

Making Decarbonisation Fair, 1st-4th March 2021



The Potential of Hard to Decarbonise Homes as a Pathway to Energy Equity

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Overview

- Reducing heat sector related carbon emissions from the UK's energy system to Net Zero by 2050 requires a three-way approach
- This involves reducing heat demand, decarbonising the fuel supply & deploying low carbon heating technologies
- Decarbonising HTD homes is at the cornerstone of this agenda



Analysis on abating direct emissions from 'hard-to-decarbonise' homes, with a view to informing the UK's long term targets

A study for the
Committee on Climate Change

Final Report (Version 3.4)
July 2019

elementenergy

UCL 

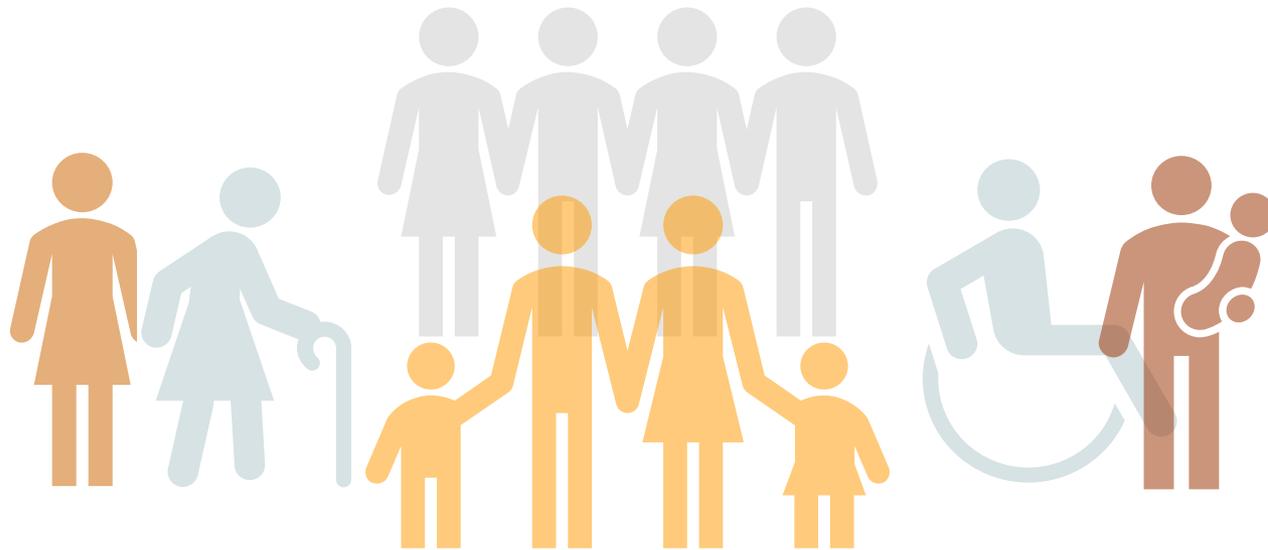
What is an HTD Home?

- Homes can be considered to be 'hard to decarbonise' if they are 'hard to treat' &/or do not have *cost-effective* options for low carbon heating



Why should we tackle HTD Homes?

People



Why should we tackle HTD Homes?

Who are the fuel poor?

■ Percent of households in fuel poverty have this characteristic
 ■ Percent of households with this characteristic are in fuel poverty

Household demographics



Couples with children (30%)



Single adults under 60 (17%)



Lone parents (15%)



Couples over 60 (12%)

Employment status



In work (49%)



Inactive (40%)



Unemployed (12%)

Household tenure



Owner occupied (51%)



Private rented (33%)

