



Department for  
Communities and  
Local Government

# Energy Performance of Buildings Certificates Statistical Release: Q2 2017: England and Wales

## **Energy Performance Certificates (EPCs)**

During the latest quarter ending in June 2017:

- A total of 340,000 EPCs were lodged on the Registers, a decrease of 22 per cent on the equivalent quarter in 2016.
- EPCs covering the sale and letting of existing dwellings and the construction/sale of new dwellings amounted to 322,000, a decrease of 23 per cent on the same quarter last year. The largest proportion of these properties were awarded a Band D Rating on both efficiency measures.
- New build dwellings and conversions made up 57,000 (18%) of all domestic EPCs in the second quarter, a decrease of 2 per cent on the equivalent quarter in 2016. Most new dwellings (over 80%) were given a Band B rating on both measures.
- The remaining 18,000 lodgements covered non-domestic properties, an increase of 7 per cent compared to the corresponding period last year. The largest proportion (35%) were placed in Band D.

During the 12 month period ending in June 2017:

- A total of 1,334,000 domestic EPCs were lodged on the Registers, a decrease of 19 per cent on the equivalent 12-month period last year. Of these, 219,000 EPCs covered new build/ properties and conversions, an increase of 7 per cent on the corresponding 12-month period in 2016.

## **Display Energy Certificates (DECs)**

- 8,000 Display Energy Certificates (DECs) were lodged on the Register during the latest quarter, an increase of 3 per cent on the corresponding period last year. The largest proportion (36%) were placed in Band D.

We are seeking to improve this quarterly statistics release and accompanying Live Tables. We are also releasing the contents of the Energy Performance of Buildings Register on the Open Data Communities website. We would welcome users' views on the usefulness of each published table. To comment, email [Housing.statistics@communities.gov.uk](mailto:Housing.statistics@communities.gov.uk)

## Energy Efficiency

### *Experimental Official Statistical Release*

1 August 2017

Introduction	2
All Domestic Properties	2
New Domestic Properties	3
Non-Domestic Properties	5
Display Energy Certificates	5
All Certificates	6
Accompanying Tables	7
Open Data	9
Definitions	9
Notes	10

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### **Date of next publication:**

31 October 2017

# Introduction

This statistical release presents experimental official statistics based on Energy Performance Certificates (EPCs) issued for domestic and non-domestic building and Display Energy Certificates (DECs) issued for buildings occupied by public authorities. The certificates are lodged on the Energy Performance of Buildings Registers (the registers) for England and Wales.

## Energy Performance Certificates

An Energy Performance Certificate (EPC) indicates the energy efficiency of building. The assessments are banded from A to G, where A (or A+ for non-domestic properties) is the most efficient in terms of likely fuel costs and carbon dioxide emissions. An EPC is required whenever a building is newly constructed, sold or is let to a new tenant. The purpose of an EPC is to show prospective tenants or buyers the energy efficiency of the building.

## Display Energy Certificates

Larger properties occupied by a public authority and where the building is frequently visited by the public must display a Display Energy Certificate (DEC) in a prominent place. DECs show the actual energy consumption of a building and are accompanied by reports which provide recommendations on potential energy saving measures.

## Experimental official statistics

Experimental statistics are defined in the Code of Practice for Official Statistics as 'new official statistics undergoing evaluation'. They are published in order to involve users and stakeholders in their development and as means to build in quality at an early stage.

These statistics are based on information from EPCs and DECs lodged on the registers. This administrative data is subject to continuing quality investigation and improvement (see Technical Notes on Data Quality). They have been released because they have been judged to be of immediate value to interested parties and to encourage user feedback.

## All Domestic Properties

During the second quarter of 2017, 322,000 EPCs were lodged on the register covering all domestic properties (sales, lets and new dwellings). This compares with 418,000 lodgements during the corresponding quarter in 2016, a decrease of 23%. Over the 12 months to the end of June 2017, 1,334,000 EPCs were lodged, a fall of 19% on the equivalent 12-month period during the previous year (Live Table D1). These falls reflect fewer transactions involving the sale or letting of existing properties.

