



West
Yorkshire
Combined
Authority

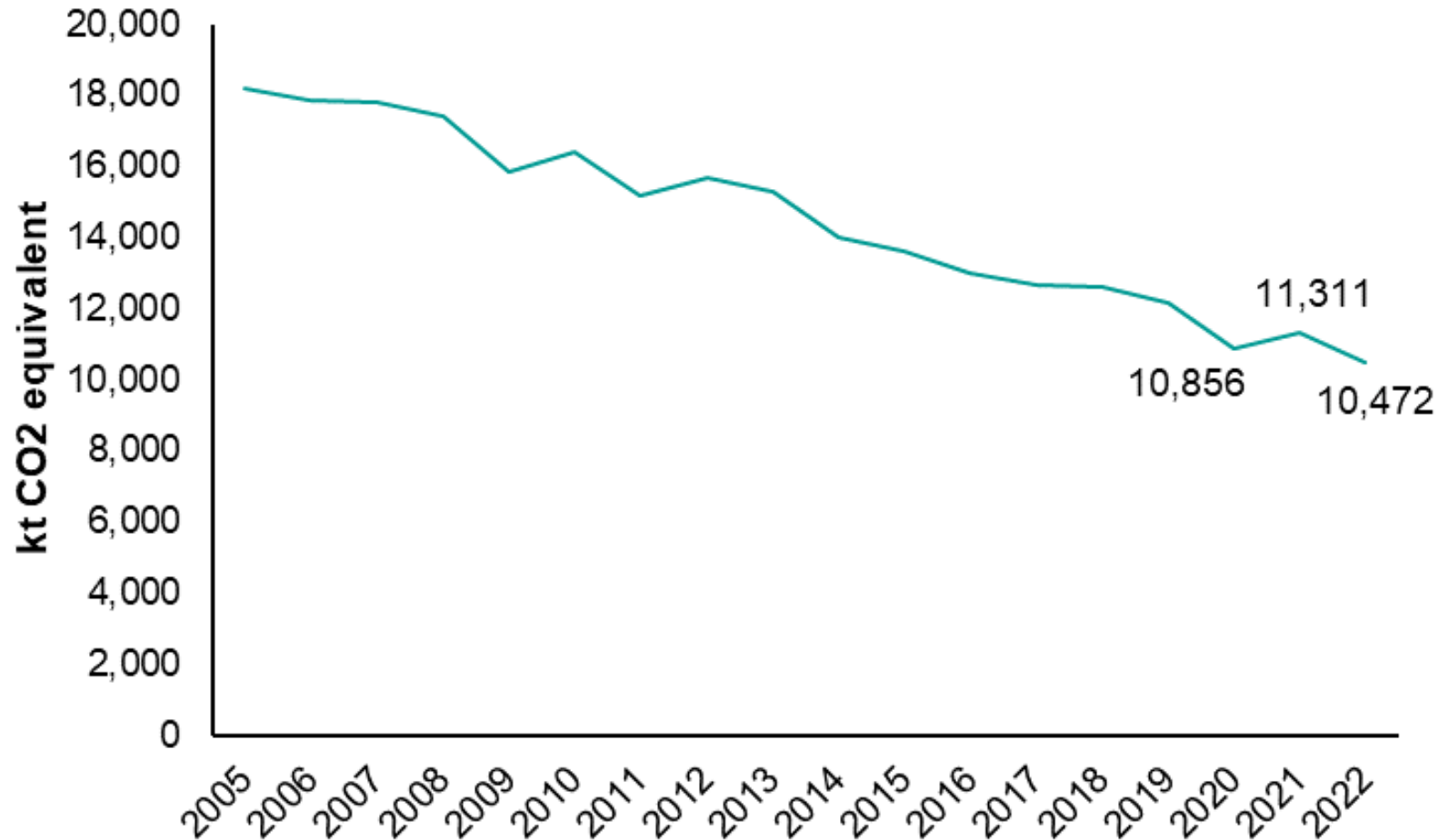
Tracy
Brabin
Mayor of
West Yorkshire

Item 5: Appendix - Monitoring indicators



After an increase in 2021, emissions declined in 2022 and reached their lowest recorded level

Figure: Trend in greenhouse gas emissions, West Yorkshire (ktCO₂e)



After an increase in 2021, emissions were back on a downward trend in 2022 and at the lowest level recorded in the data (2005-2022 period).

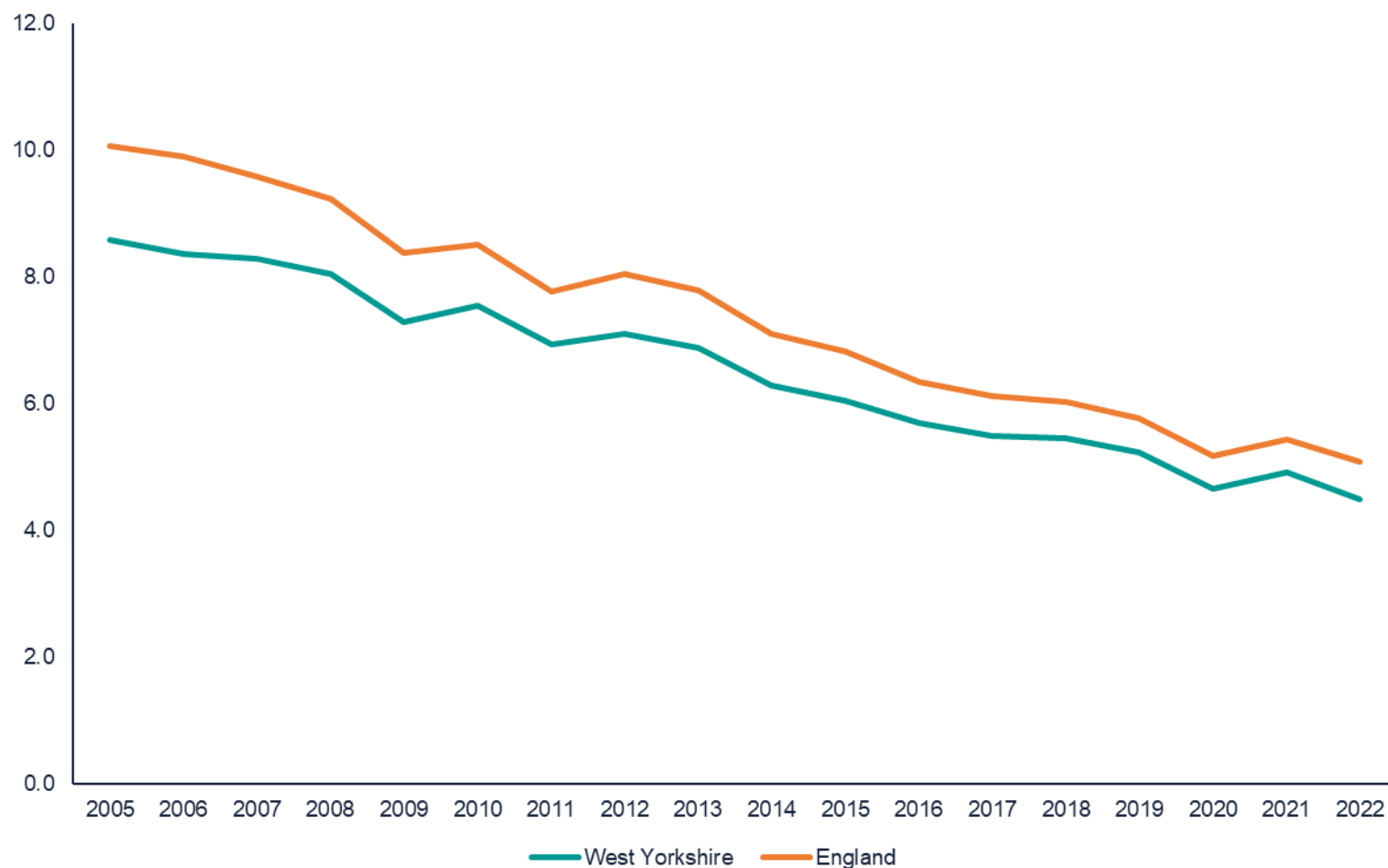
West Yorkshire emissions fell by 7.4% year-on-year compared to the previous year and are 3.5% below 2020 levels.

Compared to pre-pandemic, emissions were 13.9% lower.

NB: CO₂e (CO₂ equivalent) units are a measure of greenhouse gas emissions, including methane (CH₄) and nitrous oxide (N₂O) emissions as well as carbon dioxide (CO₂) emissions. Each of the gases is weighted by its global warming potential - defined as its warming influence in relation to that of carbon dioxide over a 100-year period

West Yorkshire emissions also declined more than England's on a per capita basis

Figure: Per capita greenhouse gas emissions (tonnes CO₂e per resident), 2005-2022



In 2022 emissions per capita fell faster in West Yorkshire compared to the previous year than in England : -8.5% vs. -6.4%, respectively.

Also, emissions are 3.4% lower when compared to 2020 in West Yorkshire and only 1.9% lower in England.

In pre-pandemic terms, emissions per capita declined by 14.0% vs. 11.9% in England.

Per capita emissions are below the national average for four of the five local authorities

Figure: Per capita greenhouse gas emissions (tonnes CO₂e per resident), 2022



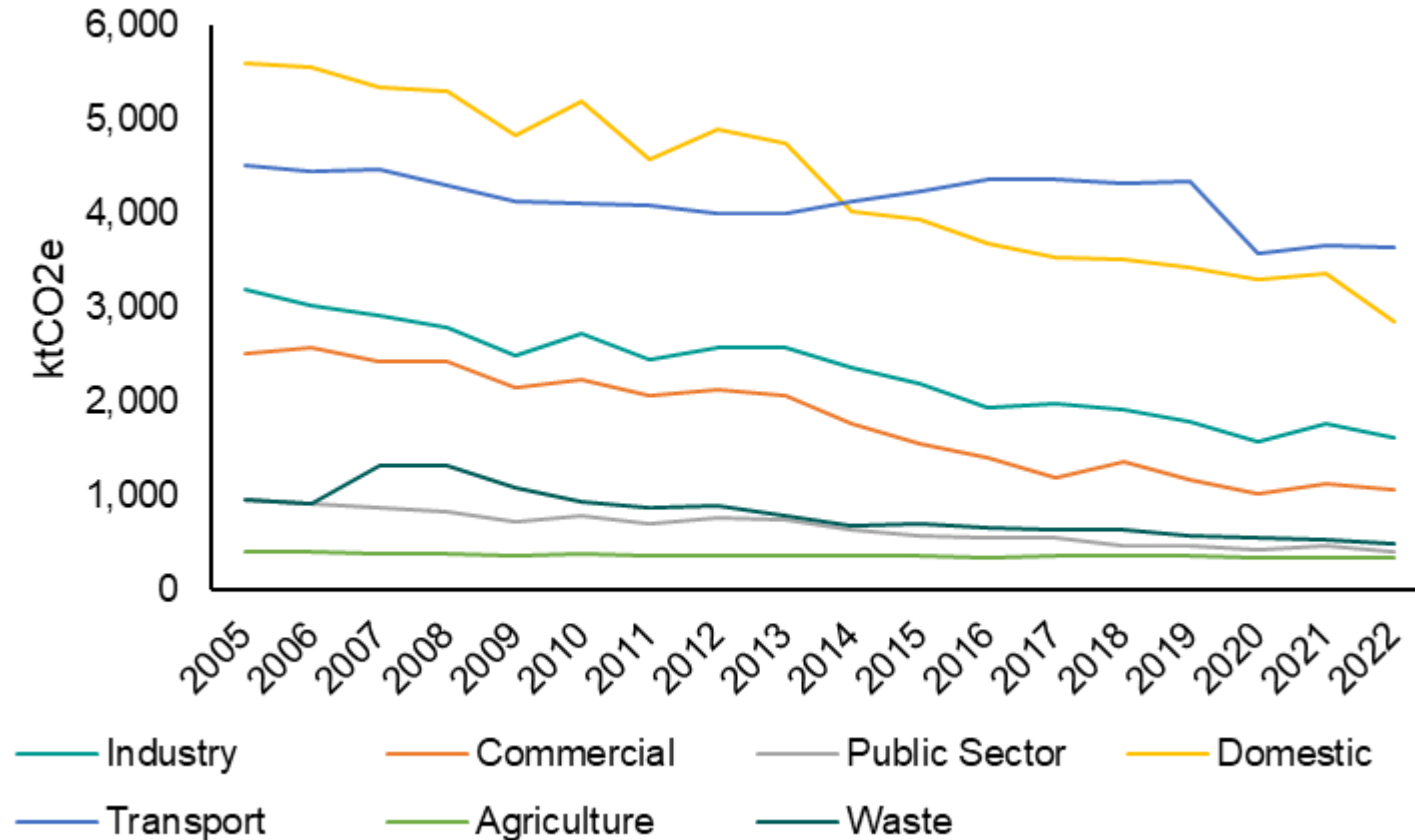
Wakefield is the only local authority with higher emissions per capita than the England average and in line with the UK average.

