Heat in Buildings Strategy Consultation – Questions asked during webinars.

Scottish Government Heat Strategy Unit 24 March 2021 heatinbuildings@gov.scot

The following questions were submitted during online webinars to discuss the draft Heat in Buildings Strategy, between 8th and 18th March.

A 2045 pathway for homes and buildings in Scotland

What does the Scottish Government include as low and zero emissions heating, and what are "low or no regret areas"?

By low and zero emissions heating systems we currently mean systems that have zero direct greenhouse gas emissions such as individual electric heat pumps and connection to heat networks, or electric systems such as storage heaters, and systems that have very low emissions such as those that use hydrogen.

Buildings connected to existing heat networks, powered using natural gas, will be considered to be future proofed and net zero ready. Heat networks will need to decarbonise by 2040-45 and new heat networks consented from 2023 will need to use heat from low or zero emissions sources.

Bioenergy, for example in the form of biomass, bio-heating oil, bio-propane, where they come from net zero compatible and sustainable sources, are included as low emissions systems, but likely to have a more limited role. This list of low and zero emissions heating systems will be kept under review.

To achieve our 2030 emissions reduction targets, alongside energy efficiency improvements and blending green gas into the gas system, over a million homes will need to switch from fossil fuel boilers to a zero emissions heating system. Achieving this will require accelerated deployment of these heating systems, and the draft Strategy sets out (page 24) which technologies in which locations could be deployed in the near term with the lowest potential for regret. That is, where installation is most likely to be compatible with the lowest cost pathway to delivering the 2030 targets. These are:

- 1. Energy efficiency across the building stock
- 2. Heat pumps in buildings off the gas network which currently use high carbon heating fuels
- 3. Heat pumps in certain buildings currently using mains gas, particularly in areas least likely to receive a mains hydrogen supply in the future and buildings for which initial assessments suggest heat pumps are likely to be cost effective in the short-term.
- 4. Low and zero emissions heat networks (district heating and communal heating systems) in areas deemed suitable.

What role does the draft Heat in Buildings Strategy envisage hydrogen playing in the decarbonisation of heat, and over what timescale?

There is no single technology that will deliver zero emissions heating in Scotland. The most cost-effective pathway will require several different approaches.

Constraints in the near-term availability of hydrogen, coupled with a need to establish the standards and safe systems for its use, repurpose the gas network and replace household appliances, means that hydrogen is unlikely to play a large part in reducing emissions before 2030. In the near term, the draft Strategy sets out the need to accelerate deployment of key low and zero emissions heating solutions that available today: heat pumps and heat networks. Meeting the 2030 emissions targets will require over a million homes converting to zero emissions heating.

Longer term, hydrogen may have an important role to play and our <u>Hydrogen Policy</u> <u>Statement</u> and <u>Hydrogen Assessment</u>, published in December, set out our ambitions in hydrogen deployment in Scotland. We will take forward work to understand the potential for hydrogen for heat, including identifying those buildings and areas where hydrogen is least and most likely to be the best option for delivering our targets.

What role does the draft Strategy propose for onsite generation, including solar thermal?

Small-scale renewable generation and storage, including solar thermal and photovoltaic (PVs), thermal and battery storage could potentially provide a source of energy and flexibility for consumers, helping to reduce bills and tackle fuel poverty. Warmer Homes Scotland and our Area Based Schemes have supported a number of projects which have set out to demonstrate the role of domestic scale renewable generation and storage in alleviating fuel poverty. During 2021-22 we will evaluate these projects to understand further the cost-effectiveness of this system-based approach. If shown to be cost-effective and capable of delivering both fuel poverty and emissions reduction objectives we will consider, if appropriate and affordable within available budgets, adjusting our delivery programmes so that they can offer a wider set of micro-renewable and storage measures to be deployed in combination with energy efficiency and zero emissions heating measures.

Scotland's building stock

Retrofitting can be even more expensive/challenging on listed buildings; how does the draft Strategy propose to deal with this?

We will work with stakeholders, including Historic Environment Scotland, to develop approaches and solutions to transition Scotland's historic buildings to low and zero emissions heating while respecting and preserving the special characteristics of our buildings and places.

Energy efficiency

Can we get clearer guidance on the right level of energy efficiency for different building archetypes?

