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THE FUTURE OF THE ENERGY COMPANY OBLIGATION BOOSTING DELIVERY TO TACKLE FUEL POVERTY AND UPGRADE HOMES

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The energy company obligation (ECO) is the government's flagship fuel poverty alleviation programme, and one of the main pillars to improve overall energy efficiency. However, changes to the scheme have led to a major fall in the number of households benefiting from the scheme. There is an opportunity to reform the programme to ensure it can play a central role in meeting the UK's statutory target to end fuel poverty by 2030.

By 2035, the UK aims to have upgraded as many of the 15 million homes below EPC C as possible, and Labour want to upgrade 5 million homes before 2030. This requires a well-designed, effective fuel poverty alleviation programme. While ECO has potential, current installation rates are not commensurate with meeting this challenge. At the actual ECO4 delivery rate – around 32,000 homes in year 2022/23, plus 37,000 homes treated by other policy – achieving the 2035 and 2030 targets will take 217 and 72 years respectively.

ECO's ability to act as a vehicle to deliver home upgrades has proved successful in the past, with decades of knowledge and experience delivering through this route. However, the case for reform is clear. To realign objectives and delivery with the UK's fuel poverty and energy efficiency objectives, E3G recommend a full review of ECO is undertaken, which would examine the underlying principles and supporting architecture, which should include the following:

1. **The role of the supplier obligation**, how ECO's delivery can maximise the strengths of this route to retrofit,



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2. **Depth of retrofit**, reducing the number of measures delivered per home to spread the benefits evenly among fuel poor homes,
 3. **Household eligibility**, ensuring the right eligibility requirements are set so the obligation can support a range of fuel poor homes,
 4. **Compliance and customer assurance**, ensuring quality standards are aligned with the depth of retrofit and failures are remediated,
 5. **Building types and geographies**, ensuring the obligation works fairly across flats and houses, as well as in rural and urban areas,
 6. **The role of local authorities in ECO** should be evaluated to ensure they can make a full contribution to delivery of the obligation.

1. The role of the supplier obligation

ECO works by placing an obligation on medium and large energy suppliers, of which 13 are currently obligated. Obligated suppliers must promote measures that improve the ability of low-income, fuel-poor, and vulnerable households to heat their homes. Britain's largest suppliers have been obligated to run energy efficiency schemes for nearly three decades. Over this time, they have established teams, experience, and supply chains necessary to manage large schemes and new delivery routes (for example, The Local Authority Flexible Eligibility known as LA Flex). Their large customer bases and significant operations mean they have some natural advantages in running schemes. The strength of their established supply chain network has been a crucial factor. Energy companies can expand their offers on energy efficiency and clean heat to wider consumers, some already offer heat pumps, solar and reduced tariffs.

The supplier obligation is not the only avenue to deliver home upgrades. A successful, national retrofit drive will leverage different routes, and ensure they are complementary and provide full coverage of the UK's households. The comparative characteristics of the different approaches to delivering home upgrades with public funds are outlined in Table 1, including local authorities and consumer-led alongside the supplier obligation.



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Table 1. Characteristics of different avenues to deliver home retrofit

Approach	UK coverage	Targeting fuel poor	Scale of delivery
Supplier obligation	Nationwide presence and strength of the obligation supports consistent implementation.	Data is not currently maximised, so targeting can be difficult. Suppliers are high level, not in the community.	Large scale delivery with potential for economies of scale.
Local authority	Gaps in local authority capacity means implementation is currently inconsistent.	Authorities which have invested can overlay different datasets to target homes; only high capacity authorities can.	Can provide large scale delivery in precise local areas to produce economies of scale.
Consumer-led	Mainly applicable to owner occupier homes, implementation dependent on consumer will.	Can be targeted centrally, however, often consumer-led schemes do not fully support homes so can exclude low income.	Could support large scale delivery over a long-time frame, but individual motivation low. Economies of scale are more limited.

