

FABRIC

Another year; another scheme to try and remedy the chronic problem of poor insulation in UK houses. It comes in the shape of the £2bn Green Homes Grant, offering vouchers up to £5,000 to help homeowners upgrade their properties.

The high proportion of homes that leak heat and incur high energy bills seems to be a peculiarly British problem. Over the last decade the proportion of households in fuel poverty has consistently been 10–12%. Why volume builders were not forced to build better insulated properties long ago is an enduring topic of conjecture. It means the country is forever playing catch-up, and the business of retrofit is inevitably expensive and disruptive.

Government approaches have generally been piecemeal and stop-start. Take Warm Front, launched in 2000 to help households grappling with fuel poverty. The scheme offered grants up to £3,500 to cover energy efficient home heating and loft insulation. But, by the end of 2009, the financially-constrained Labour government announced plans to cut funding from £369mn to £195mn in 2010.

The coalition government then reduced Warm Front's budget to £110mn in 2011–12. Eligibility criteria were tightened to target only the most vulnerable households and those living in the most poorly heated and insulated homes. By then, however, another scheme was in the mix, the Community Energy Saving Programme (CESP). This ran from October 2009 to December 2012 – its aim to reduce carbon emissions. The onus fell on gas and electricity suppliers and power generators to deliver energy saving measures for domestic consumers in specified low income areas.

Most CESP projects were achieved through partnerships with social housing providers or direct promotion to private households. CESP incentivised energy companies to install particular measures, such as solid wall insulation; also to carry out as much activity as possible in each house treated, and in every target area.

Although energy companies fell 15% short of the government target, the scheme had gathered momentum towards its end. According to energy regulator Ofgem, the programme benefited 154,000 homes in low income areas.



New scheme the latest of many to create green homes

Many UK homes continue to perform poorly in terms of keeping heat in, despite a series of government and utility-supported programmes, over the years, to improve things. Andrew Maurant reports.

'The majority... were hard-to-treat and may not have received measures under a less targeted scheme,' it concluded.

Green Deal remedy

As CESP faded away, in came the ill-fated Green Deal, the coalition government's attempt to remedy the problem. This was an insulate now, pay later scheme, the money recouped via a levy on household electricity bills. It soon unravelled.

A finance company provided up-front funding but at interest rates of almost 7%. Critics feared

that lower income households risked being saddled with high interest debt that would wipe out any savings they might make.

Green Deal was further undermined by a grassroots problem. It was to rely on an army of energy assessors, many providing home energy performance certificates (EPCs). Their job was to give impartial advice about what work was needed. Yet, having invested in costly training to become assessors, large numbers could only find work through intermediary companies, many linked to estate agents, and received shockingly low fees for their work.

Moreover, assessors wanting to retain a licence to work faced sitting an exam at their own expense. It was not an appealing prospect. There was a dramatic fall in numbers of people insulating their homes from 2012–13 for, as the flaw-ridden Green Deal had been ushered in, the government finally axed Warm Front.

In 2013, with Green Deal floundering, government tried a new tack, the Energy Company Obligation (ECO). This obliged major gas and electricity suppliers – British Gas, EDF Energy, E.ON, npower, Scottish Power and SSE – to help households with measures such as insulating lofts, cavity walls and solid walls, and boiler replacement or repair.

ECO for low-income homes

In its current form, due to run until 2022, ECO is focusing on low-income households – in total, 6.5mn are eligible. The aim is to make energy-saving improvements to 900,000 homes. Gas and electricity companies with more than 200,000 customers are automatically required to deliver ECO. Each must contribute to a quota of improvements, based on its market share.

Yet, in 2017, ECO's budget was halved, to £640mn, from its original £1.3bn. According to the National Insulation Association (NIA), ECO has failed to deliver the scale of change needed. NIA claims that because the ECO budget is paid for by a levy on customer bills, energy suppliers are under pressure to deliver upgrades cheaply to avoid an increase in costs; and that houses in need of costly improvements are being neglected.

Three years ago, as part of its Clean Growth Strategy, the government announced plans to improve the energy performance of UK homes and bring them up to a

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Standard Assessment Procedure

A standard assessment procedure (SAP) for the energy rating of houses was first adopted within government building regulations in 1994. The most recent update was in 2012. SAP covers matters such as energy consumption per unit floor area and energy cost rating adjusted for floor area (expressed on a scale of 1 to 100 – a lower rating indicates higher running costs and carbon dioxide emissions).

Rules have evolved to make new homes more thermally efficient, though some vary across individual countries of the UK. Standards set by UK government building regulations of 2010 focusing on fuel and power conservation, and tweaked at intervals since, address the insulation value of a building's various elements; allowable area of windows, doors etc; air permeability; boiler efficiency and much else.

Before construction begins, a design stage calculation must be issued to the Building Control Body (BCB) setting out the Target Emission Rate (TER), Dwellings Emissions Rate (DER) – which should be in line with that of comparable buildings, and a specification for the proposed building.