We know that a minimum level of energy efficiency is an important prerequisite and is needed to underpin the rollout of zero emissions heating across all technology scenarios. To better understand the role of energy efficiency levels in unlocking the deployment of zero emissions heating systems in different types of building stock, we will undertake further modelling and analysis which will inform future delivery and regulatory programmes. This will be underpinned by reforms to Energy Performance Certificates, and their underpinning methodologies, taking into account our fuel poverty and climate objectives, as set out in Chapter 8.

Is there an assessment tool for non-domestic buildings?

The Simplified Building Energy Model (SBEM) or approved Dynamic Simulation Modelling (DSM) software can be used to calculate energy performance. The Scottish Government also has a simple tool for reporting operational energy use (ORCalc) and the production of Display Energy Certificates, currently used as an optional process for larger buildings subject to 2016 regulations made under section 63 of our Climate Change Act. We are also engaging with UK Government on their proposals for further assessment tools.

<u>People</u>

What approach does the draft Strategy propose for public engagement?

We will develop and implement a public engagement strategy and action plan for heat decarbonisation. We will build on the objectives and guiding principles of our <u>draft Public Engagement Strategy for Climate Change</u>, to develop and begin implementing a bespoke public engagement strategy for heat in buildings, with a focus on:

- raising the profile of energy efficiency and zero emissions heating options so that people are aware of the benefits and begin to see them as a positive choice;
- enabling people to actively participate in shaping the development of Scottish Government policy and incentives as well as local level heat and energy efficiency planning; and
- promoting the support that is on offer from both the Scottish and UK governments to maximise take up over the 5 years of this strategy.

More detail can be found in chapter 3 of the draft Strategy.

What does a "just transition" mean in relation to heat?

The transition to net zero emissions will transform our society and economy, therefore the manner of our transition will be crucial. If we plan and prepare, building consensus about our collective future through dialogue and engagement, then we can ensure Scotland benefits from the opportunities of net zero. The transition can realise green jobs, a better environment and a healthy economy that supports our wellbeing. Failure to plan risks abrupt shifts, the loss of key industries and jobs, and deepening inequalities. This is why Scotland has committed to a just transition to net zero.

A just transition puts people, communities and places at the heart of our approach to climate change action. It ensures we work together in order to capture opportunities, tackle existing inequalities and exclusion, whilst anticipating and mitigating risks to those worst impacted so no one is left behind. As the pace of the transformation increases, the need for a collaborative just transition becomes ever more important.

This approach is at the heart of Scotland's ambitions to move to a wellbeing economy that prioritises society's wellbeing as the core aim of our economy.

The draft Strategy commits to a new public engagement strategy, focused on raising the profile of zero emissions heat and energy efficiency, enabling people to actively participate in decision making, and promoting available support. The consultation invites views on how this can be made most effective.

As long as the heating system is low or zero emissions, will consumers continue to be able to choose a solution that works for them?

We want individuals and organisations to see energy efficiency and low and zero emissions heating as a positive choice, know what the options are, and know where they can get help and trusted advice.

Overall, we recognise some properties may be more constrained in terms of technology options available, limited by location and property type, proximity to the gas network, impact on the fabric of historic buildings, space constraint s, and capacity of the electricity grid. As out lined above there are a range of technology solutions to reducing emissions from our homes and buildings. A number of factors will affect which buildings would be most suitable for any given technology, including the building's characteristics and the local network infrastructure that it has or will have available (electricity, gas and heat) as well as the likelihood that an area may have access to low carbon or green hydrogen in the future.

What is the Scottish Government's proposed approach to delivering fuel poverty and zero emissions commitments simultaneously?

As we transform our homes and buildings over the next two decades it will be imperative that we do so in a way that continues to help eradicate fuel poverty and protect our most vulnerable citizens. We will continue to build the evidence base on the interactions between our fuel poverty and climate commitments, and apply that knowledge to our policy design and to our programmes, mitigating any risk of unintended consequences, and tracking progress and learning by doing in order to adjust immediately where unintended consequences nevertheless arise.

As we further develop each of the actions set out in this strategy we will undertake an assessment of the impact they will have on fuel poverty. In the final version of this Strategy, we will publish a set of guiding principles to underpin our commitment to no one being left behind, ensuring our approach neither increases the fuel poverty rate nor increases the depth of existing fuel poverty.

In the nearer term in order to protect those in fuel poverty, we will reshape and target our energy efficiency and heat programmes. We will continue to use our delivery programmes to target support to fuel poor households, to maximise the number of households in fuel poverty achieving a level of energy efficiency equivalent to EPC C by 2030 and EPC B by 2040.