The following Table covers EPCs lodged during the second quarter of 2016 and 2017 and compares their average values over a range of indicators:

**Table 1: Mean Floor Area, Energy Use, CO<sub>2</sub> Emissions and Fuel Costs for all Domestic Properties, England and Wales**

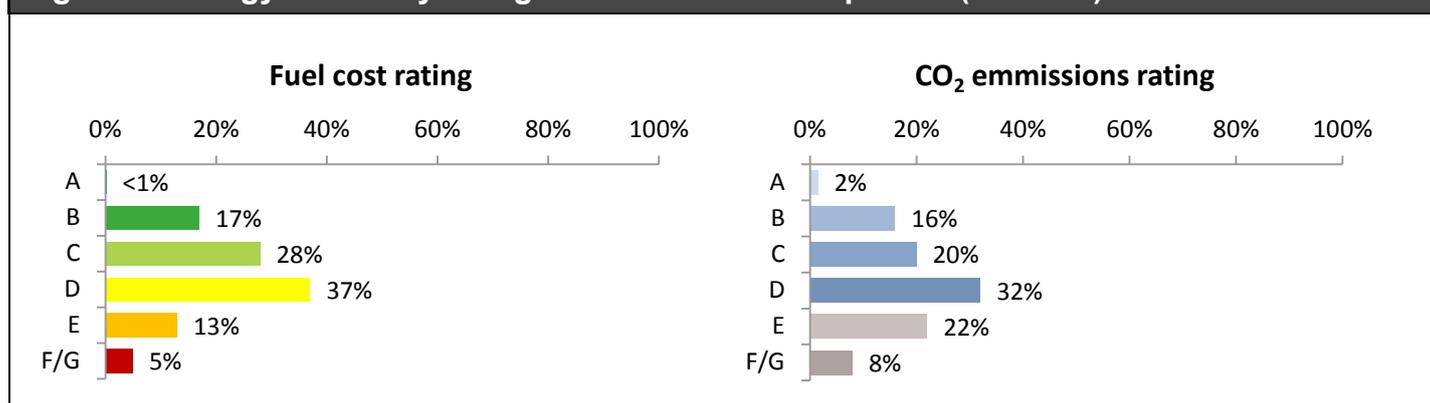
Quarter lodged	Floor Area (m <sup>2</sup> )	Energy Use (kWh/m <sup>2</sup> per annum)	CO <sub>2</sub> Emissions (tonnes per annum)	Lighting Costs (£ per annum)	Heating Costs (£ per annum)	Hot Water Costs (£ per annum)
Q2 2016	95	274	4.61	85	823	149
Q2 2017	91	247	3.87	78	672	136

Source: Live Table D3

An EPC for domestic properties shows an energy efficiency rating based on estimated fuel costs and an environmental impact rating based on CO<sub>2</sub> emissions. Both measures are estimated from the characteristics of the property. The numerical ratings are then banded A to G, with A being the most energy efficient and G the least. The better the rating, the more energy efficient the building is, and the lower the fuel bills and CO<sub>2</sub> emissions are likely to be.

The distributions by Rating Band for all domestic certificates lodged in the second quarter of 2017 are shown in Figure 1, in terms of both their energy efficiency rating (based on their fuel costs) and their environmental impact rating (based on their carbon emissions). For both measures, the largest proportion were placed within Band D.

**Figure 1: Energy efficiency ratings – All Domestic Properties (Q2 2017)**



Source: Live Table D1 and D2

## New Domestic Properties

During the second quarter of 2017, 57,000 EPCs were lodged on the register covering **new** domestic properties (new builds, conversions and change of use). This compares with 58,000 lodgements during the corresponding quarter in 2016, a decrease of 2%. Over the 12 months to

June 2017, 219,000 EPCs were lodged on the register, up 7% on the equivalent period during the previous year (Live Table NB1).

