

Article

# Energy efficiency of housing in England and Wales: 2025

Energy efficiency, carbon dioxide emissions and central heating main fuel type for new and existing homes by property type, tenure, and property age.

Contact:  
Housing Analysis team  
[better.info@ons.gov.uk](mailto:better.info@ons.gov.uk)

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## Notice

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As part of our [steps to focus on quality over quantity](#), we have reviewed our outputs and have decided to discontinue these Energy Efficiency of Housing statistics.

We are aware that the information we publish is of value to users and we want to ensure the continuation of this, where possible. So, we are working with the Ministry of Housing, Communities and Local Government (MHCLG) to incorporate some elements of this publication into the existing [Energy Performance of Buildings Certificates publication](#).

If you have any questions or if you would like to provide us with feedback, please contact us at [better.info@ons.gov.uk](mailto:better.info@ons.gov.uk).

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# 1 . Main points

- Homes in England had a median Energy Performance Certificate (EPC) score of 69 (Band C), while homes in Wales had a median EPC score of 68 (Band D), according to records from the 10 years up to March 2025.
- Performance across English regions is broadly similar, with London, East of England and the South East having a slightly higher median score of 70 (band C), compared with Yorkshire and The Humber, with the lowest score of 68 (band D).
- New dwellings are gradually increasing in energy efficiency in England, going from a median score of 82 in the five-year period to March 2013, to 84 in the five-year period to March 2025; in Wales, median EPC scores for new dwellings increased from 81 to 84.
- In England, median scores for Middle-layer Super Output Areas ranged from 85 (band B) to 48 (band E), while in Wales, median scores ranged from 83 (band B) to 46 (band E).
- Mid-Suffolk in the East of England (10.6%), followed by Ceredigion in Wales (9.5%), had the highest proportion of properties listing a heat pump on their EPC; a heat pump is an energy-efficient device used for heating and cooling buildings.
- Smaller rural areas typically had lower median EPC scores than urban or large rural areas, but this is not the case for all local authorities.

## 2 . Overview of energy efficiency of dwellings

Energy Performance Certificates (EPCs) indicate the energy efficiency of dwellings. They are based on data about a building's energy features, for example, the building materials used, the heating systems, and insulation. These data are collected by an accredited energy assessor and used to generate an EPC score, typically ranging from 1 to 100.

Domestic EPCs are banded from A to G, where A is the most energy efficient. The scores associated with each energy efficiency band are:

- band A – 92 plus (most efficient)
- band B – 81 to 91
- band C – 69 to 80
- band D – 55 to 68
- band E – 39 to 54
- band F – 21 to 38
- band G – 1 to 20 (least efficient)

This article contains analysis of EPC data for England and Wales, from the Ministry of Housing, Communities and Local Government's (MHCLG's) [Open Data Communities webpage](#).

Our analysis does not cover all homes in England and Wales, because not every dwelling has an EPC. This is because they are only required when a dwelling is constructed, converted, sold, or let. So, these statistics are not a full representation of the entire dwelling stock. These data are based on one record per dwelling, using records from April 2015 to March 2025. For more information, see [Section 6: Coverage and Representativeness](#) and our [Energy efficiency of housing in England and Wales Quality and Methodology Information \(QMI\)](#). See [Section 10: Related links](#) for other sources of data on energy efficiency.

We found that, for records in the ten years up to March 2025, the median EPC score for England was 69 and the median EPC score for Wales was 68. London, East of England and the South East had the highest median score in the English regions (70), while Yorkshire and The Humber had the lowest median score (68).

Just over 65% of local authority areas (207 out of 318) had more than half of their housing in band C or higher (an EPC score of 69 or above). Tower Hamlets in London stands out as the local authority with the highest percentage of housing in band C or above, with 82% of dwellings with a valid EPC registering a score of 69 or above. Knowsley in the North West was the second highest, with 74% of dwellings in band C or above.

Across England and Wales, flats and maisonettes were the most energy efficient property type, with a median score of 74.

In both England and Wales, properties built after 2012 had a higher median EPC score (84) than homes built before 2012. The age of property also made a difference in carbon dioxide (CO<sub>2</sub>) emissions. New dwellings, on average, emitted less CO<sub>2</sub> (1.2 tonnes per year in England, 1.3 tonnes per year in Wales) than existing homes (3.2 tonnes per year in England, 3.5 tonnes per year in Wales).

New dwellings are becoming increasingly energy efficient. Using EPC records grouped into five-year blocks allows us to compare discrete results. Average scores increase by two points in England (82 to 84), and three points in Wales (81 to 84), when we compare EPC results for new dwellings from 2008 to 2013 with the most recent five years from 2020 to 2025.

