Department for Energy Security & Net Zero

Household Energy Efficiency

Great Britain, Data to December 2023

About this release

The annual report presents in-depth statistics on the government supported energy efficiency schemes in Great Britain (GB) and updated estimates of GB insulation levels.

In this release

Scheme Information

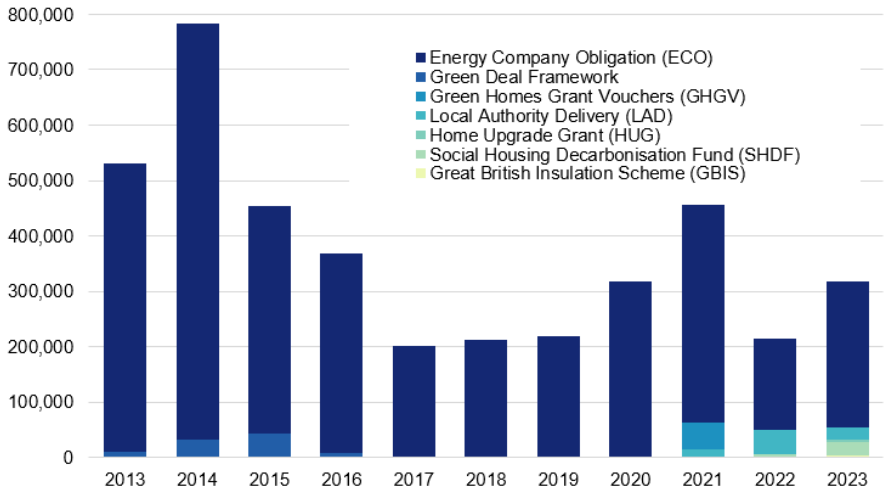
For information on the schemes please see the Technical Information.

Data tables

The underlying tables are available in Excel format at HEE Statistics.

This publication is based on data from the scheme administrators. New data are incorporated in line with the DESNZ statistical revisions policy developed in accordance with the UK Statistics Authority Code of Practice for Statistics.

Annual Energy Efficiency measures installations to 2023



Key headlines

- From 2013 to the end of 2023, around 4.1 million energy efficiency measures were installed in 2.7 million properties in Great Britain through various government support schemes: Energy Company Obligation (ECO), the Green Deal (GD) Framework, Green Homes Grant Vouchers (GHGV), Local Authority Delivery (LAD), Home Upgrade Grant (HUG), Social Housing Decarbonisation Fund (SHDF) and the Great British Insulation Scheme (GBIS).
- During 2023, around 318,600 energy efficiency measures were installed through these schemes, an increase of 49 per cent compared with 2022.
- However, around 83,500 households were upgraded across all schemes, a decrease of 17 per cent compared with 2022 – this is largely driven by ECO4's whole-house retrofit approach of multiple installations per household.
- ECO remains the largest energy efficiency scheme. Measures delivered through ECO accounted for 83 per cent of all measures installed in 2023. During 2023, ECO delivered 265,000 measures – an increase of 61 per cent compared to 2022 – as delivery under ECO4 continued to grow, following its start in April 2022 after the closure of ECO3.
- In 2023, 23,600 measures were delivered through SHDF, 20,400 measures through LAD, 5,600 measures through HUG, and 4,000 measures through GBIS.
- At the end of 2023, it is estimated that 15.0 million properties in Great Britain had cavity wall insulation (70 per cent of properties with a cavity wall), 17.3 million had loft insulation (67 per cent of properties with a loft) and 833,000 had solid wall insulation (10 per cent of properties with solid wall).

1. Energy Efficiency Trends

Tables 1.1 to 1.2, 2.3 and 4.1 to 4.5

The number of measures installed and the number of households receiving measures under ECO and other energy efficiency schemes.

Key Headlines

- From 2013 to 2023, 4.1 million energy efficiency measures were installed in 2.7 million properties through various government support schemes.
- In 2023, 318,600 measures were installed through ECO, LAD, HUG, SHDF and GBIS.
- In 2023, 265,000 ECO measures were installed in 50,300 first-time households.

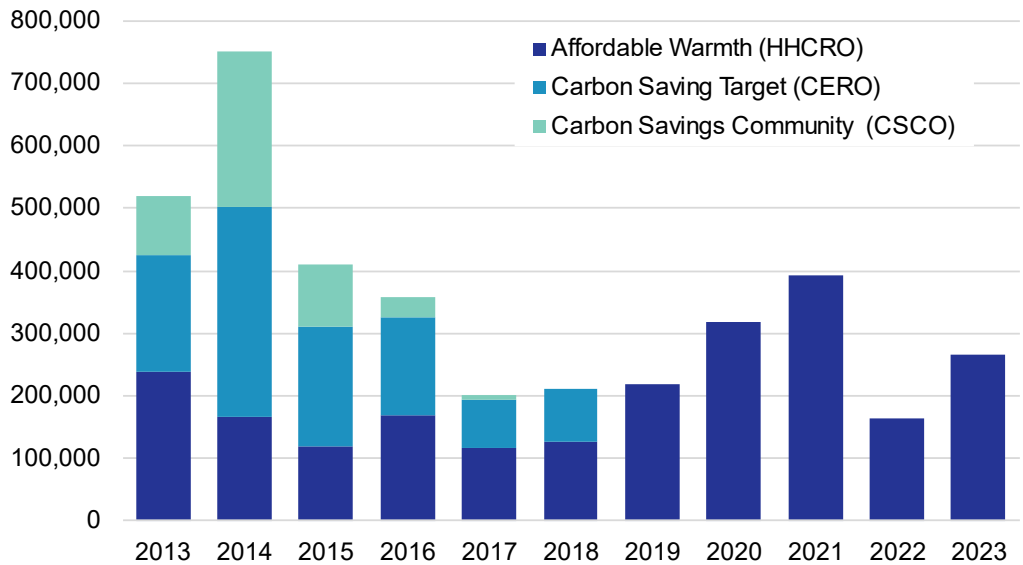
From January 2013 to the end of December 2023, around 4.1 million energy efficiency measures (see chapter 2 for the types of measures) were installed in 2.7 million properties through various government support schemes: Energy Company Obligation (ECO), the Green Deal (GD) Framework, Green Homes Grant Vouchers (GHGV), Local Authority Delivery (LAD), Home Upgrade Grant (HUG), Social Housing Decarbonisation Fund (SHDF) and the Great British Insulation Scheme (GBIS). Around 3.8 million of these installed measures (94 per cent) were delivered through ECO.

In 2023, 318,600 measures were installed through ECO, LAD, HUG, SHDF and GBIS. This is an increase of 49 per cent compared with 2022. This increase was largely due to the delivery under ECO picking up after lower levels of delivery in 2022 as a result of the transition to the latest iteration of ECO, ECO4.

LAD began delivery in late 2020. Delivery under both LAD Phase 1 and 2 came to an end in December 2022, with only Phase 3 delivering in 2023. HUG and SHDF schemes both began delivering in 2022, whilst GBIS began delivery in May 2023. Aside from ECO, SHDF delivered the highest number of measures in 2023, with 23,600 measures being installed (7 per cent). This was followed by LAD, with 20,400 measures being installed, down from 42,300 measures in 2022. Under HUG, 5,600 measures were delivered in 2023 and 4,000 measures were installed under GBIS.

In 2023, 265,000 ECO measures were installed which was 61 per cent higher than in 2022. This was lower than delivery in both 2020 and 2021 and the earlier periods of ECO. Through 2023, around 63,700 households received an ECO measure with 50,300 households receiving measures for the first time, which was 22 per cent lower than in 2022. As ECO has been running since 2013, a number of households have been treated previously under the scheme. The current iteration of ECO (ECO4) also adopts a whole-house approach to energy efficiency improvement whereby multiple measures are installed in a property following a full assessment of the home's needs, therefore leading to a higher number of measures per household.

Chart 1: ECO measures installed by obligation, by year, to end 2023 (Table 2.3)



2. Measures by Type

Tables 1.5 and 3.1 to 4.5

The number of measures installed by type of measure.

Key Headlines

- Across all schemes, 57 per cent of measures were for insulation and 43 per cent for heating.
- In 2023, the most popular group of measures under ECO was 'Other heating', with 139,500 measures installed - the majority of which were heating controls.

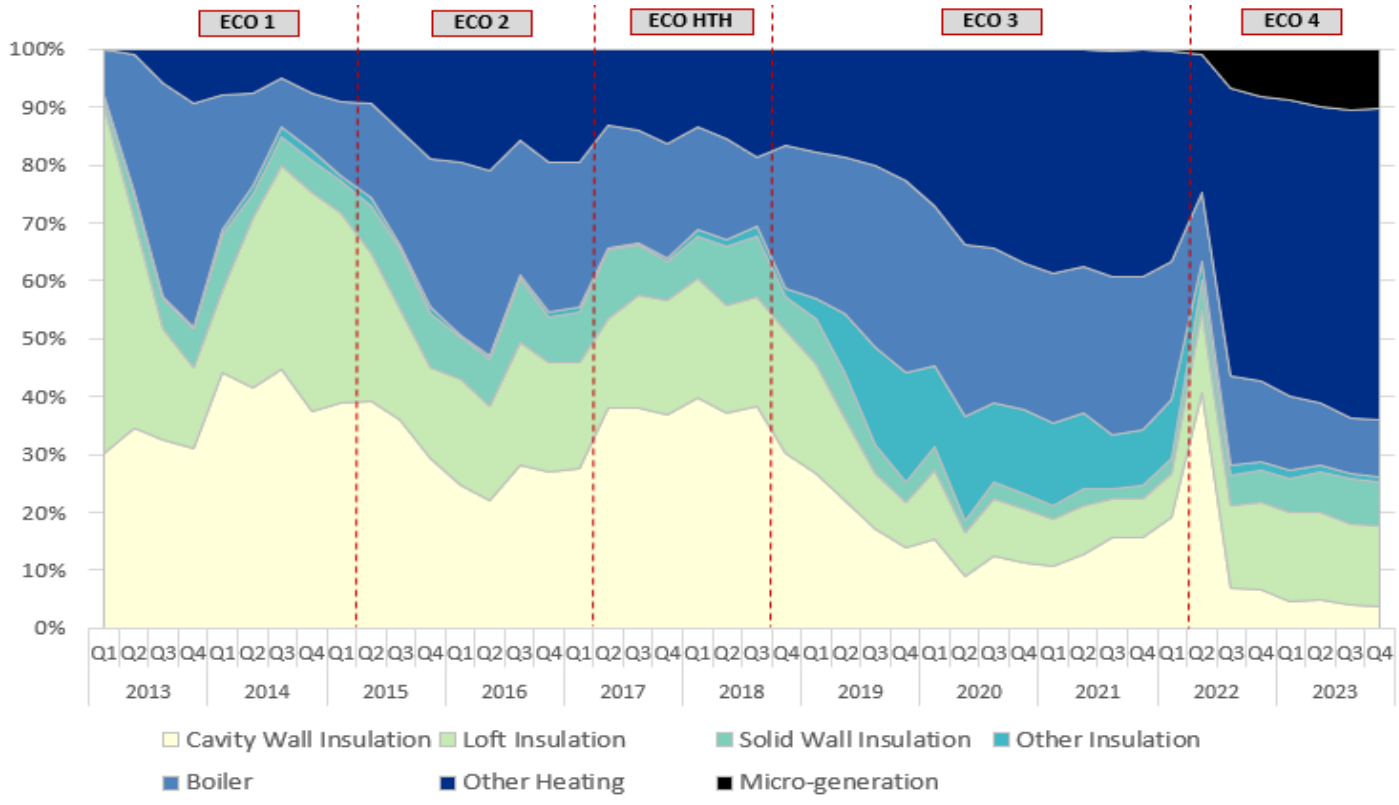
Measures by Type

Energy efficiency measures installed under government schemes include insulation measures, boiler measures, low carbon heat measures such as heat pumps and solar thermal, photovoltaics (solar PV), window and door measures, and heating controls.

Of all measures installed under ECO, GD, LAD, HUG, GHGV, SHDF and GBIS to the end of 2023, around 57 per cent were insulation measures and 43 per cent were heating measures. Less than one per cent of measures were 'Other' measures such as Energy Efficiency lighting and Waste water heat recovery systems (Table 1.5).

Under ECO in 2023, the most popular measure group was 'Other heating', with around 139,500 measures installed (53 per cent) – the majority of which were heating controls. The second most popular measure group was loft insulation, with 38,300 measures installed (14 per cent). In 2023, the micro-generation measure group (heat pumps, biomass boilers and photovoltaics) has continued to grow, making up 10 per cent of all measures installed. This is up from two per cent in 2022. (Table 3.1).

Chart 2: Share of quarterly ECO measures by measure type, to end 2023 (Table 3.1 from quarterly statistical release)



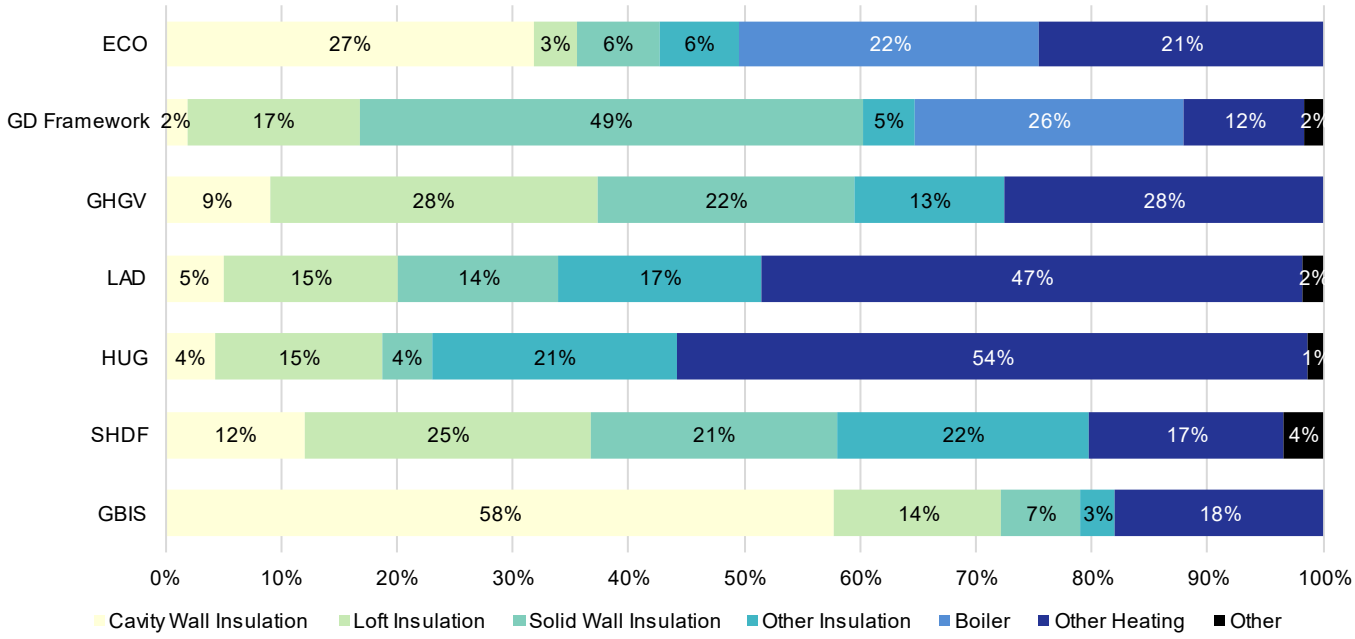
The breakdown of measures installed by measure type for other household energy efficiency schemes varies, mainly due to the differences in the types of measures that are eligible. Under the Green Deal Framework,

solid wall insulation accounts for almost half (49 per cent) of all measures installed. This is followed by boiler measures, accounting for 26 per cent. (Table 1.5).