West Yorkshire's five local authorities saw a stronger decline in emissions per capita between 2021 and 2022 than the national average.

Source: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2022

West Yorkshire's reduction mostly driven by domestic and industrial emissions; Transport emissions remain stable and above 2020 levels

Figure: Trend in greenhouse gas emissions by sector, (ktCO₂e), West Yorkshire



Although all sectors have emissions below 2019 levels:

Compared to 2019, the sharpest declines were domestic emissions (-16.9%) and transport (-16.1%)

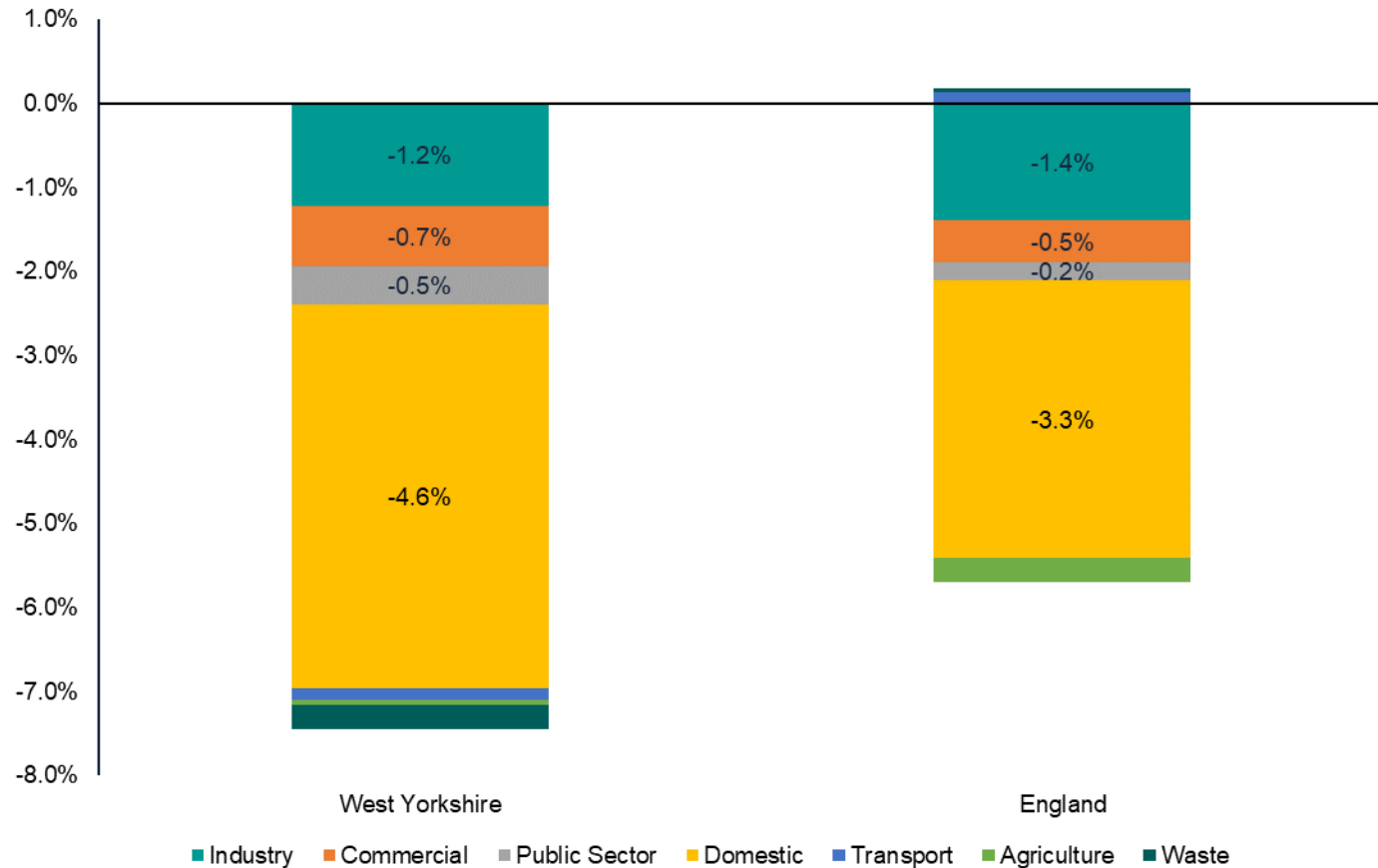
Transport emissions remained mostly static between 2021 and 2022 and 1.6% above 2020 levels.

Transport emissions continue to be the highest source of emissions at 35% of the total - in line with Transport's contribution in 2019.

Source: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2022

Domestic emissions are the main reason why West Yorkshire had a stronger overall decline than England in 2022

Figure: Contribution to the carbon emissions reduction in 2022 (share of all emissions), West Yorkshire and England 2022 vs. 2021



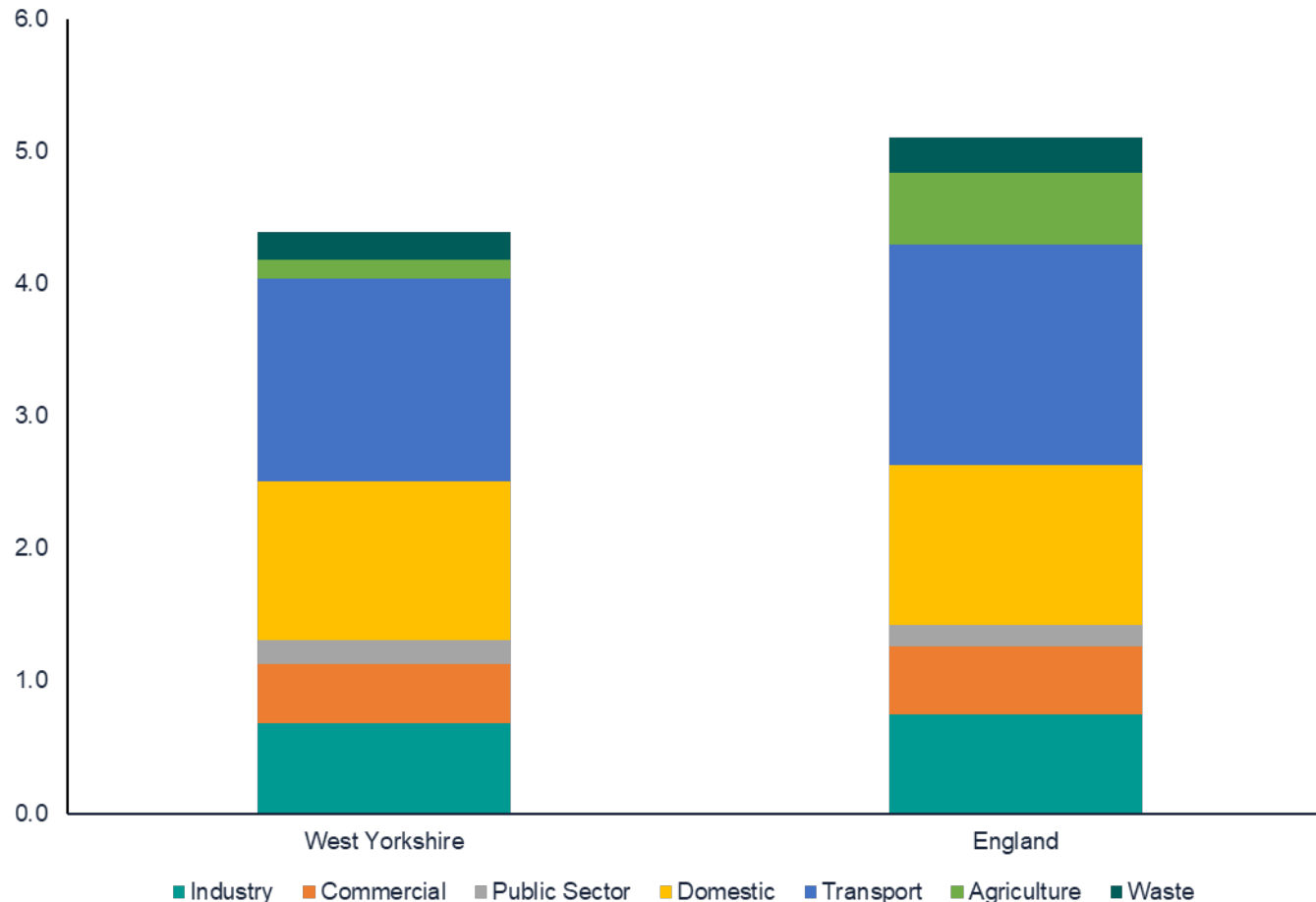
The major difference between West Yorkshire and England's emissions decline is seen in domestic sector.

- Of the 1.9 percentage point difference in the decline in emissions 1.3 percentage points can be attributed to domestic emissions.

-The decline in industrial emissions was stronger at national level (1.4 point contribution to the reduction of all emissions) than in contribution to the West Yorkshire (1.2 points).

The major difference in per capita emissions between West Yorkshire and England comes from agriculture

Figure: Per capita greenhouse gas emissions by sector (tonnes CO₂e per resident), West Yorkshire and England in 2022



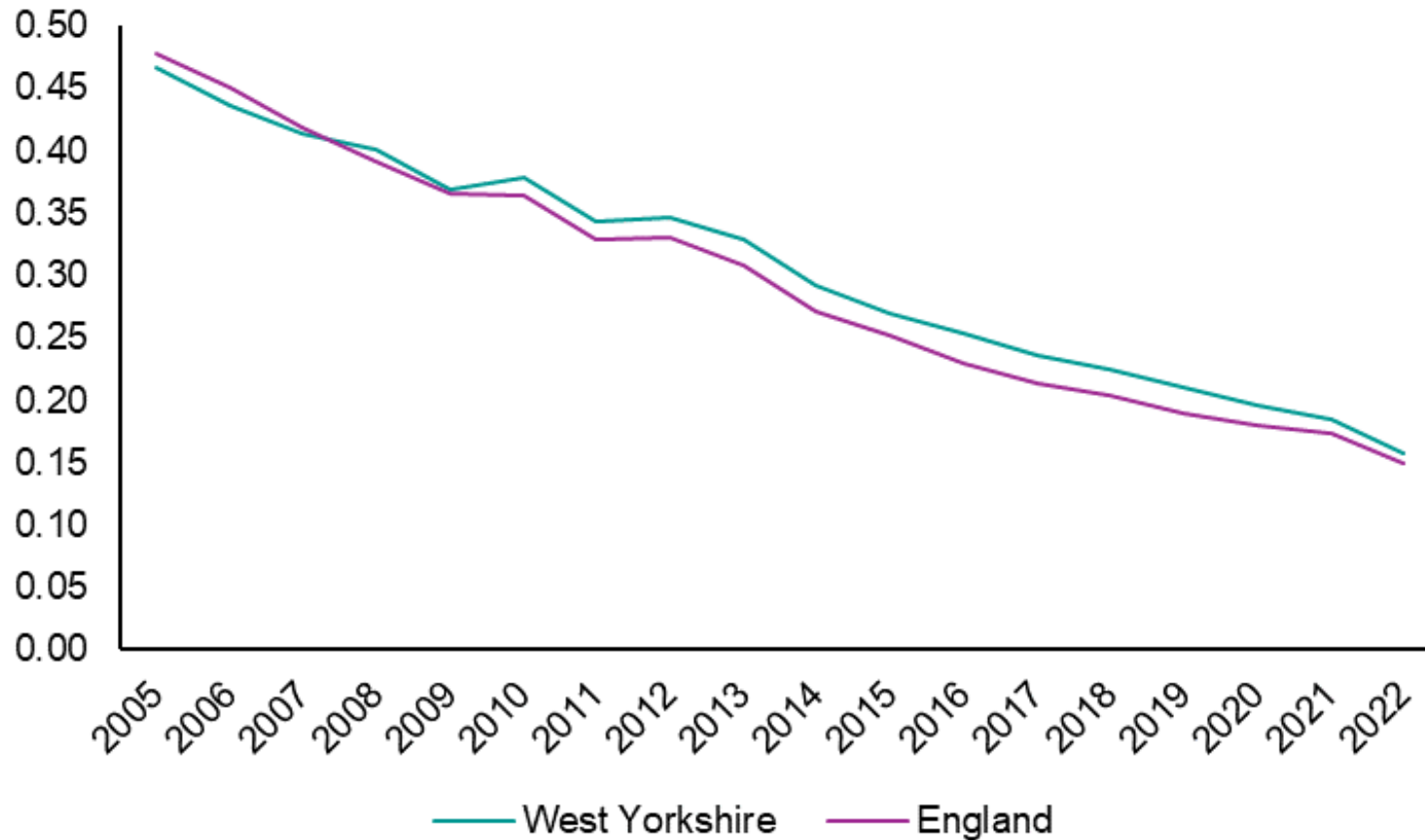
England's emissions are 0.7 tonnes of CO₂ equivalent per resident higher than in West Yorkshire.

Of that difference, 0.4 tonnes (55%) can be attributed to differences in agriculture related emissions.

