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Energy efficiency programmes and what we can learn from our neighbours

An exploration of European retrofit schemes and how they can inform our thinking about the ECO scheme and energy efficiency programmes in the UK

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2. Introduction

The UK, with its long history of energy efficiency programmes, particularly the Energy Company Obligation (ECO) scheme¹ and its predecessor programmes, has much to share with its European neighbours. The UK has just embarked on a new version of ECO, which makes significant changes in terms of the scale of the programme, how it is delivered, and who is eligible for support. The UK is also considering new energy efficiency programmes to help address rising energy bills.

In an effort to help address the cost of living crisis the UK Government under Liz Truss announced that green and social levies would be moved off of consumer bills and paid for through government spending. The shift from funding ECO through energy suppliers and consumer bills to government funding – even if temporary – is a radical departure from a funding model that has been in place for 30 years.

The current iteration of the UK supplier obligation is therefore a major change in the funding and delivery landscape for energy efficiency in UK homes and continues to be one of the best funded and most stable UK energy efficiency schemes. Given the threat posed by the energy crisis and the likelihood that, without mitigation, consumer energy bills will not return to their pre-crisis level for some time, it is important to consider how existing approaches can be enhanced or supported. With this in mind, we should be considering what we can learn from countries who have implemented schemes with similar objectives and design elements.

2.1. The ENSMOV Project

ENSMOV² (Enhancing the Implementation and Monitoring and Verification practices of Energy Saving Policies under Article 7 of the Energy Efficiency Directive) is a 3-year EU Horizon 2020-funded project which commenced in June 2019. The project is led by the Institute for European Energy and Climate Policy³.

2.2. What is Article 7?

Article 7 of the Energy Efficiency Directive (EED) requires Member States to cut their annual energy use by setting up an energy efficiency obligation scheme or using alternative measures (e.g. a loan scheme for households). An energy efficiency obligation scheme is a market mechanism that requires obligated parties (i.e. energy suppliers) to fund energy efficiency improvements of some kind.

ENSMOV is being delivered across 13 EU member states and the UK (Austria, Belgium, Bulgaria, Croatia, France, Germany, Greece, Hungary, Italy, Lithuania, Netherlands, Poland, Romania and the UK). The goal of the project has been to support all 27 Member States, accession countries

¹ <https://www.ofgem.gov.uk/environmental-and-social-schemes/energy-company-obligation-eco>

² <https://ensmov.eu/>

³ <http://www.ieecp.org>

and the UK to share learnings around energy efficiency obligation schemes and wider energy efficiency programmes.

The experiences of implementing Article 7 of the EED has shown that European Union Member States have limited time and resources to share learnings at an EU level and further afield. Similarly, these constraints limit their ability to research and adopt successful policy implementation approaches of other countries. The intention of the ENSMOV project is to facilitate the sharing of programme experiences to enable stronger policymaking across consortium members and across Europe.

2.3. The energy crisis in the UK

While Russian aggression has driven record high wholesale energy costs the UK has been left particularly exposed because of our reliance on natural gas for heating and electricity generation, our relative lack of gas storage infrastructure, the poor condition of our housing stock, and a market that was less able to weather the current storm than we had hoped. The result has been UK energy consumers facing skyrocketing energy bills which in turn has driven general inflation to levels not seen for many decades.

The International Monetary Fund recently found that consumers in the UK are being hit harder by inflation than any other country in Western Europe with the poorest the worst affected⁴ with the Centre for Cities⁵ pointing to “poor insulation and car dependency” as key drivers of regional differences in inflation rates.

The UK Government’s Energy Price Guarantee freeze on energy bills along with the previous Energy Support Scheme payments has given a welcome reprieve for many households and businesses. Questions remain about the level of support and its ability to target the most vulnerable. The cap on consumer prices, with the Treasury paying the difference, only makes the case for reducing demand through energy efficiency measures stronger.

As well as addressing these issues around the immediate support package we must be thinking long term about how to secure security of supply for the future to prevent ourselves falling into a similar situation again. This means decoupling the UK from volatile global fossil fuel markets by investing in the generation and storage of renewable energy, particularly wind and solar which are by far the cheapest forms of energy. Improving energy efficiency in buildings and electrifying heat are the necessary demand side corollaries to achieve this.

We must see a national programme of residential energy efficiency retrofit with a scheme that supports the most vulnerable with free measures and enables and incentivises the ‘able-to-pay’ market with attractive financing, expert and impartial advice, and guarantees of good quality work. Ensuring this is a priority is the fastest way to permanently reduce energy demand, cut costs and slash emissions whilst keeping people warm and safe.

⁴ <https://www.imf.org/en/Publications/WP/Issues/2022/07/28/Surging-Energy-Prices-in-Europe-in-the-Aftermath-of-the-War-How-to-Support-the-Vulnerable-521457>

⁵ <https://www.centreforcities.org/publication/out-of-pocket-the-cost-of-living-crisis/>

3. The ECO scheme

The UK's Energy Company Obligation (ECO) scheme is an internationally-regarded energy efficiency support scheme aimed at supporting low income households. The ECO scheme, first introduced in 2013 (building on earlier supplier obligation programmes that date back to the 1990s), is an energy efficiency scheme that obliges energy suppliers to provide energy efficiency measures to low income households in Great Britain. The scheme focuses on providing insulation and heating measures and, since its inception in 2013, has improved over 2.4m homes.