Compared to both other approaches, delivery under the supplier obligation offers high geographic coverage directed at fuel poor homes. The established energy efficiency teams in obligated suppliers means delivery failures are rare; only one supplier failed to meet its ECO3 obligation.

A local authority-led approach could also deliver a similar level of coverage and security, but the current high degree of inequality between authorities' capacity to deliver retrofit programmes means this delivery route cannot be guaranteed to deliver consistently immediately. Because authorities are embedded in local communities, they have the potential to deliver more innovative, community-oriented projects compared to the supplier approach, which makes investing in this approach worthwhile in the longer term. Although a centralised consumer-led route has a high level of national coverage, accessibility is not guaranteed for fuel poor and low-income households. Based on this assessment, the supplier obligation can remain a crucial component of the UK's approach to retrofit, guaranteeing upgrades to fuel poor homes across a wide geographic coverage. Review of the obligation should consider:

- > How the strengths of the energy supplier obligation route can be maximised by adjusting scheme design (e.g., depth of retrofit, household eligibility, compliance and assurance, buildings and geographies treated).

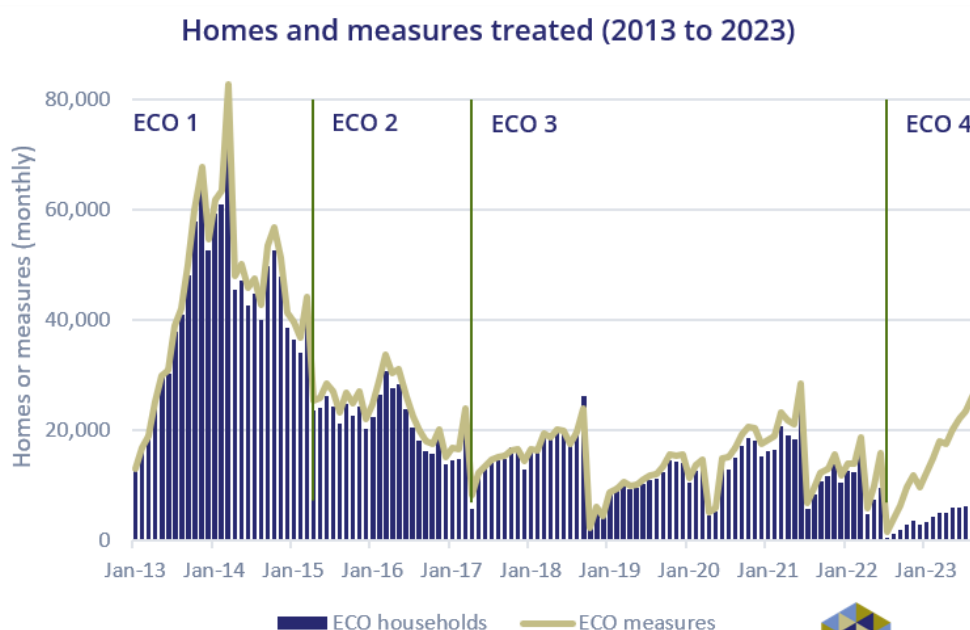


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- > There is limited coordination between ECO and parallel local schemes or consumer-led policies. Future design should complement other avenues for delivery. Some overlap in supply chains is likely to be unavoidable, especially between ECO and the local authority delivery route.

2. Depth of retrofit

In 2022, ECO shifted towards deeper retrofit, treating fewer homes with more measures. Deep retrofit produces a larger improvement on a home's energy efficiency rating but is more expensive to undertake. With a limited budget, this means fewer homes are treated and narrows the pool of homes where deep works are feasible. As illustrated in Figure 1, in July 2022 when ECO4 replaced ECO3, the number of measures and homes treated decouples dramatically, showing more measures are installed per home treated. In turn, average investment per home under ECO4 has averaged £26,000, compared to £3,500 under ECO3, an increase of 640%. In the most recent quarter of ECO4, average investment was £33,000 per home.



