

Institute for Public Policy Research



BEYOND ECO

THE FUTURE OF FUEL POVERTY SUPPORT

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LIST OF ABBREVIATIONS

- BEIS Department for Business, Energy and Industrial Strategy
- CERO Carbon Emissions Reduction Obligation
- CSCO Carbon Saving Community Obligation
- DNO Distributed network operator
- DWP Department for Work and Pensions
- ECO Energy Company Obligation
- EPC Energy Performance Certificate
- FREE Future of Rural Energy England
- GDN Gas distribution network
- GP General practitioner
- HEED Homes Energy Efficiency Database
- HEEP Home Energy Efficiency Programme
- HHCRO Home Heating Cost Reduction Obligation
- LIHC Low Income High Costs
- LPG Liquid petroleum gas
- MtCO₂ metric tons of carbon dioxide
- NEA National Energy Action
- NEED National Energy Efficiency Data-Framework
- NHS National Health Service
- NICE National Institute for Health and Care Excellence
- PSWMR Provisional Solid Wall Minimum Requirement
- RIIO Returns = Incentives + Innovation + Outputs
- UKERC UK Energy Research Centre
- VOA Valuation Office Agency

SUMMARY

Fuel poverty is a fact of life for 2.5 million households across England. It is also an increasing problem, with the number of households in fuel poverty rising by just under 5 per cent from 2014 to 2015. The average fuel poverty gap – the amount by which a fuel-poor household’s energy bills exceed reasonable costs each year – was £353 in 2015. As a consequence, too many people are forced to make unacceptable choices between ‘heating or eating’. At its worst, fuel poverty can contribute to premature winter deaths – around 10,000 deaths in 2016–2017 were related to cold homes.

Fuel poverty and its consequences are largely preventable through the right policy interventions, including action on energy prices, direct financial support to relevant households and energy efficiency schemes. However, it is through improving energy efficiency that the most cost-effective and long-lasting difference could be made in reducing fuel poverty.

To that end, the government has set out its ambition to upgrade as many fuel-poor homes in England ‘as is reasonably practicable’ to band C of the Energy Performance Certificate (EPC) by 2030, which is a certificate giving the energy efficiency rating of a property. The main policy aimed at achieving this target is the government’s Energy Company Obligation (ECO), which is now the primary policy aimed at permanently alleviating fuel poverty in England.

However, despite some moderate progress in achieving its interim objectives, this report finds that ECO isn’t working. As currently construed, ECO will not deliver the step-change in improving the energy efficiency of the properties of fuel-poor households that England needs. The Committee on Fuel Poverty estimates that only 11 per cent of fuel-poor homes will have reached band C by 2017. According to IPPR analysis based on current rates of the installation of energy efficiency measures, elevating all fuel-poor households to EPC band C will not be achieved until 2091 at the very earliest.

If the 2030 target is to be realised for all 2.5 million households in fuel poverty, the scheme will need to undergo substantial changes. This report outlines the issues with the current policy. It then sets out how a new area-based approach led by local authorities could help tackle energy affordability for fuel-poor consumers by delivering improvements in the energy efficiency of their homes.

RESEARCH OBJECTIVES

This report focuses on how ECO will need to be redesigned in future to overcome the current challenges of the scheme. The focus is on England, rather than Wales or Scotland. It has three main objectives:

- to take stock of the current approach to tackling fuel poverty in England through energy efficiency upgrades by evaluating the effectiveness of ECO
- to understand the demands and challenges of delivering ECO
- to use this information to understand what changes to the design of the scheme could improve the intended goal of tackling fuel poverty.

RESEARCH METHODOLOGY SUMMARY

The research methodology included a literature review, roundtable discussions and semi-structured interviews with over 25 key stakeholders. For more detailed information on the methodology, please see page 53.

KEY FINDINGS

Fuel poverty

- In total, 2.5 million households live in fuel poverty in England (as of 2015). This is an increase from 2.39 million households who were in fuel poverty in 2014.
- Of those households living in fuel poverty (as of 2015), 92 per cent live in homes with an energy efficiency rating of D or below, and 37 per cent live in homes with a rating of E or below.
- The average fuel poverty gap is £353. However, it is significantly worse for households with lower EPC ratings, with an average fuel poverty gap of £645 for properties with an E, F or G rating.
- For rural households, not only are the EPC ratings of their properties lower, their energy costs are also often much higher due to more expensive heating systems. They are often off the gas grid and as a result rely on fuels such as liquid petroleum gas (LPG).
- Tenants in fuel poverty or households in the private rented sector often do not feel empowered to act because permission to make energy efficiency improvements rests with their landlord.

The Energy Company Obligation (ECO)

ECO fails to target fuel-poor consumers appropriately

- ECO is not available to all fuel-poor households. Around 20 per cent of households in fuel poverty (500,000 households) are not eligible for ECO because they do not receive, or are unaware of their eligibility for, benefits.
- The use of benefits data as a proxy to identify fuel-poor households is ineffective. As a consequence, it is estimated that only 30 per cent of funds are likely to be spent on fuel-poor consumers, equating to a leakage of £448 million (according to IPPR analysis) being spent on non-fuel-poor households every year.
- Despite accounting for around 20 per cent of fuel-poor properties in 2015, less than 1 per cent of rural households have received ECO measures.

ECO fails to provide the right incentives for those participating in the scheme

Consumers

- Without a significant financial incentive, fuel-poor consumers tend to be the least likely to pursue an application for energy efficiency measures, due to perceived hassle, and a lack of confidence, awareness and knowledge.
- Tenants may be unable to seek upgrades because they require permission from a private landlord. Yet the private rented sector cost cap of £2,500, which limits the amount that landlords are required to invest to bring their properties up to the legal energy efficiency standard, is unlikely to be sufficient to provide meaningful upgrades to the large majority of harder-to-treat rented properties.

Industry (energy suppliers and installers)

- There is market pressure on suppliers to keep delivery costs as low as possible as well as pressure from government and suppliers to limit overall costs. This means that cheaper measures will often be preferred to meet obligations. The way in which funds are raised from energy bills and the political sensitivity regarding these levies also limit increases to the size of the scheme.

- The homes of fuel-poor households often require multiple, high-cost measures such as solid wall insulation to bring them up to required EPC standards. In addition, before measures are installed, homes are often in need of initial repairs.

Government

- From 2013 to 2015, the ECO scheme is estimated to have exceeded its lifetime carbon savings targets.
- However, it now conflates this objective with tackling fuel poverty. The already constrained financial resources are divided between both drivers, limiting their effectiveness.

ECO fails to provide an effective supply chain

- Applying for an ECO upgrade is complex and confusing. This is problematic for fuel-poor consumers who are least likely to apply for measures themselves.
- Energy suppliers, with some exceptions, often subcontract the installation of measures. This reduces transparency because the suppliers, not those installing the measures, are accountable to Ofgem, the energy regulator.

ECO relies on a regressive funding model and is unfair in how it distributes funding

- On-bill levies are highly regressive, meaning that fuel-poor households pay disproportionately more for energy than affluent consumers.
- This situation is even worse for rural communities. Rural consumers, despite paying over £70 million in bill levies over two years, only received measures worth £3.5 million.

ECO is not future-proofed

- ECO does not currently consider ways in which the heating systems in households may change in future. This could lead to efficiency upgrades being delivered, only to become defunct once new heating systems are installed.

KEY RECOMMENDATIONS

A new approach to energy efficiency

If the government is to deliver on its ambition of upgrading as many fuel-poor homes 'as is reasonably practicable' to the energy efficiency rating of band C by 2030, then it is clear that a new approach is needed beyond 2022.

We believe that the new approach should see ECO after 2022 transformed from a supplier-led scheme to a local-authority-led area-based scheme. This scheme should be supported by a national delivery body and funded through general taxation.

The key recommendations that form the body of this new approach are as follows.

Creating an accessible supply chain

- An area-based approach to delivering energy efficiency upgrades should be adopted. For remote rural schemes in particular, this will require local authorities to engage with rural community councils and local energy champions.
- The current ECO scheme should be reformed to establish a supply chain that is primarily led by local authorities.
- A national delivery body should be created that would have several key functions, including supporting local authorities to develop area-based approaches.

- Local authorities should engage with DNOs and GDNs and share projections of energy savings among clusters of households to encourage additional investment.
- All local authorities should ensure that advice services are in place for fuel-poor consumers that have clear referral routes to and from other services such as debt advice, jobcentres and GP practices.
- These advice services should register with the national Energy Savings Advice Service (which is currently being redesigned), which could provide referrals for anyone contacting the national helpline.

Motivating participation from government, consumers, landlords and industry

- From a central government perspective, ECO should become a policy solely focussed on addressing fuel poverty. However, to ensure that the crucial role that energy efficiency has in reducing carbon emissions is not forgotten, the government should consider developing a new and separate scheme concentrating on the able-to-pay market that focusses on reducing carbon emissions.
- From a local government perspective, councils should act to align fuel poverty objectives with those of health and wellbeing boards and work with local advice services to provide a more connected service with clear access points and referral methods.
- In order to engage consumers, the Scottish model should be followed and a free energy advice service should be established that refers consumers to, and helps to build their trust in, the multiple services available.
- Echoing the recommendation of the Committee on Fuel Poverty, enforcement of minimum standards should be increased and the cost cap in the private rented sector should be increased to £5,000. Also, landlord associations should be contacted about the increase in house prices that energy efficiency improvements could produce.
- Energy suppliers should have a minimal direct role in a future energy efficiency scheme beyond 2022, with the exception of those business arms of some energy companies that are dedicated to providing energy efficiency upgrades.
- Local authorities should work with a national delivery body to cluster households together with clear energy saving projections to incentivise additional investment.
- Policy options for providing training to installers should be explored in order to address quality control issues as well as increase the number of installers who are able to provide more difficult-to-install measures.

More rigorous targeting

- From 2018 to 2022, benefits data and EPC information held by councils should be shared with energy suppliers.
- Beyond 2022, the direction of information should be reversed, with energy suppliers sharing energy consumption and billing information with local authorities.
- Beyond 2022, the government should consider providing funding for a house-by-house assessment of the efficiency of properties, including questions on income. This funding could be distributed according to the original estimates of fuel poverty within each local authority.

Fairer and sufficient funding

- From 2018 to 2022, the method of funding is unlikely to change. However, in this interim period, there should nevertheless be a substantial increase in funding, committing to £14.4 billion from 2019 to 2030, in line with projections from the Committee on Fuel Poverty. While some of this funding gap would be

met by obligations placed on landlords, there are several additional funding sources that could be explored.