Emissions per capita are lower in all sectors in West Yorkshire, with the exception of the Public sector where emissions are the same.

West Yorkshire's emissions intensity ratio continued to converge with the national average

Figure: Greenhouse gas emissions intensity (ktCO₂e per £m gross value added)

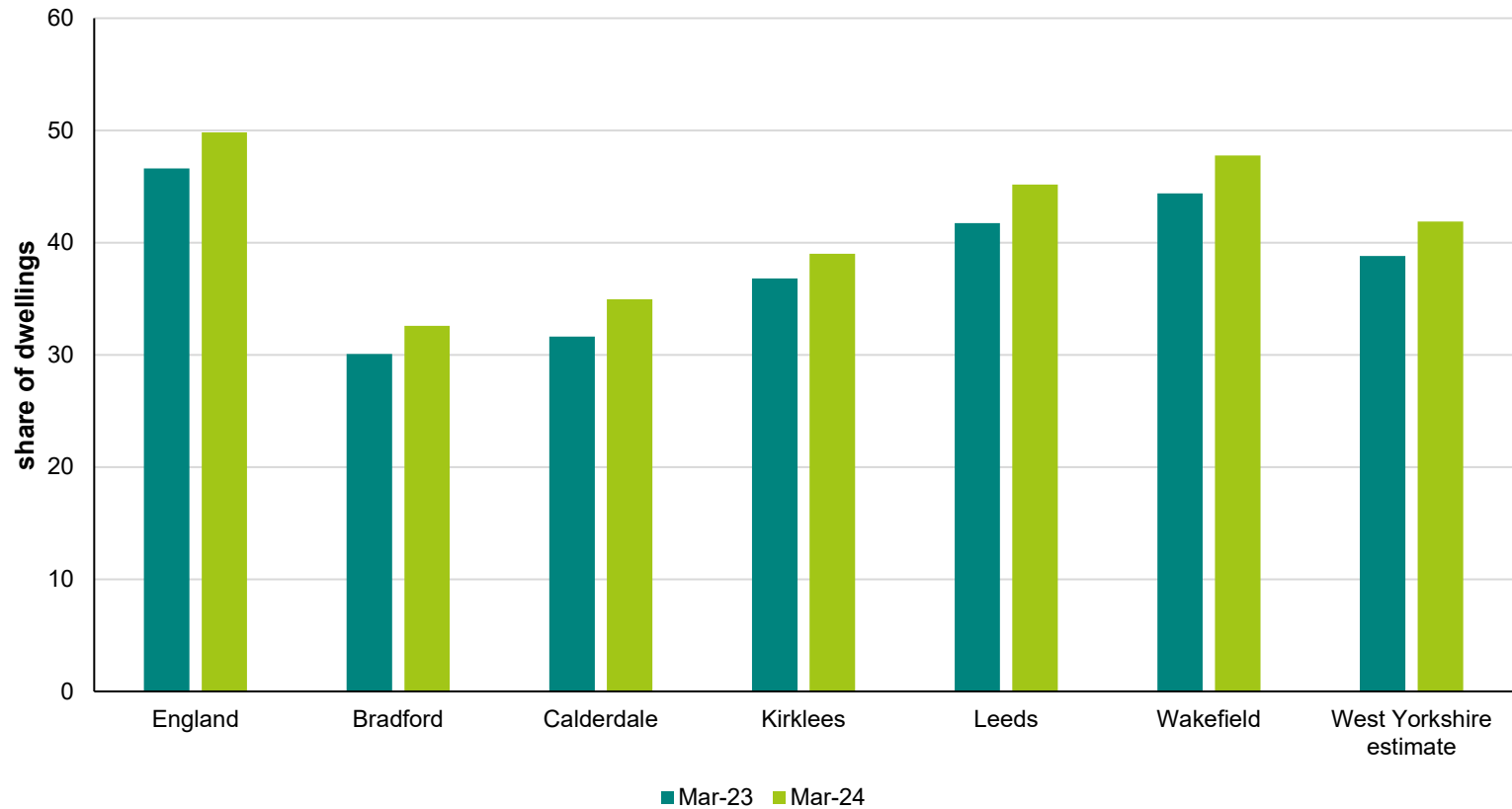


Despite lower emissions per capita, emissions intensity – taking into account economic activity – are still above the national average.

That said, the last 3-4 years intensity has been converging with the national average.

The number of dwellings with EPC Band C or above remains below the national average in all districts

Figure: Percentage of dwellings with EPC Band 'C' or above

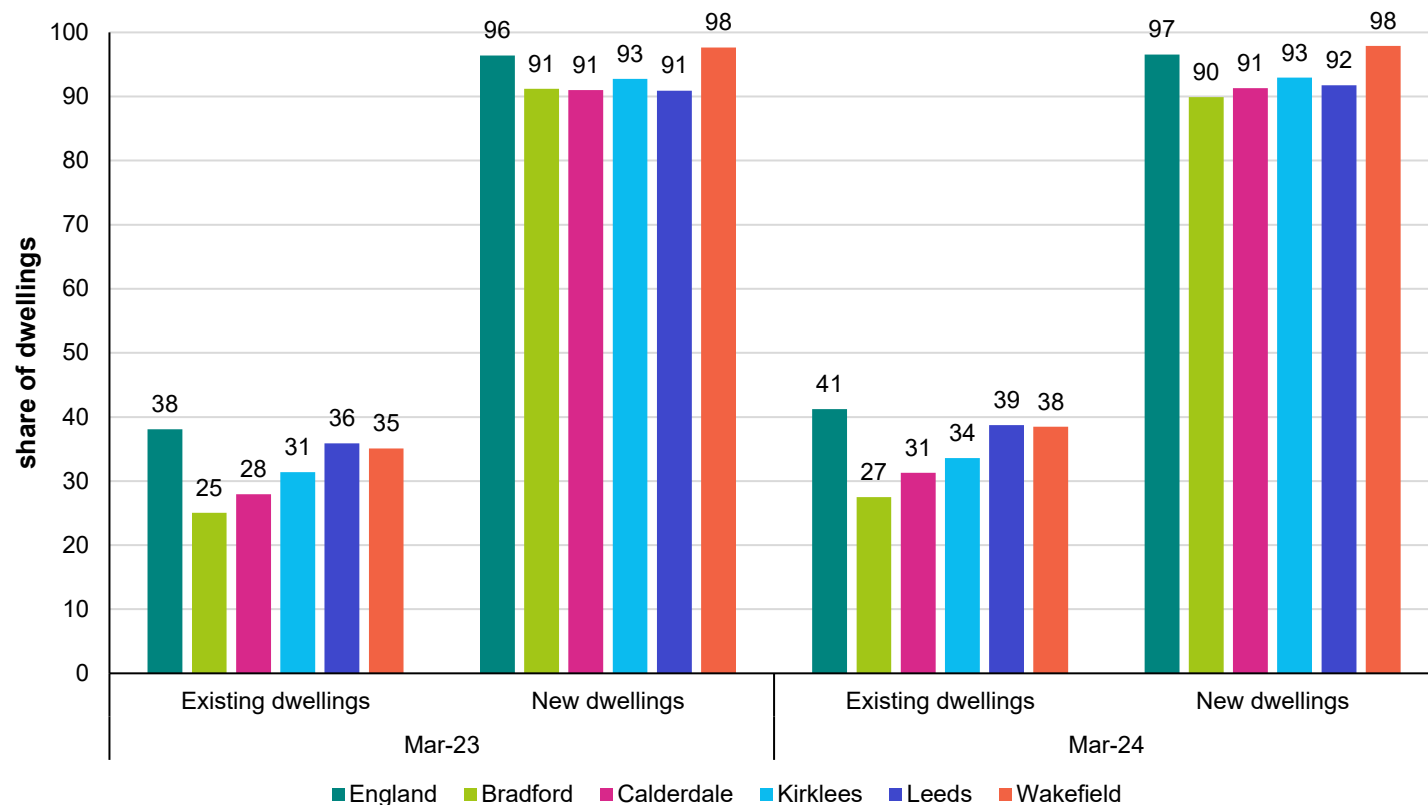


Source: ONS, Energy Performance Certificate (EPC) Band C or above, England and Wales.

Note: West Yorkshire numbers estimated using the Census 2021.

The vast majority of new dwellings have an EPC Band C or above, but the proportion remains below the national average in most districts – this is likely to be driven by conversions

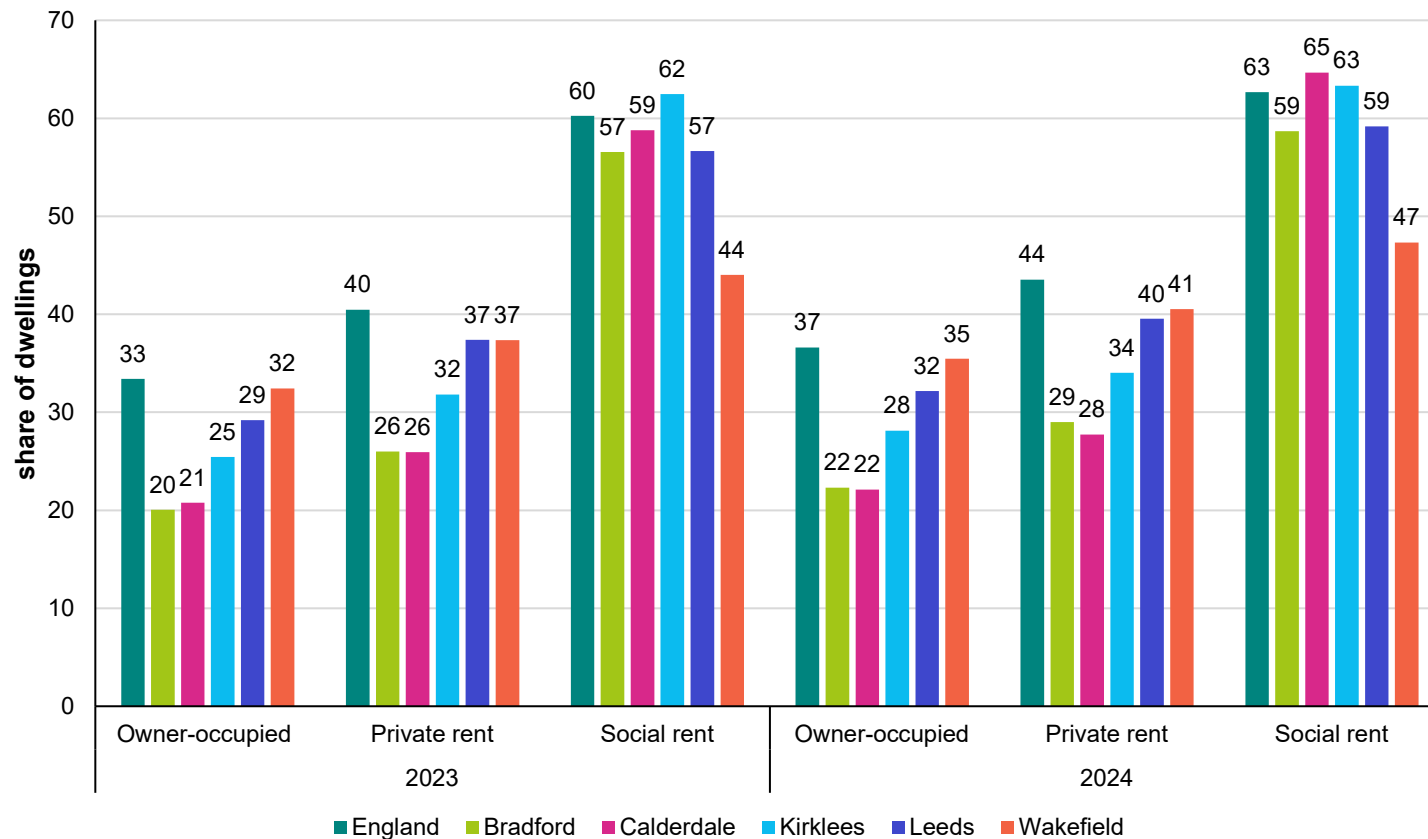
Figure: Percentage of dwellings with EPC Band 'C' or above, for new and existing dwellings



Source: ONS, Energy Performance Certificate (EPC) Band C or above, England and Wales.

