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THE HOME ENERGY SECURITY STRATEGY: A PERMANENT SOLUTION FOR LOWER BILLS

JULIET PHILLIPS, COLM BRITCHFIELD, PEDRO GUERTLER

With thanks to expert contributors and reviewers: Matt Copeland, Nigel Donohue, Sharne Lane, Keith Watson, Jess Ralston, Abigail Ward, Stew Horne, Rebecca Pickavance, Daniel Newport

Executive Summary

Across the UK, millions of families are struggling under the weight of spiralling costs of living. Soaring energy prices are a key driver. Despite the welcome one-off support recently announced by the Chancellor, the situation is unlikely to improve in the short or medium-term. Ofgem have predicted that the energy price cap will hit £2,800 in October. The underlying volatility in the price of oil and gas causing the price spike is not predicted to subside for the foreseeable future. Analysts predict that wholesale prices will remain above 2021 levels until at least 2030.

The government has provided £37bn this year just to keep people afloat.¹ Investing now in long-term, enduring solutions can prevent similar sums from being required up to 2030 and potentially beyond. The government could act now to reliably lower bills by launching a national mission to upgrade the UK's cold and leaky homes.

When the energy price cap rises again in October, the average household in a home with an Energy Performance Rating (EPC) of D or below – at least 15.3 million UK households – will pay an 'inefficiency penalty' of £916 more per year for adequate heating than the average household living in a home rated EPC C or better. If every home below EPC C was improved, the aggregate bill saving would be £10.6bn each year at today's prices.

The UK spends more money on energy wasted through the walls and roofs of our houses than any other country in Western Europe – leaving families poorer,

¹ UK Government (2022) [Government support for costs of living factsheet](#)



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unhealthier and colder. Given the new energy context we are all living in, this cannot be allowed to continue.

The Home Energy Security Strategy calls on the government to:

- 1. Step up energy efficiency support for the UK's most vulnerable households this year**, delivering the outstanding £1.4bn from the 2019 Conservative manifesto for efficiency, and by swiftly putting the next phase of the ECO programme into legislation to upgrade 450,000 fuel poor homes over the next 3 years.
- 2. Introduce new support this year to help hard-pressed families upgrade their homes** by expanding ECO to include a new "ECO Plus" scheme giving families on middle and lower incomes access to subsidised energy efficiency measures delivered by their energy companies. With £1bn per year, ECO Plus could support up to 2.1m households over three years.
- 3. Build the supply chain with skills investment and long-term, regulatory market signals**, starting this year by launching an Olympic-style skills and training programme for the retrofit supply chain; and providing long-term certainty to the market through strengthened private rented sector minimum energy efficiency standards, and a roadmap to minimum performance standards for all housing tenures including owner occupiers.
- 4. Improve the consumer experience through public engagement and a trusted advice service**, starting this year by making independent energy advice readily available to people across the country so they can understand what help is available to them, what steps they can take to improve their homes, and guide them through the process.
- 5. Support attractive green finance options for people who want to invest further**, putting new reporting requirements on mortgage lenders and setting up concessional green home finance through the UK Infrastructure Bank in the medium-term.
- 6. Restructure incentives to encourage home retrofit** by removing legacy policy costs from electricity bills – saving households around £100 per year and removing a barrier to clean, electric heating; and introducing tax incentives like an energy saving stamp duty land tax adjustment.



Introduction

Warm, healthy and stable homes are the foundation of our society, supporting productive and fulfilling lives. But with the energy price cap set to rise to £2,800 this autumn, this societal bedrock is starting to crumble. Fossil fuel prices are likely to remain high and volatile until at least 2030.² Until structural drivers of the crisis are addressed, the government could be left spending tens of billions on emergency financial support packages each year.

The government cannot change the price we pay for gas and other heating fuels. But we can waste far less of the energy we buy. The only way to reliably lower bills is to fix the UK's cold and leaky housing stock. Over the medium term, this investment can reduce future necessary spending on addressing the consequences of people living in cold homes. When the energy price cap rises again, homes rated EPC C or better could be over £900 cheaper to run than homes rated EPC D or worse.³ The direct cost of poor-quality housing to the NHS in England in 2021 was £1.4bn, with the wider societal cost reaching £18.5bn.⁴ These numbers will only increase as more people fall into fuel poverty. People struggling with high bills are also likely to fall into debt, to cut back their spending on other essentials, and to spend less elsewhere in the economy.⁵

By contrast, upgrading inefficient homes – there are 15.3 million homes with an energy performance rating of D or below in England alone – would mean permanent aggregate energy bill savings of around £10.6bn each year, under today's price cap. While these savings would fluctuate with the cost of energy, they would recur every year.⁶ Shifting to clean, electric heating technologies would also progressively limit UK household exposure to unpredictable international fossil fuel markets.

