

Heat in Buildings: Scotland's National Public Energy Agency

Analysis of Responses to Call for Evidence



Heat in Buildings: Scotland's National Public Energy Agency: Analysis of Responses to Call for Evidence

Why Research, March 2022

Acknowledgments

Thanks to the individuals and organisations who responded to the consultation and to all at the Scottish Government who provided input and offered advice as required.

Executive Summary	1
Respondent Profile	1
Key Themes.....	2
Summary of questions	3
Introduction.....	8
Background.....	8
Respondent Profile	9
Methodology	10
Dedicated Agency	12
Strategic Purpose, Remit and Objectives.....	12
Delivery Functions	21
Institutional Form and Governance	28
Strategic Partnerships and Wider Stakeholder Relations.....	30
Virtual Agency and Transition Planning	38
Strategic Purpose and Functions	38
Structure, Governance and the Transition Pathway.....	40
Additional comments	42
Annex 1: Respondent Organisations	43
Annex 2: Additional Evidence & Research Submitted by Respondents	45

Executive Summary

Scotland has one of the most ambitious climate targets in the world. The Heat in Buildings Strategy, published in October 2021, focuses on heating system change and set out a number of actions and proposals for transforming buildings and the systems that supply their heat, to ensure that all buildings reach zero carbon emissions by 2045. A key element of this strategy is the establishment of a new, dedicated National Public Energy Agency by 2025 to provide new leadership and coordination to delivery of heat decarbonisation in Scotland.

In recognition of the need to act quickly in tackling climate change challenges, the Scottish Government is already working on development of a virtual Agency which will be launched by September 2022. This virtual body will be established initially as a discrete delivery mechanism within the Scottish Government, supported by a new independent Strategic Board to oversee its work.

The Scottish Government is keen to ensure the new Agency has the support of the wider delivery landscape and can meet the needs of a wide range of end users as Scotland moves towards heat decarbonisation. As such, there is a need to consider the role and responsibilities of the Agency, its delivery functions, its structure and governance, how it will adopt a strategic leadership role and work with partners and stakeholders, and its strategic purpose and functions.

In November 2021, a Call for Evidence was launched to gather views to help inform development of a broader evidence base to inform the design of the new Agency. This closed on 8 February 2022. The findings of this Call for Evidence will be used to inform whether or not the body should adopt a regulatory role in line with proposed regulations, the governance, institutional form and functions of the Agency and how a co-development and partnership-based approach can be embedded throughout the development and delivery process for the new body.

Respondent Profile

In total, there were 52 responses to the Call for Evidence, of which 46 were from organisations and 6 from individuals.

Table 2: Respondent Groups

	Number
Campaign body	2
Community development	1
Consumer advocacy and advice	3
Energy sector	7
Enterprise agency	2
Heat & Energy Efficiency – Delivery Landscape	7
Housing sector	4
Local authority	9
Supply chain	5
Trade union	2
Other	4
Total organisations	46
Individual	6
Total respondents	52

Key Themes

A number of key themes were evident across questions as well as across respondent groups, although each was mentioned by a minority of respondents, and these are summarised below.

- While there was generally support for the establishment of a virtual Agency, there were some requests for further information given that the proposed core functions and nature of the proposed body have not been defined. Linked to this, there were requests for a robust policy framework and strategic direction. The timescale for establishing the Agency was also a concern for a small number of respondents.
- The role of the Agency was perceived by many to be in providing overarching oversight and leadership offering support, collaboration and coordination of public agencies, programmes and funds established to help with net zero ambitions. As such, respondents placed emphasis on the need for collaboration and coordination across all relevant sectors, and for the Agency to work in partnership with a wide range of stakeholders.
- Respondents identified a number of ways in which they could work with the new Agency, including the sharing of expertise, the provision of technical advice and guidance and training.

- Allied to this, there were some suggestions of the opportunity for the Agency to create a one stop shop for support, guidance, advice and expertise for industry and consumers. A key benefit of this would be to ensure there is no duplication of effort.
- Views were mixed on whether new regulatory standards should be enforced at a national or local level, although some respondents felt the most appropriate approach would be for an approach combining national regulations but with delivery and provision at a local level. This would help to bring about consistency across Scotland but benefit from the use of local knowledge. Furthermore, there were some requests as to how the proposed regulatory function of the Agency would work alongside other organisations which also have regulatory functions.
- When asked to provide evidence or case studies, relatively limited numbers of respondents did so. Throughout the consultation the Danish Energy Agency was cited as a positive example of an effective approach.
- Financial support in the short, medium and long term was outlined as a priority, particularly in relation to local authorities who play a major role in the heat decarbonisation agenda. A number of respondents referred specifically to Local Heat and Energy Efficiency Strategies (LHEES) which have to be in place by the end of 2023. There were also references to the need for the Agency to be suitably financed and resourced so as to deliver effectively on its remit.
- There were calls for skills training, both in terms of upskilling and reskilling so as to ensure there is a large enough workforce with the relevant skills and experience to help bring about the heat decarbonisation agenda.
- A great deal of importance is placed on the need to increase the engagement and awareness of consumers and the public about heat decarbonisation; for example, the requirements that will be needed, available support and advice, information on heat networks and so on. Respondents noted a range of different approaches that could be adopted for public communication and advice provision, with some focusing on the need to ensure any information is provided by trusted agencies.
- Reference was made by some respondents of a need to carry out effective monitoring and evaluation of the Agency.

Summary of questions

Dedicated Agency: Strategic Purpose, Remit and Objectives (Qs 1-5)

When asked **what is needed to achieve the transformational change that is necessary for heat decarbonisation in Scotland** (Q1), respondents cited a number of key elements. These included increased engagement with, and awareness of, consumers and the public; and a robust policy framework and strategic direction related to the Heat in Buildings Strategy and the Local Heat and Energy Efficiency Strategy (LHEES), with some calls for the interconnection of

policy targets and policy actions. There were also calls for collaborative working and coordination so as to avoid any duplication of work. Other elements cited included skills training (upskilling or reskilling); clarity in financial support; support for supply chains; and preferences for planning guidance, policy and building regulations regarding heat decarbonisation to be made mandatory. Local authorities were identified as playing a key role.

When asked **how the new dedicated Agency could best support this change programme** (Q2), some of the same themes emerged. For example, for the Agency to provide overarching support, collaboration and coordination of public agencies, programmes and funds established to help with net zero. There were some requests for support for local authorities. Again, public communication and advice provision were cited, along with support for communities and consumers, with preferences for support to be provided at a local level. Some respondents advocated for support for stakeholders, with some citing small and medium sized enterprises specifically. Other areas where support could be provided included funding, implementation, the provision of oversight and leadership and specific measures for heat decarbonisation, with some references of a need to operate under Just Transition principles.

A number of **opportunities and challenges for delivery presented by this agenda were outlined** (Q3); the most frequently mentioned opportunity was to create a one stop shop for advice and knowledge. Key challenges were perceived to be the roles played by local authorities, the Scottish Government and the Agency, public understanding, how to bring about behavioural change, supply chain capacity and the high costs of energy-related measures.

Question 4 asked whether respondents had any **evidence or insights based on experience, that demonstrated the need and potential added value of a new public body as suggested in the heat decarbonisation delivery landscape**. The key issue cited was the need for a hub providing support, guidance and expertise for consumers and industry.

When asked for **case studies or research that could help inform design of a new public sector delivery body to ensure it is able to deliver effective outcomes, and to be consumer focused** (Q5), respondents noted it is important to investigate previous work and experience. The key mention was for the Danish Energy Agency, although there were also some mentions for:

- The Sustainable Energy Authority of Ireland.
- The French Agency for Ecological Transition.
- The European Federation of Agencies and Regions for Energy and Environment.
- The Swedish Energy Agency.

Again, respondents reiterated the need for consumer engagement and empowerment.

Delivery Functions (Qs 6-9)

Respondents outlined a **number of tools and support that the dedicated Agency would need in order to effectively establish leadership and coordination of heat decarbonisation in Scotland** (Q6). The key theme was based on the need to engage and work with stakeholders and to consider how to bring this about, with a wide range of stakeholders identified. Respondents referred to resources that will be needed for staff and funding. In reference to leadership specifically, there was perceived to be a need for political commitment.

Question 7 asked for **evidence or further insights regarding the potential added value that the functions as set out could deliver**. Responses to this question were limited and many of the points raised echoed those from earlier questions. Only a small number of respondents provided any examples to illustrate the potential added value that the functions could deliver; these included:

- China.
- The Danish Energy Agency.
- The Sustainable Energy Authority of Ireland.
- The French Agency for Ecological Transition) (ADEME).
- The Federation of Agencies and Regions for Energy and Environment (FEDARENE).

A relatively limited number of respondents offered any **evidence or case studies that demonstrate the effectiveness or not of new regulatory standards being enforced at a national versus local level** (Q8), and there was little consistency across responses. A few respondents supported new regulatory standards being enforced at a national level, compared to a small number who supported this at a local level; and a small number supported an approach combining national regulations but with delivery and provision at a local level. Specific examples of an effective approach included the Danish Heat Supply Act and a joint project between Vattenfall and Midlothian Council.

When asked to indicate any **existing, or previous, public bodies that exercise both an advisory and regulatory role within the same organisation** (Q9), the most frequently mentioned organisations were SEPA, NatureScot and the Scottish water industry.

Institutional Form and Governance (Qs 10-11)

Relatively few respondents opted to answer Q10 which asked for **case studies or recent research that considers the opportunities and challenges of establishing a public sector body that is tasked with programme delivery functions on a statutory footing**.

In terms of **future proofing the agency to take on any potentially new responsibilities** (Q11), many comments related to specific roles the Agency could adopt, and a few respondents raised the question of how the proposed regulatory

function of the Agency would work alongside other organisations. Key organisations mentioned in this respect included:

- The Scottish Housing Regulator.
- The Scottish Government's Building Standards Division.
- Home Energy Scotland.
- Energy Action Scotland.
- The new Consumer Scotland body.
- Trading Standards Scotland.
- Environmental Standards Scotland.
- The Future System Operator.
- Ofgem.

Strategic Partnerships and Wider Stakeholder Relations (Qs 12-16)

Question 12 asked **who the Agency would need to work with closely in order to best facilitate delivery of the transformational change required**; there were a few general comments on the need for collaboration and coordination across sectors and stakeholder types. A wide range of specific stakeholders were cited including local authorities, the Scottish, UK and other devolved governments, regulators, enterprise agencies, public bodies, partner organisations, industry, trade associations and trade bodies, housing associations, RSLs, private landlords, the third sector and consumers.

The next question asked for **case studies that demonstrate (in)effective partnership working by a public body to coordinate a broader delivery landscape to achieve a shared goal** (Q13). Examples of effective partnerships included local authority work with Home Energy Scotland, CAS and other local services and partners, area-based schemes such as LHEES and Scottish Government investment in collaborations such as the Scottish Cities Alliance. Ineffective examples included the management of the Capacity Market, the Green Homes Grant Voucher Scheme and the current rollout of interlinked smoke and heat alarms across Scotland.

When asked what **role they saw their organisation playing in relation to the Agency once established** (Q14), key areas were in sharing expertise, technical advice and guidance, support for training, helping to standardise approaches and developing and establishing common procurement processes.

In terms of the **role they see for their organisation during the development process of the Agency** (Q15), many respondents echoed points made at Q14. The Queensferry Crossing Project was cited as a positive example.

Various types of **approaches to civic participation** (Q16) were given by respondents; there was general agreement of the need to engage with consumers, either directly or indirectly via consumer groups, local authorities or consumer advocacy organisations. Focus was on the importance of ensuring that any

approach utilised is delivered by a trusted agency. Suggestions for approaches included deliberative approaches, consultation, civic consultation forums and town hall events. There were also references to linking in with local authority community planning engagement strategies, involving local energy advice groups and using exemplars from customers.

Virtual Agency and Transition Planning (Qs 17-20)

Strategic Purpose and Functions

A few respondents noted **support for the strategic purpose and functions** listed in the consultation paper, although there were a small number of requests for more information (Q17). Little supporting evidence was provided by respondents. The timescale for establishing the Agency, additional resources for local authorities, the infrastructure, consumer engagement and fuel poverty were noted as concerns.

Structure, Governance and the Transition Pathway

There was **general agreement that having a virtual Agency is an appropriate step to aid development of a full Agency** (Q18), although there were requests for monitoring its effectiveness. Very few examples were provided of insights into the potential added value of an interim Agency.

Very few respondents provided **examples or insights based on experience of effective change management practices relating to a public sector initiative that required a shift in the existing national and / or local delivery landscape, managed over time** (Q19).

Next key steps or considerations that will need to be reflected in the transition Route Map (Q20) included development of foundations for the dedicated Agency covering its scope, remit, definition, goals, statutory and regulatory powers, resourcing and funding. There was some reference to building on existing good practice and a consistency of approach in terms of messaging and communication.

Introduction

Background

1. Scotland has one of the most ambitious climate targets in the world, with its Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 setting out a legally binding target of reaching net-zero emissions by 2045, and with interim statutory reductions of 75% by 2030 and 90% by 2040.
2. The Heat in Buildings Strategy, published by the Scottish Government on 7 October 2021, focuses on heating system change and set out a number of actions and proposals for transforming buildings and the systems that supply their heat to ensure that all buildings reach zero emissions by 2045. In order to achieve the necessary transformational change, the Scottish Government has committed at least £1.8 billion investment over the current Parliamentary period to support the decarbonisation of heat in Scotland, in line with targets. For example, the Scottish Government is committed to the decarbonisation of heat across 1 million homes and 50,000 non-domestic (equivalent) buildings by 2030.
3. A key element of this strategy is the establishment of a new, dedicated National Public Energy Agency by 2025 which would *“coordinate and accelerate delivery of heat and efficiency work, inform and educate the public on the changes required, provide expert advice to national and local government, and work with public, private and third sector partners to deliver this transformational national project”*.¹
4. In recognition of the need to act as quickly as possible in tackling climate change challenges, the Scottish Government is already working on developing a virtual Agency which will be launched by September 2022. This virtual body will be established initially as a discrete delivery mechanism within the Scottish Government, supported by a new independent Strategic Board to oversee its work.
5. The National Public Energy Agency will take a people-centred approach to delivery, supporting people and businesses to switch their heating systems and improve the energy efficiency of all buildings, while working in partnership with public, private and third sectors to achieve a coordinated approach across the wider heat decarbonisation delivery agenda in Scotland. The Scottish Government is keen to ensure the new Agency has the support of the wider delivery landscape and can meet the needs of a wide range of end users as Scotland moves towards heat decarbonisation. As such, there is a need to consider the role and responsibilities of the Agency, its delivery functions, its structure and governance, how it will adopt

¹ Net Zero Secretary, Michael Matheson

a strategic leadership role and work with partners and stakeholders; and its strategic purpose and functions.

6. In November 2021, a Call for Evidence was launched to gather views which would help inform development of a broader evidence base to inform the design of the new Agency. The Call for Evidence looked for examples of previous or existing bodies or organisation types that have a specific delivery remit and which have successfully achieved significant change at a societal, sectoral and / or infrastructure level through innovative programme design, leadership and coordination of the wider landscape. Respondents were also asked to provide evidence of the value, opportunities and challenges offered by establishing this body on a statutory footing.
7. The findings of this Call for Evidence will be used to inform whether or not the body should adopt a regulatory role in line with proposed regulations, the governance, institutional form and functions of the Agency and how a co-development and partnership-based approach can be embedded throughout the development and delivery process for the new body. The Call for Evidence closed on 8 February 2022. Alongside the Call for Evidence, the Scottish Government also two public webinars to increase the reach of the consultation and provide an opportunity for potential respondents to seek any clarifications that would help inform how they approached providing feedback to the key areas of interest.

Respondent Profile

8. In total, there were 52 responses to the Call for Evidence, of which 46 were from organisations and 6 from individuals. Respondents were assigned to respondent groupings in order to enable analysis of any differences or commonalities across or within the various different types of organisations and individuals that responded. Table 2 below shows the number of respondents in each organisational category.

Table 2: Respondent Groups

	Number
Campaign body	2
Community development	1
Consumer advocacy and advice	3
Energy sector	7
Enterprise agency	2
Heat & Energy Efficiency –Delivery Landscape	7
Housing sector	4
Local authority	9
Supply chain	5
Trade union	2
Other	4
Total organisations	46
Individual	6
Total respondents	52

9. A list of all those organisations that submitted a response to the Call for Evidence and agreed to have their name published is included in Annex 1.

