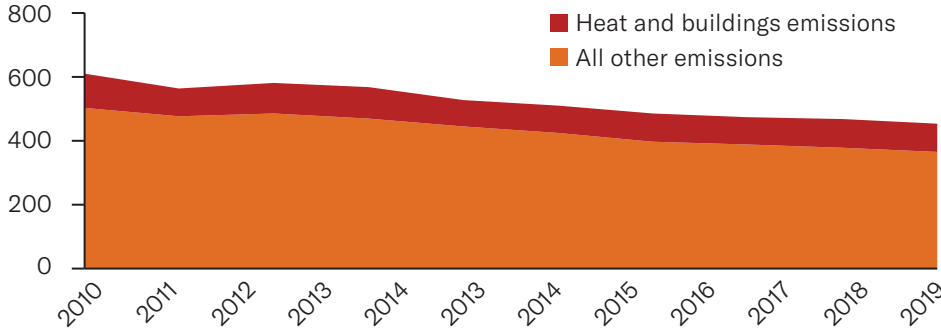


The Road to COP26

Building skills, agile tariffs and hybrid solutions needed to accelerate the decarbonisation of heating

Heating is a key focus area in the UK government's net-zero strategy

Indicative UK greenhouse gas emissions 2010-2019 (MtCO₂e)^{1,2}



- Heat and buildings form a central piece of the UK government's Net Zero Strategy presented on 19 October 2021 as heat and buildings emissions make up a significant share of all UK carbon emissions¹.
- Making progress in this category will be imperative in the context of the upcoming COP26 conference in Glasgow.

The new Heat and Buildings Strategy³ incentivises households to switch to heat pumps (HP)

The UK government set the “ambition of phasing out the installation of new natural gas boilers from 2035” and making a decision on hydrogen for heat in 2026 in its Heat and Buildings Strategy presented on 19 October 2021³.

- £5,000 grants per household for a heat pump
- £450mn boiler upgrade scheme
- £3.9bn new funding to decarbonise heat and buildings

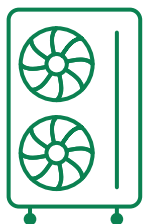
Selected challenges and opportunities

- ### 1 Scaling up the rollout

 - The Heat and Buildings Strategy confirmed the target of 600,000 annual heat pump installations by 2028 from approx. 35,000³.
 - According to the UK Government, there are currently ~3-4k active HP installers in the UK⁴, however the real figure could be much lower at around 1.2k of competent and qualified installers⁵.
 - The CIPHE* Low Temperature Heating Course and Heat Pump Associations LCL Heat Pump Training Course will contribute to rapidly increasing the number of qualified installers³.
- ### 2 Potential of other off-gas solutions

 - A hybrid solution comprises a heat pump (HP) and a fuel boiler to satisfy the heat demand in hard-to-heat properties (where a HP cannot satisfy the heat loss on its own).
 - Such solutions could be a way to significantly reduce emissions of hard-to-heat properties without deep retrofit costs to customers.
 - The future Boiler Upgrade Scheme does not currently incentivise the installation of hybrid technologies.
- ### 3 Agile tariffs and smart pricing

 - The decarbonisation of heating may contribute to flexibility in the electricity system if combined with agile tariffs and smart pricing.
 - The right products and pricing structures could incentivise customers to change their heating behaviour, expectations or preferences.
 - The management of this service for customers may be a key future opportunity for current energy retailers, as many indicated in a recent Utility Week/CRA report⁶.



Conclusion and outlook

- The UK government's focus on electrifying heat by banning fossil fuel boilers from 2028 may miss an opportunity to use affordable and currently available hybrid solutions to benefit those in the fuel poverty trap along with those in off-gas/ hard-to-heat homes.
- Up-skilling the workforce, along with the introduction of agile electricity tariffs are the two major points that will influence both the reduction of installation costs and running costs for the consumer through market competition.

For more information, visit www.crai.com/cop26

Sources: ¹HM Government (2021) Net Zero Strategy: Build Back Greener; ²BEIS (2021) Final UK greenhouse gas emissions national statistics; ³HM Government (2021) Heat and Buildings Strategy; ⁴Gas Safe Register; ⁵Independent Networks Association, 2021; ⁶Utility Week/CRA (2021) Remaking energy retail; *Chartered Institute of Plumbing and Heating Engineering (CIPHE)