For other schemes, boilers are not an eligible measure due to the focus on supporting the UK to reach its Net Zero target by 2050. Under LAD and HUG, the most popular measure installed has been photovoltaics (solar PV), accounting for 37 per cent and 28 per cent of measures installed, respectively (Table 1.5). Under SHDF, there is more variation in measure type with loft insulation being the most popular measure installed accounting for 25 per cent, followed by solid wall insulation at 21 per cent. (Table 1.5, Chart 3).

GBIS focuses on installing the most cost-effective mainly single insulation measures to the least efficient homes (with heating controls eligible as a secondary measure once an insulation measure has been installed). Under GBIS, the majority of measures installed have been cavity wall insulation at 58 per cent. This is followed by heating controls at 18 per cent. (Table 1.5, Chart 3).

Chart 3: Share of all measures installed by measure type, by scheme, up to end 2023 (Table 1.5)[1]



Multiple Measures

Since 2013, an average of 1.53 measures have been installed per household receiving measures across all schemes.

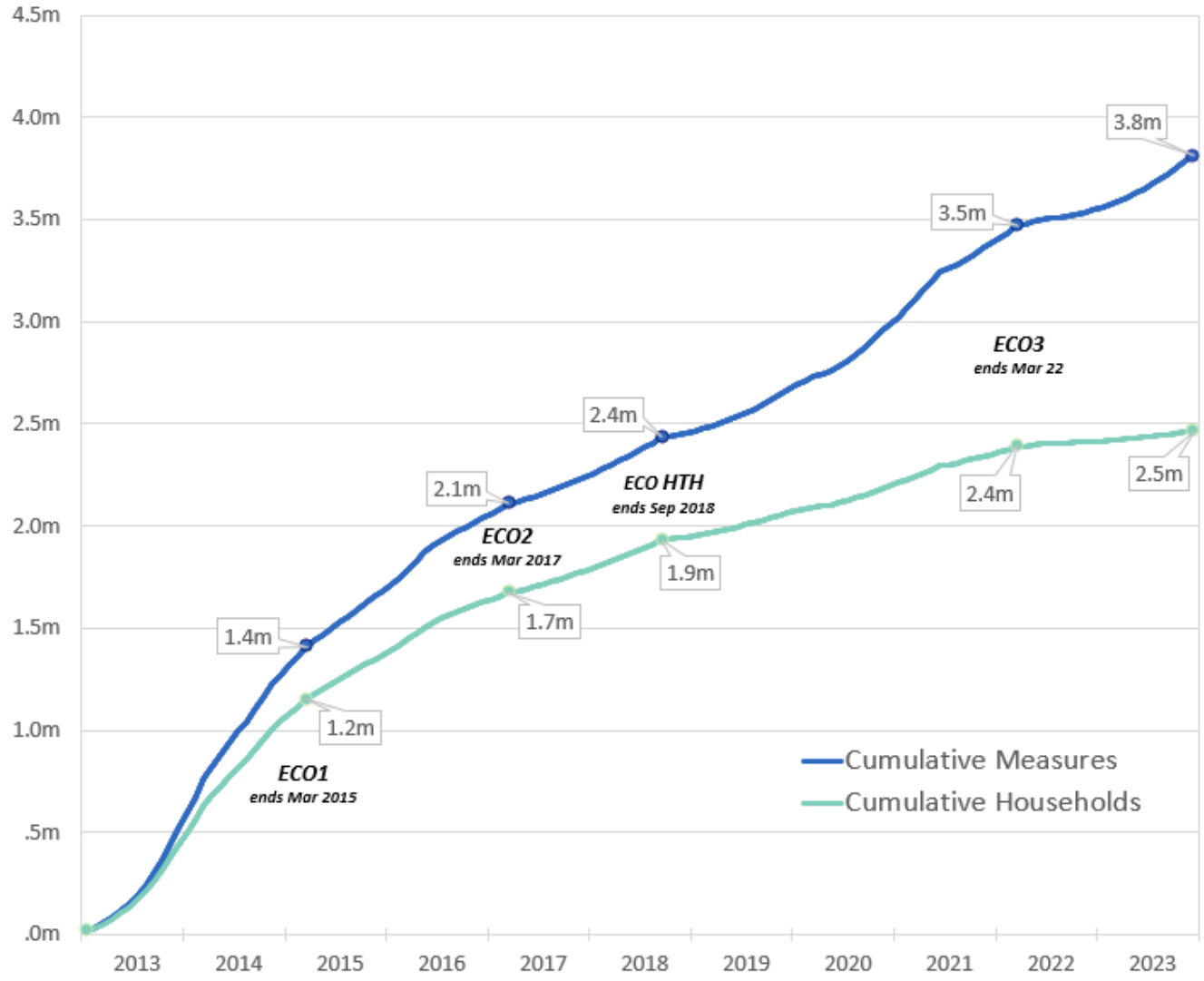
Under ECO, an average of 1.55 measures were installed per household receiving measures since 2013. The ratio remained relatively stable from 2013 to 2018, at an average of 1.21 measures per household. In 2019, the ratio was 1.61 and this slowly continued to rise to 2.16 in 2022, before rising sharply to 4.16 measures per household in 2023. (Table 2.3). This sharp rise is due to the whole-house retrofit focus on ECO4, where multiple measures are installed in a property following a full assessment of the home's needs.

[1] In Chart 3, Other Heating is made up of heating controls, electric storage heating, district heating, heat pumps, solar thermal and solar PV. Other insulation is made up room-in-roof, flat roof, floor, and park home insulation, as well as window and door measures. The 'Other' category is made up of Energy Efficiency lighting and Waste water heat recovery systems.

In 2023, across the other schemes, the average varied between 1 and 2 measures installed per household. The average was highest under SHDF at 1.98 measures per household and was lowest for GBIS at an average of 1.22 measures per household (Tables 1.1 and 1.2).

Chart 4 illustrates the cumulative number of measures installed and unique households across ECO, indicating the different rates of increase.

Chart 4: Cumulative number of ECO measures installed and unique households receiving measures by year, to end of 2023



Innovation Measures (ECO)

Under ECO3 and ECO4, suppliers can deliver up to 10 per cent of their obligation through Innovation measures. Innovation measures are measures that demonstrate an improvement over comparable measures currently deliverable under ECO, subject to technical assessment. Innovation was slow to take off. Since the first measures were approved by Ofgem in March 2019, around 16,400 innovation measures were installed to the end of 2023. 2023 saw the highest number of innovation measures installed so far at around 8,800 measures. (Table 2.3).

Of all ECO4 innovation measures, the majority were smart heating controls accounting for 46 per cent. A further 25 per cent of innovation measures were cavity wall insulation (see the quarterly statistical release for more detail on innovation measure types (Table 2.8b).

Solid Wall Minimum Requirement (SWMR) sub-obligation (ECO)

Under ECO3 suppliers were required to deliver £721m of lifetime bill savings through the Solid Wall Minimum Requirement (SWMR). Under ECO4 suppliers are required to install the equivalent of 90,000 measures through SWMR. This can only be met through the installation of external, internal or hybrid solid wall insulation (SWI) measures in eligible solid wall premises, whereas under ECO3, solid wall alternative measures which achieved the same bill savings as would been achieved by solid wall insulation were also eligible.

To the end of 2023, around 63,500 solid wall insulation and solid wall alternative measures were delivered under this sub-obligation, with 16,900 measures installed in 2023. (Table 2.3).

3. ECO Household Characteristics

Tables 3.2 and 4.2 to 4.3

The number of measures installed and households receiving an ECO measure by household characteristics, including heating source, property type and tenure.

Key Headlines

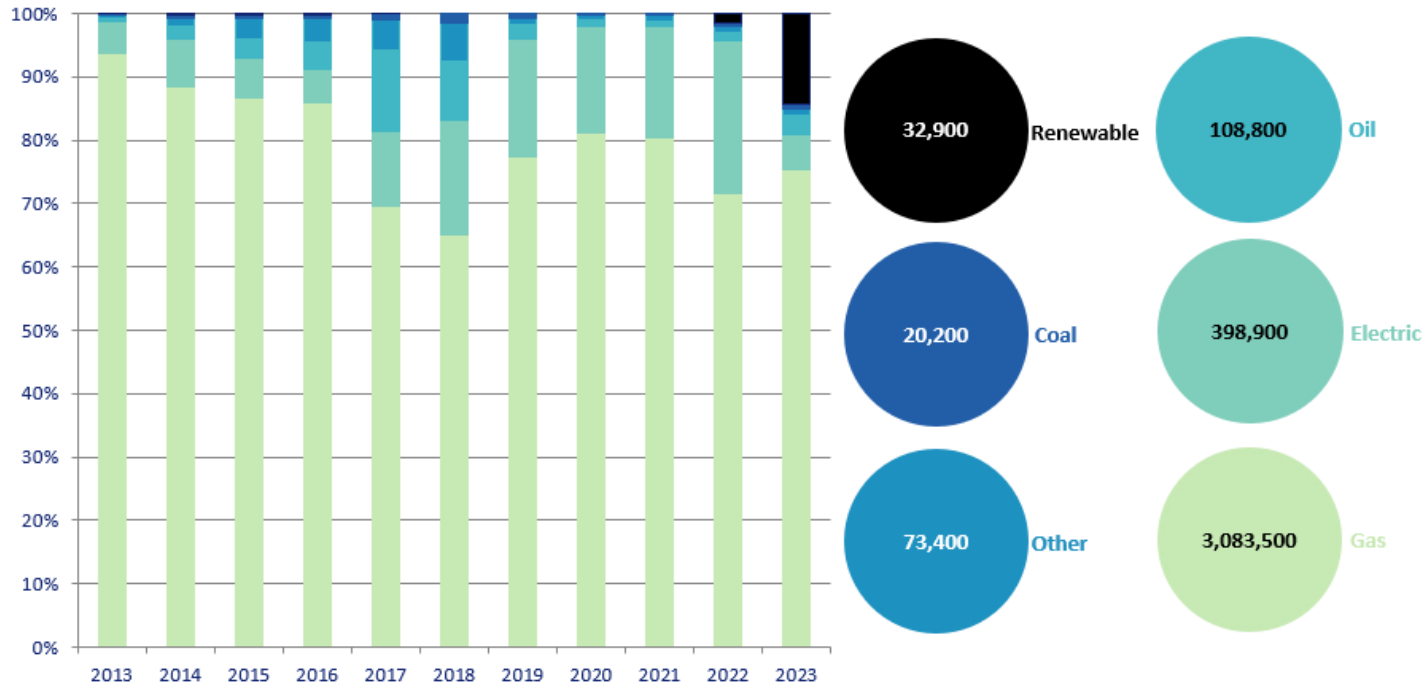
- Under ECO, 81 per cent of measures were installed in properties using gas as their main fuel type.
- The majority (71 per cent) of households where measures were installed were houses.
- The most common tenure was owner-occupied, accounting for around 70 per cent of households.

ECO measures by property main fuel type

In total, to the end of 2023, 3.08 million measures (81 per cent) were installed in properties that used gas as their main fuel type. *The 81 per cent calculation allows for including properties where the main fuel type is unknown in the overall total*.

The proportion of gas properties has decreased over the course of the scheme, from 94 per cent in 2013 when ECO started, to its lowest share of 65 per cent in 2018, before reaching 75 per cent in 2023. The number of properties where renewables were their main fuel type increased in 2023, up to 14 per cent of ECO measure install property fuel types in 2023, compared to two per cent in 2022[2] (Table 3.2, Chart 5).

Chart 5: ECO Measures by main fuel type of property, by year, to end of 2023 (Table 3.2)



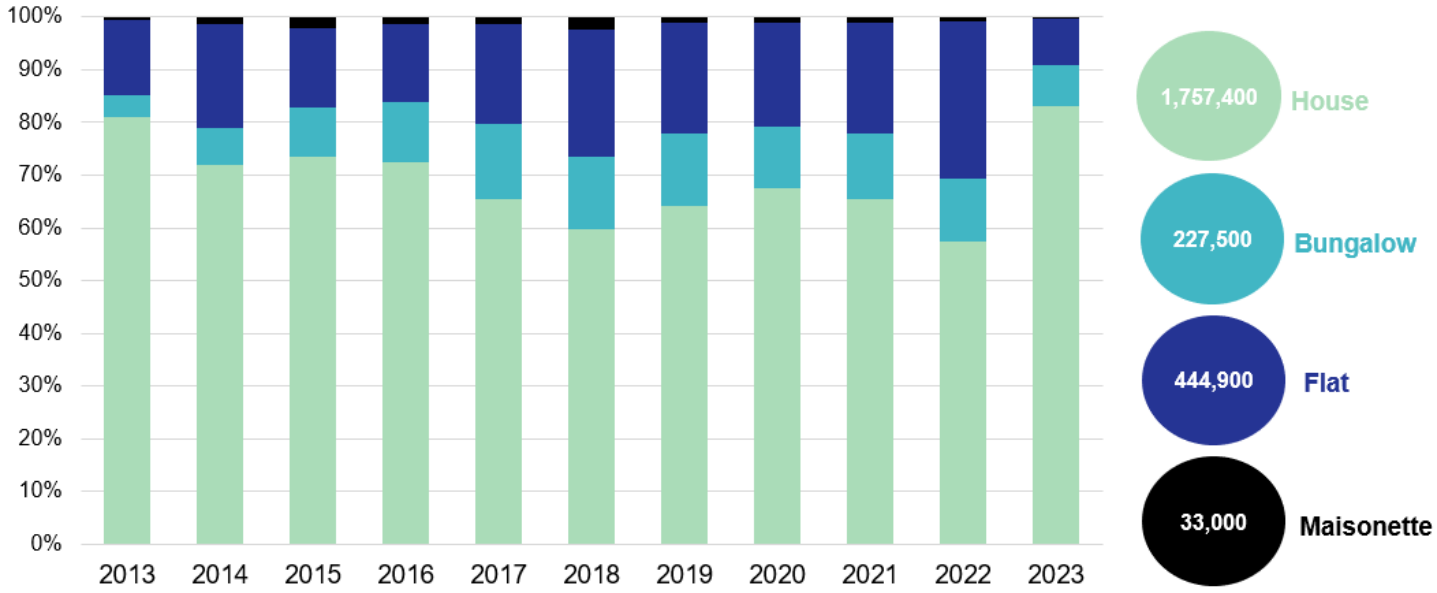
Households receiving measures – property type and tenure

Since the start of the ECO scheme in 2013, around 2.5 million households have received a measure through the scheme. Of these households, 1.8 million properties (71 per cent) were houses, with a further 18 per cent

[2]These percentages and Chart 5 exclude properties with an unknown main fuel type. This is because of an increase in the number of properties where the main fuel type is unknown during ECO4 due to changes in data collection requirements.