Methodology

10. Responses to the Call for Evidence were submitted using the Scottish Government consultation platform Citizen Space or by email.
11. It should be borne in mind that the number responding at each question is not always the same as the number presented in the respondent group table. This is because not all respondents addressed all questions. This report indicates the number of respondents who commented at each question.
12. The researchers examined all comments made by respondents and noted the range of issues mentioned in responses, including reasons for opinions, specific examples or explanations, alternative suggestions or other comments. Grouping these issues together into similar themes allowed the researchers to identify whether any particular theme was specific to any particular respondent group or groups.

13. When referring to respondents who made particular comments, the terms 'a small number', 'a few' and so on have been used. While the analysis was qualitative in nature, as a very general rule of thumb it can be assumed that: 'a very small number' indicates around 2-3 respondents, 'a small number' indicates around 4-6 respondents; 'a few' indicates around 7 to 9; and 'some' indicates 10 or more but fewer than half of those who commented at any question."
14. When considering group differences however, it must also be recognised that where a specific opinion has been identified in relation to a particular group or groups, this does not indicate that other groups did not share this opinion, but rather that they simply did not comment on that particular point.
15. While the Call for Evidence gave all who wished to comment an opportunity to do so, given the self-selecting nature of this type of exercise, any figures quoted here cannot be extrapolated to a wider population outwith the respondent sample.

Dedicated Agency

Strategic Purpose, Remit and Objectives

16. The Call for Evidence noted that it is expected that the dedicated Agency will take ownership of an agreed national delivery plan for how the heat decarbonisation transition will be implemented in Scotland. In order to carry out this role, a strategic framework for the new Agency will need to be developed across a number of areas, including:
- Leading on public communication and advice provision to raise awareness.
 - Bringing together delivery of heat decarbonisation and energy efficiency capital investment and advice programmes for small-scale domestic and non-domestic customers.
 - Accelerating the pipeline of investable large-scale heat decarbonisation and energy efficiency retrofit projects, through the provision of a package of financial and non-financial support.
 - Coordinating national, regional and local government delivery.
 - Acting as a centre of expertise.
17. The Call for Evidence also noted that, subject to proposed energy efficiency and zero emissions heat regulations as set out in the Heat in Buildings Strategy, there is an opportunity for the dedicated Agency as part of its overarching strategic framework to consider its role in terms of supporting delivery of a number of initiatives or in leading and coordinating delivery of initiatives.
18. The first question asked,

Q1: 'What is needed to achieve the transformational change that is necessary for heat decarbonisation in Scotland?'

19. A total of 50 respondents made comments at the first question. A number of key themes emerged from the answers as delineated below. A small number of respondents backed up their answers by referring to research, described in Annex 2.
20. The highest numbers of respondents – a majority – described a need to **increase the engagement and awareness of consumers and the public about heat decarbonisation**. Specific measures advocated were clear communication for building owners about requirements needed and support available, advice provision, information about heat networks, and embedding quality assurance and consumer protection measures. A supply chain organisation suggested learning from Covid communication campaigns. Small numbers of respondents wished to see communities bedded into the heat decarbonisation concept in order to get buy-in.

21. **A robust policy framework and strategic direction** was recommended by some respondents. Support was suggested for, and delivery of actions to flow from, the Heat in Buildings Strategy (HiBS) and the Local Heat and Energy Efficiency Strategy (LHEES), with calls for the connection of inter-related policy targets and policy actions. More generally, collaborative working and coordination so as not to duplicate work was urged, due to perceptions of a cluttered landscape of public sector agencies and programmes working in similar areas. Specifics mentioned in this regard included between the Scottish Government and industry, working with supply chains, integration with other agendas such as health protection infrastructure planning, and with the UK government in areas which are reserved to UK policy.

22. **Skills training** (in terms of upskilling or reskilling) should be a focus according to similar numbers of respondents, in order have the size of workforce perceived to be needed in order to realise the necessary changes. Education pathways were suggested including Passivhaus certifications for constructors and for the civil service to have an appropriate technical qualification. A supply chain organisation noted the following:

“CITB’s report Building Skills for Net Zero outlines that in order to meet Net Zero targets, an estimated 22,500 people in Scotland, through re-training and new roles, will need to be trained in energy efficiency by 2028. That represents an increase of around 9% of the current size of the workforce, based on current technologies and ways of working. This can be either through new recruitment from outside the sector or through retraining and productivity gains. There are specific, specialist roles where the shortages are most significant. For example, an additional 4,605 construction project managers will be required by 2028, as well as 1,507 construction trades supervisors, and 1,936 building envelope specialists. In addition to these roles, there is a need for training in the skills required to maintain traditional buildings. 95% of surveyed contractors in Scotland do not hold formal qualifications relating to work on traditional buildings. Only 2% of contractors surveyed in Scotland had undertaken energy efficiency retrofit work on traditional buildings.”

23. **Clarity of financial support** was a focus for some respondents, both in terms of funding sources and for over a period of time. A small number of Heat & Energy Efficiency – Delivery Landscape respondents pointed out that an estimated £33 billion of investment would be needed to decarbonise all the heat in Scotland’s buildings, as is set out in the Scottish Government’s Heat in Buildings Strategy. Suggestions for financial support to install renewable energy measures for homeowners and consumers included: grant funding for poor or vulnerable householders, tax breaks, or low or no interest financing. Funding for fabric measures was also perceived as a necessity.

24. Similar numbers of respondents desired a **Just Transition** to net zero, with the aim of eliminating or alleviating fuel poverty.

25. **Supporting supply chains** was perceived as a priority for some, with suggestions for ensuring sufficient demand and a sufficient manufacturing base.
26. The **need for planning guidance, policy and building regulations regarding heat decarbonisation to be made mandatory** was advocated by some respondents; for instance, by mandating heat pumps or solar panel installation on all new builds and removing red tape perceived as undermining efforts to decarbonise.
27. A **major role for Local Authorities** was noted (a point made by several local authorities amongst others); this was seen as important for local support and for public understanding, but that they would need funding to fulfil their remits, noting that LHEES's have to be in place by the end of 2023.
28. Some respondents also envisaged a **role for district heating and local heat networks**.
29. In addition, a few respondents each recommended the following steps to help achieve heat decarbonisation in Scotland:
- Clarity regarding practical support (e.g. incentives).
 - A balance between grassroots and top-down action (e.g. local help as well as national guidance).
 - Addressing the poor maintenance levels of Scottish properties, with comments that a major new build or maintenance programme is needed as a prerequisite before energy efficiency and renewable energy measures can be undertaken.
 - Enhancing contributions from various specified forms of renewable technology (e.g. solar / PV, hydrogen, wind farms, battery storage and smart meters), albeit that a smaller number of respondents desired a focus on scaling up existing programmes.
30. Small numbers of respondents desired the following:
- A focus on rural or older properties, where different solutions for heat decarbonisation may be required.
 - Electrification to take place as far as possible (e.g. ensuring the necessary electrical energy infrastructure is in place together with adequate grid capacity).
 - Addressing tax imbalances (e.g. between gas and electricity, with an energy organisation urging business rates exemptions to allow district heating, self-produced solar and battery storage to be classified as a utility (as with CHP)).
 - More data; data needs were identified around existing heat sources, to underpin the Heat Networks Act, to create a Scottish Heat Map, and

regarding retrofit, reporting arrangements and assessment of current building conditions.

31. Finally, some respondents reiterated aims to **ensure buildings are transitioned to zero emissions heat systems** (e.g. by means of heat pumps) and decarbonise the heat in Scotland's buildings; and similar numbers made positive comments about the **need for an overseeing public energy agency to lead or coordinate the changes needed**, with small numbers advocating that the body needs to have sufficient powers and / or be independent.
32. Question 2 of the Call for Evidence then asked,

Q2: 'How can the new dedicated Agency best support this change programme?'

33. A total of 49 respondents made comments at this question. A number of key themes again emerged which were largely similar to those espoused at question 1; a very small number of respondents noted extra evidence and research to back up their answer, which is included in Annex 2.
34. The most quoted theme (by nearly half of respondents to the question) was for the Agency to **provide overarching support, collaboration and coordination of public agencies, programmes and funds established to help with net zero**. Joining up public policy, finance, governance and avoiding duplication (e.g. by supporting the National Heat Decarbonisation Delivery (or Implementation) Programme, integrating the Consumer Duty, and avoiding clashes with planning and housing regulations) were seen as priorities. Similarly, some respondents wished the agency to **act as a hub or core focal point for industry collaboration**. Collaboration at national and international levels was also suggested.
35. Some respondents wanted the agency to **support local authorities**: firstly in delivering their LHEES's by helping facilitate processes or by funding provision, and secondly by providing other support to them in terms of funding, upskilling staff and regarding planning permissions.
36. **Public communication and advice provision** to raise awareness was also mentioned frequently, with multi-channel campaigns and a national communications strategy recommended. More **hands-on support for communities and consumers** was mentioned by similar numbers of respondents, for example by helping house owners with the application process for funding their changes, or by helping to find relevant traders. **Provision of support at a local level** was also recommended, for example by investing in local advice services or support for local partnership campaigns.
37. Some respondents advocated that the Agency **provides support for small and medium sized enterprises**, particularly specialist providers and

those involved in the supply chain, by identifying clear pipelines of work and engaging with the Heat in Buildings Supply Chain Delivery Plan. Slightly smaller numbers of respondents thought the Agency should provide **expertise, guidance, advice and support for stakeholders in general** without being specific, or be instrumental in spreading good practices and ideas.

38. **Help with various aspects of funding** was a desire of some respondents; specific areas were suggested including finding innovative solutions to access investment, private sector investment maximisation, instigating capital funding programmes, liaising with funding agencies and investors, allocating grant funding or acting as a vehicle for 'off-balance sheet' lending.
39. **Support with implementation** was also advocated by some respondents (particularly energy organisations) to ensure energy infrastructure (e.g. grid capacity) is delivered at scale and at pace. A couple of energy and housing respondents wished the Agency to "*accelerate the pipeline of investable large-scale heat decarbonisation and energy efficiency retrofit projects, particularly in social housing*" (See Annex 2). A role coordinating existing or future delivery plans was also mooted by some; however, a consumer advocacy body was opposed to the agency providing direct delivery as this was regarded as already successfully local authority-led.
40. Similar numbers of respondents would like the Agency **to provide oversight and leadership**; various roles in this area were pinpointed including providing governance and / or oversight of the HiBS, for delivery of heat decarbonisation targets, for energy efficiency, retrofitting and fuel poverty programmes and for specified physical improvement programmes such as Warmer Homes Scotland or the Energy Company Obligation. A few respondents referred to the Agency playing a role in policy and strategy development without elaborating further.
41. Support for **specified measures for heat decarbonisation** were advocated; district heating, heat networks, heat pump manufacture, mine-water geothermal and molten salt nuclear reactors were vouched for in this respect.
42. **Operating under Just Transition** principles was regarded as important by some respondents, for instance by tackling properties in fuel poverty or by engaging 'hard to reach' parts of society.
43. The following other roles for the change programme were suggested for the Agency, each by small numbers of respondents:

- Regulatory control (e.g. over management of heat network systems, oversight of compliance / enforcement / monitoring / reviewing / reporting / standards).
 - Research development and data provision.
 - Consumer protection (e.g. regarding fuel costs, and housing maintenance and repairs).
 - Training (e.g. for local authority decision-makers in renewable energy, to help fill training gaps generally, or acting as a central base for access to training materials).
44. Finally, there were a very small number of concerns about the Agency getting sufficient funding and resources to provide effective support, about a lack of detail in the consultation, and about Energy Performance Certificates (EPCs) being unfit for purpose.
45. The next question asked:

Q3: 'What are the opportunities and challenges for delivery presented by this agenda, and how might these best be overcome through the Agency?'

46. A total of 49 respondents commented on the opportunities and challenges for delivery presented by the agenda; more comments were received about the challenges (albeit with many suggestions for overcoming these) than about the opportunities. A few respondents gave extra evidence and case studies to back up their answers; these are listed in Annex 2.
47. The most frequently mentioned **opportunity** was to **create a one stop shop for advice and knowledge**; various types were specified including information on finance, providing a forum for sharing best practices, working with local authorities on LHEES, planning for implementation, removing duplication of effort, programme management, and coordinating action over key objectives. Taking a whole system view was also discussed.
48. Other opportunities that were each pinpointed by a few respondents are listed below:
- Creating green jobs, for instance in the supply chain and material manufacturing.
 - Helping to meet Net Zero targets / climate change mitigation.
 - Just Transition benefits (e.g. reduction of fuel poverty).
 - Other positive economic impacts (urban regeneration, Community Wealth Building Principles, etc.).

- Improvements to health and wellbeing.
- The following table lists the most mentioned **challenges and possible solutions to overcome them** as each described by significant numbers of respondents.

Challenges	Solutions
Roles of Local Authorities / Scottish Government / Agency: who has the power? Who is in charge of delivery? / perceived vagueness in proposals (E.g. for LHEES, should it be local authorities?, clear collaboration needed on hydrogen given use in other industries)	Clarity of direction / delineate responsibilities / support regarding local authorities / funding / cohesive approach
Public understanding (e.g. amongst owners / landlords) remains low regarding choices	Raising awareness – public awareness / info campaigns / targets / incentives / regulations / information provision on advantages
Getting public on board with agenda / behavioural change, improving uptake of energy solutions, etc.,	Emphasise problems caused by climate change; cheap clean energy solutions / other benefits
Small business / supply chain capacity	Support or advice about training / business development / shared expertise / produce Supply Chain Delivery Plan from Heat in Buildings Strategy
High costs of measures (e.g. leading to increased rents) / funding requirements	Alleviating costs / make the transition affordable (e.g. via onsite generation or fuel poverty programmes)

49. Smaller numbers of respondents listed many other challenges and possible solutions as summarised in the table below:

Challenges	Solutions
Scattered non-strategically focused activity	Involve other agencies early / learn from other countries / spread good practices

Installation (lack of skilled workforce)	Agency involvement in company / skills development / training / grant funding / accreditations
Retrofit of work done inappropriately / quality assurance	Compliance schemes (e.g. PAS 2035, Data compilation, evaluations, case studies – possible central hub for shared learning)
Challenging timescales / late stage of agency coming into being	Agency having sufficient powers, organisation & independence to deliver plans
Risks of new technologies (e.g. poor performance / performance gaps)	Data compilation, evaluations, case studies – central hub for shared learning. Advice on energy management and monitoring
Capacity of existing energy infrastructure	Buy in and support from distribution and transmission companies, DNOs
Challenges for householders / working with owner / occupiers	Support / advice (e.g. build on Home Energy Scotland)
Rising / affordability of fuel costs / energy prices	(None suggested)
Limited (supply chain of) materials	Local / regional manufacturing of low carbon materials, supply chain development
Lack of collaboration across government and other regional agencies	Involve all: e.g. Public Health Scotland, NHS Trusts, SEPA, Universities/schools, planning authorities, industry players
Traditional / historic buildings / non-urban / listed properties	Recognition of need to take different approaches & solutions to retrofitting
Adaptation to climate change impacts	Identify solutions / build resilience
EPC	Improve methodology (e.g. for some building types such as timber framed)
Energy policy aspects reserved to UK government	Robust system of interactions between agency and e.g. Ofgem, National Grid

50. Question 4 then went onto ask:

Q4: 'Based on the proposed purpose, remit and objectives of the dedicated Agency, do you have any evidence, or insights based on experience, that demonstrate the need and potential added value of a new public body of this nature in the heat decarbonisation delivery landscape?'

51. A total of 32 respondents answered this question; some general comments were received – delineated below - but most gave detailed evidence or insights; these can be found in Annex 2.

52. A few respondents chose to reiterate views that a main purpose of the Agency should be to **provide a hub for support, guidance and expertise for consumers and industry**. Small numbers of respondents urged the agency to have the following functions:

- Standardisation at central government level (e.g. being in charge of an overarching implementation plan, to avoid local authorities having to develop their own methods for delivery or to provide a national context for LHEES)
- Having oversight to generate maximum impact (e.g. for delivery of the Heat in Buildings Strategy, of national monitoring and regulation, or of a role for overseeing local authority responsibility for encouraging compliance).
- Communication provision.
- Providing support at a local level.
- Acting as a data hub.
- Commissioning delivery of activities.

53. A very small number of respondents thought it was too early to assess the need for or functions of the agency beyond interim arrangements; and a local authority suggested there was no requirement for the agency and that it was better if projects were to be carried out locally, led by local authorities.

54. The final question in this part of the Call for Evidence then asked:

Q5: 'Are you aware of any case studies – UK or international – or research that can help inform design of a new public sector delivery body to ensure it is able to deliver effective outcomes, and to be consumer focused across its operations? What do you think are some of the key factors that need to be built into the strategic framework - and corporate design – of the new body to best enable this?'

55. 35 respondents answered this question; nearly half of these detailed a variety of relevant case studies or research and these are included in Annex 2. As a general theme respondents thought it was very important to investigate previous work and experience – particularly internationally – to

help inform the design of the new agency, particularly in countries where strategies are at a more advanced stage of development.

