

Environmental *Change* Institute



Energy and equity: UK perspectives

Tina Fawcett, 17 September 2024



Agenda

1. Context on residential energy demand
2. Brief introduction to some of our research on energy & equity
3. Back to basics – what do we mean by equity?
4. Thinking about equity in the current energy system and in the energy transition
5. Future research agenda

The politics of energy and equity

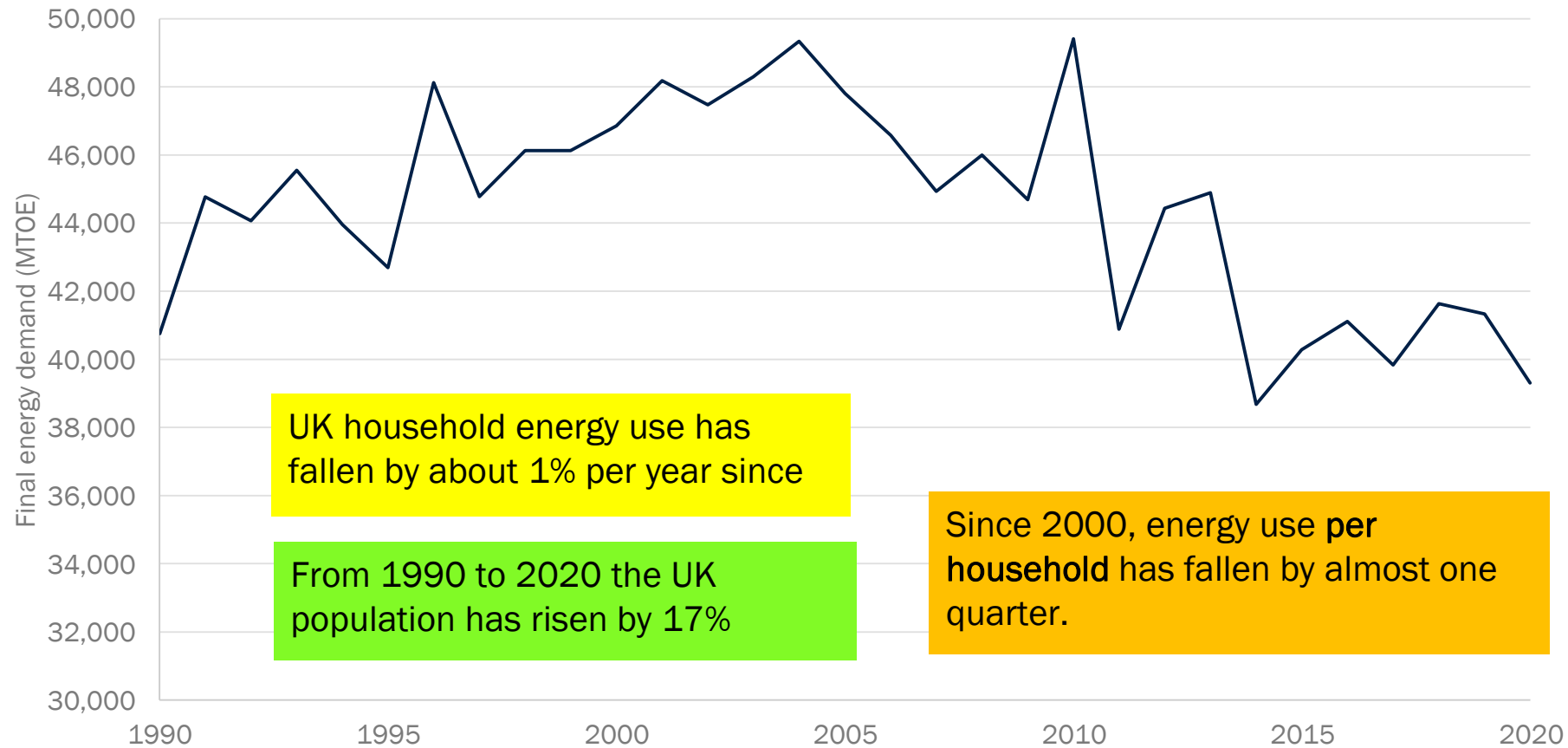


<https://www.bbc.co.uk/news/business-58090533>



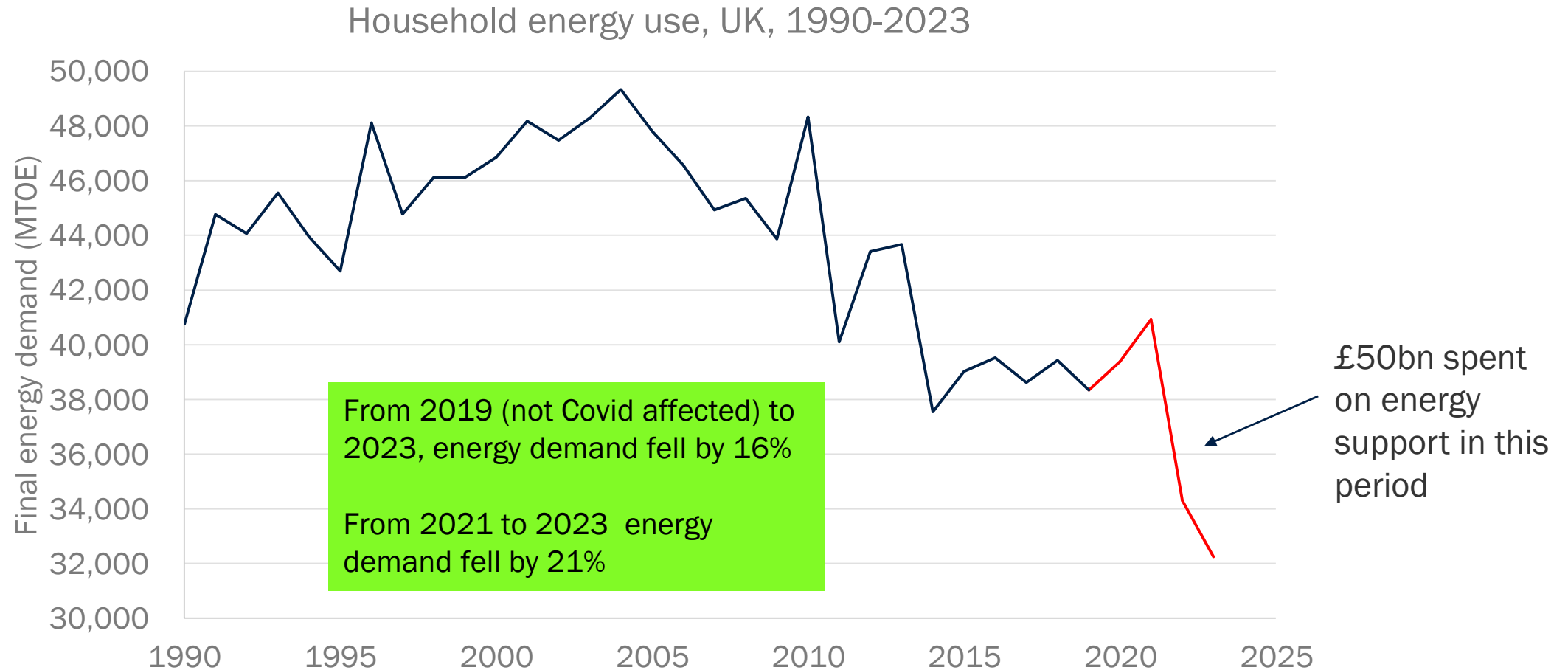
How energy use has changed over time (1)

Household energy use UK, 1990-2020



Source: BEIS (2020 & 2021) UK energy in brief 2020, 2021.