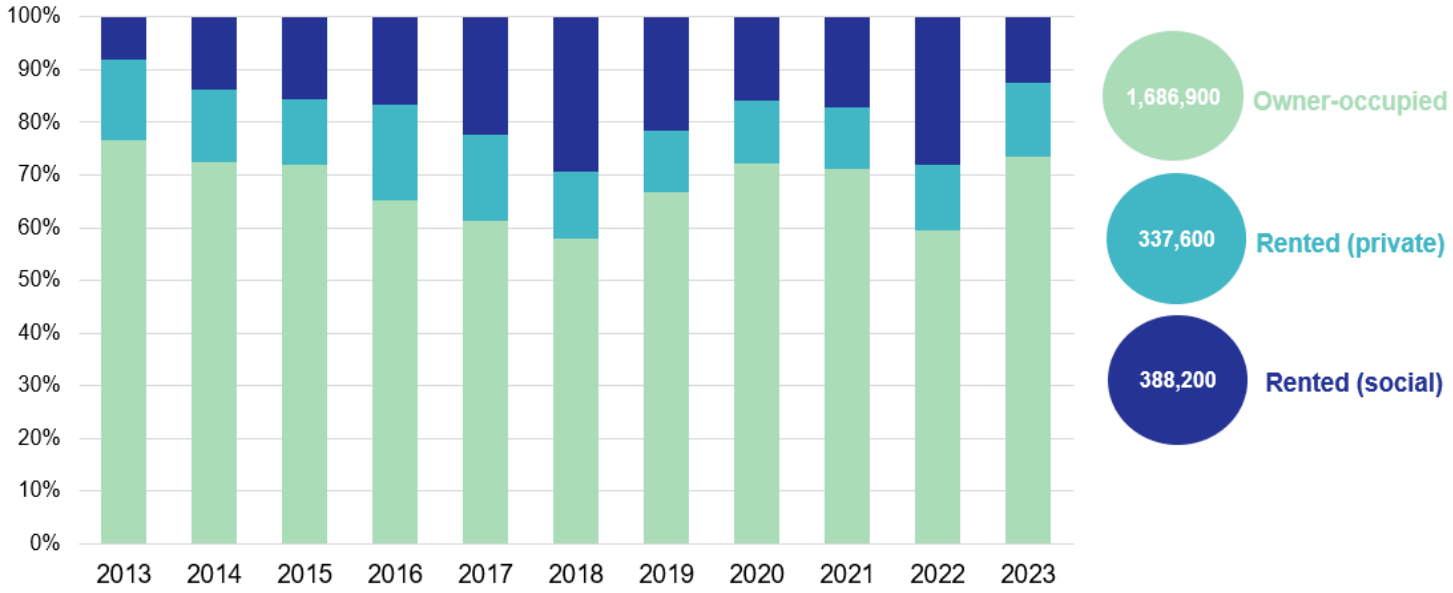
of properties flats. In 2023, 83 per cent of households that received measures in ECO were houses, the highest proportion since the beginning of the scheme, and up from 57 per cent in 2022. The proportion of flats upgraded in 2023 dropped from 30 per cent in 2022, to nine per cent (Table 4.2 and Chart 6).

Chart 6: Households in receipt of ECO measures by property type (where known), by year, to end of 2023 (Table 4.2)



For the whole of ECO, the most common tenure, where known, is owner-occupied with around 1.7 million households (70 per cent). The remainder of households were rented, with socially rented households accounting for 16 per cent and private rented households 14 per cent. In 2023, owner-occupied households accounted for just under 74 per cent of all ECO households in the year (Table 4.3 and Chart 7).

Chart 7: Households in receipt of ECO measures by tenure (where known), by year, to end of 2023 (Table 4.3)



4. Regional Trends

Tables 1.6, 2.3, 3.3 to 3.6. 3.9, 4.1 and 4.4 to 4.5

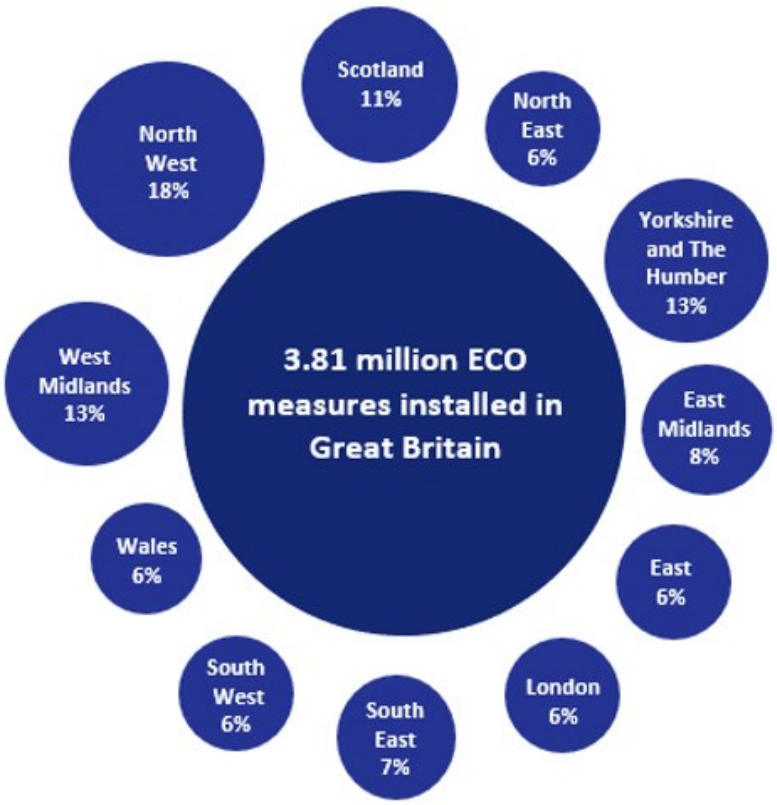
The number of measures installed and households receiving measures by region, local authority and parliamentary constituency and also geographic breakdowns for ECO Flexible Eligibility.

Key Headlines

- To date, just over nine per cent of households in Great Britain have had an ECO measure installed.
- Across ECO, nearly one fifth (18 per cent) of ECO measures were installed in the North West of England.
- The North West region also had the most measures installed under LAD and SHDF Wave 1

Regional Trends

Chart 8: ECO measures by region, up to the end of 2023 (Table 3.3)

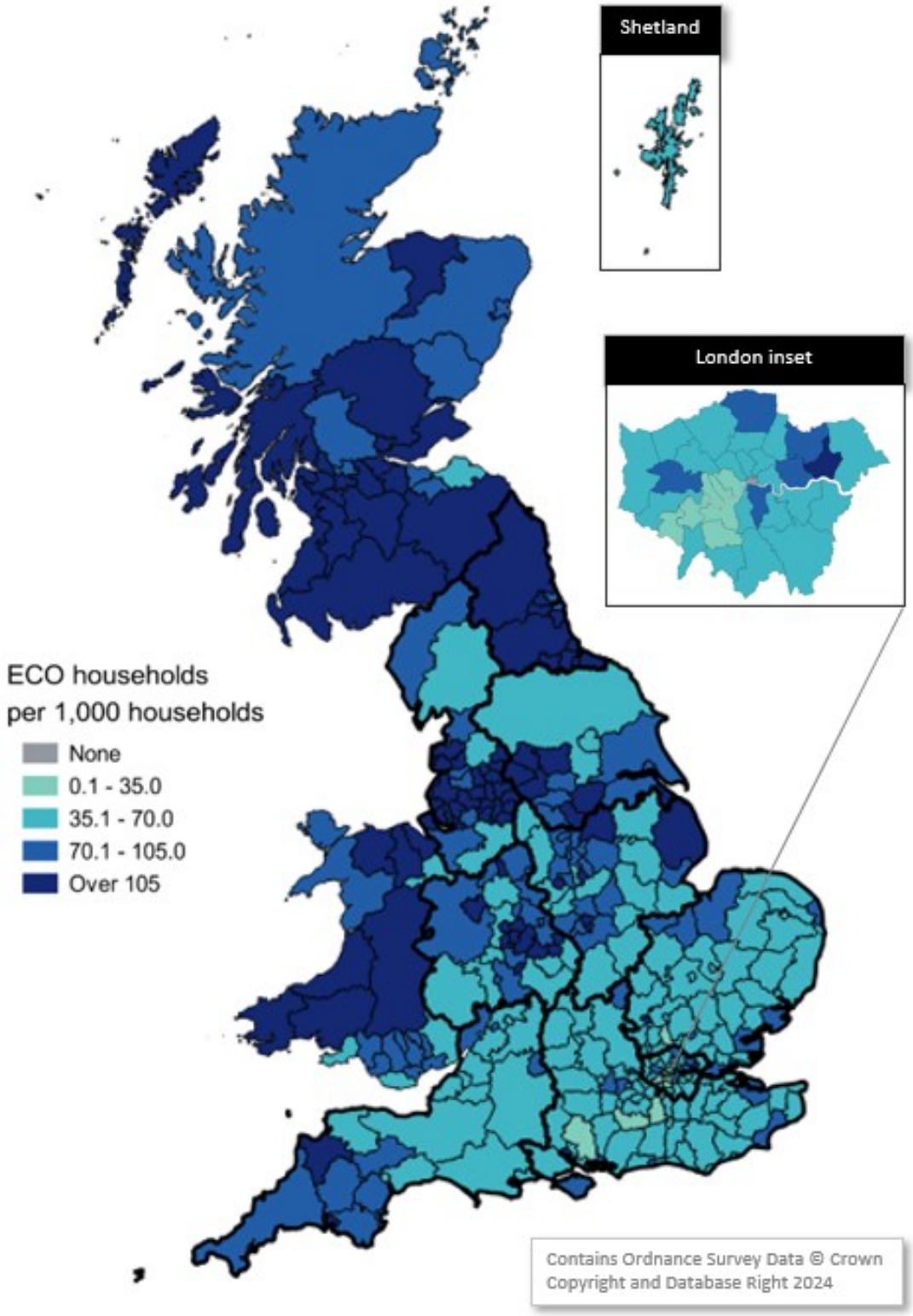


In 2023, ECO measure delivery by nation or region was:

- 212,700 measures in England, equivalent to 80 per cent of measures installed in 2023.
- 20,800 measures in Scotland, equivalent to eight per cent of measures installed in 2023.
- 31,600 measures in Wales, equivalent to 12 per cent of measures installed in 2023.
- The West Midlands had the highest regional delivery in England, with 44,900 measures installed equivalent to 17 per cent of measures installed in 2023. (Table 3.3)

Around nine per cent of all households in Great Britain had a measure installed under ECO, this is equivalent to 91 per 1,000 households, up to the end of 2023. For England, there were around 87 measures per 1,000 households, with five regions (North West, North East, West Midlands, Yorkshire and the Humber, East Midlands), each having a rate above the England average. The North West and North East regions had the highest rates in England, with 134 and 124 households with ECO measures per 1,000 households, respectively. There were around 129 measures per 1,000 households in Scotland and 93 per 1,000 households in Wales (Map 1, Table 4.1, and Table 4.4).

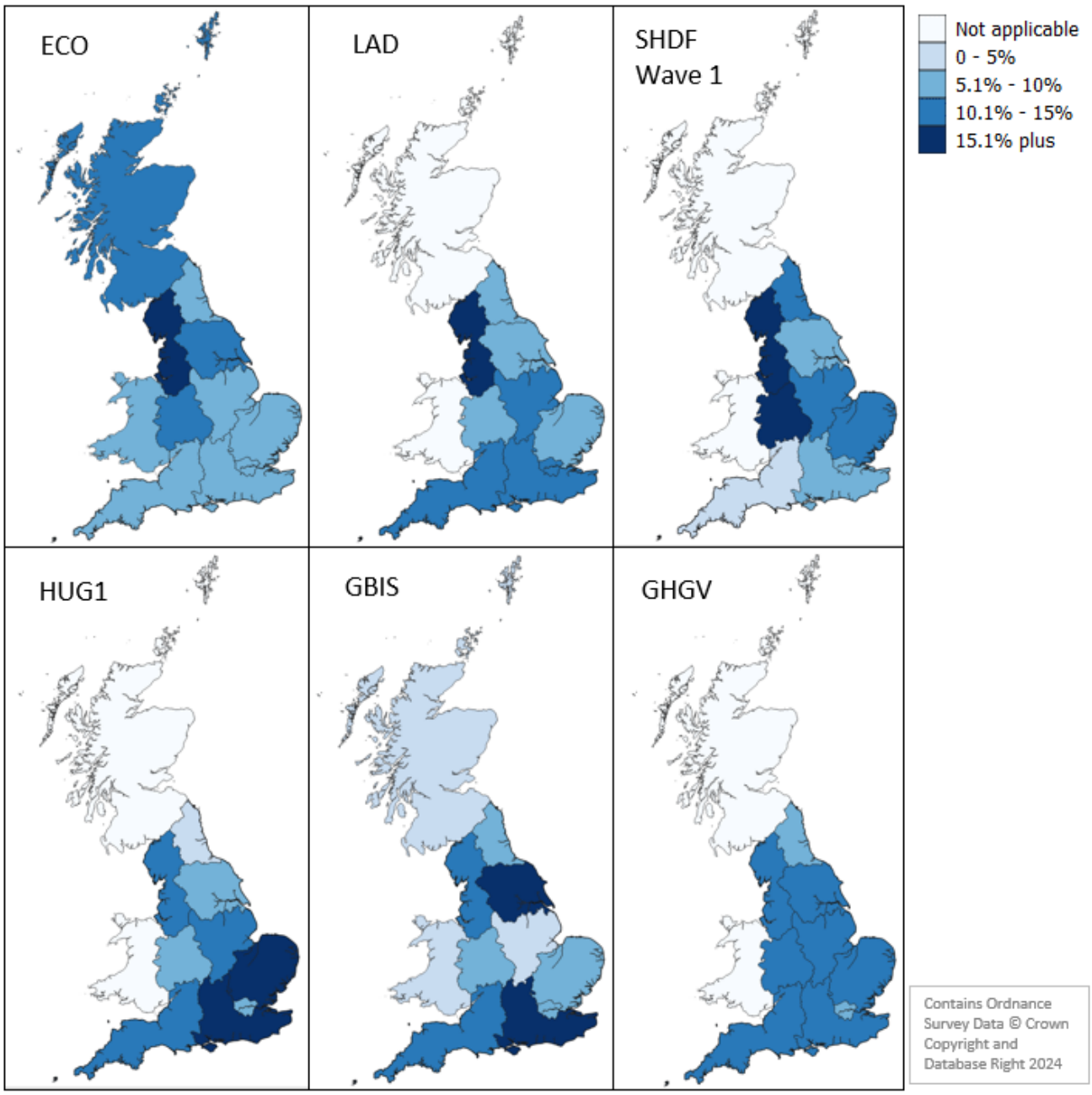
Map 1: Households in receipt of ECO measures by Local Authority per 1,000 households, to end of 2023 (Table 4.4)



Up to the end of December 2023, around one fifth (18 per cent) of ECO measures were in the North West (685,300) - the highest in any region. Eleven per cent of ECO measures were installed in Scotland (438,000) and six per cent were in Wales (216,500). Under GBIS, Yorkshire and the Humber (651 measures) and South East (650 measures) regions both had 16 per cent of all measures, higher than any other regions. Four per cent of GBIS measures were installed in Scotland (177) and five per cent were in Wales (195), (Table 1.6 and Map 2).