The UK government has acknowledged the important role energy efficiency and moving away from fossil fuel heating should play in bolstering household financial security and our national energy security. But the measures announced to date fall well short of the scale of the challenge. In terms of ambition, the UK risks falling behind its international peers. Just this year, Germany has allocated a further €4.7bn for its building renovation programme via the KfW development bank⁷ and brought forward an end date for replacement fossil gas boilers to 2024.⁸ The Netherlands has

²Cornwall Insight (2022) [Energy prices likely to remain significantly above average up to 2030 and beyond](#)

³ [E3G updated analysis](#) to reflect April 2022 and predicted October 2022 price cap

⁴ BRE Group (2021) [Report finds poor housing is costing the NHS £1.4bn a year](#)

⁵As reported in Sky News (2022) [Cost of living forced four in ten Britons to cut back on food](#)

⁶ E3G (2021) [Responding to the UK gas crisis: The critical role of energy efficiency](#)

⁷ Spiegel (2022) [Bund stockt KfW-Sanierungsprogramm um fast fünf Milliarden auf](#)

⁸ Euractiv (2022) [Germany's summer package to focus on heating sector revamp](#)



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announced that all replacement heating systems will need to be either heat pumps, hybrid heat pumps or heat network connections from 2026⁹, while the EU has positioned energy efficiency as the first pillar of its 'REPowerEU' response to the gas crisis while setting out a trajectory to end the installation of fossil gas boilers from 2029.¹⁰ As the race towards clean, efficiently heated homes heats up across Europe, there will be opportunities to put Global Britain on the map if the UK can establish itself as a major heat pump manufacturing base, as with gas boilers.

What would a Home Energy Security Strategy look like?

Now the government has delivered measures to soften the immediate impact of rising energy bills, we propose a complementary package to address a vital structural driver of high bills – our inefficient housing stock – by upgrading all homes to EPC C by 2030. Families in homes upgraded to an EPC C rating would need to spend £645 less per year on energy compared to those in homes rated EPC D or worse at current prices. With Ofgem's predicted price cap increase for October included, this difference rises to £916.¹¹ A renewed ambitious drive to upgrade the nation's housing now would turn this crisis into a historic opportunity to substantially and permanently lower bills, protect people from volatile fossil fuel prices for good, and take a huge step towards meeting the UK's net zero target.

1. Step up energy efficiency support for the UK's most vulnerable households:

The UK has existing successful schemes that support home upgrades for those in fuel poverty, including the Energy Company Obligation (ECO), Home Upgrade Grant, Local Authority Delivery Scheme and Social Housing Decarbonisation Fund. However, their funding level is not commensurate with the task at hand. The government should scale these schemes this year, at a minimum fulfilling the outstanding £1.4bn Conservative Manifesto pledge for energy efficiency. To ensure a smooth transition to the next phase of the UK's leading fuel poverty scheme, ECO phase 4, the government must immediately lay the planned but much delayed enabling legislation before the summer parliamentary recess. Allowing installers to get to work sooner rather than later is a cost-free way to lower bills and support jobs.

2. Introduce new support to help hard-pressed families upgrade their homes:

With millions of families now unable to afford their energy bills, government support for energy efficiency cannot be restricted only to those on the very lowest incomes. The government could build on the most successful delivery

⁹ Netherlands Government (2022) [Hybride warmtepomp de nieuwe standaard vanaf 2026](#)

¹⁰ European Commission (2022) [REPowerEU: A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition](#)

¹¹ [E3G updated analysis](#) to reflect April 2022 price cap



mechanism currently available for the most vulnerable, the Energy Company Obligation (ECO). One proposal – “ECO Plus” – would see energy companies offer their customers home upgrades at significantly lower cost than is currently possible, with the help of £1bn of government subsidy accessible after high-quality installations had been installed. Unlike the current ECO scheme, this would be funded through general government spending or the new windfall tax. Since energy companies already work with supply chains to deliver home upgrades through ECO, and because the terms under which they would offer subsidised upgrades to their customers are already set, this programme could deliver quickly. It could help build a mass-market for energy efficiency, while ensuring that the benefits accrue mostly to households on middle and lower incomes through restricting eligibility – for example through Council Tax bands