How energy use has changed over time (2)



Source: DUKES, 2024

Work on energy / fuel poverty

Looking in detail at the impact of high energy prices in Winter 2022/23 on pre-payment meter users, based on smart meter data.

Also now published in peer-reviewed format:

Fawcett, T., Palmer, J., Terry, N., Boardman, B. and Narayan, U. (2024) “Using smart energy meter data to design better policy: Prepayment meter customers, fuel poverty and policy targeting in Great Britain”, *Energy Research & Social Science*, 116, pp. 103666–103666.

Finding the fuel poor and
framing better policy


August 2023

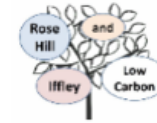




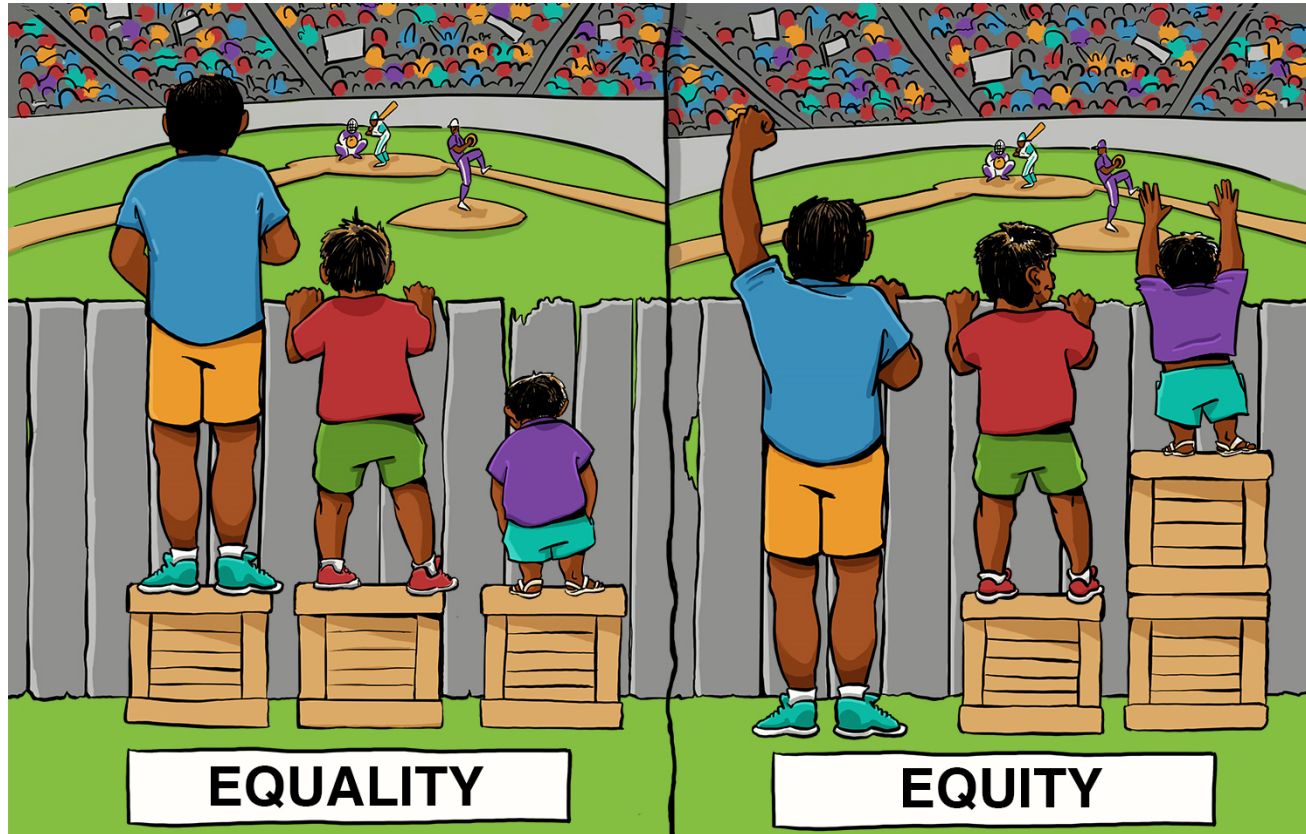
Clean Heat Streets

Working with local communities to accelerate the transition to heat pumps

Funded by  Department for Energy Security & Net Zero under Heat Pump Ready



What do we mean by equity?