These findings are broadly unchanged from our previous article. This is partly because we use all valid EPCs for our analysis, which last for a ten-year period. All data for this article can be found in our accompanying datasets. More detailed commentary on these trends can be found in our previous [Energy efficiency of housing in England and Wales: 2023 article](#).

### 3 . Energy efficiency in your local area

Looking at smaller geographical areas provides an understanding of energy efficiency at a local level. There is much more variation in scores at the local authority and Middle-layer Super Output Area (MSOA, also referred to as "local area") levels than at the regional level.

In England, the highest median energy efficiency score for local areas (MSOAs) was 85. There were seven areas found with this score:

- Gascoigne Estate and Roding Riverside in Barking and Dagenham
- Stonebridge in Brent
- Wembley Park in Brent
- Broughton and Wychnor in Preston
- Woolwich Arsenal in Greenwich
- Greenwich Peninsula West in Greenwich
- Old Oak and Wormwood in Hammersmith and Fulham

The lowest score was 48 in Upper Dales in Richmondshire, and in the Isles of Scilly.

In Wales, the highest median energy efficiency score was 83 in:

- Pen-dre, Litchard and Coity in Bridgend
- Creigiau, Pentyrch and St Fagans in Cardiff
- Langstone and Llan-wern in Newport

The lowest median score in Wales was 46 in Abersoch and Aberdaron in Gwynedd.

In England, all local areas in the following local authorities had a median energy efficiency score in band C or above:

- Cambridge
- Harlow
- Tower Hamlets
- City of London

There were six local authorities where no MSOAs had a median energy efficiency score in band C or above. These were:

- Castle Point
- Hyndburn
- Isles of Scilly
- Pendle
- Rossendale
- Staffordshire Moorlands

In Wales, 80% of local areas in Torfaen had a median energy efficiency score in band C or above, which was the highest proportion. Only Conwy had no MSOAs with a median energy score in band C or above.

Of all local authorities, 49.7% (158 out of 318) had at least half of their MSOAs with a median energy efficiency score in band C or above. This suggests that there are a variety of scores, even within the same local authority, with different areas facing different challenges for improvement.

Data can be found in our [Median energy efficiency score, England and Wales dataset](#).

### **Figure 1: Energy efficiency of homes in your local area**

**Median energy efficiency score for new and existing houses and flats and maisonettes, Middle super output areas (MSOAs), England and Wales, up to March 2025**

## 4 . Heat pumps

A heat pump is an energy-efficient device used for heating and cooling buildings. It works by transferring heat rather than generating it directly (please see [Section 8: Glossary](#) for more information). The UK Government has made the installation of heat pumps a part of the broader Net Zero by 2050 strategy and has introduced incentives, such as the [Boiler Upgrade Scheme \(BUS\)](#).

The EPC data identify the fuel types used for heating properties. Using this, we have identified EPCs that mentioned heat pumps as a source of heating, although a property may have a combination of sources of heating. There are other official sources of statistics on heat pumps such as Ministry of Housing, Communities and Local Government's (MHCLG's) [English Housing Survey](#) and the Department for Energy Security and Net Zero's (DESNZ's) [Heat Pump Deployment statistics](#).

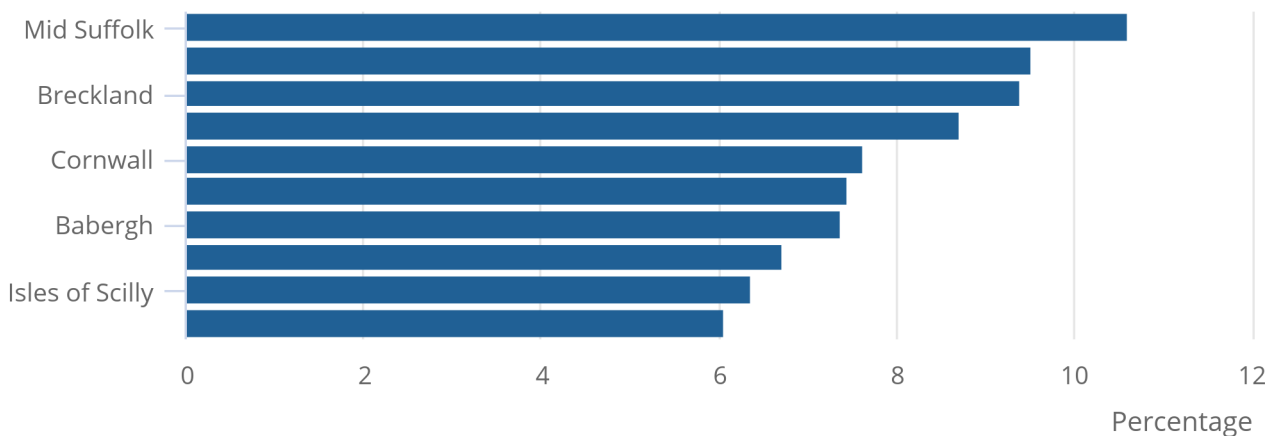
Currently, for those properties with EPCs, 1.4% of properties in England and 1.5% in Wales have heat pumps. At a local level, 7 of the 10 ten local authorities with the highest percentages of heat pumps are in the East of England, the highest being Mid Sussex, with 10.6%. Ceredigion in Wales had the second highest proportion at 9.5%. Despite having a low median EPC score (48), the Isles of Scilly in the South West has a high proportion of properties using a heat pump (6.3%), while neighbouring Cornwall was also in the top 10 (7.6%).

