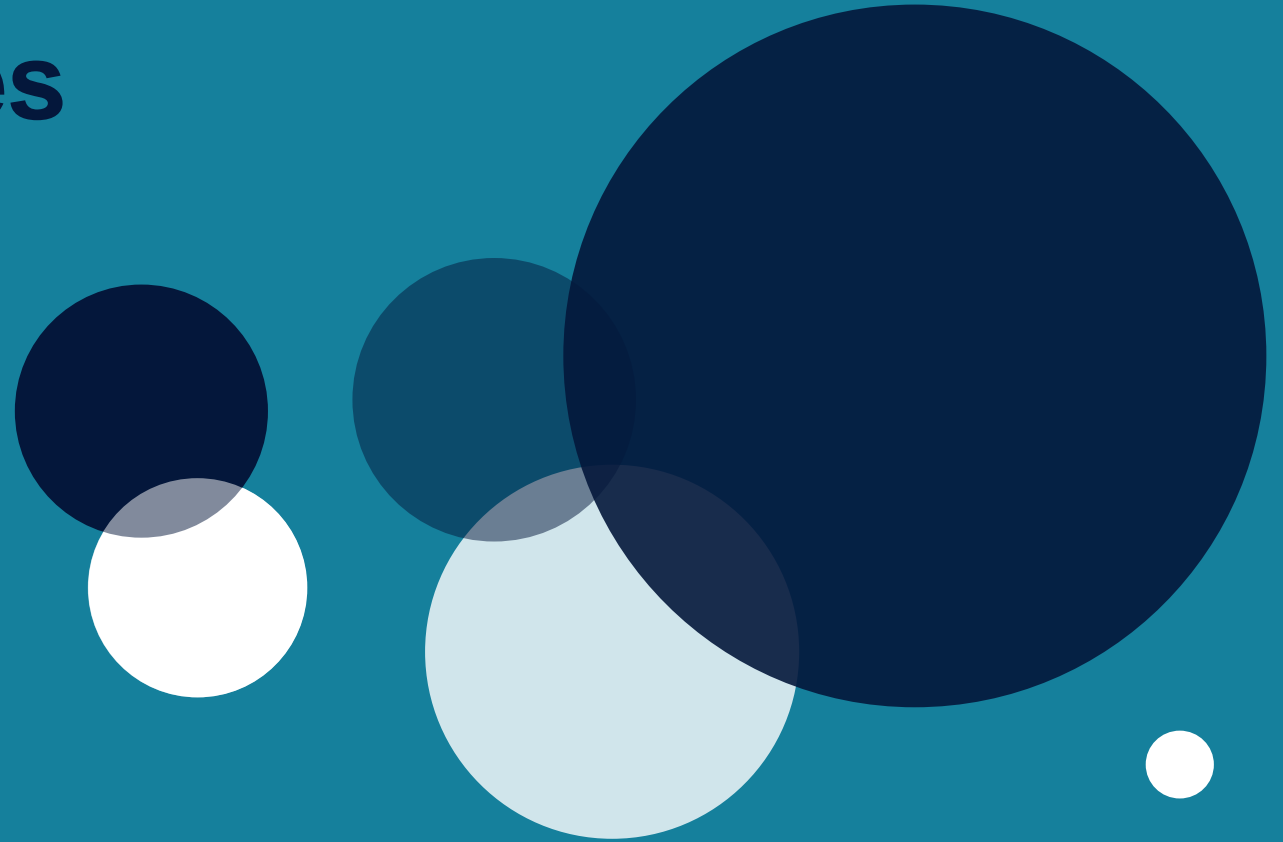


Energy use in homes & energy prices

Dr Tina Fawcett