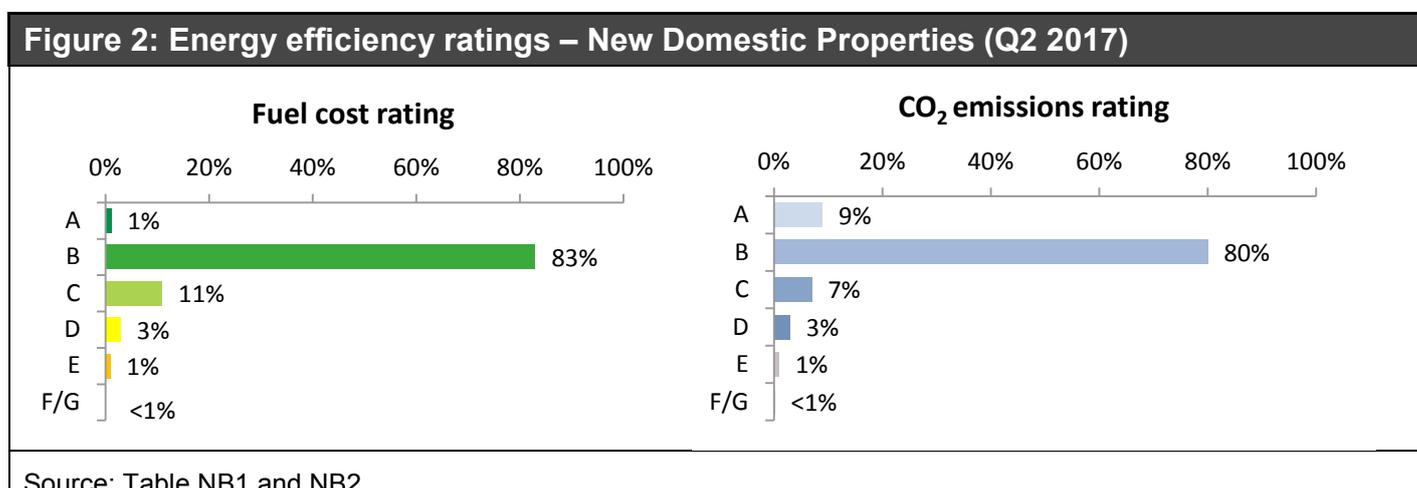
New domestic properties accounted for 18 per cent of all domestic EPCs lodged during the second quarter of 2017 (Live Table D4b). They comprised: 61% houses, 35% flats, 2% bungalows and 1% maisonettes (Live Table NB4).

The average values for a range of energy performance indicators are shown in Table 2. New properties tend to be more energy efficient. For example, despite occupying approximately the same average floor space as domestic properties as a whole, new properties use less energy, averaging 97 compared to 247 kWh/m<sup>2</sup> per annum (Table 1 and 2). Being smaller, new flats tend to produce fewer emissions and have lower lighting and heating costs than new houses even though they have a higher energy use per square metre.

Table 2 – Mean Floor Area, Energy Use, CO <sub>2</sub> Emissions and Fuel Costs for New Domestic Properties							
Year/Quarter lodged	Property type	Floor Area (m <sup>2</sup> )	Energy Use (kWh/m <sup>2</sup> per annum)	CO <sub>2</sub> Emissions (tonnes per annum)	Lighting Costs (£ per annum)	Heating Costs (£ per annum)	Hot Water Costs (£ per annum)
Q2 2016	All new	90	107	1.52	58	286	111
Q2 2017	All new	94	97	1.49	60	275	105
Q2 2017	New flats	63	113	1.13	46	217	113
Q2 2017	New houses	113	88	1.68	68	306	99

