Consultation Response
Scottish Government draft Heat in Buildings Strategy
29 April 2021

Overview

- Electrical Safety first is the UK-wide charity dedicated to reducing the number of deaths, injuries and accidents caused by electricity in the home – from both current and future risks. Electricity causes nearly three quarters of all house fires each year in Scotland.[1]

- We welcome the opportunity to respond to the Scottish Government's consultation on the draft Heat in Buildings Strategy which sets out actions and proposals for transforming Scotland's dwellings and the systems that supply their heat, ensuring all buildings reach net zero emissions by 2045.

- The draft strategy recognises the increasing role of electricity in heating people's homes using technologies such as heat pumps and heat networks, but the regulatory proposals have not considered the preparedness of domestic electrical systems within existing housing stock or supply infrastructure.

- Electrical Safety First is currently developing a white paper which will outline the safety issues linked to the transition to net zero, including analysis of the key challenges and opportunities from the decarbonisation of heat. We believe our findings could help the Scottish Government avoid any unintended safety risks that could arise from their current policy proposals. We would be happy to share our findings later in 2021.

- In the meantime, our response focuses on the consultation questions which provide an opportunity to use our expertise to highlight some of the main electrical safety implications

1 https://www.electricalsafetyfirst.org.uk/what-we-do/our-policies/scotland/statistics-scotland/

and considerations which are currently missing in the draft Strategy and often overlooked in the wider decarbonisation policy agenda not just in Scotland, but across the UK.

Question 28. In your view, is there further action that can be taken to ensure our electrical systems are ready for heat decarbonisation?

- The draft strategy highlights the major role that the electrification of heat will play in achieving decarbonisation. However, to manage this proposal there needs to be a parallel consideration of the safety effects of increased loads on existing electrical systems in dwellings.

- Whilst new build homes can and must plan for the electrification of heat, existing housing stock will prove a bigger challenge, particularly older housing which is more likely to contain outdated electrical systems.

- Around a fifth of Scotland's dwellings were built before 1919[2] - further electrification of these properties may create particular safety issues. Such dwellings are less likely to contain the five electrical safety features[3] which help to prevent against fire risks, electric shock or fatal electrocution[4] and may not be ideally suited to accommodate new net zero heating technologies.

- More widely, there is currently limited information available on the preparedness of electrical systems for future demands, including the domestic decarbonisation of heat. The Scottish

2 https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/

3 These are: modern PVC wiring, modern earthing, modern consumer unit casing, miniature circuit breakers and residual current devices.

4 DCLG. 2013. English Housing Survey: Profile of English Housing 2012.

House Condition Survey (SHCS) is the only national survey to look at the physical condition of Scotland's dwellings.

- The information collected on electrical systems is limited and largely formed through basic visual checks of elements such as power sockets and lighting. An electrical system, however, is comprised of all the fixed electrical equipment that is supplied through the electricity meter. It includes the cables that are usually hidden in the walls and ceilings, accessories (such as sockets, switches, and light fittings), and the consumer unit (fusebox) that contains all the fuses, circuit-breakers and preferably one or more Residual Current Devices (RCDs).

- Every electrical system deteriorates with use and age. To make sure it remains in a safe and serviceable condition, periodic inspections by qualified individuals are essential. They will check the condition of an existing electrical system against BS 7671, the UK standard for the safety of electrical installations.

- Regular inspections are already required in both the private and social rented sectors in Scotland. There is an opportunity to extend these to all dwellings as part of the Scottish Government's 'Housing to 2040' strategy which will introduce a new Housing Standard, set in law by 2025.[5] This will cover all homes, new and existing, and include aspects such as repairing and safety standards.

- Importantly, where owners need support to improve their homes, targeted packages and financial assistance will be developed which will be aligned closely with new support measures to deliver heat decarbonisation. This offers an opportunity for cross-government

5 https://www.gov.scot/publications/housing-2040-2/

collaboration to ensure the electrical safety considerations outlined above can be effectively addressed.

In summary:

- We need a national study to look at the physical condition and preparedness of Scotland's domestic electrical systems for future demands. This could be achieved by expanding the scope of the next Scottish Housing Condition Survey to capture more detailed and insightful information.

- Inspecting and upgrading current electrical systems in residential properties will also support the introduction of technologies that use electricity to produce heat by ensuring safe installations. Mandatory electrical checks across all tenures would help to ensure homes are ready for changing electrification needs and reduce current and future fire risks.

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

- We see benefits in adopting the UK Government endorsed TrustMark quality assurance framework which importantly provides a range of consumer protections including a Consumer Code and Consumer Charter. Additionally, it promotes reputable installers to consumers, improves sector standards, and tackles related issues such as better enforcement. We also support the proposal to adopt the latest retrofit standards to ensure consumers receive high quality and safe work carried out by skilled and competent installers.

- More generally, it is vitally important that measures are developed to enable consumers to find properly qualified and competent installers. This should include an ongoing requirement to monitor and address any issues arising from poor quality or dangerous installation work.

This will help ensure that any risks of harm to households can be quickly mitigated which will help build consumer confidence in the roll-out. In addition, installers will be in a unique position to inform and educate consumers about the safe use of these unfamiliar heat technologies.

- It is essential that consumers can easily identify and find appropriately skilled and competent installers. We can draw lessons from consumers needing electrical installation work carried out in their homes in Scotland. At present there are several avenues to find competent and qualified individual electricians and businesses, but there is no comprehensive database, and there is low recognition among consumers for the multiple databases that do exist.

- It is important that the draft Strategy aims to create the necessary environment to ensure exemplary practice and high standards and to ensure that consumer confidence in zero emissions heat measures is not undermined by poor or unsafe practice.

In summary:

- Develop a workforce with the necessary electrical skills and appropriate frameworks for continuing assurance of professional competence.
- Easy-to-access routes for consumers to find registered competent installers.
- Work closely with consumer organisations to continuously monitor and identify potential safety issues and take mitigating action when they arise.

Question 69. Is there any further information you wish to provide on the content set out in this draft Strategy?

- We welcome the range of proposals to monitor the consumer impacts of the roll-out of zero emission heating. It is vital that issues of consumer detriment are identified and addressed

promptly. The draft strategy also highlights the importance of working with a range of organisations, including energy companies and Consumer Scotland, once established, to explore how best to engage consumers to help them understand their energy needs and the longer-term benefits of different heating types.

- However, there is very little mention of safety in the draft Strategy. Electricity causes nearly three quarters of all house fires each year in Scotland and a common cause is the misuse of electrical equipment.[6] The huge increase in electrical appliances, such as electric boilers and heat pumps, together with a shortage of trained installers and a lack of familiarity with electrical heating, will impact on electrical safety.

In summary:

- Government must include electrical safety as a key factor in its policymaking towards achieving net zero homes.
- Inclusion of consumer education in the draft Strategy around the safe use of new electric heat technologies.

6 https://www.electricalsafetyfirst.org.uk/what-we-do/our-policies/scotland/statistics-scotland/