The LAD, HUG, GHGV and SHDF schemes operate within England only. Across Phases 1 to 3 of LAD, the North West region had the most measures installed of any region, around 20 per cent (15,200 measures) of all LAD measures to the end of 2023. The North West region also had the most measures installed under SHDF Wave 1 to the same period, with 19 per cent of measures, 4,800 measures. The South East and East regions had the most measures installed under HUG1 up to the end of 2023, both with 18 per cent of all HUG1 measures (1,200 and 1,100 respectively). Under GHGV, the North West, West Midlands and South East regions each had 14 per cent of all measures, all having around 7,000 each (Table 1.6 and Map 2).

Map 2: Percentage of each government scheme's measures installed in each region, up to end of 2023 (Table 1.6)



In Wales and Scotland only the ECO and GBIS schemes are applicable.

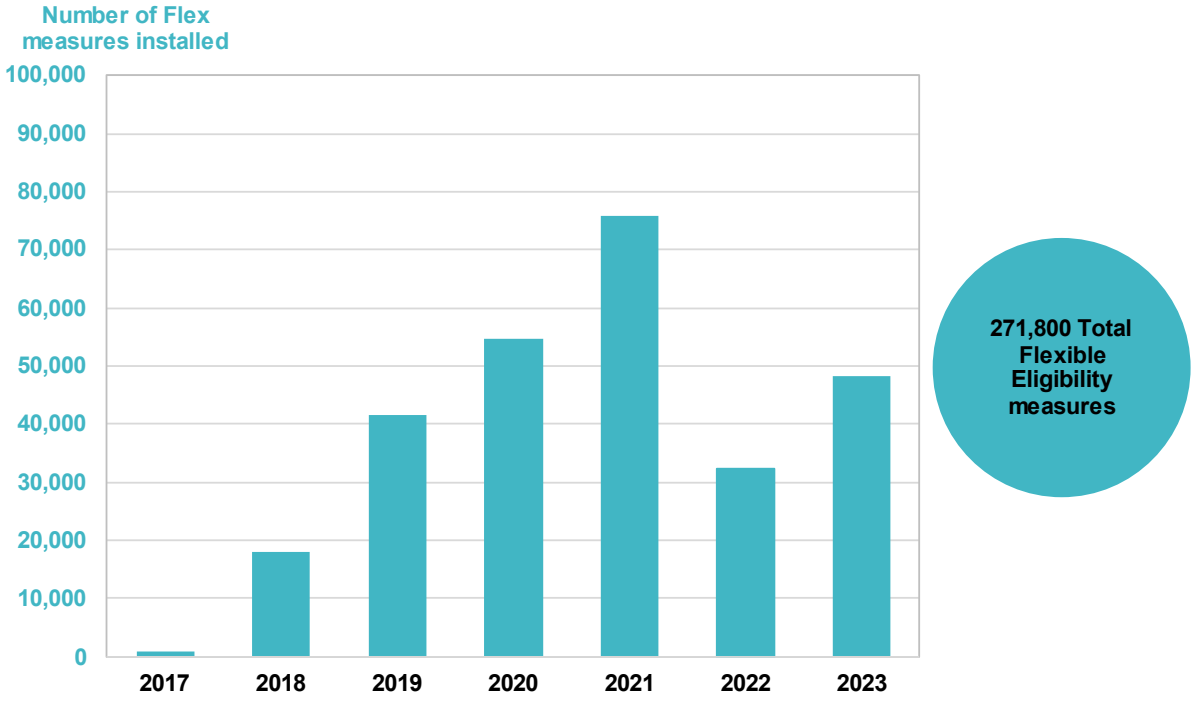
ECO Flexible Eligibility (Flex')

The 'Flexible Eligibility' rules for ECO4 mean suppliers can now deliver up to 50 per cent of their obligation through this mechanism, up from 25 per cent under ECO3, and 10 per cent under ECO Help-to-Heat (HTH). Ofgem defines ECO4 Flex as, "ECO4 Flex is a household referral mechanism within the wider ECO4 Scheme which enables councils to widen the eligibility criteria for ECO, allowing them to tailor energy efficiency schemes to their respective sector. Under ECO4 Flex, a participating local authority can refer private tenure households that it considers to be living in fuel poverty or on a low income and vulnerable to the effects of living in a cold home".

Since the introduction of Flexible Eligibility ('Flex') at the start of ECO HTH (April 2017), 271,800 measures were installed by this mechanism until the end of 2023. Of these, 212,600 were installed under either ECO HTH or ECO3, while around 59,200 were installed under ECO3 interim or ECO4 (Table 3.5 and Chart 9).

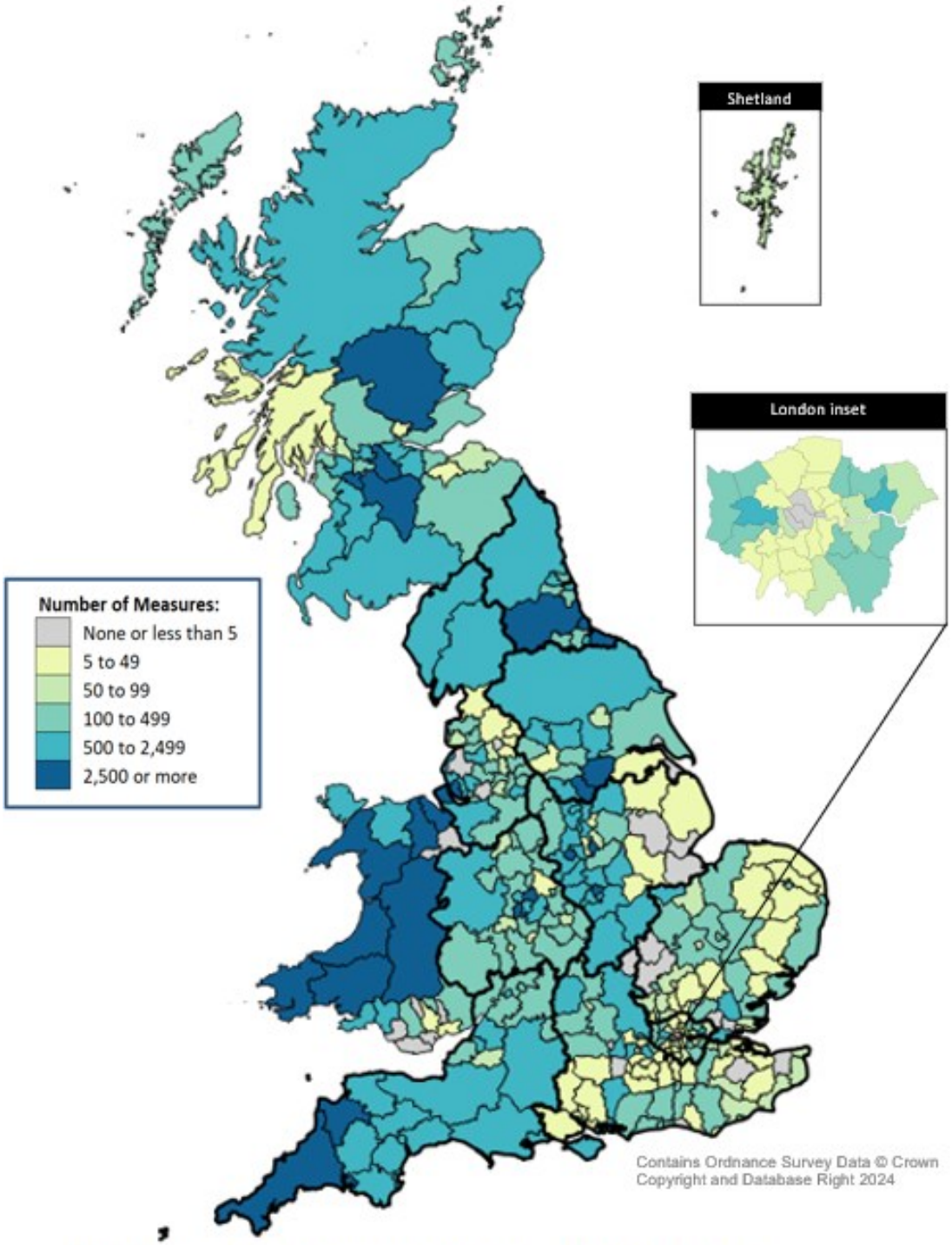
The number of Flex measures installed increased at a steady rate each year from its introduction in 2017, up until a peak of 75,800 in 2021. Flex installation numbers dropped in 2022, to around 32,300 installations, reflecting the end of the ECO3 phase and slow uptake start at the beginning of ECO4. Flex installation numbers rose again in 2023, to 48,200 in the year, as ECO4 measure installation numbers increased.

Chart 9: ECO Flexibility Eligibility Measures by installation year, to end of 2023 (Table 2.3)



To the end of December 2023, 244 local authorities had 50 or more measures installed through Flexible Eligibility, of which 109 local authorities had over 500 measures installed. The East Midlands (48,000 flex measures) and Scotland (47,000 flex measures) had the highest proportion of flex measures installed of any region, with around 18 and 17 per cent respectively of all the flex measures in Great Britain. Wales (36,000 flex measures) had around 13 per cent of all flex measures installed (Map 3 and Table 3.5).

Map 3: ECO Measures installed through Flexible Eligibility, by Local Authority from quarter 2 2017 to quarter 4 2023 (Table 3.5)

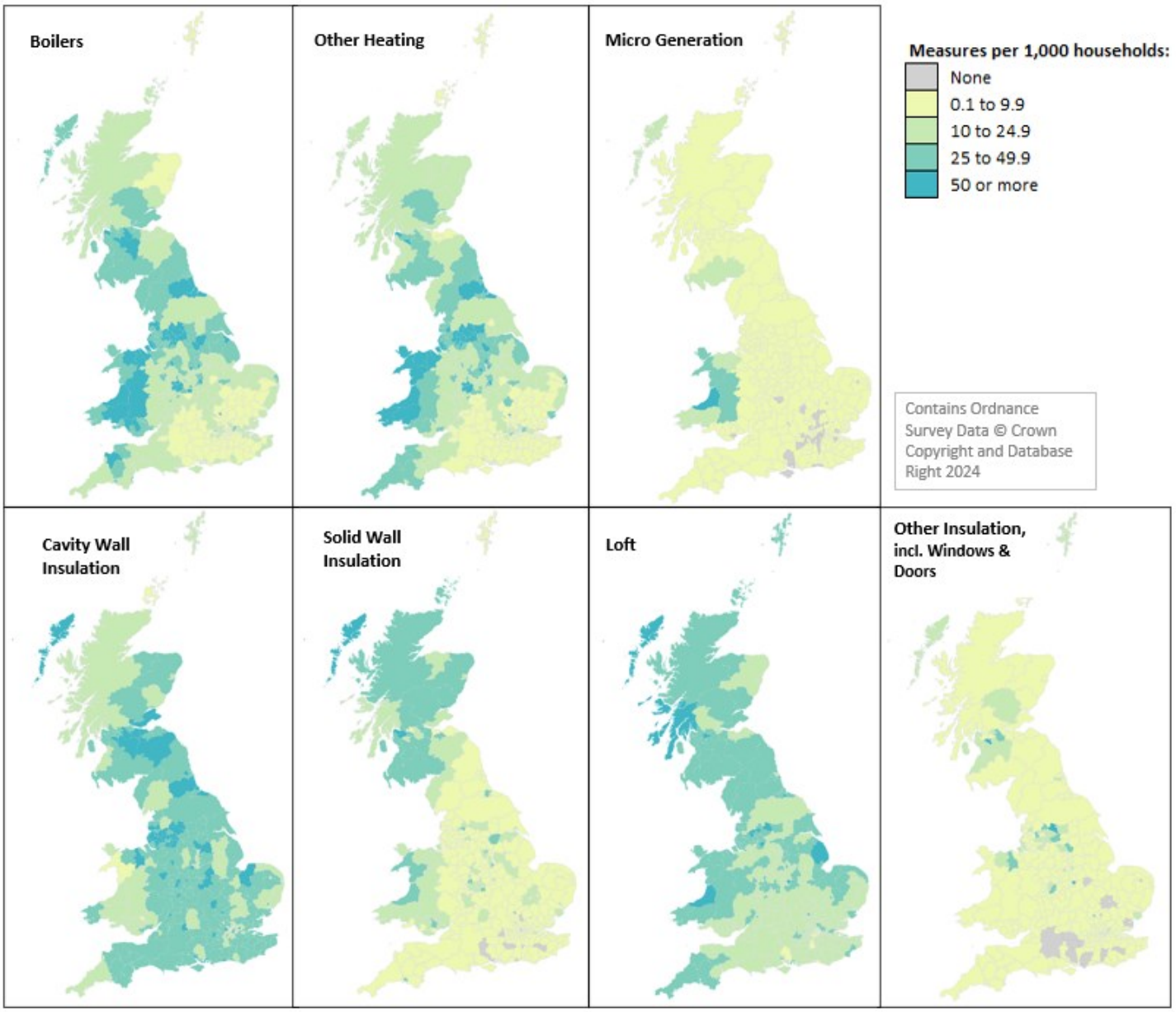


Local Authorities are shown only if they have at least five flexible eligibility measures. In total, 329 Local Authorities had at least one flex measure up to December 2023.

Regional ECO Measures by Measure Type

In addition to variation in regional delivery overall and under Flex, there is further variability in the types of measures installed. Map 44 illustrates the different types of measures installed by Local Authority, at the rate of ECO measures installed by 1,000 households. There is an individual map for boilers, other heating, micro generation, loft insulation, cavity wall insulation, solid wall insulation and other insulation. The maps show the differences in the regional spread of measures, with a higher rate of boiler installations in Wales, the North West and North East regions. There are high rates of delivery for loft insulation across Great Britain, but particularly in Scotland and England's northern regions. There are high rates of delivery for cavity wall insulation across Great Britain, though Wales is slightly lower. Scotland has the highest rates of solid wall insulation delivery. For Other Insulation measures, the rates are low across Great Britain, except for specific local authorities in North Wales, and the North West and Yorkshire & Humberside regions in England. Micro Generation rates are generally low nationally, with the exception of mid and North Wales.