Source: Live Table NB3 and NB7

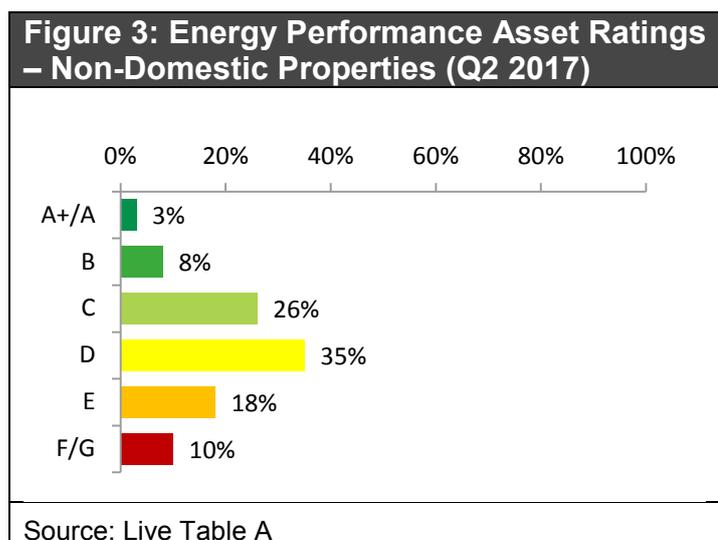
Figure 2 shows how the lodgements of EPCs for new domestic properties during the second quarter of 2017 were distributed across each Rating Band. This again shows that new properties tend to be more energy efficient. For example, 83% of new properties were rated B on fuel costs compared with 17% of all domestic (new and existing) properties.



## Non-Domestic Properties

During the second quarter of 2017, 18,000 EPCs were lodged for non-domestic properties, an increase of 7% compared with the corresponding quarter in 2016. During the twelve month period ending in June 2017, 70,000 non-domestic EPCs were lodged, slightly more than during the equivalent 12 month period in 2016 (Live Table A).

The distribution by EPC band is shown in Figure 3. Non-domestic buildings have an additional A+ band. The largest proportion of Certificates (35 per cent) were placed in Band D, whilst the fewest were in Band B and above.



## Display Energy Certificates (DECs)

Larger properties occupied by a public authority and where the building is frequently visited by the public must display a Display Energy Certificate (DEC). DECs show the actual energy consumption of a building and are accompanied by reports which provide recommendations on potential energy saving measures.

During the second quarter of 2017, 8,000 DECs were lodged relating to buildings in England and Wales, an increase of 3 per cent compared with the corresponding quarter in 2016. Over the 12 months to the end of June 2017, 36,100 DECs were lodged, 500 less than during the equivalent 12 month period in 2016 (Live Table DEC1).

Table 3 shows the average values over a range of indicators for DECs lodged during the second quarter of 2017 compared with those lodged during the equivalent period in 2016.

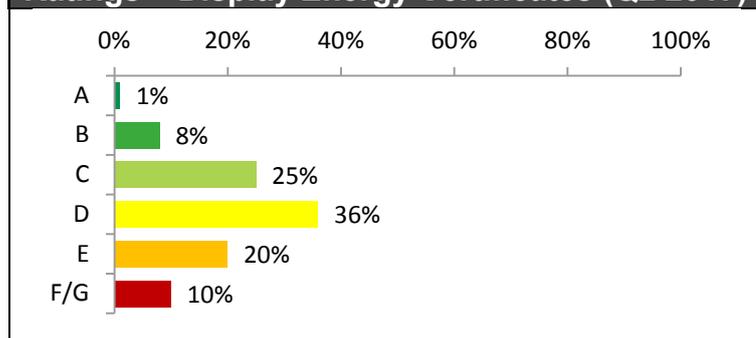
**Table 3 – Display Energy Certificates – Mean Floor Area, Energy Use, CO<sub>2</sub> Emissions, England and Wales**

Year/ Quarter Lodged	Floor Area (m <sup>2</sup> )	Average Energy Use (kWh/m <sup>2</sup> per annum)		Average Carbon Dioxide Emissions (tonnes per annum)	
		Heating	Electricity	Heating	Electricity
Q2 2016	3,026	134	69	97	146
Q2 2017	3,241	127	63	100	150

Source: Live Table DEC2

The distribution of DEC by Energy Performance Operational Ratings is shown in Figure 4. The largest proportion of Certificates (36 per cent) were banded D, whilst the fewest were in Band B and above.

