

### What does the Government's £5,000 Green Homes Grant mean for you?

The Government has offered a [grant](#) to every household in the UK to improve the energy efficiency of their homes in their [plan for jobs](#). The grant will be for up to 2/3rds the cost of a retrofit, up to a maximum voucher of £5,000 for a £7,500 project. In addition, up to £10,000 is available for households that currently receive certain benefits.

### What are retrofit measures, and what can I get with the Green Homes Grant?

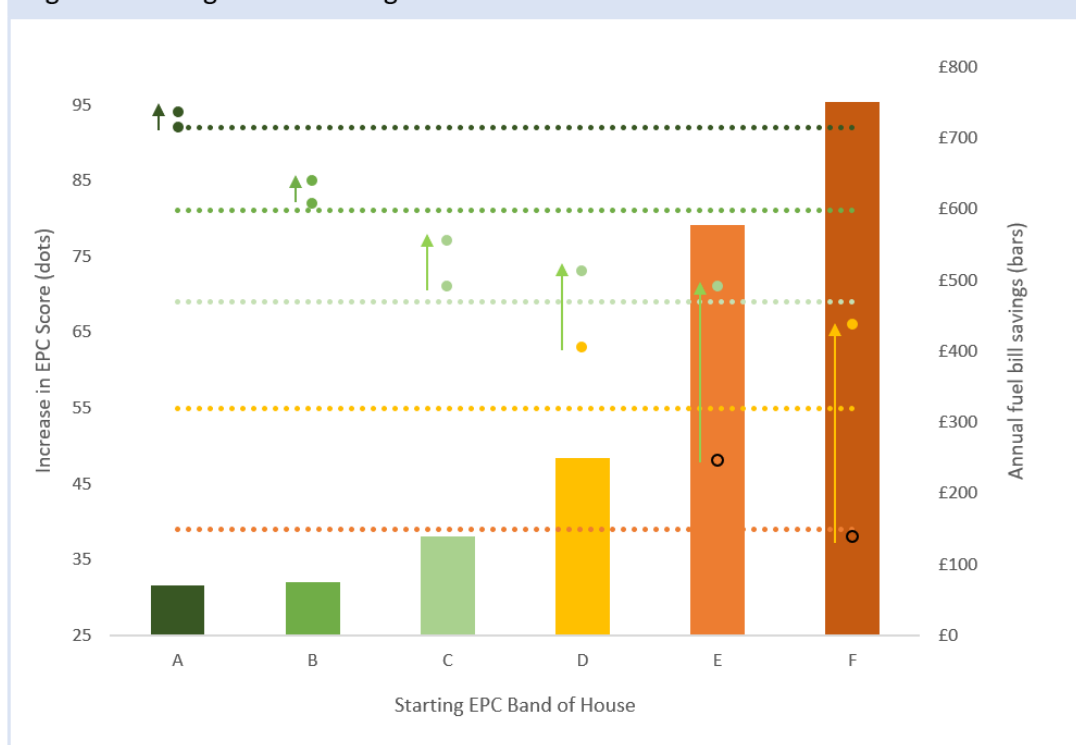
A [recent study](#) from the Department for Business, Energy and Industrial Strategy outlined the average costs for different retrofit measures, and the Government-endorsed [Simple Energy Advice](#) website also provides estimates on the cost of different energy efficiency improvements. In addition, the Energy Performance Certificate (EPC) of your home also identifies some average costs for different retrofits, which, for a 3-bed semi, include the measures in Box 1:

Box 1: Estimated cost of retrofits according to EPC	
Hot water cylinder jacket	£45
Draught proofing	£100
Loft insulation upgrade	£225
Party wall insulation	£450
Cavity wall insulation	£1,000
Ground floor insulation	£1,000
Replacement windows	£4,900

### How much will the Green Homes Grant save you?

The scheme states that households can get a £5,000 voucher if they spend at least £2,500 on energy efficiency measures themselves. So how much could you save on your fuel bill after spending £7,500 on energy efficiency? The LSI have undertaken work using the Government's retrofit energy performance tool (RdSAP) to estimate this for an average 3 bed semi household; the results are shown below:

Figure 1: Savings for an average 3 bed semi detached home





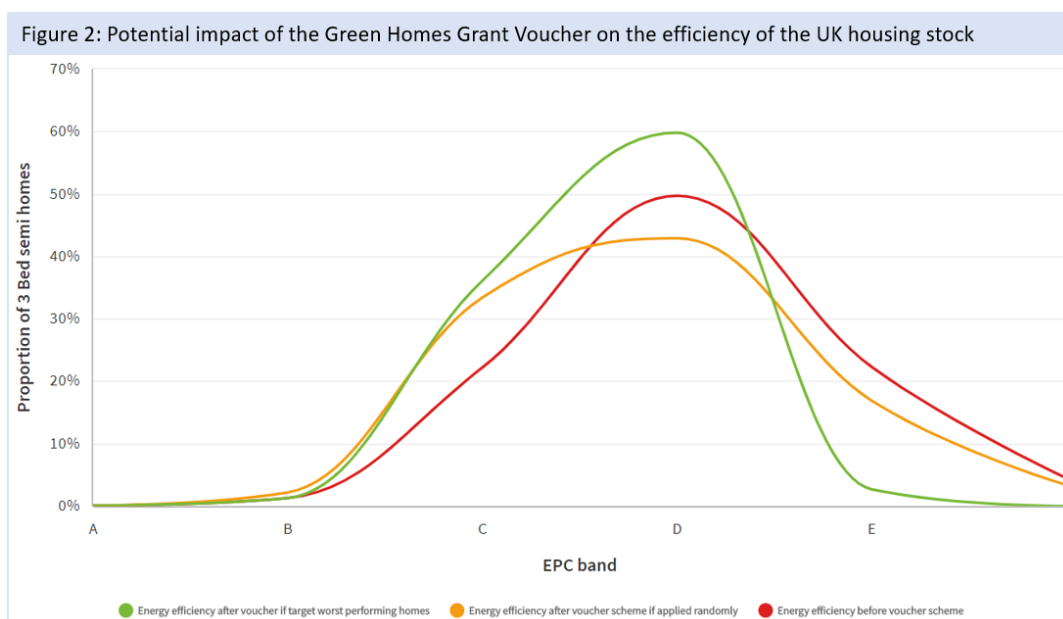
### Box 2: Impact of the GHG for Households

- The grant only provides a meaningful benefit in fuel bill savings for homes that are currently EPC band D, E or F\*, indicating that the grant will provide the most benefit to the homes in most need.
- People in the least efficient homes could save between £200 and £800 per annum making the payback on a £2,500 householder contribution between 3 to 11 years.
- Any grant taken up by A, B or C band homes will not yield significant reductions in fuel bills. This indicates the grant could have only been made available to homes rated D or lower.
- The grant would be sufficient to bring all but the very worst performing homes up to an EPC band C.

\*G rated homes were not included since cavity wall homes with gas boilers already achieve an F rating

### What will the Green Homes Grant mean for Government's national energy efficiency targets?

The Government have a commitment to bring all housing up to an [EPC band C](#). Currently the [average is a D](#). The funding pot available appears to be £2 billion (£500 million is for the Local Authority Delivery (LAD), equivalent to around 400,000 homes each taking up the £5,000 allowance. We can consider what the impact of the voucher scheme may be on 3 bed semi-detached homes in the UK by transposing the findings from our example home onto 400,000 homes in the national EPC database. The findings are presented below and summarised in Box 2. showing that the grant could achieve an uplift in the average EPC rating of the housing stock i.e. a shift to the left on the graph, representing an improvement in energy efficiency. However, the size of this shift is dependent on which homes take up the voucher scheme.



This analysis suggests that if targeted to only the worst performing 3-bed semis, it could bring almost all out of E and F bands. However, the voucher scheme is available to homes in every EPC band and if uptake is assumed to be random throughout housing stock, the grant will have less impact. Furthermore, there are only around 1.6 million 3 bed semi-detached homes in the EPC database out of 27 million total homes. The impact of the scheme will therefore be modest in terms of targets to get all homes to a C rating, and many E and F properties will remain when the grant has completed.

### **Assumptions used in this analysis**

While this analysis may be useful in predicting the impact that may be expected from the GHG, there are many caveats to the analysis presented here, namely:

- There may be millions of homes where installing these measures is not feasible.
- Measures other than those proposed by the EPC may be preferred which provide lower savings.
- The analysis presented is for an average 3 bed semi-detached home and other house archetypes may show different findings.
- Retrofitting homes is disruptive and may not be desirable for many householders.
- The costs of retrofitting homes will vary across the country and may not align with EPC recommend costs.
- EPCs do not reflect the true costs of running homes and these can vary substantially from household to household, which will in turn influence the amount of fuel bill savings realised.
- The value of the grant is extended to £10,000 for some households, however only the grant of £5,000 plus the household £2,500 has been considered here.
- The type of measures, the number of measures and the order in which these are installed affects the fuel bill savings that each may achieve. Here the maximum number of measures that could be afforded were assumed to be installed simultaneously.
- Some households may wish to invest more to improve their homes than the £2,500 needed to qualify for the full £5,000 grant, and this could increase the savings predicted.
- Further details on eligibility criteria or performance standards of the grant are unknown at this stage and will affect the fuel bill savings predicted and number of homes that may benefit from the grant.
- Only 400,000 homes were assumed to receive the full £5,000 voucher, however more homes may take up the voucher if the average voucher value is less than £5,000.
- Whilst the model used to predict the savings is the Government's own RdSAP, there may be a modelling gap between the predictions and reality of savings realised by householders.
- The quality of the retrofits delivered may vary and there may be a large performance gap between modelled savings presented here and actual savings realised by householders.

### **About the Leeds Sustainability Institute (LSI)**

The [LSI](#) are a team of researchers who undertake projects under the heading of Energy Efficiency and Policy, Sustainable Behaviour and Building Performance Simulation.

Current research contracts include £2.7 million Department for Business, Energy and Industrial Strategy (BEIS) project Demonstration of Energy Efficiency Potential ([DEEP](#)).

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