted home and not simply be switched to the rural tourism market where the incomes are significantly higher. A scheme whereby a landlord might agree to a fixed rent and a longer-term tenancy in return for the improvement of the property might mitigate some of these risks. There would also need to be some rent protection in order to ensure that any savings on fuel or by efficiency measures were not taken away directly by rent rises.

It is also the case that Community Housing and Social Housing should be encouraged to build new homes on the highest standards but then to tie them to affordable rents in order to retain that eco-housing stock for the lower income households. The Third Sector is already heavily involved in these initiatives and often local authorities in remote rural or remote small towns do not have the capital investment available to replenish the rentable housing stock at the lower end of the rental market with eco-homes with good building integrity and long life-spans. We would support the use of the Scottish Land Fund to purchase land for community rented schemes, and also support LA/Third sector

collaboration in building and planning social housing in remote rural and small towns across Scotland, including the Islands.

In conclusion, we would welcome much more mention of collaboration and co-working with the Third Sector and a commitment to back further funding for facilitation and education in these areas for the building of local plans and local solutions to local problems.

Chapter 7 Working Towards A Long-Term Market Framework

45. What are your views on the approach out lined above to take action towards a long-term market framework for net zero emissions in buildings?

On P96 the Strategy states, "We remain commit ted to delivering our ambit ion of a **public energy company** to support efforts to meet our climate change and fuel poverty targets, and to help to promote economic development." The terminology of 'Heat as a Service', is used but the text isn't clear on whether this is something the PEC would be tasked with. The Scottish Government need to consider whether we think a PEC is still a good idea, bearing in mind the demise of Our Power, Robin Hood Energy, Bristol energy, and, we believe, every other not-for-profit supplier. Did they really succeed in delivering lower prices for consumers? Are the big profits really being made by suppliers?

46. What are your views on how we can achieve a fair and equitable cost distribution for the net zero transition, including ensuring we tackle fuel poverty?

[Delivering affordable warmth in rural Scotland: action plan - gov.scot (www.gov.scot)](www.gov.scot)

The above report was commissioned by the Scottish Government in 2016. In it there are strong recommendations to improve equity and especially the levelling of the disparity in cost on remote rural homes. Di Alexander reflected that "there are excellent local community providers of advice, remedy and support whose work deserves greater recognition and enhanced Government funding with expansion in some rural areas". Another report written on similar lines was produced by Energy Action Scotland, and another by Shelter Scotland:

[ElectionManifestoMarch21.pdf (theclaymoreproject.com)](theclaymoreproject.com)

[Health and fuel poverty projects mapped - Shelter Scotland](Shelter Scotland)

It seems that the presenting issue is not a lack of analysis or advice, but rather a lack of a concerted effort to resolve the issues with Scotland's buildings and in particular from our work, rural homes of low income, and rural community buildings (religious or secular). The Scottish Government does require to act on some of this research and advice, and to be sure to involve those Third Sector organisations who are working hard to resolve the issues which relate in particular to rural homes. We know where the disparities lie. The solutions have been in the public domain for some years. The challenge is now to resolve those disparities.

47. What financing mechanisms are needed to encourage investment from householders, businesses and the private sector?

Regulated Asset Based (RAB) model is a type of economic regulation typically used in the UK for monopoly infrastructure assets such as water, gas and electricity networks. The company receives a licence from an economic regulator, which grants it the right to charge a regulated price to users in exchange for provision of the infrastructure in question. The regulated return helps secure private finance. Is this a model we want to see? It might well prove the only option for developing DHS for instance, but at what cost? There is a constant tension between profits and fuel poverty where this model exists in electricity for example; the need for regulation via Ofgem itself comes with costs and significant delays in investment whilst plans are scrutinised to ensure value for customers. We need to be far more fleet of foot over the next decade in order to meet these targets; we can't get caught up in endless cycles of tendering for licences, preparing and deliberating on business plans and permitted rates of return. Likewise, there is a real question of whether we want customers served by heat networks to be tied into monopoly, profit-driven suppliers.

For this model to succeed, there is a strong case to be made that it should be based on the Scottish Water model i.e. owned on a not-for-profit basis, with all profits reinvested in upgrading and extending networks. Potentially this could be done on a regional or local basis, with development trusts and other community-based organisations holding licences for particular heat zone areas.