Income level



41% of people in the first (lowest) income decile are fuel poor



36% of people in the second income decile are fuel poor



13% of people in the third and fourth income deciles are fuel poor

Property characteristics

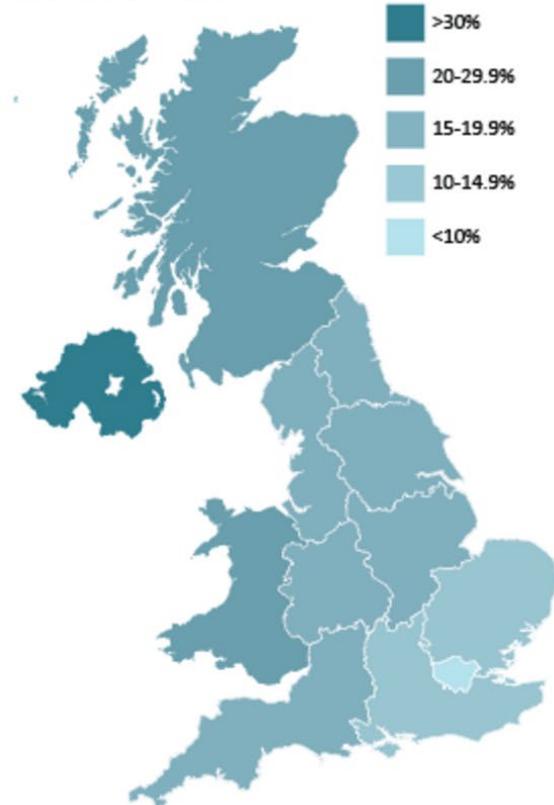


60% live in properties with an E, F or G energy efficiency rating



56% live in properties built pre-1944

Regional fuel poverty rates



Why should we tackle HTD Homes?

"The main things that I miss are being in work - it was always warm in there".

"I've stopped warming the food- it does help my electric go further & I'm still getting fed"

"a pound on a mug of tea was much cheaper than a couple of hours in the flat".

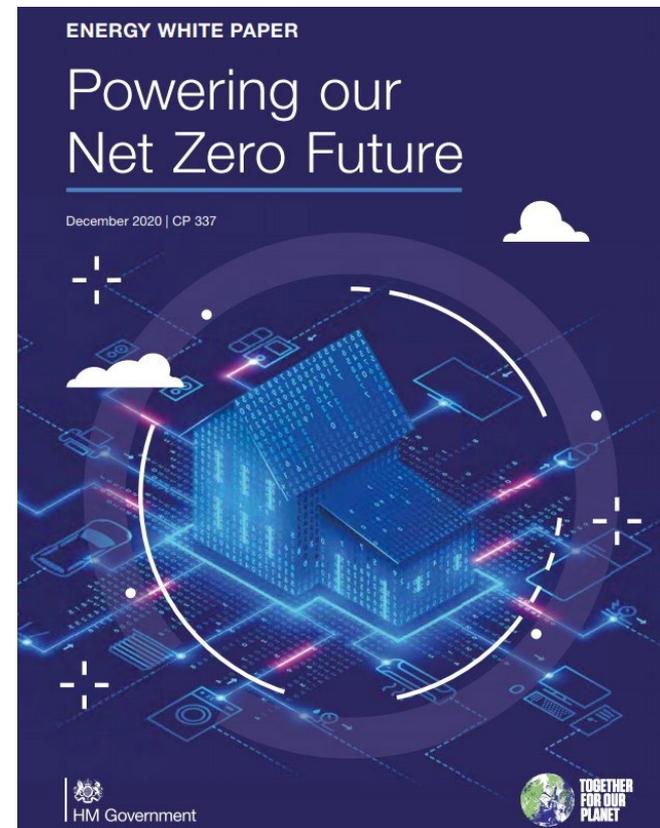
"he does complain that the house is cold. So I have to keep him distracted"

"I ended up in the park where there was more room but had to dodge joggers. I was warm but scared."

Why should we tackle HTD Homes?

Policy

- A fairer deal for energy consumers?
- **But** falls short of the long-term solutions needed for those who live in HTD homes
- Currently targeting an improvement in EPCs as long as it is 'cost effective'



How ?



What are the knowledge gaps/challenges?



Beyond technology.....

- Understanding & integrating the impact of occupant related attributes within the HTD stock
- Particularly those in fuel poverty or fall under “hard-to-reach” (HTR) energy user groups
- Ownership of properties is another dimension we will address in our research.



Our Aim

- To meet the critical need for a robust HTD evidence base, through the implementation of a participatory approach to better understand who occupies the HTD stock
- Ultimately, shape appropriate solutions that emphasize decarbonisation as a pathway to energy equity.



Key actions

1. Researching the experiences of occupying HTD properties through an extensive program of qualitative interviews (~200 across HTD archetypes)
2. Developing 'personas' that represent nuanced profiles & provide insights into behavioural variations amongst HTD occupants.
3. Co-produce regionally-focused HTD decarbonisation scenarios for key UK regions where clusters HTD are located to inform the formulation of local strategy & targets
4. **Creation of an HTD energy equity network to bring together relevant policy & research stakeholders in this area.**



What can happen?

The HTD domestic stock has recently been the focus of increased research & policy interest.

- The majority of energy efficiency will need to be installed in the next decade if homes are to be prepared for low-carbon heat
- Energy efficiency is expected to be a key component of the green economic recovery to support jobs in the UK.

**This needs to be done in a way that supports energy equity
to ensure that no one gets left behind.**

Thank you!

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