- After 2022, a new energy efficiency scheme should be funded through general taxation and distributed to local authorities according to the number of fuel-poor homes in each area.
- To support this move, the Treasury should conduct a thorough cost-benefit analysis that includes the secondary economic benefits of energy efficiency, including improved health, as these should demonstrate the substantial savings that can be achieved and thereby justify a move to funding through general taxation.
- The government should provide an investment of £40 million into local authority staffing to ensure that councils are well equipped for the additional responsibility that a local authority-led scheme would require.

A future-proofed energy efficiency scheme

- Priority should be given to technologies that would be appropriate for any kind of heating system, such as wall and loft insulation. This prioritisation could take the form of negotiated targets with local authorities to deliver a certain number of future-proof measures in return for additional funding. In addition, relevant technologies could be incorporated as standard into local authority procurement guidelines.
- Although BEIS has suggested that innovation could play a role in ECO from 2018 to 2022, we would not recommend the inclusion of policy support for innovation trials within this scheme or future schemes focussed on fuel poverty, except in circumstances where local authorities had sufficient capacity to address any issues that may occur.

1. INTRODUCTION

"I still find it extraordinary in the 21st century that so many homes in our country are so expensive to heat and run"

Then Secretary of State for Energy and Climate Change, Ed Davey, in his foreword to the 2015 Fuel Poverty Strategy (DECC 2015)

Across England, over 2.5 million households struggle to pay for their energy (BEIS 2017a). On average, the poorest 10 per cent of households spend 10 per cent of their income on energy compared with 3 per cent for the richest households (Barrett et al 2018). This is despite the fact that the poorest households use less energy (Frerk and MacLean 2017).

At its most extreme, fuel poverty can have a devastating impact on people's lives. In 2016–2017, over 10,000 deaths were thought to be attributable to cold homes (Guertler and Smith 2018).¹ The cost to our health and social care services of the impact of cold homes on older people's health has been estimated at £1.36 billion a year (Age UK 2012).

One of the biggest and most treatable causes of fuel poverty is old, energy inefficient housing. This is particularly true in England where the housing stock is one of the least efficient in Europe and in one of the worst states of repair. This leads to some of the most expensive heating costs in Europe (Guertler et al 2015).

In 2015, the government set out its Fuel Poverty Strategy for England, which aimed to upgrade England's ageing housing stock and achieve a minimum energy efficiency rating of band C by 2030 in as many fuel-poor homes 'as is reasonably practicable' (DECC 2015). This commitment was reaffirmed in the government's Clean Growth Strategy last year (BEIS 2017b).

The Energy Company Obligation (ECO) is a government energy efficiency scheme designed to help reduce carbon emissions and tackle fuel poverty. It is the primary means through which the government intends to deliver on its energy efficiency target.² However, ECO has faced several challenges in delivery and is progressing slowly, with the Committee on Fuel Poverty estimating that only 11 per cent of fuel-poor homes will reach band C by 2017 (CPF 2017).³

If the 2030 target is to be realised for all 2.5 million fuel-poor homes, the scheme will need to undergo substantial changes. According to IPPR analysis of statistics from the Department for Business, Energy and Industrial Strategy (BEIS), based on current rates of installation of energy efficiency measures, reaching all homes with even one measure, let alone sufficient measures to elevate these households to EPC band C, **will not be achieved until 2091 at the very earliest** (BEIS 2018a).⁴

1 Of a total of 34,300 unnecessary deaths recorded during the 2016-17 winter period, approximately 30 per cent are thought to have been attributable to cold homes (Guertler and Smith 2018).

2 Originally focused on carbon emissions savings, ECO has undergone many changes since its inception in January 2013.

3 Statistics for which will be reported on in 2019.

4 IPPR analysis of BEIS (2018a).

This report focuses on how ECO will need to be redesigned in future to overcome the current challenges of the scheme. It focuses on England rather than Wales or Scotland. It has three main research objectives:

- to take stock of the current approach to tackling fuel poverty in England through energy efficiency upgrades by evaluating the effectiveness of ECO
- to understand the demands and challenges of delivering ECO
- to use this information to understand what changes to the design of the scheme could improve the intended goal of tackling fuel poverty.

The report sets out the case for a new approach to energy efficiency policy to tackle fuel poverty. It is organised into five further chapters.

In chapter 2, we describe our research objectives and methodology.

In chapter 3, we set out a brief context for fuel poverty, the formal definition of fuel poverty and to whom it applies, the role of energy efficiency in tackling fuel poverty and the unique challenges that fuel-poor consumers face.

In chapter 4, we evaluate how effective ECO has been in delivering on the government's objectives to tackle fuel poverty and meet the needs of fuel-poor consumers more generally. To evaluate ECO we use a revised version of the framework formulated by the Carbon Trust (Retallack et al 2017). This assesses:

- how effectively the scheme targets fuel-poor consumers
- whether the drivers for the participants involved align with its objectives
- how effectively the supply chain operates
- how effective and fair the scheme's funding mechanism is in terms of both how it is raised and how it is distributed
- whether the scheme is future-proofed.

We conclude that ECO is in significant need of reform if it is to help tackle fuel poverty effectively.

In chapter 5, utilising the same framework, we set out potential new approaches and recommendations for the future design and delivery of ECO based on our research. We describe out how a new area-based energy efficiency scheme could help deliver the step-change we need in tackling fuel poverty.

In chapter 6, we set out our overall conclusions and a summary of recommendations for the reform and redesign of ECO.

If the government is serious about tackling fuel poverty, it has the means to do so. An effective energy efficiency scheme for fuel-poor households would be the most cost-efficient, effective and long-term way of achieving this. The current ECO scheme falls some way short of being that effective scheme, but after 2022 the government has an opportunity to take a new approach.

2. RESEARCH METHODOLOGY

To achieve the objectives of this report, we employed a multi-method approach (see table 2.1).

TABLE 2.1

Research objectives and methods

Research objective	Method
To take stock of the current approach to tackling fuel poverty in England through energy efficiency upgrades by evaluating the effectiveness of ECO	A literature review, with findings organised according to an adapted Carbon Trust framework for designing an energy efficiency scheme
To understand the demands and challenges of delivering ECO	An expert roundtable and one-to-one semi-structured in-depth interviews, supplemented by further desk-based research
To use this information to understand what changes to the design of the scheme could improve the intended goal of tackling fuel poverty	An expert roundtable and one-to-one semi-structured in-depth interviews, supplemented by further desk-based research

2.1 LITERATURE REVIEW

Within the first month of the project we conducted an extensive desk-based literature review. We organised the findings from this literature review into a framework developed by the Carbon Trust. This identifies ‘six key questions’ that must be answered when looking to design a successful energy efficiency scheme (Retallack et al 2017). For this report, we adapted the language of the framework and reduced the number of questions to five⁵ key criteria. The research was thus categorised under the following headings.

- Has the target audience been clearly identified?
- What are the underlying drivers for the scheme and how effective are they at stimulating activity?
- Is there a supply chain in place and how well does it function?
- What are the funding mechanisms and how effectively is the funding distributed?
- How does the scheme ensure that solutions lead to a future-proofed progress towards the goals of the scheme?

This framework provides a comprehensive set of criteria with which to assess the design of an energy efficiency scheme. It is particularly useful as the ECO scheme has been redesigned several times since its inception, and there are many varying opinions and reports evaluating it. Applying this framework allows us to disentangle these views and clearly set out the main benefits of, and challenges facing, ECO.

⁵ The questions pertaining to the ‘barriers to scheme design’ and ‘effectiveness of the solutions’ within the Carbon Trust framework were seen to be too general and removed in favour of more specific questions about the effectiveness of the distribution of funding.

2.2 ROUNDTABLE OF EXPERT STAKEHOLDERS

We held a roundtable at an early stage in the research, which involved stakeholders from a wide range of sectors, including the civil service, local government, energy suppliers, energy networks, healthcare, non-governmental organisations and consultancies. A list of the organisations involved can be found in appendix 1.

The main purpose of this roundtable was to provide scrutiny of our findings during the literature review phase of the project. We also asked stakeholders for their views on the design of an energy efficiency scheme beyond ECO in order to generate forward-looking recommendations.

2.3 SEMI-STRUCTURED INTERVIEWS

After the roundtable we conducted interviews to both triangulate existing research and provide deeper insight into the recommendations for designing a future energy efficiency scheme. The questions we asked our interviewees were based on our desk-based literature review using our 'five criteria' for evaluating a successful energy efficiency scheme combined with contributions from our stakeholder roundtable. Further details of the questions asked can be found in appendix 1.

3.

THE CHALLENGE OF FUEL POVERTY

In this chapter, we set out the definition of fuel poverty, its demography, the challenges that fuel-poor consumers face and the role that energy efficiency plays in alleviating fuel poverty.

3.1 FUEL POVERTY IN ENGLAND

Historically, the measurement of fuel poverty was based on the proportion of energy costs to income, with fuel poverty being defined as a household needing to spend more than 10 per cent of its income on fuel to maintain an adequate level of warmth (UK Power 2018). However, following the Hills Review in 2012,⁶ the established way of measuring fuel poverty in England was changed to the Low Income High Costs (LIHC) indicator, where a household is considered to be fuel-poor if: 'They have required fuel costs that are above average (the national median level) [and] were they to spend that amount, they would be left with a residual income below the official poverty line' (BEIS 2017c).

The old definition was deemed ineffective at correctly identifying those for whom a low income prevented them from sufficiently heating their home (Platt et al 2013). It classified as fuel-poor all those who face high energy costs, for example due to a large or inefficient home, even if their income is sufficiently high to meet these costs (Platt et al 2013). The new definition allows government support to be better targeted by providing a more accurate picture of those who are vulnerable to high energy prices (Platt et al 2013).

Under the LIHC definition,⁷ 2.5 million households across England are classified as fuel-poor, according to the latest government figures, which are for 2015 (BEIS 2017a). This is an increase from 2014, when 2.38 million households lived in fuel poverty (CFP 2017).

In addition to identifying how many households are in fuel poverty (what is called the 'extent' of fuel poverty), the LIHC indicator also highlights the 'depth' of fuel poverty (Platt et al 2013). The depth of fuel poverty is associated with the amount by which a fuel-poor household's energy bills exceed reasonable costs each year, and is referred to as the 'fuel poverty gap'. In 2015, the aggregate fuel poverty gap (the combined gap across all fuel-poor households) in England was approximately £884 million. The average gap for an individual fuel-poor household was £353 (BEIS 2017a).⁸

6 The Hills Review was commissioned by the Department of Energy and Climate Change in 2011 to examine three issues: the extent to which fuel poverty was distinct from general economic poverty; how fuel poverty can be defined and measured more appropriately than the previous 10 per cent definition; and how more accurate measurement could better inform policy.