Chapter 8 Developing a Regulatory Framework for Zero Emissions Buildings

48. What are your views on the regulatory act ions set out in the proposed regulatory framework?

We welcome recognition of the particular challenges posed by mixed-tenure and mixed-use buildings which account for a significant percentage of Scotland's housing stock and which may require complex agreements to co-ordinate works between multiple owners. Given this, a 'whole building intervention' approach which would simultaneously address energy efficiency and heat supply improvements seems sensible.

49. What are your views on the timeframes set out for the application of the regulation set out above?

We feel the timeframes for new buildings should be accelerated. The end of Sept 2022 would seem more appropriate as this is already long overdue. Ultimately, every gas and oil boiler being fitted between now and the deadline is going to have to be scrapped and replaced (at homeowner and/or taxpayer cost) well before 2045, so it seems nonsensical to prolong this window.

50. What are your views on how our Delivery Programmes could support compliance with regulation?

No comment.

51. What other mechanisms/support may be required to ensure that regulation is fair and equitable for all?

Chapter 9 The Economic Opportunity

52. What are your views on the plans set out to maximise the economic benefits to Scot land from the heat transition?

Community Energy Scotland is committed to local economies and the power of community organisations to drive forward regenerative change in renewable energy, reduction of fuel poverty, and the investment in local communities of the finance raised locally (the supply of local power to local people). While Net Zero necessitates a reduction of consumption globally, the shift to more local consumption may increase social and economic benefits in areas which have been depressed by the rapid process of globalisation in the 1990s and 2000s. The strategy in Chapter 9 is very focussed on supply chains and mobilising supply. This is going to tend towards bigger businesses taking on national contracts and the danger is that all the good work done on fuel poverty, inclusion and geographic sensitivity is instantly lost in the business modelling. It is vital to have Local Authorities, Third Sector organisations and Development Trusts around the table at the business supply meetings and for government to ensure that their voices are heard when the business models are formulated. The whole journey to Net Zero must contain the principle that local is better, national supply leaves the poorest, the most remote and the most vulnerable behind, and that effort made to 'fix the poverty gap' are far less effective (see questions 18 & 43) than efforts to alter business modelling to the local SME sized firms with high level inclusion clauses in their contracts.

There is a real danger here that the whole Net Zero and Just Transition visions are entirely sacrificed in the HiBS because the business modelling and lines of supply were left to the same old big players round the same old table. The Scottish Government must also take some responsibility for the high level of business collapse and volatile nature of business survival in the research and innovation drive which has produced the research for heat pumps, heat networks, green hydrogen and other tools simply being handed to the 'big players' in order to maximise supply. The business assumptions that bigger is better, pushing rivals to bust rather than co-operate is success, and that national contracts outstrip local contracting must be questioned if thriving local economies are to emerge from the HiBs. We would argue that local authorities, and even a new layer of democracy below local authorities, would be the best level to award contracts, monitor inclusion, and that local business friendly policy is tied to the 15 minute community and the needs of citizens to have thriving businesses on their doorsteps. If one outcome of the HiBs is the demise of out-of-town shopping, for example, through a 'polluter pays' tax on large inefficient buildings that might be a sacrifice worth making to create thousands of local jobs serving local communities.

53. What role could technology-specific milestones (for example, by 2025) play in supporting supply chain development, and how should these milestone levels be developed?

See above for detail on the vulnerability of Scotland's world standard research and innovation on heat and the need for local contracting to govern and monitor the milestones. In terms of 'technology-specific' targets these are less flexible than emissions specific targets.

54. Is there anything further that can be done to ensure that Scotland realises the economic opportunity available from the heat transition?

To quote the Scottish Government report in 2016, there are ways that a fair and equitable cost distribution (question 46) may improve rural economies and help the Scottish economy as a whole. Written before the Net Zero concept was politically current, the authors focused on justice and equity, however their observations about wider economic benefits (cahpter8 of that report) are applicable here. "There are real and significant economic and community development benefits that should flow to remote, rural economies from: ⬚ bringing fuel bills down to the national average; ⬚ increasing the involvement of local (rather than national) energy efficiency and fuel poverty service providers and supply chain businesses; and ⬚ enabling community energy providers to overcome the National Grid infrastructure constraints, which curtail their ability to derive maximum economic spin-off benefits (by way of increasing local business and job opportunities and/or making cheap, locally-generated electricity available to their communities, not least their more vulnerable members)."

