



Background quality report: Estimates of home insulation levels in Great Britain

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Introduction

Overview of output

Estimates of home insulation levels in Great Britain is a quarterly publication which allows users to see how many homes have been insulated through the rollout of Government schemes and the remaining potential for insulation in dwellings in Great Britain. DECC set out in its Departmental Business Plan 2011-15 that the cavity wall and loft insulation data would be used as one of the departments key impact indicators.

The estimates were first published on 30th November 2010, and this release contained estimates for cavity wall insulation and loft insulation. It was then extended to cover solid wall insulation, and the first update containing this additional information was published on 17th June 2011. A methodology review was conducted in Spring/Summer 2012, this involved discussions with the providers of input data. A note of proposed changes to the methodology was published for comment alongside the June 2012 release. Changes were then implemented in the September 2012 release.

These estimates are released as Experimental Statistics which means they are official statistics undergoing an evaluation process prior to being assessed as National Statistics. They are published in order to involve users and stakeholders in their development, and as a means to build in quality assurance during development.

The webpage for estimates of home insulation levels can be found at:

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/estimates-of-home-insulation-levels-in-great-britain>.

Summary of methodology

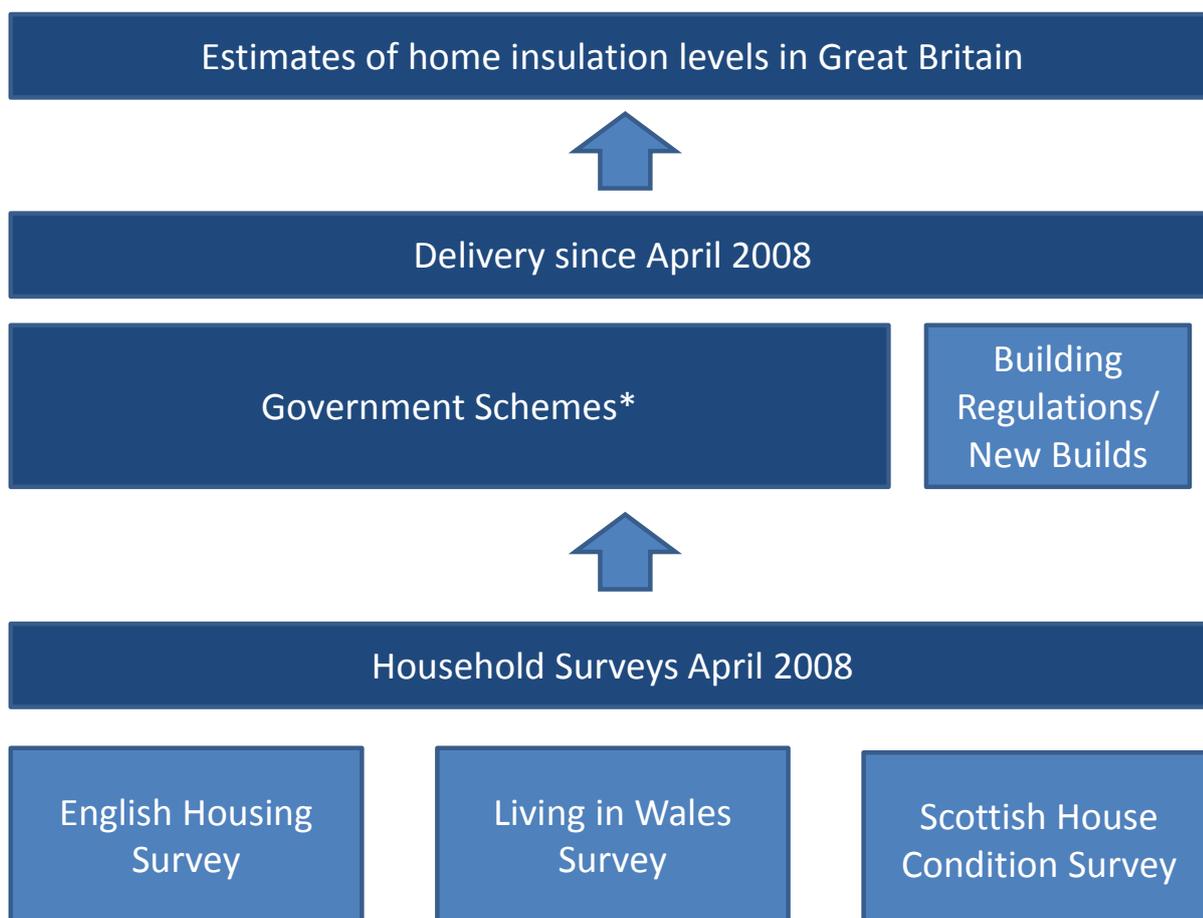
Estimates of the number of properties with cavity wall insulation and loft insulation use April 2008 national housing survey data as a baseline¹. Data available for insulation delivered through Government schemes and the estimates of properties with insulation as a result of the building of new homes are then added to the April 2008 baseline on a quarterly basis. Figure 1 below summarises how the estimates are constructed for cavity wall insulation and loft insulation. Estimates of solid wall insulation are based only on delivery of solid wall insulation through Government schemes (including the Energy Efficiency Commitment) – the 2008 housing survey data is not used as a baseline since the small number of properties with solid wall insulation and the sampling error in the survey means that numbers delivered through Government policies provide a more robust estimate. It is assumed that insulation measures have not been installed through non Government schemes in any significant numbers over this period.