Social rent has higher shares of dwellings with an EPC Band C or above, with Calderdale and Kirklees performing better than the national average

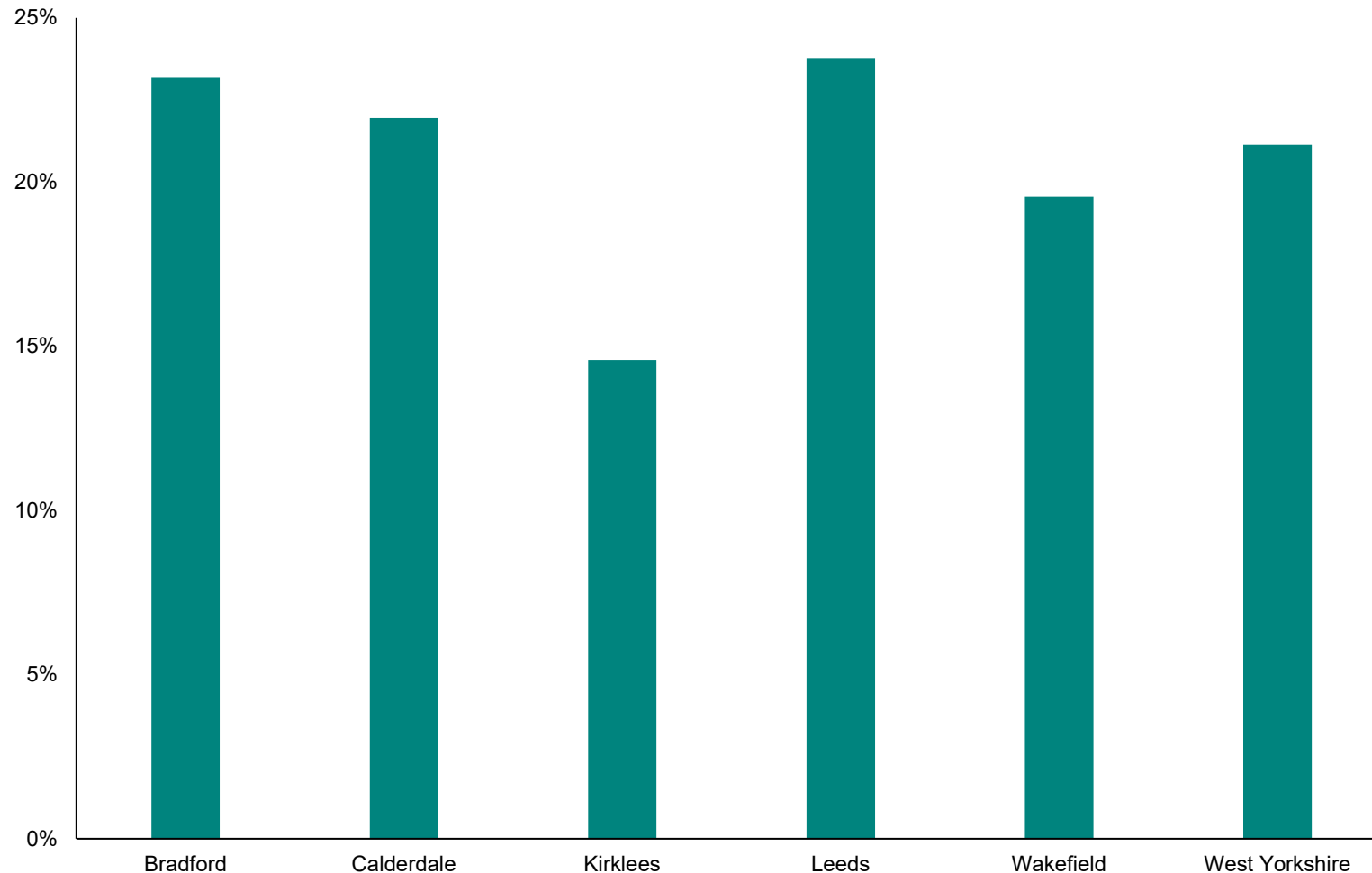
Figure: Percentage of dwellings with EPC Band 'C' or above, by tenure



Source: ONS, Energy Performance Certificate (EPC) Band C or above, England and Wales.

Around one fifth of West Yorkshire's population have easy access to local natural greenspace

Figure: Proportion of the population who have access to local natural greenspace

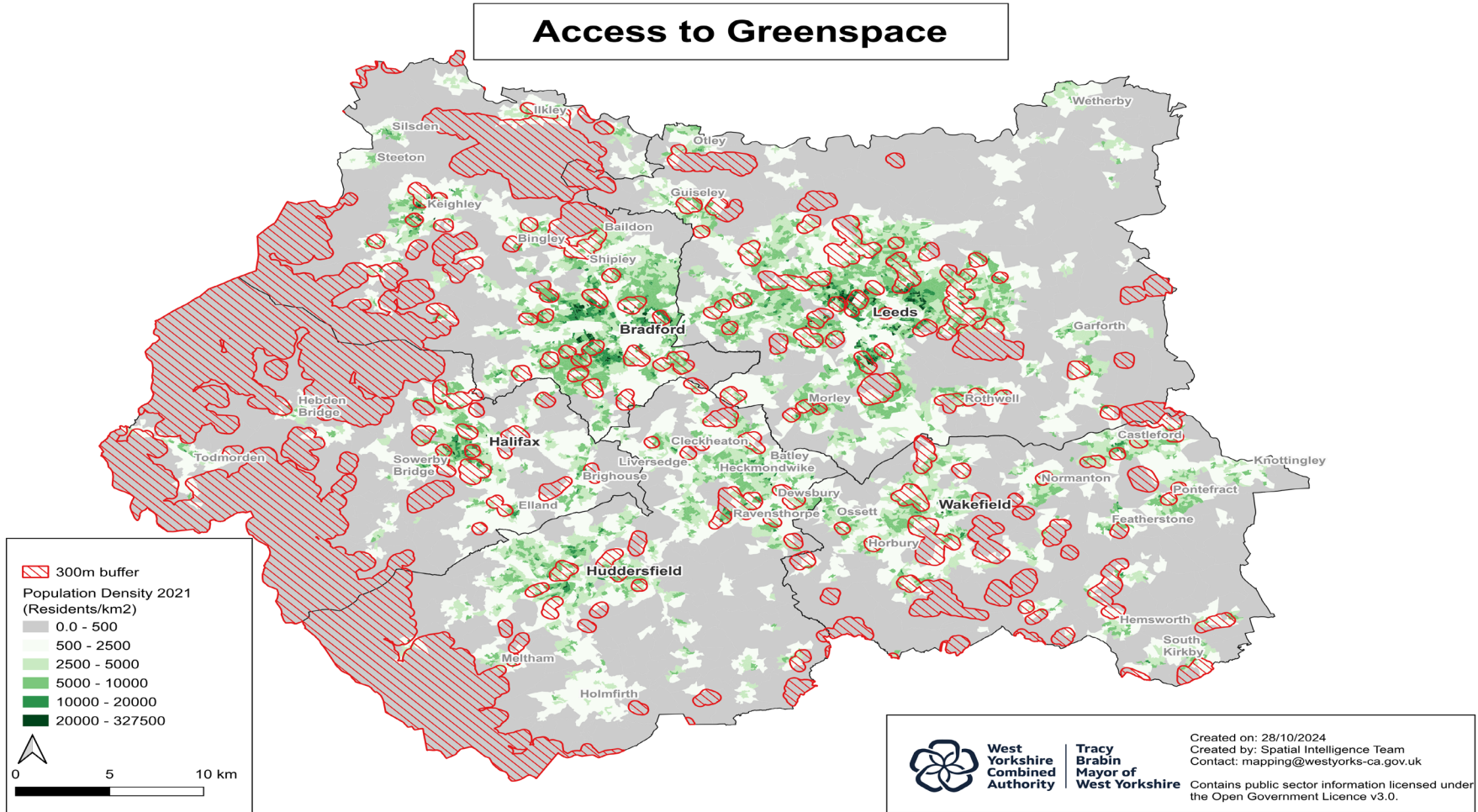


This indicator has been developed by Natural England and relates to the proportion of the population with easy access to local natural greenspace – i.e. live within 300m (as the crow flies) of an area of accessible natural greenspace of at least 2 hectares in size.

Source: Environmental Agency, ONS Mid-Year Population Estimates

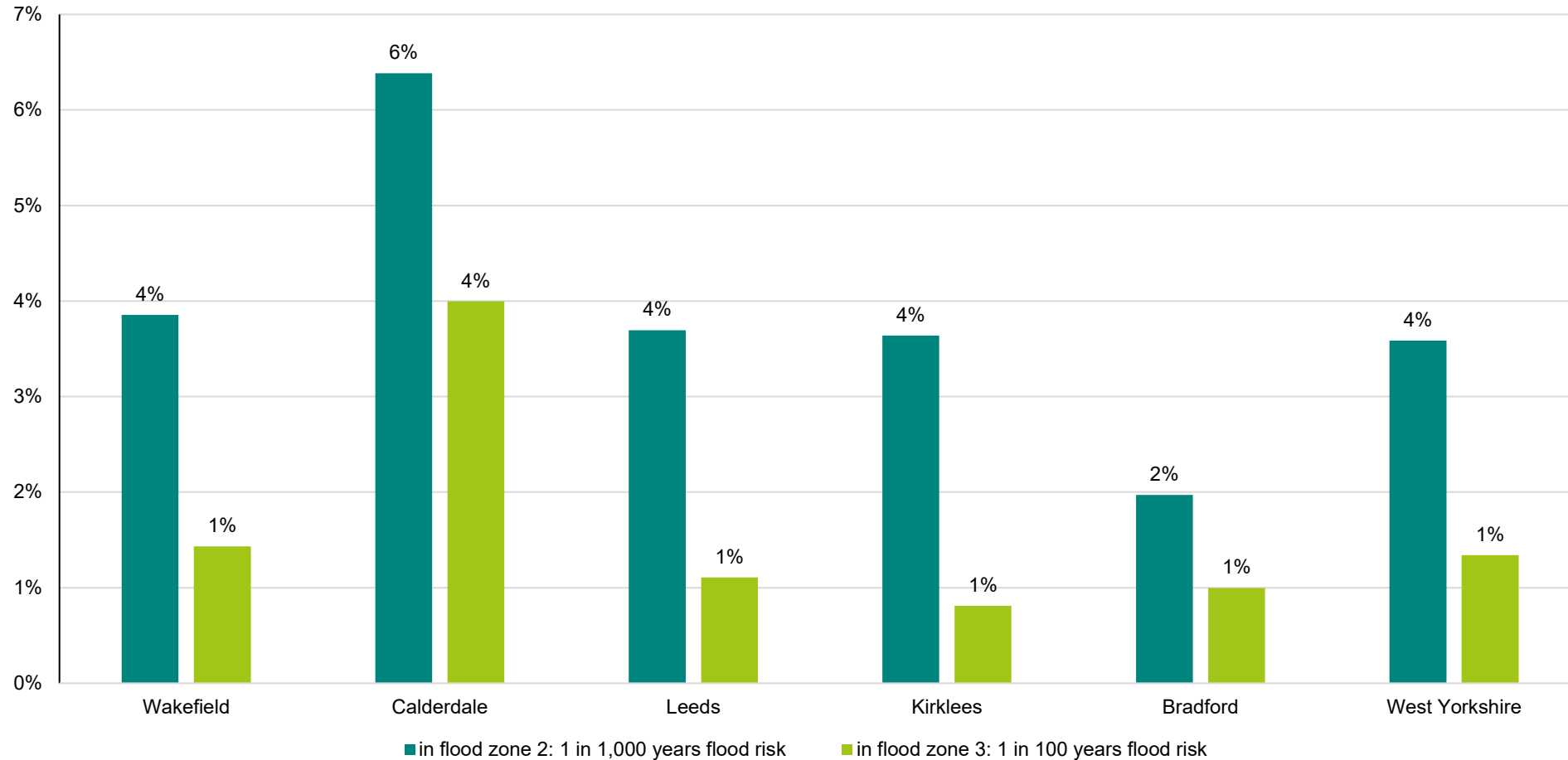
Access to local natural greenspace

Figure: Areas with access to greenspace



Around 4% of residential properties in West Yorkshire fall within a flood zone, rising to more than 6% in Calderdale