7 Throughout this report we use the LIHC definition when referring to fuel-poor households and the energy efficiency measures that would reduce their costs.

8 These figures represent a decrease since 2011 (the year statistics were available when IPPR last looked at the figures in 2013) of 23 per cent and 19 per cent respectively (Platt et al 2013).

3.2 THE ROLE OF ENERGY EFFICIENCY IN FUEL POVERTY

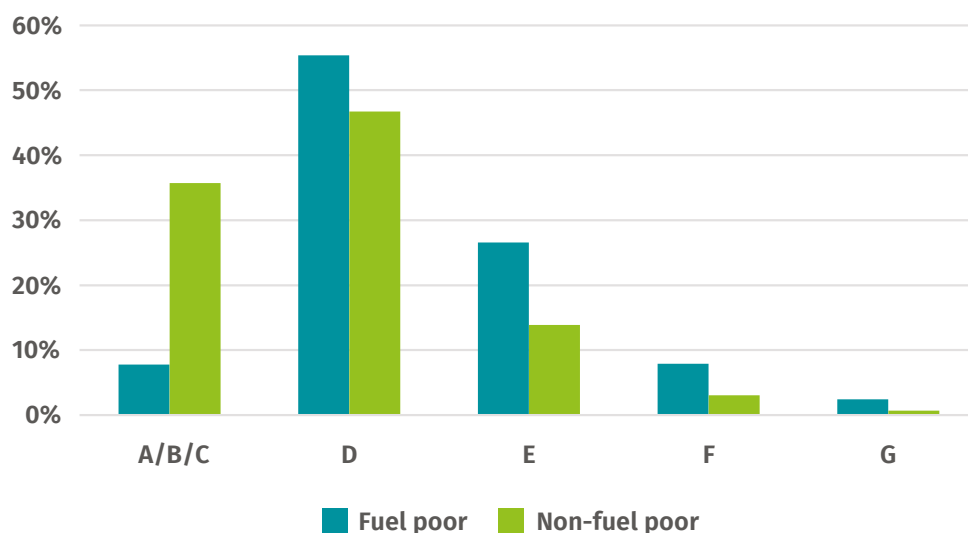
The energy efficiency of housing is defined by the ability of different elements of the building to retain heat and produce light. This includes measurement of the efficiency of walls, roofs, floors, windows, heating systems and controls, hot water and lighting (BRE 2012). The result of these combined measurements is an Energy Performance Certificate (henceforth 'EPC') rating, in descending order of efficiency, from A to G (BRE 2012).

Energy inefficient housing has a significant impact on fuel poverty, with most fuel-poor households living in homes that have low rates of thermal efficiency. The vast majority (92 per cent) of the 2.5 million fuel-poor households live in homes with an efficiency rating of D or below (as of 2015), and 37 per cent live in homes with a rating of E (see figure 3.1). By way of comparison, non-fuel-poor households are more likely to live in homes with a rating of C or above.

FIGURE 3.1

The majority of fuel-poor households live in homes with an energy efficiency rating of D or below and a much lower number of homes with a rating of C or above than non-fuel-poor households

Fuel-poor households by energy efficiency rating, 2015

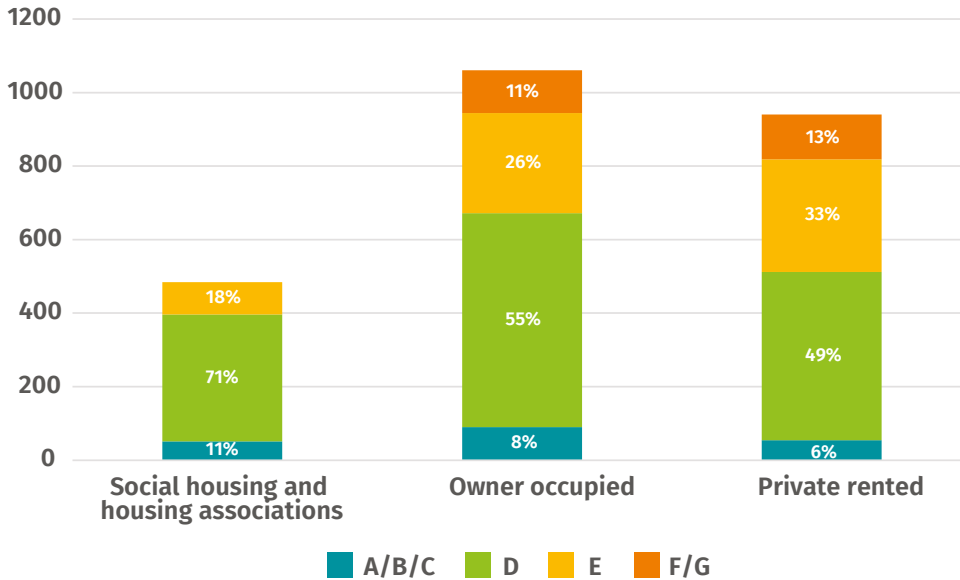


Source: Department for Business, Energy and Industrial Strategy, 'Fuel poverty statistics' (BEIS 2017c)

Fuel-poor households are disproportionately likely to be either owner occupiers or private renters (see figure 3.2). This is in part because the majority of energy inefficient homes lie within these two tenures. Private rented stock performs significantly worse than owner-occupied stock: over 20 per cent of privately rented households are fuel-poor compared with 7 per cent of owner-occupied households (BEIS 2017c).

FIGURE 3.2

The majority of fuel-poor households are either owner occupiers or private renters
Fuel poverty by tenure and EPC rating, 2015



Source: Department for Business, Energy and Industrial Strategy, *Annual Fuel Poverty Statistics Report, 2017 (2015 Data)* (BEIS 2017a)

Perhaps unsurprisingly, the more energy inefficient the home, the higher the fuel poverty gap of the household. The fuel-poverty gap grows rapidly from EPC rating A to G (see table 3.1). The gap currently stands at an average of £645 for households in properties in bands E, F and G (CFP 2017), considerably higher than the average of £353 for all households in fuel-poor properties.

TABLE 3.1

The poorer the energy efficiency rating, the higher the fuel poverty gap
Average and aggregate fuel poverty gap by energy efficiency rating, 2015

Energy efficiency rating	Average fuel poverty gap	Number of fuel-poor households (000s)	Aggregate fuel poverty gap
A/B/C	£202	194	£39.2 million
D	£205	1,385	£283.9 million
E	£427	665	£284.0 million
F	£918	197	£180.8 million
G	£1,568	61	£95.6 million

Source: Department for Business, Energy and Industrial Strategy, 'Fuel poverty statistics' (BEIS 2017c)

3.3 CONSEQUENCES OF FUEL POVERTY

The consequences of fuel poverty are significant. Many of the households who find themselves in fuel poverty often have to make unacceptable decisions between 'heating or eating' (Lamble-Mumford et al 2016). National Energy Action (NEA) calculates that there is currently an average shortfall of £197 for fuel-poor households between their annual income and payment for *all* essential cost-of-

living requirements, including energy, food, clothing, transport, mobile phones and childcare (Burroughs 2017). Previous IPPR research has found that between 2014 and 2015, approximately 950,000 households were in ‘income crisis’ (Baxter and Fahnbulleh 2017). This means that they were unable to pay two or more of their essential bills – their mortgage or rent, energy bills, water rates or council tax – at any one time (Baxter and Fahnbulleh 2017).

As a consequence of high energy costs, the majority of fuel-poor consumers are low energy users (White et al 2010). This commonly results in cold, damp homes and associated poor health, reduced educational attainment, less social activity and increased isolation since friends and relatives are less likely to visit cold homes (Hills 2012, End Fuel Poverty Coalition 2018, Guertler and Smith 2018). At its most extreme, fuel poverty can have a serious impact on occupants’ health, including death. In 2016–2017, just under 10,000 deaths were thought to be attributable to cold homes (Guertler and Smith 2018), an increase of 20 per cent from 2011–2012 when the Hills Review was commissioned.⁹

Tackling fuel poverty does not just result in financial and health benefits for the households concerned, it can also deliver wider societal benefits such as providing savings to public services such as the National Health Service (NHS). Figures from Age UK suggest that the impact of cold homes on older people’s health costs £1.36 billion in hospital and care costs every year (Age UK 2012).

3.4 UNIQUE CHALLENGES FOR CERTAIN GROUPS OF FUEL-POOR CONSUMERS

Certain groups of fuel-poor consumers face specific challenges. Rural and off-grid consumers, for example, often live in properties that are notoriously difficult to improve with energy efficiency measures. In part, this is because the proportion of rural homes that are stone-built with solid floors and walls is much higher than in urban areas (although London has a similarly high proportion of solid-walled homes¹⁰) (FREE 2013). This is a fuel poverty risk because solid walls are less efficient than cavity walls and are more expensive to insulate (DCLG 2010), meaning that rural communities are more likely to be ignored by suppliers who are looking to meet their obligations in the most cost-effective way possible (Baker et al 2008). In addition, rural homes are often in more remote geographic locations (FREE 2013) that are more difficult for suppliers to access. As a consequence, rural and off-grid homes have disproportionately lower energy efficiency ratings than the general stock of fuel-poor homes. According to the Committee on Fuel Poverty, 39 per cent of homes in bands F and G are in harder-to-access rural villages and hamlets and 71 per cent are off-grid (CFP 2017).

Not only are the EPC ratings of rural properties lower, their energy costs are often much higher. Rural homes tend to use more expensive forms of heating such as liquid petroleum gas (LPG) boilers (The Green Age 2018). This is because they are less commonly connected to the gas grid and must therefore rely on alternative heat sources. In rural areas, around 27 per cent of heating comes from non-gas and non-electric forms, compared with around 5 per cent in cities (Ofgem 2015a).

There are also particular issues in the private rented sector where tenants in fuel-poor households often do not feel empowered to act on their circumstances because permission ultimately rests with their landlord. As the owners of the properties, landlords often do not pay for improvements due to the costs of

⁹ Calculation based on total excess winter death figures in the Hills Review (27,000) (Hills 2012), multiplied by the same factor attributed to cold homes in the NEA report (Burroughs 2017). The Hills Review acknowledges that its estimate of 10 per cent of excess winter deaths related to cold homes is likely to be conservative.

¹⁰ London has a higher proportion of homes with solid walls than most other urban areas.

upgrades, the benefits of which largely accrue to tenants rather than themselves (Ambrose et al 2016).