Source: <https://www.storybasedstrategy.org/the4thbox>

Equity in relationship to what?

Energy use (per person, per household, per m²...?)

Cost of energy (per household, per kWh, as % of income?)

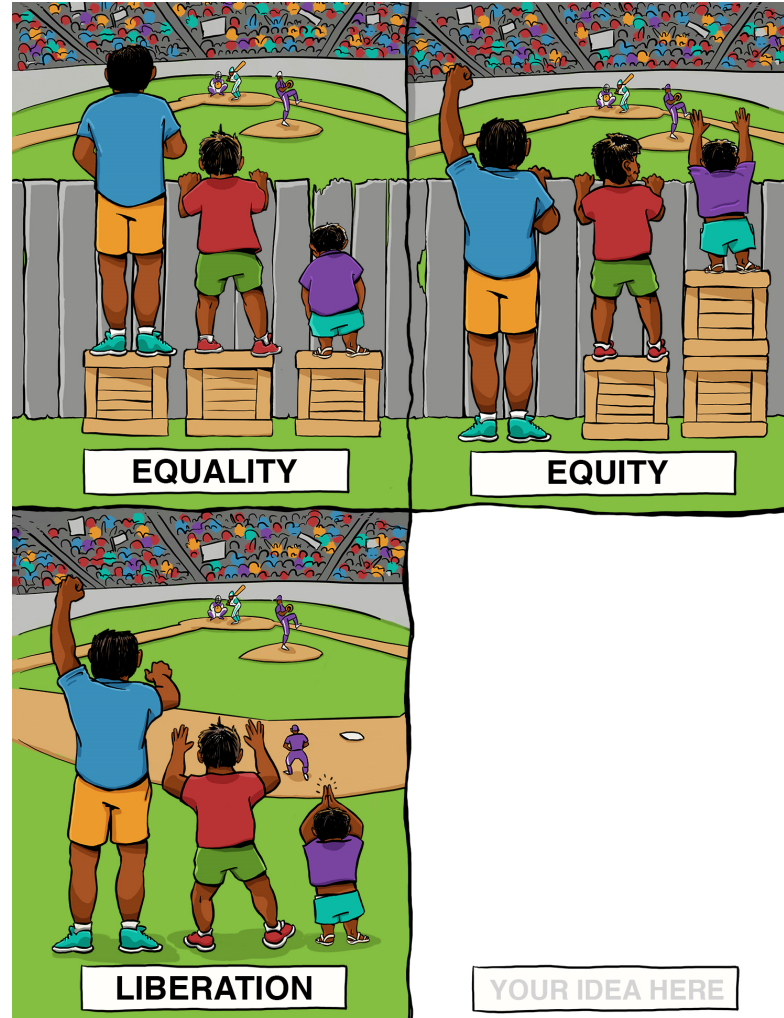
Access to basic needs delivered by energy services – “sufficiency”*

Not living in fuel / energy poverty

Carbon emissions

Taking part in the energy transition

Re-thinking this representation of equity



Thinking more
about the fence

Free energy for all isn't
a viable solution

Source: <https://www.storybasedstrategy.org/the4thbox>

What is the fence? What barriers are there to everyone accessing sufficient energy services?