Map 4: ECO Measures per 1,000 households, by measure type and Local Authority, up to end December 2023



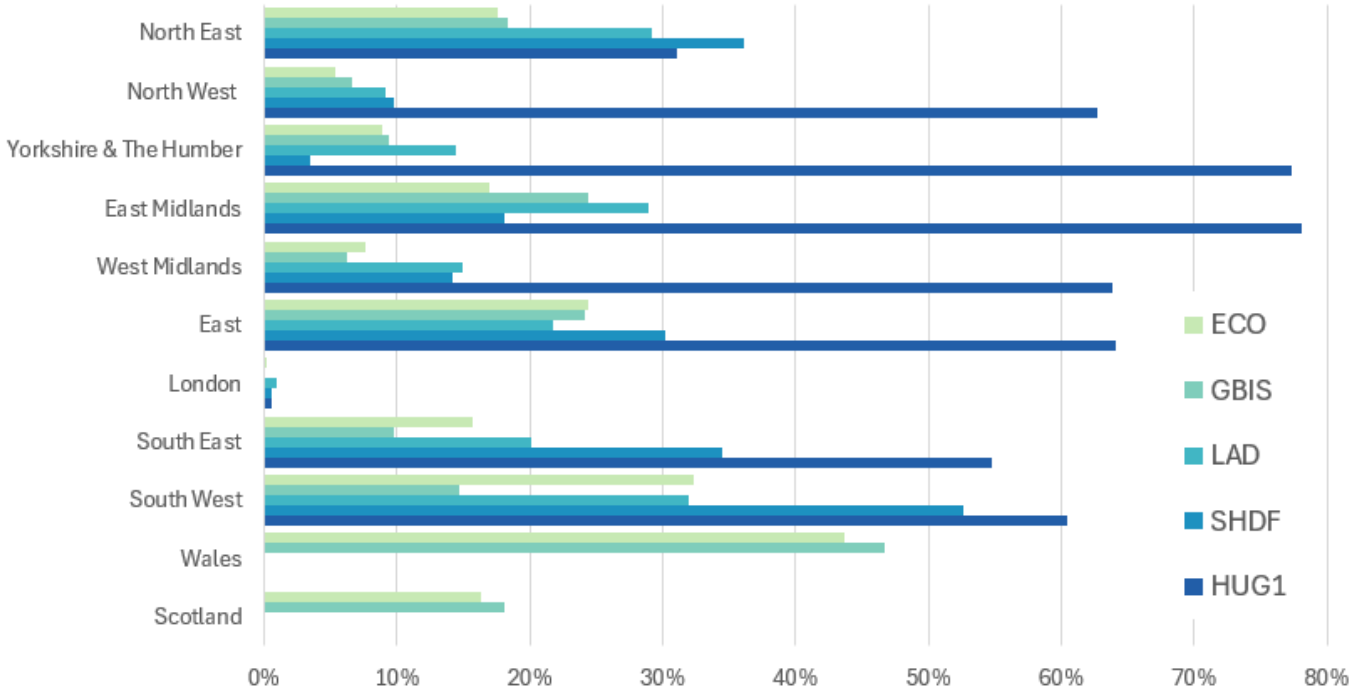
Rurality of measures installed under ECO compared to other government schemes

Under ECO up to the end of December 2023, across the whole of Great Britain around 14 per cent of measures were installed in rural areas.[3] This urban/rural installation split varies across the country, with around 44 per cent of measures in Wales installed in rural areas, compared to 16 per cent in Scotland and 12 per cent in England. Within the English regions there is also large variation, with South West and East regions having 32 per cent and 24 per cent of their measures installed in rural areas respectively. North West and West Midlands regions had only five per cent and eight per cent of installations in rural areas respectively. This is to an extent down to the general urban/rural make-up of households in those areas, as illustrated by the London region having 99.8 per cent of measures installed in urban areas (Table 3.9a and Chart 10).

So far, under GBIS up to end December 2023, the urban/rural split has followed a similar pattern as ECO in the three nations' figures: within England, 12 per cent of measures were in rural areas, with 18 per cent in rural areas of Scotland and 47 per cent of measures installed in Wales were in rural areas. However, within the English regions, it is the East Midlands and East regions that have the largest percentage of their measures in rural areas, compared to urban areas, both with 24 per cent of installations in rural areas (Table 3.9e and Chart 10).

The LAD, HUG and SHDF schemes are only applicable within England. Under LAD, within the English regions, it is the South West, North East and East Midlands regions that have the largest percentage of their measures in rural areas, compared to urban areas, with 32, 29 and 29 per cent of installations in rural areas respectively. Overall, 18 per cent of measures in England under LAD were in rural areas (Table 3.9b and Chart 10). Similarly, 18 per cent of all SHDF were in rural areas in England, with the South West region having the highest number its measures in rural areas at 53 per cent rural (Table 3.9d and Chart 10). Under HUG1, compared to other schemes there is a far higher proportion of installations in rural areas (due to HUG only being applicable to properties off the gas grid), compared to urban measure installations, in every English region except London and the North East. Under HUG1, of the other English regions, the percentage of rural measures in each area ranges from 55 per cent (South East region) to 78 per cent in the East Midlands (Table 3.9c and Chart 10).

Chart 10: Percentage of measures installed in rural areas in each region under ECO and other government schemes, to the end of 2023 (Table 3.9)



In Wales and Scotland only the ECO and GBIS schemes are applicable.

[3] Includes the groups, rural town and fringe, rural town and fringe in a sparse setting, rural village, rural village in a sparse setting, rural hamlet and isolated dwellings, rural hamlet and isolated dwellings in a sparse setting, or in Scotland Accessible Rural, remote rural, and very remote rural. This summary is not based on the rural sub-obligation.

5. ECO Costs

Tables 6.1 to 6.8

The costs of delivering and administering the ECO scheme as reported by energy suppliers.

ECO costs are updated in the monthly headline release following a quarterly publication. The figures below are from the March headline release, including all reported cost data to the end of 2023.

Key Headlines

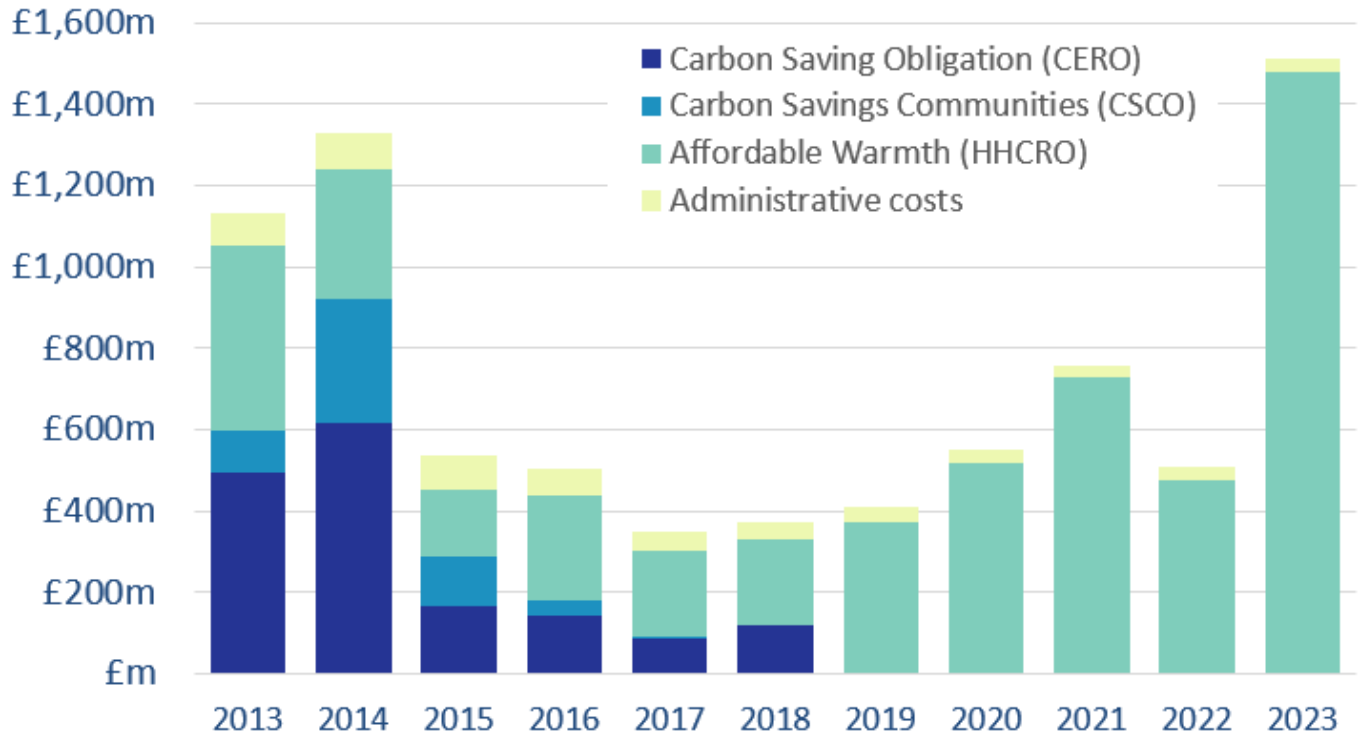
- The total ECO costs reported by suppliers (both delivery and administrative) to the end of 2023 were £7.95 billion.
- Delivery costs in 2023 were £1.48 billion.
- Up to the end of December 2023 the average cost of delivering the ECO4 obligation, not including ECO3 interim, was around £21.69 per £ annual bill savings.

ECO Costs

Total ECO delivery costs up to the end of 2023 were around £7.38 billion, with an additional £572 million in administrative costs. Therefore, the total cost of ECO was £7.95 billion. Delivery costs in 2023 were 2.1 times higher than in 2022: £1.48 billion in 2023, compared to £475m in 2022. As well as higher measure delivery volumes in 2023, compared to the prior year, this largely reflected the substantial rise in the costs of delivering ECO measures throughout ECO4. Note, historic figures are not adjusted for inflation (Table 6.1, Chart 11).

Up to the end of December 2023 the average cost of delivering the ECO4 obligation, not including ECO3 interim, was around £21.69 per £ annual bill savings (Table 6.5). Again, this average has been steadily rising throughout the ECO4 period.

Chart 11: ECO costs, by obligation, by year, up to end 2023 (Table 6.1)



6. Green Deal

Tables 7.1 to 7.4

The number of Green Deal Plans and measures installed. Table 7.1 contains data up to December 2023, with Chart 12 illustrating the delivery for complete years. The Green Deal (GD) is a government initiative that is designed to help homeowners install energy efficiency measures into their properties, and the costs of these measures are paid back through their energy bill over a period of time; this is in the form of a Green Deal Finance Plan (GD Plan).

Key Headlines

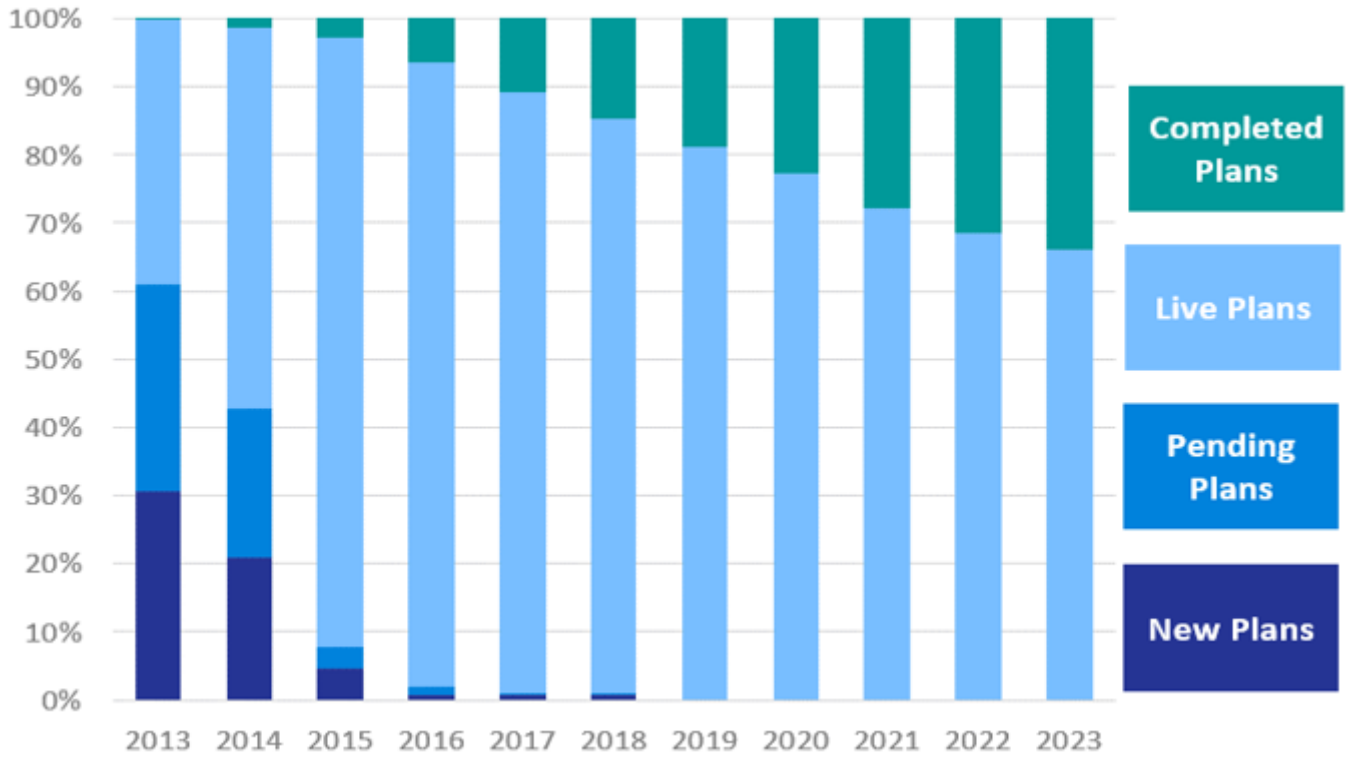
- A total of 13,867 Green Deal Plans since the Green Deal began in 2013.
- Around a third of plans (34 per cent) are classified as 'Completed' (all measures installed and paid off).
- In 2023, 359 plans were 'Completed'.

Under the Green Deal scheme, a total of 13,867 Plans were classified as either 'Live' or 'Completed' at the end of 2023. Of these, 9,157 were 'Live' (all measures installed) and 4,710 were 'Completed' (all measures installed and paid off). At the end of 2023, around 66 per cent of all plans were 'Live'. (Chart 12).

In 2023, 359 plans were 'Completed', compared to 505 plans 'Completed' in 2022 (Table 7.1).

We estimate that the total initial loan amounts (excluding APR interest payments) associated with all 'Live' plans was around £32.8m as of December 2023, with 'Completed' plans accounting for around a further £16.7m. The estimated average initial loan amount per GD Plan was around £3,600.

Chart 12: Domestic Green Deal Plans, by 'Completed', 'Live', 'Pending', or 'New' status, by year, to end of 2023 (Table 7.1)



7. Estimates of Home Insulation Levels in Great Britain

Tables 8.1 to 8.7

This section presents estimates of the number of homes in Great Britain (GB) with loft, cavity wall and solid wall insulation. It gives headline estimates for the number of insulated properties and sets out the remaining potential for insulation to be installed in properties in GB. Estimates of insulation levels are based from April 2013 to reflect information available in the English, Welsh and Scottish Housing Surveys close to the start of the Energy Company Obligation and Green Deal schemes. Adding on the observed delivery of measures is considered more accurate than re-basing to more recent surveys.