3.5 CHALLENGES BEYOND ENERGY EFFICIENCY

In this report, we focus on the design of a future energy efficiency scheme to better tackle fuel poverty and recognise it as the most important means of addressing it. However, there are a number of other policy options that can be deployed.

One option is to intervene on energy prices – one of the most immediate ways to reduce the cost of energy is to encourage people to switch to cheaper energy suppliers (Emden and Lloyd 2017). Government has recognised this through the introduction of a price cap on pre-payment meters, also known as the ‘safeguard tariff’ (Ofgem 2018a), as well as price cap legislation currently going through parliament (*Hansard* 2018), which is aimed at capping the most expensive default tariffs. While an energy price cap has its limitations, the potential saving of switching to the cheapest tariff from the average default tariff – at around £300¹¹ (Ofgem 2018b) – is substantial and not much less than the average fuel poverty gap of £349. Moreover, it could be of significant benefit to fuel-poor households in particular as the most expensive default tariffs are the most common among the poorest households.

Financial support paid directly to fuel-poor consumers is another option for addressing fuel poverty. Although additional measures such as the Warm Home Discount and the Winter Fuel Payment exist to tackle the issue, they are not thought to target fuel-poor households effectively (CFP 2017).

Any future fuel poverty scheme will need to take these policies, and the broader issues they attempt to resolve, into consideration.

11 There is still a saving to be had in the difference between Ofgem’s safeguard tariff and the cheapest tariff available on the market.

4.

EVALUATING THE ENERGY COMPANY OBLIGATION

Energy efficiency policy is the primary solution to fuel poverty (Platt et al 2013). It is also the most cost-effective approach (Hills 2012) because financial support paid directly to consumers, for example, must be provided on an ongoing basis while energy efficiency improvements lead to long-term cost savings, even if they have a one off-upfront cost (Platt et al 2013).

However, as we argue in this chapter, the main government policy for delivering energy efficiency – the Energy Company Obligation (ECO) – is not effective and will not deliver the step-change in the energy efficiency of the housing stock of fuel-poor households that is needed.

4.1 UNDERSTANDING ECO

ECO is a government energy efficiency scheme designed to help reduce carbon emissions and tackle fuel poverty. It is the primary means through which the government intends to deliver on its fuel poverty target of upgrading as many fuel-poor homes ‘as is reasonably practicable’ to EPC band C by 2030 (DECC 2015).

ECO works by placing an overarching obligation on each large energy supplier to provide a certain number of energy efficiency measures to eligible consumers within a certain time period. The suppliers then recover the costs of delivering installations through a charge on all consumer energy bills. The overarching obligation is also divided into sub-obligations, according to certain demographics of the consumers receiving them – for example, if a household is in a rural area or receives state benefits – and the measures provided. When ECO was first implemented, these sub-obligations were as follows (Ofgem 2015b):

- the **Carbon Emissions Reduction Obligation (CERO)** focused on insulation measures in hard-to-treat properties and had a target of generating 20.9 metric tons of carbon dioxide (MtCO₂) in lifetime savings
- the **Carbon Saving Community Obligation (CSCO)** focused on low-income areas with a target of generating 6.8 MtCO₂ in lifetime savings
- of CSCO, 15 per cent was to be delivered to rural consumers on certain benefits – the **CSCO rural sub-obligation**
- the **Home Heating Cost Reduction Obligation (HHCRO)**, also known as the **Affordable Warmth Group**, was ringfenced for poorer consumers, with a target of £4.2 billion in lifetime savings.

Over the course of its lifetime, ECO has had a substantial impact on the efficiency of English housing stock. From its inception in 2013 up until January 2018, approximately 2.3 million energy efficiency measures were installed in 1.8 million properties. However, ECO has also undergone substantial changes, shifting from an energy efficiency scheme focused on reducing carbon emissions to the main policy for tackling fuel poverty, as well as reducing in size. The key changes since ECO’s inception are shown in the timeline below (Ofgem 2015b, Hough 2017, BEIS 2018b).

- **1 January 2013 to 1 April 2014.** The ECO scheme is set up whereby energy companies are required to deliver energy efficiency upgrades to three groups of consumers. These groups, known as sub-obligations, are, as stated above:
 - the Carbon Emissions Reduction Obligation (CERO)
 - the Carbon Saving Community Obligation (CSCO) and the CSCO rural sub-obligation (15 per cent of the CSCO)
 - the Home Heating Cost Reduction Obligation (HHCRO) (Affordable Warmth Group).
- **1 April 2014 to 31 March 2015.** The carbon saving target for CERO is reduced by 33 per cent – from 20.9 MtCO₂ to 14 MtCO₂ – and the eligibility criteria for CSCO are revised.
- **1 April 2015 to 31 March 2017.** A new sub-obligation is introduced – the Provisional Solid Wall Minimum Requirement (PSWMR). As part of meeting all other sub-obligations, this minimum requirement has a target of reducing 4MtCO₂ in lifetime savings.
- **April 2017 to September 2018.** The total funding for ECO is reduced from £1.1 billion a year to £640 million. CSCO is scrapped, HHCRO (Affordable Warmth Group) is increased to make up 70 per cent of the scheme and CERO makes up the remaining 30 per cent. A new mechanism, known as ‘flexible eligibility’, is also introduced, whereby local councils can identify and recommend both fuel-poor and non-fuel-poor households to suppliers, equal to up to 10 per cent of the supplier’s obligation.
- **2018 to 2022 (proposed).** The main proposals for the future of the scheme include focussing the scheme entirely on HHCRO (Affordable Warmth Group), reducing PSWMR from 21,000 required annual installations of solid wall insulation to 17,000, introducing mechanisms to encourage innovation and expanding flexible eligibility to meet up to 25 per cent of the supplier’s obligations.

While progress has been made in delivering energy efficiency measures for all types of consumers, ECO has been much less effective at delivering on the Fuel Poverty Strategy. The Committee on Fuel Poverty estimated that only 11 per cent of fuel-poor homes would reach EPC band C by 2017 (CFP 2017).¹² If the 2030 target is to be realised for all 2.5 million homes in fuel poverty, the scheme will need to undergo substantial changes. According to IPPR analysis of statistics from BEIS (2018a), based on current rates of installation, reaching all homes with even one measure, let alone sufficient measures to elevate these households to EPC band C, will not be achieved until 2091 at the very earliest.¹³

In the next section, we employ an assessment framework to identify where the scheme has succeeded and where it has failed.

4.2 ESTABLISHING THE FRAMEWORK

To establish a rigorous method to assess the current design of ECO and inform future scheme design, we developed a framework based on the Carbon Trust’s ‘six key questions’ that must be asked when designing a successful energy efficiency

¹² Statistics for which will be reported on in 2019.

¹³ Calculations are based on the following: (1) For simplicity, it is generously assumed that one measure delivered = one home upgraded to an EPC rating of C. (2) Using this assumption, the number of fuel-poor households as of February 2018 (latest figures at the time of writing) is estimated at 2.36 million from a base of 2.5 million in January 2015 by subtracting 30 per cent (in line with Committee on Fuel Poverty estimates of targeting accuracy) of all HHCRO and rural sub-obligation measures installed between January 2015 and February 2018. (3) The monthly average of measures installed as of April 2017 (the start of the current ECO phase) is calculated. (4) The newly estimated figure of 2.36 million fuel-poor households is divided by this monthly average and converted to years to show that the scheme will need to run for an additional 73 years to reach all 2.36 million households. Going from February 2018, this means that this will not be achieved until 2091.

scheme (Retallack et al 2017). This framework is simplified to five questions and provides a comprehensive set of criteria for designing an energy efficiency scheme:

- Has the target audience been clearly identified?
- What are the underlying drivers for the scheme and how effective are they at stimulating activity?
- Is there a supply chain in place and how well does it function?
- What are the funding mechanisms and how effectively is the funding distributed?
- How does the scheme ensure that solutions lead to a future-proofed improvement in the goals of the scheme?

4.3 HAS THE TARGET AUDIENCE BEEN CLEARLY IDENTIFIED?

The target audience of an energy efficiency scheme designed to tackle fuel poverty should ideally focus on cost savings achieved by fuel-poor households and use clear metrics to identify which households are actually fuel-poor under the LIHC definition. In its current form, ECO faces several challenges in targeting fuel-poor consumers.

First, the HHCRO obligation (Affordable Warmth Group), which is ringfenced for poorer consumers, in its current form makes up 70 per cent of the funding, with the remainder having been allocated to CERO (Hough 2017). This marks an increase in the proportion ringfenced for poorer consumers compared with previous iterations of the scheme (Hough 2017). It is also expected to increase in the next iteration of the scheme (2018–2022) (BEIS 2018b). However, although HHCRO is the element of ECO that is focused on low-income households, it is very poor at targeting those households that are in fuel poverty. This is because it does not specifically target *fuel-poor* consumers and is instead based on households that are in receipt of particular benefits (Platt et al 2013, GOV.UK 2018). So it is not a good proxy for identifying fuel-poor consumers, which requires information about both their income and their energy costs. As a consequence of this poor targeting, around 20 per cent of households in fuel poverty (500,000 households) are not eligible for ECO because they do not receive, or they are unaware that they may be able to receive, benefits in the first place (Citizens Advice 2016, BEIS 2017d).

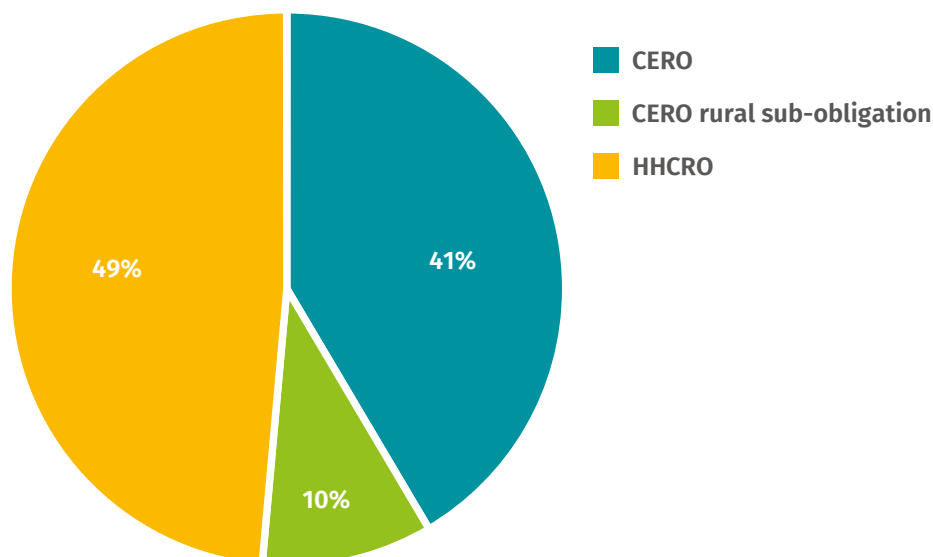
Second, it is hard to find those fuel-poor households that are actually eligible (Platt et al 2013). This is because, as mentioned in section 4.4.1, fuel-poor households are some of the least engaged consumers and are therefore less likely to identify themselves as eligible. Therefore suppliers have to spend more time trying to find and engage with fuel-poor consumers who are eligible (CFP 2017). Moreover, it is estimated that only 30 per cent of funds are likely to be spent on fuel-poor consumers (CFP 2017). IPPR analysis of CFP (2017) suggests that this equates to a leakage of £448 million being spent on non-fuel-poor households every year.