3.1. Financing of the scheme

ECO has historically been paid for through a levy on consumer energy bills – predominantly electricity bills. Before the current energy price crisis social and 'green' levies, of which ECO funding is one, accounted for as much as 23% of typical electricity bills. As wholesale prices have skyrocketed the share of bills going towards these levies has fallen so that under the Summer 2022 price cap the total contribution from green and social levies was 8% of bills. If households were now paying the Autumn 2022 price cap the share of these levies would have fallen to below 5%. Despite these levies now making up a small portion of overall bills the UK Government announced in September 2022 that ECO, along with other green and social levies, would be "temporarily" funded through Treasury spending. The decision to change the ECO funding model away from on-bill financing and, ultimately, onto taxation is a significant change that has received mixed responses from different quarters.

3.2. Level of funding

ECO, unlike many UK Government energy efficiency programmes, has benefitted from long term commitment and funding though it's important to note that this has likely been because the programme has been funded through energy bills rather than from government budgets. The level of funding has also fluctuated and the continuation of the scheme has been brought into question in the lead up to each transition period (e.g. between ECO3 and ECO4). Total funding for ECO4 initially rose to £1bn per year – a 50% increase on ECO3 levels – with an additional £1bn announced in the September mini-budget to be spread over the three years of the scheme. It is intended that this additional funding will go towards an 'ECO Plus' scheme⁶, similar to proposals championed in Summer 2022 by several stakeholder groups⁷. In practice, this looks likely to include broadened eligibility and the possibility of households part-funding measures. The Government's ECO Plus scheme is due to launch in April 2023.

3.3. Scheme delivery

It is widely accepted that improvements have been made with each new iteration of ECO, and its predecessor schemes, with improvements to administration, eligibility and the quality standards of installations. The latest version of ECO, ECO4, which will run until 2026, offers greater flexibility to local and devolved governments and energy suppliers to target scheme funding. The latest version of ECO looks to move towards a more multi-measure and whole house approach rather

⁶ <https://energysavingtrust.org.uk/what-is-the-uk-governments-eco-scheme/>

⁷ <https://www.theeig.co.uk/news/eco-plus-a-great-british-energy-saving-scheme/>

than installing single measures. There is also greater support for renewable heat, particularly heat pumps, and a marked move away from installing gas boilers.

3.4. Scheme beneficiaries: fuel poor vs better off households; vulnerable customers

The ECO scheme featured strongly in the work of the ENSMOV project as it is the longest running and among the most successful obligation schemes in Europe. An important area for sharing learnings has been the British scheme's focus on fuel poverty. Until recently it had been relatively uncommon in the EU for obligation schemes to target fuel poor or vulnerable households. In contrast, in the UK the ECO scheme and its predecessor schemes have always had this as a primary focus.

Many European countries are now looking to use their energy obligation schemes to support low income and fuel poor households to align with the proposed recast of the European Energy Efficiency Directive (EED)⁸. The recast EED was first proposed in July 2021 but has not been formally adopted. It reads: "Member States shall implement energy efficiency obligation schemes, alternative policy measures, or a combination of both, or programmes or measures financed under an Energy Efficiency National Fund, as a priority among people affected by energy poverty, vulnerable customers and, where applicable, people living in social housing." A definition of energy poverty is also now included in the proposed recast EED. Similar changes have also been proposed to the Energy Performance of Buildings Directive to make alleviation of energy poverty a key consideration.

3.5. What does the future of ECO look like?

The shift from funding ECO through energy suppliers and consumer bills to government funding – even if temporary – is a radical departure from a funding model that has been in place for 30 years. Other aspects of the UK's supplier obligation have also changed significantly this year with the launch of ECO4 – introducing large scale decentralised flexible targeting (50% of the total funding pot) and a stronger focus on a whole house/multiple measures approach. ECO4 has also seen the strongest move away from support for fossil fuel boilers to-date, though the scheme hasn't fully embraced the promotion of renewable heating.

The current iteration of the UK supplier obligation is therefore a major change in the funding and delivery landscape for energy efficiency in UK homes. It is therefore relevant to consider "Where do we go from here?" both in terms of approaches that could run alongside or as part of ECO to 2026, or as an alternative approach to funding residential energy efficiency beyond 2026.

3.5.1. Key questions to consider

Key questions to consider include:

On- or off-bill funding models

⁸ <https://www.enpor.eu/in-depth-energy-poverty-coverage-in-eed-and-epbd-recast-proposals/>

Does moving to a funding model based on general taxation make schemes more progressive?
Does funding a multi-billion pound scheme such as ECO through an on-bill model go some way to safeguarding that funding when governments are looking to make savings?

Consumer engagement routes

Consumer access to ECO is mediated usually through energy suppliers' delivery partner companies who will approach consumers who live in homes they think are suitable for retrofit. There is no central contact point where a householder can seek funding from ECO and no guarantee that funding will be available for any particular measure - limiting consumer choice and autonomy.

Incorporating better off households and addressing vulnerability

Whether and how to incorporate better off households and how vulnerability is addressed in the scheme. Is it worthwhile having one scheme that aims to support low income households as well as the better off? Should vulnerable customers be targeted alongside low income customers (even though many vulnerable customers are not low income)? How can this be made to work?

Encouraging multi-measure approaches, renewable heat

How multi-measure or whole house approaches can be encouraged and how the scheme can transition to supporting renewable heat.

European experiences, gathered through the ENSMOV project can inform the discussion of these questions, all of which have been explored in depth elsewhere across Europe. Ultimately, the question we should be asking is "How do we increase uptake of energy efficiency measures, focusing first on the homes that need them most?"