These estimates show the share of homes with loft, cavity wall and solid wall insulation separately for England, Wales and Scotland. Full details on how these estimates were constructed, based on the new methodology, can be found in the Methodology note.

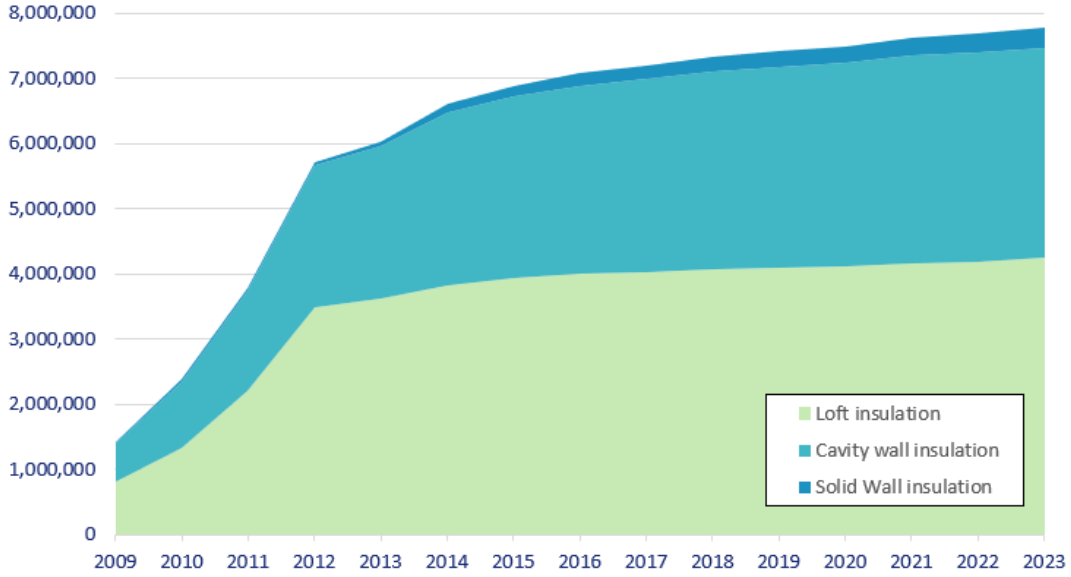
Key Headlines

- 7.8 million major professional insulation measures (cavity wall, loft and solid wall) have been installed through ECO and other government supported domestic energy efficiency schemes since 2009.
- Of the estimated 21.3 million homes with cavity walls, 70 per cent have cavity wall insulation[4].
- Of the estimated 25.8 million homes with lofts, 67 per cent have loft insulation.
- Of the estimated 8.5 million homes with solid walls, 10 per cent have solid wall insulation.

Professional Insulation measure installations

A total of 7.8 million major professional insulation measures (cavity wall, loft and solid wall) have been installed through ECO and other government supported domestic energy efficiency schemes since 2009 (Chart 13). While the number of measures delivered per year has fallen as the size of the ECO obligation has been reduced, the focus of the obligation has changed to target measures with greater energy and carbon savings which are in turn more expensive measures, such as solid wall insulation, and to target the scheme towards more vulnerable households.

Chart 13: Cumulative professional insulation measures installed through Government energy efficiency schemes 2009-2023



[4] The proportion of homes with insulation has marginally decreased since the last publication due to upward revisions in total baseline dwelling figures published by Department for Levelling Up, Housing and Communities (DLUHC), Stats Wales and the Scottish Government. Therefore, whilst there has been an increase in installations, this has led to a decrease of one percentage point in the estimated proportion reported for cavity wall insulation since the last publication.

Housing Stock

The housing stock in Great Britain is made up of properties with different characteristics, such as cavity walls or solid walls. It is important to understand the profile of the housing stock because different insulation measures are suitable for different property types.

Infographic 1: Housing Stock estimates to the end of 2023

Levels of Insulation

Estimating levels of insulation types in the housing stock makes it possible to see both how much progress has been made to date and how much work there is left to do.

At the end of December 2023:

- 15.0 million homes had cavity wall insulation (70 per cent of homes with a cavity wall);
- 833,000 had solid wall insulation (10 per cent of homes with solid walls); and
- 17.3 million had loft insulation (67 per cent of homes with a loft)

Through 2023, both retrofit insulation (delivered through Government schemes[5],[6]) and new properties[7] built with insulation resulted in the following progress:

- Around 210,800 more homes with cavity wall insulation (a 1.4 per cent increase between the end of December 2022 and December 2023), of which 17,600 were through retrofit and 193,200 through new build;
- Approximately 223,300 more homes with at least 125mm of loft insulation (a 1.3 per cent increase between the end of December 2022 and December 2023), of which 51,000 were through retrofit and 172,400 through new build;
- Around 26,800 more homes with solid wall insulation (a 3.3 per cent increase between the end of December 2022 and December 2023), all of which are assumed to be through retrofit.

[5] Insulation measures delivered in Scotland exclusively under the Green Homes Cashback scheme are excluded from the figures.
[6] The estimates of progress for 2023 include the delivery of insulation through the Green Homes Grant Vouchers (GHGV) and Green Homes Grant Local Authority Delivery (LAD) schemes, Home Upgrade Grant (HUG) and the Social Housing Decarbonisation Fund (SHDF) scheme, as well as the Energy Company Obligation (ECO) and the Great British Insulation Scheme (GBIS).
[7] Information is not available on the wall construction of new homes. Building regulations would typically be met by insulated cavity walls but other construction types could be used with an equivalent insulating performance. In this publication, it is assumed that all new builds since April 2013 have cavity wall insulation. DESNZ estimates that around 193,225 new builds were completed in 2023, based on new builds data from England, Wales and Scotland.

Sources of increase in insulation levels by nation

Tables 8.7b-8.7d of the accompanying Excel tables show the share of homes insulated for each nation in 2013 as well as the additional insulation measures delivered through newly built homes and retrofits.

Charts Chart 14 and Chart 15 below show the estimated number of homes with insulation prior to the start of ECO and GD in 2013, as well as the increase resulting from Government schemes and newly built properties.

For all three of these measures, Scotland had the highest share of insulated homes in 2013 and also the highest rates of delivery since then. At the end of December 2023, it is estimated that Scotland had:

- 80 per cent of cavity wall homes insulated, compared to 70 per cent for Great Britain;
- 86 per cent of homes with a loft insulated with at least 125mm of loft insulation, compared to 67 per cent for Great Britain; and
- 22 per cent of solid wall homes insulated, compared to 10 per cent for Great Britain.

At the end of December 2023, Wales (74 per cent) had a higher share of insulated cavity wall homes than England (69 per cent); the same levels of loft insulation (65 per cent); but slightly lower levels of solid wall insulation (seven per cent, compared to nine per cent in England).

Of retrofit insulation measures funded through government schemes since 2013, 99 per cent of cavity wall and 94 per cent of loft insulation measures have been delivered through ECO. Around 75 per cent of solid wall insulation over this period has been through ECO; with 13 per cent of solid wall measures delivered through the Green Deal framework, a combined 10 per cent through GHGV, LAD, HUG, SHDF and GBIS and two per cent through the Community Energy Savings Programme (CESP).

Chart 14: Share of homes with cavity wall insulation and loft insulation by source, Great Britain, England, Wales and Scotland, December 2023 (Table 8.7)

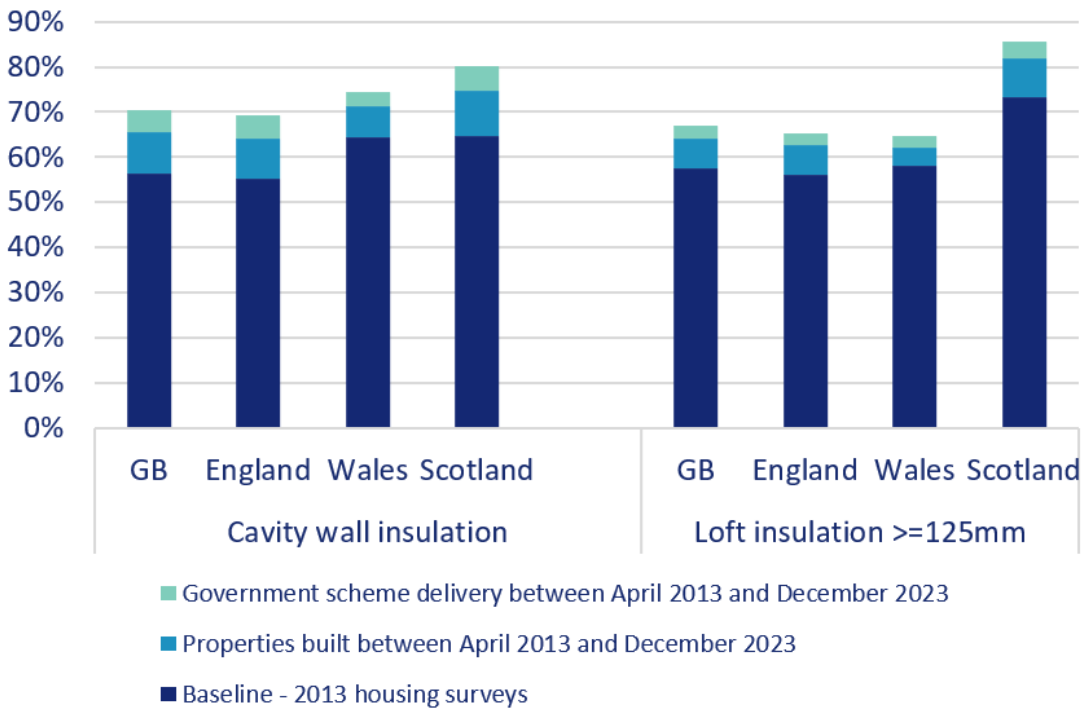
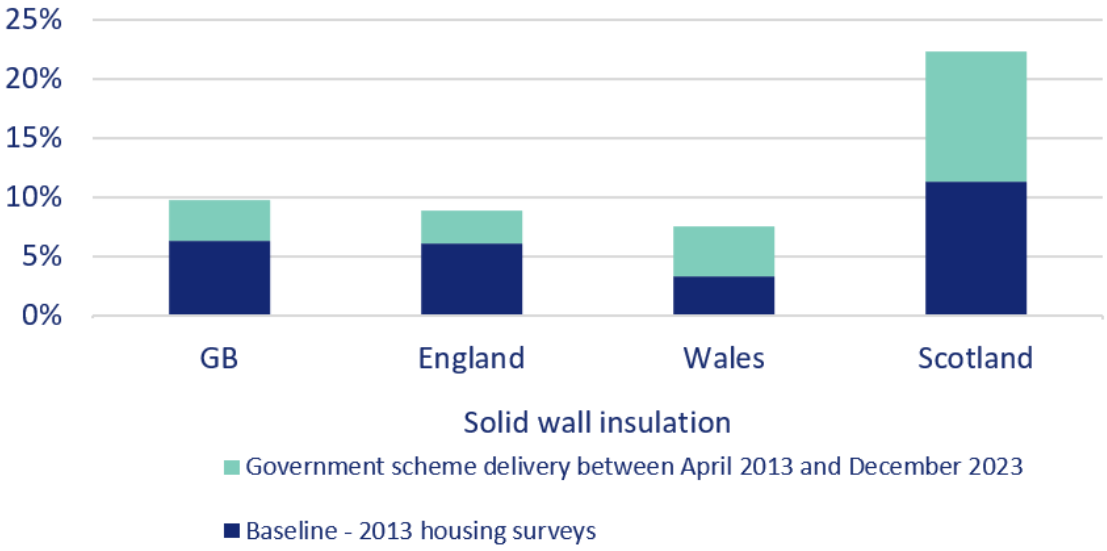


Chart 15: Share of homes in GB with solid wall insulation by source, Great Britain, England, Wales and Scotland, December 2023 (Table 8.7)



Remaining Potential

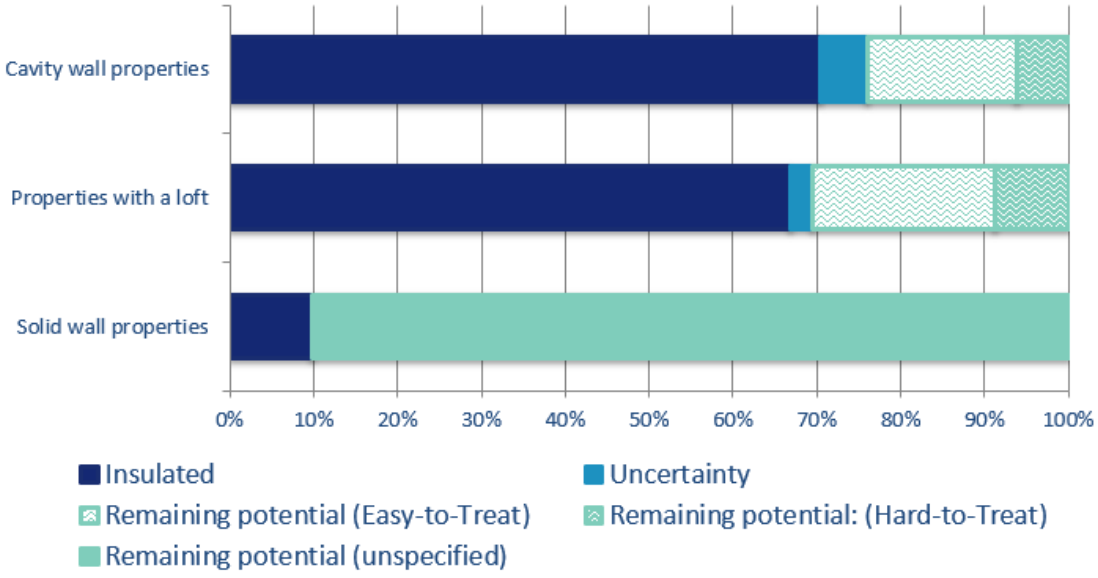
A key use of these estimates for DESNZ is to identify how many homes have the potential to receive cavity wall, loft or solid wall insulation in the future, which can then aid the design of future policies.

Both historical figures and a more detailed breakdown of Great Britain's remaining insulation potential are available in Tables 8.4 - 8.6 of the accompanying Excel tables.

Chart 16 gives a summary of the remaining potential for insulating properties in Great Britain. It shows that:

- Around 70 per cent of properties with cavity walls have cavity wall insulation
- Around 67 per cent of properties with a loft have loft insulation
- Only around 10 per cent of properties with solid walls have solid wall insulation.

Chart 16: Remaining potential to insulate the housing stock in Great Britain, end December 2023 (Tables 8.4, 8.5 and 8.6)[8]



[8] Includes where it is not certain if a property has cavity walls or a loft.

Remaining Potential – Cavity Wall Insulation

At the end of December 2023, there were an estimated 21.3 million homes with cavity walls in Great Britain (Chart 16, Table 8.4). Of these, 15.0 million (70 per cent) were estimated to have cavity wall insulation. There were also around 1.2 million homes that may or may not have cavity wall insulation due to the level of uncertainty from the survey of what is insulated. Of the remaining approximate 5.1 million homes without cavity wall insulation, we estimate that 3.8 million have easy to treat standard cavities and 1.3 million are hard to treat.[9]

Remaining Potential – Loft Insulation

Lofts are defined as insulated if they have 125mm or more of insulation. Lofts with less than 125mm of insulation are defined as uninsulated as they would benefit most from top-up insulation.