56. Amongst various strategies, respondents repeatedly picked out those of the **Danish Energy Agency** in particular as being worthy of investigation. Other agencies were mentioned in very small numbers including the Sustainable Energy Authority of Ireland, The French Agency for Ecological Transition, the European Federation of Agencies and Regions for Energy and Environment and the Swedish Energy Agency.
57. Denmark, Norway, Australia, New Zealand and the USA were countries mentioned by very small numbers of respondents in the context of case studies.
58. A small number of respondents, including two enterprise agencies, noted that enterprise agencies have experience in establishing or operating semi-independent delivery bodies and that their role should be taken into account.
59. Amongst **key factors** perceived as needing to be built into the strategic framework and design of the new body, the dominant theme amongst respondents was a reiteration that **consumer engagement and empowerment** should be important. Specific areas cited included prioritising input from those with lived experience of energy inefficient buildings or fuel poverty, and providing support and financing (e.g. Home Energy Scotland loans).
60. Small numbers of respondents identified the following other key factors perceived as needing to be built into the new agency:
 - Supply chain development work, with a focus on skills, training and expertise; it was however noted that the Energy Saving Trust and Scottish Enterprise are progressing work in the area.
 - The technical expertise and scientific knowledge of agency staff.
 - The priorities and scope of the new body.
 - Resourcing and financing of the new body.
 - Openness, accountability and honesty.
 - How to treat different types of building (e.g. in rural vs. urban areas)
 - Understanding of the wider environment, including fuel poverty, fuel price rises and building regulations.
 - The interface with energy networks and the retail/supply side for energy.

Delivery Functions

61. The Call for Evidence noted that, at a minimum, the new dedicated Agency will have a key set of responsibilities that have informed development of the remit as set out in the paper. At an operational level, the

responsibilities or functions may translate into practical actions that include the introduction of an overarching Heat Decarbonisation Implementation Plan for Scotland, providing the Agency a mechanism through which to guide and steer various interventions and support programmes in collaboration with partners and in line with shared goals. It will be important for there to be an appropriate balance between what the Agency will take on direct control and deliver responsibility for, versus what the Agency will steer strategically while working with others to implement on the ground. This will involve collaboration and co-production with stakeholders and existing delivery partners.

62. Some additional potential functions could also include:

- Operate a national level data hub.
- Co-ordinate supply chain development and expansion.
- Oversight of quality assurance standards.
- (subject to further investigation and consideration) Taking on some regulatory functions such as monitoring and compliance of the proposed energy efficiency and zero emissions heat regulations as set out in the Heat in Buildings Strategy.

63. The next question asked:

Q6: What tools and support will the dedicated Agency need in order to effectively establish leadership and coordination of heat decarbonisation in Scotland?’

64. A total of 34 respondents commented in response to this question, and a number of key themes emerged. The **key theme was based on the need to engage and work with stakeholders and to consider how to bring this about**. For example, an organisation in the consumer advocacy and advice sector noted a need to have an understanding and connections with organisations involved in the provision of energy in order to coordinate heat decarbonisation.

65. A wide range of different stakeholders were noted, including local authorities, industry, distribution network operators (DNOs), consumer advocates and the public sector. This partnership working was seen to be important for a number of reasons, which included:

- The provision of strategic direction at a local level.
- The scope to access funding and unlock funding schemes.
- To provide a coordinating role to engage with areas of building stock over which local authorities have little, or no, control.

- To provide a programme management approach to coordinate the different work-streams and activities which are envisaged for the Agency.
 - To engage with stakeholders so as to understand the challenges faced.
 - To help local authorities to deliver the key aims and objectives around LHEES.
66. A very small number of respondents noted provisos to this approach, including that the Agency will need the full support of partners across government, industry and the wider supply chain to effectively establish leadership and the delivery of heat decarbonisation; as well as building staff across the sector and utilising sector-specific stakeholders who can provide the necessary expertise.
67. Another key theme, cited by nearly half of respondents was in relation to **resources that are needed**. These fell broadly into **two categories – people and funding**.
68. In relation to **staffing**, it was noted that there is a need to develop technical capacity and ensure there are the necessary numbers of experts who understand the different approaches that can be adopted, and who have the relevant knowledge and expertise. There will be a need to develop and share best practice as well as supporting the delivery of policy and programmes. It was also suggested that as well as having the necessary expertise, staff will need to understand any constraints that can impact on the functioning of other organisations. An organisation in the ‘other’ sector noted a concern that there may be insufficiently skilled and expert staff available to lead on, and deliver, the work of the Agency and noted that many companies across sectors are currently facing recruitment issues.
69. Comments on funding noted the need for this to be long term in nature. As one respondent in the Heat & Energy Efficiency – Delivery Landscape noted, *“needs to be secure and predictable and delivered in a way which allows for independence in decision making.”* There were also a very small number of comments on the need to streamline existing funding and routes to that funding.
70. The **issue of leadership** was cited by some respondents, both externally to the Agency as well as within the Agency. A few respondents referred to the need for commitment from senior politicians to influence sensible institutional governance and offer access to senior Scottish Government officials, ministers and local authorities; as well as having sufficient powers to deliver on the plan and a clear remit and access to policy levers. In reference to **governance**, there were a small number of calls for the **Agency to be set up as a statutory authority**. This was perceived to be more effective in overseeing strategy and regulatory interventions and for the Agency to achieve maximum impact in terms of oversight within the sector. One organisation noted the need for the Agency to have sufficient autonomy so as to allow for independence in decision making. A very small

number of respondents also noted the need for independence and flexibility in decision making.

71. There were also a few comments on the need for good and effective leadership within the Agency, with a clear delineation of roles and responsibilities, as well as being knowledgeable to ensure the Agency is perceived to be a credible organisation.
72. Sitting alongside the issue of governance, a few respondents noted the need for a **credible scheme for monitoring and evaluating the Agency**, with suggestions for clear reporting requirements that would allow for Scottish Government and public oversight, as well as for planning, the setting of targets and quality assurance.
73. The need for **effective and clear communication channels** was highlighted by a small number of respondents, in order to help build trust and credibility for the Agency.
74. The **need for, and collection of, data** was highlighted by a small number of respondents as being of importance, with a need to identify what data is currently available and to create a map and plan to ensure there is robust data to enable the Agency to develop its plans. There was reference to the need for a regularly updated Heat Map illustrating the conditions to allow developers to consider what opportunities exist. One organisation noted the need for the Agency to be *“evidence-led if it is to develop credibility”*.
75. Allied to this latter point, a small number of respondents noted the need for **IT support**. There was a suggestion for the provision of a dedicated hub for advice; procurement support; knowledge on and access to funding and grants; guidance and legal advice; and reference to interactive maps showing the characteristics of Scottish neighbourhoods and the potential for different heat decarbonisation approaches they could offer.
76. Other issues raised by very small numbers of respondents included the need for the Agency to have:
 - A capacity to lever private sector participation into energy efficiency and heat decarbonisation.
 - An ability to influence energy goods and services providers, including utilities and other service companies.
 - An ability to facilitate the role of energy regulators in scaling up energy efficiency and heat decarbonisation.

77. Question 7 then went on to ask,

Q7: 'Do you have any evidence, or further insights regarding the potential added value that the functions set out can deliver within the heat decarbonisation landscape? This may include both examples of where these types of functions have, or have not been conferred on a national body as part of leading a programme of delivery and change, and the resulting implications (positive or negative)'

78. A total of 14 respondents, across most sub-groups, commented in response to this question, although two organisations in the 'other' sub-group noted that this was a difficult question to answer given that the functions and nature of the Agency still need to be defined and detailed. Another organisation in the community development sub-group noted the need for a plan to demonstrate what functions would be carried out at local and national levels. One organisation in the Heat & Energy Efficiency – Delivery Landscape commented that most of the envisaged functions of the Agency seem to be capable of addressing most issues to achieve transformational change in heat decarbonisation but noted the need to ensure the Agency would deliver additional value beyond the envisaged functions and what they will address.

79. To an extent, points raised at this question echoed those seen at earlier questions, and included the need for:

- Provision of support to supply chains.
- Support for upskilling and ensuring a workforce that has the necessary skills and expertise, although one respondent cautioned that the Agency should not deplete scarce skills and local resources.
- Clear communication to consumers regarding the costs of district heating networks.
- A strategic funding mechanism across all key thematic priority areas for a net zero transition.
- To ensure consistency and minimise risk of duplication across the sector; and sharing of good practice.
- A single data hub offering access to data, which would help to develop and share good practice and demonstrate continuous improvement.
- A streamlined procurement process.
- Planning and distribution of district heating systems.
- A clear duty and set of principles to enshrine a balanced social, economic and environmental approach so as to help reduce inequalities and fuel poverty.

80. Only a small number of respondents provided any examples to illustrate the potential added value that the functions set out can deliver

within the heat decarbonisation landscape. These included China, the Danish Energy Agency, the Sustainable Energy Authority of Ireland, ADEME (the French Agency for Ecological Transition), FEDARENE (the Federation of Agencies and Regions for Energy and Environment). References were also made to an Existing Homes Alliance report and the evaluations of LHEES phases 1, 2 and 3 pilots. More detail on these can be accessed in Annex 2.

81. Question 8 then asked,

Q8: Do you have any evidence, or case studies that demonstrate the effectiveness or not of new regulatory standards being enforced at a national versus local level? This may include international comparisons.'

82. A total of 22 respondents, across most sub-groups, opted to answer this question. Some provided general comments, while others provided some examples of evidence or case studies that demonstrated the effectiveness or not of new regulatory standards being enforced at a national versus local level.

83. A few respondents noted their support for **new regulatory standards being enforced at a national level**, with reference to the need for consistency. For example, a respondent in the housing sector noted that a national approach would reduce the possibility of inconsistency across local authorities in terms of the enforcement and interpretation of regulations; and an energy organisation felt that regulatory standards would be best set at a national level for consistency. A trade union commented on a need for a consistent approach to national regulation around Fair Work and sectoral collective bargaining on terms and conditions.

84. A housing organisation noted their support for a national energy agency playing a role in regulatory compliance, although they felt this would need to be distinct from its wider role of promoting zero carbon heat and energy efficiency measures. A local authority noted the need for national regulatory standards to drive change in the private sector, supply chain and in the development of developing a skilled workforce. Another local authority noted that there will need to be more by way of financial resources and support to allow local authorities to take on new regulatory functions.

85. Support for **new regulatory standards being enforced at a local level** came from a very small number of respondents, with one respondent in the Heat & Energy Efficiency – Delivery Landscape sub-group noting this would be consistent with current regulatory arrangements for the consenting of new developments or works to existing buildings requiring building warrants. Another respondent in the consumer advocacy and advice sub-group commented that regulations and standards would have more of an affinity with local authorities than a national energy agency, although they

noted that the agency would need to provide adequate staffing, funding and support.

86. A small number of respondents noted the need for **an approach combining national regulations but with delivery and provision at a local level**. For example, having national standards that are enforced at a local level where there is an understanding of local issues. Once again, the need for adequate resourcing at a local level was highlighted, for example, to ensure that local monitoring and enforcement arrangements were effective.

87. Other general comments made by respondents included:

- The need to consider overlap between the regulatory role proposed for the Agency, the introduction of a new housing standard for all tenures and proposals for changes to housing regulation, including a regulator for private rented housing.
- Delivery and enforcement will need to have clear separation and management in order to be robust and accountable.
- The Agency should be directly accountable to the Scottish Government but independent of the sector it is regulating.
- There will need to be a universal drive to change consumer attitudes and behaviour and to support them in implementing the necessary changes to meet net zero targets and heat decarbonisation.
- There is a need to consider whether an agency model works where Scottish Ministers hold final responsibility with the actual enforcement devolved to the local authority and to reskilled and properly equipped building control officers.
- Regulatory responsibility should be informed by the need for regulation, the intended outcomes, strategic responsibility and regime design.

88. A number of specific case studies or evidence demonstrating the effectiveness (or not) of new regulatory standards being enforced at a national versus local level were provided. These included reference to nuclear power station approval in Canada, the Danish Heat Supply Act and a joint project between Vattenfall and Midlothian Council. More detail is provided in Annex 2.

89. Two respondents referred to the EHA report due to be published in Spring 2022 as useful reading; and an individual recommended accessing [SEAI | Fiscal Interventions to Change Energy Behaviour](#).

90. The final question in this section then asked:

Q9: Are you aware of any existing, or previous, public bodies that exercise both an advisory and regulatory role within the same organisation – and how this dual remit has been translated at an operational level to avoid any risks relating to conflicts of interest, governance and lines of accountability? This may include examples from the international landscape, and / or UK context.'

91. A total of 21 respondents opted to respond to this question. A small number made general comments about the role of the Agency. A respondent in the Heat & Energy Efficiency – Delivery Landscape sub-group commented that there is potential for conflicts of interest to arise where organisations have both regulatory and advisory remits. With this in mind, a respondent in the supply chain sub-group noted the need to consider accountability and transparency if there are overlapping regulatory and advisory roles. A respondent in the consumer advocacy and advice sub-group noted that while the proposed Agency should play an important role in supporting the enforcement of regulations, it should not be responsible for enforcing them.
92. Conversely, a respondent within the supply chain sub-group felt that the Agency should be more than an advisory body; and a respondent in the 'other' sub-group commented that there can be a regulatory role for strategic planning and implementation of the Heat Supply Act and an advisory role for skills development and development of the workforce.
93. A number of examples were provided of existing or previous public bodies that exercise both an advisory and a regulatory role within the same organisation. These are provided in Annex 2. The most frequently mentioned organisations included SEPA, NatureScot and the Scottish water industry, all of which have advisory and regulatory functions and balance statutory powers for regulatory compliance alongside a consumer advocacy role.
94. There were also single mentions for the CAA, the Oil and Gas Authority, Scottish Fire & Rescue Service, Ofgem, Ofcom, the FCA, Scottish Information Commissioner, Historic Environment Scotland, the Hungarian Energy & Public Utility Authority, various local authority services and Zero Waste Scotland.

Institutional Form and Governance

95. The Call for Evidence noted that a key consideration in designing the future dedicated Agency is the level of independence from Scottish Government – and lines of accountability, or governance – it should, or will need to have in order to carry out its responsibilities effectively within the broader landscape. The Scottish Government is considering establishing the Agency on a statutory basis to ensure it is invested with the necessary authority to fulfil its remit. The Scottish Government believes the proposed Heat in Buildings Bill would provide a suitable legislative vehicle to achieve

this, and aligns with the timescale for the dedicated Agency becoming a physical body by September 2025. No decision had yet been made regarding the statutory versus non-statutory route, and views were welcomed through the consultation.

96. The next question asked:

Q10: ‘Are you aware of any case studies, or recent research that considers the opportunities and challenges of establishing a public sector body that is tasked with programme delivery functions on a statutory footing?’

97. A total of 18 respondents, across most sub-groups, opted to answer this question. A few made general comments, while the majority provided examples of case studies or research – See Annex 2 for details.

98. A small number of respondents reiterated that the Agency should be independent and have a statutory footing, while a trade union noted that publicly owned bodies in other countries (e.g. France, Scandinavia) play a key role in energy generation.

99. The next question asked:

Q11: ‘In terms of potentially establishing the dedicated Agency on a statutory footing as part of future proofing it to be able to take on any new functions or responsibilities as heat decarbonisation delivery progresses over the coming decades, are there any other considerations related to this that you think we need to be aware of any why? This may include, for example: upcoming evidence and research, other strategic policy development and targets, wider industry and sector led developments in the heat and energy efficiency landscape or related delivery areas.’

100. A total of 26 respondents made comments about future proofing the agency to take on any potentially new responsibilities. More generally expressed considerations are given below but many respondents gave examples of policy development and targets, and especially wider industry and sector-led developments; these are detailed in Annex 2.

101. The largest numbers of respondents made **suggestions as to how the Agency could act** and these included the following:

- As a national standards agency around emerging low carbon heating solutions.
- Coordinating with agencies across the UK due to industry supply chains being UK-wide.
- Coordinating public investment / delivery in financing decarbonisation.

- Acting as a single point for monitoring, reporting and communicating regarding consumer advice and protection (though it was noted the latter responsibility is reserved to the UK government).
- Coordinating key priorities and outcomes arising from energy policy (e.g. tariff data for regulated heat networks, PV or heat pump cost changes with deployment rate, including a technical steering group for guidance and clarity on technology solutions for zero carbon homes).