### Figure 2: Of the 10 local authorities with the highest percentages of heat pumps, 7 are in the East of England

Percentage of heat pumps used in central heating, local authorities, England and Wales, up to March 2025

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Percentage of heat pumps used in central heating, local authorities, England and Wales, up to March 2025



Source: Energy Performance Certificate data on Open Data Communities from the Ministry of Housing, Communities and Local Government, Property Attributes data from the Valuation Office Agency

New dwellings are more likely to have a heat pump installed than existing dwellings. In England, 4.2% of new dwellings have heat pumps compared with 0.8% in existing dwellings. Of new dwellings in Wales, 5.5% have heat pumps installed, while 1.0% of existing dwellings do. For new properties, 11 local authorities had more than 20% of their heating types made up of heat pumps. The local authority with the largest percentage of heat pumps in new properties was King's Lynn and West Norfolk (51.3%), in the East of England. Of these 11 local authorities, 6 are in the East of England.

When looking at property type, detached properties have a higher percentage of heat pumps (3.2% in England, 3.0% in Wales) than any other type at the national and regional level.

## 5 . Urban and rural areas

This year we have produced additional analysis looking at how energy efficiency varies between Rural and Urban areas.

The 2021 Rural-Urban Classification (RUC) is a statistical classification system used to categorise geographies based on the form and characteristics of the settlements present within them. It provides a consistent and standardised method for classifying areas as rural or urban based on address density, physical settlement form, population size and relative accessibility.

Urban areas are determined as settlements with populations of 10,000 or more, based on the 2021 Census. Rural areas are everywhere else and will include rural towns, villages, hamlets, isolated dwellings and open countryside.

At the national level for England, smaller rural areas have a lower median score (63) compared with urban or larger rural areas (both scoring 69). In Wales, urban areas also have a median score of 69, while larger rural areas have a slightly lower score (67). Smaller rural areas in Wales have a median score of 58.

When looking at new builds, we see that there is no difference, at the national level, whether the properties are in an urban, larger rural or smaller rural area. In both England and Wales, these categories all had a median EPC rating of 84. There is also very little variation at the regional level.

Existing properties had lower median EPC ratings. In England, existing urban properties had a median EPC of 68, similar to the rating for existing larger rural properties (67). Existing smaller rural properties were much lower, at 59. The pattern is similar in Wales; existing urban properties have a median EPC of 68, while existing larger rural properties have a median EPC of 67, and small rural properties have a median EPC of 55.

## 6 . Coverage and representativeness

Our analysis does not cover all dwellings in England and Wales because not every dwelling has an Energy Performance Certificate (EPC). These are only required when a dwelling is constructed, converted, sold, or let. So, these statistics cannot be viewed as a full representation of the entire dwelling stock. Analysis is based on one record per dwelling, and most of the analysis uses records from April 2015 to March 2025 because EPCs are only valid for 10 years.

To analyse the representativeness of dwellings covered by EPCs, we compared them with the addresses available in the Valuation Office Agency's (VOA's) Property Attributes data. Just over 71% of all residential dwellings in England, and 67% in Wales, had at least one EPC registration since records began in 2007, as of March 2025. There was a similar proportion across all regions in England, but London had the highest coverage at 73%.

Generally, newer properties have higher coverage of EPCs. This reflects the need for energy efficiency certification of new build homes. In England, the coverage of properties built before 1930 was 61%, while the coverage of those built since 2012 was 94%. Similarly in Wales, a much smaller proportion of dwellings built before 1930 were covered by an EPC (58%), compared with dwellings built since 2012 (90%).