At the end of December 2023, there were an estimated 25.8 million homes with a loft in Great Britain (Chart 16, Table 8.5). Of these, 17.3 million (67 per cent) were estimated to have loft insulation. There were also around 0.7 million homes that may or may not have had loft insulation due to the level of uncertainty from the survey of what is insulated and uncertainty whether new build homes have lofts. Of the remaining approximate 7.9 million homes without loft insulation, 5.6 million were estimated to have easy to treat lofts and 2.3 million were considered to have hard to treat or unfillable lofts which means that the loft would be hard or costly to insulate or could not be insulated at all. This can occur in properties with a flat roof, properties with a room in their roof, or properties where the roof has a very shallow pitch, which makes the loft space inaccessible.

Remaining Potential – Solid Wall Insulation

Solid wall insulation has been defined throughout this report as internal or external wall insulation installed through Government programmes.

At the end of December 2023, there were an estimated 8.5 million homes with solid walls in Great Britain (Chart 16, Table 8.6). Of these, it is estimated that 833,000 (10 per cent) had solid wall insulation and 7.7 million (90 per cent) were uninsulated.

Prior to 2013, Government schemes focused on insulating homes with cavity walls due to the costs involved with insulating solid wall properties. However, the focus has switched in recent years to harder or more expensive to treat properties due to policies like ECO, including solid wall properties. Of the remaining insulation potential, it may not be possible to insulate all solid wall properties. Some of these properties are likely to be too costly to treat or to be located within conservation areas, which means that they will never be insulated.

[9] Hard to treat cavities are ones that are more difficult or more expensive to fill than standard cavities. This includes properties with a narrow cavity and properties of either concrete or metal frame construction. The definition of hard to treat used in this publication is based on the definition used in the 2013 Housing Surveys. The ECO definition of hard to treat differs from this definition slightly as it also includes partial fill cavities and cavity wall properties over three storeys (compared to over four). It also excludes some cavities which assessors would not be able to identify as hard to treat, such as properties with high exposure to wind and rain.

8. Benefits Monitoring

Tables 1.3 and 1.4

This section sets out the combined number of measures installed across the schemes, plus the estimated carbon and energy savings from those measures.

The carbon and bill savings for ECO have not been updated with data on ECO4. The Ofgem ECO4 register is still undergoing development, limiting the variety of data currently available. ECO4 benefits monitoring information will be available in a subsequent quarterly release.

Key Headlines

- To the end of December 2023, provisional estimated annual carbon savings of measures installed through LAD, HUG, GHGV and SHDF was up to 0.0578 MtCO2.
- To the end of December 2023, provisional estimated annual energy savings of measures installed through LAD, HUG, GHGV and SHDF was up to 292 GWh.
- To the end of December 2023, provisional estimated annual bill savings of measures installed through LAD, HUG, GHGV and SHDF was £13.4m.

The carbon, energy and bill savings associated with measures installed through the LAD, HUG, GHGV, and SHDF schemes are based on annual savings rather than lifetime savings.

To the end of December 2023, the provisional estimated annual carbon savings and annual energy savings under the LAD, HUG, GHGV, and SHDF schemes was 0.0578 MtCO2 and 292 GWh respectively (Table 1.4). The breakdown by scheme was:

Table 1: Estimated Annual Energy, Carbon and Bill Savings for Installed Measures through LAD, HUG, GHGV and SHDF, to end of 2023 (Table 1.4)

Scheme[10]	Estimated Annual Energy Saving (GWh)	Estimated Annual Carbon Saving (MtCO2)	Estimated Annual Bill Saving (£)
LAD1	40.43	0.0083	2,194,100
LAD2	36.95	0.0077	2,263,600
LAD3	32.24	0.0066	1,919,800
HUG1	10.86	0.0026	788,900
GHGV	130.00	0.0241	3,908,000
SHDF Wave 1	41.14	0.0085	2,349,700
Total	**291.62**	**0.0578**	**13,424,100**

Under all of these schemes (except HUG1), solid wall insulation accounted for most of these savings out of all measures installed. Under HUG1, the installation of heat pumps accounted for most of the energy, carbon and bill saving.

[10] Data not available for HUG2 or SHDF Wave 2.

Further information on LAD, HUG, GHGV and SHDF carbon and energy savings can be found in Table 1.4 or in their respective releases available here: https://www.gov.uk/government/collections/green-home-grant-statistics and https://www.gov.uk/government/collections/social-housing-decarbonisation-fund-statistics

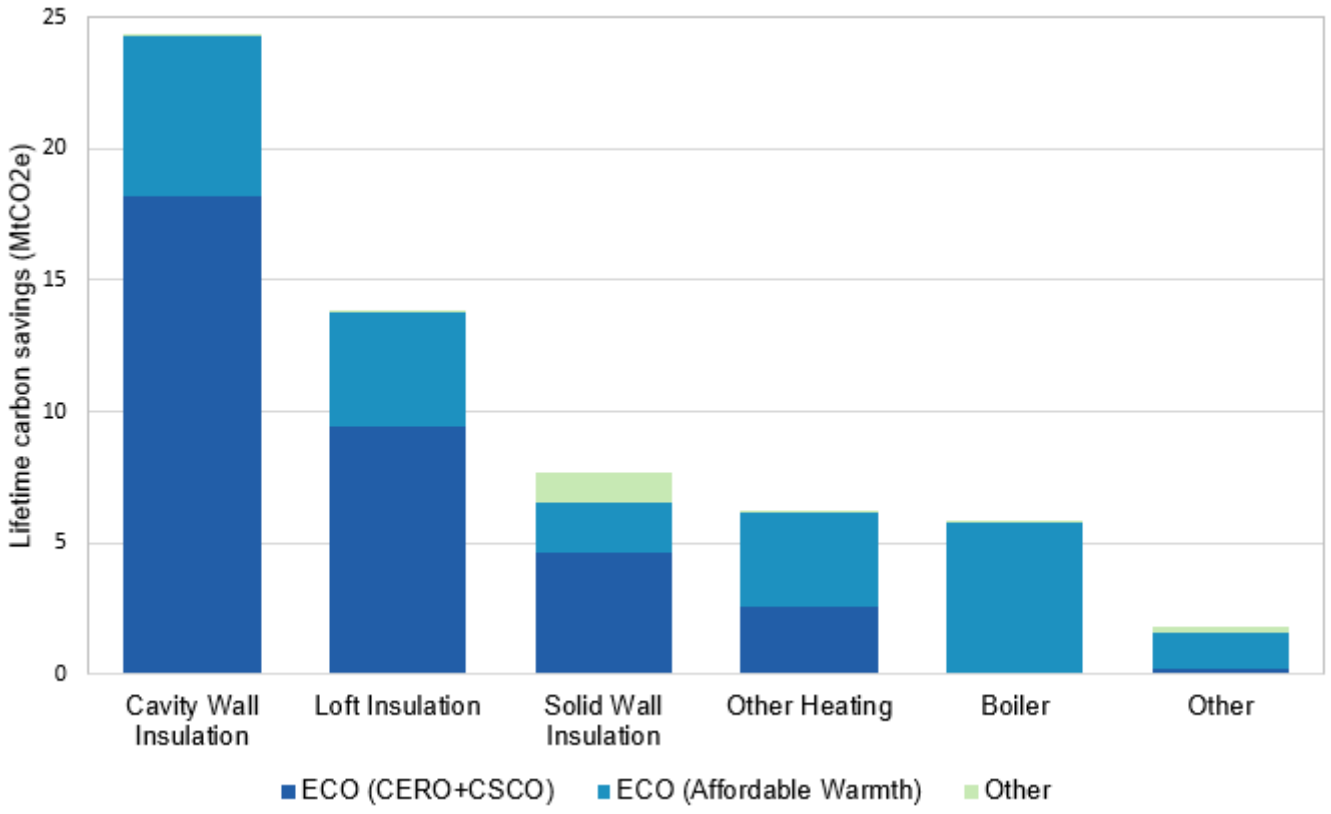
ECO and Green Deal Framework [11] Estimated Lifetime Carbon and Energy Savings

Across both ECO and GD schemes, from 2013 to the end of March 2022, the provisional estimated lifetime carbon saving was 60 MtCO2. Cavity Wall Insulation contributed significantly to these savings, accounting for around 41 per cent of the provisional estimated savings (Table 1.3; Chart 17). As illustrated in Chart 17, the majority of the estimated lifetime carbon savings from boilers occurred through the ECO Affordable Warmth obligation, which is the only ECO sub-obligation to include boilers.

The estimated lifetime energy savings across the schemes was 224,400 GWh to the end of March 2022. Similar to the carbon savings, Cavity Wall Insulation accounted for most of these savings at 43 per cent.

Further information on the method behind the carbon and energy savings estimates is available in the Technical Information and the Methodology Note, published here: https://www.gov.uk/government/publications/household-energy-efficiency-statistics-methodology-note.

Chart 17: ECO Carbon Savings by Measure Type from the start of 2013 to end of March 2022 (Table 1.3)



[11] The estimated carbon and energy savings relate to measures installed through the following schemes: ECO, Cashback, GDHIF and Green Deal Plans.

9. Technical Information

Data in this release

Data are collected by DESNZ from a range of administrative sources. For these statistics, the main sources of data on the schemes are:

- Ofgem for ECO and GBIS data – scheme administrator collects data from energy companies on ECO and GBIS delivery
- Green Deal Central Charge Database – administer and manage Green Deal Plans
- NEC Software Solutions UK – manage national lodgement of Green Deal measures
- Energy Savings Trust Scotland (EST) – manage lodgement of Green Deal measures in Scotland
- Green Deal Oversight and Regulation Body (ORB) – administer Green Deal organisations certification
- ICF for Green Homes Grant Vouchers (GHGV) data – scheme administrator collecting data from applicants (householders and landlords) and installers on GHGV delivery.
- Local authorities and Local energy hubs for Green Homes Grant Local Authority Delivery (LAD) and Home Upgrade Grant (HUG) data – administer scheme funding so collect data from householders and installers on delivery.
- Local authorities for the Social Housing Decarbonisation Fund (SHDF) – administer scheme funding so collect data from householders and installers on delivery.

Further administrative datasets are used to provide the geographic breakdowns included in this release. Reference geography datasets and map boundary files are obtained from the Office for National Statistics (ONS), through the Open Geography Portal.

Methodology and revisions

The statistics presented in this release cover measures installed up to December 2023.

Further information regarding the methodology and quality assurance process used to produce estimates for this statistical series can be found here: Household Energy Efficiency Statistics Methodology Note

Revision's policy

Figures for the latest periods are provisional and are liable to subsequent revision. The DESNZ statistical revisions policy sets out the revisions policy for these statistics, which has been developed in accordance with the UK Statistics Authority Code of Practice for Statistics.

Scheme Information

The Energy Company Obligation (ECO) was introduced in January 2013 to reduce energy consumption and support people at greater risk of living in fuel poverty. The larger energy companies are set obligations to install insulation and heating measures in order to achieve reductions in energy usage and heating costs. ECO is now in its fourth iteration since it began. Broadly, ECO takes over from two previous Energy Obligation schemes: Carbon Emissions Reduction Target (CERT) and Community Energy Saving Programme (CESP). The current ECO4 scheme focuses on providing energy efficiency measures to low income and vulnerable consumers, and compared to previous ECO schemes requires a more complete upgrade of homes, shifting to a multi-measure whole-house retrofit approach.

- ECO1 started on 1 January 2013 (although energy companies were able to count measures delivered since 1 October 2012 against their targets) and ran until 31 March 2015.
- ECO2 commenced in April 2015 and ran until 31 March 2017.
- ECO Help-to-Heat commenced in April 2017 and ran until September 2018.

- ECO3 commenced 3 December 2018 (although suppliers could count measures delivered since October 2018 against their targets) and ran until 31 March 2022.
- ECO4 commenced on 27 July 2022 (although installations between 1 April and 30 June 2022 could be counted as either 'ECO3 Interim Delivery' or 'ECO4 Early Delivery'). ECO4 will run until March 2026.

The Green Deal (GD)[12] is a government initiative that is designed to help homeowners install energy efficiency measures into their properties, and the costs of these measures are paid back through their energy bill over a period of time; this is in the form of a Green Deal Finance Plan (GD Plan).

The Green Homes Grant Vouchers (GHGV) scheme launched for applications on 30th September 2020 and closed to new applicants on 31st March 2021. It was available in England only. Householders and landlords could apply for a grant of up to £10,000 to cover the cost of installing energy efficiency measures. The scheme was split into a main scheme and a low-income scheme, which was determined by the receipt of certain benefits. Applicants on the main scheme would receive up to two-thirds of the cost of the retrofit up to a value of £5,000, while low-income applicants would be fully funded up to £10,000. Further information on the scheme is available in the official statistics[13] and GHGV guidance[14].

The Green Homes Grant Local Authority Delivery (LAD) scheme launched in 2020 with £500 million of funding to support the energy efficiency upgrades of low-income households across England. LAD is delivered over different phases, with Phase 1 allocating £200m in grants to over 136 Local Authorities for delivery by March 2022. Phase 2 allocated £300m in grants to the five Local Net Zero Hubs, who will work with their regional Local Authorities. Under the scheme, LAs identify households that meet the eligibility criteria for the scheme - these are targeted as those most at risk of fuel poverty or in the least energy efficient housing.

The Sustainable Warmth (SW) scheme launched in early 2022 to further support the energy efficiency upgrades of low-income households across England. SW consists of LAD Phase 3 and the Home Upgrade Grant (HUG) Phase 1. LAD Phase 3 has allocated £287 million funding to Local Authorities to support low-income homes on the gas grid, whilst HUG Phase 1 has allocated £220 million funding to Local Authorities to support low income homes off the gas grid. HUG Phase 2 has allocated up to £630 million of funding available for successful local authorities to deliver from September 2023 until March 2025. Further information on the LAD and HUG schemes is available in the official statistics[15].

The Social Housing Decarbonisation Fund (SHDF) scheme is a government scheme that will upgrade a significant amount of the social housing stock currently below Energy Performance Certificate (EPC) C up to that standard. It supports the installation of energy performance measures in social homes in England. The Government launched Wave 1 of the SHDF in August 2021. It has awarded around £179m of grant funding for delivery from 2022 into 2023 and will see energy performance improvements to up to 20,000 social housing properties. Successful projects within Wave 2.1 of the SHDF were announced on 22 March 2023. Wave 2.1 of the SHDF awarded around £778m of grant funding, delivering from 2023 to 2025. Further information on the scheme is available in the official statistics[16].

The Great British Insulation Scheme was announced by the Government at the end of March 2023. The £1 billion scheme will help around 300,000 households across the country with the cost of installing new home insulation. The scheme is scheduled to run until March 2026. GBIS will run alongside ECO4. Legislation relating to the scheme came into force on 25 July 2023, with delivery on or after 30 March until 24 July 2023 being known as early delivery measures. Further information on the scheme is available in the official statistics[17].