**Figure 4: Energy Performance Operational Ratings – Display Energy Certificates (Q2 2017)**



Source: Live Table DEC1

## All Certificates – cumulative totals

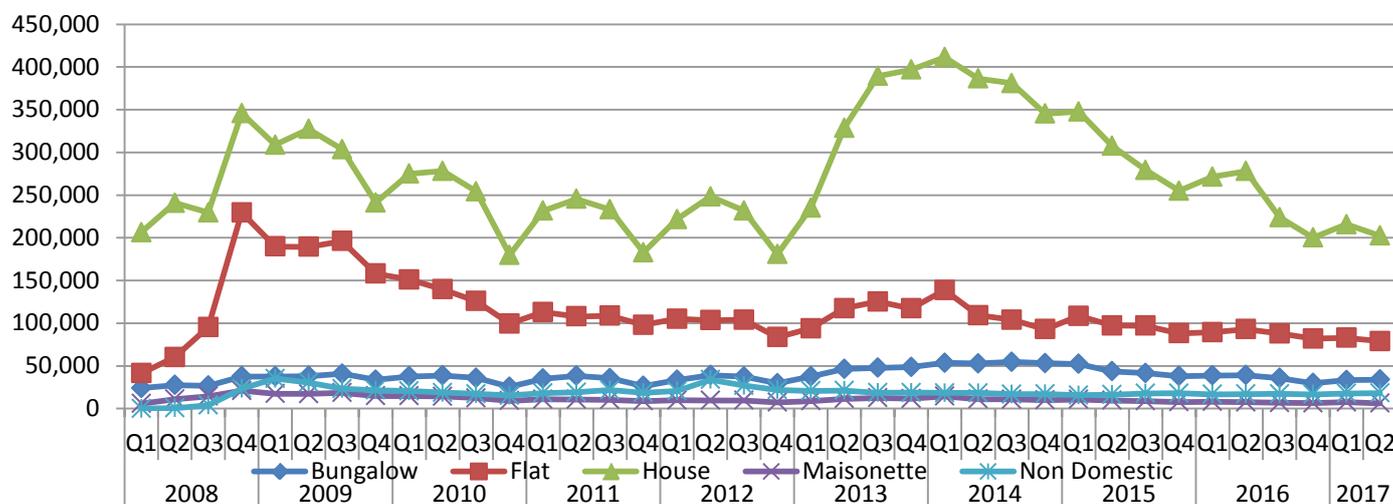
Since 2008, and up until June 2017, 17,316,000 Energy Performance Certificates for all properties have been lodged on the registers with domestic properties accounting for 96 per cent of the total.

In the twelve months to 30 June 2017, 1,404,000 EPCs were lodged – a decrease of 18% compared with the 12 months to June 2016. Of these, 340,000 were lodged during the latest quarter – a fall of 22 per cent compared with the same quarter in 2016.

Since 2008, 16,604,000 EPCs covering domestic properties (including new properties) in England and Wales have been lodged on the register. Of these, 1,543,000 EPCs covered **new** domestic properties (including new builds and conversions).

A total of 712,000 EPCs covering non-domestic properties and a total of 303,000 Display Energy Certificates (DECs) have been lodged on the registers since 2008.

**Figure 5: All properties: number of EPCs lodged from 2008 to 30 June 2017**



Source: Live Table A1

## Accompanying tables

**Table A1 – Energy Performance Certificates for All Properties:** Number of Energy Performance Certificates lodged on the Register and Total Floor Area by Type of Property – in each Year/Quarter.