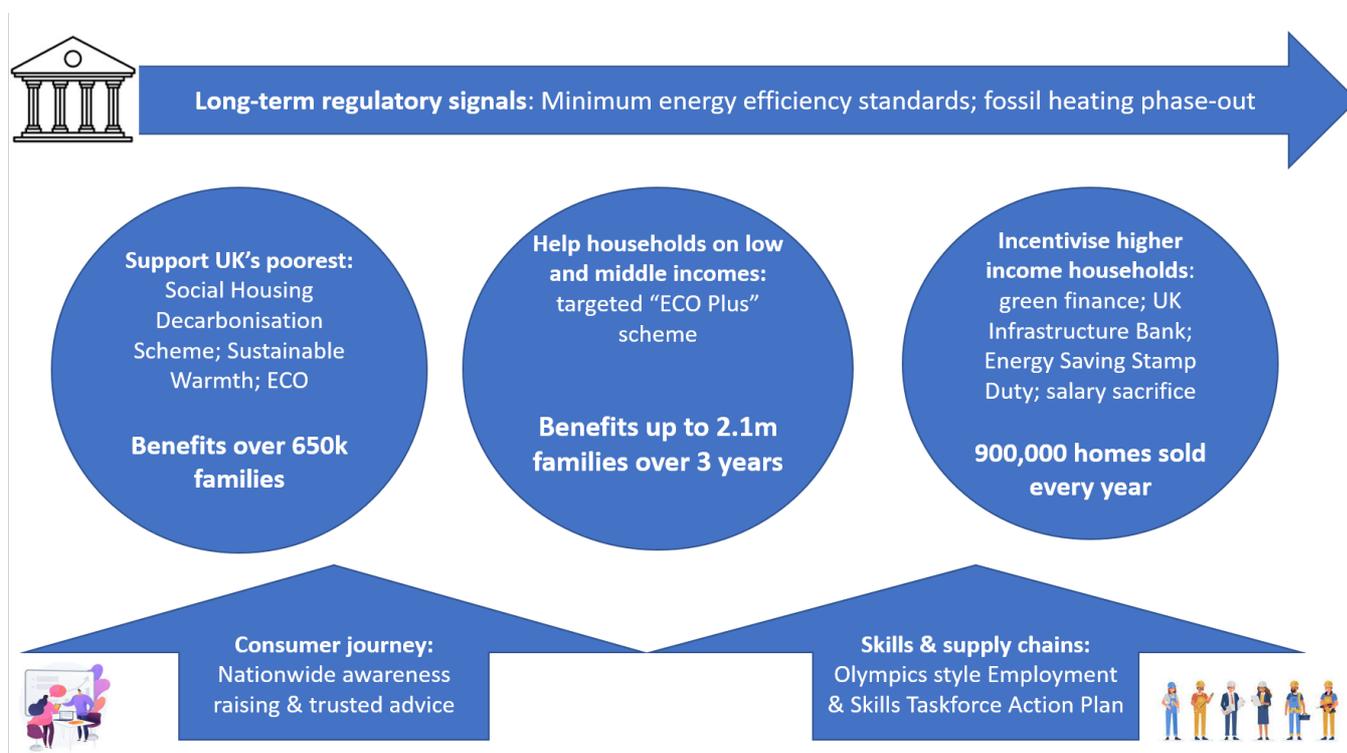
- 3. Improve the consumer experience through public engagement and a trusted advice service:** Making home retrofits straightforward will be critical to drive demand and underpin successful delivery. A dedicated advice service could be introduced this year, giving customers independent advice on energy saving measures and guiding them through choosing the right steps, finding local suppliers, and accessing relevant support. The UK has a model which could be scaled in the Home Energy Scotland service.
- 4. Build the supply chain with skills investment and long-term market signals:** Insufficient skills investment risks holding back rates of home retrofit. Government could step in this year to boost the retrofit and clean heating workforce with an Olympics style Employment and Skills Taskforce Action Plan. Government can also encourage private investment in supply chains by providing assurances about long-term demand. This can be done through confirming regulatory timelines for minimum energy efficiency standards for all housing tenures (including tightening standards in the private rented sector and gradually introducing measures for owner occupiers) and the phase-out of fossil heating systems.
- 5. Support attractive green finance options for people who want to invest:** High energy costs mean the economic case for energy efficiency is stronger than ever, with many measures now paying back the initial investment in just a few years. Green finance can help spread out the upfront cost of energy efficiency and clean heat to make the case even more compelling. Measures like requiring mortgage lenders to disclose the average energy efficiency of their lending portfolio could spur innovation and interest in financial products like green mortgages. The UK Infrastructure Bank could also play a key role to mobilise finance behind home retrofits. In the near-term this could mean supporting pilots and innovative new energy service business models with market-making potential. In the longer term, the Bank and central government could support concessional green finance deals in