Furthermore, in attempting to tackle some of the challenges that particular types of fuel-poor households face, which were identified in the previous chapter, ECO also performs poorly. Targeting and delivery costs are often higher for more rural communities, and the cost-effectiveness principle followed by suppliers (discussed in section 4.4.2) means that these areas will often be neglected in favour of urban dwellings. The CERO rural sub-obligation does not address the specific challenges facing many off-grid properties and rural communities. This is partly because ‘rural’ is defined by the Office for National Statistics as areas with a population under 10,000 people (Citizens Advice 2016). Within these areas, the current definition allows energy suppliers to meet their rural minimum requirement by providing improvements to many properties in towns that are not off-grid. Under the ECO obligation period that runs from 1 April 2017 to 30 September 2018 (referred to as ‘ECO2t’), installations within the CERO rural sub-obligation

accounted for only 10 per cent of all installations between April 2017 and February 2018, equating to 16,748 measures being installed (see figure 4.1).

FIGURE 4.1

Very few measures have been installed under the CERO rural sub-obligation of ECO2t
ECO measures by obligation type, April 2017–February 2018



Source: Department for Business, Energy and Industrial Strategy, 'Household Energy Efficiency National Statistics, headline release April 2018' (BEIS 2018c)

This number of installations translates to a tiny proportion of rural fuel-poor homes receiving energy efficiency upgrades. Even if it were assumed that each measure being installed equated to one household being fully upgraded to EPC band C and that all measures under the CERO rural sub-obligation were received by fuel-poor consumers,¹⁴ this would still only represent 0.67 per cent of all rural fuel-poor homes. This is despite the fact that rural homes accounted for around 20 per cent of fuel-poor properties in 2015 (around one million households) (BEIS 2018c).

Another challenge present in ECO relates to flexible eligibility. ECO2t introduced this mechanism in an effort to improve targeting. As noted in the timeline in section 4.1, it allows local authorities, rather than suppliers, to identify households and recommend them into the scheme for up to 10 per cent of a supplier's obligation. This includes fuel-poor households who otherwise miss out on the eligibility criteria, other households particularly vulnerable to the effects of a cold home and non-fuel-poor households where the upgrade in question is part of a project to upgrade solid walls. This change was made as it was recognised that local authorities have a better understanding than suppliers of their local housing stock and households that are likely to be most vulnerable (Citizens Advice 2016). It was hoped that it would reduce high search costs for suppliers trying to identify eligible properties (BEIS 2018b).

However, while the Committee on Fuel Poverty notes that, anecdotally, energy suppliers have found this mechanism useful (CFP 2017), according to IPPR analysis of BEIS energy efficiency statistics (BEIS 2018b), the number of measures installed

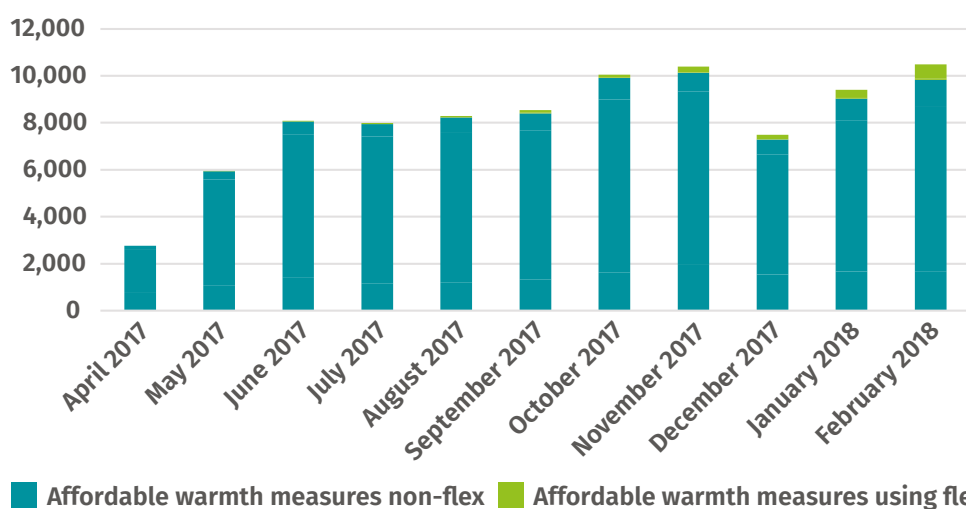
¹⁴ This is a generous assumption because as section 4.4.2 highlights, fuel-poor homes often require multiple upgrades and inefficient targeting suggests that measures delivered under CERO are not all for fuel-poor households.

under flexible eligibility has never come close to 10 per cent of the supplier's obligation (see figure 4.2). According to stakeholder input from our expert roundtable and subsequent interviews, including council officers with first-hand experience of using flexible eligibility, this has been due largely to a lack of local capacity and understanding of how to use the flex mechanism. Although the proportion has slowly increased over time, it currently still only stands at around 6 per cent of total measures installed in a month.

FIGURE 4.2

Affordable warmth measures make up a very small proportion of total measures and are well below the 10 per cent limit

Proportion of total measures installed under flexibility eligibility, April 2017–February 2018



Source: Department for Business, Energy and Industrial Strategy, 'Household Energy Efficiency National Statistics, headline release April 2018 [Tables 2.1 & 2.1a]' (BEIS 2018a)

While local authorities must submit a Statement of Intent declaring their intention to use the flexibility regulations and also include a methodology for targeting (both fuel-poor and non-fuel-poor households) (BEIS 2017d), there is no standardised methodology for doing this and neither Ofgem nor the supplier are required to assess it (Ofgem 2017). While having flexibility in methodology can be useful in accounting for the demographic differences across local authorities, the lack of standardisation may slow down the process unnecessarily, put a greater strain on local authority capacity to identify households and limit the effectiveness of reductions in search costs for suppliers.

4.4 WHAT ARE THE UNDERLYING DRIVERS FOR THE SCHEME AND HOW EFFECTIVE ARE THEY AT STIMULATING ACTIVITY?

Motivation to participate is perhaps the most important factor in designing an energy efficiency scheme in the first place. It is important, therefore, that the drivers for the participants within any scheme deliver outcomes that are aligned with the scheme's overall objectives. However, this is not the case for ECO in its current form, and the motivations to engage for the main actors – the consumers, the suppliers and government – are not aligned. As discussed in section 4.4.3, the overall objectives of the scheme – to address both fuel poverty and carbon emissions, within the same scheme – are themselves questionable.

4.4.1 Consumer drivers

One of the major challenges in delivering energy efficiency upgrades beyond the identification of eligible households is that consumers, and often unwilling landlords, are the ones who are required to apply for measures in the first place. There must therefore be sufficient incentive to participate in the energy efficiency scheme in question.

BEIS is currently considering how to design a market for energy efficiency that provides an incentive for consumers to participate. This effort is particularly targeted at the 93 per cent of households who are able to pay for energy efficiency upgrades themselves rather than fuel-poor consumers (BEIS 2017e). While the right narrative could persuade more able-to-pay consumers of the benefits of energy efficiency, this messaging would be less relevant for poorer consumers. This is because the incentives to act for able-to-pay consumers and fuel-poor consumers are not perfectly aligned, so different messaging and policies are needed for each. There is clear evidence that suggests that, in some cases, even when the benefits of warmth and cost savings were explicitly stated to fuel-poor consumers by suppliers providing them, some did not pursue measures (Preston et al 2014a). This reluctance is due to the perceived hassle and a lack of confidence, knowledge and engagement on behalf of fuel-poor consumers. Without a significant financial incentive, fuel-poor consumers are therefore the least likely to pursue an application for energy efficiency measures (TNS 2016). By comparison, wealthier households tend to have more access to information and do not face as many financial barriers, meaning that incentivising this group is more focused on communicating the benefits of energy efficiency as a lifestyle improvement (BEIS 2017e).

Furthermore, in many cases, the lack of engagement among fuel-poor households is more than just an awareness barrier. In particular, fuel-poor consumers tend to be much less likely to have access to, or feel confident using, online services and often find the process of engaging in energy-related issues to be a hassle that impinges on other more urgent priorities (Papworth et al 2015).

There are also particular barriers for consumers who rent privately because they require permission from a private landlord in order to pursue upgrades (RLA 2018). Even where permission is sought, many landlords may be unwilling to pay the cost of the upgrades because the benefits will accrue to the tenant rather than themselves (NLA 2017). While private landlords must now adhere to minimum energy efficiency standards that prohibit any new tenancy agreements for properties with an EPC rating of F or G (BEIS 2018d), there is concern that local authorities will struggle to enforce these obligations. Furthermore, landlords are only required to spend money on upgrades up to a cap of £2,500, leading to concerns that this amount of investment will not be sufficient to provide meaningful upgrades to the large majority of harder-to-treat properties in the private rented sector (Citizens Advice 2016, TNS 2016).

Finally, fuel-poor consumers' lack of engagement also creates a vicious cycle in the retail market more generally. Fuel-poor consumers are less likely than more active customers to switch to cheaper tariffs (TNS 2016), leaving them left behind to pay the higher prices charged as large energy companies lose their market share, which in turn worsens the depth of fuel poverty they experience.

4.4.2 Industry drivers

While cost-effectiveness as a general principle is a positive component of any energy efficiency scheme, there must be a broad definition of the costs and benefits. Furthermore, it cannot be the sole objective in delivering energy efficiency upgrades for fuel-poor consumers whose homes often require high-cost upgrades. There are a number of issues with the current approach to ECO.