**Table D1 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by Energy Efficiency Rating – in each Year/Quarter.

**Table D2 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by Environmental Impact Rating – in each Year/Quarter.

**Table D3 – Domestic Energy Performance Certificates for All Properties:** Floor Area, Size, Energy Use, Carbon Dioxide Emissions and Fuel Costs of Dwellings assessed and lodged on the Register - in each Year/Quarter.

**Table D4a – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by Type of Transaction – in each Year/Quarter – up to and including 30 September 2014.

**Table D4b – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by Type of Transaction – in each Year/Quarter – from 30 September 2014 to latest quarter.

**Table D5 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by Type of Property by Energy Efficiency Rating – in each Year/Quarter.

**Table D6 - Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by type of Property by Environmental Impact Rating – in each Year/Quarter.

**Table D7 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register by type of Property, and Average Energy Use, Carbon Dioxide Emissions and Fuel Costs per Dwelling – in each Year/Quarter.

**Table LA1 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register in each Local Authority by Energy Efficiency Rating – in each Year/Quarter.

**Table LA2 – Domestic Energy Performance Certificates for All Properties:** Number of Domestic Energy Performance Certificates lodged on the Register in each Local Authority by Environmental Impact Rating – in each Year/Quarter.

**Table NB1 – Domestic Energy Performance Certificates for New Properties:** Number of New Domestic Properties Energy Performance Certificates lodged on the Register by Energy Efficiency Rating – in each Year/Quarter.

**Table NB2 – Domestic Energy Performance Certificates for New Properties:** Number of New Domestic Properties Energy Performance Certificate lodged on the Register by Environmental Impact Rating – in each Year/Quarter.

**Table NB3 – Domestic Energy Performance Certificates for New Properties:** Floor Area, Size, Energy Use, Carbon Dioxide Emissions and Fuel Costs of New Dwellings assessed - in each Year/Quarter.

**Table NB4 – Domestic Energy Performance Certificates for New Properties:** Number of New Domestic Properties Energy Performance Certificates lodged on the Register and Total Floor Area by type of Property – in each Year/Quarter.

**Table NB5 – Domestic Energy Performance Certificates for New Properties:** Number off New Domestic Properties Energy Performance Certificates lodged on the Register by type of Property and Energy Efficiency Rating – in each Year/Quarter.

**Table NB6 - Domestic Energy Performance Certificates for New Properties:** Number of New Dwelling Energy Performance Certificates lodged on the Register in England & Wales, by Type of Property, by Environmental Impact Rating – Year / Quarter.

**Table NB7 – Domestic Energy Performance Certificates for New Properties:** Number of New Domestic Properties Energy Performance Certificates lodged on the Register by Type of Property, and Average Energy Use, Carbon Dioxide Emissions and Fuel Costs per dwelling – in each Year/Quarter.

### **EPCS – Non-Domestic Properties**

**Table A – Non Domestic Energy Performance Certificates for All Properties:** Number of Non-Domestic Energy Performance Certificates lodged on the Register by Energy Performance Asset Rating - in each Year/Quarter.

**Table B – Non Domestic Energy Performance Certificates for All Properties:** Number of Non-Domestic Energy Performance Certificates lodged on the Register by Property Group - in each Year/Quarter.

## **DECs**

**Table DEC1 – Display Energy Certificates:** Number of Display Energy Certificates lodged on the Register by Local Authority and Energy Performance Operational Rating - in each Year/Quarter.

**Table DEC2 – Display Energy Certificates:** Annual Energy Use and Carbon Dioxide Emissions of Buildings Assessed – in each Year/Quarter.

These tables can be accessed at:

<https://www.gov.uk/government/statistical-data-sets/live-tables-on-energy-performance-of-buildings-certificates>

Previous DCLG statistical releases are available at:

<https://www.gov.uk/government/collections/energy-performance-of-buildings-certificates>

## Open Data

Some of the statistics shown in this release are available in fully open and linkable data formats at Open Data Communities:

<http://opendatacommunities.org/>.