The latest methodology note can be found at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/209028/Methodology_Note_-_Estimate_of_home_insulation_levels_in_Great_Britain_April_2013_.pdf.

¹ [English Housing Survey](#), [Scottish House Condition Survey](#) and [Living in Wales Survey](#).

Figure 1: Methodology for cavity wall and loft insulation



*This includes the Carbon Emissions Reduction Target (DIY and Professional), Community Energy Savings Programme and Warm Front between April 2008 and December 2012. It then includes delivery through the Green Deal and the Energy Company Obligation from January 2013.

Production and dissemination process

Data providers are given a timetable in advance of their data being requested so they know when to expect the request. Once the input data has been provided the quarterly figures are updated, and an issues log is created to recorded anomalies in the data to be followed up. The statistical release and pre-release briefing are updated using the new quarterly figures. This update is reviewed by the team's Grade 6 and Head of Profession for Statistics for comments and final quality assurance.

The publication and pre-release briefing are sent to the pre-release access list 24 hours before publication. After publication an email is sent out to relevant statistical and policy colleagues to make them aware of the release and who to contact should they have any questions. A note is also included in the quarterly DECC Statistics user update about this publication. The DECC Energy Efficiency mailbox is also monitored as users are invited to send in any feedback or questions they have on the publication to this address.

Available documentation

The estimates are published online on the DECC website as a PDF document, along with an excel workbook and .csv tables containing the tables contained with the publication and further time series analysis. There is also a detailed methodology note outlining how the estimates

are produced – it is intended to help users understand the assumptions made in the compilation of these statistics and some of the limitations of the data sources. Any changes to the methodology, and the rationale behind these are included in the methodology note.

For internal use there are desk notes which outline the quarterly publication process and individuals who have pre-release access – these notes should allow anyone to update the release if the lead producer is unavailable. An issues log is created each quarter – this contains the date the issue was logged, details on the issue, the resolution and whether a revision to the publication is required. Examples of issues include unavailable data and unexpected trends.

Emails containing input data are saved in the quarterly publication folder along with any further discussion over the figures. At the end of the publication process a copy of the publication and supporting documents are saved on the Department's electronic filing system so that we have a final record of what was published.

Accuracy and reliability

Methodology

A methodology note is published alongside the statistical publication and is available on the publication's webpage. The methodology note summarises the methodology used to produce the estimates, and helps users to understand the assumptions made in the compilation of these statistics and some of the limitations of the data sources.

The methodology note firstly outlines the different sources of information which feed into the estimates of home insulation levels – national housing surveys, administrative data from Government schemes and building of new homes. It then outlines assumptions made when producing the estimates to make users aware of these and any limitations associated with them. For example if looking at cavity wall insulation the user is alerted to the fact that it is sometimes difficult to identify whether a property has cavity wall insulation. When a property has cavity wall insulation installed the insulation material is injected into the cavity through small holes made in the walls – over time these holes fade which is one reason why it is becoming harder to identify cavity wall insulation. To take account of this possible undercounting of cavity wall insulation the methodology note notifies users of a five per cent uplift which is applied to the 'insulated' category for cavity wall insulation – the Building Research Establishment estimates that the English Housing Survey under estimates the number of filled cavities by between five and ten per cent. The remaining five per cent is treated as uncertainty, meaning you can't be sure whether these properties have cavity wall insulation. By outlining the adjustments made to figures and reasons for these, users have a better understanding of the coverage of the data they are using and the limitations associated with it.

Methodology review

These estimates are published as experimental statistics which means they are undergoing an evaluation process prior to being assessed as National Statistics. As part of ongoing efforts to ensure these estimates are robust DECC has consulted on the methodology used to produce these estimates. Although we received no formal written responses we received feedback from internal users of the publication, and we liaised with data providers to ensure we were using data accurately and that any assumptions made were valid.

Accuracy of the data

The April 2008 baselines are sourced from national housing surveys which have their own published error ranges. The data for measures delivered through CERT/CESP is reported to

Ofgem for regulatory purposes and as such is expected to be accurate to levels reported in the publication. When Ofgem produce their CERT quarterly report they go through a number of quality assurance processes. They firstly request the required data from suppliers and then process these completed supplier returns at scheme level (each energy supplier can be running a number of schemes) – this is carried out by two members of staff who sense check each other's work. This data is then passed onto another team who deal with the data at supplier and overall CERT delivery level. Queries are run on the database to extract figures for each supplier and trend analysis is run to highlight any inconsistencies. If any queries are raised suppliers are contacted and the responses are recorded. Ofgem publish their statement of methodology at the following link:

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=260&refer=Sustainability/Environment/EnergyEff>

All measures installed under ECO are provisional until the end of the obligation period (the period within which energy companies are able to deliver against their targets) as checks are undertaken. Initial validation checks are undertaken by Ofgem in the month following receipt of data and longer-term audits are done over the obligation period (e.g. to verify the installation of the measures and the quality of installations and to ensure compliance with the ECO guidelines). All measures installed under Cashback are reported to DECC by the Cashback Administrator. Checks are undertaken to ensure that each Cashback recipient has a valid Green Deal Assessment prior to installation and revised Energy Performance Certificate after installation.