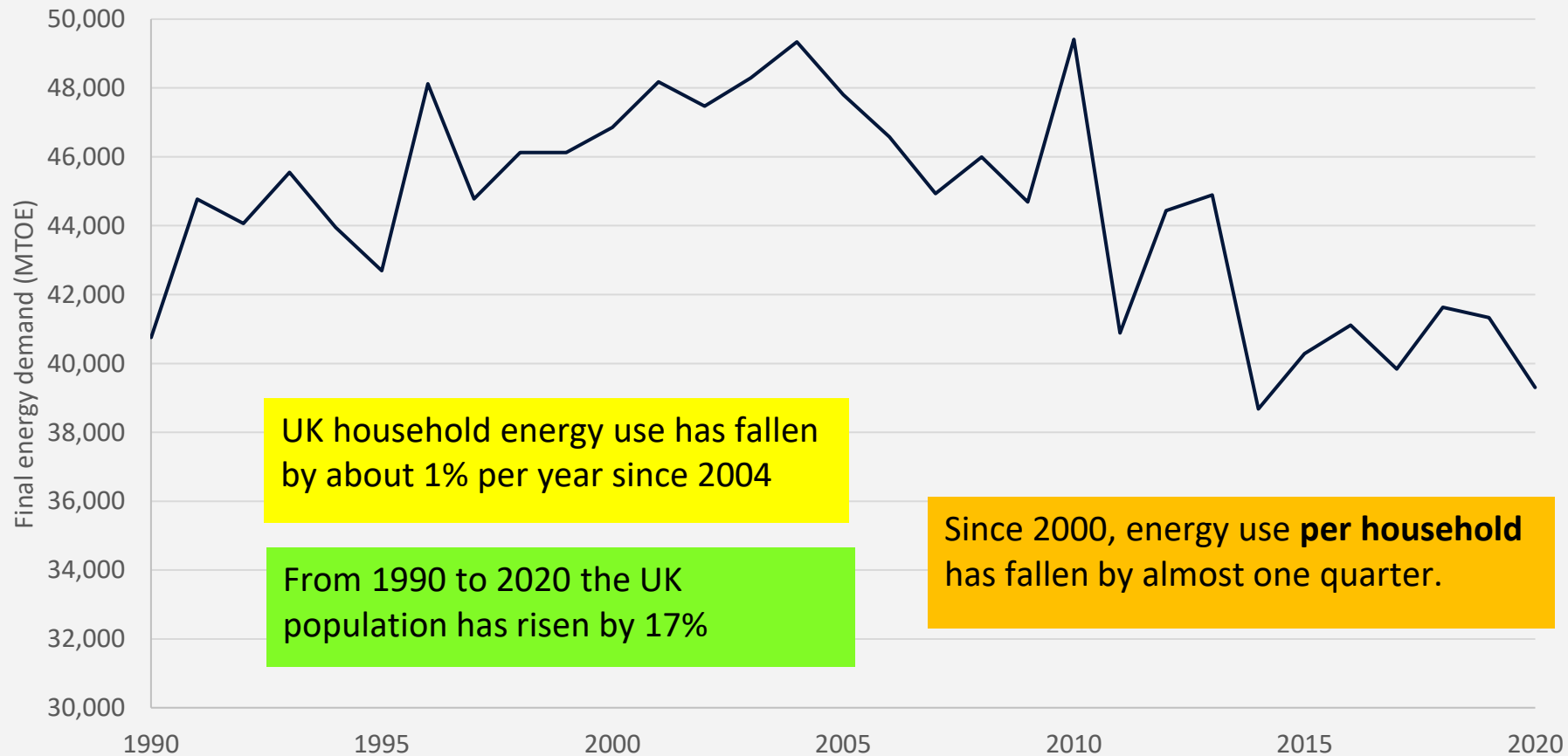
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29 November 2022