There are also property level EPC and DEC data available at Open Data Communities:

<https://epc.opendatacommunities.org/>.

## Definitions

For full details on how the requirements of the Energy Performance of Buildings Directive are applied to domestic and non-domestic buildings and buildings occupied by public authorities, users should consult the Energy Performance Certificates guidance collection on GOV.UK:

<http://www.gov.uk/government/publications/improving-the-energy-efficiency-of-our-buildings>

A consolidated glossary of all the terms related to energy performance of buildings certificates can be accessed on GOV.UK:

<http://www.gov.uk/government/collections/energy-performance-of-buildings-certificates>

# Technical notes

## Data collection

Data lodged on the registers record information about the certificates issued for buildings which have been newly constructed, sold or let since 2008. Data lodged in relation to buildings occupied by public authorities over 1,000 square metres also date back to 2008. The floor area size threshold was changed to include buildings over 500 square metres in January 2013. In July 2015 the floor area size threshold was lowered to include buildings over 250 square metres. These statistics do not, therefore, represent the entire building stock in England and Wales.

## Coverage

The registers do not hold data for every domestic and non-domestic building or every building occupied by public authorities in England and Wales. These statistics should, therefore, not be interpreted as a true representation of the whole of the building stock in England and Wales, but viewed as part of a wider package of Government's provision of information on the energy efficiency of buildings.

## Periodicity

The release covers certificates lodged between Q1 2008 and Q2 2017 and breaks the data down for each specified calendar quarter (Q1=Jan-Mar, Q2=Apr-Jun, Q3=Jul-Sep, Q4=Oct-Dec) within each specified calendar year.

## New build vs new dwellings

If works are carried out to create a new building(s), either by means of new build or by conversion of an existing building (for example, subdivision of an existing building into flats or change of use of an office), the builder or person responsible for the construction must obtain an EPC once construction has been completed. This will also apply if a building is converted into fewer or more units designed for separate occupation and there are changes to the heating, hot water provision or air conditioning/ventilation services.

## Park Homes

This category of property means a caravan within the meaning of Part 1 of the Caravan Sites and Control of Development Act 1960 which is situated on a relevant protected site and which is occupied by the occupier as their only or main residence. EPCs for park homes have been lodged on the domestic register from December 2014.

## Multiple certificates

The statistical counts in the tables cover all valid EPCs and DECAs (i.e. only those lodged on the registers where there are no doubts about their status) although individual buildings may have more than one certificate. EPCs are valid for up to 10 years. Depending on the size of the building, a new DEC may be issued annually. Data are kept on the registers for 20 years; therefore, more than one EPC or DEC may be stored over a number of years for one building. While it is possible to identify the most recent certificate at property level, this duplication is not distinguishable from high-level statistics.

## Data quality

These are experimental official statistics drawn from data which have been lodged on the registers. Experimental official statistics are, by definition, still subject to evaluation and testing and may not meet the same rigorous quality standards as official statistics generally. In spite of any data quality variances which may exist, we are publishing these statistics because we believe them to be of immediate value and we welcome feedback from interested parties to aid their development.

These statistics are in the development stage and we are still refining the data search criteria we use. This process is aimed at producing more accurate statistics.

In accordance with the regulations, the Department for Communities and Local Government and Landmark Information Group cannot alter data which has been lodged on the Registers.

Data used to produce these published tables is updated every 24 hours and can, therefore, vary from day to day. To ensure consistency between the information detailed in separate tables the published tables are produced on the same day. Exceptionally, data between tables may vary marginally where we are required to use tables drawn down on different days or where reports are producing using different search criteria

Originally, Energy Assessor Accreditation Schemes had the option of lodging the underlying data used to produce the certificate in addition to the PDF document of the final certificate itself. After September 2008, lodging the data became a mandatory requirement. Due to the technical difficulty involved in formatting PDFs into searchable data, the statistics do not include data lodged in the form of a PDF document only.

