

ambient

# How unlocking the Gas Safe Register data could accelerate the UK's clean heat economy

September 2024



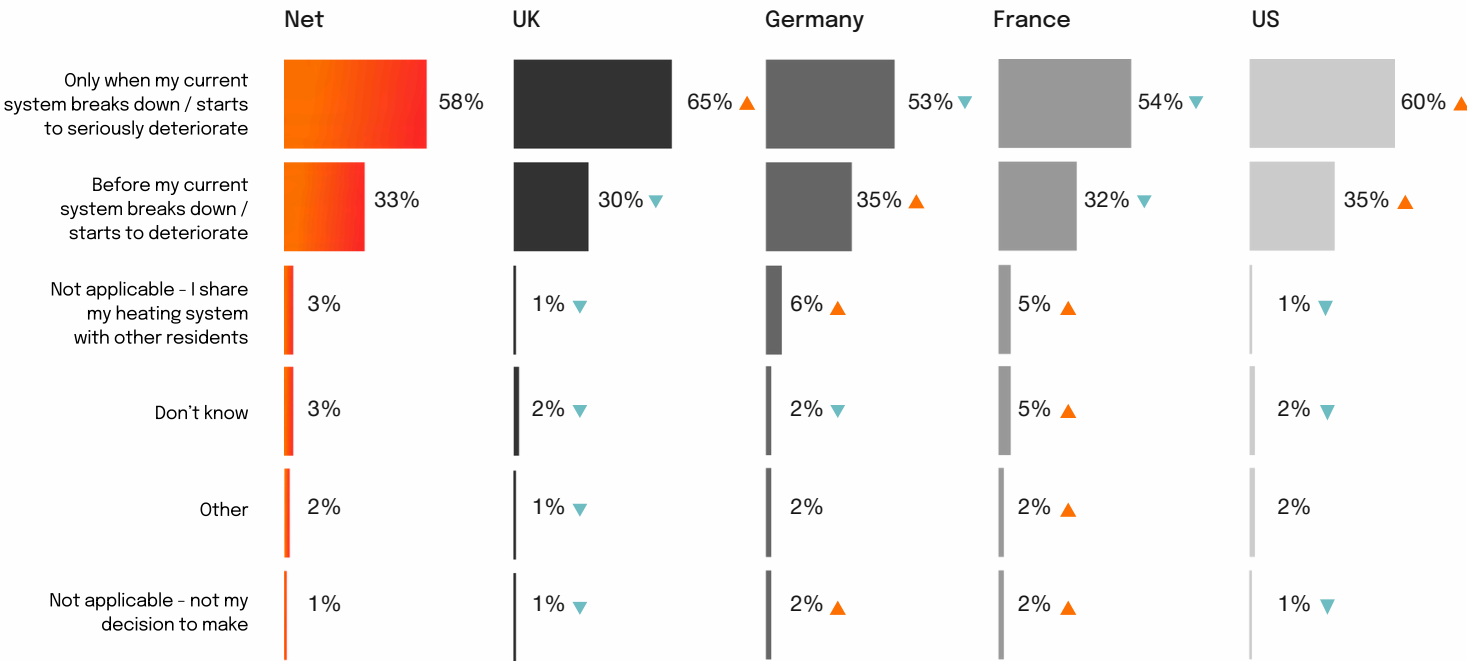


# Two thirds of UK home owners won't change their heating system until it breaks down

Electrify Research

This means that homeowners whose boilers are likely to break down soon are the biggest pool of potential demand for heat pumps.

## Replacement heating: circumstances



Electrify Research (Home Electrification Tracker Survey) 2023/24

The problem is that we don't know who these people are. Knowing who these homeowners are would enable government and industry to target them with compelling propositions for clean heating **before** their boiler breaks down. This is where the Gas Safe Register data comes in. The [Register](#) is the official gas registration body for the UK and is owned by the Health and Safety Executive (HSE) a UK government body, thus receives taxpayer funding. It holds records for boilers installed in the UK since 2009. This data is not publicly available.