partnership with retail banks, supporting concessional and 0% interest loans inspired by the successful German KfW development bank programme.

- 6. Restructure incentives to encourage home retrofit:** There are structural changes the government should make to incentivise action and investment. For example, removing legacy policy costs from electricity bills – which raise the price of electricity disproportionately relative to gas– will lower bills immediately while also encouraging a switch to clean electric heating.¹² Introducing an Energy Saving Stamp Duty adjustment could spur people to undertake retrofit measures at the point of sale of a property, a common time when people consider home improvements.

Unpacking the plan: How the Home Energy Security Strategy fits together



1. Step up energy efficiency support for the UK's most vulnerable households

The government has several designed and functioning home upgrade schemes supporting low-income households through which it could deliver a strategic surge in investment to secure long-term and permanent bill savings. This includes a capital

¹² Legacy policy costs refer to costs of historic revenue support schemes for renewable generation which have now been retired, chiefly the Renewables Obligation and Feed in Tariffs. Through Contracts for Difference, renewable generators now pay back to government when electricity prices rise, and many modern projects are now entirely subsidy free. Moving older contracts into general government spending would be a fairer way to pay for them.



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investment programme targeting social housing improvements (the Social Housing Decarbonisation Fund), a scheme providing warm home measures for fuel poor homes funded through levies on energy bills (ECO) and grant funding for low-income households, delivered through local bodies with delivery partners (known collectively as the Sustainable Warmth competition, consisting of the Home Upgrade Grant and the green home grant Local Authority Delivery (LAD) scheme).

- **ECO 4 will treat 450k homes in 3 years, and is levied through bills**
- **The Home Upgrade Grant covers 200,000 households, saving on average £750/year**

The projects are already delivering demonstrable benefits. ECO is Britain's first line of defence against fuel poverty, providing new boilers, heating controls and energy-saving insulation measures to households that could otherwise not afford them. ECO has saved low-income customers £17.5bn in lifetime energy bills since 2013.¹³ The average saving for homes improved under ECO is £290 per year – a saving which is likely to be even greater now energy prices have dramatically increased.¹⁴ Meanwhile, projects delivered so far under the Social Housing Decarbonisation Scheme are estimated to support 9,000 jobs, delivering carbon emissions savings equivalent to taking up to 6,000 cars off the road in any given year.¹⁵

These programmes are the key vehicles through which the government can channel additional resources to reflect the nature of the current crisis – meeting (or exceeding) Conservative manifesto pledges with a further £1.2bn for the Home Upgrade Grant, £200m through the Social Housing Decarbonisation Fund, and £400m through the Public Sector Decarbonisation Fund.¹⁶ The government could extend the Sustainable Warmth scheme to 2025 and announce an intention to roll it over in the subsequent parliament, with further funding distributed based on area needs rather than the current competitive approach which can disadvantage Local Authorities who are not well-resourced to successfully submit bids – leaving vulnerable households without access to funds. E3G estimates of the households with below average incomes living in the least efficient homes, 81% are deemed ineligible for nationally available government support.¹⁷

ECO has consisted of three main phases. ECO1 ran from 2013 to 2015, ECO2 ran to 2017, and ECO3 was replaced by ECO4 in April this year. ECO4 is planned to run until 2026 with funding increased from £600m to £1bn per year. ECO4 will upgrade a

¹³ BEIS (2021) [Household Energy Efficiency Statistics](#)

¹⁴ BEIS (2021) [Household Energy Efficiency Statistics](#)

¹⁵ BEIS (2022) [Funding for energy efficiency upgrades will slash fuel bills for 20,000 social housing properties](#)

¹⁶ [The Conservative and Unionist Party Manifesto, 2019.](#)

¹⁷ E3G (2021) [Responding to the UK gas crisis: The critical role of energy efficiency](#)



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minimum of 100,000 homes rated Energy Performance Certificate (EPC) E, F and G. Without intervention, between 70 and 80% of households in homes rated EPC F or G will be spending well over 10% of their household income on energy.