Source: Household Energy Efficiency Statistics, headline release January 2024



Figure 1. Measures delivered and homes treated through four rounds of ECO.

Options for depth of retrofit

There are a variety of approaches to the depth of retrofit, they are compared in Table 2. Whereas deep retrofits result in the greatest bill savings per home, the



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upfront costs per home is higher, meaning fewer homes can be treated within budget. Not all households want to commit to a whole house retrofit, which can be disruptive and require residents to move out. Under the current design of ECO, not all households are economically eligible for a whole house retrofit, as it would be too expensive under the spending envelope, or the measures wouldn't bring the property up to the necessary energy performance rating.

Other policies have taken different approaches to depth of retrofit. CERT (2008-2012) delivered a wide range of measures were available, with no minimum requirements. Eligible measures under the first iteration of ECO (ECO1) were more restrictive than those under its predecessor CERT. Under ECO1, the specific measures available also shifted to “hard to treat” cavity and solid wall insulation. As a result, ECO1's carbon targets under ECO were lowered to reflect the fact that these harder to treat measures may require larger subsidies from obligated suppliers.

Table 2. Evaluation of different depths of retrofit

Approach	Scalability	Quality	Cost	Result
Do it Yourself e.g., loft and draught proofing	High scalability, but limited to certain measures	Limited to no external quality control and risk of unintended consequences	Very low cost and simple to roll out	Low level of energy efficiency improvement, widespread deployment
Single measure e.g., double glazing, loft, heating controls	Good scalability, broader range of measures available than DIY	Good quality control as works done by professionals. Homes are not treated holistically.	Low cost, requires careful scheme design to balance quality with efficient delivery.	Better energy efficiency improvement than DIY. Shallow retrofit, but widespread deployment.
Single and multi-measure one or more of e.g., loft, EWI, CWI, heating	Good scalability, complete set of measures available	Good quality control as works done by professionals. Potential to work more holistically.	Slightly higher cost than single measure only.	Range of improvements delivered, tailored to feasibility.
Deep retrofit, multiple of e.g., loft, EWI, CWI, heating	More difficult to deliver at scale; fewer houses eligible.	High levels of quality control required when doing deep retrofit.	Higher average spend per home. Careful scheme design required.	Deep improvements in less homes.



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Adjusting the minimum requirement

When the budget available to help fuel poor homes is limited, and fuel poverty levels remain high in England, the current magnitude of spending per home is not sustainable. Adjusting the depth of retrofit and whole house approach will be crucial to reinvigorating ECO's scale. Under ECO4, a property must meet the minimum requirement (MR) determined under the scheme, and be assessed by a retrofit coordinator, for works to start. ECO4 introduced a new MR to improve the energy efficiency rating by 2 SAP ratings (i.e., from EPC E to EPC C). Homes in band C and above are not eligible for works unless they are in-fill flats. The MR makes it impossible to undertake shallower retrofit in other homes, which, although less impactful on a singular project basis, deliver improvements to a larger number of homes.

Homes which meet ECO4's MR and can be cost effectively treated are more likely to be larger, rural, off-gas properties. This means many EPC D, semi-detached properties in the UK are missing out on the chance to improve energy efficiency standards under the scheme. Allowing more flexibility under the MR could enable more properties to become eligible under the scheme, while also enabling homeowners more choice over the timing and depth of upgrades. E3G recommends removing the minimum requirement to move up EPC bands to boost ECO4's delivery rates – allowing for more flexibility under the scheme.