Data can be found in our Percentage of dwellings covered by an EPC dataset.

## 7 . Data on energy efficiency

### [Energy efficiency of housing, England and Wales, five rolling years](#)

Dataset | Released 28 October 2025

Data on the energy efficiency of dwellings, estimated CO2 emissions and main fuel type of central heating in England and Wales for five-year groups, by property type and whether new or existing.

### [Median energy efficiency score, England and Wales](#)

Dataset | Released 28 October 2025

Data on the median energy efficiency score of dwellings in England and Wales. These are broken down by property type, property age and whether a dwelling is new or existing.

### [Energy Performance Certificate \(EPC\) Band C or above, England and Wales](#)

Dataset | Released 28 October 2025

Data on dwellings with EPC Band C or above in England and Wales. These are broken down by property type, property age and whether a dwelling is new or existing.

### [Individual Energy Performance Certificate \(EPC\) Bands, England and Wales](#)

Dataset | Released 28 October 2025

Data on the EPC Bands of dwellings in England and Wales. These are broken down by property type, property age and whether a dwelling is new or existing.

### [Main fuel type or method of heating used in central heating, England and Wales](#)

Dataset | Released 28 October 2025

Data on the main fuel type of central heating of dwellings in England and Wales. These are broken down by property type, property age and whether a dwelling is new or existing.

### [Median estimated carbon dioxide \(CO2\) emissions, England and Wales](#)

Dataset | Released 28 October 2025

Data on the carbon dioxide (CO2) emissions of dwellings in England and Wales. These are broken down by property type, property age and whether a dwelling is new or existing.

### [Heat pumps used in central heating, England and Wales](#)

Dataset | Released 28 October 2025

Data on heat pumps used in central heating of dwellings in England and Wales.

## 8 . Glossary

### Community heating scheme

A community heating scheme is a distribution system of insulated pipes that takes heat from a central source, usually in the form of hot water or steam, and delivers it to different buildings, or dwellings within the same building.

### Dwelling

A dwelling is an address containing a unit of accommodation that can comprise one or more household spaces.

### Energy efficiency

Energy efficiency relates to the concept of efficient energy use, which means using less energy to provide a given amount of heating or lighting. Using less energy reduces emissions of carbon dioxide.

## Energy efficiency score

The energy efficiency score (Standard Assessment Procedure (SAP) score or Reduced data SAP (RdSAP)) is a measure of the overall efficiency of a building. This score is based on the performance of the building and its fixed services, such as heating and lighting. The higher the score, the more energy efficient the home. The score is produced during an Energy Performance Certificate assessment and is based on standardised assumptions for occupancy and behaviour. This enables a like-for-like comparison of a dwelling's energy efficiency performance.

## Energy Performance Certificate

Energy Performance Certificates (EPCs) are required for all domestic and non-domestic buildings, when constructed, sold, or let. There are some exemptions, like for buildings used as places of worship. EPCs are valid for 10 years. The EPC records how energy efficient a property is as a building. The EPC uses an A-to-G rating scale, where A is the most efficient and G is the least efficient. The certificate also lists the potential rating of the building if all the cost-effective measures are installed.

## Existing dwelling

Existing dwellings are those that are required to undergo an energy performance assessment because they are either being sold or let. They are not newly constructed or converted. Statistics for existing dwellings were created using data from the latest EPC record available for existing dwellings in a financial year.

## Heat pump

A heat pump is a device that absorbs heat from one environment and transports it into another using electricity. For example, an air-source heat pump extracts heat from the air outside and transfers it into the home. This heat can then be used to warm radiators and underfloor heating systems.

## New dwelling

A new dwelling is any dwelling that has been newly constructed, created by conversion (for example, a house being converted into flats), or has undergone a change of use (for example, a pub being converted into flats), and is now required to have an energy performance assessment. Statistics for new dwellings are generated using data from new-dwelling EPC records.

# 9 . Data sources and quality

This article contains analysis of the Energy Performance Certificate (EPC) data for England and Wales from the Ministry of Housing, Communities and Local Government's (MHCLG's) Open Data Communities webpage.

Further energy efficiency statistics are published in MHCLG's [Energy Performance of Building Certificates Statistical Release: April to June 2024 England and Wales](#), the Welsh Government's [Energy efficiency of homes report](#), the Scottish Government's [Scottish House Condition Survey: 2021 Key Findings report](#), and Northern Ireland's [Energy rating of housing in Northern Ireland up to March 2023 report](#). The [English Housing Survey](#) also provides insight into energy efficiency in housing in England.

