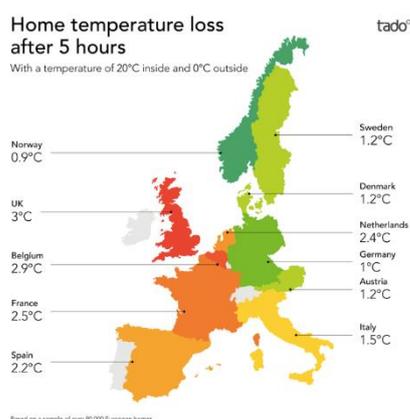


The opportunity for a green recovery post COVID-19

There's a lot of talk of post-COVID green stimulus in the building sector, with everyone from Nobel winning economist Joseph Stiglitz¹, Lord Stern and Sir John Armitt, Chair of the National Infrastructure Commission² highlighting home energy efficiency as a key opportunity.

There's been less discussion in the media so far about what exactly we should be looking to achieve in the next decade and the new jobs that could result. At the Energy Saving Trust we have over 25 years of delivering home energy improvement – so we are well placed to provide the detail.

Homes account for just under 30 percent of energy use and around 20 percent of greenhouse gas emissions in the UK - and yet two thirds are currently below an adequate level of efficiency. This visual from Tado³ (a smart thermostat manufacturer), clearly illustrates the problem. Tado's analysis of 80,000 homes across Europe suggests that British⁴ homes are losing heat up to three times faster.



Taking action here could prevent the 3,200⁵ excess deaths a year that directly link to cold, damp homes. It would also prevent the associated £1.4-2 billion annual cost to the NHS (of treating health conditions made worse by poor housing). Homes that are affordable to heat would cut the average energy bills by a quarter, putting £7-8.5bn a year back into consumers' pockets.⁶ This would mean there would be less need for the £2.3 billion⁷ annual welfare payments made to help vulnerable households with their heating costs.

Our key opportunities to 2030 are:

1. **Energy Efficiency:** Improve the two thirds of homes that are currently below an adequate thermal efficiency standard (Energy Performance Certificate 'C').

¹ <https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf>

² <https://www.nic.org.uk/news/armitt-decisions-now-can-help-on-long-road-of-healing-economy/>

³ <https://www.tado.com/t/en/uk-homes-losing-heat-up-to-three-times-faster-than-european-neighbours/>

⁴ There is no smart meter programme in Northern Ireland so it was not included in the Tado study,

⁵ https://www.e3g.org/docs/E3G_NEA_Cold_homes_and_excess_winter_deaths_2018.02.pdf

⁶ https://www.theeig.co.uk/media/1063/eeig_net-zero_1019.pdf

⁷ Warm Home Discount (£320m), Cold Weather Payments (£130m) and Winter Fuel Payment (£1.8bn)

2. **Low Carbon Technologies:** Stimulate mass-market deployment of low carbon technologies by supporting households to invest.
3. **Heat Pumps:** Enable the take up of 3.3 million heat pumps into new build, electrically heated and off-grid homes.

How could this be delivered?

1. Energy efficiency: all homes to EPC 'C' (or equivalent) by 2030.

We were pleased that the Conservative manifesto included a £6bn manifesto commitment to help fuel poor households. Our analysis shows that, accompanied by the right framework of support, a tripling of this commitment to £18bn over 10 years (as a stimulus measure), could deliver the Clean Growth Strategy target of EPC 'C' five years early. This would deliver £60bn of private investment and provide 150,000 new skilled and semi-skilled jobs.

Short-term focus: An initial focus on the social housing sector where there are programmes ready to go and established supply chains would mean work can get started quickly.

2. Stimulate mass-market deployment of low carbon technologies for homes by 2030

This is about unlocking demand and investment from householders themselves. New research⁸ highlights how 'granular' technologies with the potential for mass deployment (rooftop solar, electricity storage batteries and smart thermostats), can deliver rapid decarbonisation whilst delivering more jobs and a higher return of investment, with far less need for public investment than 'lumpy' technologies (nuclear and Carbon Capture and Storage – those these are needed too).

Evidence from France, Germany and our work for the Scottish Government shows that where households can access low cost finance and tailored support on how new technologies will work for them, there is strong demand. The more comprehensive the support, the more comfortable households are taking up a loan or investing their own savings. Consumer 'hand-holding' is therefore a cost-effective 'enabling' measure (reducing or avoiding the need for subsidy).

Alongside this, there needs to be a focus on raising awareness. Research suggests that whilst there is strong support for action on climate change, there is a low awareness of what individuals can do. Less than half of households, for example, realise that central heating contributes to climate change with many thinking that plastic waste or their annual holiday flight has a larger impact.⁹

Short-term focus: An attractive finance offer for the 'able to pay' market matched with a new advisory service to support households to act. A central government communications campaign (based on the forthcoming Heat and Buildings Strategy) on steps to Net Zero would support this.