4. On- or off-bill funding models

Do on-bill funding approaches make sense during periods of very high energy costs?

The ECO scheme has always ultimately been funded through a levy on consumer energy bills. In periods of low energy cost, as has largely been the case for the past two decades or more, this approach is effective and not especially onerous on household bills. However, the current energy crisis has prompted a rethink when it comes to the merits (and even ethics) of on-bill financing of such schemes. While it is true that wealthier households tend to use more energy than poorer households, households in the lower income deciles spend a significantly larger proportion of their available income on energy⁹. Is it right that these poorer households, many of whom are eligible for ECO-funded measures, should be contributing to the funding pot? Or, indeed, that there are poor households contributing to ECO who receive very little ECO funding (e.g. those in the private rental sector). In recent months Energy Saving Trust has called for green and social levies to be removed from energy bills and instead funded via general taxation, which would produce more progressive outcomes. Many other organisations have proposed similar approaches¹⁰ and it now appears that this is the path the UK Government will take – “temporarily” suspending “green levies” and, we are told, financing the programmes they support through HM Treasury spending.

Most obligation-style schemes in Europe where energy providers are obligated in one way or another to contribute to improving energy efficiency finance these contributions through levies on the fuel they sell in much the same way as ECO is financed in GB. Funding models for other energy efficiency schemes in Europe are a mixture of public and private financing with households encouraged to self fund measures through cashback or partial grant funding approaches or through generous tax reductions. As the energy crisis continues across Europe energy agencies have been increasingly considering the merits of on- and off-bill financing approaches.

While financing schemes through consumer bills has been shown to be regressive¹¹ there is an argument to be made that separating funding for these programmes from government spending helps to safeguard them from cuts and improve their longevity. Broadly, this is the view taken by the environmental think tank E3G¹², who proposed issuing a “rebate using the Energy Bills Support Scheme mechanism to cover the cost of the Warm Home Discount and ECO this winter” rather than removing the levies that fund these programmes from bills altogether. They reflect that “The levy funding system for ECO and the WHD is a source of stability for suppliers which allows for easier administration and contracting with delivery partners”. They also argue that because the ECO scheme funds measures for low-income households it is less regressive than other social and green levies (e.g. the Feed-in Tariff). This is a view shared by National Energy Action¹³, who called for other levies to be removed from consumer bills but for ECO and the Warm

⁹ Frerk M and MacLean K (2017) Heat Decarbonisation: Potential impacts on social equity and fuel poverty, National Energy Action

¹⁰ <https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/Beyond%20ECO.pdf>

¹¹ Barrett J, Owen A and Taylor P (2018) Funding a Low Carbon Energy System: A fairer approach?, UK Energy Research Centre

¹² https://e3g.wpenginepowered.com/wp-content/uploads/Green-Levies_E3G-briefing.pdf

¹³ <https://www.nea.org.uk/publications/uk-fuel-poverty-monitor-2020-21/>

Home Discount to remain. Given the need to retrofit as many homes as possible this decade to combat rising energy bills and carbon emissions the Energy Saving Trust view is that regardless of the funding model these programmes should be placed on a stable footing in terms of financing and political buy-in.

5. Enhancing consumer engagement

A crucial factor that is often neglected when designing new or improved energy efficiency schemes, and something of relevance in a UK context where support programmes, and levels of support, differ across regions and nations, is the consumer experience of interacting with programmes. One critique of the ECO scheme that has not been addressed is that consumer access to it is always mediated – usually through energy suppliers’ delivery partner companies. There is no central contact point where a householder can seek funding from ECO and no guarantee that funding will be available for a particular measure that a household is interested in. This barrier between the scheme and consumers limits consumer choice and autonomy and likely prevents wider uptake of the scheme. The fact that consumers do not directly interact with ECO is likely a factor in the scheme having limited recognition among the general public compared to more consumer-facing but shorter-lived programmes such as the Green Homes Grant.

(Box 1) CoachCoPro, Paris, France

CoachCopro is a one-stop shop programme focused on apartment buildings in Paris, working both with individual apartment owners and with the *Syndic* – the name given to the group of co-owners of an apartment building. CoachCoPro works to build demand from flat owners and residents and to strengthen the supply chain and bring the two sides together.

A dedicated advisor is allocated to each apartment building with an online platform also available to provide useful resources (e.g. interactive map of case studies, FAQs etc) and access to the documents needed to progress the works. An energy audit is needed before work can take place with the City of Paris offering a €5,000 grant for the most detailed version of the audit.

On the supply side, training is provided

Given that most homes will need to be retrofitted to some degree for the UK to meet climate targets, and there is a suggestion that ECO could be expanded to incorporate a wider cohort of households, it is worth considering whether the scheme’s approach to consumer engagement could be improved and where there are examples of schemes giving more choice and autonomy to households.

The Paris CoachCoPro scheme (Box 1) offers a one stop shop service to homeowners and tenants in apartment buildings. The scheme aims to encourage the retrofit of apartment buildings by offering advice and tools to households and access to experts who can deliver energy audits and talk through options for their building.

5.1. One stop shops

(Box 3) Portal CasA+, Portugal

Launched in March 2021 casA+ is a free digital platform that encourages consumers (owners as well as tenants of a property) to store <https://www.nea.org.uk/publications/uk-fuel-poverty-monitor-2020-21/> information about their home, appliances and energy data in one central location. Based on this information, casA+ suggests renovation measures to improve efficiency. The platform allows homeowners to consult a qualified expert or request an AQUA+ auditor to visit their homes and assess measures to improve their energy and water efficiency.