[Delivering affordable warmth in rural Scotland: action plan - gov.scot (www.gov.scot)](www.gov.scot)

55. What more can be done to support the development of sustainable, high quality and local jobs in the heat and energy efficiency supply chain across the breadth of Scotland?

See above comments on the ill-effects on local business created by a centralised system of supply and a reliance on current models to support business which favours the bigger players. For more on the need for local jobs and local economies see: .[Next-Steps-in-Community-Energy-Full-Paper-Final-25-08-20.pdf (communityenergyscotland.org.uk)](communityenergyscotland.org.uk)

56. In your view, what are the opportunities and constraints presented by the role of the wider public sector in maximising the economic benefits to Scotland?

The public sector can play a key role offering heat anchor loads which will be necessary to provide the certainty of stable, long term heat demand expected by private investors in the development of heat networks. This type of leadership will be necessary not just from an economic perspective to stimulate development of these networks but to encourage the broader adoption of heat networks in a country where most people do not know or understand the benefits and may well be reluctant to shift from a unit heat model to alternatives such as "heat as a service".

57. In recognition of the proposals set out in the forthcoming skills consultation what further action can be taken to support skills development in Scotland over the lifetime of this strategy?

No comment.

58. Are you aware of any barriers to the reskilling of existing oil and gas heating engineers to equip them to install low and zero emission heating?

No comment.

59. How can we support the development of more opportunities for young people?

No comment.

Chapter 10 Working with the UK Government

60. To what extent do you agree that the issues identified must be addressed jointly by the UK and Scottish government s to unlock delivery in Scotland?

Devolved power in the areas of heat policy, energy efficiency and building standards gives the Scottish Government considerable scope to formulate and drive forward bold and impactful measures to meet the challenge of net zero emissions and this must be grasped with both hands. For reserved policy areas, then clearly there will need to be some level of partnership working with the UK government. Community Energy Scotland would be in favour of a 'positive outcomes' approach which is to say that those collaborations which empower local economies and inclusion are to be favoured over national or UK wide policy feeding into large-scale supply and inflexible supply chains devised in a mistaken understanding of efficiency always being at scale. For this strategy efficiency must be judged by how well we reach the most rural, hardest to heat, lowest income homes.

61. Are there any further areas where joint action is required, for example to ensure no one is left behind in the transition and fuel poverty is addressed?

It is difficult to see how we will successfully transition to predominantly electric based low carbon heat when environmental and social obligation levies on gas are a mere 2% of costs compared with 23% for electricity. This disparity must be addressed if we are serious about moving away from fossil fuels and achieving net zero within the proposed timeframes. However, there is a very real danger of the burden of these costs being borne by the most vulnerable and fuel poor and jointly agreed measures must be taken to protect them from further hardship. Gas costs require further careful regulation and gas companies need to meet the same rigorous environmental standards as all other companies on a 'polluter pays taxation' basis while mechanisms are put in place to ensure lower income households are not put at further risk of fuel poverty. This is also tackled in Q46.

Chapter 11 Monitoring, Evaluation and Future Decision Making

62. Do you agree with our proposals for a monitoring and evaluation framework? If not, please state your reasons and suggested improvements.

A monitoring and evaluation framework is clearly a useful tool to ensure we remain on track to meet targets and allow for remedial action if required but the proposals put forward here are so general as to be meaningless. We would expect the publication of more detail before commenting further. As cited above, the need for Scottish Government to interlace and cross-reference their targets, monitoring and evaluation so that health, fuel poverty, social inclusion and local economies thrive and that one framework is not actually competing against another, or indeed as with the supply chains, that untested assumptions don't tear down all the work of one policy aim (equity) in the cause of another (speed).

63. What are your views on how lessons learned from heat and energy efficiency policy and programmes should be shared with the sector and key stakeholders to ensure that Scotland benefits from the public investment out lined above?

Given the length and detail of this survey, it might be that to share further lessons learned a more accessible method of data sharing might be conceived of with a clearer picture of the purpose of the data, the questions required to elicit the data and a thorough revision to prevent repetition of material.

64. Finally, is there any other information you would like to provide us with that is relevant to the development of Scotland's Heat in Building Strategy?

No comment.