In general we do not get large revisions to the data – data from previous quarters is only revised if we are notified of a change by a supplier of the input data. The main source of revisions to date results from changes to methodology – which following the comprehensive review of methodology recently undertaken should become less frequent. The publication of estimates on 25th September 2012 contained significant revisions to the number of properties with cavity wall insulation, this resulted from changes to the way the 2008 cavity wall insulation baseline is constructed. The proposed changes to the methodology were included in a consultation annex to the statistical release on 7th June 2012 to let users know of planned changes. These changes were then implemented in the September release, full details of the changes were included in the methodology note.

At present there is no revisions triangle published. Revisions performance will be monitored in 2013.

Timeliness and punctuality

Estimates are published eleven weeks later than the period they refer to i.e. estimates for the beginning of July 2013 will be published on 19th September 2013. Each publication states when the next update to figures will be published, any delay to publication would be announced on the publications home page with the reason explained.

Accessibility and clarity

DECC statistics can be easily accessed from the DECC homepage which includes a link to the statistics area where the estimates of home insulation levels can be accessed from. Alternatively the publication can also be accessed from the publications webpage:

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/estimates-of-home-insulation-levels-in-great-britain>

The methodology note is at the top of the webpage so users can easily find out how the estimates are constructed. Underneath this are the most recently published figures under the heading 'Latest figures' so that people who come to the webpage can easily find the latest information. Underneath the latest figures are the historical releases of this publication. All text documents are available in PDF format, and the table which accompanies the release is in excel format. We have made more data available in .csv format from December 2012, and plan to release a text summary of the release in html format for ease of re-use.

Plain English terms are used where possible, and full explanations are provided for any technical terms used.

Coherence and comparability

The majority of figures which feed into this publication are released in other publications by the original data suppliers. For example figures on insulation measures delivered through CERT are published by Ofgem. It is important to note that figures published in these estimates will not always be comparable with the input data due to adjustments made in the production process. Details on the adjustments made can be found in the methodology note under 'Assumptions made in producing the estimates'.

The estimates published by DECC can be used to estimate the number of homes that have the potential to receive insulation in the future. Users need to be aware that this cannot be achieved by simply taking the total insulated from the number of homes in Great Britain. For example when looking at properties with a loft that have not yet been insulated, some will be unfillable or hard to treat such as properties with a flat, chalet or mansard roof.

Whilst we use national housing surveys as the baseline data for this publication, at present we do not use the most recent annual results from these surveys to inform estimates since April 2008. This is because we consider the data on the number of insulation measures delivered through Government schemes to be more accurate than the housing survey data. However, differences between DECC estimates and those from the housing surveys are considered annually as results from the surveys become available.

Assessment of user needs and perceptions

The publication is used by policy teams within DECC to see how many homes have different types of insulation. The figures are also used internally and by industry to estimate how many homes remain uninsulated and have the potential to be insulated in the future. Users within DECC can email the lead producer of the publication with any questions. External users of the publication can email the DECC Energy Efficiency mailbox with any questions.

In 2012, we have been consulting users about changes to the methodology used in the report, and have also sought users views about the main uses of the publication and presentation of the data. As a result we now publish remaining potential figures on a quarterly basis as this was seen as a key use of the publication.

Performance, cost and respondent burden

The publication makes use of existing data sources and therefore no extra resource is required to collect the data:

- Housing surveys – produced by Department for Communities and Local Government, and Scottish and Welsh Government survey units.
- Administrative data from Government schemes – collected by Landmark (installations under the Green Deal in England and Wales), and Ofgem (ECO).
- House building statistics – produced by Department for Communities and Local Government.
- Hard to treat cavity wall properties – produced by Inbuilt.

It takes approximately two days to produce the quarterly estimates and update the publication. In addition resource is required from the team leader to check the update, and from the team's Grade 6 and Head of Profession for Statistics to read the release and provide any comments. Additional resource is required for review and development. It then takes an additional day to complete all other tasks such as communicating with policy teams, press office and the web team.

Confidentiality, transparency and security

All data used to produce the estimates are aggregated – there is no record level data dealt with when producing this publication. Figures in tables are rounded to the nearest ten thousand, and any figures less than 10,000 are not shown, with the exception of solid wall insulation which is rounded to the nearest 1,000. This rounding is used to reflect the fact that these are estimates and are therefore not accurate to the nearest single measure.