102. A few respondents wished **consideration to be given as to how the proposed regulatory function of the Agency would work alongside other organisations**, some of which also have regulatory functions. Risks concerning possible conflicting outcomes between bodies and duplication of their work were raised. Other organisations and sectors mentioned by respondents in this context included:

- The Scottish Housing Regulator and the proposed regulator for the Private Rented Sector.
- The Scottish Government's Building Standards Division.
- Home Energy Scotland.
- Energy Action Scotland.
- The new Consumer Scotland body.
- Citizens Advice Scotland.
- Trading Standards Scotland.
- Environmental Standards Scotland.
- The Future System Operator.
- OFGEM.
- The Home improvement sector.

103. Very small numbers of respondents noted that future proofing needs to be done through appropriate drafting of the governing legislation or through another founding document or constitution, with primary legislation able to enshrine flexibility, either in the statutory description of the Agency's functions, or by providing Scottish Ministers with powers to alter or expand its remit in the future (which would typically require secondary legislation). Other more general remarks were made about the Agency itself needing to be effectively monitored, and queries as to the role of boards and oversight control.

Strategic Partnerships and Wider Stakeholder Relations

104. The Call for Evidence noted that the Agency will need to garner respect and recognition of its position and authority among stakeholders if it is to be able to perform its strategic leadership and coordination roles effectively. A wide range of stakeholders will need to understand what role the Agency will play to support them in responding to the heat

decarbonisation transition. The Scottish Government is keen that the Agency creates a strong sense of co-ownership of the agenda and collaboration in its implementation. The Agency will need to have a full understanding of the capacity and capabilities of the delivery landscape, so as to target support and draw on a wider pool of existing expertise, resources, connections and experience. Question 12 asked:

Q12: 'Who will the Agency need to work closely with in order to best facilitate delivery of the transformational change required, and how do you think this should work in practice?'

105. A total of 42 respondents, across all sub-groups, made comments at this question; and a wide range of organisation types were mentioned by respondents.
106. There were a few general comments on the **need for collaboration and coordination across sectors, working in partnership and the need for a wide range of stakeholders** to facilitate the delivery of the required transformational change. There were a very small number of suggestions of the need for work with existing structures and / or delivery partners given that the delivery of decarbonisation is underway in many areas.
107. Over half the respondents referred to **local authorities** specifically as an organisation type the Agency will need to work closely with in order to best facilitate the delivery of transformational change required. Some respondents noted the key role of local authorities as housing providers who will be involved in the installation of new systems, the development and implementation of LHEES as well as noting the potential for local authority energy services companies to carry out large scale retrofit, which would help to achieve economies of scale.
108. There were some references to working with various **directorates across the Scottish Government** to inform and advise on policy development and report on outcomes. At a wider level, there were also some references to working with the **UK Government** so as to make the most of synergies with UK policy, programmes and funding arrangements, and avoid potential conflicts or confusion; and **other devolved governments** so as to standardise approaches such as Each Home Counts PAS and TrustMark frameworks. There was some reference to **regulators** such as Ofgem, or the CCC and **enterprise agencies**. Some respondents also cited the involvement of **public bodies** and the public sector, referring to organisations such as Zero Waste Scotland, Scottish Futures Trust, Historic Scotland, the NHS and **partner organisations** such as the Energy Saving Trust, Home Energy Scotland or Changeworks who manage delivery programmes on behalf of the Scottish Government. There were also a small number of references to the Scottish National Investment Bank ('the Bank') who could direct the choice of projects to be funded.

109. The industry itself was seen to be important, with references to **network operators, energy companies, the supply chain and developers as well as any other organisations with an interest in energy supply**. The involvement of these organisations was perceived to be a way by which energy network capacity can be ensured and does not limit the supply of new homes or prevent the retrofit of existing buildings. There were some references to **trade associations** and **trade bodies**.
110. Over half the respondents referred to **housing associations, social housing landlords and private landlords**. Alongside this, there were a few references to community groups or residents associations and the wider general public and consumers.
111. There were some references to the **third sector and consumer advocacy groups** such as Consumer Scotland, or Citizen Advice Scotland who are in a position to help households to deliver the required changes for 2045.
112. Smaller numbers of respondents also cited:
- Financial institutions.
 - Academic institutions, colleges / training providers, for example, in relation to development of skills and expertise within the supply chain.
 - Trade unions.
 - Data providers as data will be needed to inform decision making.
113. A few respondents outlined ways in which the Agency could collaborate or work with partners. These included:
- Playing a supporting role in delivery of sustainability initiatives envisaged by the draft National Planning Framework (NPF4) and other key initiatives that local authorities are responsible for
 - Playing a supporting role in the delivery, coordination and facilitation of delivery through local agencies and public bodies.
 - Adopting an open and transparent approach to stakeholder engagement as well as being open and transparent with its policy priorities.
 - Supporting stakeholders in developing long term delivery approaches for the development of heat networks across new build and retrofit domestic and non-domestic pipelines.
 - Providing a mechanism to integrate heat decarbonisation planning and policy with Distribution Network Operators (DNO) short-term energy planning to identify opportunities and barriers.
 - Development of a communications strategy for stakeholders.
 - Helping with the development of national and local areas of activities, with national activities based on general guidance, promotion and liaison across

organisations; and a local focus on assistance and delivery to local authorities, RSLs (Registered Social Landlords), small scale businesses, landlords and the public.

114. A very small number of respondents noted the need to build in sufficient flexibility to enable the Agency to grow its scope over time.

115. Question 13 then asked:

Q13: 'Are you aware of any case studies that demonstrate (in)effective partnership working by a public body to coordinate a broader delivery landscape to achieve a shared goal? What lessons can be taken from these examples?'

116. A total of 22 respondents opted to provide general comments or cited case studies that demonstrated (in)effective partnership working by a public body to coordinate a broader delivery landscape to achieve a shared goal.

117. A small number of respondents offered general comments rather than providing examples. These included the view that a well constituted public body can successfully coordinate a broader delivery landscape to achieve a shared goal (supply chain respondent); and a local authority noted that councils play a central role in coordinating and leading local partnerships and are best able to do this when fully empowered to collaborate and take decisions at a local level. Another organisation noted that for the long-term success of the National Public Energy Agency, it will need to have a clear remit, minimal administrative burdens and costs, and an efficient delivery mechanism to fulfil its goals.

118. A number of examples that demonstrate **effective partnership working** were noted by some respondents, albeit each example was only mentioned by a single respondent. These included local authority work with Home Energy Scotland, Citizens Advice Scotland (CAS) and other local services and partners, area-based schemes such as LHEES and Scottish Government investment in collaboration such as the Scottish Cities Alliance. A full listing of the examples provided can be found in Annex 2.

119. Fewer **ineffective examples** were provided by respondents; these included the management of the Capacity Market, the Green Homes Grant Voucher Scheme (GHGVS) and the current rollout of interlinked smoke and heat alarms across Scotland.

120. Question 14 went onto ask:

Q14: 'What role do you see your organisation playing in relation to the Agency once established?'

121. Over half (38) of the respondents made comments in response to this question, with most of these identifying some form of collaborative role.
122. A key area identified by over half of these respondents was that of **sharing expertise, technical advice or the provision of guidance**, for example in sharing network knowledge and experience to help develop plans for heat decarbonisation. Other areas referred to included **support for training, helping to standardise approaches** to ensure consistency in technical and financial network assessments to ensure there is consistency across professional services and contractors or to **develop and establish common procurement processes**.
123. The need for data has been highlighted previously by respondents and a few noted they could help in **providing data and research** to inform policy development.
124. A few respondents referred to a capacity to challenge the Scottish Government and hold Ministers to account as well as monitoring the effectiveness of the virtual Agency to ascertain its success at driving and achieving transformational change.
125. A small number of organisations referred to benefits they could help bring such as offering insights into the problems faced by energy consumers, helping to increase awareness and consensus or providing practical solutions for specific issues such as the challenge of retrofit across Scotland.
126. A small number of trade bodies or associations noted they would be able to help disseminate information to their members, to engage the industry, to support the businesses they represent or to represent their sector in the broader arena, for example, to ensure detailed delivery plans are developed.
127. A very small number of respondents noted the need to ensure there is representation of the views of rural and remote areas; and two trade unions noted they could help with supporting workers' rights, with reference to Fair Work Treatment.
128. A few respondents commented on the Agency, for example, in referring to specific roles that could be undertaken by the Agency. These included:
- A remit for innovation and innovative approaches in working with partners.
 - A function to collect and analyse evidence.
 - A role in developing resource capacity within the low carbon heat sector.

- To be a leadership and oversight body which commissions organisations to deliver a wide range of programmes for heat decarbonisation and improve energy efficiency.

129. Question 15 then went onto ask:

Q15: ‘What role do you see for your organisation during the development process of the Agency, and do you have any examples of the type of collaborative approach to design of a new public body or delivery programme that you would like to see implemented? What lessons can be taken from these?’

130. A total of 28 respondents opted to provide comments in response to this question, many of which echoed responses given at the previous question. Once again, some respondents offered their expertise and experience, with some noting that this would help Scotland develop exemplar energy efficiency and heat decarbonisation that would deliver on the Agency remit. A very small number noted that their organisation already contributes to task forces or short life working groups.
131. A few respondents noted their keenness to be involved to help inform future delivery programmes and the overarching Heat in Buildings Decarbonisation Delivery Plan for Scotland; and one local authority noted that further consultation will be required. A small number also commented that they would represent their sector or workers’ rights.
132. As at the previous question, a few respondents also noted their capacity to share information, data and research.
133. An organisation in the Heat & Energy Efficiency – Delivery Landscape noted there is a need to ensure that roles, responsibilities and tasks are allocated to the organisations with the most appropriate skills, experience and expertise; or that where additional skills are needed, these can be developed in the most appropriate organisations. An organisation in the energy sector commented that the Agency needs to ascertain where existing expertise is, identify opportunities for collaboration and ensure there is no duplication of effort in the sector.
134. Only a very small number of respondents outlined any positive or negative lessons learnt that could be of use. The Queensferry Crossing Project was seen to be a positive example where the Transport Scotland team for design and construction had high levels of relevant expertise. Conversely, the Northern Ireland Renewable Heat Initiative was seen to offer an example of how not to approach a project. This respondent felt the proposals were not tested against requirements and other proposals, and with no focus on identifying and avoiding, or of mitigating against, any negative unintended consequences.

135. Finally, in this section of the Call for Evidence, question 16 asked:

Q16: ‘What types of approaches to civic participation do you think could work most effectively in supporting development of the dedicated Agency, and why? How can these be best implemented to work alongside wider stakeholder engagement? Please provide any examples, or case studies you may have to support your response.

136. 22 respondents made comments at this question. A key focus for respondents was agreement on the need to engage with consumers, either directly or via consumer groups, local communities or consumer advocacy organisations. One local authority noted the need to utilise a range of different approaches in order to achieve civic participation. Another local authority commented on the need for clear national messaging to manage public expectations and offer support, particularly as there is still a need to persuade the public why heat decarbonisation and energy efficiency are of prime importance. It was also felt that there is a need to increase the public’s understanding of available technologies.

137. A few respondents noted the importance of involving approaches via trusted agencies, and Finland’s heat pump transition was offered as an example of how trusted, local sources of information can be perceived more favourably than centralised messaging. As noted by an organisation in the energy sector and another in the ‘other’ sector:

“There are already community organisations, community development trusts, community councils and charitable trusts that have been active in the energy efficiency and fuel poverty landscape for some time and are seen as trusted face to face intermediaries. Collaborating with such bodies would provide an effective approach to civic participation and are more likely to work effectively as they are trusted locally. Third sector bodies like Changeworks (see for example their work in West Linton) demonstrate they can act as trusted organisations for larger scale roll-out of energy upgrade work. In the absence of a public energy delivery body, ideally, we need a network of trusted third sector energy bodies across Scotland that can provide the support and information to consumers and businesses ‘on the ground’”.

138. Various suggestions were offered as to what approaches to civic participation would be most effective, with references to deliberative approaches such as that used in Scotland’s Climate Assembly, or to using consultations, town hall events or civic consultation forums which have been used by a number of local authorities and community groups. Other suggestions included linking in with local authority community planning engagement strategies so as to engage directly with communities, involving local energy advice groups, using exemplars from consumers who have already adopted different heating options such as solar panels or engagement via those who will be installing new technologies.

139. One respondent in the Heat & Energy Efficiency – Delivery Landscape referenced recent work undertaken by Ipsos MORI – *‘Public Engagement in Infrastructure’* – which highlights good practice for designing public engagement for infrastructure along with outlining key principles on how to engage with the public. A local authority provided examples of three pilots they are undertaking to progress net zero communities in Scotland and noted that direct national support for delivery programmes would be of value to the transition at neighbourhood and council level and help drive behaviour change and citizen action.

Virtual Agency and Transition Planning

140. The Call for Evidence noted the need to act now to tackle the challenge of transformational change in how Scotland heats its homes and buildings. As such, it is intended to establish a virtual Agency by September 2022. Working with key delivery partners, the plan is to set a transition route map, that will consider how to build on, improve and co-ordinate existing – and future – advice and delivery programmes, and what needs to happen to scale up to deliver within a single dedicated body by September 2025.

Strategic Purpose and Functions

141. It is intended that the virtual Agency will be tasked with two strategic purposes:

- To lead strategic oversight and co-ordination of on-going energy efficiency and heat retrofit delivery programmes pan-Scotland.
- To lead a set of development work-streams to inform the design and set up of the dedicated Agency, in respect of key functions and governance.

142. Question 17 of the Call for Evidence asked:

Q17: 'Other than those listed, are there any other specific functions that you think the virtual Agency should be tasked with delivery ahead of the dedicated Agency, and why? If you have any supporting evidence that demonstrates the potential added value – or make clear the current gap in delivery – of such a function pre-regulations, please provide.'

143. A total of 21 respondents answered this question, with a small number of these noting their **support for the strategic purpose and functions** as listed in the consultation paper; for example, in supporting a leadership role in the provision and development of energy networks that will support the decarbonisation of the built environment. That said, there were a very small number of **requests for more information** given that the proposed core functions and nature of the proposed body have not been defined or for more information on the scale and pace of activity in the delivery of heat decarbonisation. Little supporting evidence was provided by respondents.

144. The **timescale** for establishing the Agency was a concern for a small number of respondents, with a respondent in the Heat & Energy Efficiency – Delivery Landscape sub-group noting that, given the short timescale to 2030, there is a need for more information on the scale and pace of activity and the need to start delivering programmes. A very small number of organisations also commented on the need for early introduction of regulations so as to encourage compliance.

145. As at previous questions, a key issue for a few respondents was of the need to **ensure local authorities have adequate resources** – both funding

and staffing expertise – for example, to complete high quality LHEES or to conduct a skills gap analysis and develop a suitable workforce. One respondent in the housing sector also noted that the virtual Agency will also need additional resources in order to increase capacity.

146. A small number of respondents focused on possible functions for the Agency, and most of these focused on the virtual Agency. These included an organisation in the consumer advocacy and advice sub-group which commented that the new Agency should be covered by the Consumer Duty and integrate this into its mission and organisational principals. Another organisation in the Heat & Energy Efficiency – Delivery Landscape sub-group noted the Agency might have a wider remit than the focus on energy efficiency and heat decarbonisation and the remit should also include national and distribution energy networks, industrial heat, carbon capture and storage infrastructure, and the energy infrastructure required to support transport networks. They also noted that responsibility for these areas between the Agency, the SNIB (the Bank) and other organisations should be clarified in due course and considered in parallel with the development of the Virtual Agency, and included in any review of the case for establishing a dedicated Agency. An organisation in the housing sector noted that it will be important for the Agency to take on a leadership role in the provision and development of energy networks that will support decarbonisation of the built environment.
147. The issue of **fuel poverty** was raised by a small number of respondents who wanted to see a commitment to ‘no detriment’ for fuel poor households and a reduction in fuel poverty. One organisation, while welcoming plans for the Agency, noted their concern that given the current high rates of fuel poverty, it will be essential to understand how the virtual Agency can scale up and accelerate delivery of retrofit and heat decarbonisation.
148. A small number of organisations also noted a need for a **rural transition package in off-gas areas**; or the need to investigate off-grid rural properties to investigate how they can be decarbonised².
149. The issue of the **infrastructure** was noted by a very small number of respondents, with a comment from a housing sector organisation that the energy infrastructure should be a key objective from the start.
150. There were also a few comments relating to **consumer engagement and awareness** with references to the need to increase awareness among consumers on the benefits of retrofit, as well as changes in legislation to prepare the market for the retrofit agenda once policies are in place. There

² It should be noted that the Scottish Government is clear in its commitment to a Just Transition, and in its Heat in Buildings Strategy sets out guiding principles to ensure alignment of the heat decarbonisation transition with fuel poverty objectives.

were also a small number of comments on the need for customer journeys to be designed for different audiences in terms of advice, finance and support.

151. There were a very small number of references to **partnership working** with the need for evidence collection and options analysis to be conducted in partnership with the Scottish Government and industry; or for continuing existing relationships with the UK Government and BEIS.