There are cost-free steps the government can take to ensure the efficient delivery of existing pots of funding. This includes smoothing the transition to ECO4, which has not yet been legislated for, with delays to the issuance of guidance to energy suppliers, installers and local delivery partners. Ministers can ensure that the legislation is laid before summer recess, and work with Ofgem and BEIS to provide resources to support the rapid issuance of guidance. Additional measures can be taken to prevent the number of warm home installations falling off a cliff-edge over summer 2022 – such as providing assurance to installers and energy suppliers of the measures they can support which would qualify under the transition period and communicating the importance of keeping up installation numbers this summer.

2. Introduce new support for hard-pressed families

Schemes like ECO are rightfully targeted at those already defined as “fuel poor”. However, soaring costs of living mean that more people will be left in a position where they are not able to keep their homes warm and healthy this winter. The ECO Plus proposal has been developed to expand existing, industry-led delivery channels to cover a wider range of households. Using existing delivery channels and terms reduces the risks associated with setting up an entirely new scheme from scratch, and the mechanism of a voluntary obligation with subsidy accessed by energy suppliers to use to develop compelling consumer offers means the scheme retains a competitive, market-led component. This would spur innovation, leverage industry resources, and help to grow a self-sustaining market for energy efficiency upgrades.

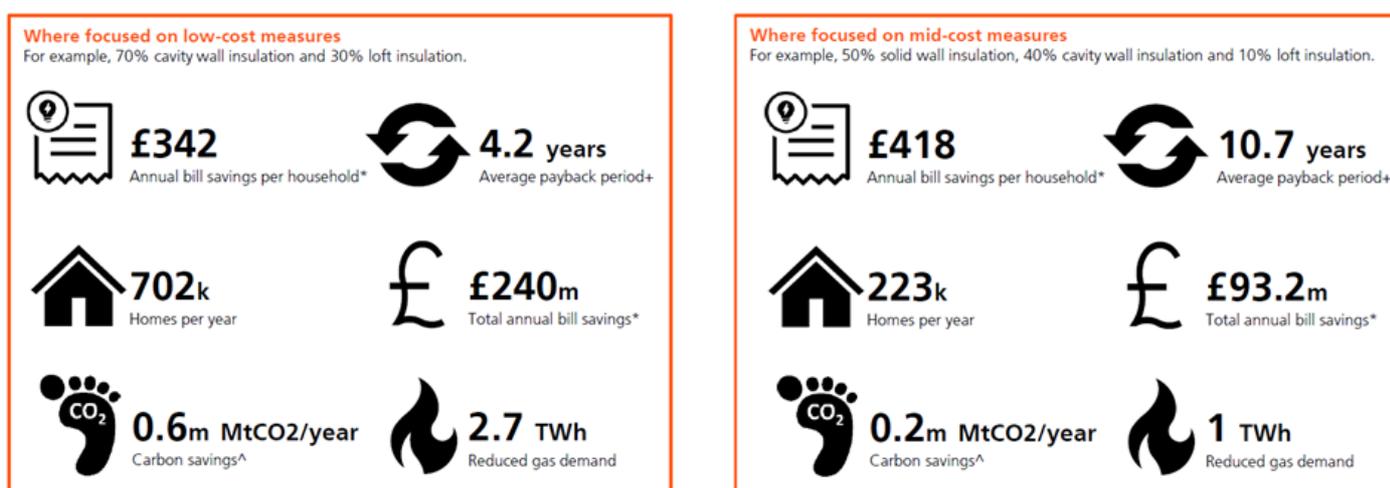
ECO+ would deliver part-subsidised energy efficiency measures to improve the homes of low and middle-income households, with eligibility drawn to reduce administrative complexity – for example, eligibility could be based on council tax bands, in keeping with previous support measures announced by the Treasury in 2022. The current administration and oversight by Ofgem could be adopted, using processes and procedures already in place for the existing ECO scheme, ensuring quality delivery and value for money. It would be a voluntary mechanism where energy suppliers would be offered a budget allowance linked to their market share. To remove risk to government, a ‘pay after delivery model’ is proposed, where funding would only be provided to energy suppliers once measures had been installed and signed off by Ofgem.