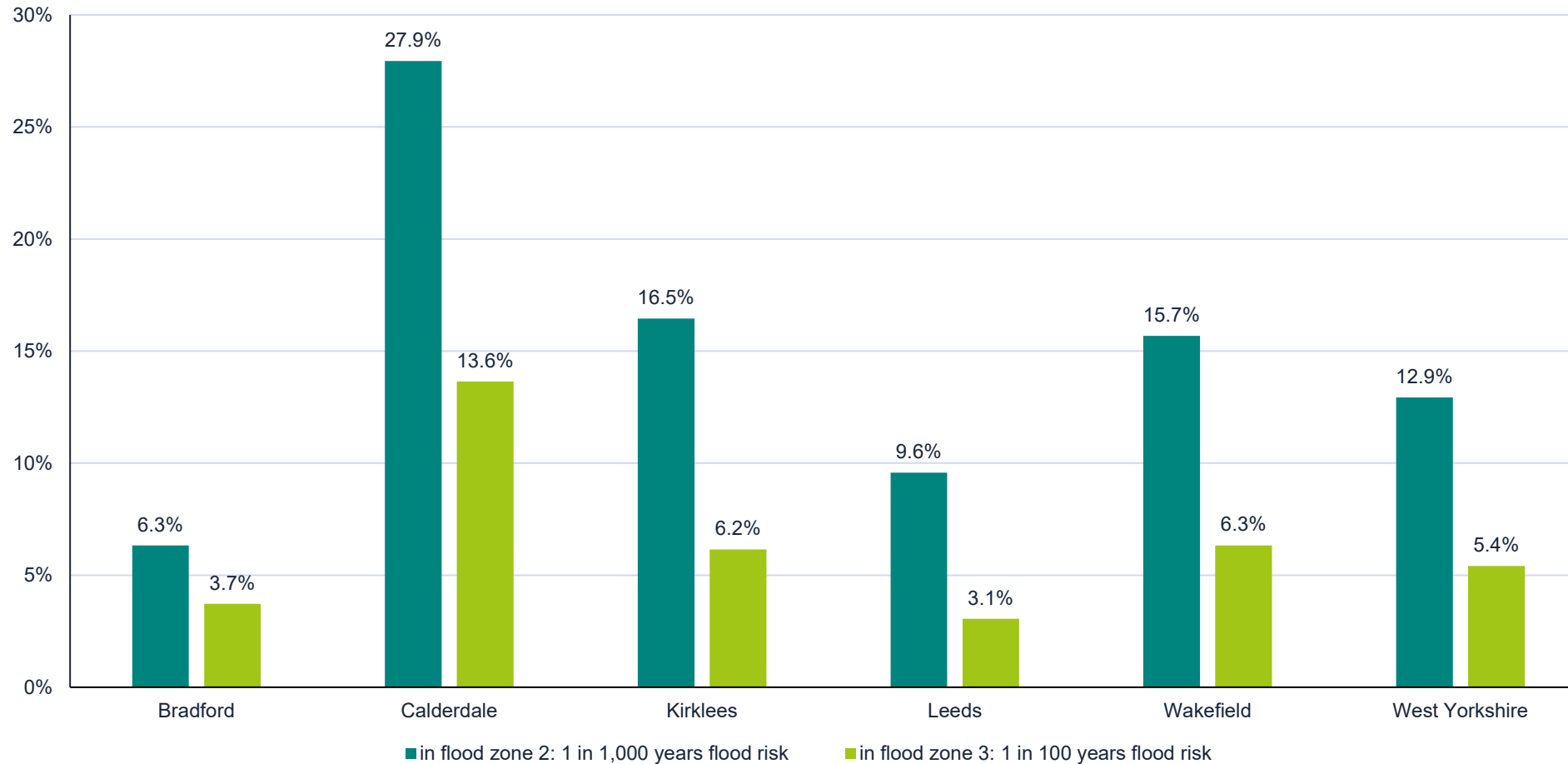
Figure: Proportion of residential properties in flood zones



Source: Environmental Agency 2024, Ordnance Survey 2024

13% of commercial properties in West Yorkshire fall within a flood zone, with almost a third in Calderdale

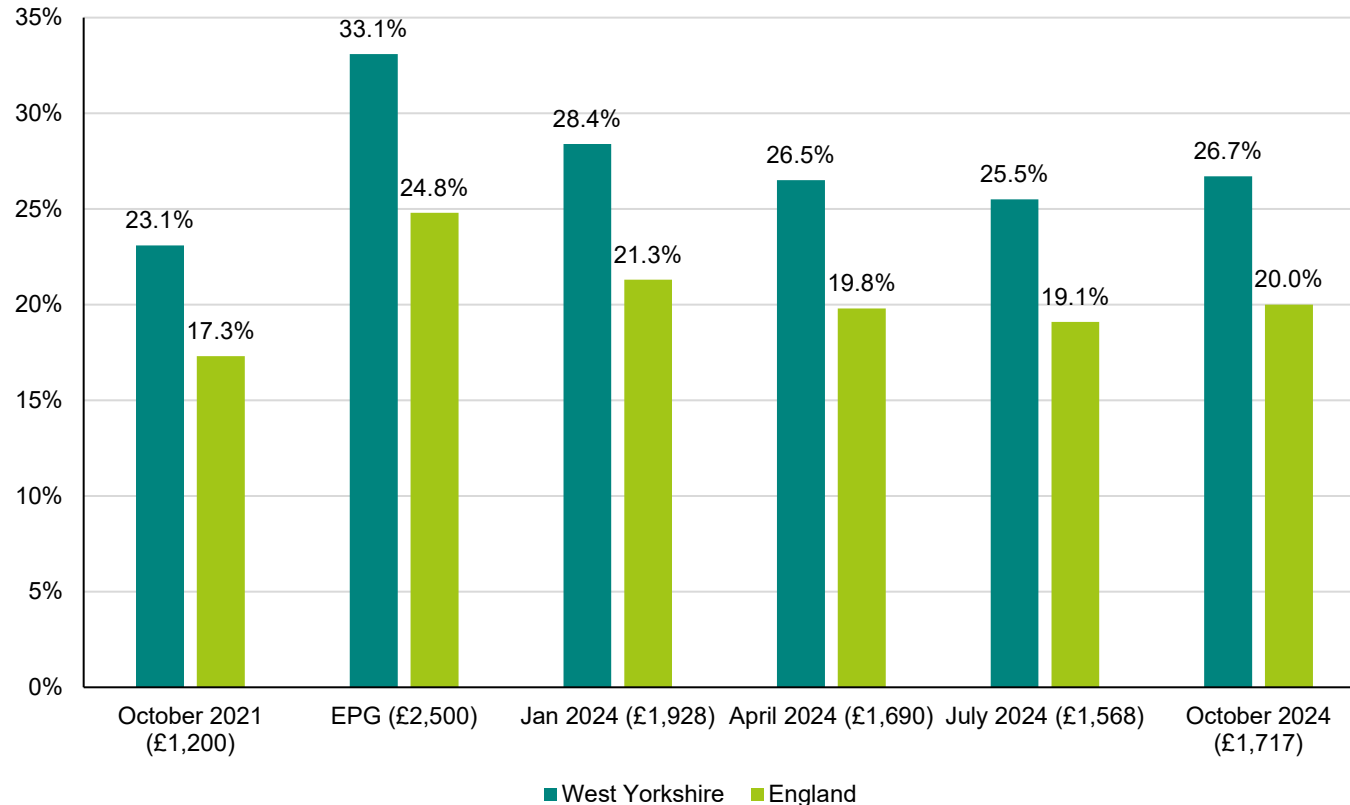
Figure: Proportion of commercial properties in flood zones



Source: Environmental Agency 2024, Ordnance Survey 2024

Estimates suggest that 27% of West Yorkshire households are in fuel poverty under the latest energy cap, above England average

Figure: Proportion of households in fuel poverty, estimates based on End Fuel Poverty Coalition figures

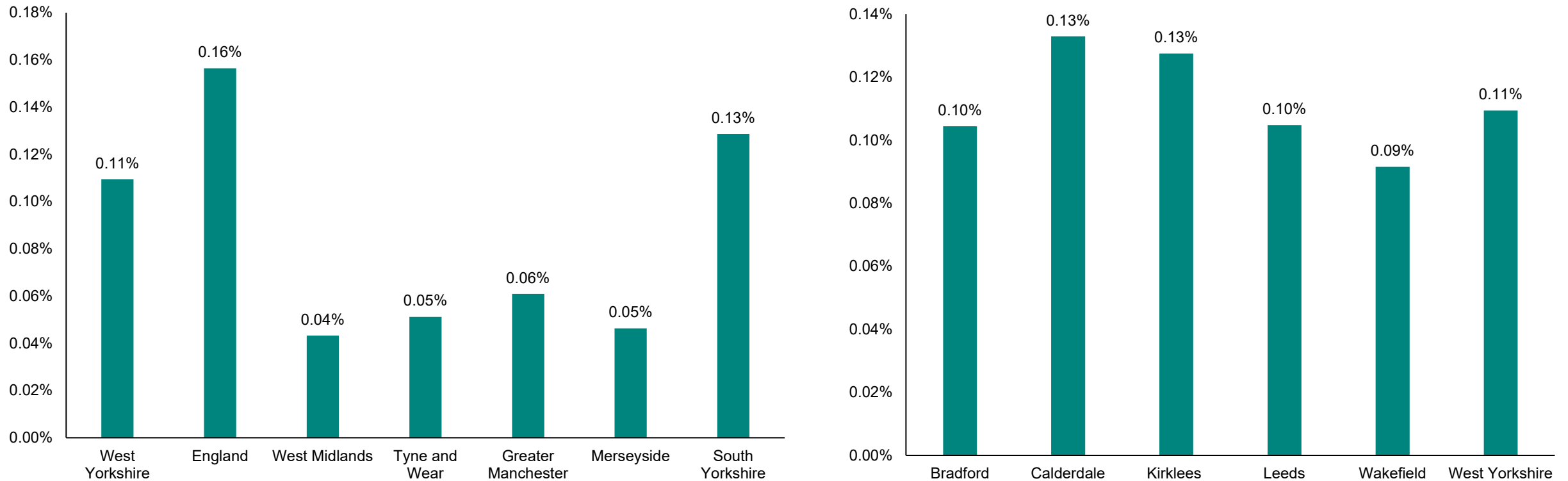


These estimates do not take into account changes to winter fuel payments

Source: West Yorkshire Combined Authority estimates, based on End Fuel Poverty Coalition figures. This figures differ, methodologically, from ONS [Low-Income Low Energy Efficiency \(LILEE\)](#) methodology.

West Yorkshire households less likely to receive BUS grant than national average

Figure: Number of Boiler Upgrade Scheme (BUS) grants paid (May 2022 to December 2024) as proportion of total dwellings (dwelling stock, 2023)



Source: Department for Energy Security and Net Zero, Boiler Upgrade Scheme statistics: December 2024.

- Within West Yorkshire, Calderdale and Kirklees are the ones taking most grants.

The proportion of West Yorkshire households receiving Warm Home Discount is above national average

Figure: Number of households receiving WHD, 2023/24

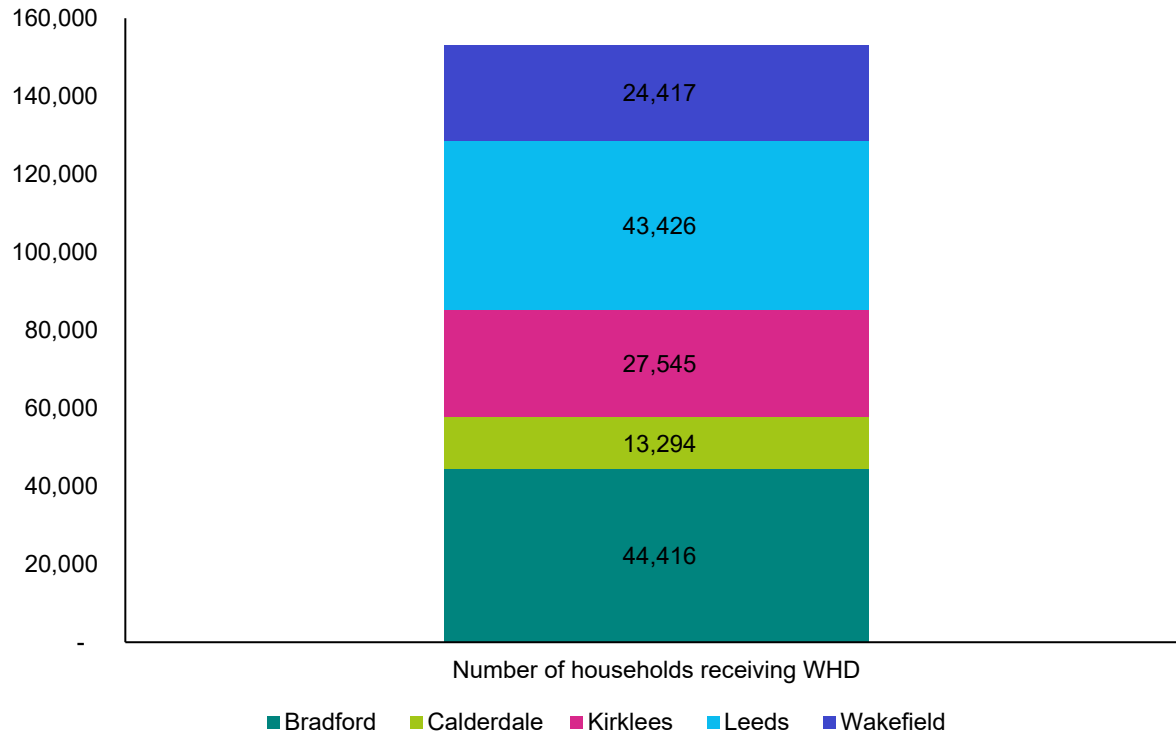
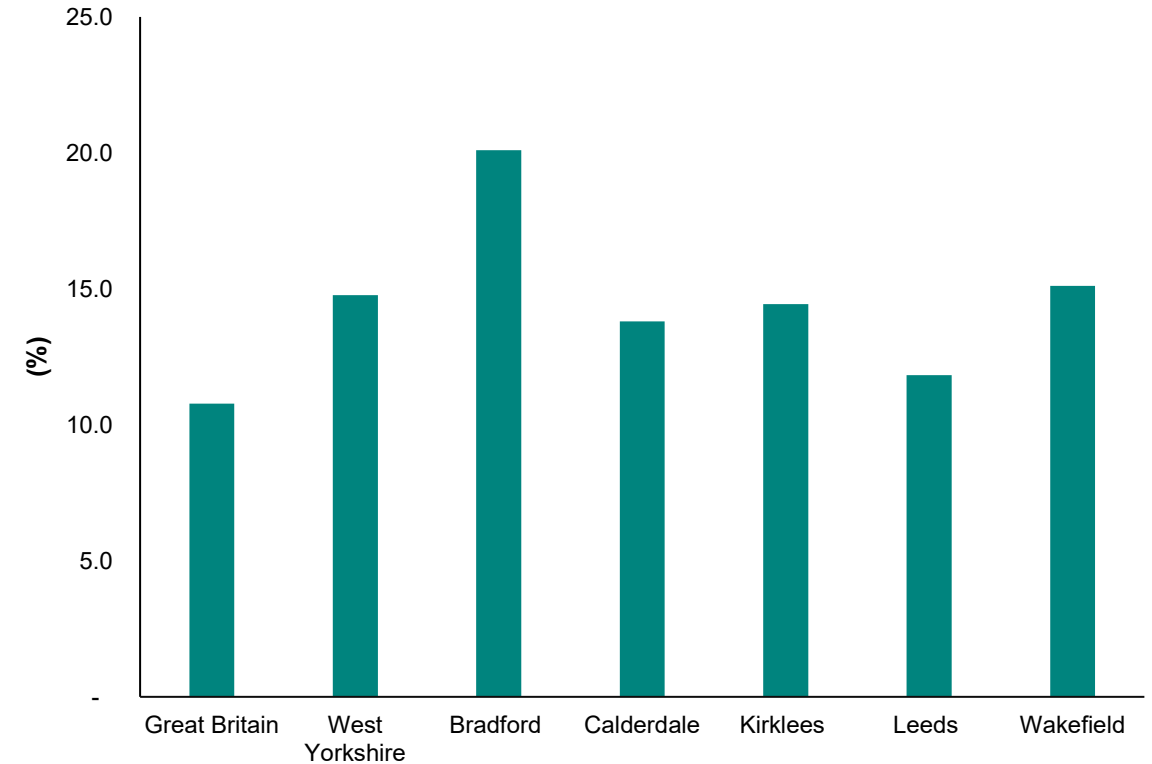