**Ambient** is an independent not for profit organisation with a data-driven vision: Britain as a clean energy superpower by accelerating the adoption of electrified heating and cooling solutions.

We believe that this data could be a key enabler of the clean heat transition in the UK. Having a view of boiler age at household level across the UK could be a game changer because a targeted approach to the transition could massively increase the electrified heating and cooling industry's ability to scale.

## We're not alone in holding this view:

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"Having accurate data on boiler age at household level is critical. Together with other public datasets this creates a tremendous opportunity to support the UK's clean heat transition. This is especially true for 'distress' situations, where boiler failure is imminent. EPC data has been transformational to this industry. Gas Safe Register data will take this much further, driving innovation that will support both the public and private sector in delivering on net zero ambitions. We fully support Ambient's objectives of having this publicly funded data set made accessible to accelerate growth in the clean heat economy."



Philip Jackson,  
Director, Thermly Limited.

"Having access to high-quality, granular data is key to driving localised decarbonisation in our homes and on our streets. Accelerating the decarbonisation of heating through a place-based or locally coordinated approach requires a greater understanding of the buildings in each area. Additionally, you need information such as how old the gas boilers in buildings are and how soon the heating systems may need to be replaced. This data can help industry to plan their approach for upgrades in an area to a heat network or heat pumps. The data that Ambient is gathering on gas boilers has the potential to be an enabler of progress towards Net Zero."



Katrina Young, Heat Policy and Local  
Energy, Energy Systems Catapult

"A household level view of boiler age could enable the targeting of government clean heating programmes. Making the most of Gas Safe Register data is a critical enabler for this and I'm very excited to see Ambient's insights on this data."



Jan Rosenow, Director of European Programmes,  
Regulatory Assistance Project

"Ambient's analysis of Gas Safe Register data provides a clear example of why we need more accessible and open data, as well as effective not-for-profits who can harness that data to drive evidence-based and effective policies to tackle the climate crisis."



Elodie Read,  
Special Projects Manager, Subak

"Working on solutions for failing boilers so homes don't get locked in with gas for another 15 years is essential, and this information would be invaluable to help assist with that. Particularly as it will give homeowners more time to prepare their homes and understand their options well in advance so they aren't forced into an undesirable result, but also for companies like ours to understand how to best approach and scale up to the challenge with maximum impact and accessibility."



Adam Chapman,  
Founder, Heat Geek

"High quality, reliable, public data has the potential to accelerate the adoption of heat pumps to decarbonise homes. An open and accessible Gas Safe Register is crucial for timely and responsive local area energy planning, tailored heat pump marketing and enabling coordinated switching. Speeding up heat pump adoption is essential to reaching net zero. One in ten households need to install a heat pump during the life of this Parliament to meet the UK's climate obligations. This would require a 12-fold increase in installations over five years when compared with the last five years."



Katy King, Deputy Director,  
Sustainable Future Mission, Nesta

"We support the government's plans to decarbonise the grid by 2030. Electrification of heat is necessary to fully realise their ambitions for energy security. In the long term, this will protect consumers; lowering energy bills for good and creating comfortable, warm homes. EPC data was previously made public to support national climate objectives and has massively increased innovation in the sector... Recognising the benefits of understanding boiler age at household level, Ambient believes that it is in the public interest to harness the Gas Safe Register data for the benefit of all. We look forward to working collaboratively with all stakeholders to make this happen."



Irene Omaswa,  
Founding Board Chair, Ambient



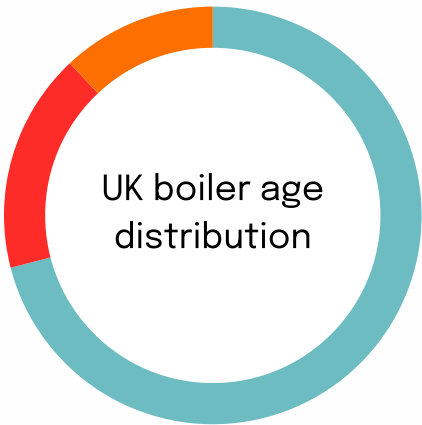
Ambient has downloaded and analysed data from approximately 60,000 boilers across the UK.