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The scheme should be long-term to restore industry confidence by providing certainty over the direction of travel. A £1bn per-year subsidy element could support as many as 2.1m households over three years, saving households an average of £342 per year. If the scheme was focused on mid-cost measures, even greater annual bill savings per household could be made. While ECO is paid for via levies on energy bills, ECO Plus should be funded via general government spending or the oil and gas company windfall tax.

- **The impact and reach of ECO+ will depend on a number of factors** such as scheme budget, subsidy level and the customer offer.
- Based on an annual scheme budget of **£1 billion** and an **average customer contribution of 50%** to the total cost, ECO+ could help a significant number of households insulate their homes and sustainably lower their energy bills:



*Annual bill savings per package based on data provided by Energy Saving Trust for gas-heated semi-detached property, adjusted for forecasted October 2022 Default Tariff Cap increase.
 +Based on the following conservative measure costs from available ECO industry data: loft insulation £2,500; cavity wall insulation £3,000; and solid wall insulation £15,000
 ^Carbon savings based on data provided by Energy Saving Trust for single measures installed in a gas-heated semi-detached property.

Figure 1: Illustrative impact of ECO+. Figures provided by EDF Energy.

3. Improve the consumer experience with a dedicated advice service

A hurdle in the retrofit process is the confusing consumer journey. Even if households have the funding available to make the necessary changes, working out which measures should be installed and at what time can be tricky. It can also be hard to find qualified installers and heat pump engineers in the local area. Supporting a nationwide information campaign, with a parallel roll-out of a trusted advice services with local provision across the country, would be a relatively low-cost, high-impact way for the government to spur demand and increase awareness of measures and financing options, complementing existing support services.

An independent, comprehensive advice service should provide tailored advice to households so that they feel supported to install low carbon heating systems and empowered to improve the energy efficiency of their homes. The return on investment for such a programme could be high. Energy Saving Trust estimates that



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expanding the Home Energy Scotland model to England could result in over £1bn in total lifetime savings each year. Evidence from Scotland found that 69% of total savings achieved by customers can be directly attributed to the advice received, with an average lifetime saving of 4.3 tonnes CO₂ (and £1,600 financial saving) per customer advised. Though demand for support and advice is on the rise,¹⁸ existing advice provision in England is currently patchy and variable. With energy prices set to remain high, it has never been more important for people to be aware of the energy saving measures they can take, and the long-term solutions available to make their homes more efficient, cheaper and greener to run.

4. Build the supply chain with skills investment and long-term market signals

An Olympic-effort to boost skills and training

Consumers can struggle to find skilled, qualified retrofit experts, installers and engineers in their area – a capacity crunch which could get worse as an increasing number of households seek out green home retrofit measures. The Heat Pump Association estimates 50,000 trained installers will be needed by 2030, up from around 3,800 today. Although the UK has relatively few trained heat pump installers, there are 130,000 registered heating engineers in the country who could add heat pump installation to their core skillset. There are similar challenges regarding the pipeline of workers trained in building fabric measures. The sector needs a kick start. Previous infrastructure projects have had dedicated skills and training programmes, such as the Olympic Park Development, Crossrail and High Speed 2 Rail Academy.

Clear career pathways and underpinning qualifications need to be developed with and by industry, with employability and development programmes incentivised and offered by FE Colleges and private training providers. Key to this delivery could be a centre of excellence partly funded by the industry, responsible for the development of appropriate career pathway qualifications to include management and supervisory professional qualifications and installer technician/administrative qualifications. Investment needs to focus on standards but critically careers advice in schools and colleges to establish the future talent pool.

Industry estimates suggest a relatively conservative capital investment of £7m match funded by industry contributions could provide a central hub for the development and delivery of the necessary energy efficiency skills required to deliver quality installations at scale (this mirrors a similar investment of £14m in the

¹⁸ Citizens Advice (2022) Citizens Advice crisis support record broken again in March



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Crossrail Academy). Subsequent Government support to apprenticeships, employability programmes and upskilling the existing workforce through employer grants or fully funded training could have a significant impact with an estimated 2,000 employment outcomes, 1,000 apprenticeships and 3,000 upskilled workers delivered each year for an investment of £8.65m per annum.¹⁹ For clean heat, the Heat Pump Association estimate that a 4 or 5-day course delivered by manufacturers for NVQ Level 2 trained plumbers costs around £300, and includes instruction in heat pumps and generic low temperature heating, which is seen as important for all heating installers. Accreditation from the Microgeneration Certification Scheme – the industry standards body – costs around £750.²⁰

Given the costs outlined above, paying the full training and accreditation costs for 10,000 new heat pump installers this year would cost just £10.5m. Recognising the urgency of the situation, the government could compensate installers' time, directly or through tax incentives.²¹ This would bring costs to £19.5m. If it chose, the government could cover the entire costs of training every one of the 50,000 heat pump installers needed by 2030 to get British homes off gas and meet our net zero target for less than £100m spread over 8 years.