Figure: Proportion of households receiving WHD, 2023/24

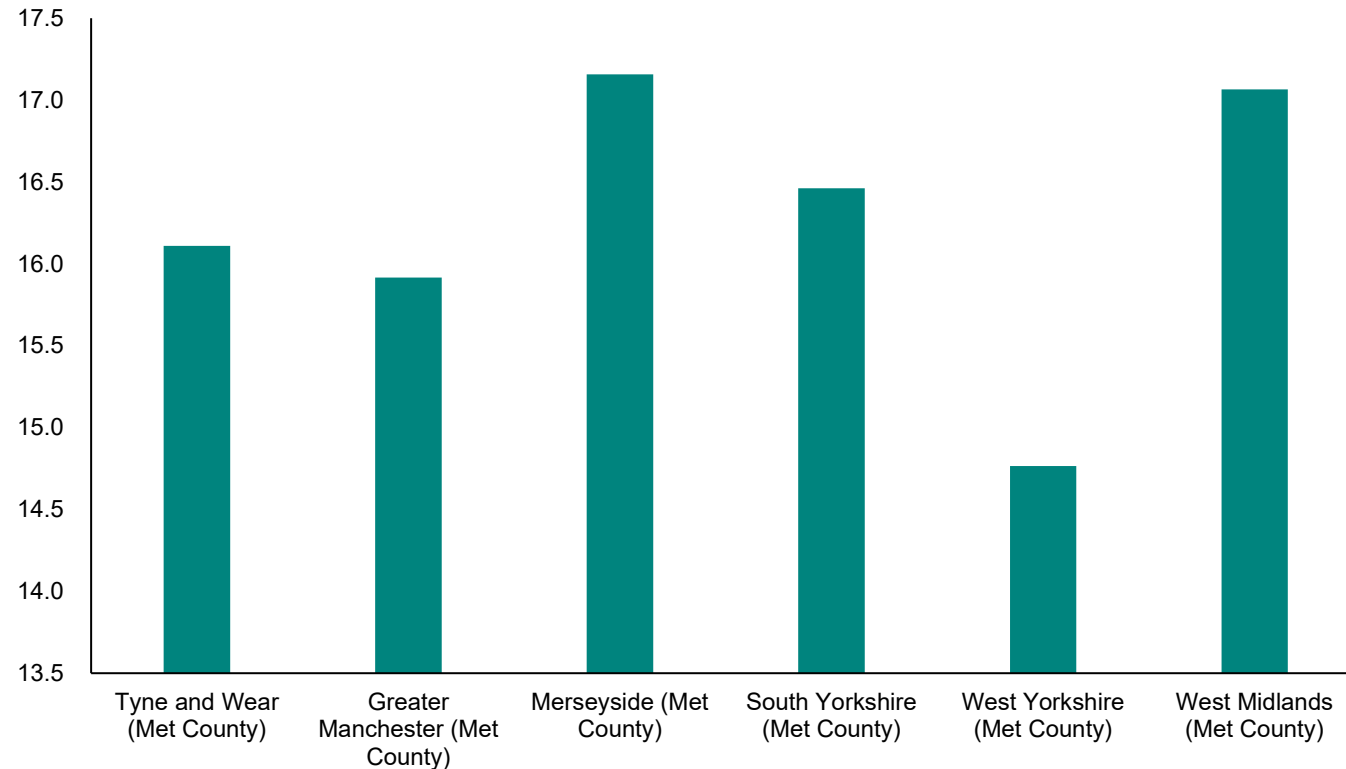


Source: Department for Energy Security and Net Zero, Warm Home Discount Scheme.

- All local authorities have a share above England average.

But not as high as other Combined Authorities

Figure: Proportion of households receiving WHD

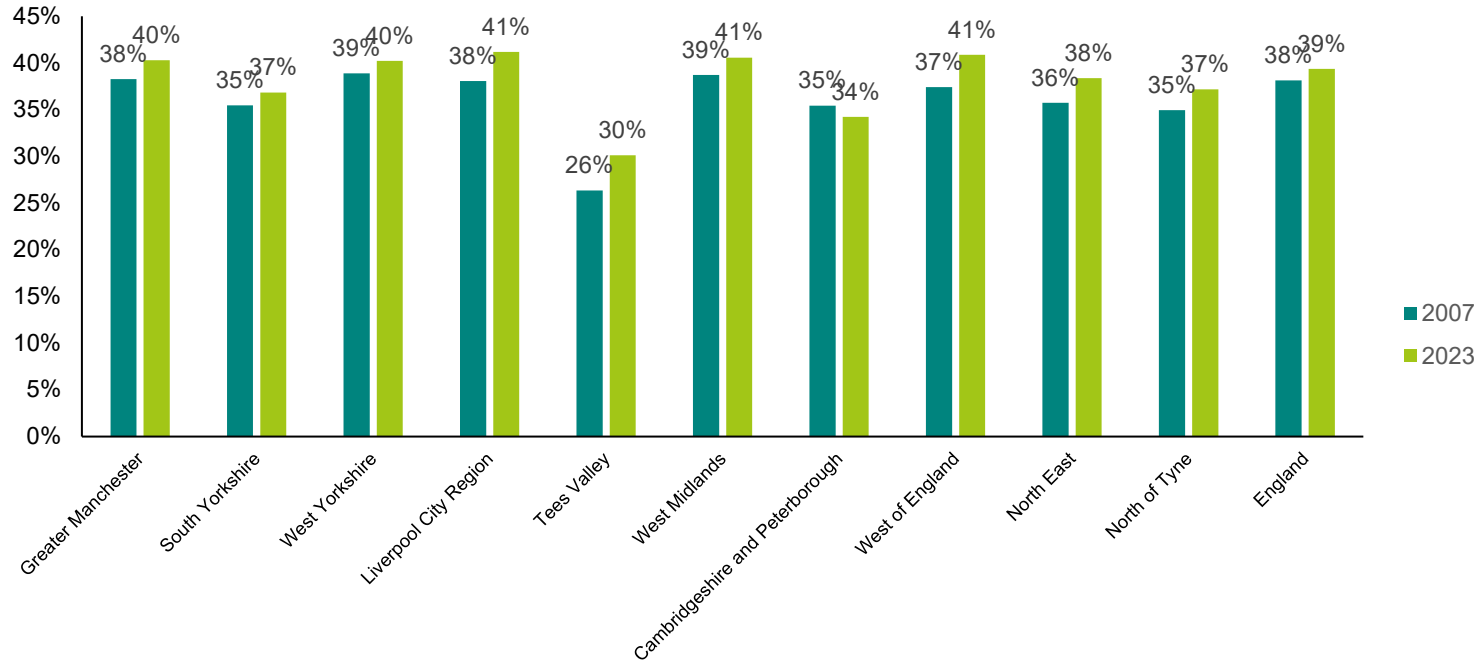


Source: Department for Energy Security and Net Zero, Warm Home Discount Scheme.

- But below the peer Combined Authorities in Midlands and North.

Domestic electricity consumption is around 40% of all consumption

Figure: Domestic consumption as proportion of all electricity consumption

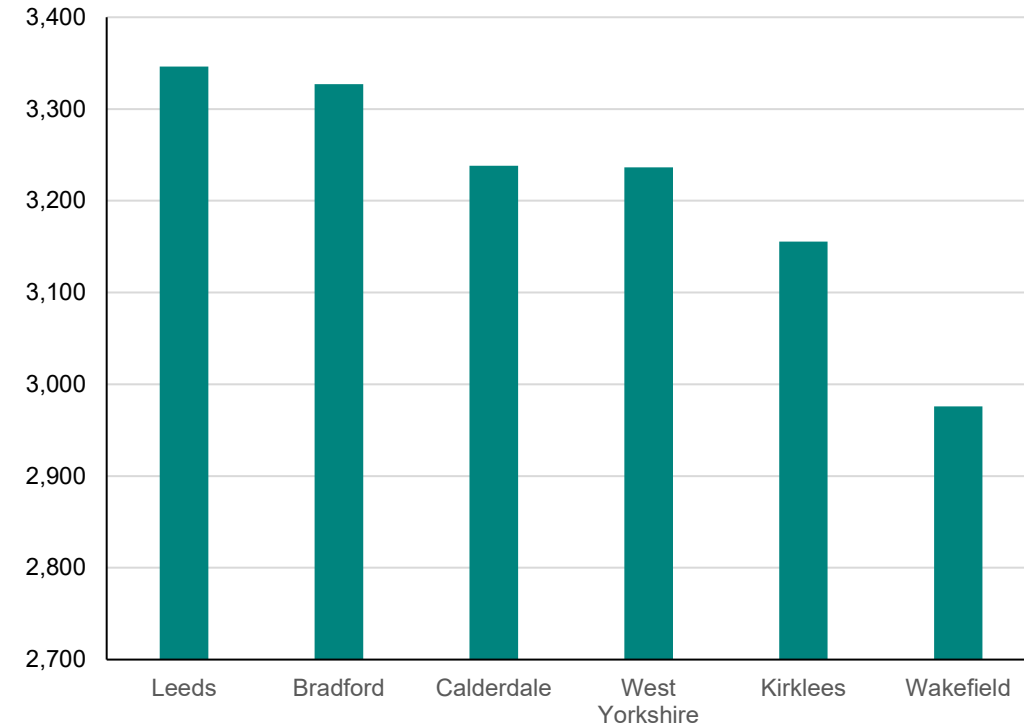
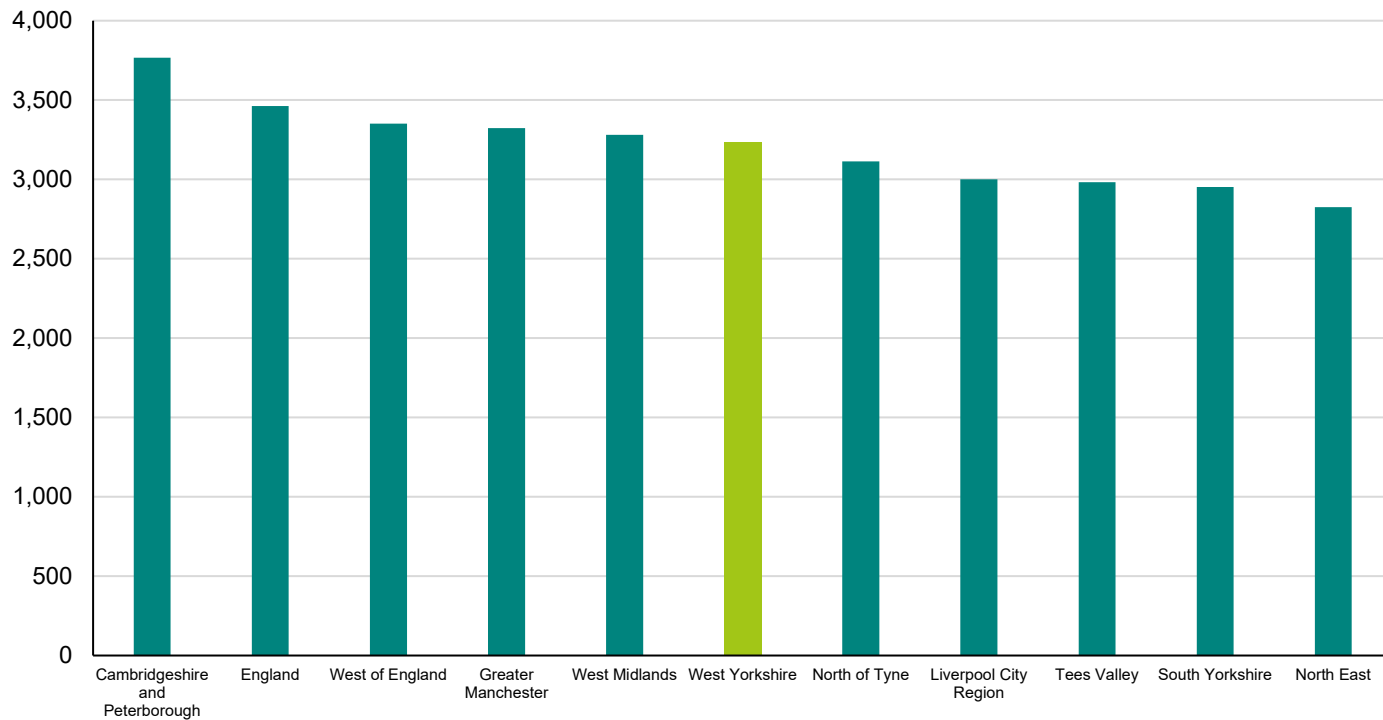


Source: Department for Energy Security and Net Zero, Subnational electricity consumption data

- Domestic consumption becoming a larger part of electricity consumption in all combined authorities analysed.