Structure, Governance and the Transition Pathway

152. In line with timescales to launch by September 2022, the Cabinet Secretary for Net Zero, Energy and Transport informed the Scottish Parliament's Net Zero, Energy and Transport Committee on 14 September that the virtual Agency would operate in-house for the Scottish Government to begin with. This will ensure there is minimal disruption to the continuing delivery of current energy efficiency and heat decarbonisation programmes as well as allow for flexibility in design of the virtual Agency so that it can change and evolve in structure, governance and capacity as required.
153. To ensure the virtual Agency has both credibility within the wider stakeholder landscape and the necessary decision making authority and capability to begin to transition delivery, the Scottish Government is proposing setting up a shadow independent Strategic Partnership Board to help oversee its work. Question 18 asked:

Q18: 'Do you have any examples, or insights based on experience, that demonstrate the potential added value of an 'interim' delivery body in advance of a dedicated public body, and how this can best be achieved?'

154. Only 11 respondents made comments at this question, with only a small number giving examples of or insights into the potential added value of an interim agency – See Annex 2.
155. Most of the more general comments voiced **agreement that having a virtual Agency is an appropriate step to aid the development of a full Agency**, with suggestions that it would help to highlight areas that need to be addressed or lessons that need to be learned. An energy respondent pointed out that there would be a benefit from having the start-up time required for the agency reduced.
156. Very small numbers cited points about the virtual agency needing to be monitored for effectiveness in order to inform areas to include in the dedicated agency, and a need to ensure that the setting up of the dedicated agency does not impinge on wider activities such as supply chain development. A Heat & Energy Efficiency – Delivery Landscape organisation disagreed that an interim solution is positive, stating that a long-term committed agency was needed to lead by example and that there was a danger that the interim agency may become semi-permanent.

157. Question 19 then asked:

Q19: 'Do you have any examples, or insights based on experience, of effective change management practices relating to a public sector initiative that required a shift in the existing national and / or local delivery landscape, managed over time? What lessons can be learnt?'

158. 9 respondents made comments at this question, almost all of whom gave detailed examples and insights – See Annex 2. There was one reiteration citing the importance of change management practices being effective, and a request not to tie this in with the Scottish Government.

159. Finally, the last question in the Call for Evidence asked:

Q20: 'What do you see as the key steps, and / or considerations that will need to be reflected in the transition Route Map, and why?'

160. 24 respondents made comments at the final question, many of which reiterated points already made and didn't go into great detail. Only three respondents made reference to extra evidence, each of these citing the same source – see Annex 2.

161. The main consideration theme, cited by a majority of respondents, was to **develop foundations for the dedicated agency**, comprising its scope, remit, definition, goals, statutory and regulatory powers, resources and funding; it was also noted that the transition should highlight gaps and be used as a proving ground.

162. A few respondents thought that the transition route map should comprise **building on existing good practice** in terms of delivery infrastructure, scaling up and accelerating existing programmes and ensuring the essential building blocks are already in place and not disrupted. Similar numbers encouraged a **consistency of approach in terms of messaging and communication**; however, there were a small number of respondents who suggested tailoring policy, communications and delivery for different audiences and for more complex interventions.

163. Small numbers of respondents made the following other points to be reflected in the transition route map:

- The needs of communities / local areas (e.g. those in fuel poverty, ensuring Just Transition principles).
- Supply chain issues (e.g. role, capacity, worker engagement, skills availability).
- The involvement of stakeholders during development of the agency (role of local authorities, other agencies, etc.).

- Skills and technical expertise availability amongst staff in the agency.
- Provision of clear leadership and / or oversight (e.g. providing guidance to stakeholders such as local authorities and landlords).
- Space for further consultations and feedback on progress.

Additional comments

164. Twelve respondents, mostly organisations, opted to provide additional information in their consultation response. Most provided background information on their organisation to set the context for their response and / or welcomed the opportunity to respond to the consultation. A few of these provided a brief summary of the points made in response to specific consultation questions. For example, reiterating ways in which they could collaborate with the new Agency, their views on the functions of the Agency or concerns over fuel poverty.

165. One individual noted their support for electrification of heat sources and ways of making electricity more affordable rather than retrofitting or other efficiency measures. They felt that higher levels of electricity usage would bring about a greater return on investment and cause less disruption and expense than retrofitting. Another individual noted their support for use of biomethane and renewable synthetic methane, which are carbon-containing net zero gases that can be supplied with no changes to boilers.

Annex 1: Respondent Organisations

Advice Direct Scotland
Association for Decentralised Energy (ADE)
Campaign for Lower Electricity Prices
Changeworks
Citizens Advice Scotland (CAS)
City of Edinburgh Council
Community Power Outer Hebrides (CPOH)
Construction Industry Training Board (Scotland)
Consumer Scotland
Energy Action Scotland
Energy Agency
Energy Saving Trust
Existing Homes Alliance Scotland
Glasgow City Region
Highlands and Islands Enterprise
Historic Environment Scotland
Homes for Scotland
Institution of Engineers in Scotland
Loco Home Retrofit CIC
MCS Charitable Foundation
Moray Council
North Lanarkshire Council
Perth & Kinross Council (Planning & Housing Strategy Team)
Royal Institute of Chartered Surveyors (RICS)
Scottish Enterprise
Scottish Federation of Housing Associations
Scottish Futures Trust
Scottish Renewables
Scottish Power
Scottish Power Energy Networks (SPEN)
Scottish Property Federation
Scottish Trades Union Congress (STUC)
SGN
Shetland Islands Council
Smart Energy GB
SNPEF (Scottish and Northern Ireland Plumbing Employers Federation)
Solar Energy Scotland
South Lanarkshire Council
Stirling Council

The Energy Poverty Research initiative (EPRI); Common Weal; & The Built Environment Asset Management (BEAM) Centre, Glasgow Caledonian University. (Joint response)

UNISON Scotland

Vattenfall Heat UK

Warmworks Scotland

West Dunbartonshire Council

Zero Waste Scotland

Annex 2: Additional Evidence & Research Submitted by Respondents

Question 1

Research and other evidence
<p>Some regulations and building specs may still be based on assumptions about a building left over from a previous era, e.g. the assumption that a domestic house will have a fire place, or fail to allow tasteful and decarbonising modifications to historic buildings.</p>
<p>As well as being shaped by our experience Energy Saving Trust's views on a potential National Energy Agency have also been shaped by relevant research including the Scottish Government commissioned 2019 "Strategic Outline Case for Proposed Development of a National Delivery Mechanism" 1 Executive summary - Energy Efficient Scotland programme: analysis of delivery mechanism - gov.scot (www.gov.scot) and a scoping study commissioned by the Existing Homes Alliance (EHA) (of which we are a founding member) with support from the European Climate Foundation in 2018 which provided an initial assessment of options for the oversight of the Scottish Government's National Infrastructure Priority on Energy Efficiency Energy Efficient Scotland – Options for National Oversight Body The Existing Homes Alliance Scotland (existinghomesalliancescotland.co.uk). This scoping study in turn draws heavily on the International Energy Agency's 2010 Energy Efficiency Governance report Energy Efficiency Governance – Analysis - IEA which is a useful reference document in its own right. The report is based on a survey of over 500 experts in 110 countries, follow up interviews with over 120 experts in 27 countries and extensive desk research and literature reviews. It is the only comprehensive study that we are aware of, of the legal frameworks, funding mechanisms, institutional, and co-ordination arrangements needed to scale-up energy efficiency – collectively referred to as Energy Efficiency Governance.</p>
<p>CITB's report Building Skills for Net Zero outlines that in order to meet Net Zero targets, an estimated 22,500 people in Scotland, through re-training and new roles, will need to be trained in energy efficiency by 2028. That represents an increase of around 9% of the current size of the workforce, based on current technologies and ways of working. This can be either through new recruitment from outside the sector or through retraining and productivity gains. There are specific, specialist roles where the shortages are most significant. For example, an additional 4,605 construction project managers will be required by 2028, as well 1,507 construction trades supervisors, and 1,936 building envelope specialists.</p> <p>In addition to these roles, there is a need for training in the skills required to maintain traditional buildings. 95% of surveyed contractors in Scotland do not hold formal qualifications relating to work on traditional buildings. Only 2% of contractors surveyed in Scotland had undertaken energy efficiency retrofit work on traditional buildings.</p>
<p>The recent Westminster Business Energy and Industrial Strategy Select Committee report into Decarbonising Heat in Homes report³ highlighted the Ofgem consumer engagement survey for 2020 "found that the majority of consumers believe that they are already doing all they can to save energy at home. The survey identified that barriers to the adoption of low carbon technologies included perceived high costs, disruption from the installation process, and doubts about reducing energy bills." It concluded that "consumer awareness of the transition to low carbon heat is low."</p>
<p>Research by Delta-EE6 highlights that:</p> <ul style="list-style-type: none">• in electricity generation, smart meters will allow for more renewable generation, contributing to a 77 per cent CO2 reduction by 2035 (from 2015 levels);

- in homes, smart meters will help accelerate the uptake of energy efficiency measures and low carbon heating, and enable consumers to better engage with their energy use, contributing to a 25 per cent saving in CO2 by 2035 (from 2015 levels); and
- in transport, smart meters will be a critical enabler for high levels of electrification, contributing to a 54 per cent CO2 reduction by 2035 (from 2015 levels).

Research (Hofman et al, 2021) has found that neither top-down nor grassroots approaches alone are sufficient to make progress on decarbonisation but that complementary mixes can be effective. [Retrofitting at scale: comparing transition experiments in Scotland and the Netherlands \(journal-buildingscities.org\)](https://journal-buildingscities.org)

Innovative groups such as Carbon Coop in Manchester and Low Carbon Hub in Oxford have shown that localised, citizen- and neighbourhood-specific approaches can achieve faster progress in comparison with broad-brushed policy measures.

[Selected demonstration projects: summaries - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

In Scotland, local groups including Loco Home Retrofit CIC in Glasgow and Zero Carbon Daviot are already placed to make significant impact but little or no Scottish government support exists for such programmes.

[Loco Home Retrofit CIC Limited | Glasgow's Retrofit Co-operative](https://www.locohome.co.uk)

Research has demonstrated that PV can make a valuable contribution to reducing social housing tenants' fuel bills and alleviating fuel poverty. Analysis of electricity bills pre and post PV installation in 42 households found an average reduction of £90 per year after the PV was installed.

Both solar PV and thermal collectors can be installed at mass and micro scales to ensure that households, businesses, farmers, manufacturers, and public bodies are able to participate in a just and clean energy transition. There is already close to 600MW of utility-scale solar capacity proposed in the Scottish deployment pipeline that is expected to be co-located with energy storage. However, deployment has historically been challenging for all scales of development. Outdated policies and inconsistent funding have long-prevented homeowners, businesses, and landowners from generating their own clean energy and playing their part in the decarbonisation of heat agenda.

In October last year, the Westminster Government announced that solar PV and auxiliary technologies in England would be exempt from business rates between 2023 and 2035, to support business recovery in the wake of the COVID-19 pandemic. In order to support the decarbonisation agenda in Scotland, Scottish Government should look to exempt solar and storage from non-domestic rates aligning with England.

In order to deliver on both the Scottish Government's and local authorities' own carbon and climate targets, GCR is committed to developing a large scale domestic energy efficiency and low carbon heating retrofit programme. This work commenced in spring 2021 and an initial Strategic Outline Business Case was shared with GCR Cabinet in October 2021. Details on the business case are available here:

[Committee Information - Submission Documents \(glasgow.gov.uk\)](https://www.glasgow.gov.uk)

Key to this will be delivering on the recommendations of the Zero Emissions Social Housing Taskforce (ZEST) and learning from experience of the social sector which has already been at the forefront of energy efficiency measures and the transition to low and zero emission heat solutions. ZEST set out some of the key challenges and how to progress the shift to zero emission homes. The priority actions include increased capital investment, designed in line with the needs of the sector, a fabric first approach to reduce overall energy demand and minimise energy costs, and early engagement to ensure tenants are fully supported in the

rollout of unfamiliar technologies. The Energy Efficiency Standard for Social Housing (EESH) will also need to be realigned to support heat decarbonisation and ensure it delivers positive outcomes for tenants.

Publication of a final report by the Heat Pump Sector Deal Expert Advisory Group

An empowered and locally led transition to a low carbon and fairer future will require government and industry to work together to meaningfully engage communities across Scotland in the processes and decisions that matter to them throughout the period to 2045; our (Citizens Advice Scotland) Engaging Heart and Minds report [2020]¹ provides a useful starting point for such a program.

Question 2

Research and other evidence

Planning and building success should also be researched, for example Sweden has a very high number of prefabricated buildings which, among other benefits, tend to be easier to heat and have lower carbon emissions than traditionally built alternatives. Therefore they likely have good knowledge of how building regulations can be altered to facilitate energy efficient housing.

Consistency with that outlined by the EHA in their briefing of December 2021 and entitled “A new National Energy Agency for Scotland: key to the successful net-zero transition for buildings” [A new National Energy Agency for Scotland – Briefing December 2021 | The Existing Homes Alliance | Scotland \(existinghomesalliancescotland.co.uk\)](#).

Smart meter installation journey for vulnerable people - Our In Communities programme was created to ensure that we reach and support people who may be experiencing barriers to engaging with the rollout. This means that we partner with trusted, expert organisations from the voluntary and public sector, including many across Scotland, to ensure that everyone understands the benefits of smart meters. Between 2016-2020 we have awarded grants to 23 Scottish organisations including Carers Scotland, Airdrie Citizens Advice, Aberdeen Care & Repair and Argyll, Lomond and the Islands Energy Agency. In our work last year, our In Communities programme focused on providing additional engagement to the over 65 audience. This is because this audience is harder to reach through a mainstream communications approach, and need more support in the smart meter journey. Our partners focused on delivering face-to-face activity, which has proved to be the most effective in increasing the desire for smart meters among this audience. We support our partners by providing free print and downloadable materials in a range of languages and accessible formats such as braille, so that they can run their own campaign. Below are some of the examples of our programme.

2017 Partnership Marketing Programme

In 2017 our partnership marketing programme covered the whole of GB through 5 national partnerships and 111 regional/local partnerships, such as Energy Action Scotland. This included:

- 5 national partnerships (Royal Horticultural Society, Age UK and Age Scotland, Scottish Federation of Housing Associations (SFHA), National Housing Federation, Community Housing Cymru)
- 66 grantees were awarded grants of up to £5,000 (average grant: £3,925)
- 45 unfunded partners who delivered smart metering messages
- 179 champions were trained through 22 smart meter champion training sessions
- 531 users registered on the Smart Energy GB Resource Centre and downloaded 1,908 assets and ordered 248,305 hard copy assets

- over 430,000 consumers of 65+ offline audience were reached

2018 Partnerships Marketing Programme

A partnership for low-income audiences with supported targeted communication with 10 housing associations which have a particularly high instance of low-income tenants. A partnership with Picturehouse Cinemas which resulted in experiential activity at 'Silver Screenings', including in Edinburgh, to target older audiences. Five grants were awarded in Scotland to support older people audiences. These were Clackmannanshire Citizens Advice Bureau, East Ayrshire Citizens Advice Bureau, Hope Amplified, Airdrie Citizens Advice Bureau, Milan Senior Welfare Organisation.

Partnerships continued into 2019 including work with Carers Scotland. Patricia Clark, Development and Training Manager said: "The partnership funding enabled us to reach many carers in Scotland, face-to-face or online. We were able to give them take home resources and share digital assets in different formats - articles, leaflets, videos and stories. Smart Energy GB also helped us develop our 'Smart meter' webpage and regularly sent us news stories and updates that might be relevant to our activities." "Carers from more vulnerable households found our sessions on smart meters and energy information useful (see quotes below). This made the project especially worthwhile for us." Catherine, 65 "I can see how much energy I have used from my monitor which is really helpful as I can monitor daily, weekly, monthly and annual usage and know if I need to increase my direct debit to cover this especially in the winter months"

Loco Home Retrofit CIC is a community-owned retrofit co-operative in Glasgow. As a community intermediary, it seeks to develop both the market and the supply chain for risk-managed, step-wise whole building retrofit. It directly addresses the key policy challenges of homeowner acceptance, cost, quality assurance and supply chain skills / capacity.

Loco Home's member-owners are homeowners, contractors and retrofit professionals. It provides paid retrofit advice services as well as community engagement activities in the Southside of Glasgow. It has certified Passivhaus level expertise and years of community energy experience in its team.

Loco Home Retrofit CIC has a business plan to expand its paid retrofit advice service if it can raise the working capital to employ staff and franchise a proven methodology. It also has plans to develop scaled approaches to common Glasgow building archetypes and again the main barrier is working capital.