The One Stop Shop advice service approach is growing in popularity across Europe specifically because it facilitates strong consumer engagement and seeks to address common barriers such as lack of knowledge of the best approach, accessing skilled tradespeople and financing. The Scottish Government, the Northern Ireland Executive and Republic of Ireland Government are all pursuing a one stop shop-style approach, though in Scotland and the Republic of Ireland programmes are regionally delivered. While the CoachCoPro example in Paris and the Picardie Pass (Box 2) demonstrates a one stop shop approach working at a local level, these efforts by national governments are intended to offer many of the benefits of a locally-delivered scheme as part of a national, centrally-delivered programme. Namely, leveraging a greater degree of local knowledge if one stop shops are locally-situated – as is the case in the Republic of Ireland (Box 4). Delivering

(Box 4) National Retrofitting Scheme, Ireland

Launched in February 2022, the scheme pledges to improve the energy efficiency of 500,000 homes by 2030 (1/3 homes in Ireland). The scheme includes a range of measures aimed to drive up the demand for retrofit and seeks to encourage a whole house approach. These measures include:

- a National Home Energy Upgrade Scheme, which provides a grant of up to 50 per cent (increased from 30-35 per cent currently available) of the cost of a typical deep retrofit.
- A network of local One Stop Shops that offers a hassle-free project management service from the start to finish, including access to finance for energy upgrades.
- Free energy upgrades for those at risk of energy poverty.
- an enhanced grant rate (equivalent to 80 per cent) for attic and cavity wall insulation for all households. Intended to address the current energy crisis
- an investment of €8 billion to 2030 to enable the supply chain to scale up

The increased grant support, and free energy upgrades are supported by ring-fenced funds from a Carbon tax. Deeper retrofit is encouraged by grant funding only being available for properties that move up several energy bands and have achieved a minimum 100 kWh improvement in energy use. The engagement of obligated parties is encouraged through a 5-10% grant uplift if measures are delivered by an obligated party. We have been informed that low cost loans are being considered for future versions of the scheme.

advice, and offering enhanced consumer support, through a one stop shop approach can also provide consumers with greater agency and choice over the approach they wish to take in their own home with expert advisors able to recommend more bespoke approaches that reflect a customer's needs. One stop shops are now being delivered in several other European countries and regions, including Portugal (Box 3), the Netherlands (Box 5) and Denmark (Box 6)¹⁴.

5.2. Other successful approaches

There have been several additional schemes that have been successful in engaging with consumers and offering them an intuitive application and smooth delivery process. One such scheme is Denmark's Building Pool (Box 6), which is a relatively simple post-install grant scheme that has nonetheless seen strong consumer demand owing to strong messaging around the scheme¹⁵, the regular but limited funding rounds, and Denmark's already strong supply chain and installer base, which has improved the customer experience.

¹⁴ <https://www.managenergy.eu/node/927>

¹⁵ <https://www.bolius.dk/fac-tilskud-fra-bygningspuljen-saadan-ansoeger-du-naar-den-frigives-95013>

(Box 5) Reimarkt, Netherlands

Unlike the other case studies provided, Reimarkt is a private company that was set up in 2013 to act as a broker between renovation suppliers and building users. Reimarkt aims to accelerate the process of transitioning away from natural gas to sustainable heating and electricity. This one stop shop model works together with suppliers, municipalities, and housing corporations to develop products that match the technical characteristic of the housing stock, the policy of the municipality and the wishes of the residents.

As well as an online offering Reimarkt has physical offices in 6 locations in Netherlands, selling energy efficient retrofits both offline and online. The online energy check application helps customers see their energy consumption and compare the result to other households with similar family size. In addition to providing customers with products, Reimarkt supports customers throughout their retrofit journey especially in gaining access to grants and financial schemes to support their renovation work.

(Box 6) Building Pool, Denmark

Building Pool is a grant launched in 2020, with funding agreed until 2026, designed to support homeowners to make energy improvements to their buildings. It aims to particularly incentivise the installation of heat pumps by earmarking 80% of future funding rounds to heat pump installations and explicitly stating that bids into the scheme that include heat pump installations will be favoured. More controversially, unlike the installation of other measures, an energy label is not required if a heat pump is being installed by itself.

The grant also covers energy improvement measures such as roof and solid outer-wall insulations, window replacement, and ventilation systems among other measures. Only buildings with energy labels E, F and G are eligible to apply for the grant for these additional measures.

The grant is opened several times a year and runs on a first-come, first-served basis with limited funding. Recent funding rounds have been fully allocated in a matter of days proving the scheme's popularity. The grant is paid to the homeowner post-install, likely limiting the number of households who can benefit.

What many of these schemes have in common is a generous and uncomplicated offer and a clear application process (often involving an advice offering). Successful schemes typically align well with pre-existing and related schemes, such as the MaPrimeRénov' scheme¹⁶ in France (Box

¹⁶ [MaPrimeRénov' : la prime pour la rénovation énergétique | economie.gouv.fr](https://www.economie.gouv.fr/ma-prime-renov)

7). This approach has often been lacking in the UK, where multiple, often short term, schemes have markedly different offerings and application processes and rarely work synergistically with one another. For example, previous rounds of ECO have not allowed ECO funded measures to be combined with measures funded from other sources (eg local authority schemes) in one project. This means local authorities and other potential ECO applicants must decide which funding source is likely to be most effective and choose at the pre-application stage. A better approach would be to allow ECO funding to be blended with other funding sources to allow deeper retrofit of properties and more homes to be improved.