<u>Place</u>

How will Local Heat and Energy Efficiency Strategies (LHEES) be developed and what role will public engagement play?

The consultation document sets out our approach to LHEES on pages 52-55. The development of Local Heat and Energy Efficiency Strategies and Delivery Plans will be an opportunity to consider both local community and wider national infrastructure issues. We want LHEES to form the basis for local public engagement and involvement in decision making at the local level, and to be developed through extensive engagement with local communities. We will work with local authorities to ensure that the development of LHEES is appropriately resourced, including the important engagement aspects of this approach.

How will the strategy respond to the distinct challenges and opportunities for energy efficiency and zero emissions heat in different places?

As we transform our homes and buildings by making them more energy efficient and installing low and zero emissions heating, we will need to consider our local surroundings and resources, whether in dense urban or suburban areas or smaller rural towns and villages or in our remote and island communities. As such, the transition to zero emissions buildings may look different in different communities and require approaches tailored to place. Local Heat and Energy Efficiency Strategies will form a crucial part of this, providing a foundation for locally-tailored plans and delivery.

We propose to continue delivery of energy efficiency investment to support fuel poor households in order to make homes warmer and cheaper to heat and to reduce the impact of any increased running costs from zero emissions systems, including recognising the distinct challenges faced by island, rural and remote communities and seek to improve targeting so that we can reach more households in fuel poverty.

We welcome views as to how we can support place-based deployment of zero emissions heat within our delivery programmes through this consultation.

How will community groups be used and enabled to help engage individuals?

We believe that communities, large and small, will play an important role in driving forward the transformation of the nation's building stock, not only working to solve local energy challenges but being powerful advocates for local change, motivating volunteers and local champions to take action. Communities can play an important role in planning, identifying and delivering projects on heat and energy efficiency; demonstrating technologies and approaches to a wider audience. The consultation seeks views on the roles community organisations could play in supporting the heat transition.

Investment and market framework

What support does Scottish Government make available for low and zero emissions heat?

The Scottish Government provides information and financial support through various programmes set out below

Domestic	Home Energy Sectland	Home Energy Scotland: Loans
	Home Energy Scotland Free independent advice	and Cashback
support	and referral scheme	
	and referral scheme	Interest free loan (up to £17,500
		for up to two home renewables
		system, up to £6,000 for an
		energy storage system and up to
		£15,000 for energy efficiency
		measures) with 40% cashback
		grant for energy efficiency (up to
		£6,000) and 75% cashback for
		renewable heating system (up to
	Area Based Schemes	£7,500) Warmer Homes Scotland
	Fuel poverty scheme deliveri	Fuel poverty scheme delivering
	ng energy efficiency,	heating improvements and
	leveraging ECO and private i	energy efficiency. Recent grant
	nvestment. Particularly effective for mixed tenure	level extension to support heat
		pumps.
Business	multi-occupancy buildings.	Energy Efficiency Business
	Business Support Service	Support SME Loan and
support	Free advice and support to	Cashback
	SMEs for energy efficiency	Low-cost loan and cashback for
	and heat decarbonisation	energy efficiency and renewable
		heat
Communities	Community and	Public Sector Non-Domestic
and public	Renewable Energy	Energy Efficiency Framework
sector	Scheme (CARES)	Enarmy Darformance Contract
		Energy Performance Contract
	Advice and funding support	Framework for larger public
	Advice and funding support for renewable energy	Framework for larger public sector projects
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure	Framework for larger public sector projects District Heating Loan Fund
	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social landlords, SMEs and ESCOs
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from advice to financial support	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from advice to financial support for low carbon projects,	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social landlords, SMEs and ESCOs
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from advice to financial support for low carbon projects, including heat network	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social landlords, SMEs and ESCOs
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from advice to financial support for low carbon projects, including heat network capital support and social	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social landlords, SMEs and ESCOs
Multi-sector	Advice and funding support for renewable energy Low Carbon Infrastructure Transition Programme Range of support from advice to financial support for low carbon projects, including heat network	Framework for larger public sector projects District Heating Loan Fund Open to local authorities, social landlords, SMEs and ESCOs

How is the Scottish Government supporting the development of heat networks?

Heat networks will play an important role in the heat transition. The Heat Networks (Scotland) Bill that was passed by the Scottish Parliament in February 2021 will build confidence among consumers and attract investment for development. To achieve that the Bill introduces a regulatory framework that includes amongst other things heat network licensing, consents, zones and permits. A new regulatory regime for heat networks will be operational by the end of 2023.