The provision of long-term regulatory support and innovation funding will to demonstrate the potential of a similar scheme in Scotland. An example is REflex Orkney, a multi renewable technology project has future plans to roll out solar and storage as part of a heating installation service to significantly reduce energy bills for consumers and reduce carbon emissions. As mentioned above, including battery storage will support the already heavily constraint grid and store excess generation on the local network to supply during times of high demand. The development of REflex Orkney and similar future models will be vital in meeting decarbonisation targets. We strongly encourage the new agency to support and accelerate the development of innovative business models by unlocking innovation funding.

Question 3

Case Studies and other evidence
<p>Support for the householder is required to convert an interest in taking action to actually taking action. This can include detailed technical advice, supplier selection, review of quotations etc. This is an integral part of Warmer Homes Scotland and EES:ABS. For the self-funding sector a relatively small number of householders are provided with some of this in-depth support by Home Energy Scotland.</p>
<p>(on compliance) The Agency has the opportunity to manage these challenges in a number of ways. It could oversee and improve upon existing monitoring and compliance tools and standards (for example, EPCs, retrofit assessments as part of PAS 2030/2035/2038, etc.), and could monitor the role of trade associations to ensure they won't have too prominent a role in promoting solutions which constrained by the methods and materials used by their members. The Agency could also a dedicated agency could monitor and influence the standard of advice provided by Energy Saving Trust and Home Energy Scotland to ensure consistency and quality, particularly in the context of the differing approaches that may be needed for different building typologies.</p>
<p>(whole system) Finally, across heat decarbonisation and energy efficiency, there may also be useful comparisons with the work BEIS is doing on a Future System Operator in providing whole-system, coordinated analysis and recommendations to Government</p>
<p>(quality assurance) The agency should incorporate in its constitution from the outset mechanisms that balance the lobbying of the major insulation manufacturers with input from smaller manufacturers and independent experts. The Grenfell inquiry shows how destructive a close relationship between manufacturers, testing houses and regulators can be. Unfortunately the same pattern can be seen in PAS2035 whereby it is all but impossible to achieve an insurance backed guarantee using vapour-permeable materials that are appropriate for solid-walled buildings. The agency should commit to PAS2035 and, in particular, independent advice, as the key means of achieving quality installations that will last for many years without damaging the health of the building or the occupants. However it should adopt a pragmatic approach with PAS2035 variations for Scotland. For example, it should allow PAS2035 to be attained for retrofits that use vapour permeable materials which are generally from smaller manufacturers that cannot afford the BBA accreditation necessary for an insurance backed guarantee.</p>
<p>(timescales) There are around 2.3 million homes in Scotland so heating more than 1 million of those homes with a zero carbon heating system by 2030, as envisaged in the Scottish Government's Heat in Buildings Strategy, will mean that on average at least 100,000 new heating systems will need to be installed each year, or 2,000 new systems each week. Currently, 2-3,000 renewable heating systems are installed in homes in Scotland every year. In other words, the level of activity currently taking place each year will need to take place each week if Scotland's ambitions are to be realised.</p>
<p>(retrofit costs) The projected cost of bringing all homes across the GCR to Energy Performance Certificate (EPC) C and above, with many being EPC B and above and some close to or at net zero is estimated to be in the region of £10.7 billion.</p>
<p>We welcomed the Scottish Government's Community and Renewable Energy Scheme (CARES), which is an example of best practice in encouraging development and engaging with a diverse range of voices from the public. The success of the CARES can be measured both empirically, through its addition of over 500MW of renewable energy to the Scottish grid in less than half the projected time, and conceptually through the empowerment of communities and democratisation of energy that has resulted from the funding of enabling direct access to ownership of renewable</p>

energy generation assets. its projects. We applaud the CARES success and would encourage the Scottish Government to continue to facilitate and support such initiatives through the proposed agency.

The STUC's Green Jobs Report estimates this could create up to 108,000 jobs

Question 4

Evidence & insights based on experience

The experience that our Council has had with developing an ESCo for our Queens Quay Water Source DHN shows that there is a requirement for an agency that leads and/or supports Scotland in:

- o Developing detailed business cases and financial models for heat decarbonisation on a large scale;
- o Advising and supporting monitoring, metering and billing responsibilities associated with ESCo's and beyond;
- o Detailed and simple legal advice on land, environmental impacts, historical fabric impacts, and landowner engagement, etc.;
- o Having an agency that helps develop holistic and partnership based approaches to heat decarbonisation, whether that be cross-sector, partnership between Local Authorities or Private Sector, or community partnerships with residents.

As Simon Roberts of the Centre for Sustainable Energy said in 2017 (see page 5), we need policy makers to stop being obsessed with coming up with the perfect plan for the entire housing stock and should instead focus on the "next million" (on a UK scale). His comments remain relevant today. Policy paralysis in other words.

[Centre for Sustainable Energy: Do the next million first: What to do to get the home-owner market going for low carbon retrofit – in a world without grants \(presentation\) \(cse.org.uk\)](#)

Based on the success of the local supply chain demonstration projects funded by BEIS, Scottish Government should consider devolving more control or resources to local groups ready to take action.

[Selected demonstration projects: summaries - GOV.UK \(www.gov.uk\)](#)

The integration of new standards such as PAS2035 has been challenging and is still not resolved nearly a year after being introduced as a requirement of Scottish Government schemes. The Agency could bring the expertise and expedite decision making by proactively engaging with Local Authorities/Managing Agents/Contractors to bring consistency and clarity.

The support for Local Authorities around ECO could be better especially with the introduction of ECO4 and its application to Scottish Government programmes. It now can't be blended with other funding (e.g. EES:ABS) so Local Authorities need direction on how best to maximise ECO in their programmes IF this is still a priority for Scottish Government. ECO4 is coming into effect in less than 10 weeks' time.

The integration and blending of community-based work across multiple funding streams to re-focus on a just transition to a low carbon economy. At the moment these projects and programmes (e.g. waste, transport, energy efficiency, decarbonisation) are all disparate elements of a wider low carbon agenda. A central Scottish Government Agency could facilitate the blending of funding to create whole community Net Zero models which would facilitate and accelerate the transition on a whole area basis rather than smaller individual initiatives with lesser impact.

In Stirling, with the Forthside District Heating Network project, at the point of outset, Stirling Council had limited experience in delivering a district heating network. The advisory resources from Scottish Futures Trust were invaluable in delivering this project. A public agency dedicated to heat management systems could fulfil that central expertise and advisory service, essential for delivering the magnitude of low-carbon heat management systems across Scotland.

It is worth noting that the previous administration commissioned a strategic outline case for a proposed 'national delivery mechanism for Energy Efficient Scotland' in 2019. This research recognised the benefits of an independent agency to support meeting government targets, and provides useful analysis of the remit and shape for such a body.

Based on our findings from the international literature, we believe coherent governance includes the need for:

- a legislative framework which lays out the components of the strategy including targets.
- an agency formed by statute with responsibility for oversight and ensuring delivery, and provided with adequate independence, authority and capacity.
 - o responsible for delivering a clearly defined set of activities,
 - o adequately resourced with well qualified staff and finances,
 - o independent of government, given legitimacy via statute
 - o overall responsibility to rest with a single senior official, preferably a Minister.

Midlothian Council and Vattenfall's joint venture, Midlothian Energy Limited (MEL), provides useful evidence of a public/private partnership.

The first district heating system crosses East Lothian and City of Edinburgh Council boundaries. This has implications for consistency in terms of permitting and policy around planning, highways, etc. The public body should play a coordinating role to ensure consistent approaches exist across authorities. This is already being picked up through early joint discussion on coordinating Local Heat and Energy Efficiency Strategies (LHEES). The district heating system ownership, consent, permitting and licensing across boundaries will need to be clearly defined. This is the proposal for the current LHEES coordination proposed for South East Edinburgh. That will likely apply in other locations and the NPEA would be well placed to engage in current discussion and to develop this role more widely. The added value to this type of relationship is about management of risk. This is about risk reduction of investment rather than sharing of risk. Both parties bring key attributes and experience to the partnership that reduces investment risk. This allows for long-term investment at a lower risk. This is what enables the deployment of capital, effectively and efficiently, to support low-carbon energy infrastructure.

The Existing Home Alliance has conducted previous research on options for energy efficiency governance in Scotland. Further information on this is provided in the EHA response and the research report: [Oversightbody FINAL-REPORT Nov18.pdf](#) (existinghomesalliancescotland.co.uk)

We are a member of the Existing Homes Alliance and support the work it did in 2018. Based on its findings from the international literature, we believe coherent governance includes the need for:

- a legislative framework which lays out the components of the strategy including targets.
- an agency formed by statute with responsibility for oversight and ensuring delivery, and provided with adequate independence, authority and capacity.
 - o responsible for delivering a clearly defined set of activities,
 - o adequately resourced with well qualified staff and finances,
 - o independent of government, given legitimacy via statute
 - o overall responsibility to rest with a single senior official, preferably a Cabinet Secretary or Minister.

The main sources for the perspective I have laid out here comes from or is supported by the work of Saul Griffith, US based energy expert, and his organisation Rewiring America. I was unable to attach the reports from their website ([Rewiring America](#)) but they have a lot of valuable resources around policy, economic, societal, and household benefits of decarbonising, . As far as I am aware Saul Griffith and his colleagues do provide consultation at the government level to New Zealand, Australia and parts of Europe. The thrust of Griffith's analysis is that the best route to reduce the impact of climate change is a complex multi-level approach focused on electrifying almost everything, and using existing technology to achieve goals. His work is very America focused, but most is applicable to the Scottish context also.

In my experience in public health and behavioural insights, the practicalities and science of sustained implementation is often underspecified when it comes to these ambitious agendas. While it is of course not possible to do everything within a small agency -actively promoting a policy, showing how it should be implemented, and providing support for implementation using evidence from the behavioural and environmental psychology literature is too often overlooked. [Journal of Environmental Psychology - Journal - Elsevier](#)
[Implementation Science | Home page \(biomedcentral.com\)](#)
[Behavioral science tools to strengthen energy & environmental policy \(behavioralpolicy.org\)](#)

Yes. Within Europe were mandated to convert from leaded to non-leaded solder. This took a lot of evaluations and experiments. The transition was project managed effectively and the conformance to the EU directive achieved. The UK is one of the top Electronics manufacturing countries in the world and led in this transition.

While a number of energy transitions have been detrimental to working class communities, the United Kingdom's conversion from 'town gas' to 'natural gas' between 1968 and 1976 involved converting around 40 million appliances for 14 million customers, mostly households. Working alongside 12 regional gas boards, the Government took a central coordinating role, with a nationalised Gas Council giving the state direct control of the required investment Lessons can be learned from all of these examples about the scale of Government intervention require to ensure a comprehensive and successful street by street transition of residential heating. Specifically regarding the design of an effective Agency, we would point to the work of Andy Cumbers and Commonweal which has called for a Scottish Energy Agency, modelled in part, on the Danish Energy Agency.

Sweden's transition to district heating is another example which has enabled high security of supply, low carbon dioxide emissions, and efficient use of available heat sources.

Evidence from across Europe also shows the key role of municipalities in the energy transition – delivering publicly owned renewable energy and delivering retrofitting programmes.

Lessons can be learned from all of these examples about the scale of Government intervention require to ensure a comprehensive and successful street by street transition of residential heating. Specifically regarding the design of an effective Agency, we would point to the work of Andy Cumbers and Commonweal which has called for a Scottish Energy Agency, modelled in part, on the Danish Energy Agency./ We note that the Scottish Government is already in communication with the Danish Energy Agency, which is running a heat-as-a-service focused boiler scrappage scheme, and we would encourage further bilateral discussions to share best practice amongst governments with higher uptake of decarbonised heating

The MCS Charitable Foundation report 'Energising Advice' 1 highlighted the 'postcode lottery' in advice for homeowners when trying to make energy efficiency and retrofit decisions. It revealed that current provision of energy advice and information on retrofitting homes is inadequate and urged central Government to take a new, more radical approach to benefit homeowners across the UK. Current advice availability varies depending on where you live, and in many parts of the

UK is too basic for the practical complexities of deep retrofit. The main exception is Scotland, which has set a higher benchmark, and we would urge the Scottish Government to continue to lead the way in this area of such importance in the transition to a Net Zero future. The study assessed over 60 advice services across the UK and pinpointed a clear need for a national information resource underpinned by a network of local and regional hubs, such as those proposed in the outline plans for a National Energy Agency

A national information resource providing expert and regularly updated information resources, covering all relevant technologies and user behaviour: to enable consistency in advice, whoever it is delivered by. This should be:

Commercially independent and unbiased, with public funding to ensure, and to signal to consumers and the industry that this is the case;

Tailored to the specific requirements of owner-occupiers, landlords, tenants, advisers and building professionals and tradespeople;

A framework for local or regional one-stop-shop contact hubs, to support homeowners through the retrofit process.

Development of a new energy advice qualification. This framework will help support individual householders in identifying and delivering the best possible range of energy efficiency and renewable energy measures. Such services should be tailored to meet the specific needs of landlords and tenants as well as owner-occupiers and should become a priority to tackle the massive job of decarbonising homes in Scotland. Clear advice and support enables people to retrofit their homes, help reduce their energy bills and choose the appropriate low carbon heating solution, which is critical for a zero carbon future. A worrying gap in this support is creating barriers to people adopting low carbon technologies in their home.

The research commissioned by the EHA and referenced above ([Energy Efficient Scotland – Options for National Oversight Body | The Existing Homes Alliance | Scotland](#) (existinghomesalliancescotland.co.uk)) concluded that “A central and consistent finding in the literature is that the establishment of responsibility with a single agency tasked with oversight for energy efficiency is central to coherent governance.” The findings of the Strategic Outline Case commissioned by the Scottish Government are also relevant here in that they highlighted that there was a definite case for a body to take on a range of roles – including many listed in the consultation (coordination and coherence, engagement, etc.). It is also worthwhile noting the Strategic Outline Case emphasised that “the expected ‘net’ incremental costs to be incurred from developing any new delivery architecture, in advance of the counterfactual, are potentially inconsequential. Over the course of the entire 20-year programme of EES, the additional set up costs of any bodies could be dwarfed by the scale of the benefits and operational costs the programme has the potential to deliver”.

There have been many reports and commissioned research and valuations on the need and added potential over the last decade. Some of these include the Danish Energy Agency, which Scotland already has a track record of engaging with. Scotland has already established experience and dialogues, including a Memorandum of Understanding with Denmark. DENA, the German Energy Agency provides a model [About dena – Deutsche Energie-Agentur \(dena\)](#). The Scottish Government may also wish to consider approaches taken by Efficiency Maine Trust, which has seen high recent rates of heat pump uptake across the State of Maine through its heat pump rebate scheme.

We have all witnessed the continued issues around old and heat inefficient buildings and the detrimental impact this has on those most in need within our communities. We have also witnessed inefficient heating systems and badly thought out installer replacement schemes and the negative impact on our communities. We have however also experienced how locally managed schemes have provided numerous people with properly insulated homes and engaging educational workshops. The CPOH members have also carried out various energy efficiency schemes and support packages to householders and are shining examples of how community

energy can lead to many other positive changes, if they are supported at the outset to overcome the hurdles faced in installing the community energy technology.

(innovations at home not working out) While we support innovation and new approaches to improved energy efficiency and the decarbonisation of heat, local decision makers must be supported to make things right when a system or product does not work as planned. In its response to the Scottish Government's consultation on the draft Heat in Buildings Strategy 2, the Energy Consumers Commission called for the creation of "a ring-fenced pot of funding to be used to correct installations of new technologies that have gone wrong". CAS agrees with the need for such a fund but to date no such monies have been made available, leaving landlords in the social rented sector facing unaffordable rectification costs and many consumers facing severe and ongoing detriment through no fault of their own. The National Public Energy Agency could serve a useful function in administering such a Fund on behalf of the Scottish Government, were the funding to be made available. The proposed Agency could also support local authorities and social landlords by offering expert advice about emerging or little-known technologies before installation (or signposting decision makers to the appropriate expertise), assist with procurement if needed, and help pursue redress if things go wrong. A West of Scotland CAB reports: Several clients came to CAB for assistance with fuel bills. Clients had had an infrared heating system installed by their housing association which the clients felt was not performing satisfactorily. The smart controls do not work, and the heat delivered is both inadequate for the needs of the property, and vastly more expensive than the system it replaced. One of the tenants reports winter weekly electricity costs of £59 against a heating demand that was projected to require an annualised average spend of just £16 per week, while another has reported costs more than 4 times projections. Severe issues with damp have developed due to properties being under-heated since the IR systems were installed, resulting in and/or exacerbating respiratory and mental health conditions, and damage both to tenants' property and the fabric of their home. In at least one case, penetrating dampness and defective or inappropriate cavity wall insulation appear to be exacerbating factors. Despite having been treated under the EESSH, the SAP rating of one of the properties was assessed in March 2019 as 20. This compares with the Scottish Government's 2020 target for the property type of a SAP rating of 623.

