

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



Chartered
Institute of
Housing

About CIH

The Chartered Institute of Housing (CIH) is the independent voice for housing and the home of professional standards. Our goal is simple – to provide housing professionals and their organisations with the advice, support and knowledge they need to be brilliant. CIH is a registered charity and not-for-profit organisation. This means that the money we make is put back into the organisation and funds the activities we carry out to support the housing sector. We have a diverse membership of people who work in both the public and private sectors, in 20 countries on five continents across the world.

Further information is available at: www.cih.org

CIH contact:

John Perry, CIH policy adviser

john.perry@cih.org

This is a response to the Select Committee's [call for evidence](#) on whether current targets are sufficient to meet the “net-zero by 2050” challenge within the existing housing stock.

Our evidence responds to each of the Committee's questions in turn and focuses on the challenge in England.

Are the Government's targets on residential energy efficiency still appropriate to achieve its ambition to reach net zero emissions by 2050?

The 2050 target for net-zero emissions is still achievable but only if net-zero delivery becomes embedded in everything we plan, design and deliver going forward, including the financial systems, tax arrangements and regulatory systems that apply to existing as well as newly built homes.

The target to achieve an EPC rating of C in “as many homes as possible” by 2035 is an important staging post, providing that:

- Realistic plans, backed by resources and with appropriate stepping stones, are put in place now, as 15 years is an achievable but very tight timescale.
- Meeting the target in “as many homes as possible” is interpreted strictly, with criteria and compensating measures for those categories that cannot realistically achieve this rating in the timescale (as happened for example when the Decent Homes Standard was set in social housing).
- Plans to achieve C ratings in the majority of the stock by 2035 are kept compatible with the further work that needs to be done to achieve the 2050 target (i.e. abortive work must be avoided in meeting the interim target).
- Measurement systems are robust and monitoring is effective.

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



- The government enables the social sector to take a strong lead in creating the market for retrofit work and making early progress on the social sector stock.

What are the potential risks and opportunities of bringing forward the Government's energy efficiency target?

Policies and funding plans to tackle the issue of energy efficiency in existing homes at the scale and pace required have not yet been introduced in England. The BEIS Select Committee heard that average annual per capita investment on energy efficiency was: £35 in Scotland, £23 in Northern Ireland, £17 in Wales and £8 in England.¹ Unless underfunding in England is rectified soon, there is a huge risk that the current targets become discredited and disregarded, as has happened in the past.

Therefore, while bringing forward the target and trying to make faster progress than currently planned is highly desirable, it is unrealistic without a level of government commitment that is so far not in evidence. CIH believes that the best option is to work to the 2035 and 2050 targets, ensuring that realistic plans are put in place to achieve them.

The government could use the social sector to spearhead the drive towards the targets, setting more rapid targets for this part of the stock – providing of course that this is backed by resources. A big drive towards retrofit to high standards in the social sector would help create the market and set consumer expectations in the private sector. It could be linked to training programmes and apprenticeships involving the private sector firms undertaking social sector work. Such a drive could be a key measure to stimulate the economy in environmentally sustainable ways after the coronavirus epidemic.

Should Government targets for energy efficiency be legislated for, and if so, what difference would this make?

There is an argument that a target that is enshrined in legislation can still be ignored or under-resourced. However, there are some merits in legislating, for example to formalise the 2035 interim target and the obligations it places on the government:

- Given that the current target was set by a previous administration, legislation would help to secure the commitment and resources from the current one.
- Legislation now would help emphasise the urgency and scale of the task.
- A measure such as Lord Foster's [Domestic Premises \(Minimum Energy Performance\) Bill](#) would set out basic criteria to be applied, a timetable and the requirement on government to produce a strategy and specify the resources to implement it, which would help ensure that the 2035 target is realistically addressed.

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



A Bill could also provide an opportunity for wide consideration of how the 2035 and 2050 targets are to be met. At the moment, after various bodies have produced reports or led campaigns around zero carbon, there is an urgent need, alongside potential legislation, to raise awareness about the targets and build consensus on how to achieve them.

How effective is the EPC rating at measuring energy efficiency? Are there any alternative methodologies that could be used? What are the challenges for rural areas?

CIH is not in a position to make technical comments on the EPC, but it supports the view that its effectiveness should be kept under review, that this should include looking at alternative measures that may be advantageous, and also that the effectiveness of EPC ratings in practice should be monitored to ensure that the certificates are a reliable measure of actual performance.