3. Household eligibility for ECO

In England alone there remain 3.17 million households in fuel poverty under the Low Income Low Energy Efficiency (LILEE) metric.¹ In 2023, overall fuel poverty remained the same as in 2022, however, the depth of fuel poverty experienced by these homes increased dramatically. When so many homes remain in the LILEE group, and fuel poverty in this group has worsened, it is right to target ECO's spending on fuel poverty alleviation. The costs of identifying fuel poor households are currently high, which distracts investment from works. Narrow eligibility requirements also limit opportunities to work at scale locally and exclude around 20% of fuel poor households.²

Review of ECO should consider how search costs could be brought down by using data more innovatively, using a wider fuel poverty definition by improving delivery of the Local Authority Flex mechanism (please see Section 6 for further

¹ UK government, 15 February 2024, **Annual fuel poverty statistics report: 2024**

² IPPR, June 2018, **Beyond ECO**



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explanation), and to identify whether ECO could effectively target fuel poverty by working on a street-by-street basis (see Section 6).

The importance of eligibility for scheme outcomes

The approach to eligibility under the supplier obligation has evolved since 2008. Table 3 provides an overview of the different approaches to household eligibility, examining an exclusive focus on fuel poverty, a joint approach, and a scheme with open or no eligibility requirements.

Table 3. Different approaches to household eligibility and assessment.

Approach	Assessment
Focus exclusively on fuel poverty	This approach dedicates the largest amount of resources to tackling fuel poverty. When overall public resources are limited, especially at a time when energy bills are at an all-time high, focusing on the most vulnerable households is the most equitable approach.
Focus on fuel poverty, with relaxed eligibility requirements (e.g., via the Flex approach)	This approach supports a range of household incomes, so can spread impacts across income groups. This approach can also allow economies of scale to be developed, i.e., through retrofitting a whole housing estate where most homes are low income. Quotas could help ensure resources are fairly distributed between different household income groups. Providing broad support to different income groups, means it overlaps with other schemes, such as those delivered by the local authorities.
No eligibility requirements	When measures are available without household eligibility requirements, experience shows most resource will go to higher income homes. However, there is a risk that fuel poor homes miss out, unless there is parallel focus via other delivery channels.

The previous iteration of ECO, CERT, had no eligibility requirements. Due to social factors and scheme design, this meant most measures went to higher income homes (a parallel scheme, Warm Front, focused on energy efficiency in fuel poor homes).³ Schemes without eligibility requirements have fewer steps to identify eligible homes. As a result, they are slightly better adapted to delivery at scale than schemes which target low income and fuel poor homes. CERT succeeded in undertaking mass retrofit, it exceeded its emissions reduction

³ UK government, 2014, **Evaluation of the CERT and CESP**



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target and evaluation found it was a successful vehicle for reducing household carbon emissions across Great Britain.⁴

ECO4 continues to focus on fuel poor homes. Eligible homes must be part of the ‘help to heat group’, which is defined as receiving some form of benefits (such as, jobseekers’ allowance, child tax credit) and meeting minimum income requirements. ECO4’s Flex route has slightly wider household qualifying criteria than the core supplier-led ECO4 scheme, which allows authorities to submit homes they consider eligible for energy efficiency works.

The future of eligibility requirements under ECO

While fuel poverty remains high in the UK, there remains a strong argument that energy efficiency funding should be focused on low-income homes. If the level of resource available for ECO was increased significantly, there would be an argument for broadening the eligibility requirements to enable more households to benefit. Regardless of investment in ECO, review of the obligation should consider how; data, different fuel poverty definitions, street-by-street works and complementing parallel schemes could improve targeting. Table 4 summarises recommendations to adjust eligibility requirements.

Table 4. Opportunities to improve ECO’s targeting.

Opportunity	Assessment
Complement other policies	ECO eligibility requirements could better complement parallel energy efficiency and heat decarbonisation schemes, such as, local authority led programmes and heat electrification grants. Complementing other policies enables authorities and energy suppliers to coordinate and pool funds. The Scottish Area Based Scheme and ECO 3 previously did this, but changes to the guidance in ECO 4 means this is no longer possible. ⁵
Use data more innovatively	Industry representatives highlight the increasing opportunity to use smart meter data to identify the worst performing homes. Crossing over benefits data with EPC bands in a government low-income verification tool should continue. Around 60% of homes in the UK now have smart meters, meaning a significant (growing) amount of data could be used by energy companies. Any use of consumers’ data would require careful consideration of people’s privacy and data rights.