Once a house is completed, a report must be issued to BCB showing that requirements have been met, along with changes (if any) to the spec, and an energy performance certificate (EPC). These calculations require a test to be carried out to prove that the building will not leak air (and so heat) through its fabric.

'C' rating by 2035. A priority is getting fuel poor and privately rented homes to that level by 2030. Yet these ambitions carried an equivocal tone – in summarising the scheme, the phrase: 'where practical, cost-effective and affordable' recurred.

As for social housing, there was merely intent to 'consult on how [it] can meet similar standards over this period.' It's hard to escape the sense that the neediest households and properties could slip through the net, yet social housing comprises 17% of the UK's housing stock, and half has an EPC rating of 'D' or worse.

Green Homes Grant

But the landscape is changing: the government has committed to net zero carbon emissions by 2050; and COVID-19 has thrust a new emphasis on creating green jobs. Due to go live this month, Green Homes Grant entails government funding up to two-thirds of the cost of home improvements for over 600,000 homes, covering insulation (solid wall, underfloor, cavity wall or roof) and heat pumps.

Within the deal, £500mn will be earmarked for low-income, fuel poor households, including those in rented accommodation. A further £50mn will pilot innovative approaches to

retrofitting social housing.

Householders will be able to claim vouchers worth up to £5,000 and those on low incomes can receive vouchers covering 100% of the expense, up to £10,000. They will have to apply online for a specific improvement, get a quote from a listed supplier and have this approved beforehand. Vouchers can also be used for improved, thermally efficient glazing and upgrades to energy efficient doors.

Builders, plumbers, and other tradespeople across England will need a government seal of approval to provide their services, which means registering for TrustMark or the Microgeneration Certification Scheme accreditation.

Yet missing from all of this is any requirement on builders to provide high standard insulation from the outset. Tory MP Sir Geoffrey Clifton-Brown is trying to rectify things. In June his private members bill had a first reading in the Commons, with the aim of compelling developers to meet minimum insulation standards in all new-build homes.

Clifton-Brown told MPs that the Clean Growth Strategy needs to be much more ambitious, 'which is why this bill will legislate for all new homes to reach that level (C rating) now. It is far cheaper to build [insulation] into new homes than to retrofit... it's shocking to read accounts of people living in new homes who report that they are cold and draughty,' he said. But with Clifton-Brown's bill not due its second reading until March 2021, no one should expect progress rapid progress.

Significant funding

Energy industry bodies and others have been picking over the pros and cons of the Green Homes Grant. Julie Hirigoyen, Chief Executive of the UK Green Building Council, welcomed 'the first significant pot of funding for energy efficiency in five years' but says there is: 'much more to do if this is to be the start of genuinely building back better and not a rerun of past missteps.'

'It's crucial that government avoids falling foul of the mistakes made by previous schemes. This means ensuring all measures and installers under the scheme are properly accredited and deliver real improvements,' she added.

But Hirigoyen feels social housing has been sold short; that the £500mn allocation is 'a drop in the ocean.' Moreover, there was a missed opportunity to offer targeted tax cuts that could support decarbonising the built

environment. 'We still need incentives to drive demand for energy efficiency retrofit in the 'able to pay' market,' she says. 'These should include financing options to suit the needs of all households and tenures.'

The Royal Institute of British Architects (RIBA) also has mixed feelings about the Green Homes Grant. 'We've long called for use of a TrustMark to ensure homeowners are using accredited tradespeople, and for a simple energy advice service,' said RIBA President, Alan Jones. 'But it's very disappointing there is no requirement to compare energy pre and post retrofit to help ensure value for money and energy savings. The government needs to set out a national strategy with adequate funding to retrofit homes which require upgrading.'

The NIA has called for a street-by-street approach to insulation retrofit involving local authorities and Department of Business Energy and Industrial Strategy (BEIS)-funded local energy hubs. Their role would be to work with councils, local electricity providers and community energy groups on a variety of schemes. NIA argues councils are best placed to identify the least energy efficient homes. Such an approach would allow for a focus on specific property archetypes in clusters.

'It will enable contractors to better plan works, avoid unnecessary disruption, and capitalise on the cost-effectiveness of upgrading multiple homes at the same time. If fuel poor and able-to-pay properties are on the same street, it makes sense to upgrade both at the same time,' says the NIA.

In Scandinavia, where insulation is vital, deaths from the cold are much lower than in Britain. Thirty years ago, Germany devised the Passivhaus Standard, designed to make homes ultra-insulated (an average depth of 300 mm), airtight, with triple-glazing, mechanical ventilation and a heat recovery system. While a smattering of British homes have been built to this template, the UK remains blighted by some of the worst insulated homes in Europe. That sorry fact continues to nag like an icy draught creeping in through an ill-fitting door. ●

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