(Box 7) Certificats d'Economie d'Energie (CEE), MaPrimeRénov' Copropriété, and ECO-PTZ (Zero Rate Loan) France

The Certificats d'Economie d'Energie (CEE) is the French Government's supplier obligation scheme (akin to ECO in the UK). This scheme is able to work alongside the MaPrimeRénov', which provides lump sum financing for insulation, heating, ventilation upgrades or energy audit work for houses or apartment. A linked fund MaPrimeRenov' Copropriete provides funds for works in the communal areas of blocks of flats. The funding is provided at five different levels based on the household income. The amount received also depends on the measures being installed. Landlords who receive the funding are restricted in their ability to raise rents as a result of the improved home. An online calculator helps households to know what funding they can get depending on the project and their situation. The funding can be used in addition to any funding received under the CEE (French energy supplier scheme) and is also subject to a reduced tax rate of 5.5%. Works must be carried out by a qualified retrofit professional under the Recognized Guarantor of the Environment (RGE) scheme. There are additional bonuses paid where the improvement brings the homes out of the very energy inefficient category or into a high performing category. Additional grant funding is available for each low income household in a block. The French Government have made sure that this funding can work alongside CEE funding. CEE funding can be used to fund individual measures as part of a whole building renovation and allows suppliers to receive additional credits under the scheme while reducing the cost to households in the block of flats. Much, if not all, of the remaining retrofit and project management costs can be covered by an ECO-PTZ zero-interest

ansitions in a number of ways how can it better

integrate with other funding sources and schemes? **Taking lessons from the French example in Box 7 we can see that it is possible to design an obligation scheme to work alongside smaller or more focused schemes and incorporate funding for both able to pay and low income households.**

We can see that there have been several consumer-facing schemes that have proven successful in terms of the quantity of measures installed and the resulting energy, cost and carbon savings, but also in terms of consumer buy-in. Achieving retrofit at the scale required will need widespread consumer interest and support, meaning the benefits must be well-communicated, the process made as simple as possible, and the barrier of upfront costs mitigated with attractive financing options. The UK energy efficiency support offering is a patchwork with longstanding schemes in the devolved nations having very different eligibility criteria and advice offerings. We also see, particularly in England, several local authority schemes which struggle to cut through. These schemes do not always work effectively alongside the GB-wide ECO scheme which, after the closure of the Green Homes Grant, remains the most significant source of energy efficiency funding for private tenure housing.

5.3. A localised approach to drive greater engagement?

There has been some suggestion that taking a more local approach could drive greater engagement in energy efficiency programmes, particularly for those households who may be hard to reach. The benefits of local administration and delivery are often described as being able to utilise local knowledge and practices and being able to support local businesses and supply chains. Anecdotally, it appears that a well-resourced localised approach can drive greater engagement (though there are many factors at play).

However, obligation schemes, such as ECO, have tended to be centrally administered at the national level. Energy efficiency programmes more generally have been administered and delivered at both the national and sub-national level in different European countries.

Frequently cited drawbacks to locally-focused approaches include there being a risk that a locally-delivered schemes produce a provision 'postcode lottery' where the areas with the most resources and access to expertise receive a disproportionate amount of funding and local authority areas with fewer resources, who may benefit more from such schemes, do not undertake programmes or access funding. National governments can address this challenge by providing free expert support to enable all local governments to participate on an equal footing. This is the approach taken in Scotland where a dedicated ECO Manager assists local authorities with their bids into the ECO funding pot. This has enabled Scotland to leverage a greater share of ECO funding over time. The Welsh Government hopes to provide an advisory and supporting role to Welsh local authorities hoping to bid for ECO4 funding.

Common challenges faced by centrally-administered schemes include: failing to identify the most vulnerable in a given locality because local knowledge is not well-integrated, attempting to use standardised approaches regardless of the local context (e.g. not taking account of local

climates, weather patterns or building practices), and failing to integrate and enhance existing local or national schemes – instead, duplicating effort and adding to the administrative burden of these small schemes.

It is clear from the European examples presented in this chapter that **national governments eager to maximise the impact of centralised energy efficiency programmes should look to work with colleagues in local government and regional stakeholders to help identify high impact areas and enable national schemes to integrate with regionally or locally-administered programmes** to limit duplication of effort and enhance the consumer offering of their schemes. By working collaboratively across different levels of government and between the public and private sectors greater consumer engagement can be achieved with the consumer offering being enhanced.

5.4. Using the ECO LA and Supplier Flex to drive greater engagement

The UK's decision to allow up to half of the available ECO4 funding to be delivered through either local authority or supplier 'Flex' would be, as far as we're aware, the most ambitious local government-led delivery of an obligation scheme in Europe. The rationale for taking this approach is that the Flex element will help to identify qualifying low income households who might be missed by the schemes standard approach to eligibility. This could enable a large national scheme to achieve some of the benefits of a more localised approach.

A household can qualify under ECO Flex through four referral routes:

1. Household income below £31,000
2. Proxy targeting – households need a combination of two low income or low income and vulnerable proxies (e.g. being in receipt of a council tax rebate and receiving free school meals)¹⁷.
3. NHS referrals – introduced to support low income and vulnerable households whose health conditions may be impacted further by living in a cold home. Households under this route can only be referred by either an NHS Foundation Trust, NHS Trust, NHS Health Board or a General Medical Practitioner
4. Bespoke targeting – intended to incentivise “innovative methods” of targeting low income and vulnerable households. A local authority or supplier must submit a proposal detailing how their approach would better target eligible households. It is intended that measures delivered through an approved targeting methodology will benefit from a 10% uplift

ECO4 also allows devolved governments to refer households via the Flex element, including route 4, which could allow them to better integrate ECO funding into their existing schemes.

