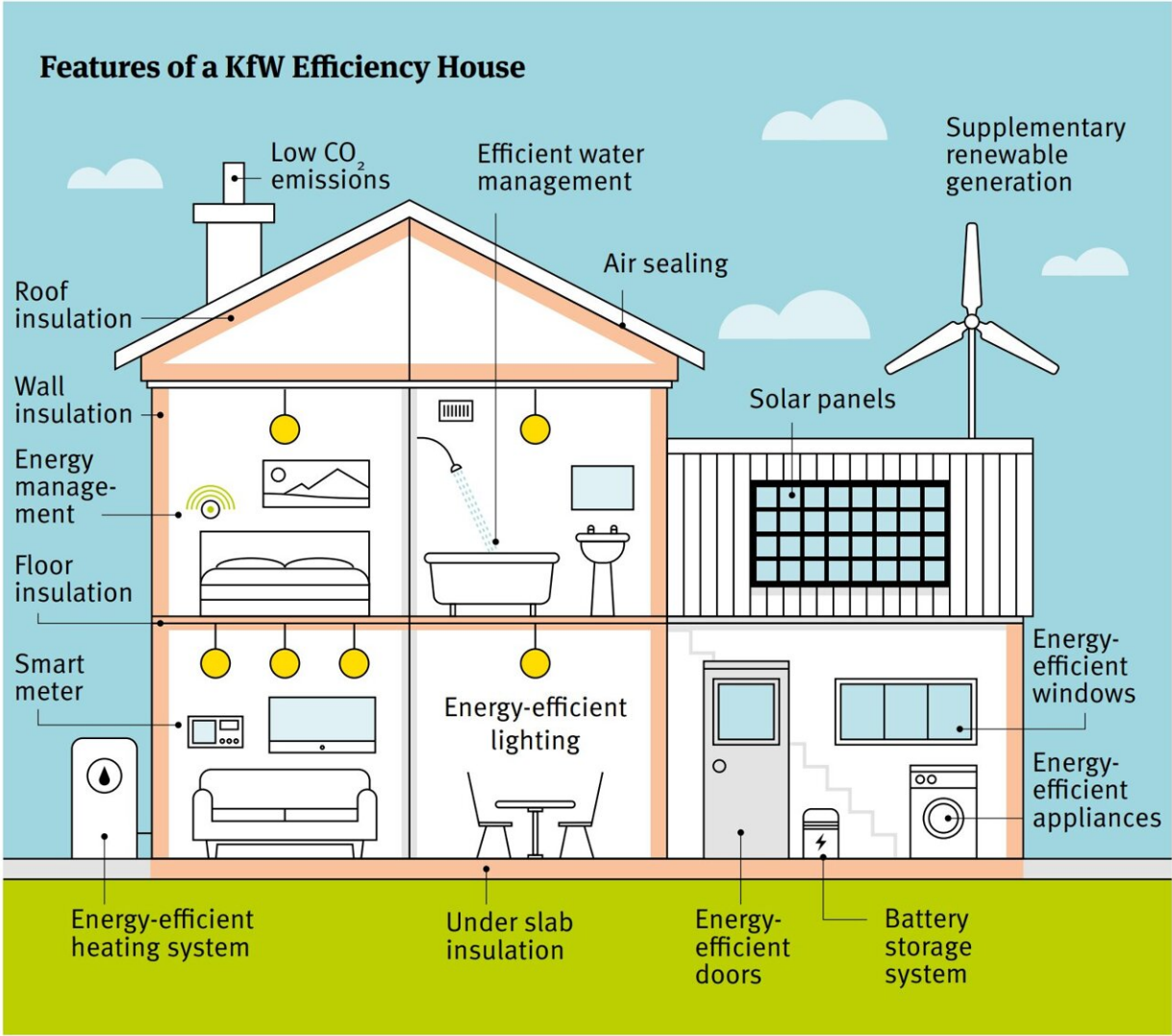


UK trails behind as European countries upgrade homes to reduce energy bills and tackle climate crisis

December 15 2022



Credit: *Decarbonising Buildings: Insights from across Europe* (2022).

This is according to a briefing paper from Imperial College London experts released today, called "Decarbonising Buildings: Insights From Across Europe," published by the Grantham Institute—Climate Change and the Environment at Imperial.

Countries including Germany, France, Sweden, Norway, Italy and the Netherlands have been rolling out multiple programs and incentives to reduce residents' energy consumption and costs.

Meanwhile, the report's authors say the UK government is falling behind in helping people conserve energy, leaving Brits living in some of the least efficient housing in Europe, and compounding the energy and cost of living crises.

Lead author Dr. Salvador Acha, from the Department of Chemical Engineering at Imperial College London, said, "Studies show the UK's 28.6 million homes are among the least energy efficient in Europe and lose heat up to three times faster than on the continent, making people poorer and colder.