New heat networks will need to be powered using renewables or other low or zero emissions sources of heat. From 2023 we will only consent renewable and low or zero emissions heat networks. We will also provide support to existing schemes by working in partnership with the sector to develop Decarbonisation Plans and to trial their implementation.

It is important that we learn from international experience of the role of Energy from Waste in supplying low emission heat via heat networks. In the <u>Fourth National</u> <u>Planning Framework: position statement</u> we have set out a potential planning policy to encourage applications for energy from waste facilities to provide a connection to a heat network. We will also consult in 2021-2022 on further regulatory or support measures to increase the utilisation of waste or surplus heat through heat networks.

We will publish a Heat Network Investment Prospectus next financial year that will demonstrate the size and location of heat network opportunities across Scotland, as well as information on the decarbonisation requirements of existing networks in Scotland.

Additional financial support will also play a role in deployment of heat networks. Schemes like the Low Carbon Infrastructure Transition Programme (LCITP) which since its launch in 2015, has awarded over £50 million of funding to low carbon demonstration projects. We are <u>seeking input from stakeholders to help design and</u> <u>develop a successor programme to LCITP</u>. Alongside public sector funding, we must mobilise and work in collaboration with the private sector to leverage the scale of investment needed and to develop innovative and new approaches to financing heat decarbonisation and energy efficiency measures.

More details of our approach to heat networks can be found on pages 70-76 of the draft Strategy and we welcome stakeholder feedback.

What is the role of energy prices in incentivising a switch to zero emissions heat for a greater number of buildings?

As we accelerate deployment of a wider range of heating systems, it is important that the market evolves with it so as not to disincentivise households from switching to zero emissions systems and to reduce the risk of tension between our climate change and fuel poverty targets. The current imbalance of gas and electricity costs is incompatible with our net zero objectives and acts to disincentivise take up of zero emissions heating technologies. We agree with the recommendation, from the UK's Climate Change Committee, for action to address this imbalance.

We do not have the levers to control energy prices, such as reforming the energy market or restructuring the various levies and charges that are added to energy bills. These powers remain reserved to the UK Government. We welcome the UK Government 's commitment, in its recent Energy White Paper, to publish a call for evidence this year on affordability and fairness. We have commissioned research to understand whether rebalancing of levies and charges between electricity and gas supplies might impact the deployment of low and zero emissions heat in both domestic and nondomestic settings in Scotland.

We will work with energy retailers to ensure households have access to the right tariffs, that tariffs tailored to zero emissions heating systems are available, and continue to press for customers with pre-payment meters to access similar tariffs to direct debit customers.

Is there a long-term replacement for the RHI payments?

The RHI scheme and its successors are UK Government policies. Details of the UK Government's approach can be found in their <u>Future Support for Low Carbon Heat</u> <u>Consultation Response</u>.

Has Scottish Government considered the interaction with the Business Rates System in the context of the liability for business rates increasing should the tone of rent levels rise for efficient buildings

The interaction between the Business Rates Systems and rent levels is important. Analysis of any interaction will be undertaken as part of work to investigate the potential use of local taxes, which will be subject to extensive consultation as set out in the draft Heat in Buildings Strategy.

How can the overall cost (taxes, utility bills, home conversion and maintenance) of the transition be minimised, and how are different approaches, such as zero emissions supply and energy efficiency, best balanced?

Different low and zero emissions heat options locate costs at different points along the energy chain. In broad terms, hydrogen shows a relative concentration of costs in the production of hydrogen (i.e. upstream), heat networks in distribution infrastructure, and heat pumps in building-level equipment. In part, minimising the costs of the heat transition means deploying the lowest cost combination of technologies. Alongside achieving the least cost configuration of technologies, economies of scale and coordination will be important for keeping whole system lifecycle costs as low as possible.

Local Heat & Energy Efficiency Strategies will have an important role in ensuring that the most optimal solution is identified for an area, and also helping to manage coordinating and realise economies of scale on the ground.

We welcome views on our approach to heat decarbonisation pathways to be submitted through the consultation.

Developing a new regulatory framework

To what extent does the zero or very low emissions standard for new heating systems in existing homes rely on new powers from the UK Government?