A particular gap is that inspectors only look at what is visible in a building (for example, they do not consider under-floor insulation if it cannot be directly inspected). As standards get driven upwards, it is important that ways are found to address this deficiency as otherwise there is a disincentive on owners to carry out necessary work that will not 'count' towards their EPC rating when it is assessed.

How will lack of progress on residential energy efficiency impact the decarbonisation of heat and the associated costs of this?

Although there is some degree of trade-off between action to improve fabric efficiency and action to decarbonise heating, CIH views the energy efficiency of the fabric as being fundamental because:

- Space heating is by far the biggest energy user in the home, therefore reducing the need for it by improving energy efficiency is an essential and often cost-effective contribution towards decarbonisation, by reducing the heat load required.
- New low carbon heating sources generally have lower heat output than traditional gas or electric sources, and therefore require good fabric standards to ensure comfortable ambient temperatures.
- If homes are to become net generators of energy, as many argue, then high fabric standards are clearly required so as to maximise the amount of spare energy available for other purposes (e.g. charging electric vehicles).
- Where high fabric standards are difficult to achieve (e.g. in some of the pre-1919 stock), then decarbonising their heating systems is even more important.

It should be noted that decarbonisation of heating is making slow progress. The government has just announced that 12,500 homes a year will receive support for switching to low carbon heating solutions in 2022/23 and 2023/24. However, this compares with some 1.7 million gas boilers being installed. Less than 2% of homes have low carbon heating, one of the lowest levels in Europe.²

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



How can the Government frame a Covid-19 stimulus strategy around improved energy efficiency of homes?

The construction sector has been one of the hardest hit by the current crisis. There is a limit to which “shovel ready” projects in new construction will be available or (because of market conditions) viable, when the crisis ends. Fortunately, there is growing recognition of the potential for a dramatic upscaling of energy efficiency work in the existing housing stock to stimulate the economy and provide jobs, as well as having obvious environmental benefits. Furthermore, these jobs would be created across the country, not be concentrated in particular areas, potentially taking up slack in employment in areas with high numbers of people looking for work, assisting in regeneration and supporting government intentions to “level up” infrastructure spending across the UK.

The International Energy Agency picked out retrofit in urging governments in June 2020 to back a green recovery, emphasising that:³

Measures in this area often have short lead-times: existing efficiency programmes, for example, can be rapidly expanded and new projects can be shovel-ready within weeks or months. Targeting support to social housing and government buildings in the first instance could help kick-start efficiency improvement works, creating a pipeline of projects for the industry.

A government-funded training programme could rapidly upskill furloughed workers or those looking to requalify from sectors impacted by the crisis. The IEA estimates that around 60% of expenditure on home energy efficiency retrofits goes towards labour,⁴ based on experience in Ireland.⁵

A major initiative of this kind would also meet the proposals by the Committee on Climate Change (CCC) in its letter on May 6 to the prime minister.⁶ They specifically call on the government to “use climate investments to support economic recovery and jobs.” The “liberal Conservative” think tank, Bright Blue, has similarly called for a “resilient recovery” in its report *Delivering Net Zero*.⁷ A group of city mayors from Northern England has called for a national retrofit programme as the main element of an economic stimulus package.⁸

The Energy Efficiency Infrastructure Group (EEIG) has called for a stimulus package based on retrofit to create 40,000 jobs over the next two years and 150,000 by 2030.⁹ The Local Government Association, in calling for broadly based green stimulus, says that one-fifth of the 700,000 jobs it hopes to create will come from energy-efficiency work.¹⁰

There is therefore a strong consensus that a retrofit programme both contributes to meeting the government’s carbon targets *and* creates jobs quickly and more efficiently than many other ways of stimulating the economy. In addition, of course, it has enormous extra benefits in terms of reduced fuel poverty, savings to the NHS, etc.

The key questions are how to carry out an ambitious retrofit programme, how much it will cost and how will this be funded.

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



Is the £5 million Green Home Finance Innovation Fund enough to stimulate the market for and drive action from the banks to encourage owner occupiers to improve the energy efficiency of their homes?