First, the levying of funds through consumer bills is itself a challenge since it requires suppliers to deliver energy efficiency upgrades at the lowest possible cost. Also, any efforts to raise more funds for more expensive upgrades would be politically sensitive as it would increase bill costs – although as we note in chapter 5, this is a challenge that an alternative funding mechanism would also be likely to face. In the case of ECO, this current design has resulted in suppliers neglecting the needs of fuel-poor households because they often require multiple, high-cost measures such as solid wall insulation and often initial repairs before energy efficiency measures can even be installed (Citizens Advice 2016).

Second, the calculation of what is or is not cost-effective does not include indirect benefits (Middlemiss 2017a) because they are more difficult to quantify. In particular, this includes the health benefits of warmer homes, which result in an alleviated financial burden on the NHS (NEA 2016) and fewer days off work. If these were included in calculations for the cost of a scheme that was more attuned to the needs of fuel-poor consumers, high-cost measures such as solid wall insulation would be expected to play a bigger role (Prince 2014).

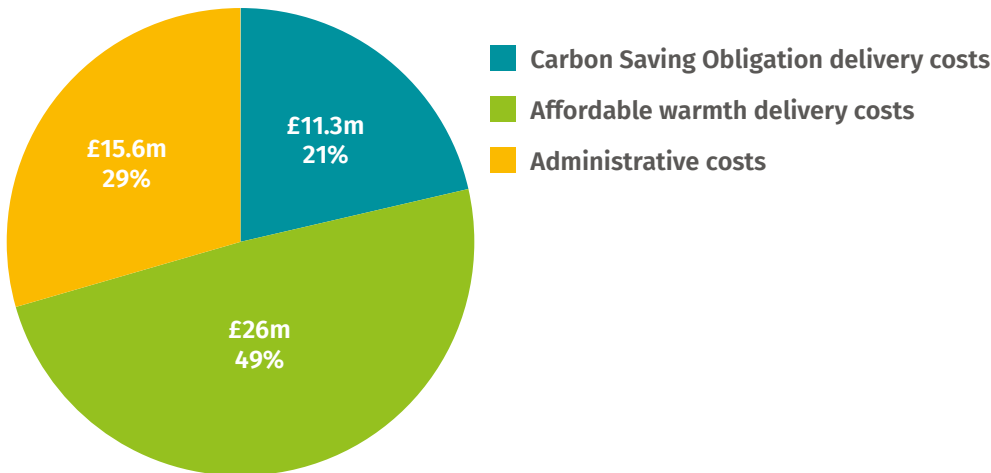
Third, even in situations where suppliers identify fuel-poor households as being eligible for an upgrade that would meet their needs, the underlying cost-effectiveness driver requires them to source the cheapest installers, leading to quality control issues (Pye Tait Consulting 2015). In 2016, monitoring by Ofgem found that around 10 per cent of energy efficiency measures inspected were poorly installed. This can have a negative impact on the health and wellbeing of fuel-poor occupants, as well as the reputation and trust of the installation industry (Bonfield 2016). Furthermore, since installers themselves incur larger labour costs from more time-consuming measures, they tend to specialise in easier-to-install upgrades, further limiting the pool of reliable professionals available to apply more intensive measures (Bonfield 2016). As noted in chapter 5, this is a challenge that could face any future alternative model to ECO and would therefore require additional policy measures to address this issue.

Finally, even if the cost-effectiveness principle aligned well with tackling fuel poverty, there are questions over whether the scheme is as cost-effective as it could be. As an example, search costs for suppliers are high and flexible eligibility has had a limited effect, potentially due to a lack of sufficient resources for local authorities (BEIS 2018e). Between April 2017, when flexible eligibility was introduced, and June 2017, administrative costs made up just under a third of total supplier costs (see figure 4.4).

FIGURE 4.4

Administrative costs have been very high for ECO, in part due to resource-intensive searches for eligible households

Breakdown of ECO costs, April 2017–June 2017



Source: Department for Business, Energy and Industrial Strategy, 'Household Energy Efficiency National Statistics, headline release April 2018' (BEIS 2018c)

4.4.3 Government drivers

With limited resources available to promote energy efficiency, it is important that funding is focussed on specifically tackling fuel poverty, rather than attempting to fulfil multiple policies' objectives, which could dilute the scheme's impact. This is a particular challenge for ECO as it has undergone many changes since its inception in 2013 and still retains many legacy elements.

When ECO had a more specific focus on meeting the government's climate change objectives, the scheme was arguably relatively successful. From 2013 to 2015, it is estimated to have achieved lifetime carbon savings of 29.9 MtCO₂, exceeding albeit modest (Platt et al 2012) targets across all of its sub-obligations (that is, CERO, CSCO and HHCRO) (Ofgem 2015b). For context, this saving equates to around 6.4 per cent of the total greenhouse gas emissions generated in the UK in 2016 (BEIS 2018f).

However, there is now a conflation of emissions goals and fuel poverty objectives, which has led to the ECO obligation attempting to serve both objectives at the same time. Indeed, ECO is mentioned in both the Fuel Poverty Strategy (DECC 2015) and the Clean Growth Strategy (BEIS 2017b), both of which commit to delivering an EPC rating of C to as many fuel-poor households as is practicable by 2030.

The result of retaining both objectives is that already constrained finances are divided between tackling fuel poverty and reducing carbon emissions, limiting their effectiveness. Moreover, the objective to reduce fuel poverty actually makes the objective to reduce carbon emissions more difficult since fuel-poor consumers tend to use less energy (White et al 2010, Frerk and MacLean 2017).

It should be noted here that in its consultation for the future of ECO from 2018 to 2022, BEIS recognised that ECO should focus solely on HHCRO (Affordable Warmth Group) (BEIS 2018b). While this is a welcome development, it raises questions (beyond the scope of this report) around government plans to deploy energy efficiency as a means of reducing carbon emissions since, as mentioned above, a scheme focus on fuel-poor consumers is not the most efficient means of achieving

this. Rather, government ought to take a differentiated approach, using a different mechanism to support or incentivise different groups.

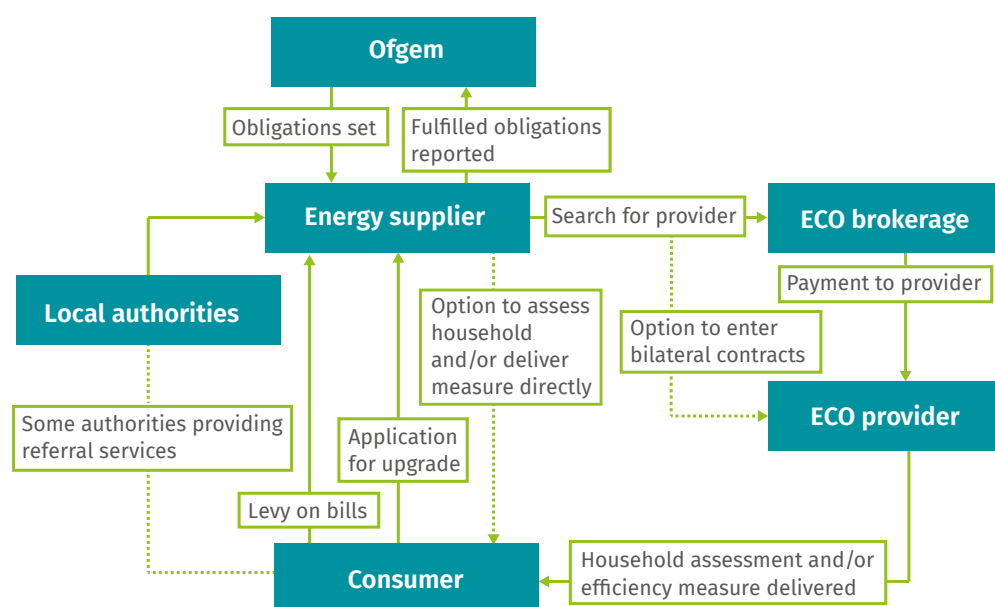
4.5 IS THERE A SUPPLY CHAIN IN PLACE AND HOW WELL DOES IT FUNCTION?

The supply chain for any energy efficiency scheme must have multiple access points for the consumers engaging in it, as well as a clear pathway by which industry stakeholders are able to deliver energy efficiency upgrades to the consumers.

The current ECO scheme has a long-established supply chain, which has largely remained the same since its inception in 2013 (see figure 4.5).

FIGURE 4.5

Diagram of the current ECO supply chain



Source: IPPR analysis

Despite a supply chain being in place, however, there are several bottlenecks, and several crucial stakeholders who are not included in its design.

First, one of the major bottlenecks is that consumers are required to apply for energy efficiency measures themselves in a process that is very complex and confusing. In particular, the scheme often rests on consumers taking the initiative and applying for upgrades despite low awareness (DECC 2014) and entering details about their home such as its age and the type of walls – information that they may not know (Preston et al 2014a). This is particularly problematic for fuel-poor consumers who tend to be the least engaged in the market and are therefore least likely to apply for measures themselves.

To some extent, the eligibility flexibility mechanism that has been introduced has provided local authorities with some ability to identify properties on consumers' behalf. However, austerity measures have forced local authorities to scale back non-essential services (NAO 2018), including teams addressing fuel poverty and energy efficiency (Webb et al 2017). As a result, since its introduction in April 2017,

on average only 2 per cent of total measures installed made use of the flexible eligibility criteria, with a peak of 6 per cent in February 2018 (BEIS 2018a).

Second, our interviews with stakeholders revealed that many energy suppliers have little expertise in the efficiency of dwelling stock, meaning that work is often subcontracted several times. Although the ECO brokerage system provides an opportunity to hire certified providers, usage figures and feedback on previous consultation by the government have suggested concerns over the transparency of the process (BEIS 2017f), with many energy suppliers instead opting to hire installers bilaterally (SSE 2013) and deal with them directly. However, bilateral deals also have a negative impact on transparency because ultimately it is the suppliers, not those installing the measures, who are accountable to Ofgem and report back to it on the measures that have been installed (Ofgem 2017). This increases the likelihood of the poor delivery quality mentioned in section 4.4.2.

Finally, given the lack of engagement from fuel-poor consumers, advice services have been repeatedly cited as critical to the process of referring customers to where they can apply for energy efficiency measures. While this is already in place in Scotland through Home Energy Scotland (Energy Saving Trust 2018a) and in individual local authorities across the UK, it is currently not an integral part of the ECO scheme on a national basis. Indeed, although the Energy Saving Advice Service does exist in England, it does not have a website, nor is it free to call the number and access energy advice (Energy Saving Trust 2018b). While the service is being redesigned to change this, there are still lessons to be learnt from Scotland where advice services are linked to benefits assessment services and each can refer a consumer to the other.