¹⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1010366/eco4-consultation.pdf. See Table 8 on page 34 for full breakdown of eligible proxies.

While there are concerns about some local authorities' ability to engage with ECO Flex routes, **route 4 in particular could allow for better and more localised targeting and better integration with other schemes (particularly in the devolved nations)**. This could mean greater uptake and engagement with particular household types or properties able to be targeted.

6. Whether and how to incorporate better off households

Another challenge facing energy efficiency programmes, and being increasingly considered as part of the ECO offering, is whether and how to incorporate better off households, able to fully- or part-fund measures.

The September 2022 mini-budget contained little detail on future energy efficiency investments or programmes but did make reference to an additional £1bn of funding over three years for the ECO scheme. The eligibility attached to this funding seemed to suggest that rather than focusing on low income per se this funding would be allocated based on poor building efficiency and a household being in a low council tax band. The main criticism levelled at the then-Chancellor's Spring 2022 cost of living support payments were that distributing this support based on council tax bands would be ineffective at targeting the most vulnerable or those on the lowest incomes because council tax bands are a poor proxy for low income or vulnerability. Does this mean that we can assume, whether by accident or design, that this additional £1bn is going to be spent supporting some better off households?

The question of whether it is desirable to include support for better off households alongside support for vulnerable or low income households in one scheme is a perennial one in energy policy. In general, in the UK, the approach has been to separate out support for low income or fuel poor households from programmes aimed at the 'able to pay'. In Scotland, the approach has differed with all households encouraged to access advice and support through the Home Energy Scotland advice service before being triaged into the appropriate support programme. The Welsh Government recently consulted on the future of its own fuel poverty support service, the Warm Homes Programme, and asked respondents for their views on integrating support for better off households into the overall scheme. These questions received mixed responses.

(Box 8) Superbonus 110, Italy

There are several tax relief schemes that support energy efficiency and renewable energy in Italy. These include: Bonus Casa, Ecobonus, Bonus Facciate and Superbonus 110.

Superbonus 110 is a tax relief scheme introduced by the Italian government to support residential property owners to undertake energy efficiency and seismic activity improvement measures. Launched in 2020 it was designed to stimulate the economy at the outset of the COVID-19 pandemic and built on the Ecobonus scheme which operated similarly but offered lower levels of tax relief.

Superbonus 110 provides a tax relief of 110 percent of the cost of eligible measures.

Eligible measures are categorised as either leading or secondary. Energy-related leading improvements are either thermal insulation of more than 25% of the façade or replacement of space heating system (this can be a replacement with a condensing boiler as well as a heat pump). Once the leading improvements are undertaken, secondary improvements such as windows replacement, solar

The drawbacks of taking a more integrated approach largely equate to concerns that the limited public funds for these schemes will be monopolised by better off households who tend to have more capacity to engage with schemes and are more likely to own their own home and so have one less barrier to overcome when deciding to undertake a programme of retrofit. Another issue that is often raised is that better off households, if given the choice, might tend to opt for more expensive but less impactful measures – in terms of carbon reduction or increased thermal comfort – such as new double glazing. There are approaches that can be taken to help mitigate these concerns. Firstly, **a portion of any available funding could be ringfenced for low income households**. There is precedent for taking this approach in Northern Ireland where 80% of the Northern Ireland Sustainable Energy Programme (NISEP) – which operates similarly to a supplier obligation – is ringfenced for fuel poor consumers. There are also ‘softer’ approaches that could be taken such as focusing marketing and communications campaigns towards low income or vulnerable households or primarily relying on referrals into the service from outside support agencies to provide a better balance between support for low income households and better off households.

Taking a more integrated approach can prove beneficial in a number of ways. Providing a service that is open to everyone can reduce any stigma that a person might feel in reaching out for support, even if once they’ve engaged with the scheme a greater degree of grant funding or deeper advice is provided. Having one scheme, available to everyone, provides a much clearer consumer offering and one point of contact. Taking a more universal approach can also prevent people ‘falling through the cracks’ that can be left when a more targeted or prescriptive approach to eligibility is taken. However, to reach the most vulnerable some degree of proactive outreach is likely to be needed.

By incorporating better off households who are able to part-fund measures or take out loans instead of grants it is possible to design a scheme that uses these funds to subsidise grant funded measures for fuel poor or lower income households. Taking this approach could drive better rates of retrofit than could be achieved otherwise. Finally, offering a more universal scheme open to all gives greater scope for whole building or area-based approaches. **We can see this working in action as part of the MaPrimeRénov’ Copropriété (Box 7) where low income households are provided with additional grant funding making it more likely that an entire apartment block can be completed, lowering overall costs and improving gains in thermal efficiency.**

While in Europe many schemes were not designed to primarily support fuel poor households, in the UK this has tended to be the primary or initial focus of programmes with the challenge being to incorporate better off households after the fact. Arguably the most successful example of this in a UK context is the Home Energy Scotland programme which offers one point of entry to consumers before triaging them based on need. This service offers zero-interest loan financing and cashback grants to encourage the installation of particular measures for those who are able to pay and grant funding for low income households. This scheme has proven very popular and offers several lessons to other governments looking to implement energy efficiency support programmes.