How household energy use has changed over time

Household energy use UK, 1990-2020



Where we use energy in homes

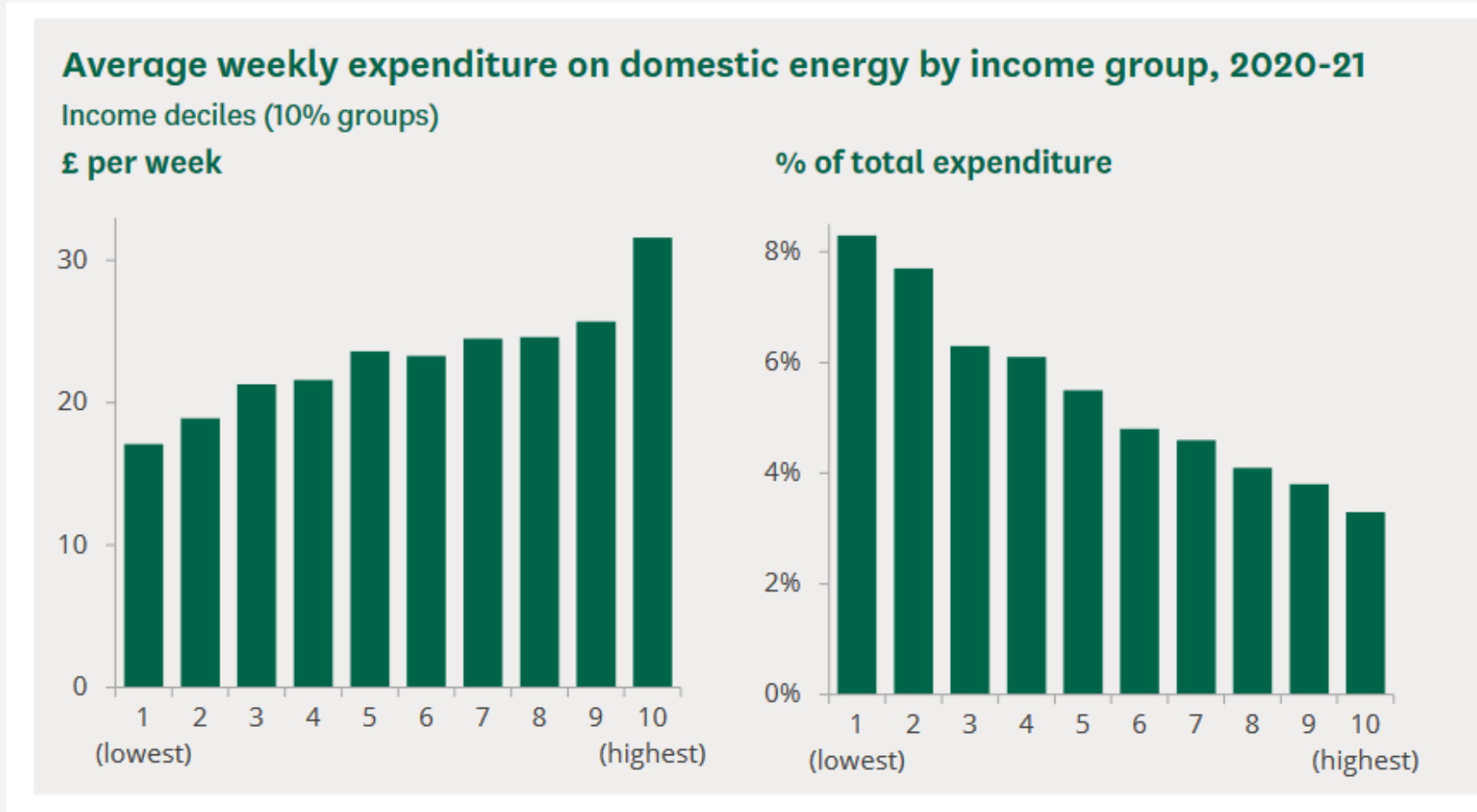
Approximately 30% of the UK's energy is used in homes. This supplies us with heating, hot water, electrical appliances, information / entertainment, cooking and lighting.

Most energy is used for heating and hot water (about two thirds of the total). For most people, this is provided by natural gas.

Energy use can vary hugely between similar-looking households, for a variety of technical, social and behavioural reasons.

On average, lower income households use less energy than higher income households, but spend a higher percentage of their income on it.