We know that introducing regulation to require changes to the way in which our buildings are heated will impact on the current operation of the heating market, which is currently dominated by fossil fuel (high emission) heating systems. Whilst regulating for emissions, heat and energy efficiency is a largely devolved matter, the regulation of energy markets, fossil fuels, consumer protection and competition are reserved to the UK Government. As such, we will need to develop our proposals for regulation in conversation with the UK Government, to ensure that the Scottish Government has the powers needed, and to ensure that the UK Government takes necessary action in reserved areas. Given that the UK Government faces the same challenge to decarbonise heat in buildings that we face, we will work with them to enable us to introduce regulation for zero emissions heating across the entire building stock from 2025 at the latest.

How will the all-tenure zero emissions heat standard be implemented?

Chapter 8 sets out our approach to zero emissions heat standards. Various aspects of these regulations are yet to be developed, and will be subject to extensive stakeholder engagement and consultation. We welcome views at this stage on how best an all-tenure standard can be implemented and, more broadly, on the approach to regulation we have set out in the document.

How can Public buildings be compelled to upgrade if no refurbishment is planned or if this is avoided to get round the regulations?

The public sector must demonstrate its commitment to transforming Scotland's buildings by taking early and sustained action to decarbonise the public sector estate and improve the energy performance of all public buildings. Over the next Parliament, we will invest at least £95 million in the Scottish public sector estate to improve and reduce energy use and install zero emissions heating systems. We propose to bring forward a new Scottish Green Public Sector Estate Scheme during 2021 - which will draw together capital grants, loans, and other revenue funding mechanisms and incorporate and build upon our existing Non-Domestic Energy Efficiency Framework - as the main government-led capital funding mechanism to support leadership for heat decarbonisation right across the public sector.

For new public sector buildings, we have developed the Net Zero Carbon Public Buildings Standard, working with the Scottish Futures Trust and other public sector partners. This new standard will be progressively applied to new build and major refurbishment projects across the public sector from early 2021. The voluntary Standard has been adopted by Scottish Ministers and we are working with our wider public sector partners to support application of the Standard to projects, helping public sector bodies to meet their commitments to reach net zero. We will publish the Standard in early 2021. This will feed into work to introduce regulation and mandatory standards across the non-domestic sector more widely from 2023-25 onwards.

Has cost-benefit assessment been done to support early compliance with the 2024 new build standards for new affordable housing investment?

We are evaluating a number of affordable housing projects that feature zero emissions heating through our Affordable Housing Supply Programme. The findings from the evaluation, which consider both capital and operational costs, as well as the impacts on tenants, will make an important contribution to the development of the 2024 Standard. In addition, we are in the process of undertaking a Business and Regulatory Impact Assessment, which considers the potential costs, benefits and risks associated with the introduction of the New Build Heat Standard. This will be published upon completion.

How important do you think it is that Building Standards stay ahead of change in systems and technologies as it has historically been slow to adapt to new technologies.

Building standards, as national regulations, have to reflect solutions that are practical and deliverable at scale and periodic review considers how change and innovation can support improved standards. It is recognised that with building standards or other regulations seeking to drive improvement in the existing stock, there can be limits to the extent such solutions can be represented within the UK calculation methodologies (SAP and SBEM). Accordingly, the continued, robust development of these methodologies remains important.

What are the timescales regulations to set standards for zero emissions heating and energy efficiency?

Energy efficiency and zero emissions heating investments are long term decisions that require certainty and clear end-points. Regulations will help provide that certainty and also help build supply chain confidence to invest in training, skills and new projects. In this way, regulation can help to lower the costs of the transition Chapter 8 of the draft Strategy sets out the detail of our approach to regulations.

We are currently developing regulations which will require new buildings consented from 2024 to use zero emissions heating (and cooling). This will initially apply to new homes - with similar requirements to be phased-in from 2024 for new non-domestic buildings. In parallel, we are reviewing the energy efficiency standards set by building regulations to ensure that Scotland's future buildings are highly energy efficient, in line with our wider net zero ambitions. We consulted on our initial <u>Scoping Consultation on the 2024 New Build Heat Standard</u> from December 2020 to March 2021, and we are welcoming evidence and stakeholder input as we look to further develop the Standard.

We are proposing our regulatory framework for existing buildings needs to go further than previously set out in the 2018 Energy Efficient Scotland Route Map. To this end we are proposing to:

- reform the assessment process and metrics underpinning Energy Performance Certificates
- address both heat decarbonisation and energy efficiency, where previously our regulatory approach centred on energy efficiency only
- increase clarity and pace by regulating to ensure that all buildings across all tenures achieve a good level of energy efficiency by 2035 and use zero emissions heating (and cooling) by 2045, with more ambitious delivery for households in fuel poverty.

