Written evidence submitted by Baxi Heating (DHH0007)

About Baxi Heating UK Ltd:

Baxi is part of Baxi Heating. Baxi Heating has a portfolio of some of the best known and most respected brands in the domestic and commercial heating industry across the UK and Ireland, including Baxi; Potterton; Main Heating; Heatrae Sadia; Megaflo; Remeha; Andrews Water Heaters; Potterton Commercial; and Packaged Plant Solutions.

Our mission, vision and values underpin everything we do: the way we behave, how we work with our stakeholders and the pride we take in our products and services.

Our aim is to deliver best value through reliable, energy efficient products and high-quality service and technical support, while promoting environmental, social and economic sustainability.

We value our environment and are committed to its conservation. We seek to identify and minimise carbon emissions, noise pollution, waste and packaging in our workplace, in our products and throughout the supply chain.

We are committed to supporting the energy transition towards a zero-carbon economy. We advocate a collaborative approach, focusing on high efficiency domestic and commercial heating and hot water solutions that meet our customers' needs. We are actively working with industry bodies and the government to help shape the heating industry of the future as the UK moves towards net zero emissions by 2050.

Response to Questions

What has been the impact of past and current policies for low carbon heat, and what lessons can be learnt, including examples from devolved administrations and international comparators?

The past decade has been an extremely patchy period of policy implementation. Heating businesses have seen the failure of policies such as Zero Carbon Homes and the Green Deal. Others such as the Renewable Heat Incentive have been marginally more successful, although sale volumes of low carbon heating have remained stubbornly low. This has created some weariness and cynicism amongst consumers and investors and a clear plan is now required with consistent follow up and cross-party consensus.

The 2018 Boiler plus policy is one little known but bright spot from the past few years which increased minimum efficiencies for boilers, required time and temperature controls (surprisingly not present in all installations) and required an additional energy efficiency measure (weather compensation, smart thermostat, flue gas heat recovery, load compensation) has demonstrated that change in regulation can be implemented successfully when undertaken in collaboration with industry. Although the change in individual properties can be just a few % points in efficiency, across millions of boiler installations significant benefits have been accrued.

What key policies, priorities and timelines should be included in the Government's forthcoming 'Buildings and Heat Strategy' to ensure that the UK is on track to deliver Net Zero? What are the most urgent decisions and actions that need to be taken over the course of this Parliament (by 2024)?

Accelerate progress on Community trial of Hydrogen Appliances

Hydrogen must play a significant role in the decarbonisation of heat; however, government now needs to get serious about its deployment. The next phase in the UK's development of 100% hydrogen heating must take place over the next five years. It is vital to set out funding for and begin Hydrogen trials in a wide range of domestic and commercial buildings. The Hy4Heat programme has successfully proven that Hydrogen boilers can operate safely within a test environment and it is now time for the next phase.

Mandate ''Hydrogen Ready'' from 2025

Given the current UK domestic gas boiler market is around 1.65m units per year, a mandate that all boiler installations from 2025 are hydrogen ready would mean that a significant proportion of the existing housing stock is prepared for a future changeover. This is a no regrets action at no cost to Government.

Support hydrogen production

Uncertainty of future revenue streams and higher production costs are issues common to almost all early stage energy technology. Hydrogen technologies are still in early stages of deployment and as such face operational cost challenges, particularly when competing with low cost higher carbon alternatives such as natural gas. The development of a financial support scheme will enable investment across the supply chain, including those areas which are less mature, enabling upstream hydrogen production technologies to achieve cost down and mass market deployment

Clarity on future infrastructure

We also recommend clearer infrastructure plans for low carbon heat. For example, zoning areas that will need to be electrified (off-grid), areas suitable for hydrogen deployment of heating (many of our suburban and urban areas) and areas suited to heat networks (communal heating systems and city centres)

Which technologies are the most viable to deliver the decarbonisation of heating, and what would be the most appropriate mix of technologies across the UK?

A variety of solutions are required to cater for the needs of the UK's highly diverse building stock. A diversity of technologies will be required to support a decarbonised heating system by 2050 – with reference to the electrification of heat, biogases and hydrogen. Baxi are working to deliver a low carbon heating solution whatever the individual property circumstance.