Domestic electricity consumption

Figure: Mean domestic consumption (kWh per household)

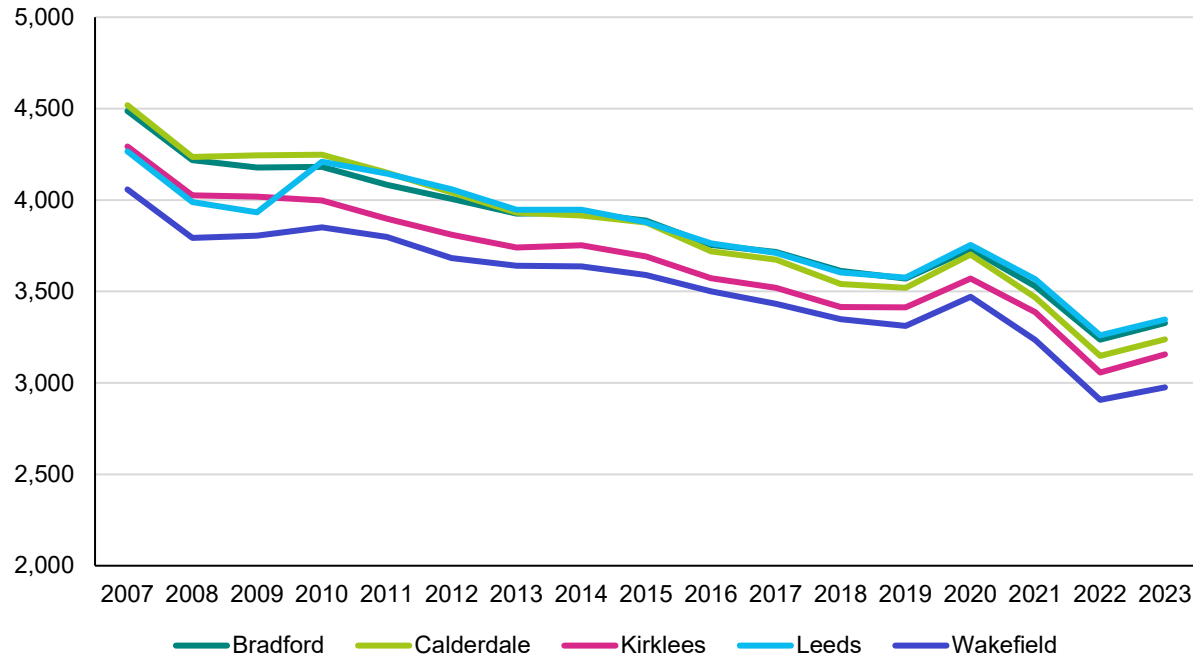


Source: Department for Energy Security and Net Zero, Subnational electricity consumption data

- Low consumption compared with the average and combined authorities in the South of England. Consumption is relatively high in the context of Combined Authorities from the North and Midlands.
- Within West Yorkshire, Leeds and Bradford – the most urban – have the highest electricity consumption and Wakefield has the lowest.

Domestic electricity consumption is falling in absolute terms

Figure: Mean domestic consumption (kWh per household)

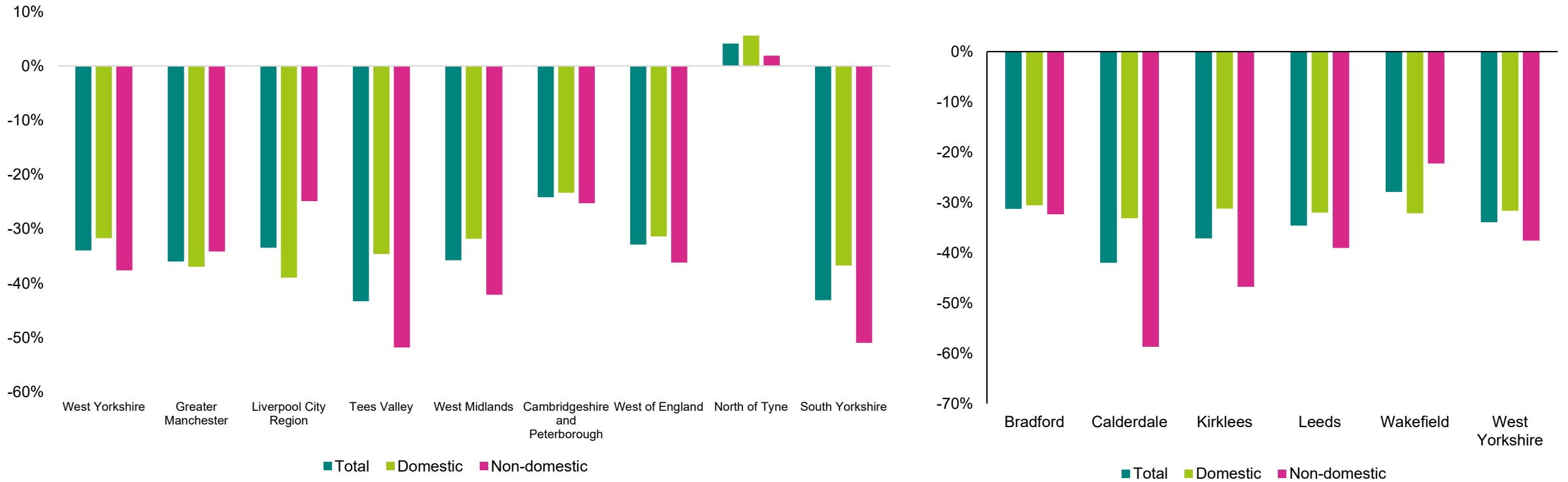


CA	2007-2023
South Yorkshire	-22.0%
North of Tyne	-23.8%
Liverpool City Region	-24.0%
Tees Valley	-24.1%
Cambridgeshire and Peterborough	-24.4%
England	-24.7%
West of England	-24.9%
North East	-25.2%
West Midlands	-26.1%
West Yorkshire	-26.9%
Greater Manchester	-31.0%

Source: Department for Energy Security and Net Zero, Subnational electricity consumption data

Gas consumption also falling

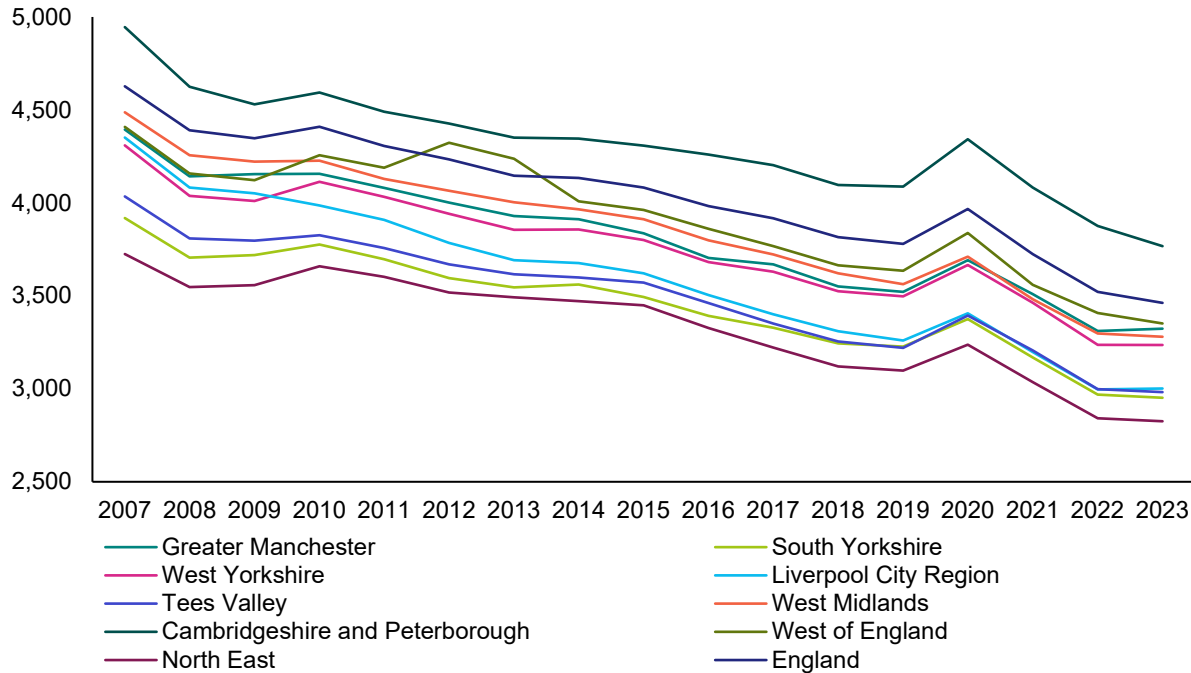
Figure: Total gas consumption variation between 2005 and 2023 (GWh)



Source: Department for Energy Security and Net Zero, **Regional and local authority gas consumption statistics.**

Domestic electricity consumption is falling in absolute terms

Figure: Mean domestic consumption (kWh per household)

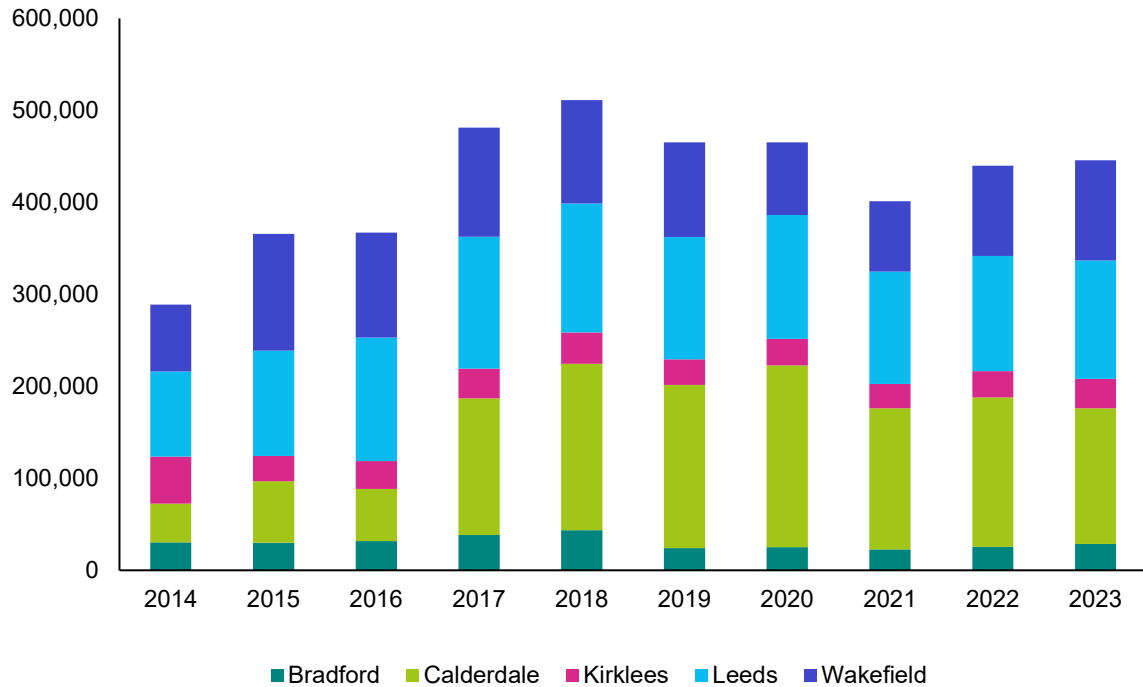


Local Authority	2007-2023
Bradford	-25.8%
Calderdale	-28.3%
Kirklees	-26.5%
Leeds	-21.6%
Wakefield	-26.7%