Question 5

Case Study and research details

Existing Homes Alliance Report

[Oversightbody_FINAL-REPORT_Nov18.pdf \(existinghomesalliancescotland.co.uk\)](#)
[Energy Efficient Scotland – Options for National Oversight Body | The Existing Homes Alliance | Scotland \(existinghomesalliancescotland.co.uk\)](#)

The Existing Homes Alliance report included a literature review covering global, European, UK and Scottish sources, and identified the various elements which will require oversight as part of a coherent energy efficiency and heat strategy. This is used to propose a detailed remit for a Scottish agency.

Proposed remit for a National Energy Agency

Enabling Frameworks National Energy Agency Role Immediate Tasks for the virtual agency
Statutory Targets

- Oversee and monitor progress against statutory targets on energy performance, heat decarbonisation, and as required targets related to fuel poverty and climate change
- Develop consistent systems for monitoring and evaluation across all delivery programmes which will measure progress on the ground.

Strategies

- Oversee delivery of the Heat in Buildings Strategy in its totality and relevant components of the Fuel Poverty Strategy, Climate Change Plan, and Energy Strategy

- Develop the Heat Decarbonisation Implementation Plan for Scotland (as per call for evidence)

Regulation

- Oversee enforcement of regulation and standards and implementation of guidance (building standards, historic buildings, common areas, planning).

- Consider best use of regulation, standards and guidance going forward.

- Develop communications and engagement to raise awareness of forthcoming regulation and make the most of the foreshadow period.

Institutional arrangements

Heat in Buildings Strategy

- Oversight of implementing agencies; budget requirements and spend

- Policy and programme development

- Review and revise strategies as required.

- Commissioning and evaluating programmes

- Develop the Heat Decarbonisation Implementation Plan for Scotland (as per call for evidence)

Support for local authorities

- Oversight of measures to support local authorities to deliver programmes: provision of data, procurement and best practice guidance, facilitation of networking and partnership working

- Develop a heat networks accelerator programme which provides practical and financial support for local authorities and partners to develop heat network proposals.

- Collation and publication of progress being made by local authorities including case studies to provide wider confidence that action is being taken

Stakeholder engagement

- Liaison with stakeholders (energy suppliers, delivery bodies, professional institutions, trade bodies, academia, research organisations, third sector)

- Ensure the national implementation plan includes strong partnership approaches to delivery

Supply chain

- Oversight of measures to improve skills, accreditation, quality assurance

- Co-ordinate programmes to stimulate the supply of skilled labour to match anticipated growth in demand working across the private, college, skills, business development and public sectors

Research

- Support research and development (e.g. technology, behaviour change, engagement, finance)

- Immediate research and dissemination of the impact of Warmer Homes Scotland and Area-based Schemes including the performance of renewable installations

- Liaison with the private finance sector to develop new models for funding e.g. heat as service, collective purchase

Public engagement, advice, and protection

- Oversight of programmes to raise awareness and engage building owners, occupiers, and managers.

- Maintaining a single national point of consumer engagement, advice and support that can refer into local schemes and support – as delivered by Home Energy Scotland

- Oversight of programmes to maintain and enhance trust, consumer rights and redress e.g. complaints procedures

- Undertake a comprehensive analysis of the customer journey for different households including maximising post-installation performance.

Co-ordinating mechanisms

Governmental co-ordination

Lead and facilitate co-ordination:

- Intra-government - Energy/Climate Change, Housing, Health, Education

- Inter-government - UK, Scotland, local authority, devolved nations

- Coordination of relevant regulatory regimes
- Coordination of monitoring and reporting to Ministers and Parliament
- Ensure that the National Delivery Plan for the Heat in Buildings Strategy includes coordination actions across all levels of government.

The study concludes that a statutory Executive Non-Departmental Public Body (NDPB) is best suited to play this oversight role, as it is established by statute, facilitates parliamentary and stakeholder input, creating conditions which allow for long-term consensus on its powers, functions, and long-term objectives over successive administrations. It gives the agency more stability than those agencies established by framework agreements alone such as Executive Agencies. Ultimate responsibility for the agency should lie with the relevant Minister, ensuring it has the political leadership to drive through change.

The report includes the following case studies which will be of interest – a short summary of findings is given below:

Danish Energy Agency: The DEA is indeed a highly credible agency both at home and internationally. Additionally, the Energy Agreements and the political consensus surrounding these, help ensure adequate funding is delivered by successive administrations. Danish energy policy is also described as focused on synergies and integration across the various policy areas and objectives contained with the Energy Agreement.

Sustainable Energy Authority of Ireland: the SEAI engages effectively with public and private sector partners; is able to lever in private funding; and has well-defined specialisms across generation, supply, and use. Its long-term nature has allowed it to build expertise and reputation and it appears to be able to effectively feed in to policy and independent in its decision making. In order to access funding and lead collaboration, it has clear legally defined functions, with a remit broad enough to adapt to changing circumstances.

Another example that might be of interest is ADEME, the French Agency for Ecological Transition which has a broad remit on engagement with citizens and businesses on the transition to a low carbon society. across a wide range of sectors engagement, providing advice and financial support.

Finally, we recommend consulting with FEDARENE, the European Federation of Agencies and Regions for Energy and Environment for best practice examples. This is a European network of energy agencies and local/regional authorities which focus on energy policy and delivery.

Our work on our proposals for a national energy company and Scottish energy development agency included engaging with representatives of the Danish Government, and so we are aware that the Scottish Government has engaged with the Danes too. However, unlike our own work, we see no evidence that the Scottish Government has listened to them and understood their experience. This is particularly evident in the content of this consultation. Specifically regarding the design of an effective Agency, we would point to the work of Andy Cumbers and Commonweal which has called for a Scottish Energy Agency, modelled in part, on the Danish Energy Agency. Danish Energy Agency (DEA) role in supporting long-term energy planning through scenario-based analysis to scale up cost-efficient transformation of energy systems, identify challenges for both short term and long term targets with an emphasis on open, shareable models.

We are a long standing member of the European Energy Network (EnR) a voluntary network of 24 national energy agencies from EU member states and neighbour countries. We have strong relationships with these agencies and as such, if it would be useful, we would be happy to send out a request for specific information to EnR members and/or arrange short calls for Scottish Government officials with relevant EnR members to see if they have any relevant insight that could help inform the design of the new Agency.

rewiringamerica.org has resources on this. In particular see their "county by county" factsheet on the benefits of electrification/decarbonisation. This could be a potential template for resources provided by this agency? <https://map.rewiringamerica.org/>

Viken County Norway case study [Energies | Free Full-Text | Moving Toward a Sustainable Energy System: A Case Study of Viken County of Norway \(mdpi.com\)](#)

Nordic housing report see in particular page 57
["Building Affordable Homes: Challenges and Solutions in the Nordic Region" \(diva-portal.org\)](#)

Case studies could include that of The Infrastructure Commission for Scotland and the delivery findings report on potential models for organisation and strategy. This includes examples from Australia and New Zealand and compares public-led bodies with independent models.

Reference to the 'Energising Advice' report: [Postcode lottery in clean energy advice for consumers, reveals charity report — MCS Charitable Foundation](#)

SFT provides an instructive case study of a public sector organisation set up with a delivery focus. SFT was established in 2008 as a company and an executive non-departmental public body of the Scottish Government. Its mission is to improve the efficiency and effectiveness of infrastructure investment in Scotland. It operates as a centre of infrastructure expertise, providing additional skills, resources and knowledge to public sector organisations, supporting them to plan, fund, deliver and manage their assets (primarily buildings, but also other infrastructure such as heat networks, and digital infrastructure). Such infrastructure promotes inclusive economic growth and societal benefits. Key elements of the corporate design of SFT that have promoted its effectiveness as a delivery-focused organisation, and which may therefore have relevance to the design of the Agency, include: - a clear organisational purpose – namely, "to improve the efficiency and effectiveness of infrastructure investment and use in Scotland by working collaboratively with public bodies and industry, leading to better value for money and providing the opportunity to maximise the investment in the fabric of Scotland and hence contribute to the Scottish Government's overarching purpose to increase inclusive economic growth". This purpose is reflected throughout the management and organisational structure: in SFT's corporate priorities (Place, Net Zero and Inclusive Economic Growth); its published 5-year Corporate Plan² ; annual published Business Plan³ ; individual business objectives and workstream priorities. The Corporate Plan is aligned with the Scottish Government's National Performance Framework ("NPF"), recognising the role that infrastructure plays in supporting the outcomes identified in the NPF⁴ , including addressing the climate emergency (announced in 2019) and economic recovery following Covid; - clear set of responsibilities – SFT works between policy and delivery across all sectors, geographies and stages of infrastructure life-cycle, collaborating with Scotland's public and private sectors

operational independence – SFT is established as a company, with separate legal entity, wholly owned by the Scottish Government. Its activity is overseen by the Minister for Business, Trade, Tourism and Enterprise. It operates under an approved 5 year Corporate Plan, and an annual Business Plan incorporating objectives discussed with Scottish Government sponsors. To be effective as a centre of expertise, SFT needs to be able to attract and retain specialist skills and experience across a range of disciplines. It has operational independence over its core budget, and is in a position to recruit at market rates from across the private and public sectors. It publishes an annual report covering financial and operational performance; and accountability for outcomes – SFT reports annually on the outcomes generated by the work it does, including economic, social and environmental. SFT does not deliver any outcomes itself, but by working in collaboration with other public and private sector organisations. In summary, SFT's clarity of purpose and remit, its organisational structure and governance arrangements, operational independence in relation to core budget, and control over how business objectives agreed with Scottish Government are delivered, each contribute to the effectiveness of the organisation in being able to work with others to deliver outcomes. In terms of limitations, whilst SFT uses its

available resources to influence and improve infrastructure delivery, it is constrained insofar as it does not hold capital budgets, and hence cannot directly control infrastructure investment decisions, which are retained by project sponsors. This is the nature of an organisation operating as a centre of expertise.

The nuclear regulatory bodies in the USA and Canada

The United Kingdom's conversion from 'town gas' to 'natural gas' between 1968 and 1976 involved converting around 40 million appliances for 14 million customers, mostly households. Working alongside 12 regional gas boards, the Government took a central coordinating role, with a nationalised Gas Council giving the state direct control of the required investment.

Sweden's transition to district heating is another example which has enabled high security of supply, low carbon dioxide emissions, and efficient use of available heat sources.

We would also suggest the Scottish Government consider approaches taken by Efficiency Maine Trust², which has seen high recent rates of heat pump uptake across the State of Maine [Efficiency Maine | Saving energy, reducing energy costs, and improving energy conservation](#)

Given the interdependency between Scottish Government ambitions and local authority delivery, that the energy agency be jointly developed and governed. Scottish Government should also be working closely with COSLA to ensure joint accountability to both Scottish Ministers and local government.

Question 7

Danish Energy Agency	<i>The DEA is indeed a highly credible agency both at home and internationally. Additionally, the Energy Agreements and the political consensus surrounding these, help ensure adequate funding is delivered by successive administrations. Danish energy policy is also described as focused on synergies and integration across the various policy areas and objectives contained with the Energy Agreement.</i>
Sustainable Energy Authority of Ireland	<i>the SEAI engages effectively with public and private sector partners; is able to lever in private funding; and has well-defined specialisms across generation, supply, and use. Its long-term nature has allowed it to build expertise and reputation and it appears to be able to effectively feed in to policy and independent in its decision making. In order to access funding and lead collaboration, it has clear legally defined functions, with a remit broad enough to adapt to changing circumstances.</i>
ADEME, the French Agency for Ecological Transition	Has a broad remit on engagement with citizens and businesses on the transition to a low carbon society. across a wide range of sectors engagement, providing advice and financial support.
FEDARENE, the Federation of Agencies and Regions for Energy and Environment	This is a European network of energy agencies and local/regional authorities which focus on energy policy and delivery.
Forsyningstilsynet	Who are the regulator in Denmark, and publish the heat tariffs for circa 250 DH networks where this data is annually provided by the District Heating companies and published. The DEA have prepared a number of important guidance documents and including the Technology Catalogue providing a standard set of costs of equipment and this is used in conjunction with their published socio-economic model to demonstrate that DH zones are the best available technology through the District Heating Assessment Tool.
Evaluations of LHEES Phase 1, 2 & 3 pilot projects	
Existing Homes Alliance	Explored many of the issues of relevant to this question in its Options for Oversight Arrangements for Energy Efficient Scotland report (2018)

Question 8

Effective	
Canada – nuclear power station approval	Speeds up everything
Danish Heat Supply Act	Effective This has facilitated a shift away for higher carbon heating systems whilst ensuring that there is no detriment to households
EU	No information specified
Europe	Experience across Europe is that municipal & community-led energy generation works best within a national network and that liberalisation of the network causes range of negative outcomes
Infrastructure Commission for Scotland reports	
RoHS (Restriction of Hazardous Substances)	
PAS 2035	To ensure best practice, although it has increased costs for improving building efficiency to the point it has had a negative impact on the necessary decarbonising programme
USA – nuclear power station approval	Speeds up everything
Vattenfall and Midlothian Council to plan and develop a district heating system in that area	They reflect that where heat networks are located on the cusp of several local authority boundaries there should be opportunities to coordinate across authorities in relation to planning, consenting, permitting and licensing of heat networks. This would ensure that district heating networks that cross boundaries are given the same standing by each local authority. For example, if a consent conveys utility powers on the network investor/operator then these powers would need to be recognised and accepted across the three authorities. The NPEA could take an oversight role in smoothing out these types of boundary issues, ensuring consistency across all local authority areas, and relating this to the LHEES for the area.
WEEE (Waste from electrical and electronic equipment)	
https://www.seai.ie/publications/	

Question 9

CAA (Civil Aviation Authority)	
FCA, Hungarian Energy & Public Utility Authority, NatureScot, Ofgem and Ofcom, Scottish Information Commissioner	Which have a regulatory function but also provide advice to the public
France	
Scandinavia	
Scottish Fire & Rescue Service	Provide local operational advice but also have enforcement and investigatory role in relation to fire safety
Scottish local authority services including Environmental health, planning, waste management etc Building standards, trading standards, environmental health, safety advisory groups	However, it was noted that it is an issue that a Building Standards Service has a conflict of interest where the Service acts as a Building Standards verifier and an Enforcing Authority
Scottish Water industry	Balance statutory powers for regulatory compliance alongside consumer advocacy role Delivers Ministerial objectives and carries out project delivery.
SEPA	<ul style="list-style-type: none"> • Have advisory & regulatory role • Balance statutory powers for regulatory compliance alongside consumer advocacy role • Delivers Ministerial objectives and carries out project delivery.
Zero Waste Scotland	Development only body, at arms length, independent of government but created and funded by it. Entirely publicly funded but with a non-regulatory remit and with a policy and strategy enabling purpose.