In addition to hydrogen, and electric heating technologies, greater participation in energy markets is becoming possible as DSR technologies emerge (e.g. smart thermostats, storage

capacity). This is ultimately beneficial for the consumer as the avoidance of mandatory infrastructure costs (enabled by DSR) will reduce energy prices.

A good example to demonstrate how consumers may participate with the energy system, reduce their energy bills and offer important DSR services to mitigate the burden on the electricity system is seen with the Ubiquitous Storage Empower Response (USER) project that is funded by BEIS under the Domestic Demand Side Response Competition. The project looks to increase the role of housing in offering DSR services by combing AI-led optimisation technologies and hot water tanks. Whilst hot water storage is being used less, the existing installed capacity in the UK is still around 27GW which is a huge reserve that should be tapped in to and support the energy system and consumer needs.

What are the barriers to scaling up low carbon heating technologies? What is needed to overcome these barriers?

Low carbon heating technologies are lacking the following:

- A clear plan to develop the supporting infrastructure
- Consumer awareness and support for consumers with making necessary changes to their properties to ensure low carbon heating tech is suitable for homes

We welcome the inclusion of heat pumps as an eligible measure within the Green Homes Grant as there is a clear need to grow the UK supply chain and skills base to support a wider role for this technology group as we transition towards net-zero. However, the scope of heating measures should be wider to better support consumer needs and include other key components such as hot water storage cylinders.

How can the costs of decarbonising heat be distributed fairly across consumers, taxpayers, business and government, taking account of the fuel poor and communities affected by the transition? What is the impact of the existing distribution of environmental levies across electricity, gas and fuel bills on drivers for switching to low carbon heating, and should this distribution be reviewed?

First step is to ensure optimal design for energy system to reduce the overall cost of heat decarbonisation. The necessary infrastructure upgrades that would be required to facilitate complete electrification of heat and satisfy electrical demand of other sectors means that alternative heat decarbonisation pathways must be considered. We agree that it is therefore important for policy to remain flexible as the potential of emerging technologies becomes clearer.

An obvious easy win for heat pumps lie off the gas grid, approximately 15% of the 28million properties in the UK are off the grid and the vast majority of these are not high rise where it might be more effective to deploy district schemes rather than individual heat pumps. These properties are subjected to volatile energy prices, relatively high carbon output and represent the quickest opportunity for deployment.

Early adopters likely to benefit from generous subsidies. Also, costs of infrastructure such as maintaining gas network likely to increase as households opt out of gas heating infrastructure. Emerging inequalities will need to be managed carefully.

What incentives and regulatory measures should be employed to encourage and ensure households take up low carbon heat, and how will these need to vary for different household types?

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Clear direction is needed from Government through policy and regulation that assures investors, manufacturers and installers that the future is certain. Confidence is critical to increasing installers training in low carbon heating and to allow companies to provide investment. Government can provide this through upcoming policy decisions to encourage the deployment of low carbon heating technology.

With this in mind, we see the Green Homes Grant scheme as an interesting start and await the publication of the BEIS Heat and Buildings Strategy, together with the outcome of the current Government spending review with interest.

What action is required to ensure that households are engaged, informed, supported and protected during the transition to low carbon heat, including measures to minimise disruption in homes and to maintain consumer choice?

In order to achieve widespread adoption and significant change, consumers must be made aware of how they can personally benefit from low carbon heat innovation that is becoming commercially available.

There has never been a public awareness campaign from any central body on the different ways in which you could heat your home. In a recent Public Attitudes Research, it was revealed that only 33% of respondents were even aware of heat pumps.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/913541/transforming-heat-public-attitudes-research-report.pdf

Baxi would like to see a government backed industry led campaign designed to increase the awareness of different technologies that can heat your home. There are subtle expectations from heating systems in the UK that will change as we move to a low carbon heating future and unless we communicate that the next installer might offer something different, they will always be sceptical. It's an important stage in the process of change and we need government help to back a campaign which gives exposure to these new technologies.

A clear plan for infrastructure is also important within local areas and may trump consumer choice over low carbon heat technology. Within zones identified for types of infrastructure households should be encouraged to join.

Where should responsibility lie for the governance, coordination and delivery of low carbon heating? What will these organisations need in order to deliver such responsibilities?

Strategic decisions on heat infrastructure need to be taken nationally – at the same level as strategic decisions on other part of energy system. Local decisions will depend on specific circumstances of building stock/heat requirement and availability of low carbon heat source

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