⁴ Ibid

⁵ Existing Homes Alliance, 9 October 2023, **Rapid Review of Scottish Government Fuel Poverty Programme**



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Boost LA Flex Local authority Flex delivery (discussed below) could be improved to unlock a wider, more place-based blend of fuel poverty definitions.

4. Compliance and customer assurance

Without an effective compliance and assurance system, households cannot be fully confident they are protected from the risks of poorly conducted retrofit. Compliance includes the framework of technical processes and standards to ensure works are undertaken to a minimum level. Customer assurance refers to processes for resolving or renumeraling households when issues arise. Both compliance and assurance require improvements to align ECO with fuel poverty targets and ensure consumers get a fair deal.

Compliance

ECO4, in 2024, is guided by the compliance frameworks PAS 2035:2023 and PAS 2030:2023, which work in conjunction with each other. PAS 2035 is the main document in the framework, it specifies requirements relating to an initial assessment, identification of options, design, monitoring and evaluation. PAS 2035 applies to home upgrades in the context of a whole-house approach which considers the building as a system, rather than individual elements. PAS 2030 sets out critical aspects of retrofit design, it aims to provide a consistent installation process which shows the installer can deliver to client expectation and specification. This standards framework was born out of a recommendation to introduce a quality mark for domestic retrofit in the Bonfield Review.

Industry reporting indicates the current approach to compliance adds significant additional costs and time to home upgrades; some installers report compliance costs exceed £1000 per project. High levels of compliance and associated costs reduces the risk of poor-quality works, but also makes it more difficult for smaller scale retrofit projects to be financially viable. In larger retrofit projects higher spend dilutes the overall cost of compliance, which makes stricter compliance more viable. Labour and material costs for different jobs vary significantly, but face the same compliance tests; for example, labour and materials costs for loft insulation compared to external wall insulation are large; £2800 vs £19,500 for under Local Authority Delivery of the Green Homes Grant.⁶

⁶ UK government, 25 January 2024, **Green Homes Grant LAD and HUG release, January 2024**



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If ECO targeted more single-measure retrofits and less deep works, the compliance process would need to be adjusted to align it with the different risks and costs of shallower retrofit. The approach to compliance should be reviewed in line with the broader scheme design, particularly the depth of retrofit which ECO aims to achieve. Review of PAS by industry experts to improve the performance of parallel Great British Insulation Scheme has been completed and will be included in the ECO4 consultation scheduled for Spring 2024.

Customer assurance

Government-backed retrofit schemes provide assurance to households in receipt of measures that if there are project failures or issues caused by the works, they can be compensated. ECO4 requires that all measures must be delivered by TrustMark Registered Businesses. Assurance and compliance are linked. Robust consumer assurance should provide greater incentive for installers to have greater oversight of the quality of installation work and suitability of properties. This can work alongside PAS 2035 to facilitate a less costly approach to delivery.

Issues relating to insurance backed guarantees (IBGs) have been raised by industry, whereby the assurance does not provide adequate cover for households in all situations. Consumer guarantees should be proactive, remediate when works are not carried out correctly, and not linked to the trading status of the installer. Backstop insolvency guarantees and the tendency to compensate for loss are arguably the wrong approach for a fuel poverty scheme.

Experts argue TrustMark's approach to assurance does not provide sufficient cover in the case of a failure.⁷ For example, remuneration tends to be based on the original cost of the works rather than the cost of remediating the issue. Furthermore, the approach to assurance has no active relationship with the surveillance bodies and does not have competent resources on the street to check on the quality and capability of installers. Similarly, there is no audit of system designers to ensure operatives are competent to install their product or indeed that the product is robust. Finally, the timelines for lodging a claim are tight, consumers need to have notified the insurer within 30 days of identifying the fault, within which they need to confirm that the installer has ceased to trade. After that, consumers have only 2 weeks to prove they have exhausted all other insurance avenues before the insurer will proceed with their claim.