Question 10

Case Studies / Research	Details
BEIS (Business, Energy & Industrial Strategy) Dept	E.g. in its Energy Innovation Programmes
Climate Change Committee with its Carbon Budget reports	
COVID-driven examples (not specified)	
Existing Home Alliance Research	<p>Oversightbody FINAL-REPORT Nov18.pdf (existinghomesalliancescotland.co.uk)</p> <p>The EHA 2018 report noted that “Any agency set up to provide oversight is more likely to be effective if it, and its functions are established by statute” because:</p> <ul style="list-style-type: none"> • It allows for the organisation’s remit and functions to be debated and agreed in parliament and for stakeholder input which gives the Agency a firm foundation built on consensus. • It gives greater political and budgetary autonomy than some other organisational types and has greater flexibility in its operations. • It would have a stable and long-term future, as organisations established by statute are more difficult to wind up. <p>One potential limitation of a statutory body is that its functions could be defined too rigidly, which would limit its ability to adapt to changed circumstances. However, this limitation can be overcome by building in sufficient flexibility into the legislation (as was done for the Sustainable Energy Authority in Ireland). Such flexibility should be built into the legislatively defined functions of any such agency in Scotland as the net zero pathway is long and complicated and there will inevitably be a need for flexibility to continue to follow it over as yet unforeseen changes in technologies and circumstances.</p>
Highlands and Islands Enterprise	Has significant strategic experience in not only the creation of subsidiaries or new organisations with specific remits for delivery, but also pertaining to the governance around their design

Infrastructure Commission for Scotland	
OFGEM	Has powers in this area, albeit with clear division between the regulatory function and e-Serve.
Reference to the 'Energising Advice' report	Postcode lottery in clean energy advice for consumers, reveals charity report — MCS Charitable Foundation
Scottish Enterprise	Has experience in establishing and operating semi-independent delivery bodies which provide services within and beyond their geographic boundaries
Scottish Futures Trust	<p>An example of a public sector body tasked with programme delivery functions that is not a statutory body (it is established as a company wholly owned by the Scottish Government and an executive non-departmental public body) and describes the key elements of its structure and governance that underpin its effectiveness.</p> <p>SFT's clarity of purpose and remit, its organisational structure and governance arrangements, operational independence in relation to core budget, and control over how business objectives are achieved, each contribute to the effectiveness of the organisation in being able to work with others to deliver outcomes. In terms of limitations, whilst SFT uses its available resources to influence and improve infrastructure delivery, it is constrained insofar as it does not hold capital budgets, and hence cannot directly control infrastructure investment decisions, which are retained by project sponsors. This is the nature of an organisation operating as a centre of expertise. This illustrates that the establishment of the Agency on either a statutory or non-statutory footing, whilst an important consideration, is only one of a number of factors that will determine how effective the organisation is in practice.</p>
Scottish Government's Building Standards Division	Recent work in developing a nationwide regulatory and information hub
SEPA	A good Scottish example of a statutory public sector body that has programme delivery functions
Smart Energy GB	Has experience of taking consumers on a journey to accepting new technologies in their homes – can share knowledge on community engagement, partnerships programmes and insight

The Scottish Water industry	An example where a public provider operates alongside regulatory bodies / excellent case study
The Strategic Outline Case for Proposed Development of a National Delivery Mechanism report to Scottish Government (April 2019)	<p>Concluded that a statutory NDPB would be well-suited to the critical roles needed for an oversight body with the following strengths:</p> <ul style="list-style-type: none"> • It would provide capacity, support and expert advice to Local Authorities and the potential to acquire specialist technical resource to provide specific guidance • It provides a strong central focal point for national-scale marketing, communication, and education services with an ability to establish a clear central brand. • There is the potential to recruit specialists to support local level enforcement of regulations. • It would provide a clear lead to supply chain players for supporting development, training, and expansion. • It can recruit the right specialists to facilitate project finance (blending public and private investment) and to maintain an overview of the funding availability and allocations.
Trade Union-associated research	<p>A number of reports and resources which highlight the opportunities and challenges associated with public sector delivery (or lack of public sector delivery) of energy, retrofitting and green jobs in Scotland.</p> <p>STUC Energy Conference (2019) Policy Conferences - STUC</p> <p>STUC (2020) Renewable Jobs Crisis Covid-19.pdf (stuc.org.uk)</p> <p>STUC (2021) STUC Green Jobs.pdf</p> <p>STUC (2021) Our-Homes briefing.pdf (stuc.org.uk)</p> <p>UNISON (2021) ‘Getting to net zero in UK public services: The road to decarbonisation’ (unison.org.uk)</p> <p>UNISON (2019) ‘Power to the People’ Microsoft Word - UNISONenergypublicownershipreport0619.docx</p> <p>Commonweal (2019) The Common Home Plan - Common Weal</p> <p>Reid Foundation (2013) ‘Repossessing the Future’ Repossessing.pdf (reidfoundation.scot)</p>
UK-led Competitions and Markets Authority	
Zoning coordinators	Could be an example in future as they will fulfil the role of both the coordinator of zoning designations as well as delivering

	capital programmes (although not on a statutory footing for the latter).
--	--

Question 11

Evidence and Research	Details
The Existing Homes Alliance – “Options for oversight arrangements for Energy Efficient Scotland report” [2018]	Explored many issues of relevance to the question
Strategic Policy Developments and Targets	
Decarbonising Heat National Programme, established by Scottish Enterprise / decarbonisation of all energy use in buildings	To maximise the economic impact from Scottish Government heat and energy efficiency policies by working with company supply chains and other partners
Changes to the Climate Change Levy	E.g. costs, regulations, requirements
Partnering with other countries	E.g. Danish Embassy / DBDH
LHEES2	Assessing the effectiveness of the secondary legislation underpinning LHEES2
Housing 2040 commitments	Spell out relationship with the agency
Just Transition / fuel poverty outcomes	Prioritising the reduction of fuel poverty
Whole system view of home energy decarbonisation	Whether the agency should take a whole system view. For example, taking into account the relationship between home energy use and transport use (e.g. use of electricity from the home to charge an electric vehicle), and how water efficiency can help to reduce energy costs from hot water (as well as reducing wider water and energy system costs). To achieve Scotland’s 2045 net zero target it may not be that an Agency focused entirely on heat and energy efficiency is a sufficiently holistic function for the new body.
Synergies between mitigation and adaptation actions	The Climate Change Committee has recommended that ‘the Scottish Government must also take actions to

	improve Scotland's resilience to climate change by integrating adaptation into all Government policy'. In this context perhaps the Scottish Government should also be aware of the potential links between climate change mitigation and climate change adaptation activities in the buildings sector. Should, for example, the agency be responsible for or able to commission adaptation programmes in the buildings sector?
The interaction between the proposed energy standards as outlined within the Scottish Building Standards consultation and the proposed 2024 new building heat standard	Suggested that the Scottish Government review this: the primary concern is that once zero emission heating (at point of use) becomes mandatory in 2024, housebuilders will effectively have no option but to transition to air source heat pumps and solar will be lost from new homes.
Permitted development rights & building warrants	The current, outdated 50kW Permitted Development threshold is considerably reducing opportunities to deploy solar power in Scotland. Commercial-scale rooftop solar projects in England and Wales do not typically require full planning permission.
Wider industry / sector-led developments	
New technologies (e.g. carbon capture / storage, heating and building fabrics, invention of lower net zero / reduced pollutant / environmentally friendly materials / insulation, smart meters, hydrogen alternatives)	Potential to maximise efficiency gains and further reduce emissions.
Unforeseen energy market developments (e.g. significant rise in energy costs due to volatile prices, changes to energy markets / pricing)	Show the benefits / cost effectiveness of zero carbon alternatives
Energy shift to a decentralised model	Query about having a national one-size fits all approach
Linkages to microgeneration of energy in or on buildings	
Disrepair issues / widespread disrepair in housing stock	Must be tackled prior to retrofit and zero emission heating. Queries as to agency role in tackling disrepair.

Directing the upgrading or replacement of existing district heating schemes fueled by non-renewable energy sources	Query as to agency role, and whether data on these has been collected, and how data will be used to direct this transition
Heat networks	Heat networks present a proven option to provide low carbon heat to a large number of buildings without putting the burden of upfront cost and decision making on the individual. The economics and technical feasibility have been proven for decades in other countries such as Denmark, Austria and Germany.

Question 13

Local authority working with Home Energy Scotland and CAS and other local services and partners	<p>This ensured services provided complimented and supported one another with the common aim of tackling fuel poverty.</p> <p>This approach has seen consistently high referral rates to both energy advice and energy related financial support from social housing providers. In addition, understanding of energy and fuel poverty issues for personnel within housing services has improved through dedicated training from these partners, enabling further support to tenants.</p>
Area-based schemes, the LHEES pilots, and the community groups working on energy efficiency in partnership with Home Energy Scotland (many of which were funded through the Climate Challenge Fund) – for example Cosy Kingdom in Fife, South Seeds in Glasgow and LEAP in Lochwinnoch.	
Establishing and operating semi-independent delivery bodies which provide services within and beyond our geographic boundaries.	These examples demonstrate that it is possible for an existing Government organisation to successfully manage major programmes of delivery.
Scottish Water working in partnership with SG	Maintains high quality water supplies, tackles flooding etc

<p>Changeworks works in partnership with Local Authorities, EST, Scottish Government, the supply chain and social housing landlords for the delivery of EES:ABS schemes, decarbonisation funds and LHEES pilots</p>	
<p>Transport Scotland's work to decarbonise transport in Scotland</p>	<p>Work has touched on a wide variety of different areas, spanning across the transport sector. Examples include:</p> <ul style="list-style-type: none"> • Interest free loan funding for businesses and consumers to purchase electric vehicles and grants to allow them to install appropriate charging infrastructure. • Advice and support for businesses and local authorities to understand how best to electrify their fleets. • Free eBike trials available to organisations, which specifically targeted key workers during the covid-19 pandemic • Grants and interest free loans for businesses, consumers, third sector organisations and public bodies to purchase eBikes, adapted cycles and eCargo Bikes. • A pilot project offering funding specifically targeted at community transport organisations for the purchase of electric vehicles and installation of charge points. • Specialist support for the taxi sector to encourage them to move to less polluting vehicles, along with grant support in line with the Low Emission Zones across cities in Scotland.
<p>Energy Saving Trust as part of Active Travel Delivery Partnership (ATDP) including a range of organisations who are involved with delivering active travel on behalf of Transport Scotland</p>	<p>The group meets annually with the Cabinet Secretary and works together and with Transport Scotland to ensure a coherent and joined up approach across programmes and also enables best practice and ideas to be shared.</p>
<p>mPower research project looking at best practice examples in municipal energy across more</p>	<p>Home Page - mPOWER (municipalpower.org)</p>

than 100 public authorities across Europe -	
National investment banks in various countries	By focusing on missions and clear targeting of support, have enabled genuinely inclusive growth. Strict conditionality and targeting of financial support is crucial, not simply address market failures or supporting vested interests.
Smart Energy GB	Refer to partnership details
Midlothian Council and Vattenfall (who have shared values)	In order to deliver their net zero target, and to enable their energy from waste partnership to utilise heat in nearby development. The shareholders in that partnership have wider obligations to work together on decarbonisation across the authority and this partnership is in its early stages but demonstrating that these areas of focus on district heating and wider decarbonisation can be achieved. The major success of this partnership is not through risk sharing, but through overall risk reduction. Where both parties contribute their skillset and positions to reduce the overall risk of investment.
National Parks Agencies	An example of a public body coordinating a broader delivery landscape to achieve a shared goal, which represent many different organisations within a defined geographical area, while also having regulatory powers.
NatureScot	Has powers over national park areas in terms of their planning and management. The NPEA need similar but more geographically extensive powers over the coordination, enforcement and communication of low carbon heat solutions.
Scottish Government investment in collaboration such as the Scottish Cities Alliance	Track record of unlocking success through this partnership would pave the way for a more substantive partnership to coordinate delivery.
Local area-based schemes, energy efficiency programmes; eg in areas including the Western Isles (Council and Tighean Innse Gall), Fife (Council and the Cosy Kingdom partnership), Argyll and Bute (Council and AliEnergy).	Brought about many productive and valuable local partnerships been local authorities.

Question 18

Examples and Insights
As highlighted previously, the gas transition in 1970s was hugely successful. The approach initially involved regional gas boards, before these were merged into British Gas. The lessons that can be drawn include the need for clear public sector vision and leadership, planning, financial resource, investment in the workforce, and engagement with communities through effective local democracy.
The Oil & Gas Authority (which is a GovCo) was initially part of a UK Gov Dept before vesting.
In professional engineering, the creation of prototypes, when feasible, is a very important strategy. Using an interim delivery body would not be exactly a prototype but would represent system planning for the structure of the Agency - and therefore would be a very appropriate strategy. The interim Agency would get to work on achieving the goals but, special attention would be given to structure and modus operandi at the formative stages.
This question moves the terminology from “virtual” to “interim”. A more nuanced, and likely effective, approach would be to map out how the functions of the agency could be added and expanded over time, which could be illustrated in a Gantt chart to enable understanding and discussion.

Question 19

Examples and lessons to be learnt
As highlighted previously, the gas transition in 1970s was hugely successful. The approach initially involved regional gas boards, before these were merged into British Gas. The lessons that can be drawn include the need for clear public sector vision and leadership, planning, financial resource, investment in the workforce, and engagement with communities through effective local democracy.
The Existing Homes Alliance explored many of the issues of relevance to this question in its Options for oversight arrangements for Energy Efficient Scotland report [2018]
We have already cited the example of the Danish Energy Agency in delivering transformational change in decarbonising the Danish economy.
Possibly the most relevant example is the changes the GB electricity system that resulted from the 1926 Electricity Supplies Act as discussed in Section 4. The introduction of system planning transformed the management of the electricity system to become a model of best practice.
Consideration should perhaps be given to the approach taken by the Scottish Government within the housing sector, with a new requirement for local authorities to

work in partnership with local housing, health and homeless partners to develop a Rapid Rehousing Transition Plan in 2019. Although not statutory, the new five year plans have required significant changes in the way services are delivered locally, how they are funded and new reporting requirements. Changes in remit and structure internally within the Scottish Government were also required to facilitate this shift.

SFT's involvement in the development of:

i) an outcome-based funding model for the Learning Estate Investment Programme; and
ii) the Net Zero Public Sector Buildings Standard, provide examples of how innovative approaches to the funding and delivery of public sector assets can result in a shift in the delivery landscape.

Learning Estate Investment Programme (LEIP)

In September 2019, Scottish Government & COSLA published their new Learning Estate Strategy, announced in tandem with the first phase of projects to benefit from funding through LEIP. To support the delivery of LEIP, SFT developed an outcomes-based funding approach. The approach, which was developed in conjunction with Scottish Government, COSLA and local authority representative groups, sees programme funding dependent on achieving a number of outcomes:

- new schools are built to a high quality and maintained in good condition for at least 25 years;
- in building the schools, construction firms create and support new jobs;
- connectivity targets are achieved to support digitally enabled learning and teaching, and advancements in technology; and
- ambitious energy efficiency targets are achieved over 25 years.

SFT used its technical and financial expertise to ensure that the outcomes and objectives sought are challenging but deliverable, particularly the in-use energy targets. SFT worked with the initial projects both directly and through collaborative workshops with local authorities. This helped to secure local authority buy-in at all levels to the outcomes-based funding model, and how the model could be used in the context of operational energy targets to improve building performance. By providing clarity around the outcomes to be delivered, a step change in approach has been achieved. The outcomes and objectives of the programme and funding model have now been agreed, providing a pipeline of work to industry exceeding £1bn.

Net Zero Public Sector Buildings Standard

SFT is now building on this experience in the use of operational energy targets to improve the performance of public buildings further. When planning a new building or refurbishing an existing property, during the design phase the building's energy performance is predicted. Often, when the building becomes operational, the actual energy performance is considerably worse than was forecast at the design stage. This is known as the 'energy performance gap'. SFT used its infrastructure, construction and low carbon expertise to set up a working group to tackle the issue. As this work developed, the initial concept grew and became known as the Standard. Recognising its contribution to supporting and delivering the net zero agenda, it was established as an action in the Scottish Government's 2019-20 Programme for Government. To establish the Standard, a Steering Group was formed by SFT, made up of representatives from across the public sector in Scotland, including Health Facilities Scotland, Zero Waste Scotland, Building Standards Division, the Scottish Funding Council and Chaired by the Scottish Government's Energy and Climate Change Directorate. The Steering Group's role was to

provide governance, with the scope of the Standard expanded to include all building-related whole-life carbon, inclusive net zero economy outcomes as well as other indoor and outdoor environmental aspects. In March 2021, the Standard was adopted by the Scottish Government as the Net Zero Public Sector Buildings Standard - the world's first net zero standard developed and owned by a national government. The aim of the Standard is to provide the public sector with a framework to achieve exceptional energy and environmental performance in their new build and major refurbishment construction projects. It brings the Scottish Government's and other public bodies' own commitments to net zero deadlines into their projects' requirements, whilst also achieving excellence in other areas such as indoor environmental quality, biodiversity and construction embodied carbon. But more than that, the Standard will ensure the right buildings are built in the right place, that the opportunities for collaboration are maximised across the public sector and that these buildings also excel functionally, providing superb spaces for the public sector.

LEIP and the Net Zero Public Sector Buildings Standard are ongoing initiatives. Both demonstrate the benefits not just of innovation in the infrastructure delivery landscape, but also of a collaborative and multi-disciplinary approach, based on sustained engagement with project partners, external stakeholders and on the development of long-term, trusted relationships. Further details of these initiatives are available at SFT's outcomes website

Question 20

Key step / Considerations

EHA has published research in this area which will be of interest: The right frame of mind: Engagement for domestic energy efficiency in Scotland (2019)

How to access background or source data

The data collected for this <statistical bulletin / social research publication>:

- are available in more detail through Scottish Neighbourhood Statistics
- are available via an alternative route <specify or delete this text>
- may be made available on request, subject to consideration of legal and ethical factors. Please contact <email address> for further information.
- cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.



Scottish Government
Riaghaltas na h-Alba
gov.scot

© Crown copyright 2022

OGL

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

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

This publication is available at www.gov.scot

Any enquiries regarding this publication should be sent to us at

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

ISBN: 978-1-80435-394-3 (web only)

Published by The Scottish Government, May 2022

Produced for The Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA
PPDAS1078702 (05/22)

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