We are proposing that regulations addressing the energy efficiency and heat decarbonisation of all existing buildings would be in force by 2025, subject to having the powers needed to introduce these. Bringing the proposed backstop date for compliance with energy efficiency regulations forward by five years to 2035 reflects a balance between the need to accelerate progress in response to the global climate emergency and new net zero targets, with the need to ensure supply chains and delivery programmes can scale up at a rate that does not risk excessive cost or poor

quality installations. Through the consultation we invite views on the regulatory approach (further detailed in chapter 8 of the draft Strategy) and the timeframes for implementation we have set out.

The Economic Opportunity

What impact will the transition to zero emissions heating have on jobs, and will demand for different skills vary by geography.

We will see increased rates of installation of energy efficiency measures, potentially supporting 1,200 jobs for every £100 million invested. Our targeted support for innovation will support companies with a high growth potential, boosting the economy and creating jobs. Overall, we estimate that as many as 24,000 jobs could be supported each year in Scotland by the roll out of low and zero emissions heat. We are committed to building local supply chains, maximising local job creation, and ensuring a just transition. To ensure a smooth rollout of zero emissions heating and energy efficiency we need to have the right skills, in the right place and at the right time We will work with Scottish businesses so that they can play a significant part in the transformation of Scotland's homes and buildings.

Our supply chain action plan will play an important role in ensuring this development. For example, through the consideration of opportunity for retraining and dual qualifying the existing heating sector workforce to enabling, existing gas and oil boiler installers to offer expert knowledge on alternative systems. We also see an important role for Community Anchor Organisations as playing important roles at a local level in reskilling and capacity building, and will ensure these are considered in our supply chain action plan. We will also continue to flex our delivery programmes to support local jobs and create opportunities for young people. Further details and consultation questions can be found on pages 126-132 of the draft Strategy.

How will the Strategy enable the market and supply chain to take action and make decisions in the short term between now and 2024?

To realise the economic opportunities associated with decarbonising Scotland's homes and buildings, it will be critical to secure and maximise investment in supply chains in Scotland. Developing new supply chains is a key element of our National Mission for Jobs which will deliver new, high quality and green jobs. As set out in the Programme for Government, we want to see – as a minimum - the rate of renewable heat installations in homes and buildings double every year from a current baseline of 3,000 domestic installations per annum in 2020 to 64,000 homes fitted in 2025 – a cumulative total of around 124,000 homes. We recognise that setting medium term credible aspirations for deployment of categories of heating technology can build confidence and support investment across supply chains. We will develop an action plan, specifically focussed on strengthening the broad supply chains needed to deliver energy efficiency and zero emissions heat in buildings. We welcome views on the role technology specific milestones could play in ramping up supply chain capacity, and how best to set them.

We are already working with the Heat Pump Sector to develop a new Heat Pump Sector Deal in Scotland. An expert working group has been set up to make recommendations to Scottish Ministers by Summer 2021 on how industry and

Government can work together to set a clear pathway for accelerated deployment of heat pumps, and to consider how innovation can improve the consumer experience of heat pump technology whilst maximising economic opportunities across Scotland. We will respond to those recommendations in the final version of this Strategy.

What mechanisms are in place, or are likely to be put in place, to allow innovators or those seeking to work with innovators, in support of the strategy?

Innovation, in terms of products, services and business models, will be required to meet our ambitious targets for transforming Scot land's homes and buildings. Fostering and incubating this innovation in Scotland will help to create further economic opportunities for Scottish businesses. We will work with our partners, including our Enterprise Agencies and the National Manufacturing Institute for Scotland, to create a forward looking and proactive Research and Development community focussed on creating solutions to help decarbonise Scotland's homes and buildings.

We are developing a new framework of support for innovation across Scotland's energy sector, including a specific workstream on heat and energy efficiency. To underpin this, we will launch a call for evidence in 2021. This call will seek views on how best to maximise Scotland's world leading research talent and facilities for energy innovation. We will respond to the call for evidence by publishing a new market support framework for innovation by the end of 2021.

The Low Carbon Infrastructure Transition Programme (LCITP) has, since 2015, supported innovative low-carbon infrastructure projects, which could be replicated elsewhere in Scotland to maximise our potential in the low-carbon sector. We want to build on this programme and have launched a <u>call for evidence seeking input from</u> <u>stakeholders to help design and develop a successor programme</u>.