Ambient download from Gas Safe Register - September 2024

23 million  
gas boilers in the UK  
which last on average  
10-15 years

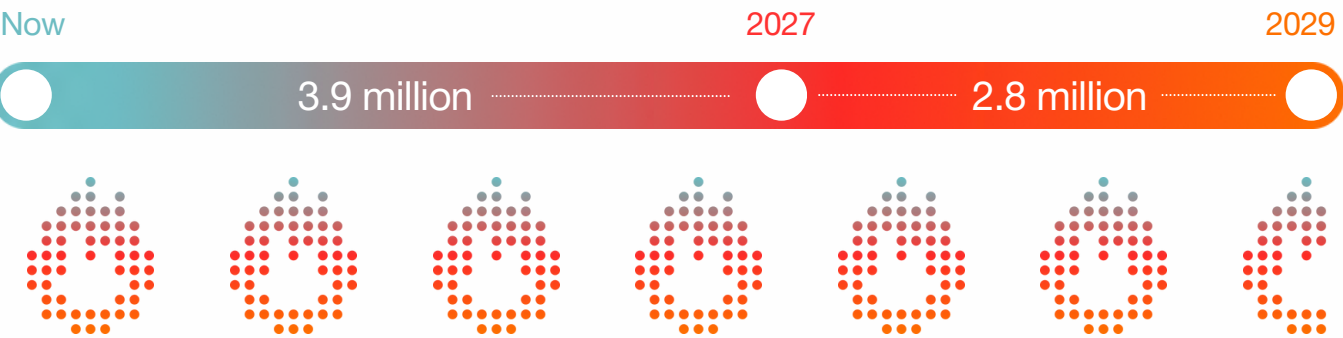


- From 10 to 12 years  
12.2%
- More than 12 years  
17%
- Less than 10 years  
70.9%



The chart above shows our findings: nationally, 17% of boilers are 12-15 years old and 12% are 10-12 years old. Boilers in the UK last 10-15 years, so by extrapolating out to the UK's 23 million<sup>1</sup> gas boilers, the number of boilers that may need replacement between now and 2027 will be around 3.9 million, and up to 2.8 million boilers between 2027 and 2029.

Replacement boilers needed



## These findings are just the beginning...

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We know that clean heat is the future, we just have to get there faster. If we could harness the Gas Safe Register data, it would enable so much:

- The UK's nascent heat pump industry could target these homeowners before they replace their gas boilers enabling us to build a thriving clean heat economy with high paying jobs.
- Knowing where heat pumps are likely to be installed enables planning for upgrades to the grid infrastructure to be conducted in much more detail. This could lead to faster upgrades and more efficient investment.
- Knowing which homes have the oldest and least efficient boilers would mean that public sector bodies could identify and target households in fuel poverty. We could then make sure that scarce funds are used where they are needed most.
- By showing that the sector understands exactly how the transition will happen, we could turbocharge investor confidence. This would unlock private sector investment at scale to match public funding of the transition.
- Shared data insights around the state of the nation's heating would enable the private sector and government to work together to deliver the UK's decarbonisation targets.

The precedent is already set with EPC data which is much more granular because individual addresses and associated details are available. It was initially not in the public domain but was subsequently made public by the government. This was because of its value in accelerating the decarbonisation of heat and the achievement of the national climate change objectives.<sup>2</sup>

**Ambient sees tremendous value in Gas Safe Register data. It is in the public interest for publicly funded data to be made available for the benefit of all.**

The key to unlocking the growth of electrified heating and cooling is transformational policy support backed up by data. Ambient will continue to share analysis on this data.

If you are an organisation that shares our goals, please contact us on [hello@projectambient.org](mailto:hello@projectambient.org) to have a conversation about this. We would be very interested to learn how you would use this data if it were made public. We would also like to know if there is any analysis on this data that you would like to see from us in the future.

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### References

1. UK Committee on Climate Change (CCC) report on Heat in UK Buildings
2. UK Government Guidance on Energy Performance Certificates public disclosure



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