- Income inequality and the structure of social support
- Access to capital
- Housing - its efficiency and condition of repair
- Energy-using equipment, its efficiency and condition
- Household level energy generation and storage
- Access to energy systems / fuels (e.g. natural gas)
- Energy prices
- Energy tariffs and who can take advantage of them
- Design of energy markets



There have been some important improvements

Energy prices per kWh no longer higher for pre-payment meter users

Energy using equipment is more efficient

Homes are more efficient

BUT

Millions of people in the UK are still suffering from inadequate access to energy services and tens of millions are vulnerable to price shocks.

The energy transition and equity: new issues

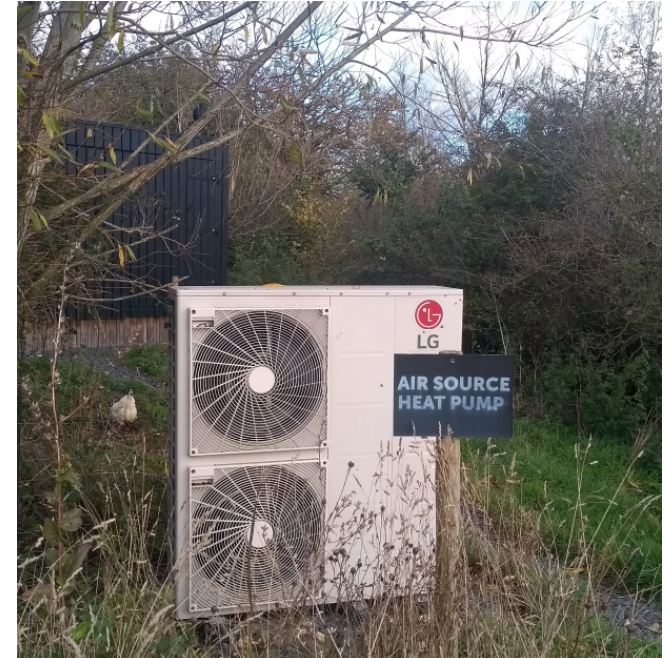
Switch away from gas heating towards a higher capital cost alternative

Running costs depend on government choices around market structures (as well as international energy prices)

Flexibility of energy use may increasingly determine prices paid – uneven distribution of ‘flexibility capital’

More community / local ownership of energy assets? Which communities & which capabilities?

Impact of digitalisation and other mega-trends



Future research on energy and equity (1)

Detailed work on implementation projects and trials, working with a range of partners, particularly on energy transition projects & with under-represented groups

Critical analysis of the patterns and causes of energy inequity, using new data

Analysis of the governance of energy & energy policy – equity impacts

iDpower iconDDLE



**REPAIR: RESEARCH ON ENERGY THROUGH
PARTICIPATORY INSIGHTS FROM COMMUNITY
REPRESENTATIVES**

Future research on energy and equity (2)

Thinking bigger – proposing more radical solutions

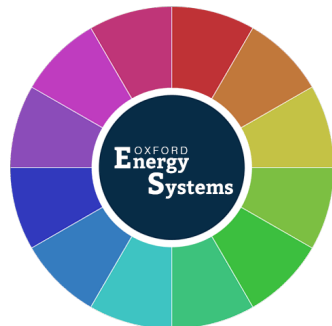
Conceptual development – sharper thinking on equity

Focusing on energy sufficiency – over- as well as under-consumption

Exploit opportunities with new data sources, tools & methods

Equity beyond individuals and households – what about SMEs?

Making connections with broader areas of research and practice



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Thank you

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Further information

European sufficiency project: www.energysufficiency.org (includes Darby, S. and Fawcett, T. (2018) *Energy sufficiency: a concept paper for ECEEE*. European Council for an Energy-Efficient Economy.)

www.edol.uk

<https://accessnetwork.uk/repair-research-on-energy-through-participatory-insights-from-community-representatives/>

<https://idoddle.org/>

<https://www.cleanheatstreets.com/>

<https://circeular.org/>