

Importance of electrifying heat highlighted as Climate Change Committee warn of lack of climate action

Lord Deben emphasises the need to shift from ambition to delivery on net zero policy as he concludes his final report as Chairman of the Climate Change Committee (CCC) and declares that he is "worried" about apparent reluctance to place climate leadership at the centre of policy initiatives. This 437-page report, which emphasises the significant role heat pumps will play, expresses concern for the current situation and provides bold recommendations, has a key focus on heat decarbonisation strategy. We have compiled a summary of the key takeaways.

Key Quotes:

"There will be a major role for electrical heat in every plausible eventuality" (page 160).

"New buildings have high standards of fabric efficiency and can be optimised for electrical heat from the outset... They provide an excellent opportunity for building supply chains and consumer confidence" (page 163).

"Using zero-carbon electricity to drive heat pumps provides around four times the benefit compared to its use to produce hydrogen for boilers, when considering both system-wide emissions reductions and reductions in fossil gas use" (page 169).

"Reform energy markets to ensure that heat pumps are cheaper to run than gas boilers, through removing market distortions (whereby policy costs are primarily added to electricity bills), reviewing the scope of carbon pricing, and wider improvements to pricing mechanisms in the electricity market. Ensure that distributional impacts of reforms are carefully considered and appropriately addressed" (page 395).

The committee's evaluation of the current state of play in the UK heat pump market doesn't make for easy reading. The market is growing, with clear consumer demand, but we will need to see an acceleration in the coming years and an upturn in Government commitment to support the burgeoning industry. Some key highlights include:

1. **First, the bad news** - The UK is "significantly off track" to decarbonise the building sector, lagging on key indicators including heat pump installations, heat pump costs, trained heat pump installers, and energy efficiency measures.
2. **Bottom of the table** - In comparison to neighbouring countries, the UK ranked 21st out of 21 for per-capita installations of heat pumps in 2022. Current rates of heat pump installation are around one-ninth of the target of 600,000 per year, and this is not increasing fast enough.
3. **Supply chain challenges**- Supply chains for electrified heat are weak and are not developing at the required pace. The workforce of engineers and related trades is growing slowly, the installed cost of heat pumps is rising rather than falling, UK manufacturing capacity is failing to grow significantly, and imports of key components are not growing.
4. **Weak and confusing signals** - Government signals on low carbon heat have been too few and too confusing for both consumers and for industry, delaying investment decisions, but there is clear demand for heat pumps.
5. **On the continent** – The Netherlands, the only European country more dependent on fossil gas for heating than the UK, is mandating households to replace fossil boilers with a heat pump or hybrid from 2026. In Germany, the government has introduced legislation to ban new fossil heating systems from 2024, requiring all new heating systems to use at least 65% renewable energy, implying widespread use of heat pumps and hybrids.

While the current situation is admittedly concerning, the committee has a range of recommendations to get us back on track to decarbonise and electrify heat. With ambitious new policy on the horizon and the prospect of reform to the existing system there is still absolutely room for optimism. Some key highlights include:

- **No backtracking and press ahead** – "Stay firm on existing commitments and move to delivery" is the second of the committee's opening key messages, citing the Government's commitment to install 600,000 heat pumps per year by 2028.
- **New homes, no brainer** – Recommendation for "electrification of heating in all new buildings... using a mixture of heat pumps and heat networks" and that Government "should rule that new buildings should not be connected to the gas grid".

- **Striking the balance** - The Government needs to outline a clear approach to rebalance the relative costs of gas vs. electricity for consumers by the end of 2023, making heat pumps more cost competitive to run compared with gas boilers.
- **A clear position on hybrid heat pumps** - Clarity and support are needed surrounding hybrids, particularly in areas where deployment of standalone heat pumps may be constrained by network capacity limits (likely rural areas off the gas grid). Consumer acceptance of hybrids is likely to be higher and they offer a retrofit solution around existing fossil fuel heating systems – before the boiler needs replacing.
- **A heat pump ready grid** - The electricity distribution network needs to be in place to support heat pump deployment.
- **No new off-grid gas** – Another “no-regret action” would be for properties currently off the gas grid to electrify, rather than connect to gas in future. The committee recommends prohibiting fossil fuel boiler replacements in off-gas grid buildings from 2024 for large non-residential buildings.
- **Reform of EPCs** – The consumer facing energy efficiency rating for properties, the Energy Performance Certificate (EPC), is “poorly aligned with net zero”. The committee has called for urgent EPC reform to make them more informative and accurate, as well to update an underlying metric of the EPC, the 'reduced data' Standard Assessment Procedure (RdSAP).