## How we used the property attributes data

To quality check the EPC records used for analysis, we link EPC data to Valuation Office Agency (VOA) property attributes data at the address level. This enables us to check that a dwelling with an EPC record still exists, and that there is consistent property information (property type and age of property band) across both data sources. We exclude records that have a direct contradiction between data sources on these property variables from the analysis. After we applied these quality-assurance checks, 42.3% of the original EPC dataset remained. These records became the basis for most of our analysis.

The following is an overview of the data-parsing process. This includes the number of records removed as a percentage of the original 27,805,091 records and the type of remaining record:

- records with implausible values on important variables are filtered out (less than 0.0%)
- EPC records where there is direct contradiction between the property types provided in the EPC and VOA property attributes (where both have property type information available) are removed (11.7%)
- EPC records where there is direct contradiction between the age of property band provided in EPC and the VOA property attributes, where both have age-of-property information available, are removed (13.4%)
- duplicated EPC records based on multiple variables including Unique Property Reference Number and inspection date are removed (0.2%)
- EPC records that have been superseded by a later record for the same dwelling are removed (26.6%)
- EPC records that are older than 10 years are removed (21.9%)
- 11,150,054 EPC records are retained and used for analysis (42.3%)

## **Interpreting these statistics**

EPCs are valid for 10 years, so they do not reflect energy efficiency improvements made after certification. Dwellings can have more than one record, but we keep only the latest record for our analysis, so dwellings are not double counted in any time period that we analysed. For more information about the strengths and limitations of the data, methods used, and data uses and users, see our Energy efficiency of housing in England and Wales Quality and Methodology Information (QMI).

## 10 . Related links

### [Energy Efficiency of Housing in England and Wales Quality and Methodology Information \(QMI\) report](#)

Report | Last updated 9 October 2023

Quality and Methodology Information for energy efficiency of housing estimates for England and Wales, detailing the strengths and limitations of the data, methods used, and data uses and users.

### [Energy Performance of Buildings Certificates](#)

Statistical release collection| Last updated 31 July 2025

The Ministry of Housing, Communities and Local Government (MHCLG) publish quarterly EPC statistical releases. These focus primarily on the number of EPC lodgements for domestic, non-domestic and Display Energy Certificates (DECs) in England and Wales. These figures are most appropriate for an early indicator for new housing supply.

### [English Housing Survey](#)

Statistics | 17 July 2025

The English Housing Survey is a continuous national survey commissioned by the Ministry of Housing, Communities and Local Government (MHCLG). It collects information about people's housing circumstances and the condition and energy efficiency of housing in England. The survey offers representative statistics by EPC band for dwellings in England.

### [National Energy Efficiency Data framework \(NEED\)](#)

Collection | 26 June 2025

The data framework matches gas and electricity consumption data, collected for Department for Energy Security and Net Zero (DESNZ) subnational energy consumption statistics, with information on energy efficiency measures installed in homes, from government schemes, such as the Energy Company Obligation (ECO) and the Green Homes Grant. It also includes data about property attributes and household characteristics, obtained from a range of sources.

### [Energy Performance Certificates \(EPCs\) for homes in Wales: interactive dashboard](#)

Statistics Dashboard | 23 September 2025

The Welsh Government produces this interactive dashboard containing data and insights on EPCs in Wales. The dashboard is based on MHCLG's Open Data Communities' EPC data.

### [Scottish house condition survey](#)

Statistics| Released 30 May 2023

The Scottish house condition survey contains statistics on energy efficiency, based on an annual survey sample of around 3,000 dwellings. This is the primary source of data at a national level on the energy efficiency of the Scottish housing stock.

### [Scottish EPC register](#)

Database | updated to most recent year quarter

Data extracts for domestic EPC data from the Scottish Energy Performance Certificate Register are published by The Scottish Government. The dataset is updated quarterly and includes all valid EPC records from the start of 2013 to the most recent year quarter. A publication note is included describing the data elements present.

### [Energy rating of housing in Northern Ireland](#)

Report | Last updated 10 July 2024

The Energy Rating of Housing in Northern Ireland from the Northern Ireland Executive's Department for Communities is an annual report that uses data from Energy Performance Certificates (EPCs). It provides information on energy rating, carbon dioxide emissions, and heating fuel types for dwellings with a valid EPC for Northern Ireland.

## 11 . Cite this article

Office for National Statistics (ONS), released 28 October 2025, ONS website, article, [Energy efficiency of housing in England and Wales: 2025](#)