4.6 WHAT ARE THE FUNDING MECHANISMS AND HOW EFFECTIVELY IS THE FUNDING DISTRIBUTED?

Neither is the funding of the ECO scheme sufficient to meet the EPC fuel poverty target by 2030, nor is the finance raised or distributed in a socially equitable way.

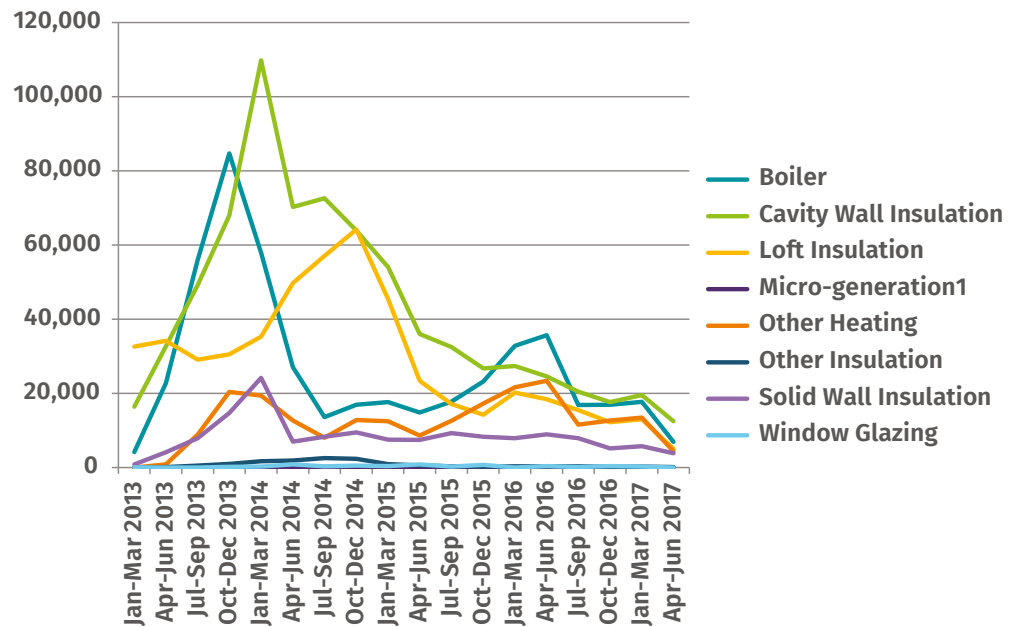
Looking first at the level of funding, in terms of delivering on the interim targets for the Fuel Poverty Strategy, the ECO scheme has made good progress towards interim goals to raise fuel-poor households to EPC band E by 2020, with 93 per cent of consumers expected to reach this by 2019 (CFP 2017). However, when looking at the EPC data available at local authority level, the number of households receiving an EPC rating of E or above in England in 2017 stood at 96 per cent, only improving 0.5 per cent since the introduction of ECO in 2013 (DCLG 2018). Part of this discrepancy between national and local figures is explained by the fact that raw local EPC data only provides a sample of the total number of households. Nevertheless, it suggests that, despite progress towards interim targets, the initial target was a low bar to start with.

Moreover, based on current policies, the Committee on Fuel Poverty estimates that only around 11 per cent of fuel-poor households will reach EPC band C by 2017 (CFP 2017), with an additional £14.4 billion needed between 2019 and 2030 to provide energy efficiency measures for the remaining 89 per cent of households. However, despite the greater focus on HHCRO (Affordable Warmth Group) by increasing this sub-obligation from 36 per cent to 70 per cent of the total obligation, overall scheme funding has actually decreased from £1.1 billion a year to £640 million a year (CFP 2017). Combined with the mounting challenge of identifying cost-effective measures in the first place, this has resulted in a steady decline in the number of energy efficiency measures being delivered since 2013 (see figure 4.6).

FIGURE 4.6

Since its inception, there has been a steady decline in the number of measures being delivered, reflecting a reduction in funding

*ECO measures delivered by type, January 2013–June 2017**



Source: Department for Business, Energy and Industrial Strategy, ‘Household Energy Efficiency National Statistics, headline release April 2018’ (BEIS 2018c)

* Funding reductions occurred in December 2014.

The way in which funding is raised and distributed is also very regressive (ACE et al 2015, Citizens Advice 2016, Frerk and MacLean 2017, Barrett et al 2018). On average, the poorest households spend a higher proportion (10 per cent) of their income on energy compared with the richest households (3 per cent) (Barrett et al 2018). This is despite the fact that they use less energy overall (White et al 2010), yet still pay similar amounts on their bills for ECO (Preston et al 2014b). Moreover, in terms of scheme funding, the Committee on Fuel Poverty estimates that only around 30 per cent (£192 million from 2018 to 2022) of money spent on HHCRO (the Affordable Warmth Group) will result in energy efficiency upgrades for fuel-poor consumers (CFP 2017).

This disparity is due partly to the fact that, as mentioned in section 4.4.1, fuel-poor consumers are among the least likely to engage in schemes like ECO, meaning that they end up paying for it through bills but do not receive any of the benefits. This situation is particularly bad for rural communities where, despite paying over £70 million in bill levies over a two-year period, rural households only received measures worth £3.5 million (Gosden 2014). Finally, in some cases, even if consumers are eligible to receive upgrades, they may be asked to make a capital contribution towards their energy efficiency measures, which many fuel-poor consumers are unable to afford (Citizens Advice 2016).

In summary, fuel-poor consumers pay more for their energy as a proportion of their income, use less of it, pay similar amounts for ECO on their bills and receive fewer energy efficiency measures than other consumers in the scheme.

4.7 HOW DOES THE SCHEME ENSURE THAT SOLUTIONS LEAD TO A FUTURE-PROOFED IMPROVEMENT IN THE GOALS OF THE SCHEME?

One of the key assumptions in the Committee on Climate Change's modelling on the implications of the proposed fuel poverty targets is that the most efficient way to reach the EPC band C target for fuel-poor households by 2030 is to upgrade properties multiple times over a number of years (White et al 2014). Indeed, the Fuel Poverty Strategy includes interim targets for upgrading the EPC ratings of as many households as is practicable to EPC band E by 2020 and EPC band D by 2025 (CFP 2017). However, this would involve significant disruption for the households concerned, which the strategy does not address. This raises questions about how any energy efficiency scheme can be future-proofed to avoid this.

At the same time as these incremental improvements are being planned for the future, the ECO scheme does not currently consider ways in which the heating systems in households may change in the future. This could lead to efficiency upgrades currently being delivered becoming defunct once new heating systems are installed.

In part this is due to the absence of a long-term strategy for heat decarbonisation, making future needs difficult to predict. In addition, a shift towards a more decentralised energy system (Hull and Jones 2016) will mean that local communities are likely to have much more choice in deciding which technologies they would use to heat their homes – ranging from hydrogen gas networks, to air-source heat pumps, to solar thermal heating – undermining the ability to future-proof even further (Emden 2018). Thus, opportunities to install energy efficient upgrades that will survive whatever decarbonisation path is chosen by national policy or local communities will need to be prioritised.

5. EMERGING APPROACHES TO THE FUTURE DELIVERY OF ENERGY EFFICIENCY SCHEMES

In chapter 4, we demonstrated that while ECO has made progress in raising the energy efficiency of fuel-poor households, it has not been an effective means of delivering on the targets set out in the Fuel Poverty Strategy for England. Moreover, as currently constructed, the scheme will not deliver the government's ambitions in the future.

But, as we set out in this chapter, there is potential for adopting new approaches that will significantly improve the effectiveness of delivery and make a substantial contribution to tackling fuel poverty in England. To understand the different approaches, in this chapter we use the same evaluation framework described in chapter 4. We set out the emerging approaches to improving the future delivery of energy efficiency schemes and include key observations highlighted by stakeholders, critical analysis and our recommendations.

During the course of our roundtable and subsequent expert interviews, we found that there is a degree of consensus on some issues, with notable exceptions. Throughout this chapter we present our analysis with supporting quotations from stakeholders where relevant, as well as providing a thorough presentation and judgement of stakeholder views where there were points of disagreement.

We also recognise that the government is already consulting on the future of ECO between 2018 and 2022. Our focus is therefore largely on how a future energy efficiency scheme could operate beyond that current cycle, but where relevant we also point to steps that could be taken in this interim period.

5.1 A NEW APPROACH TO ENERGY EFFICIENCY

If the government is to deliver on its ambition of upgrading as many fuel-poor homes 'as is reasonably practicable' to the energy efficiency rating of band C by 2030 (DECC 2015), then it is clear that a new approach is needed beyond 2022.

We believe that the new approach should see ECO after 2022 transformed from a supplier-led scheme to a local authority-led, area-based scheme. This scheme should be supported by a national delivery body and funded through general taxation.

The main aspects of this new approach would be as follows:

- **An area-based approach delivered by local authorities.** Local councils would deliver a future energy efficiency scheme through an area-based approach, with particularly intensive engagement in hard-to-reach places such as rural areas.
- **A national delivery body to support local authorities.** A national body should be set up that has several key functions, including supporting local authorities in delivering the new area-based approach.

- **Alignment of the drivers for all participants to the overall objectives of the scheme.** The scheme should be structured so that the drivers for government, consumers, landlords and industry are better aligned to support the delivery of the overall objectives. From a government perspective, the policy should be focussed solely on addressing fuel poverty. And local authorities should share their projections of energy savings among clusters of households with DNOs and GDNs to encourage their investment in the scheme. For consumers, the scheme should include free energy advice to increase engagement and be supported by effective enforcement of minimum energy efficiency standards in the private rented sector and an increase in their cost cap to £5,000.
- **A more rigorous approach to targeting fuel-poor consumers.** Energy suppliers should share energy consumption data and billing information with local authorities to be matched with the EPC information and benefits data that local authorities hold, so that local authorities can better target fuel-poor households. Beyond 2022, we recommend that government should consider providing funding for a house-by-house assessment of the efficiency of properties, including questions on income.
- **Fairer and sufficient funding.** After 2022, a future energy efficiency scheme should be funded through general taxation and distributed to local authorities according to the number of fuel-poor homes in each area. This should be supported by additional investment to support staffing in local authorities for this new approach.
- **A future-proofed energy efficiency scheme.** In general, fuel-poor consumers should not be the target demographic for trialling innovations in energy technologies but any future scheme should prioritise energy efficiency measures that both meet the needs of fuel-poor consumers and are adaptable to all forms of heating system, such as wall and loft insulation.

This new approach would have several components that aim to address the challenges highlighted by our evaluation framework in chapter 4. We now set out our rationale and critical analysis for each of our recommendations in more detail.