⁷ Citizens Advice, 9 February 2024, [Zero guarantee? Net Zero homes need better financial protections](#)



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5. Building types and geographies treated

The design of ECO privileges works in different building types and geographies. Currently, design of the scheme skews the obligation towards working in larger houses, rather than flats or other building types, despite there being high levels of fuel poverty in other settings. Reform of ECO should aim to balance delivering home upgrades in a way which align its core strengths with the varying fuel poverty levels in different types of homes.

Fuel poverty and efficiency in different settings, and ECO’s performance

Figure 2 shows the likelihood of fuel poverty is highest in converted flats and end terrace homes, but that in absolute terms most fuel poor homes live in semi-detached and mid-terrace homes. However, households living in detached properties have the largest average fuel poverty gap at £702, and since 2021 the gap has increased disproportionately compared to other homes.⁸

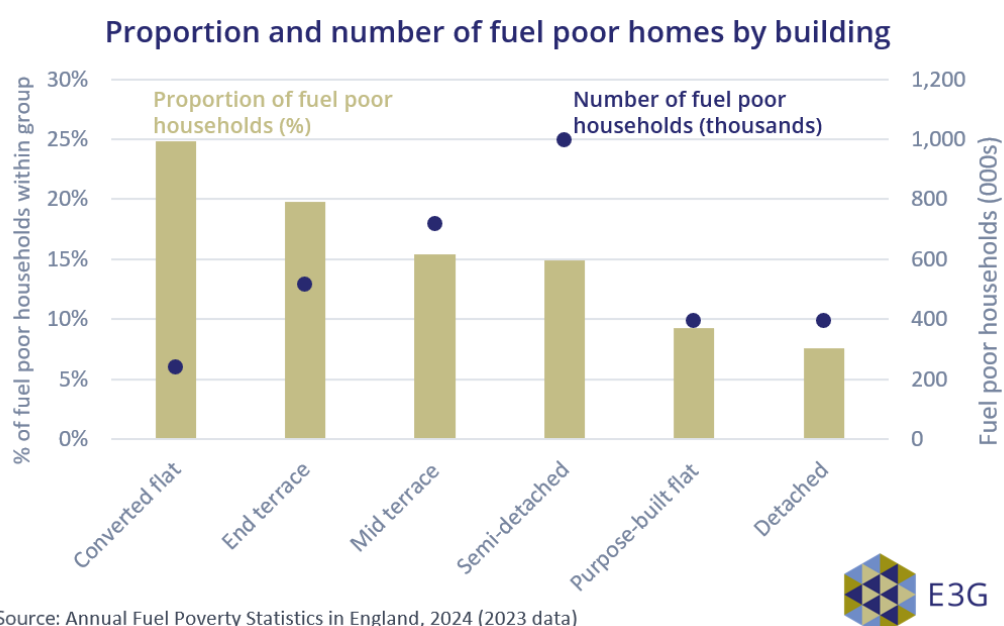


Figure 2. % of fuel poor within group and total number by building type

ECO4 has dramatically shifted to treating homes compared to flats, illustrated in Figure 3. Installers report that homes being treated are predominantly detached and off the gas grid. As discussed, these homes have seen a disproportionately high increase in fuel poverty since 2021 which could merit increased focus on these homes. However, if the absolute number of fuel poor homes in converted

⁸ The fuel poverty gap is the reduction in costs required to remove a household from fuel poverty.



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flats and terraced homes is much higher than in detached off-gas homes, this raises questions about whether ECO4's potential is maximised by focusing on a narrow group of properties.