Long term regulatory certainty

In addition to direct investment in skills and training, government can give industry and households greater certainty for investment with a long-term regulatory framework. At a minimum, the government should confirm and legislate for the tightened minimum energy efficiency standards for homes in the private rented sector as consulted on in 2020.²² The government's response to the consultation detailed strong targets of EPC C by 2025 for new tenancies and 2028 for all tenancies, with reasonable exemptions and a maximum cost cap raised to £10,000, and higher penalties for non-compliance. It is essential that the government does not water these proposals down. Confirmation of timelines for phasing out fossil heating systems, enshrined in law, would provide an additional steer for making decisions about the purchase of new systems.

Steps should also be taken to pave the way for the introduction of minimum energy efficiency standards for the owner occupier sector, which makes up around two

¹⁹ Figures estimated on 1000 apprentices at £8000 each (2 year programmes), 2000 employability at £1200 each (4 week programmes) and upskilling and NVQs at circa £750 each). Taken from apprenticeship levy underspend and existing DFE budgets, supported by CITB grants

²⁰ Electrify Heat (2021) **Training, Trust and Tariffs: Electrify Heat's priorities to boost the heat pump market**

²¹ Based on average gross annual pay for gas boiler installers, this would amount to £900. Figures based on Heat Pump Association research [forthcoming, shared with permission].

²² BEIS (2020) **Improving the energy performance of privately rented homes**



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thirds of UK households. Setting clear “point of sale targets” with long lead-in times will enable homeowners to plan ahead and give the market time to provide innovative offers to lower upfront costs, with greater certainty of demand backed up by regulation. A gradual approach to the introduction of new standards could be taken. An immediate step that the government could take would be to automatically send targeted advice and information to all homeowners purchasing a home rated below EPC C, to prime the market ahead of the eventual long-term introduction of regulatory standards.

5. Support attractive green finance options for people who want to invest

Attractive green finance and innovative business models can also play a critical role. While there are an increasing range of offers on the market, more is needed to get to a critical mass of demand, building on existing initiatives – for example, through the Green Homes Finance Accelerator.²³ The government should also confirm plans to introduce a Lenders’ Disclosure Requirement, which would require mortgage lenders to disclose the average energy efficiency of their portfolio, and encourage them to improve it over time through voluntary targets. This reporting requirement would provide a spur to lenders to market green finance related to home improvements to their customers.

The UK Infrastructure Bank could play an important role – developing an attractive consumer offer inspired by the successful German KfW programme and offered via retail banks. The *Kreditanstalt für Wiederaufbau* (KfW) – the Reconstruction Loan Company – is Germany’s development bank. Lending to promote energy efficient buildings has been a core component of the bank’s model since the oil crisis of the 1970s. A similarly ambitious approach is warranted in light of today’s gas crisis.

In Germany, projects which lead to the most efficient homes can access the most attractive rates and subsidies, incentivising greater ambition and promoting additional economic activity.²⁴ The KfW loan can be used to cover 50% of the costs of hiring retrofit specialists on the German Energy Agency’s list of accredited supervisors to oversee and plan the work, providing confidence to the household that the correct measures are being expertly installed. Between 2007-17.4 million individual housing units were either newly built or refurbished to high standards of

²³ BEIS (2020) [Green Home Finance Accelerator](#)

²⁴ UCL Energy Institute (2011) [THE KfW EXPERIENCE IN THE REDUCTION OF ENERGY USE IN AND CO2 EMISSIONS FROM BUILDINGS: OPERATION, IMPACTS AND LESSONS FOR THE UK](#)



energy efficiency. For every €1 invested by the bank, building owners invested a further €6.²⁵ In 2021, KfW commitments reached a new high of €34.5bn.²⁶

Several factors have been important to the success of the KfW's energy efficiency programmes. The long-term nature of the programme, combined with favourable terms, relative ease of application and ability to link KfW packages together and with other sources of finance are all vital in making the schemes attractive. They incentivise energy efficiency upgrades at crucial "trigger points" like other home upgrades – like a new kitchen or loft conversion – or home purchases. The integration of the loans with connections to trusted sources of advice and the supply chain has been important to pave a smooth consumer journey.