⁸ <https://www.uea.ac.uk/about/-/smaller-scale-solutions-needed-for-rapid-progress-towards-emissions-targets>

⁹ <https://es.catapult.org.uk/reports/net-zero-a-consumer-perspective/>

3. Heat pump sector deal and scrappage scheme to scale up and bring down costs

To provide clear, long-term market signals for the accelerated installation of heat pumps. There is an urgent need to scale up the heat pump market to supply the new build market; replace high-carbon systems off the grid and to be part of the solution for homes on the grid. There are less than 250,000 heat pumps now (just 1 percent of the market) but if we are to reach net zero by 2050, we will need to phase out conventional heating by 2035 at the latest (based on an average 15 year lifetime).

In 2015, the Committee on Climate Change (CCC) recommended 2.3 million as the minimum uptake of heat pumps needed by 2030. We now have a more ambitious, net zero target and a clearer understanding that (however we decarbonise heating), heat pumps (wholly electric or combined with a low carbon gas boiler¹⁰) will be a large part of the solution. Given this, we back the CCC's higher 3.3 million target by 2030. This is challenging but achievable with a targeted short-term push now and a focussed plan to 2030 – and there will be strong economic benefits. Sir John Grieve, a former deputy Governor of the Bank of England, recently cited replacing gas boilers as a key opportunity in a recovery plan based on high productivity.¹¹

Short-term focus: Scrappage scheme: The scale of the government's proposed grant for heat pumps is too small to drive the required change to 2025. We recommend that the scheme is expanded with a £1bn budget and realigned to run as a scrappage scheme (from 2022-2026,) prioritising applications from households with older high carbon oil, coal and LPG heating systems as well as social housing with inefficient electric heating.

Impact on the economy

Together, these opportunities would generate around over £120bn of additional investment into the economy (at least three quarters of this from the private sector) by 2030; generating 200,000 new skilled jobs across the country and exceeding the reduction required from homes in the UK's statutory Fifth Carbon Budget.

The estimated £31bn of public investment includes £12bn of committed/promised funding, leaving £19bn as truly 'additional'. There is scope to reduce this further with a strong 'enabling' policy framework (including regulatory changes and consumer incentives to drive the market). The increased VAT revenue would offset almost a third of this additional investment.

The entire public investment above could alternatively, be funded through a progressive carbon tax as advocated by the London School of Economics.¹² Annual revenues from this would range from £5bn –£36bn - more than sufficient to meet the public investment for the three identified opportunities, whilst mitigating any financial impact on low-income households (without which it would have a regressive impact), and sending a strong price signal to investors.

A progressive carbon tax, could also provide the public funding required to stimulate the widespread change in our home heating from the 2030s. The Government's independent advisors, the Committee on Climate Change, has estimated this will require an additional £15bn annually by 2050. If the preparatory energy efficiency work is not completed first

¹⁰ <https://www.energynetworks.org/assets/files/gas/Navigant%20Pathways%20to%20Net-Zero.pdf>

¹¹ <https://utilityweek.co.uk/decarbonisation-heat-offers-chance-reskill-post-lockdown/>

¹² <http://www.lse.ac.uk/GranthamInstitute/publication/distributional-impacts-of-a-carbon-tax-in-the-uk/>

however, this will add £6.2bn per year (reflecting the higher heating costs)¹³ to costs. This is likely to increase fuel poverty, under-heating and the health impacts of cold, damp homes.

Conclusion

- **Green stimulus outperforms brown:** the evidence¹⁴ shows that green stimulus, such as energy efficiency improvements, outperforms 'brown' or neutral as a stimulus measure – delivering *more* jobs and a *higher return* in both the short and long-term for the investment. For example, Frontier Economics has found that our first opportunity of improving the energy efficiency of all homes to EPC 'C', when appraised as an infrastructure investment, has a net present value of £47bn (generating benefits to the economy, reduced power system investment and from improved health).
- **We should invest in the future not the past.** Covid-19 is changing the economy and with it the demand for road use, air travel, office buildings and non-flexible power generation. The future economy will be digital and low carbon so prudent investment will prioritise broadband and boiler replacements over road schemes and commercial real estate.
- **'Shovel ready investment':** Energy efficiency is employment intensive, 'shovel ready' work. It will deliver benefits to local economies throughout the UK and stimulate export opportunities.
- **High ratio of private to public investment:** Whilst public investment is required, the main role of government here is as 'enabler' rather than 'funder' - to bring forward private investment and to deploy non-financial levers such as standards, regulation and tax changes. A clear policy framework and consistent messaging will reduce the public investment required.

¹³ <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf>

¹⁴ <https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf>