Local Authority Retrofit Scheme – retrofitting right… lessons from the home upgrade scheme

"The whole funding system is completely broken. It's failing across the country"
[Claire Wilson, Retrofit Project Manager at the Centre for Sustainable Energy]

The Centre for Sustainable Energy (CSE) is a national charity (298740) supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes.

We're supporting local authorities to retrofit private sector homes across their area through the Home Upgrade Grant Scheme (HUGs). This government programme funds energy-saving improvements to the homes of people who struggle to pay their heating bills and keep their homes warm in the winter. We work with local authorities to support them to deliver HUGS providing retrofit assessments and coordinating the work.

One example is the work we do with Somerset Council to deliver HUGS in their area. In the first year we've installed 244 measures in 75 households, including a wide range of insulation measures, air source heat pumps, draughtproofing, worth a total of £1.1m. The performance of HUGs nationally is so low that our work in Somerset accounts for a staggering 25% of the 300 households that have received measures in the first year of the scheme nationally.

This is valuable, necessary work which alleviates the suffering associated with cold homes and saves carbon. The impact of these home improvements on individual householders can be life-changing. We've written this short paper documenting our experiences and highlighting our key recommendations for the Local Authority Retrofit Scheme, namely:

- A reduced role for consultants.
- A proportionate approach to batching measures.
- Homes getting the measures they need, not just ticking boxes on the EPC.
- An approach which is future proof, which delivers fuel poverty and carbon reduction, and unlocks the potential for flexibility.
- Help for the fuel poor whose homes are heated by gas.
- Measurement and verification of installation performance.
- Project wide case studies showcasing positive outcomes.
- High quality advice for all residents receiving measures.
- Long-term consistent funding to support supply chain growth.

How HUGs works

Local authorities apply to a central government funding pot. Often lacking experience in managing retrofit projects, they frequently partner with energy agencies like CSE to administer funding and oversee installers.

The process faces challenges due to slow, expensive bureaucracy and the complex decision making around installation measures. In the HUG schemes we administer, four organisations (excluding the

installer) are involved in determining which properties receive funding and what work is done. We know that other advice agencies, such as Severn Wye, have encountered similar issues[1].

CSE checks the eligibility of households applying for funding and carries out a retrofit assessment to suggest appropriate measures for each property. Then, we batch up groups of properties to put forward for approval. Next, two consultancy firms (Arup and Turner & Townsend) and DESNZ (the government department responsible for retrofit policy and funding programmes) decide between them what gets funded. We've found no rhyme or reason to what is approved by the department.

As you can imagine, with four organisations deciding what gets funded, and with no clear guidance or consistency on what DESNZ will approve, there's plenty of scope for delay. This is particularly so because feedback is drip-fed property by property, and there's no opportunity to amend applications. And if one property is refused funding, then the whole batch fails and must be re-submitted. This has led to householders waiting eight to nine months, who then become tired of waiting, and as a result some people drop out. Don't forget, this is people stuck in cold, damp, mouldy homes. Miserable.

A recent batch of ten properties, with retrofit measures costed at £130,000, sat in the system for five months before being rejected. We've had to start the batch from scratch, and six months later we are still awaiting sign-off.

Overall, it feels like there's a lack of trust. There's a bean-counting exercise to ensure that the money is well spent, and we understand that (it's public money after all) but the exercise itself has significant costs and undermines the effectiveness of the scheme.

For proof, look at the performance of HUGs. Nationwide, there have only been 283 installations under HUGs this past year, and CSE has administered over a quarter of them. We know from our fuel poverty work that this is a drop in the ocean compared to the level of need there is out there and the heart-breaking circumstances we find some people living in.

Measures installed

Moving on to the measures installed, accepted good practice is that a whole house approach should be taken to designing retrofit packages. This means that retrofit work should not be undertaken in a piecemeal fashion; instead, a comprehensive plan should be drawn up for each building, considering its construction and condition, its inhabitants, heating systems, and ventilation.

This, theoretically, is built into the process, in that prior to recommending the appropriate package of measures, CSE undertakes a structured retrofit assessment which uses this approach. However, this is all undercut because the actual measures that can be installed are dictated by DESNZ according to the measures the government says it wants, with limits put on the proportions of particular measures we can install. More unnecessary bureaucracy.

The grading that has been put in by the Department and the cost caps completely overrule the retrofit assessment. We would ask, why bother to undertake a professional retrofit assessment at all, if ultimately, it's irrelevant?

[1] https://severnwye.org.uk/blog/the-home-upgrade-grant-a-good-idea-badly-implemented/

As the project manager for our Somerset HUGs project, Clarie Wilson, said: “After the professional retrofit assessment tells you the property needs something, how can you dictate something else? It baffles me!”

The measures required are driven by a flawed objective to improve the Energy Performance Certificate (EPC) by two bands. The sector knows that EPCs are a blunt tool and are not suitable for planning retrofit works, and in acknowledgement, EPCs are to be improved with the addition of the Home Energy Model next year.

EPCs are widely criticised as being inaccurate, but their headline ratings are also designed to broadly indicate the energy efficiency of a home, not its carbon emissions. So, measures that will reduce emissions but not improve energy efficiency, aren’t being funded. It makes no sense.

Smaller complex properties aren’t well served

There is a disconnect between the funding available for smaller terraced properties and larger properties.

Occupiers living in flats or a mid-terrace property with cavity wall insulation, even if their properties are very energy inefficient (EPC D or below), will get minimal funding i.e. £8,000 for energy efficiency measures, which might not even cover the installation of a solar PV system. Yet, if you live in a semi-detached, solid-walled, fossil-fuel heated property, you will get £24,000 for energy efficiency measures. Claire Wilson again:

> “I get that a smaller property equals a smaller installation cost, but it’s still a massive disconnect. For mid-terraced housing, it’s rare that you can fit a heat pump, and our cap is 10% for installations of electric heating. There are other measures we can do, so if they need loft or cavity wall insulation, or even upgrading their heating controls, that’s a possibility for smaller houses, but we’re still unable to upgrade their heating.
>
> “The thing that frustrates me is the government is so keen to see these smaller houses treated, but don’t take into consideration that those houses need specific things.”

Remedial Repairs

Finally, added to this, the fund makes no allowance for the need for remedial repairs. Our most vulnerable customers tend to live in the worst homes, which are often sub-standard and in need of basic repairs, which must be rectified before retrofitting works begin.

In a house with a leaking roof and cold, wet walls, the most effective thing to do to increase energy efficiency and improve living conditions will almost always be to fix the roof.

> “We met with another local authority who are delivering HUGs and they are being somewhat successful. We asked them how they are you doing it?
>
> “They said “We are doing a solar and cavity and loft campaign. We're not looking at any of the bigger measures like EWI or windows and doors and heat pumps. We've just stepped

> away from it … and the minute we know the house has got a defect, they're no longer eligible. We just bin them off”.”
> [Claire Wilson]

While to a degree we understand the response taken by this local authority to this frustrating funding scheme, this approach is failing those most in need. We’ve seen the same cherry picking of homes for years under the Energy Company Obligation (ECO) programme and its forerunners. This shouldn’t be happening in a government-funded scheme to tackle fuel poverty.

Performance

Finally, whilst we know how many properties have had measures fitted, there’s no real quality assurance to confirm how well this has been done. We don’t really know the outcomes of all this work. It all leads us to suspect that HUGS has become an EPC numbers game, with its setup very distant from the needs of the vulnerable people we’re trying to help.

“The whole funding system is completely broken. It's failing across the country”
Claire Wilson, project manager

What needs to change

The introduction of the LARS, the replacement to HUGs, offers the opportunity to fix some of these problems. We’d like to see:

A reduced role for consultants

> There are far too many cooks spoiling the broth. Once funded local authorities and their partners have demonstrated competency then the level of administration and management should be reduced.

A proportionate approach to batching measures

> The process should be adapted so that if one property out of the batch fails but the other nine pass, then those installations can still go ahead. The current process is overly complex and is creating unnecessary administration and delay.

Homes getting the measures they need, not just ticking boxes on the EPC

> LARS needs to go beyond ticking boxes on an EPC. The programme needs to focus on the resident’s situation and individual property needs, to address the root of the problem rather than applying sticking plasters and fitting into rigid offers of pre-conceived measures. The outcome needs to be cheap affordable low carbon heat and power for the resident. We’d like to see a more flexible approach, in-line with the first round of HUGS, whereby the scheme needed to maintain an average price per property. This flexibility allowed some properties to come under the cost cap and some to go over.

An approach which is future proof, which delivers fuel poverty and carbon reduction, and unlocks the potential for flexibility

It's madness to have publicly funded fuel poverty alleviation schemes that don't try to cut carbon at the same time. The scheme should include measures that support the flexible, smart use of energy as well as carbon and cost reduction.

Homes that have a hot water tank and receive PV should get a solar divertor as standard, alongside other measures like batteries and smart meters which enable the flexible use of electricity (and reduce the need for fossil fuel electricity generation when the wind isn't blowing and the sun isn't shining). If we don't do this now, we will be re-retrofitting homes for flexibility in five years' time.

Help for the fuel poor whose homes are heated by gas

The current HUGS funding model rules out retrofit activity in areas that are on the gas network, presumably assuming gas will always be cheaper. When specified and fitted well[2], a heat pump will outperform a gas boiler financially.

LARS is planning on allowing a proportion of on-gas properties that can be eligible for heat pumps within socio-economically deprived areas. Why not instead allow the installation of heat pumps for those in fuel poverty everywhere?

Measurement and verification of installation performance

Retrofit outcomes should be measurable, with appropriate monitoring over at least the first full year post-install, so that instances of poor performance can be identified and rectified. Key technologies such as heat pumps should have measured performance targets (i.e. Seasonal Coefficient of Performance) and monitoring technology should be included as an eligible measure for funding wherever possible. This will ensure that all homes really are more comfortable and cheaper to run post-retrofit, and that the anticipated carbon savings have truly been achieved. It would also enable the industry to learn from mistakes, promoting continuous improvement, which could help to promote consumer trust and potentially increase scheme take-up in the future.

The Home Energy Model, which was proposed as part of the Future Homes Standard, could be used to drive improvements in the standards of retrofit programmes i.e. measured performance testing in-situ. We need better data and modelling tools and methodologies relating to building characteristics and energy performance to enable research and innovation, as well as better application of measures.

Project wide case studies showcasing positive outcomes

We create case studies for our local authorities, but we don't have the budget to polish them to the standard needed for effective mass consumer engagement. The government needs to invest more in case studies that go beyond the property. Government should be creating videos and blogs from successful projects with accompanying case studies on the installation

[2] With a coefficient of performance of 3.2 or higher, that is generating 3.2 kwh of heat for every 1 kwh of electricity used

process and impact of the work with customer testimonials. HUGS has a bad reputation amongst clients, and while it is flawed, and installation rates are disappointing, its impact on individual families can be lifechanging. Not enough success stories are published.

High quality advice for all residents receiving measures

As highlighted by our SIF Guidelight[3] project, evidence suggests that there can be a significant socio-technical performance gap associated with the installation of low carbon measures under publicly funded retrofit schemes. People don't always know how to get the best performance from their new technologies or how to access financial benefits such as smart tariffs or the export guarantee tariff.

HUGS funding is often used to fit complicated and novel energy technology (for instance heat pumps, solar panels, and smart heating controls) in the homes of vulnerable people, often who haven't specifically asked for it and aren't given sufficient support either during the installation itself or once the technology is up and running.

The opposite of a fit-and-forget approach should be adopted. Customers need plain English guidance in different formats to meet different needs (e.g. access to information in easy-to-read factsheets and video format rather than just dense technical documentation, in-person advice, perhaps delivered by community-based retrofit champions or digital navigators to help those that are less confident using new technologies and smart applications), and the value of providing appropriately targeted advice needs to recognised in scheme design and roll-out so that adequate funding can be provided and the full social and environmental benefits of retrofit projects can be achieved.

Long-term consistent funding to support supply chain growth

We need a ten-year national retrofit programme that builds the sectors confidence and encourages installers to invest in growth. Despite the significant investment in HUGS and the social housing decarbonisation scheme (SHDF), the current funding programmes have short 12-18 month funding windows which undermine confidence. This is compounded by the past withdrawal of past schemes like the Green Deal and the Feed-in Tariff which damaged the sectors confidence in internal investment. To invest in training, apprenticeship, materials, and equipment, the industry needs a stable, long-term funding environment.

Coming back to the start, the work funded by retrofit programmes like HUGs and is valuable and necessary, both to cut carbon emissions and alleviate suffering from cold homes in a time of high energy costs. We want to be doing more of it, faster, cheaper and better.

The Local Authority Retrofit Scheme offers the opportunity to fix some of the problems we're experiencing with the current funding system. We hope the next government takes it.

[3] https://innovation.ukpowernetworks.co.uk/projects/guidelight