The government's aims for achieving EPC band C in the existing stock were originally set out in its *Clean Growth Strategy* of October 2017. It promised a long-term trajectory and consultation on achieving the targets, with a range of actions focussing on the period from 2020 onwards. In 2018, the National Infrastructure Commission's *National Infrastructure Assessment* set a target for the rate of installations of energy efficiency measures in the building stock of 21,000 measures a week by 2020, and proposed a range of ways to achieve this. In 2019, the government published its *Green Finance Strategy* which estimated the cost of achieving the retrofit target to be between £35-65 billion, and acknowledged that considerable private sector resources would need to be mobilised.

Unfortunately there is still no clear strategy for achieving the targets set in 2017, 2018 and 2019. The Government's 2019 election manifesto made £9.2 billion of commitments over five years to energy efficiency work, beginning in 2020/21. This is a significant commitment but was unmentioned in the March 2020 Budget, despite the fact that spending should now have begun and the Budget promised to start "decarbonising the economy". Instead, the approach has been piecemeal and slow: the Green Home Finance Innovation Fund for example is a modest proposal launched in July 2019 but with funding still unallocated to approved projects. It relies very much on a response from banks, but what happens if they show insufficient interest or the mortgage products developed prove unattractive?

Funding of at least the scale indicated in the manifesto needs to be confirmed in full. It should now be treated as instrumental to an energy-efficiency post-Covid stimulus package, focused on assisting low-income households in the existing stock over the next two years.

The Energy Efficiency Infrastructure Group calls for a package which takes £1.5 billion of the sums promised in the manifesto, adds £1.2 billion of post-Covid incentives to homeowners and brings forward £0.1 billion promised for Clean Heat Grants from 2022. This combined stimulus package totalling £3.2 billion would lever in a further £3.4 billion from households and social sector landlords. This would support 42,500 full-time equivalent jobs over the two-year period of the package and benefit one million households in lower heating costs.¹¹

CIH supports this approach, with the proviso that the funds must be backed by clear implementation plans. Ideally, these would be built into the National Infrastructure Plan, to make a long-term commitment (and resources linked to it) which is clear to all stakeholders.

What policy and/or regulation could supplement it?

Any policies additional to the Green Home Finance Innovation Fund must offer a combination of carrots and sticks, such as those included in the CCC's report on retrofitting "hard to decarbonise" stock.¹² These include low or zero interest loans, mandatory energy standards for

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



existing homes in all sectors (enforceable at sale or rental), supporting innovative business models such as pay-as-you-save etc., and providing tailored advice and support to households on the support available, how to access financial assistance and how to identify certified suppliers.

The Coalition for the Energy Efficiency of Buildings (CEEB) has produced a detailed list of 20 demonstration projects, several of which are relevant to homeowners.¹³ These include developing a “green equity release” scheme for older owners, a “Help to Green” equity loan and several others.

The RICS has recommended tax changes to promote retrofit, such as varying Stamp Duty Land Tax according to the house’s EPC rating and a reduced VAT rate of 5% for home improvement and repair.¹⁴

All these proposals have merits. The point is that to achieve an ambitious target in a relatively short time will require concerted action across many fronts, backed by a strategy and an implementation mechanism. It cannot be achieved through isolated initiatives that rely on a response from the private market. This is even more the case in the prevailing market conditions caused by the epidemic. The government must aim to create a climate in which retrofit is seen as part of a huge drive towards a greener future, attractive incentives are available and homeowners begin to realise that the value and saleability of their home depends on its achieving good energy ratings.

Which models in other countries have been successful at stimulating demand for energy efficiency within this market?

There are international examples which show that the potential economic stimulus produced by ambitious retrofit programmes is real, not hypothetical. For example:

- Germany promoted around 420,000 retrofits through fiscal measures and concessional loans between 2008-2010 as part of its economic recovery package, with significant economic multiplier effects from invested public funds, creating 251,000 “person years” of extra employment.¹⁵
- The USA’s American Recovery Act of 2009 promoted energy efficiency improvements in over 800,000 residential homes between 2009-2012 with federal support, creating over 200,000 jobs and delivering about \$2 in energy cost savings for every \$1 invested.¹⁶ Already some countries are including retrofit in post-Covid economic stimulus plans:
- Germany has recently boosted its spending on retrofit programmes, taking total investment in 2020 and 2021 to €2.5 billion annually.
- Denmark has earmarked over £3.5 billion for green renovations to social housing between 2020 and 2026, including insulation measures, window replacements and replacing oil-fired heating systems.¹⁷

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



- Luxembourg has announced post-Covid grants to cover 50% of “green home” renovations and to replace inefficient heating systems in private homes.¹⁸

Within the UK, progress is already being made. For example, Scotland has Warmworks – a programme rolling out insulation and heating to vulnerable households in the private sector using 29 local contractors. Scotland also has an area-based, ring-fenced fund for local authorities to retrofit public sector housing using local contractors.