In May 2009, additional validation checks were introduced into the lodgement process to identify prescribed data quality issues. Before this period, statistics for domestic buildings may include anomalies which affect the quality of reported CO2 emission rates. In addition, statistics for domestic and non-domestic buildings and for DEC's may include anomalies which affect total useful floor area figures.

On 1 April 2012, the first set of Scheme Operating Requirements came into effect for Domestic Energy Assessors, setting new rules for the operation of Energy Assessor Accreditation Schemes. One new requirement was to introduce quality assurance audit of EPCs. The result was a demonstrable improvement in the quality of data lodged on the Registers from mid-2012 onwards. Users are asked to consider this when interpreting figures prior to that period.

Fourth quarter statistics from 2014 onwards includes statistics for EPC lodged for properties defined as Park Homes.

## Revisions policy

This policy has been developed in accordance with the UK Statistics Authority's *Code of Practice for Official Statistics* and the Department's own Revisions Policy (found at <https://www.gov.uk/government/publications/statistical-notice-dclg-revisions-policy>). That policy covers two types of revision:

## Non-Scheduled Revisions

Where a substantial error has occurred as a result of the compilation, imputation or dissemination process, the statistical release, live tables and other accompanying releases will be updated with a correction notice as soon as is practical.

## Scheduled Revisions

DCLG and Landmark do not alter the source data for these releases. The next quarterly release will include new certificates and any changes to existing ones (e.g. cancellations).

## Uses of the data

The Energy Performance of Buildings Certificates statistical series is an important part of the evidence base which informs the development and evaluation of housing, energy and climate change policy by central and local government. An EPC is required for all properties when constructed, sold or let and this data source provides the most comprehensive evidence of energy efficiency and property attributes in buildings, which is widely used by housing market and energy analysts, environmental modellers, forecasters and decision makers, for example in the construction industry. They are used by the media in reports on the housing market, energy and climate change and by academics both in the UK and abroad. The statistics are also used for market research by a wide range of other businesses.

## User engagement

Users are encouraged to provide 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 encouraged. Responses should be addressed to the "Public enquiries" contact given in the "Enquiries" section below.

The Department's engagement strategy to meet the needs of statistics users is published here:

<https://www.gov.uk/government/publications/engagement-strategy-to-meet-the-needs-of-statistics-users>

## Notes

1-These experimental official statistics based on EPCs and DECAs are estimates and are provisional and subject to revision.

2-Throughout this commentary the statistics on lodgements have been quoted to the nearest thousand for EPCs and the nearest hundred for DECAs. Percentage changes have been calculated using unrounded figures.

3-Sources are shown at the foot of individual accompanying tables and live tables.

4-Experimental Statistics are defined in the *Code of Practice for Official Statistics* as new official statistics undergoing evaluation. They are published in order to involve users and stakeholders in their development and as means to build in quality at an early stage.

5-Details of the Ministers and officials who receive pre-release access to this release up to 24 hours before publication can be found at:

<https://www.gov.uk/government/organisations/department-for-communities-and-local-government/about/statistics>

6-The next quarterly release will be published on 31 October 2017, and will provide estimates up to the third quarter of 2017.

## Devolved administration statistics

The requirement on domestic and non-domestic properties to have an EPC on construction, sale or let and for buildings occupied by public authorities to have a DEC are devolved matters in Scotland and Northern Ireland. Further information can be found on Devolved Administration websites:

Scottish Government: <http://www.gov.scot/Home>

Department of Finance Northern Ireland: <https://www.finance-ni.gov.uk/>

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Information on forthcoming Official Statistics is available via the 'gov.uk' Release Calendar:

<https://www.gov.uk/government/statistics/announcements>

Information about statistics at DCLG is available via the Department's website:

<https://www.gov.uk/government/organisations/department-for-communities-and-local-government/about/statistics>

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