Definitions

Energy Company Obligation (ECO) requires the larger energy suppliers to achieve savings in homes. There have been three main ECO obligations, which are detailed in the table below. The table also identifies defines Flexible Eligibility and Innovation, which are sub-obligations operating under ECO4. CERO & CSCO were

[12] https://www.gov.uk/green-deal-energy-saving-measures

[13] https://www.gov.uk/government/collections/green-home-grant-statistics
[14] https://www.gov.uk/guidance/apply-for-the-green-homes-grant-scheme
[15] https://www.gov.uk/government/collections/green-home-grant-statistics
[16] https://www.gov.uk/government/collections/social-housing-decarbonisation-fund-statistics
[17] https://www.gov.uk/government/collections/great-british-insulation-scheme

measured in terms of lifetime carbon savings. Affordable Warmth was measured in terms of lifetime bill savings under ECO3 but is now measures in terms of annual bill savings for ECO3.

Energy Suppliers are set targets for each phase of the scheme based on two criteria: the number of customers that they have and the amount of energy that they supply to domestic properties in Great Britain. This threshold remained the same for ECO1, 2 & Help-to-Heat but it is tightened through ECO3. Targets for ECO4 have remained the same as ECO3. The targets are as follows:

- Number of domestic customers must be 150,000 or more
- Electricity supply to domestic customers must be 300 GWh or more
- Gas supply to domestic customers must be 700 GWh or more

Suppliers are obligated to participate in the scheme if they exceeded both the customer number threshold and the electricity or gas supply threshold as of 31 December of the previous year.

Carbon Emission Reduction Obligation (CERO)	This covered the installation of measures like solid wall and hard-to-treat cavity wall insulation, which ordinarily cannot be financed solely through Green Deal Plans. The obligation was measured in terms of lifetime carbon savings. From April 2017 this included a rural sub-obligation where at least 15 per cent of a supplier's CERO for Help-to-Heat must be achieved in rural areas. (Closed end September 2018).
Carbon Saving Communities (CSCO)	This provides insulation measures to households in specified areas of low income. The obligation was measured in terms of lifetime carbon savings. It required 15 per cent of each supplier's obligation to be used to upgrade more hard-to-reach low-income households in rural areas. (Closed end March 2017)
Affordable Warmth or The Home Heating Cost Reduction Obligation (HHCRO)	This provides heating and insulation measures to consumers who receive particular means-tested benefits. Since April 2017 it enables those in social housing living in E, F and G rated properties to receive insulation measures, and some heating measures. This obligation supports low-income consumers who are vulnerable to the impact of living in cold homes, including the elderly, disabled and families. Under ECO4, 100% of the obligation is based on HHCRO. The obligation was measured in terms of annual bill savings (previously measured in terms of lifetime savings for ECO3).
Flexible Eligibility	Local Authorities can determine eligible homes under the new 'Flexible Eligibility' mechanism, introduced in 2017. Up to 50% of the Obligation can be delivered through Flexible Eligibility under ECO4, up from 25% under ECO3. Households can be assessed by Local Authorities, the Devolved Administrations or suppliers to be 'living in fuel poverty'; or assessed to be 'living on a low income and vulnerable to cold'.
Innovation Measures	Under ECO4, suppliers are able to meet up to 10% of their obligation to deliver innovation measures to eligible households. A further 10% can be used to monitor the actual energy performance of measures in homes.

ECO Brokerage

The ECO Brokerage system operated a fortnightly anonymous auction to enable 'lots' of ECO measures to be sold to energy companies in return for ECO subsidy. From February 2021, auctions were held monthly. Subsequently, Crown Commercial Services (CCS) sent out communication to all stakeholders in May 2021 that the ECO brokerage mechanism would be decommissioned as of June 2021, with no further auctions after auction number 205.

ECO delivery costs

ECO delivery costs and administrative costs are reported by obligated energy suppliers by the end of the second month following each reporting quarter. Full definitions on ECO costs are included here.

ECO delivery costs are defined as the cost of installing an ECO measure in a property. This includes the costs of technical monitoring, measure assessment costs, costs involved with searching for ECO properties, installation costs and marketing costs by delivery partners involved with promoting the ECO obligations.

In addition, **administrative costs** are collected from suppliers and include reporting and compliance, own marketing, and direct administrative costs (such as development of IT/reporting systems to support delivery of the scheme).

Legacy Green Deal Schemes

Measures installed from these legacy schemes are included in Tables 1.1 to 1.5, but detailed scheme figures are not reported in this release but are available in the 2017 Detailed report.

Green Deal Home Improvement Fund (GDHIF)

The GDHIF was an incentive scheme open to all householders in England and Wales wanting to improve the energy efficiency of their homes. The scheme allowed householders to choose one or both of two offers and they were eligible to claim up to £7,600. Householders could also claim a refund of up to £100 for a GDAR. In July 2015, it was announced that there would be no future funding of GDHIF, resulting in close down of the scheme in June 2016.

Green Deal Communities

The Green Deal Communities scheme was in operation from April 2014 until September 2016.[18] Twenty-three areas in England (covering 98 individual Local Authorities) received £85 million to help deliver the Government's Green Deal home energy efficiency programme.

[18] Some installations were until the end of November 2016.

10. Household Energy Efficiency Schemes

This section of the report presents activity levels on the Energy Company Obligation (ECO), Green Deal (GD), Green Homes Grant Vouchers (GHGV), Local Authority Delivery (LAD), Home Upgrade Grant (HUG), Social Housing Decarbonisation Fund (SHDF) and the Great British Insulation Scheme (GBIS) between January 2013 and December 2023 alongside figures on Feed-In Tariffs installations, Renewable Heat Premium Payment voucher redemptions, Domestic Renewable Heat Incentive, and Boiler Upgrade Scheme installations that have been previously published in their own statistical releases. These figures are shown in Table 9.1 of the Detailed tables.

ECO and Green Deal

It is estimated that around 2.5 million households benefitted from ECO and 13,800 households had funded measures through GD Finance Plans up to December 2023.

In addition, around 14,700 households installed from the Cashback scheme, 35,300 households had funded measures through GDHIF, and 15,600 households had measures funded under the Green Deal Communities.

There is a small amount of double counting between these mechanisms. For the latest statistics, please see the latest monthly Headline release.

Green Homes Grant Local Authority Delivery

The Local Authority Delivery scheme began delivery in October 2020. It is estimated that around 58,900 households have been upgraded under LAD Phase 1, 2 and 3 up to December 2023 (including around 1,300 households where completion date is missing for measures installed).

Home Upgrade Grant

The Home Upgrade Grant began delivery in January 2022. Under HUG1 and HUG2, around 4,400 households have been upgraded up to December 2023 (including 19 households where completion date is missing for measures installed).

Social Housing Decarbonisation Fund

The Social Housing Decarbonisation Fund began delivery in March 2022. To the end of December 2023, 15,100 households have been upgraded under Wave 1 and Wave 2.1 of the scheme.

Great British Insulation Scheme

The Great British Insulation Scheme began delivery in May 2022. To the end of December 2023, 3,300 households have been upgraded under the scheme.

Feed-in-Tariffs

The Feed-in Tariff (FITs) scheme was launched in April 2010 and is a financial support scheme for eligible low-carbon electricity technologies, aimed at small-scale installations with a capacity of less than 5 megawatts (MW). FITs support new anaerobic digestion (AD), solar photovoltaic (PV), small hydro and wind, by requiring electricity suppliers to make payments (generation tariffs) to these generators based on the number of kilowatt hours (kWh) they generate. An additional guaranteed export tariff is paid for electricity generated that is not used on site and exported to the grid. The scheme also supports micro combined heat and power installations with an electrical capacity of 2 kW or less.

The majority of the installations installed under FITs are in the domestic sector (96 per cent) but, as these tend to be smaller in size, the capacity of domestic schemes makes up 47 per cent of the total capacity installed under FITs. The majority of the domestic schemes are solar PV (99 per cent). These solar PV schemes cover 98 per cent of the total installed domestic capacity, whilst domestic wind installations account for 1.5 per cent of capacity.

Between January 2013 and the end of December 2023, 483,600 domestic installations were confirmed onto the Central FIT Register. Since the FIT scheme began in April 2010, 828,900 domestic installations were confirmed onto the Central FIT Register to the end of December 2023.

Since the closure of the Feed in Tariff scheme in March 2019, 21,258 domestic installations have been confirmed onto the Central FIT Register. These installations had been commissioned before the closure date, however there can be a lag of 18 months before a site is confirmed onto the scheme.

Domestic Renewable Heat Incentive

The Domestic Renewable Heat Incentive (RHI) is a financial incentive scheme introduced to encourage a switch to renewable heating systems in the domestic sector in Great Britain. Participants of the scheme receive tariff payments for the heat generated from an eligible renewable heating system which is heating a single property. The scheme covers single domestic properties and was open to owner-occupiers, private landlords, social landlords and self-builders. There are four renewable heating technologies covered by the scheme: air-source heat pumps; ground and water-source heat pumps; biomass-only boilers and biomass pellet stoves with integrated boilers; and solar thermal panels.

The domestic scheme closed to new applicants at the end of March 2022. At the end of March 2023, just under 114,800 systems have been accredited to the scheme.

Renewable Heat Premium Payment (Legacy scheme)

The Renewable Heat Premium Payment (RHPP) scheme was introduced as an interim measure in advance of the domestic Renewable Heat Incentive (RHI). It was designed to support the uptake of domestic renewable heat and maintain the supply chain, to learn about renewable heat technologies and the way consumers use them to better shape the domestic RHI policy and contribute to the renewable energy target. The scheme encompassed three components: the householder scheme, social landlord competition and communities scheme. These components were designed to give greater coverage across the different parts of the housing market.

Solar Thermal and Air Source Heat Pumps were the most popular technologies in all phases, accounting for over two thirds of redeemed or claimed vouchers in total.

Smart Meters

Smart meters[19] are the next generation of gas and electricity meters and offer a range of intelligent functions. They can tell customers how much energy they are using in pounds and pence through an In-Home Display (IHD). This information helps customers manage their energy use, save money and reduce emissions. Smart meters communicate automatically with energy suppliers, which avoids manual meter reads and provides customers with accurate bills.

By the end of 2023, there were 32.9 million smart meters operating across homes in Great Britain; 18.8 million were electricity smart meters operating, of which 17.2 million were operating in smart mode.

Boiler Upgrade Scheme

The Boiler Upgrade Scheme (BUS) aims to incentivise and increase the deployment of low carbon heating technologies by providing an upfront capital grant towards the cost of an installation of an air source heat pump (ASHP), a ground source heat pump (GSHP) and, in limited circumstances, a biomass boiler. Installations commissioned from 1 April 2022 are eligible to apply for the grant. At scheme launch, grants available were £5,000 for an ASHP or biomass boiler, and £6,000 for a GSHP. From 23 October 2023, grant levels for the installation of ASHPs and GSHPs increased to £7,500. Grants for biomass boilers remain at £5,000. To the end of December 2023, for all technology types, around 19,100 vouchers have been redeemed and the redemptions paid.

[19] Smart meters are compliant with the Smart Meter Equipment Technical Specification (SMETS).

11. Further Information

Recent publications of interest

Household Energy Efficiency Detailed statistics (annual)
For detailed analysis of ECO and GD Plans, along with home insulation levels across Great Britain see the Annual Household Energy Efficiency Detailed Statistics publication.

Green Homes Grant Local Authority Delivery and Home Upgrade Grant statistics
For statistics monitoring the Green Homes Grant Local Authority Delivery and Home Upgrade Grant schemes across England, see the Green Homes Grant Local Authority Delivery statistics.

Social Housing Decarbonisation Fund statistics
For statistics monitoring the Social Housing Decarbonisation Fund scheme across England, see the Social Housing Decarbonisation Fund statistics.

Great British Insulation Scheme statistics
For statistics monitoring the Great British Insulation Scheme across Great Britain, see the Great British Insulation Scheme statistics.

Smart Meters quarterly statistics
For estimates on the roll-out of Smart Meters in Great Britain, covering meters operating and meters installed, see the Smart Meters statistics.

Energy Trends
For detailed data on supply and demand of coal, oil, gas, electricity and renewables in the United Kingdom, see the Energy Trends statistics.

Energy Consumption in the United Kingdom (ECUK)
For detailed data on end use estimates of energy in the UK, see the Energy Consumption in the United Kingdom (ECUK) statistics.

Sub-national total final energy consumption
For findings of the sub–national energy consumption analysis in the UK for all fuels, for the period covering 1 January to 31 December, with gas consumption covering the annual period from mid-May, see the sub-national total final energy consumption statistics.

Sub-national electricity consumption
For electricity consumption by consuming sector for Great Britain and devolved administration areas, see the sub-national electricity consumption statistics. Data are based on the aggregation of Meter Point Administration Number readings as part of DESNZ's annual meter point electricity data exercise.

Sub-national gas consumption
For gas consumption by consuming sector for Great Britain, and devolved administration areas, see the sub-national gas consumption statistics. Data are based on the aggregation of Meter Point Reference Number readings throughout Great Britain as part of DESNZ's annual meter point gas data exercise. Data are subject to a weather correction factor to enable comparison of gas use over time.

Domestic Energy Interactive Map
For an interactive map for indicators of domestic energy efficiency, including the percentage of households receiving ECO measures down to Lower Layer Super Output Area up to December 2023, see the Domestic Energy Map. The map also shows the number of loft and wall insulation measures installed.

Future updates to these statistics

The next headline release on the gov.uk website is planned for publication at 9.30am on 18h April 2024 and will contain the latest available information on headline ECO measures up to the end of February 2024.
The next quarterly release is planned for publication at 9.30am on 30th May 2023.

National statistics

This is an accredited official statistics publication. Accredited official statistics are called National Statistics in the Statistics and Registration Service Act 2007.

These accredited official statistics were independently reviewed by the Office for Statistics Regulation (OSR) in June 2014. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled 'accredited official statistics'.

Our statistical practice is regulated by the Office for Statistics Regulation (OSR). OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

You are welcome to contact us directly with any comments about how we meet these standards. Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Pre-release

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the DESNZ statement of compliance with the Pre-Release Access to Official Statistics Order 2008.

Uses of these statistics

These statistics are used by Government to monitor the delivery and effectiveness of the ECO and GD schemes. They are used to monitor the delivery of the ECO obligation and the share of the obligation delivered though key aspects of the scheme, including Flexibility Eligibility and innovation measures. The data are used within the National Energy Efficiency Data-framework to assess the impact of these measures in different types of homes.

User engagement

Users are encouraged to provide comments and feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed and should be sent to the Energy Efficiency Statistics mailbox.

The DESNZ statement on statistical public engagement and data standards sets out the department's commitments on public engagement and data standards as outlined by the Code of Practice for Statistics.

Contact

- Responsible statistician: Isi Avbulimen
- Email: EnergyEfficiency.Stats@energysecurity.gov.uk
- Media enquiries: 020 7215 1000

This publication is available on Gov.uk by following the link here.

If you need a version of this document in a more accessible format, please email the Energy Efficiency Statistics mailbox. Please tell us what format you need. It will help us if you say what assistive technology you use.