Allowing ECO and other national retrofit programmes to fund measures for better off households comes with additional administrative challenges and would need careful consideration. But,

given the need to retrofit the majority of UK homes to some degree, enabling better of households to access competitive upfront financing through the same programme that is already delivering thousands of retrofits per year through an established supply chain is an option well worth considering. Taking this approach has proven beneficial elsewhere in Europe.

7. How to achieve a multi-measure approach

The intention of ECO4 is to achieve deeper retrofit and a more whole-house approach where possible. While this is a welcome aim, likely to achieve greater carbon savings and reduced running costs, we have heard anecdotally from installers and industry bodies that more stringent whole house targets have made it more difficult to identify eligible properties.

What lessons can we have learn from other programmes that have been successful in achieving a multi-measure or whole house approach?

7.1. *Greater scheme flexibility in terms of measures and funding*

If challenges identifying suitable properties persist introducing greater flexibility to the scheme could help to encourage the installation of more measures and measures that are more tailored to a particular property's needs.

The enhanced role of the Supplier and Local Authority Flex portion of ECO4 offers flexibility in terms of household targeting and eligibility but does not allow any additional flexibility in terms of the measures that can be installed. This is a missed opportunity to give local authorities and their partners a bigger say in what suite of measures will work best for properties in their area. With the right checks in place to ensure suitable measures are being installed, allowing this additional flexibility could increase the number of measures installed in individual properties and promote a more tailored, whole house approach.

ECO4 also allows devolved governments to refer households via the Flex element which could allow them to better integrate ECO funding into their existing schemes.

Despite this the ability to combine different funding sources in one property or for one measure remains limited under ECO4. While ECO does nominally allow for different measures in one property to be funded by ECO and another scheme (such as the Home Upgrade Grant or a devolved nation funding programme) in practice this has proven to be complex with measures funded by another route not able to be installed concurrently with ECO-funded measures. Individual measures can also only be funded by one scheme – there can be no blending of funding for Solid Wall Insulation for example. While there are practical reasons why blended funding for individual measures is challenging, not least the risk of double counting savings and attributing any savings to particular schemes (a challenge discussed at length through the ENSMOV project¹⁸), it should be possible to streamline the process of combining funding for a given property and so allow for better integration and greater deployment of more expensive measures. Helping to promote a whole house approach.

¹⁸ <https://ensmov.eu/recording-dealing-with-additionality-in-the-context-of-article-7-eed-experiences-about-monitoring-and-energy-savings-calculations/>

7.2. Price signalling

While less relevant in previous versions of ECO which have offered full grant funding, the suggestion that ECO could move to incorporate elements of self funding provides an opportunity to encourage the installation of more measures and specific technologies through price signalling. This has proven effective as part of the Irish National Retrofitting Scheme where larger grants are available for heat pumps. A similar approach is taken as part of the Home Energy Scotland zero interest loan¹⁹ where additional cashback is offered for particular measures.

As we've seen from the example of ECO-PTZ (Zero Rate Loan) (Box 7), this additional financing can come from private lenders as well as the more common government lending seen in Home Energy Scotland, Ireland's National Retrofitting Scheme and the Danish Building Pool, among others.

7.3. Scheme design

Several schemes also seek to drive the installation of multiple measures and particular technologies through the scheme design itself. **It is quite common for schemes to require a property to have improved by two energy classes. This is the case in the Italian Superbonus 110 scheme (Box 8) as well as the Irish National Retrofitting Scheme (Box 4).** As part of the Irish scheme a building must increase both its energy rating by at least two levels to a BER B2 and improve its energy usage by at least 100 kWh. This encourages a deeper, multi-measure retrofit approach enabled by their One Stop Shop advice service and Home Energy Assessment audit. Alignment with other programmes is also a key pillar of the scheme and households can receive an additional 5-10% grant if their retrofit is delivered by an obligated party. Requiring a kWh improvement also has the benefit of encouraging fabric measures and more efficient electric heating systems over renewable energy generation which can dominate applications if energy class improvements are the only success metric.

Particular technologies can also be favoured in the application process (as happens in the Danish Building Pool's preference for heat pumps (Box 6)) or as part of the eligibility, as happens in the Italian Superbonus 110 scheme (Box 8). Both of these schemes were designed to have primary and secondary measures with secondary measures only eligible once primary measures had been included in an application. The primary or *leading* energy-related measures in the Italian Superbonus 110 are heat pumps and external wall insulation. These higher value and more impactful measures must be included before secondary measures such as window replacement, solar panels, electric vehicle charging and building automation can be included. By favouring or requiring certain technologies to be installed before other measures these programmes encourage the installation of multiple measures and households to consider a more whole house approach.

¹⁹ <https://www.homeenergyscotland.org/find-funding-grants-and-loans/interest-free-loans/detail/>
<https://www.homeenergyscotland.org/find-funding-grants-and-loans/interest-free-loans/detail/>

7.4. Advice

Regardless of whether a household is receiving insulation or clean heat measures through full grant funding or an element of self funding it is clear that expert and impartial advice encourages the uptake of schemes overall and a more multi-measure whole house approach. Whether advice is delivered through a one stop shop-style offering such as Home Energy Scotland or the Irish National Retrofitting Scheme, or through an energy assessment and auditing approach, as is the case in the Danish Building Pool programme (Box 6), Italian Superbonus 110 (Box 8) and Portuguese Portal CasA+ programme (Box 3), the value of expert and impartial advice cannot be overstated. In all of these examples the provision of advice helps to remove the significant initial barrier of not knowing what to do first or what to prioritise. The best programmes also offer a degree of project management so that engaging with different tradespeople is undertaken by the scheme provider, further streamlining the process for households.