"At a time of increased energy bills and inflation, people in the UK can't afford to lose energy due to inefficient housing, but unfortunately [energy policy](#) in this area has been nil for many years. With the continued climate crisis, and the fact that our homes account for 30 percent of the UK's total greenhouse gas emissions, the planet can't afford this lack of action either."

The Grantham report comes just two weeks after the Department for Business, Energy and Industry Strategy (BEIS) announced a £1 billion grant scheme to help homeowners that have low energy efficiency ratings and are in lower council tax bands, insulate their homes. The

scheme has been criticized for not opening until Spring.

Dr. Acha added, "I'm pleased to see the UK government taking this step in the right direction, despite the tardiness of the announcement, as we have been suffering from high energy prices for over a year. However, action needs to be taken on an even larger scale. If each eligible home claims the maximum grant of £15,000, the new scheme will help about 67,000 homes—a tiny proportion of the houses that need to be upgraded, and roughly 0.25% of the housing stock."

"Insulating the UK's homes would reduce the amount of energy we need to heat them. Well-insulated homes leave more money in people's pockets, keep them warm, well and comfortable, and less worried about paying their bills. They also reduce our demand on overseas energy sources, strengthening our national energy security. Our research shows that European countries are ahead in crafting innovative policies to reduce energy use and costs, so we know change is possible."

Recommendations

To create more energy efficient homes, the authors' key lessons from this research for the UK government are:

1. Create the right conditions that encourage and support people to make their homes more energy efficient;
2. Ensure the UK has the skilled workforce needed to make new and older buildings more energy efficient;
3. Concurrently, improve energy certification schemes (e.g., the Energy Performance Certificates (EPCs) presently used in the UK and European Union) to ensure they more accurately reflect the energy performance and environmental impact of properties;
4. Reduce emissions from heating buildings by replacing fossil-fuelled systems with reliable and more efficient technologies

such as electric [heat pumps](#).

"This requires long-term planning with short-term targets, incentives and advice for homeowners to take up new technologies, and the provision of skills and training for the workforce across our local communities who will be making the improvements," said Dr. Acha.

The UK government has committed to 600,000 heat pump installations per year by 2028, and to ensure heat pumps are no more expensive to buy and run than gas boilers by 2030. Currently, households are encouraged to replace their gas boilers with air-source heat pumps while benefitting from a £5,000 grant. The installation of gas boilers in new housing developments is set to be phased out by 2035 and both new and existing homes will have to meet at least EPC band C ratings by 2035.

"Although these targets are a step in the right direction there is a lack of clarity on how businesses will be supported to invest in sufficient skilled labor across the country to install thousands of heat pumps and revamp homes. I fear that the socio-economic inequality of the country will be reflected in widening the south and north divide in terms of quality housing—a national comprehensive effort is needed to ensure these policies benefit all," said Dr. Acha.

REPORT HIGHLIGHTS: What other countries are doing:

Sweden and Norway

Low-cost sustainable heating has been a priority for many years in Nordic countries. In Sweden, the widespread deployment of heat pumps has tripled installation since 2000, thanks to a well-developed market helping to reduce costs. Sweden currently has the highest number of

ground source heat pumps per capita in the world, with heat pump sales per 1,000 households reaching 29 in 2021 compared to the UK's 1.5 in the same year.

Heat pumps are energy efficient devices that extract ambient warmth from the air or ground and bring it into buildings. Because they are electrically powered, heat pumps can run on 'decarbonized' (i.e. renewable and stored) energy, which cuts out fossil fuels and climate-damaging greenhouse gases.

Norway has all but fully decarbonised heating across the country. Approximately 85 percent of buildings in Norway are heated using electricity, 92 percent of which was produced by hydropower, and 6.5 percent from wind.

France

France Rénov' is a government-backed public housing renovation service, set up by the French Ministry of Ecological Transition in January 2022. Free services include personalized advice on cost-effective renovation work to improve energy efficiency and insulation; information about available energy renovation measures; advice on how to claim available financial support; and advice on how to contact qualified craftsmen.

Germany

The KfW Efficiency House standard is a voluntary standard for assessment of building energy efficiency, linked to the existing German Building Standard for newly built homes. From 2006-2016 it is estimated that, by improving awareness of the benefits of energy efficient homes, the KfW standard resulted in an annual reduction of 8.3

million tons of CO₂ emissions, saved €3.3 billion for homeowners in 2011 alone, and creates and safeguards around 300,000 jobs a year.

Italy

Established in July 2020 as part of the country's post pandemic recovery strategy, the Italian government's 'Superbonus' scheme offers homeowners a tax credit of up to 110 percent on the cost of eligible energy renovations. The scheme acts as a supplement to the government's previous 'Ecobonus' scheme that, since 2012, offered up to 65 percent of the cost to homeowners to help stimulate residential [energy](#) renovations.

More information: Report: www.imperial.ac.uk/grantham/pu...om-across-europe.php

Provided by Imperial College London

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