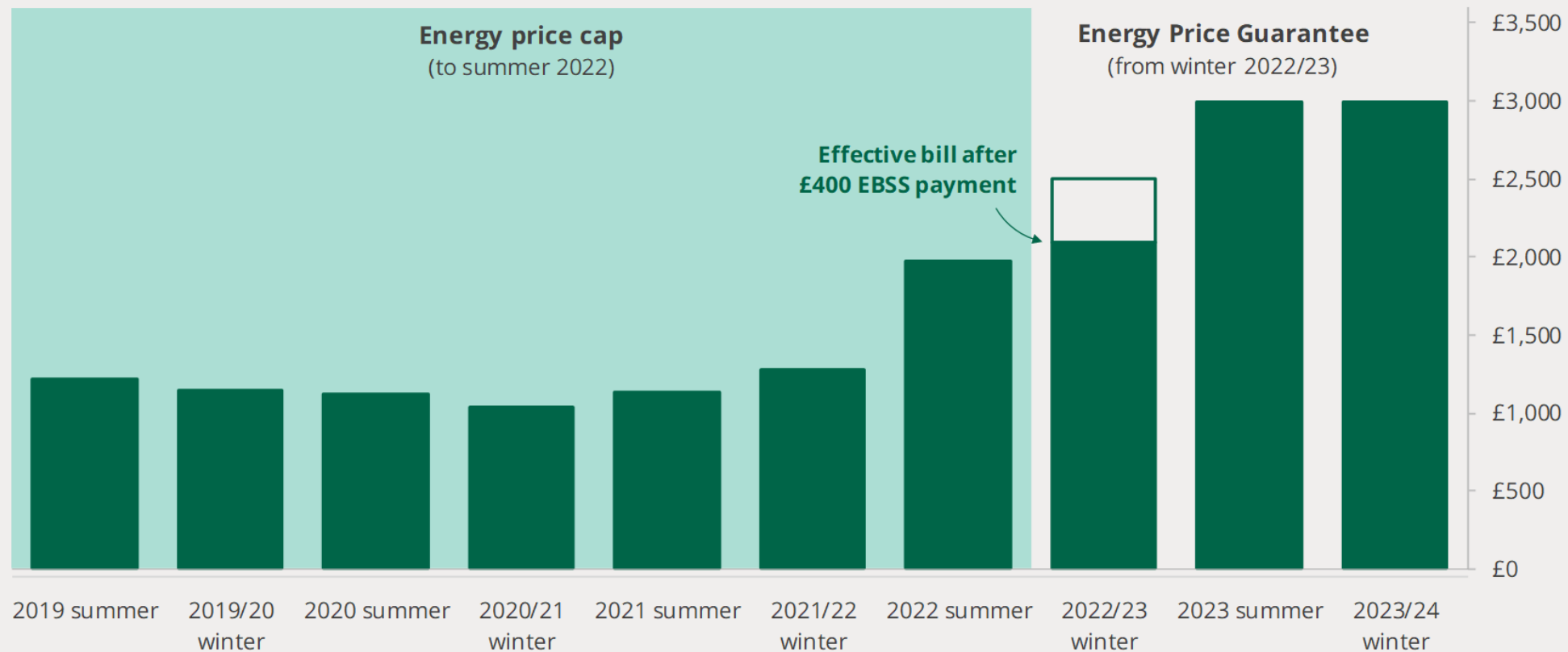
Expenditure by income



Expenditure on energy

Under the Energy Price Guarantee bills increase by 27% in October 2022 and a further 20% in March 2023, bills in winter 2022/23 reduced by the EBSS

Annual bill equivalent for typical levels of consumption, direct debit dual fuel customers



Price rises & low income households

“... energy prices in 2022-23 could be 116% higher than in 2020-21.

An increase of this size would mean that households in the bottom two income deciles would need to spend £1,000 to £1,100 more on energy in 2022-23 to consume the same amount as they did in 2019-20.

Pensioner households would have to spend around £1,400 more.

These estimates average out prices for the whole year, so only partially take into account higher prices from October. In addition, households will also face pressure on their budgets from rising food prices and other increases to the costs of living.”

House of Commons Library (2022) Domestic energy prices, p 48, <https://researchbriefings.files.parliament.uk/documents/CBP-9491/CBP-9491.pdf>

Saving household energy



We don't know for certain how much energy the average household can save, without suffering some adverse effects from loss of 'energy services'.

My personal guesstimate would be 10-20%.

Certainly, without major investment in energy efficiency, people cannot reduce their energy use by half. Reducing energy use by half would involve very major household renovation.

Therefore it is generally impossible, in the short to medium term, for people to save their way back to 2021 energy bills without very serious adverse effects, particularly in terms of warmth.

There are some good sources of information on how to save energy (e.g. Energy Saving Trust), but from research we know that personal advice is more effective than generic information. This is generally more expensive to deliver and difficult to scale up.