In Wales, the Arbed scheme is an area-based fuel poverty scheme, targeting areas with high numbers of privately owned, off-gas or hard-to-treat homes. It is investing £54 million, with funding from a combination of the European Regional Development Fund, Welsh Government and ECO.

What additional policy interventions are needed for social housing, leaseholders, landlords and tenants?

The need for social housing to “lead the way” in retrofit has already been accepted by the government in its *National Infrastructure Assessment*. It recommended a £3.8 billion budget for the sector to 2030 and the Conservative manifesto promised this amount as the Social Housing Decarbonisation Fund. However the Business, Energy and Industrial Strategy Committee warned last year that while the government wants the sector to lead, it “has failed to set out a trajectory for the sector, let alone a policy framework,” and that it is vital that “government acts with urgency” to agree a strategy and ensure that zero carbon targets are embedded in the sector’s business plans.¹⁹

Savills has estimated that the average net cost of retrofitting social housing to meet band C requirements is about £17,000 per unit if combined with other major refurbishment work. Given that about 56% of social housing already meets band C, this means about 1,760,000 dwellings need to be retrofitted which over 15 years would be some 117,000 annually at a net cost of £2 billion per year. One housing association, Raven, has costed the work to achieve the full zero carbon target in its stock at £20,000 per unit on top of normal investment – a sum compatible with the Savills estimate.²⁰

The government must now quickly start and then gear up the Social Housing Decarbonisation Fund, for example by announcing a starter programme of say £100 million for the current year then £400 million per annum from 2021/22 onwards, aimed at leveraging in the additional finance from the sector itself. This will soon provide evidence on whether this is sufficient to achieve the 2035 target and the government should commit to increasing the size of the fund if this proves to be necessary.

Another issue to be resolved is the approach to stock that is costly to retrofit. In the social sector, there is an argument for setting targets in terms of the average for the landlord’s stock, so that band C is achieved as an average but some hard-to-tackle homes are left at a lower level (say at a minimum of band D) while others are raised to A or B. Such an approach

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



Chartered
Institute of
Housing

might even be adaptable to the stock across a local authority area, if councils were to have a strategic role in planning retrofit programmes across sectors (see below).

It is important to incentivise social landlords not to simply dispose of their very worst stock, almost certainly to the private sector where it may deteriorate further and be more difficult to retrofit. In addition to the measure just proposed, this might be an issue for the Regulator of Social Housing to examine. Funding for new build might also include an element for replacing the hardest-to-treat stock as an alternative to disposal.

If the social sector is to lead the way and drive the required transformation, there is an argument for a “sector deal” along the lines of the government’s Construction Sector Deal.²¹ This appears to be working successfully not just as a one-off commitment but as an ongoing programme to improve productivity in the building industry, which is subject to regular review and updating. This could provide a model for a “Social Housing Green Deal” in which both government and social landlords would commit to deploying resources and taking action to meet the decarbonisation challenge in the housing stock and in the sector’s operations. It will be particularly important to build skills in this field, to ensure that retrofit work is high quality, durable, and delivers the promised benefits to householders.

Incentives for leaseholders, private landlords and tenants are included within the CEEB demonstration projects referred to above: for space reasons we do not address them here.

How should the proposed Home Upgrade Grant Scheme be delivered to help the fuel poor? Should the new grant scheme supplement ECO in its current form, or should ECO be redesigned?

The UK Green Building Council has called for the accelerated deployment and front-loading of the Home Upgrades Grant (HUG) and for extra funding for local training to support the scheme, ensuring that the supply chain is able to step up and deliver.²² If HUG is to be deployed quickly, there is a strong argument for this to be done via local authorities, some 40% of whom have experience of delivering cross-sector retrofit programmes via ECO or other schemes and who often also are able to target the work at clusters of fuel-poor households.²³

Are there examples of where energy efficiency policy has fallen between Government Departments? How could cross-departmental coordination be improved?

