

Institute for Public Policy Research



GREENGO

UNLOCKING AN ENERGY
EFFICIENCY AND CLEAN
HEAT REVOLUTION

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January 2023

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This paper was first published in January 2023. © IPPR 2023

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ACKNOWLEDGEMENTS

The authors would like to thank Stonewater for their support in producing this briefing paper.

The authors would also like to thank IPPR colleagues including Abi Hynes, Richard Maclean, David Wastell, and Liam Evans for their contributions.



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Citation

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Emden J and Murphy L (2023) *GreenGo: Unlocking an energy efficiency and clean heat revolution*, IPPR.

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SUMMARY

In the autumn statement late last year, chancellor Jeremy Hunt argued that the only way to stop the UK being 'at the mercy of international gas prices' is energy independence combined with energy efficiency. After more than a decade of energy efficiency being relegated to the margins of public policy, the recognition by the government of its contribution to addressing the energy crisis is welcome.

However, while the announcements of an energy demand reduction target, additional investment after 2025, and an energy efficiency taskforce (EETF) were welcome, the action proposed by the government did not match the rhetoric and does not come soon enough. Households are struggling with a cost of living crisis and retrofitting and good ventilation is crucial to cutting high energy bills, addressing rising fuel poverty, and getting rid of damp and mould in the UK's cold, draughty homes. Retrofitting could save the NHS up to £2 billion per year by preventing or reducing the need to treat respiratory and cardiovascular diseases.

This briefing highlights the gap in investment that the government needs to fill, and the steps that its proposed taskforce needs to take, if energy efficiency is to play its part in reducing energy demand and lowering energy bills, improving energy security, and reducing emissions to meet our net zero targets.

KEY FINDINGS

- Under the new £3,000 energy price guarantee in April, upgrading homes with high-quality insulation, ventilation measures and heat pumps could save up to £500 on annual energy bills for the average household and significantly more for the least energy efficient homes, potentially up to £2,000 per year.
- If government is serious, as the chancellor has stated, about putting 'cheap, low carbon, reliable energy' at the heart of the UK economy then it must increase public investment by at least £5.8 billion into energy efficiency and low-carbon heating between now and 2025 and set out a comprehensive nationwide 'GreenGo' retrofitting programme.
- The chancellor could meet this funding gap by bringing forward by two years the £6 billion committed in the autumn statement for 2025–2028.
- Recent analysis has shown that there is still a £2.6 billion gap in the government's manifesto commitment of £9.2 billion of public investment into energy efficiency for the course of this parliament.

RECOMMENDATIONS

We are calling on the government's new energy efficiency taskforce to back the creation of a new 'GreenGO scheme' – a 'one stop shop' to provide the information and financial support to deliver energy efficiency and clean heat to households right across the country. Key features of the scheme would include:

- **GreenGo funding:** Continue and uplift existing schemes such as the energy company obligation and local authority delivery schemes and introduce full grants for fuel poor homes and grants up to £7,500 for non-fuel poor homes for upgrading homes with insulation, good-quality ventilation and low-carbon heating.
- **GreenGo communication:** Provide a massive nationwide awareness raising scheme for the GreenGo scheme which would include information about access

to funding, a properly resourced energy advice service and the introduction of bespoke building renovation passports to give each household specific advice about the upgrades needed for their home.

- **GreenGo skills:** Work with unions, businesses and workers to develop high-quality job standards and provide £160 million in training funding per year to 2030 through a Green Training Fund for both existing workers and new labour market entrants, including increasing the provision of on-site practical training in local colleges, and introducing skills academies to coordinate this training support.
- **GreenGo standards:** Introducing point of rent, point of renovation and point of sale regulations confirming government plans to require an EPC rating of C by 2028 for privately rented properties and requiring the same standards by 2030 for homeowners, an oil boiler phase-out date of 2026, and ratcheting up the 2035 gas boiler phase-out ambition, into a clear regulation by 2033.
- **GreenGo street-by-street:** Increasing local capacity resources to carry out 'heat zoning' to determine the most appropriate heat technologies for different areas, to identify and prioritise where improvements need to be made, to audit stock and monitor retrofitting activity.

1. INTRODUCTION

The benefits of upgrading the UK's homes with low-carbon heating and energy efficiency measures, like insulation and good ventilation, are substantial, but UK policy has been lagging on delivery for many years. Despite some successes, such as the gradual scale up of the social housing decarbonisation fund (SHDFs) and funding for local authority delivery (LADs) for those councils with the capacity to apply, other policy efforts like the green homes grant voucher scheme have been too short-term in scope and poorly designed.

Amidst the current cost of living crisis, retrofitting has never been more important as it can help to cut energy bills and tackle rising fuel poverty, remove damp and mould from the UK's cold, draughty housing stock, deliver energy security by reducing demand and lowering gas imports, and create jobs and help level up the country.

The current chancellor's recent rhetoric, marking out energy efficiency as a national priority, is therefore welcome. However, despite future funding commitments for 2025, the government failed to bring forward the investment and policies to deliver the improvements in energy efficiency needed now, while also increasing the energy price cap so many households will again be paying more for energy next year. Households and the taxpayer will pay more as a result. The UK will remain less energy secure than it should. And we'll make slower progress towards net zero than we need.

In this briefing, we highlight the substantial benefits of upgrading the UK's housing stock to make the case for greater policy support above and beyond existing packages. We argue for a comprehensive nationwide retrofitting programme to be overseen by the government's new energy efficiency taskforce. We then quantify funding gaps between current policy initiatives and the level of support needed to meet both the UK's net zero targets but also a more ambitious trajectory that would deliver the benefits of retrofitting more quickly. Finally, we set out our recommendations for what a comprehensive nationwide retrofitting programme should look like.

2. THE BENEFITS OF ENERGY EFFICIENCY AND CLEAN HEAT

The UK is experiencing the worst energy bills crisis in at least 50 years (Evans 2022a). While the introduction of the energy price guarantee has held back the worst impacts of energy bill increases, even holding average energy bills at £2,500 has led to an estimated 6.7 million homes falling into fuel poverty (NEA 2022).

Fuel poverty will now worsen in April with the government planning to increase the energy price guarantee to £3,000 for the average household, and far more for the least energy efficient homes. To support this increase, the government has only offered an additional £250 to the lowest income households (£900 in total, up from £650) to support all cost-of-living increases (Capstick 2022), not just for energy bills, and it has not yet recommitted to the £400 energy bill rebate for 2023 (Calnan 2022), which households are receiving this winter.

Set against this policy context, below we set out why a wide-ranging national retrofitting programme of energy efficiency and clean heat is so important to support households and the wider economy.

2.1 ESSENTIAL TO CUTTING ENERGY BILLS PERMANENTLY AND REDUCING COSTS TO THE TAXPAYER

With bills now increasing in April and projected to stay high well into 2023, the government will need to act to lower bills permanently by investing in retrofitting homes with energy efficiency measures like insulation and replacing gas boilers with low-carbon heating. Indeed, while gas prices have gone up across Europe, the UK is one of the worst affected countries because almost every home (around 85 per cent) has a gas boiler (compared to fewer than 50 per cent in France and Germany) (Evans 2022a).

In their place, IPPR analysis using modelling developed by Carbon Brief suggests that installing heat pumps, good quality insulation and ventilation measures as part of a whole-house approach¹ could lead to savings of up to £500 on energy bills for the average home when the new energy price guarantee comes into force in April 2023 (Evans 2022b).² For the worst insulated properties, delivering these measures could result in substantially higher savings, with some estimates suggesting the gap between households with an EPC of F or G and C could be as much as £2,000 per year (Evans 2022c).

Finally, as the electricity grid continues its rapid decarbonisation, these savings will increase further and protect households from future price shocks as the electricity that homes use to power their heat pumps is increasingly supplied by renewable generation that is much cheaper than gas.

1 To minimise disruption to households and ensure compatibility of installations, we have recommended a whole-house approach that installs both insulation and low-carbon heating at the same time but recognise that where this is not possible the government should take a fabric-first approach to prioritise energy bills savings.

2 Details of the discounted tariffs under the April 2023 EPG have yet to be announced, so our cost saving calculation is based on assumptions about the tariffs increasing in the same ratio to each other and no changes to the standing charge.

2.2 ESSENTIAL TO ENERGY SECURITY

Against a backdrop of the Russian invasion of Ukraine, retrofitting is essential to long-term economic security. The UK imported around 50 per cent of the gas it consumed in 2021 (Mettrick and Yang 2022). Deploying low-carbon heating measures like heat pumps and heat networks and energy efficiency at the scale required to meet net zero targets would decrease total gas demand by 34 per cent by 2050 (CCC 2020). Importantly, deployment rates for retrofitting also outpace alternative proposals to improve energy security by increasing domestic fossil fuel production. It takes an average of 28 years from oil and gas exploration licences being granted to production commencing (CCC 2022a). In effect, this means a scale up in household retrofitting by 2050, including the near total decarbonisation of the power grid to provide cheap renewable electricity for low-carbon heating to consume, would already have begun and ended before a drop of new oil or gas was produced. Even then, most of the oil and a large proportion of gas will be exported, rather than benefitting domestic consumption (Emden et al 2020).

2.3 ESSENTIAL TO JOBS AND LEVELLING UP

Analysis from IPPR finds that a retrofitting programme in England could sustain over 400,000 direct jobs and 500,000 indirect jobs by 2030 and over 1.2 million direct jobs and 1.5 indirect jobs by 2050 (Emden 2022).

Crucially, the distribution of retrofitting jobs fits particularly well with the government's levelling up strategy since those constituencies with the highest demand for installers tend to be current or former industrial centres and coastal communities outside of London and the South East. Benefitting the most are coastal constituencies across England like Clacton, North Norfolk, Wallasey, and South East Cornwall, along with former industrial centres like Doncaster North and Sheffield Hallam.

A nationwide retrofitting programme could also be particularly beneficial to so-called 'red wall' seats,³ like North West Durham, Birmingham Northfield, Stoke-on-Trent North, Rother Valley, Don Valley, and Gedling, all of which are among the top 50 seats with the highest location quotient score – a measure of the importance a sector has to a local economy compared to the national average.

2.4 ESSENTIAL TO HEALTH AND WELLBEING

The link between leaky, damp, and cold homes and poor health is well-established but is only just starting to gain traction in Whitehall (Committee on Fuel Poverty 2021). It has previously been estimated that investing £10 billion in improving the warmth and comfort of fuel poor homes through retrofitting could save the NHS between £1.4 billion and £2 billion per year by preventing or reducing the need to treat respiratory and cardiovascular diseases (Nicol et al 2015) and as much as £55.9 billion by 2040 (CLC 2021).

As energy bills soar, it is highly likely that many households – particularly those on pre-payment meters – will simply stop heating their homes (known as self-disconnection) (Grayburn and Stoker 2017). This self-disconnection will increase the likelihood of ill health and incidence of early winter deaths which, combined with Covid-19 cases on top of seasonal flu, will put the NHS under even more extreme pressure this autumn and winter. A ramp up in retrofitting to curb self-disconnection and increase warmth and comfort more generally must therefore be seen as an urgent priority for both social and health policy.

3 As defined by Kanagasooriam and Simon (2021).

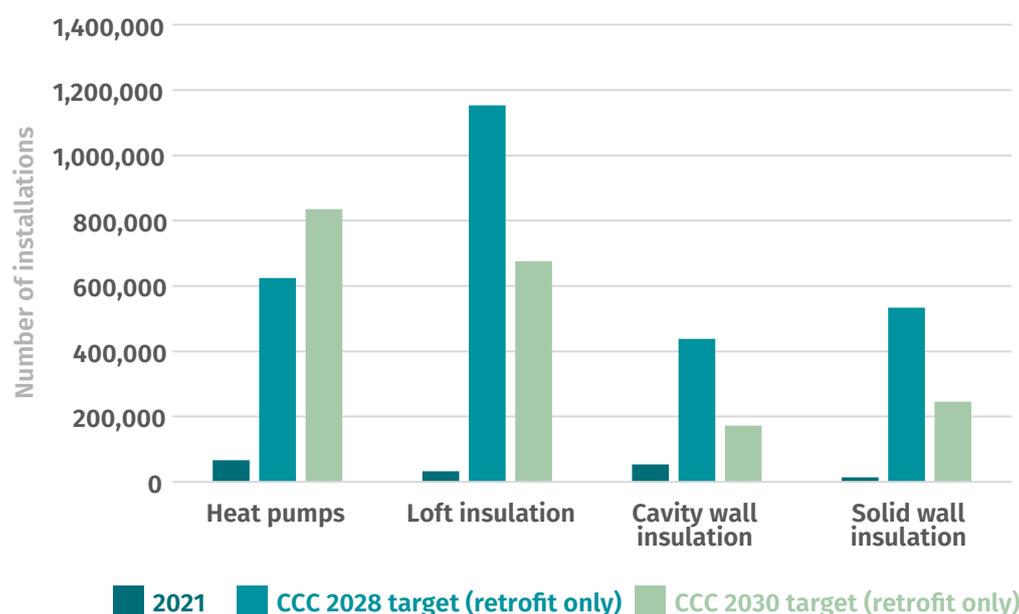
3. CURRENT POLICY PROGRESS

Despite these substantial benefits, for the last decade the government has failed to grasp the opportunity for retrofitting through a combination of cuts and multiple false-starts with initiatives like the green deal and green homes grant.

3.1 FALLING BEHIND OUR TARGETS

Compared to net zero targets, the rate of deployment of both heat pumps and energy efficiency retrofitting is severely behind schedule. IPPR analysis (see figure 3.1) shows how the UK is currently installing only 11 per cent of the heat pumps, 12 per cent of the cavity wall insulations, 3 per cent of the loft insulations and 3 per cent of the solid wall insulations needed by 2028 to keep pace with net zero (figure 3.1) (Emden and Rankin 2021). In the face of the dire energy price crisis the pace of deployment required is only increasing.

FIGURE 3.1: THE UK IS BEHIND THE PACE NEEDED TO KEEP TRACK WITH NET ZERO TARGETS
Installations in 2021 by technology compared to annual installation targets for 2028 and 2030



Source: HPA 2021, CCC 2022b (adapted by IPPR)

3.2. INVESTMENT IS FALLING SHORT

Despite the government announcing additional funding for after 2025, the evidence shows that more investment is needed now and that slow progress is also a matter of insufficient and often short-term, piecemeal funding, which has stunted the growth of the retrofitting industry as a whole. Most prominently, the £2 billion green homes grant voucher scheme was designed and then discontinued after three months which was described as having a ‘chilling effect’ on industry confidence.

Learning from these mistakes, recent spending plans have committed to a gradual scale up in funding over longer time periods. For example, funding for the local authority delivery (LADs) scheme and off-grid rural properties (home upgrade grants or ‘HUGs’) has continued and increased gradually over time. Despite delays to ECO4, the chancellor recently confirmed plans to uplift ECO spending targets to £1 billion per year through to 2026.

Taking all these funding streams together suggests that government policies supporting investment into energy efficiency measures are now close to matching the Climate Change Committee’s (CCC) estimates of funding requirements between 2020-2025.⁴ If the funding for a £1 billion ECO Plus scheme proves to be genuinely additional (see 3.3 below), then funding for energy efficiency would broadly match investment required by the CCC’s balanced pathway scenario.

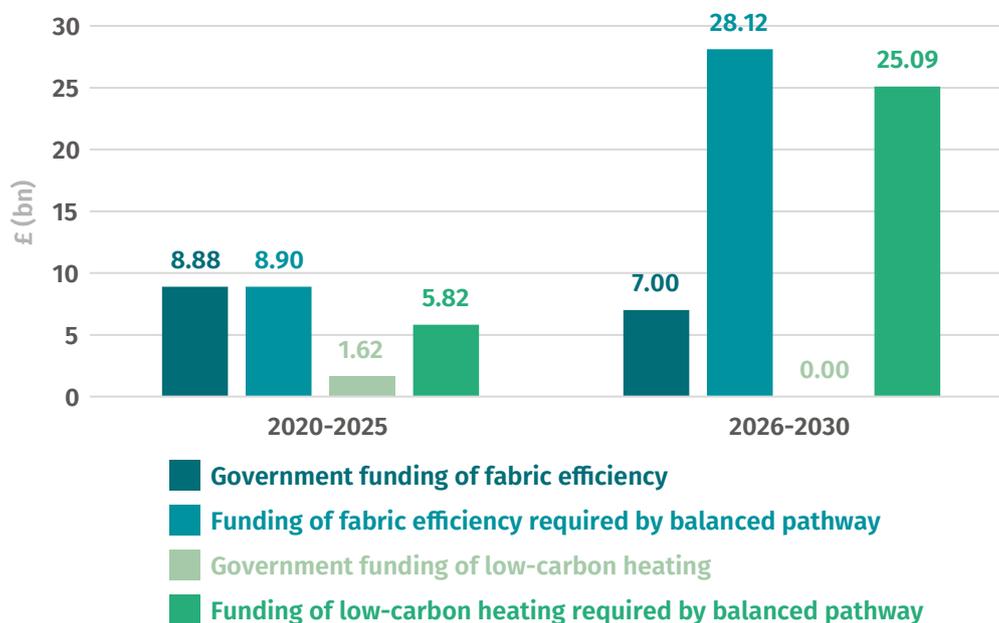
However, many severe funding gaps remain. First, a large portion of the investment mentioned above comes from industry spending as part of the Energy Company Obligation. Looking purely at public investment, as the Environmental Audit Committee has recently highlighted, there is still a £2.6 billion gap in the government’s manifesto commitment of £9.2 billion in public investment into energy efficiency for the course of this parliament (EAC 2022). Second, as figure 3.2 shows, there is still a substantial £4.2 billion funding gap for support for heat pumps between 2020-2025. Second, despite the autumn statement committing £6 billion of additional funding between 2025 and 2028 (HMT 2022) the overall funding picture falls off a cliff-edge during this period,⁵ as these years mark the exact time when funding should be rapidly scaling up. While there is still time to commit to more investment between 2026-2030, this funding commitment would be less than the amount spent on retrofitting⁶ during the current parliament.

4 These figures focus on funding from Westminster and therefore do not include the Scottish government’s planned £1.8 billion investment into energy efficiency and low-carbon heating over the course of this parliament in its programme for government.

5 The £7 billion amount in figure 3.2 includes one year of £1 billion of ECO4 spending in 2026. We also allocate all of the £6 billion committed in the autumn statement to the 2026-2030 period. It is possible that some of this funding will be spent in 2025 but this will only widen the funding gap in the second period shown.

6 This gap includes investment into public sector energy efficiency but we do not include this in calculations below relating solely to investment required into domestic retrofitting.

FIGURE 3.2: PLANNED PUBLIC INVESTMENT IS FALLING SHORT BEFORE AND AFTER 2025
Government funding compared with the funding required by the CCC balanced pathway



Source: IPPR analysis, as of 23 October 2022

Third, retrofitting’s crucial role in cutting soaring energy bills means there is a strong case for accelerating the rollout of energy efficiency measures and low-carbon heating above and beyond the CCC’s balanced pathway timeline.

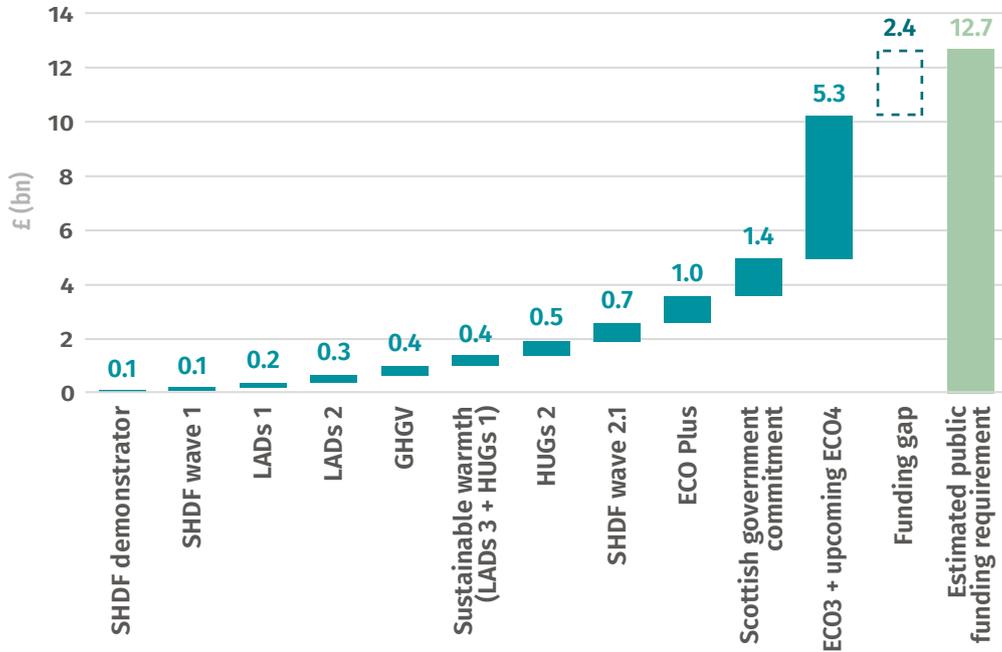
As a response, the Energy Efficiency Infrastructure Group (EEIG) have previously set out what a more ambitious public investment programme should look like between 2020-2025, the ambition of which closely matches the CCC’s tailwinds scenarios. This pathway would see 7 million homes upgraded with insulation to reach an EPC of C and 750,000 homes upgraded with heat pumps by 2025. This ambition would require £12.7 billion of public investment (matched by £15.6 billion in private investment) into scaling up fabric efficiency installations and £5.1 billion of public investment (matched by £2.2 billion in private investment) into delivering heat pump upgrades (EEIG 2021).

As figures 3.3 and 3.4 below demonstrate, public funding is currently falling short of this pathway, particularly on heat pumps. In total we estimate there is consequently a £5.8 billion gap in public investment between now and 2025, £2.4–£3.4 billion for fabric efficiency,⁷ and £3.4 billion for heat pumps.

⁷ Depending on whether ECO Plus funding is additional or not. In addition, the EEIG funding scenarios include devolved nations funding and we therefore include the Scottish government’s £1.8 billion included in its programme for government. It is possible that some of this funding will be drawn from central government ECO funding meaning the funding gap estimated should be viewed as a minimum figure. Our recommendations below are still aimed at the UK government as the CCC has previously estimated that the £1.8 billion commitment from the Scottish government would put Scotland comfortably ahead of their net zero targets.

FIGURE 3.3 PUBLIC INVESTMENT INTO ENERGY EFFICIENCY IS FALLING AT LEAST £2.4 BILLION SHORT

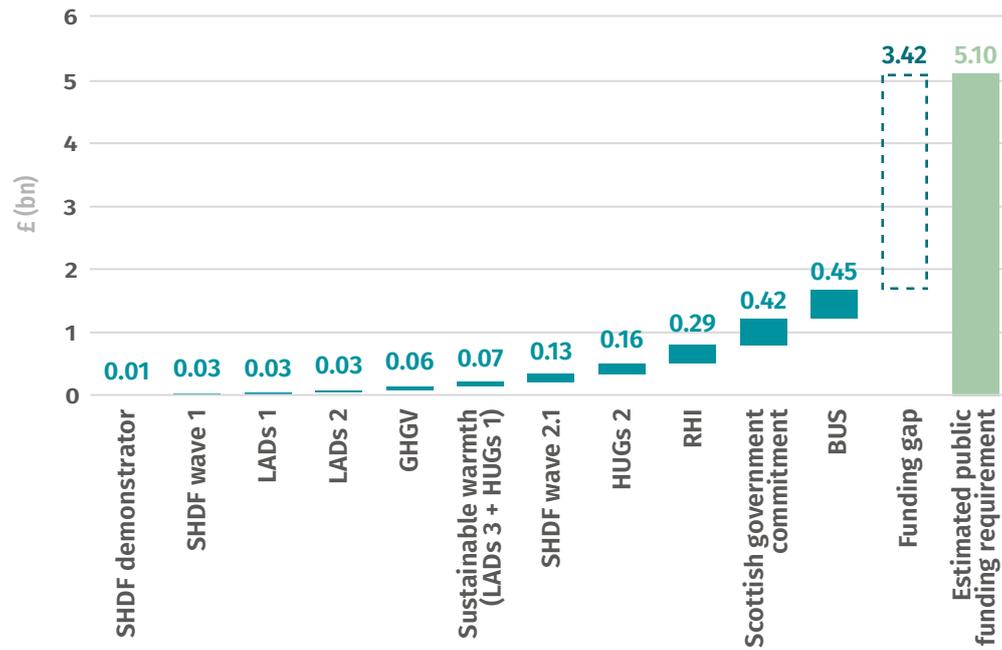
Estimated fabric efficiency public funding for households (2020-2025) committed vs gap



Source: IPPR analysis, as of 23 October 2022

FIGURE 3.4 PUBLIC INVESTMENT INTO HEAT PUMPS IS FALLING £3.4 BILLION SHORT

Estimated heat pump public funding for households (2020-2025) committed vs gap



IPPR analysis, as of 23 October 2022

3.3 CHALLENGES IN DELIVERY

While some schemes have seen funding gradually increase over time, many still face several delivery challenges. Most prominently, the only consistent funding for energy efficiency measures for low-income households, the energy company obligation, has seen its most recent wave of funding (ECO4), which was due in April, delayed by seven months. Research suggests just under 19,000 homes missed out on bill saving energy efficiency measures as a result (Heath 2022). Even with funding in place, this scheme has also had longstanding challenges identifying and targeting where low-income earners actually live (Emden et al 2018).

Further challenges exist for other retrofitting schemes including both the social housing decarbonisation fund (SHDF) and local authority delivery scheme (LADs) which provide funding for retrofitting of both social housing and private housing at a local level respectively. While a gradual increase in waves of funding for both schemes has been welcome, a recent industry survey has raised concerns over the inflexibility of funding being allocated. This is due to each scheme steering social landlords and local authorities away from investing in properties and sites that may have multiple tenures even where it is more efficient to retrofit the entire building and instead encourages them to focus primarily on social housing and private housing respectively (Inside Housing 2022). This is particularly concerning for the social housing sector since social landlords are at the forefront of retrofit delivery and are often the most willing and effective at delivering upgrades, which can, in turn, help to drive and develop the supply chain for retrofitting (Webb et al 2021).

Recent analysis has also shown that the government's boiler upgrade scheme (BUS) has had relatively slow take-up despite strong public demand for heat pumps. It has been suggested that this has been down to issues with scheme design, including delays in payment to installers, with only 40 per cent of vouchers applied for being paid out since its introduction in March (Orso and Sissons 2022), suggesting some issues from the failure of the green homes grant are resurfacing.

Finally, while there are proposals for the introduction of an ECO Plus scheme for middle income households, there are suggestions that this funding will be pulled from future rounds of funding from other schemes such as the home upgrades grant and the social housing decarbonisation fund, meaning this funding would not be truly additional.

4.

REENGO: A COMPREHENSIVE NATIONWIDE PROGRAMME FOR ENERGY EFFICIENCY AND CLEAN HEAT

Well-designed, comprehensive policy to realise the opportunities of home decarbonisation has never been more important.

4.1 ESTABLISHING REENGO

We are calling on the government's new energy efficiency taskforce to back the creation of a new 'GreenGO scheme' – a 'one stop shop' to provide the information and financial support to deliver energy efficiency and clean heat to households right across the country.

GreenGO should provide a unifying brand under which financial support and high-quality advice can be communicated to and accessed by the public. One of the main functions of the GreenGO scheme would be to provide all households with funding and incentives to transition to green alternatives.

Each element must be well sequenced to avoid unintended consequences. They must also be treated as a package of measures; these are not individual policies to adopt in isolation.

4.2 REENGO FUNDING

To respond with the kind of policy support commensurate to the energy crisis we recommend introducing a 'one stop shop' for financial support known as 'GreenGO'. This scheme would see an increase in public funding of £5.8 billion between now and 2025, over and above funding which has already been committed, of which £2.4 billion would go towards energy efficiency upgrades and £3.5 billion would go towards support for installing low-carbon heating. We therefore call on the chancellor to bring forward the £6 billion committed in the autumn statement for 2025-2028 to increase funding for this GreenGo programme from now until 2025.

Key features of the scheme would include:

- The continued scale up in funding for LADs, HUGs and the SHDF. For both LADs and the SHDF, the funding must be made more flexible to allow for situations where efficient delivery would mean upgrading housing or areas with multiple tenures.
- No reallocation of funding from HUGs or SHDF to others scheme such as ECO Plus.
- Full grants for fuel poor homes that would fund energy efficiency upgrades, additional measures such as water tanks and new radiators and low-carbon heating. We estimate the average cost of these grants would be approximately £12,000 per household, potentially falling to £9,500 by 2030. Substantial grants are already available to some extent for off-grid properties through the HUGs programme but other funding sources for these grants could include uplifting public funding for LADs and SHDF and increasing funding targets for ECO4.

- Grants for non-fuel poor homes of up to £7,500 per home until 2025. We estimate that any remaining costs would be comparable to the price of a high-end gas boiler. This funding could initially come from the government's plans for a £1 billion ECO Plus able-to-pay scheme but would need to be uplifted with additional public investment.⁸
- Beyond 2025, drawing inspiration from Germany, we recommend that the government consult on introducing zero-interest loans of up to £7,000 with repayment subsidies of up to 50 per cent of costs proportionate to the increase in energy efficiency achieved.
- After 2030, this would reduce to £6,500 and repayment subsidies of up to 30 per cent of costs to reflect falling heat pump prices. If consultations and engagement with consumer groups gave negative feedback, then the government should be prepared to continue with grant funding.

Private finance could also have an important role to play by offering green mortgages, demand-aggregated financing and community municipal bonds. The extent to which private finance will be involved will depend on market confidence in government which will require leading the way with public funding. Consequently, we caution that the government should not wait for private financing solutions to develop in the absence of public financing.

4.3 GREENGO COMMUNICATION

To raise consumer awareness, understanding and enthusiasm for the GreenGO scheme, the government should run a massive national information campaign with consistent branding throughout. Key elements of this campaign should include the following.

- National advertising on television, online, through local councils and common services such as GPs, post offices, banks and supermarkets.
- A cross-referral mechanism whereby services can refer households to energy advice services, benefits support or both.
- A properly resourced energy advice service (online and over the phone) in England and increased capacity for services in Scotland and Wales in anticipation of greater demand. These advice services would provide energy savings advice and help households to access funding.
- A requirement for installers to provide bespoke 'building renovation plans' to give households clear information about how to upgrade their home and how to access funding.

4.4 GREENGO STANDARDS

To set a clear direction, we recommend introducing point of rent, point of renovation and point of sale regulations confirming government plans to require an EPC rating of C by 2028 for privately rented properties and introducing the same standards by 2030 for homeowners.

To bring supply chains together and thereby minimise disruption for households, we recommend introducing a 'whole-house heat' standard requiring all homes to have energy efficiency upgrades, good-quality ventilation measures and low-carbon heating, installed together wherever possible (unless additional insulation or heating measures are not needed). This standard would be introduced as a voluntary industry standard for installation in 2023.

⁸ For the purposes of this briefing we have not calculated how the additional £5.8 billion would be distributed between fuel poor and non-fuel poor homes but would recommend a much stronger weighting towards fuel poor homes given the potential for the greatest impact on cutting bills.

Like targets for phasing out petrol and diesel cars, we recommend phasing out the sale of oil boilers by 2026 and gas boilers by 2033 at the very latest.

4.5 GREENGO SKILLS

To ensure energy efficiency upgrades and low-carbon heating systems are compatible with each other when installed, we recommend expanding existing training standards to require an understanding of the whole heating system including energy efficiency performance, ventilation requirements and an understanding of heat loss throughout the property.

To increase the attractiveness of the industry to new labour market entrants and reassure workers looking to retrain, we recommend that the government work with unions and workers to co-develop and introduce high-quality job standards for the retrofit industry.

To ensure skilled installers are available to meet the scale up in demand required, we recommend the government should provide £160 million in training funding per year to 2030 through a green training fund for both existing workers and new labour market entrants. This should include funding to increase practical and local on-site training to ensure new installers have the practical experience which many employers demand.

To coordinate this funding and help installers find accredited training providers, we recommend that the government reintroduce skills academies. The key task of these academies would include the following.

- Working with key stakeholders including trade unions, local employers, local authorities and skills advisory panels to identify local upskilling, reskilling, and new skills needs, ensuring training leads to high-quality jobs.
- Supporting TrustMark and the Microgeneration Certification Scheme (MCS) to accredit monitor and evaluate training providers.
- Providing an easily accessible online platform of accredited providers and an over-the-phone advice service for installers or individuals seeking training and raising awareness of training opportunities.
- Financing companies and individuals applying to access this training through the green training fund or existing skills funding.
- Developing 'skills passports' for workers with existing transferable skills to remove the burden of paying for certification of skills that they already have.

To ensure high-quality installations and public trust, we recommend banning 'pay to pass' training and expanding the resources of TrustMark and MCS to clamp down on bad certification practices.

4.6 GREENGO STREET-BY-STREET

Local authorities often have a much better understanding of local challenges than national government. To ensure heat decarbonisation is tailored to the needs of individual communities and homes, we recommend that energy efficiency and clean heat rollout is led by local government but with coordination and support provided by the UK and devolved governments.

These plans will need to prioritise all homes in the social rented sector and fuel-poor homes across tenures. Identifying where to use heat pumps and heat networks, where to use hydrogen boilers, and where to use alternative technologies requires understanding both local housing stock and local energy sources.

Resources should be allocated to carry out 'heat zoning' to determine the most appropriate heat technologies for different areas. Under this approach, local authorities will play a key role in identifying where improvements need to be made and be responsible for auditing stock and monitoring retrofit activity.

5. CONCLUSION

If the government is serious, as the chancellor has stated, about putting 'cheap, low carbon, reliable energy' at the heart of the UK economy then it must begin with a huge step change in ambition, investment, and policy on energy efficiency and clean heat.

We call for the energy efficiency taskforce to take forward the recommendations made in this briefing and for the government to bring forward the planned investment for 2025-2028 to increase funding for the GreenGo programme proposed from now until 2025.

REFERENCES

- Calnan M (2022) 'Everything you need to know about the government's energy support', Which?, news article. <https://www.which.co.uk/news/article/everything-you-need-to-know-about-the-governments-energy-support-amf4S7t6qm95>
- Capstick A (2022) 'Energy prices to rise by 20% from April as Government announces scaled back support for households from next spring', MoneySavingExpert, news article. <https://www.moneysavingexpert.com/news/2022/11/government-extends-energy-support-from-april/>
- Climate Change Committee [CCC] (2020) *The sixth carbon budget: the UK's path to net zero*. <https://www.theccc.org.uk/publication/sixth-carbon-budget/>
- Climate Change Committee [CCC] (2022a) *Letter: climate compatibility of new oil and gas fields*. <https://www.theccc.org.uk/publication/letter-climate-compatibility-of-new-oiland-gas-fields>
- Climate Change Committee [CCC] (2022b) *Progress in reducing emissions: 2022 report to Parliament*. <https://www.theccc.org.uk/wp-content/uploads/2022/06/Progress-in-reducing-emissions-2022-Report-to-Parliament.pdf>
- Committee on Fuel Poverty (2021) *Committee on fuel poverty: annual report – October 2021*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1028724/cfp-annual-report-2021.pdf
- Construction Leadership Council [CLC] (2021) *Greening our existing homes: national retrofit strategy*. <https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2021/05/Construction-Leadership-Council-National-Retrofit-Strategy-Version-2.pdf>
- Energy Efficiency Infrastructure Group [EEIG] (2021) *Better buildings investment plan: investing in British homes and communities*. https://www.theeeig.co.uk/media/1109/eeig_2021-budget-and-spending-review_0721.pdf
- Emden J, Murphy L and Lloyd H (2020) *Beyond ECO: the future of fuel poverty support*, IPPR. <https://www.ippr.org/publications/beyond-eco>
- Emden J, Murphy L and Gunson R (2020) *Net zero north sea: a managed transition for oil and gas in Scotland and the UK after Covid-19*, IPPR. <https://www.ippr.org/research/publications/net-zero-north-sea>
- Emden J and Rankin L (2021) *Pump up the volume: a comprehensive plan to decarbonise the UK's homes*, IPPR. <https://www.ippr.org/research/publications/pump-up-the-volume>
- Emden J (2022) *Train local, work local, stay local: Retrofit, growth and levelling up*, IPPR. https://www.ippr.org/files/2022-09/1663704873_train-local-work-local-september-2022.pdf
- Environmental Audit Committee [EAC] (2022) *Accelerating the transition from fossil fuels and securing energy supplies*, House of Commons Environmental Audit Committee. <https://committees.parliament.uk/publications/33366/documents/180604/default/>
- Evans S (2022a) 'Analysis: Why UK energy bills are soaring to record highs – and how to cut them', Carbon Brief, blog. <https://www.carbonbrief.org/analysis-why-uk-energy-bills-are-soaring-to-record-highs--and-how-to-cut-them/>
- Evans S (2022b) Tweet posted 14 February 2022, Twitter. https://twitter.com/DrSimEvans/status/1493239839470366723?s=20&t=3gbfh_qBuq1SM1XWKisJCG
- Evans S (2022b) Tweet posted 12 August 2022, Twitter. <https://twitter.com/DrSimEvans/status/1558197169764667392?s=20&t=0EZxbKWIYt-IikGx6u-Bw>
- Grayburn N and Stoker D (2017) *Switched on: Improving support for repayment consumers who've self-disconnected*, Citizens Advice. <https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/PPM%20self-disconnection%20short%20report.pdf>

- Heath L (2022) 'Thousands in fuel poverty miss out on £300 energy bill savings due to delays with Government green home scheme', iNews, news article. <https://inews.co.uk/news/thousands-fuel-poverty-miss-out-energy-bill-savings-due-delays-government-green-home-scheme-1955268>
- Heat Pump Association [HPA] (2021) 'UK Heat Pump market set to almost double this year', news article. <https://www.heatpumps.org.uk/uk-heat-pump-market-set-to-almostdouble-this-year/>
- HM Treasury [HMT] (2022) *Autumn Statement 2022*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1118417/CCS1022065440-001_SECURE_HMT_Autumn_Statement_November_2022_Web_accessible_1.pdf
- Inside Housing (2022) 'What progress has the sector made to plan and prioritise decarbonisation projects?', sponsored news article. <https://www.insidehousing.co.uk/sponsored/sponsored/what-progress-has-the-sector-made-to-plan-and-prioritise-decarbonisation-projects>
- Kanagasooriam J and Simon E (2021) 'Red Wall: The Definitive Description', *Political Insight*, 12(3):8–11. <https://journals.sagepub.com/doi/10.1177/20419058211045127>
- Mettrick A and Ying D (2022) *Chapter 4: Natural Gas, Digest of UK Energy Statistics [DUKES]*, Department for Business, Energy and Industrial Strategy [BEIS]. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1094421/DUKES_2022_Chapter_4.pdf
- National Energy Action [NEA] (2022) 'Energy crisis', webpage. <https://www.nea.org.uk/energy-crisis/#:~:text=This%20would%20mean%20that%206.7,replaced%20with%20'targeted%20support'>
- Nicol S, Roys M and Garrett H (2015) *The cost of poor housing to the NHS*, BRE Trust. <https://www.bre.co.uk/filelibrary/pdf/87741-Cost-of-Poor-Housing-Briefing-Paper-v3.pdf>
- Orsa L and Sissons A (2022) 'Six months in, how is the government's boiler upgrade scheme doing?', Nesta, news article. <https://www.nesta.org.uk/data-visualisation-and-interactive/six-months-in-how-is-the-governments-boiler-upgrade-scheme-doing/>
- Webb J, Emden J and Murphy L (2020) *All hands to the pump: a home improvement plan for England*, IPPR. <https://www.ippr.org/research/publications/all-hands-to-the-pump>

APPENDIX

TABLE 1: ACRONYMS FOR GOVERNMENT RETROFITTING SCHEMES

Acronym	Full name
BUS	Boiler upgrade scheme
ECO	Energy company obligation
GHGV	Green homes grant voucher scheme
HUGs	Home upgrades grant
LADs	Local authority delivery scheme
RHI	Renewable heat incentive
SHDF	Social housing decarbonisation fund

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