8. How do we increase uptake of the ECO scheme?

ECO4 and the different path it looks to be charting offer plenty of opportunities to reach more households, better utilise local knowledge and target local need and poses questions about what any future support scheme should look to achieve and how it should be funded. A greatly expanded and differently-focused scheme also presents challenges and risks.

The increased scale of the ECO scheme, its potential transition to offering funding to more self-funding households, and the decision to distribute up to 50% of the funding via local authorities and devolved governments through ECO Flex all offer opportunities to better integrate this sizeable funding pot with existing smaller schemes to enhance their work and cut out the duplication of effort and confusion that has occurred in previous iterations.

Recommendations

Given the need to retrofit as many homes as possible this decade to combat rising energy bills and carbon emissions our view is that regardless of the funding model **programmes such as ECO should be placed on a stable footing in terms of financing and political buy-in**. This will help to drive the improvements in the supply chain needed to meet future demand.

Boost engagement

As the level of ECO funding increases, a more whole-house approach is desired, and it looks increasingly likely that eligibility will expand beyond the previous cohorts it will be necessary to increase awareness and engagement of the programme. This can be achieved by adopting the following:

- **Greater publicity.** Consumer awareness of ECO is low, in part because the supplier obligation model has meant that the consumers tend to engage with their supplier or a third party delivery partners rather than with the scheme itself. The role ECO plays in decarbonising homes should be recognised and promoted.
- **Improve consumer agency by making ECO more demand responsive.** Consumers who believe they may be eligible for support should be able to proactively contact scheme administrators directly.
- **Strengthen the consumer pathway with a clear offer and application process** and 'hand holding' for those who need it.
- **Facilitate this positive customer journey with robust advice provision**, ideally moving towards a One Stop Shop offering that is able to offer expert, impartial and bespoke advice to all and signpost to further support. This will encourage uptake and deeper retrofit. We know from our work delivering the Home Energy Scotland advice service that 44% of callers go on to install energy efficiency measures.

- **Incorporate with other schemes and work with local partners** to identify properties and approaches. Allowing expensive individual measures to be funded from different sources and ECO to better integrate with other programmes more generally would drive greater deployment of energy efficiency measures and clean heat and improve partnership working.
- **Seize the opportunity of LA and Supplier Flex** by enabling better localised targeting and, in time, programme design.

Adopt ECO Plus elements

A recent survey of ECO installers²⁰ and the supply chain highlighted the value of ECO in its current form and the ability and willingness of the sector to expand into supporting the ‘able-to-pay’ market through an extended programme using the same administrative systems but targeting a wider group of households. They found that the current ECO delivery mechanism is viewed as an effective way to deliver an able to pay scheme such as the ECO Plus programme proposed by industry figures in Summer 2022²¹. While final details are yet to be decided, it appears that the UK Government’s ECO Plus scheme differs from these proposals. For this reason, we still believe it is worthwhile considering the original ECO Plus proposal and the views of ECO installers and the supply chain who were asked for their views on the industry proposals. Over 12 months, respondents were confident that they could increase capacity between 50% and 100% with the availability of ECO Plus funding and that the introduction of ECO Plus would have a positive impact on business growth, employment and investment in innovation. To meet our climate targets, improve energy security and reduce energy bills we need to see an ambitious programme of retrofit such as an ECO Plus-style approach. With that in mind, we believe the UK Government should consider adopting several of the original ECO Plus elements:

- **Move towards allowing an element of self-funding with low cost financing being available** to self-funding households.
- **Crucially, ring-fence the majority of funding for low income and vulnerable households, coupled with soft targeting measures that ensure ECO continues to primarily support the least able to pay and worst homes.**
- **Utilise and invest in existing supply chains and admin systems.** ECO is one of the longest-running and most successful energy efficiency schemes in Europe. The existing pool of designers, installers and suppliers should be leaned upon and supported to increase capacity with government funding available to train additional staff and guarantees of work.

²⁰ <https://gemserv.com/our-thoughts/proposed-energy-efficiency-scheme-eco-plus/>

²¹ <https://www.theeig.co.uk/news/eco-plus-a-great-british-energy-saving-scheme/>

Encourage multi-measure approach

It is right that the latest iteration of ECO is looking to move towards the installation of more low carbon heat systems and multiple energy efficiency measures. This is essential for meeting our decarbonisation targets and enabling everyone to benefit from the transition to efficient and low cost low carbon heating but makes the delivery of ECO more challenging.

- **Incentivise heat pump adoption and particular energy efficiency measures as part of the scheme** by considering the range of measures taken elsewhere in Europe to drive adoption (e.g. increased grant funding or tax breaks for heat pumps, ventilation or solid wall insulation; designing the able to pay portion of the scheme to incorporate primary and secondary measures)
- **Greater flexibility in terms of eligible measures.** We have heard anecdotally from long-time ECO installers that it has been challenging finding suitable eligible properties to retrofit with multiple measures. Providing more flexibility in terms of which measures can be installed in particular properties would enable more homes to be retrofitted.
- **Combining funding sources for expensive measures,** such as External Wall Insulation and heat pumps, would enable more homes to be retrofitted with these expensive but effective measures.
- **Require kWh improvement as well as improvements in EPC bands.** This would encourage deeper retrofit and the installation of heat pumps which are not favoured under the current SAP methodology that underpins EPCs.