Clearly there is a strong overlap in dealing with domestic energy efficiency between the work of BEIS and of the MHCLG, which in turn uses Homes England, the GLA and local authorities generally to deliver its Affordable Homes Programme in England, and also the devolved administrations which deliver their own housing programmes. To achieve the 2035 target across the UK, there is a strong argument for a co-ordination mechanism which also includes HM Treasury. This would also provide a means of comparing experiences, given that Scotland in particular is well advanced in its retrofit programmes.

CIH submission to Environmental Audit Select Committee inquiry into the energy efficiency of existing homes



Chartered
Institute of
Housing

-
- ¹ BEIS Select Committee (2019) *Energy efficiency: building towards net zero*.
- ² <https://greenallianceblog.org.uk/2020/05/13/net-zero-is-nowhere-in-sight-for-uk-clean-heat-policy/>
- ³ IEA (2020) *Sustainable recovery* (<https://www.iea.org/reports/sustainable-recovery>).
- ⁴ International Energy Agency (2020) *Energy efficiency and economic stimulus* (<https://www.iea.org/articles/energy-efficiency-and-economic-stimulus>).
- ⁵ Scheer, J. and B. Motherway (2011), *Economic Analysis of Residential and Small-Business Energy Efficiency Improvements*, Sustainable Energy Authority of Ireland, <https://www.seai.ie/publications/Economic-Analysis-of-Residential-and-Small-Business-Energy-Efficiency-Improvements.pdf>
- ⁶ See <https://www.theccc.org.uk/2020/05/06/take-urgent-action-on-six-key-principles-for-a-resilient-recovery/>
- ⁷ <https://www.wsp.com/en-GB/news/2020/bright-blue-and-wsp-net-zero>
- ⁸ <https://www.theguardian.com/world/2020/apr/21/northern-mayors-call-for-economic-rethink-after-coronavirus-burnham-rotheram>
- ⁹ <https://www.theeeig.co.uk/news/starstarnew-reportstarstar-rebuilding-for-resilience-energy-efficiency-s-offer-for-a-net-zero-compatible-stimulus-and-recovery/>
- ¹⁰ <https://www.local.gov.uk/lga-over-million-new-green-jobs-could-be-created-2050>
- ¹¹ <https://www.theeeig.co.uk/news/starstarnew-reportstarstar-rebuilding-for-resilience-energy-efficiency-s-offer-for-a-net-zero-compatible-stimulus-and-recovery/>
- ¹² <https://www.theccc.org.uk/publication/analysis-on-abating-direct-emissions-from-hard-to-decarbonise-homes-element-energy-ucl/>
- ¹³ Green Finance Institute for CEEB (2020) *Financing Energy Efficient Buildings: The path to retrofit at scale*.
- ¹⁴ RICS (2020) *Retrofitting to decarbonise UK existing housing stock*.
- ¹⁵ Sauter, R., & Volkery, A. (2013). *Review of Costs and Benefits of energy savings: Task 1 Report 'Energy Savings 2030.'* [http://energycoalition.eu/sites/default/files/Energy Savings 2030 IEEP Review of Cost and Benefits of Energy Savings 2013.pdf](http://energycoalition.eu/sites/default/files/Energy%20Savings%202030%20IEEP%20Review%20of%20Cost%20and%20Benefits%20of%20Energy%20Savings%202013.pdf)
- ¹⁶ Motherway, B., & Oppermann, M. (2020). *Energy efficiency can boost economies quickly, with long-lasting benefits* (<https://www.iea.org/commentaries/energy-efficiency-can-boost-economies-quickly-with-long-lasting-benefits>).
- ¹⁷ (In Danish) <https://www.trm.dk/nyheder/2020/groen-genopretning-af-danmark-30-mia-kr-til-renoveringer-i-den-almene-boligsektor/>
- ¹⁸ <https://today.rtl.lu/news/luxembourg/a/1526282.html>
- ¹⁹ Business, Energy and Industrial Strategy Committee (2020) *Energy efficiency: building towards net zero*.
- ²⁰ <https://www.insidehousing.co.uk/news/news/housing-association-says-zero-carbon-will-cost-20000-per-home-66885>
- ²¹ <https://www.gov.uk/government/publications/construction-sector-deal/construction-sector-deal-one-year-on>
- ²² UKBC (2020) *UKGBC Green recovery position paper*.
- ²³ <https://www.theeeig.co.uk/news/starstarnew-reportstarstar-rebuilding-for-resilience-energy-efficiency-s-offer-for-a-net-zero-compatible-stimulus-and-recovery/>