Source: Department for Energy Security and Net Zero, Subnational electricity consumption data

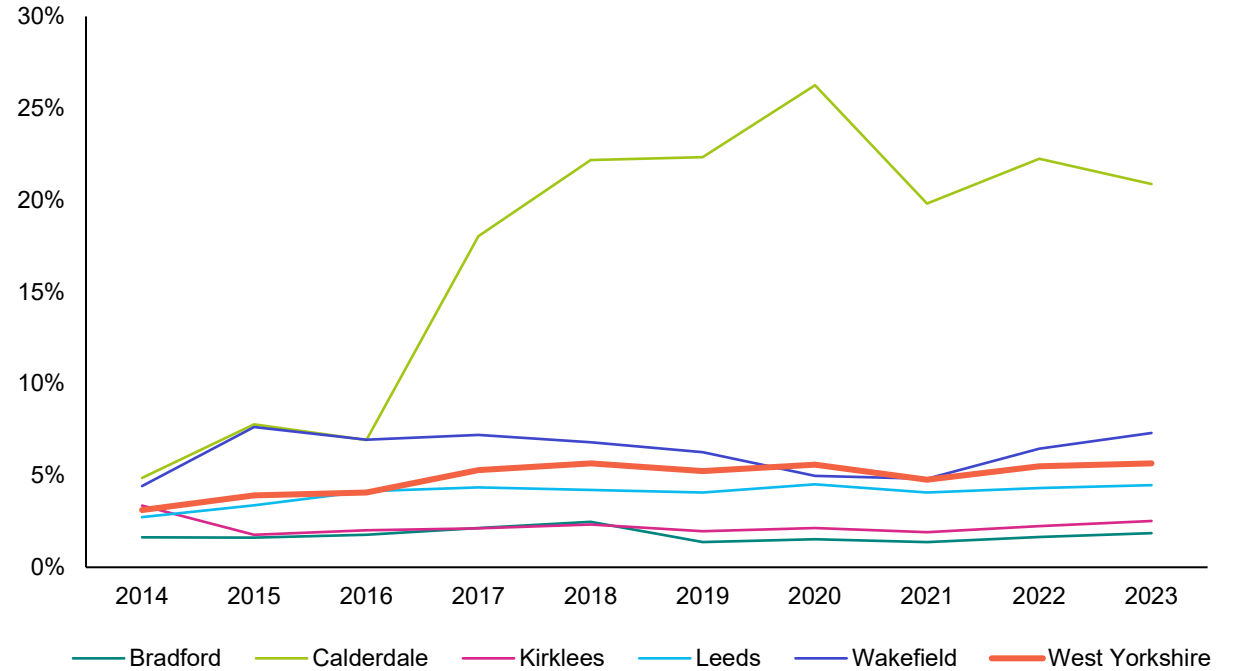
Renewable energy generation grew significantly between 2014-18 and then stabilised with Calderdale leading

Figure: Renewable electricity generation: (MWh)



Source: Department for Energy Security and Net Zero, Regional Renewable Statistics.

Figure: Renewable electricity generation as share of electricity consumption

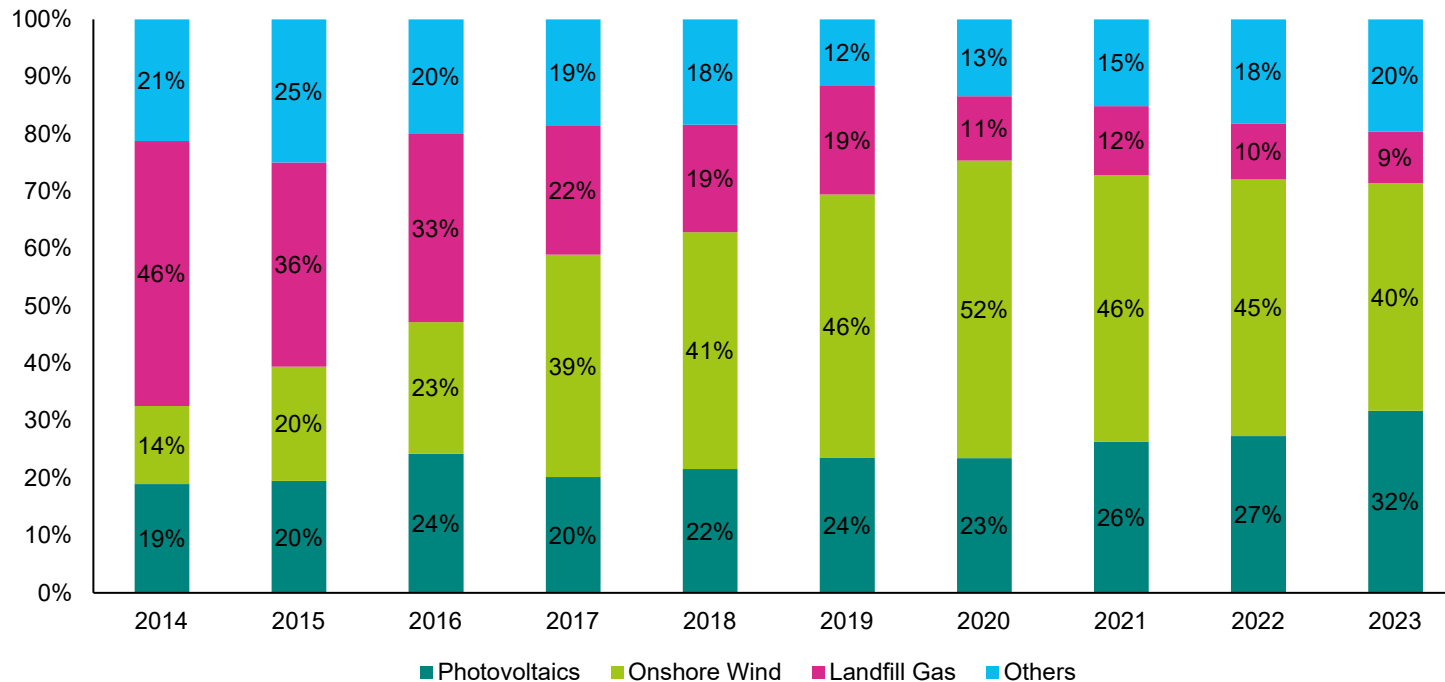


Source: Department for Energy Security and Net Zero, Regional Renewable Statistics; Department for Energy Security and Net Zero, Subnational electricity consumption data

- As a share of consumption, West Yorkshire moved from 3.1% in 2014 to 5.7% in 2023.
- Calderdale saw a sharp increase in renewable energy from onshore wind.

Photovoltaics and Onshore wind both grew their share of renewable electricity generation

Figure: Renewable electricity generation by source in West Yorkshire

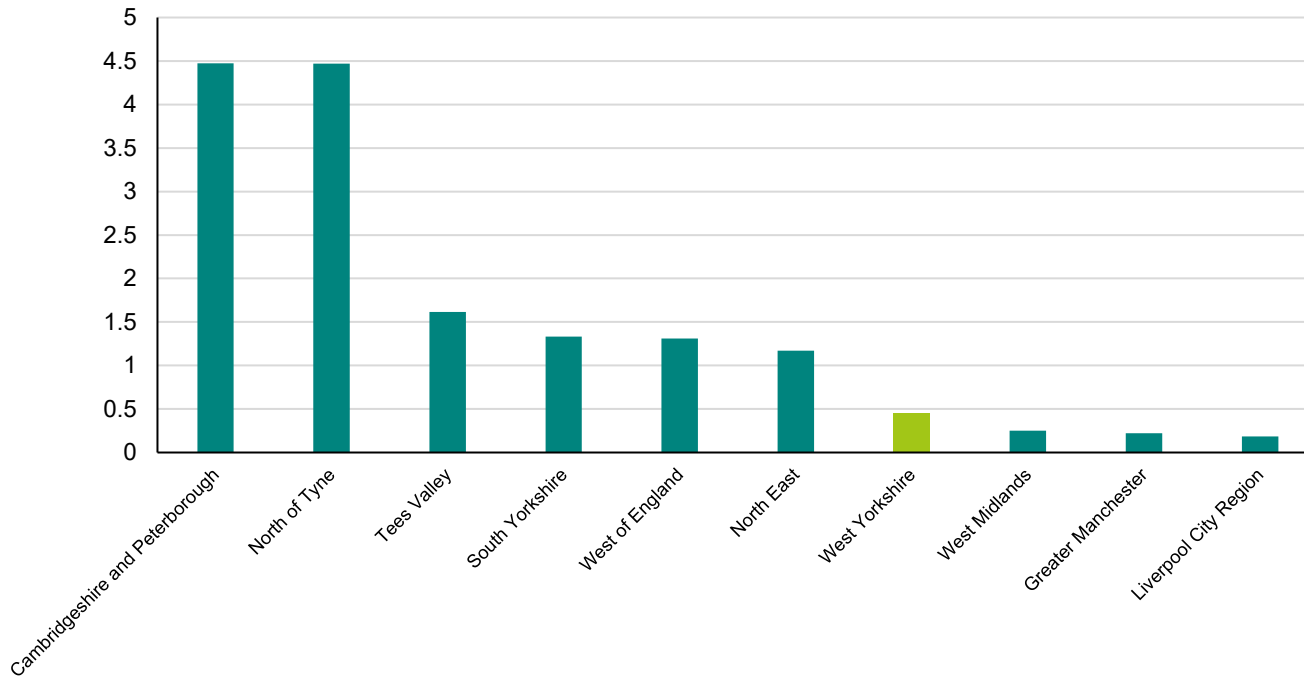


Source: Department for Energy Security and Net Zero, Regional Renewable Statistics.

- The composition of renewables saw an increase in onshore wind until 2019/2020 and then a rise in photovoltaic.

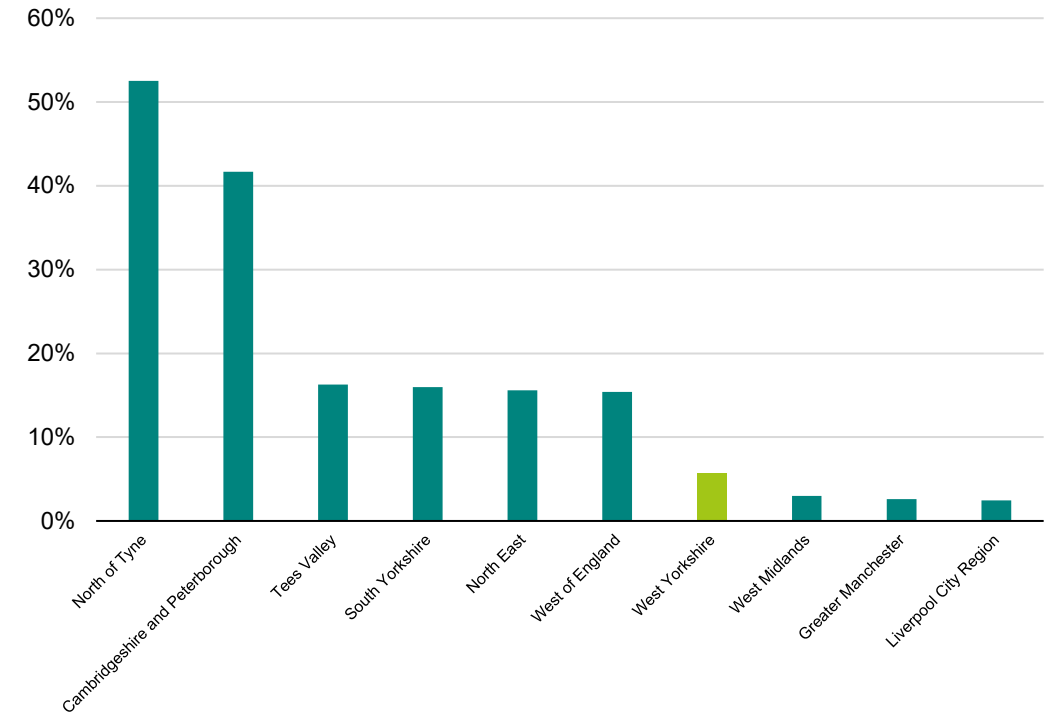
West Yorkshire has a low level of renewable energy generation per household

Figure: Renewable electricity generation (MWh) per household in 2023



Source: Department for Energy Security and Net Zero, Regional Renewable Statistics.

Figure: Renewable electricity generation as share of electricity consumption



Source: Department for Energy Security and Net Zero, Regional Renewable Statistics; Department for Energy Security and Net Zero, Subnational electricity consumption data

- There is a clear difference between the more urban Combined Authorities like West Yorkshire, West Midlands, Liverpool City Region and Greater Manchester and the others.