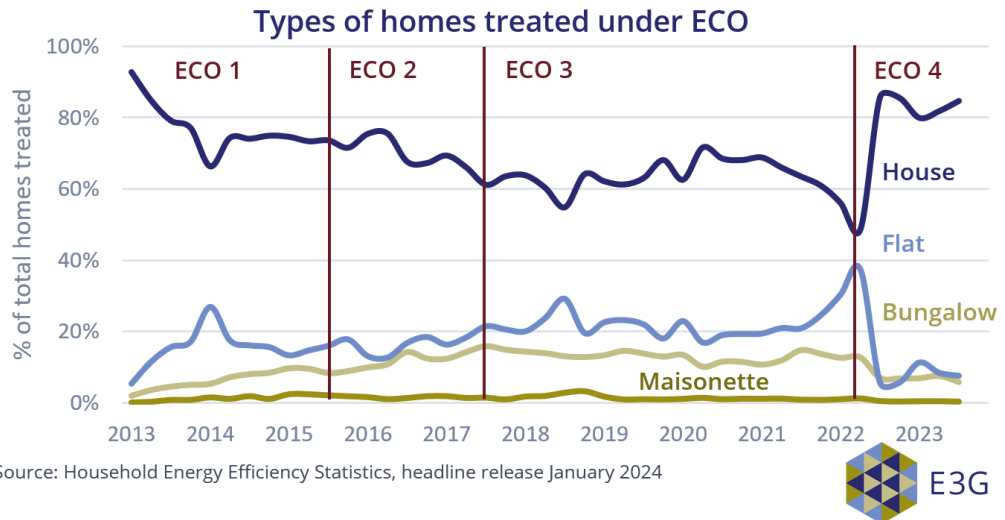


Figure 3. Different building types treated by ECO.

Dramatic switches in building types eligible for ECO support is not helpful for suppliers, whose operations are geared towards specific jobs with supply chains established in individual locations. Furthermore, this change overlapped with the introduction of a locally led scheme focused on off-grid fuel poor homes (HUG), meaning there was competition for the limited supply chains. Review of ECO should consider:

- > Which building types and geographies it is most effective at treating,
- > How it can complement parallel schemes working on similar buildings,
- > Ensuring any adjustments are predictable and gradual to ensure supply chains are not disrupted by constant shifting scheme design.

6. The role of local authorities in delivery

Local authorities are embedded in local areas, meaning they have the potential to combine information about households with buildings themselves. Since 2020 the government has increased authorities' role in fuel poverty alleviation and



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energy efficiency by increasing both the proportion of ECO4 delivery which can be undertaken in partnership with authorities from 10% to 50%, and introduced via separate grant funding for authorities. Although 50% of works can be undertaken under Flex, only 14.5% of measures have been delivered via this channel in ECO4. In this context, a review of ECO should consider how it can work more effectively with and alongside authorities.

The ECO4 LA Flex scheme enables local authorities to identify eligible households through their own means or via a third party, and then sign off on works. It aims to harness local authorities' knowledge of low income, poorly insulated homes to improve targeting, and household eligibility requirements in Flex are broader than the core route. Experts and stakeholders are positive about the potential role for local authorities in supporting ECO's delivery. Personalised approaches and visits from third sector and local organisations were found by evaluations of both ECO and the CERT and CESP programmes to be more effective at engaging vulnerable households than phone lines, leaflets, and advice at the door.⁹

Opportunities to ECO's working relationship with local authorities

Following a decade of funding cuts, local authorities' existing capacity to deliver retrofit programmes is inconsistent and requires resource and time to build capacity and expertise. Adequate resource with streamlined application processes should be provided to ensure all authorities can engage with the scheme. Funds for Flex should not be onerous to apply for to avoid creating an additional barrier to engage with the scheme.

The existing Flex mechanism already allows authorities to adjust eligibility criteria, supported by data and knowledge specific to their local area. This approach means ECO can target vulnerable residents based on local conditions. However, for highly resource constrained authorities this additional work discourages them from engaging with the scheme. More advanced roles are possible for authorities with more established teams and capabilities. Therefore, review of ECO should consider how it can support resource constrained authorities to understand programme requirements.

⁹ UK government, 2014, **Evaluation of CERT and CESP**



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