To replicate Germany's success, there is an important need for long-term cooperation across government departments, as well as with industry and local delivery partners. In the near-term, the Treasury could provide public funding to support a trial KfW style loan with a high-street bank. The offer must be consumer-centred, with trusted advice provided to support the household to select appropriate measures, and information provided to guide the homeowner on how to use new appliances and installations efficiently.

6. Restructure incentives to encourage investment

With fossil fuel prices likely to remain high, government needs to think long-term about the levers it can pull to encourage more homeowners to undertake the renovation work needed to heat their homes more efficiently. This includes structural changes to encourage property owners to make home upgrades.

Home purchases are a key "trigger point" when households are more likely to invest in home improvements, including energy efficiency and new heating systems. Government should incentivise energy efficiency improvement at the point of sale by introducing an energy saving stamp duty incentive, whereby more energy efficient homes pay an adjusted lower rate, with a rebate paid to new homeowners who improve the energy efficiency within two years of purchase. An enhanced rebate level which tapers out as property value increases could be set to give greater support to those buying lower-value homes. Analysis shows this could be designed to be revenue-neutral for the Treasury, while catalysing significant investment.²⁷ The incentive principle could be announced immediately, sending a

²⁵ Calculated from Institut Wohnen und Umwelt & Fraunhofer Institut (2018) Monitoring der KfWProgramme "Energie-effizient Sanieren" und "Energie-effizient Bauen" 2016; BfM (2016) Haushaltsgesetz 2016.

²⁶ KfW (2021) **Annual reporting**

²⁷ UK Green Building Council (2021) **A housing market catalyst to drive carbon emission reductions**



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clear message of intent to homeowners and the marketplace, with actual changes to Stamp Duty coming into place in 2023.

Another change that could help pave the way towards clean heat is to reduce the running cost of clean, electric heat pumps. “Legacy” policy costs, essentially those used to pay for historic investment in renewables like the Renewables Obligation, Feed-in-Tariffs, and Contracts for Difference, have delivered excellent results and have contributed to the success of the UK offshore wind sector. But modern renewable generation does not need revenue support in the same way – meaning these costs are now fixed - and while the policies themselves have proved valuable, their costs fall disproportionately on electricity bills.²⁸ Because the costs are levied on bills, they are also not paid for progressively. The government has already committed to looking at removing policy costs through the Fairness and Affordability consultation. By paying for legacy policy costs through general taxation, the government could lower energy bills by around £100 at a stroke, saving an aggregate £2.76bn and incentivising the electrification of heat.²⁹

Measure	Additional cost to 2025	Savings and benefits
Social Housing Decarbonisation Fund	At least £0.2bn, in line with Manifesto pledges	Full SHDF covers estimated 180,000 homes
Home Upgrade Grant	At least £1.4bn, in line with Manifesto pledges	200,000 homes, saving on average £750/year
Smoothing ECO 4	No cost	450,000 homes in 3 years if work can begin this summer
ECO Plus	£3bn (£1bn per year)	Up to 2.1m homes in 3 years
Energy Saving Stamp Duty	No cost	900,000 homes sold per year
Removing legacy policy costs	£2.76bn	~£100 per year per household
UK Infrastructure Bank (subsidised by HMT)	£0.6bn for owner occupier incentives	Spurs new products and services
Public engagement and consumer advice	£20 million	£1bn in England
Supporting skills and supply chains	Heat pumps: ~£31.5 million over 3 years Energy efficiency: £7m one-off capital investment and ~£26m over 3 years	20-30k trained 6k employment outcomes, 3k apprenticeships and 9k upskilled workers
Total	£8.04bn	Upgrading well over 3 million homes, saving families between £450 - £1,000+ per year

²⁸ Energy and Climate Intelligence Unit (2021) [Rebalancing Energy Bills and Carbon Prices: what are the options?](#)

²⁹ The Energy Company Obligation (an ongoing rather than legacy policy cost) is also recovered via bills. The relative stability of this funding mechanism means there is a strong argument for retaining ECO on bills while removing the other costs.



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About E3G

E3G is an independent European climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action. E3G builds broad-based coalitions to deliver a safe climate, working closely with like-minded partners in government, politics, civil society, science, the media, public interest foundations and elsewhere to leverage change. More information is available at www.e3g.org

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