5.2 CREATING AN ACCESSIBLE SUPPLY CHAIN

The current supply chain for ECO contains several bottlenecks that are having a big impact on delivery and there are several crucial stakeholders who are not included in its design. We argue that the supply chain for a future scheme must have multiple access points for fuel-poor consumers and involve all of the key stakeholders. A flow diagram depicting how we envisage stakeholders interacting with each other can be found in appendix 2, figure A2.1.

5.2.1 Using an area-based approach to deliver energy efficiency upgrades

Through weighing up stakeholder views and our evidence, we recommend that area-based approaches led by local authorities should be the main method by which a future energy scheme is delivered. An area-based approach would be more effective than targeting individual households (Howard 2015) for several reasons:

- Where fuel-poor and non-fuel-poor households are located in the same place, local authorities would be able to upgrade all households together. While this would lead to some leakage of spending on non-fuel-poor consumers, it has the potential to be offset by the cost-effectiveness of upgrading multiple properties at the same time (ACE et al 2015).
- In addition, it would avoid a piecemeal delivery of solid wall insulation, which may result in unnecessary heat loss, disruption to neighbours and the stigmatisation of individual households (ACE et al 2015, Energy Saving Trust 2018c).
- Identifying specific areas that should receive energy efficiency upgrades can be an efficient way of identifying and addressing synergies with other local

authority priorities at the same time, such as regeneration and health and wellbeing (ACE et al 2015).

As one stakeholder noted:

"An area-based approach is good because it allows you to target specific housing archetypes for upgrades. That also helps provide installers with a clearer picture of what kinds of installations you're likely to want from them"

Representative from a gas company

In delivering an area-based approach, there are key risks that must be considered, many of which the stakeholders in our interviews highlighted. First, an area-based approach assumes that priority will be given to the poorest areas in order to target fuel-poor consumers rather than to other areas within a local authority's catchment. In reality, however, the poorest consumers may not necessarily all be in the poorest areas (ACE et al 2015), meaning that some may be left out. As one stakeholder noted:

"If you're going to do an area-based energy efficiency scheme, you need to make sure you're properly tackling the overlap between fuel-poor areas and areas of deprivation but you also can't forget that these areas don't always line up perfectly"

Representative from a fuel poverty non-governmental organisation

However, as discussed in section 5.4.1, if energy-use data was being shared with local authorities, local authorities would hold more accurate energy consumption information, enabling them to identify more accurately both priority areas and clusters of households outside of priority areas.

Second, while, in general, local authorities understand the composition of their housing stock better than other stakeholders, there is considerable variation in the level of resources at the disposal of different councils. This could result in a 'postcode lottery', with better-funded local authority areas able to deliver a more comprehensive approach than those councils that are less well resourced (Platt et al 2012, ACE et al 2015, Citizens Advice 2016, CFP 2017). One stakeholder from our interviews warned that '[t]he ideal is different from the reality' because, they argued, some local authorities are already struggling to deliver on their core competencies (independent expert on fuel poverty).

Moreover, some stakeholders who we interviewed raised fears that councils lacking the capacity to deliver a scheme may be more likely to outsource responsibility for the management of delivery. If not done effectively, this could result in less transparent quality control. As the same stakeholder as above summarised: 'A lot of councils outsource management of flexibility eligibility at the moment and would do the same if they had to run the scheme entirely by themselves' (independent expert on fuel poverty).

We therefore argue that sufficient resources and capacity at a local authority level are required and additional investment would be cost-effective and a way to reduce regional variations in capacity and engagement. As noted in section 5.5.3, IPPR previously estimated that an investment of £40 million in recruitment, training, data analysis and research could secure a net benefit to the overall energy efficiency scheme of £90 million (Platt et al 2012).

Finally, several stakeholders during the interviews pointed out that the quality and archetypes of housing stock in rural and off-grid communities can be less well known and would require much greater engagement with local energy champions

and other constituents to obtain this information. Further evidence from the Future of Rural Energy England (FREE) programme supported this view (FREE 2013).

To address these challenges, it will be necessary for local authorities to engage local stakeholders such as rural community councils and local energy champions to help identify the properties to target (FREE 2013).

Recommendation: An area-based approach to delivering energy efficiency upgrades should be adopted. For remote rural schemes in particular, this will require local authorities to engage with rural community councils and local energy champions.

5.2.2 The role of local authorities

In our discussions with expert stakeholders, there were differing views over the role of local authorities in the delivery of a future scheme. On the one hand, some stakeholders suggested that local authorities should primarily be responsible for collating consumer data, including housing efficiency information, benefits data and energy consumption and billing information (see section 5.4.1). This data would then be presented to another stakeholder such as a DNO or GDN (see below), who would be responsible for the oversight of the delivery of measures. As one stakeholder during our roundtable noted: 'We're still testing the water in terms of how DNOs could help local authorities but we do think there's a clear opportunity to work with them on the data that they have access to' (representative from a distributed network operator). On the other hand, some stakeholders proposed that local authorities could both identify households and oversee programme delivery as well. As one stakeholder pointed out:

"Gathering and managing all this data is a classic public sector role that has been outsourced. You really need to combine energy data with building efficiency data and all of that is more likely to be held by local councils"

Academic and energy expert

The discrepancy in positions can be explained predominantly by stakeholders' view of local authority resources in light of increasing pressures on their financial sustainability (NAO 2018). As one stakeholder summarised:

"The real problem here is capacity. While not all councils are the same and some might need more training than others, there are cases where you have people with skills who could do it. But you really need to have funding to accompany it to free up capacity"

Local council officer

While we acknowledge that there are major concerns over local authority capacity, we also conclude that the major barriers to this capacity could be overcome with the introduction of a national delivery body and sufficient funding. We therefore recommend that the current ECO scheme should be reformed so that it is primarily led by local authorities, provided it is supported and funded at the national level.

Recommendation: The current ECO scheme should be reformed to establish a supply chain that is primarily led by local authorities.

5.2.3 A national delivery body to support delivery

If this shortfall in capacity could be addressed, local authorities would then be in a position to deliver a future energy efficiency scheme. This could be made possible through the creation of a national body that would help local authorities to develop their own practices, documentation and capacity to gather and utilise data. As one stakeholder from our interviews suggested:

"Just saying local authorities should do it, isn't going to get you there. To support them, you need a national delivery body that has a clear set of governance arrangements and provides extensive supporting guidelines"

Energy economist at an energy consultancy firm

This stance would enable local authorities to oversee the delivery of energy efficiency upgrades for themselves through an area-based approach (ACE et al 2015, Deasley and Claire 2017). Finally, additional functions could be added to the national body to help streamline the process of delivering measures from the installer perspective and ensure that quality delivery is incorporated into their core responsibility. The particular roles of this national delivery body would therefore include:

- helping local authorities to develop targeting frameworks by standardising methodologies for identifying vulnerable households
- fostering collaborations between local authorities where it makes sense to pool resources (ACE et al 2015)
- supporting local authorities as they develop procurement specifications for installers, helping them with the aggregation of multiple households to increase the attractiveness of tenders for DNOs and GDNs
- supporting local authorities by providing standardised methods for recording and monitoring impact
- distributing funding for staff costs (see section 5.5.3)
- engaging with private landlord associations about the benefits of energy efficiency for property value and, where necessary, assisting with the enforcement of minimum standards.

Recommendation: A national delivery body should be created that would have several key functions, including supporting local authorities to develop area-based approaches.

5.2.4 The role of DNOs and GDNs

In addition to the role played by local authorities, there was also disagreement among our experts over the extent to which DNOs and GDNs should be involved in the energy efficiency scheme. DNOs and GDNs provide the physical cables and gas pipelines that connect electricity and gas from the grid to our households. Given that they have responsibility for managing energy demand on these local grids, there are clear system benefits to DNOs and GDNs if they are delivering energy efficiency upgrades.

On the one hand, some stakeholders suggested that a supply chain scenario consisting of a scheme that is funded by DNOs and GDNs through the RIIO price framework – the Returns = Incentives + Innovation + Outputs model under which these networks operate – could have several benefits (ACE et al 2015). This is because this framework is designed to ensure that the network cost portion of the bill stays as low as possible and, if possible, results in bill reductions due to profits being shared between DNOs and consumers (ENA 2017). As one stakeholder from the interviews noted: 'I think a DNO proposition could certainly be considered, as they need to keep the energy demand on the network as low as possible to avoid additional network costs' (government official from BEIS).

However, simply replacing a supplier-led scheme with a DNO- and GDN-led one presents two major challenges. First, just like energy suppliers, DNOs and GDNs do not have specific expertise in building energy efficiency and would therefore be just as reliant on local authorities supporting them and equally likely to subcontract to third parties, thereby reducing transparency. As one stakeholder who we interviewed noted: 'There may be opportunities with DNOs but there

needs to be strong protections for fuel-poor consumers as the networks aren't experts in buildings either' (independent expert focused on fuel poverty).

Second, while it is possible under the RIIO framework for savings from energy efficiency upgrades to be shared with customers (National Grid 2018), the actual raising of funds would still be a *de facto* regressive levy on bills. It would therefore face the same problem of disproportionately penalising the poorest consumers.

Our preferred method of involvement from DNOs and GDNs would be for them to provide investment where there were obvious energy savings to be made, which would help them to defer the cost of upgrading the network and make savings themselves. In appendix 2, table A2.1, we set out the benefits and disadvantages of different ownership models for a future energy efficiency scheme in more detail.

Recommendation: Local authorities should engage with DNOs and GDNs and share projections of energy savings among clusters of households to encourage additional investment. While we recognise that the energy savings from fuel-poor consumers are lower than more able-to-pay consumers, by bundling households together it should be possible to produce clear projections of potential savings at a scale sufficient to motivate investment.

5.2.5 The role of other key local authority services

A key part of a successful supply chain for a programme tackling fuel poverty is the integration of multiple entry points through which consumers can access the scheme (Citizens Advice 2016). Across the UK, there are several examples of stakeholders providing access points that could all be integrated within the supply chain of any future energy efficiency scheme for England (see the box below). While not all of the services highlighted relate directly to energy efficiency, there could be benefits if they were all able to refer consumers to such a scheme in the future.

EXAMPLES OF INTEGRATED SERVICES TO TACKLE FUEL POVERTY

Food and fuel banks including debt advice services

In the wake of increasing energy prices (Ofgem 2018b), energy suppliers have started to provide fuel vouchers when consumers visit food banks, allowing them to access both at the same time (npower 2018). While reliance on voluntary services should never have to be the method by which the poorest consumers are able to afford food, the addition of these vouchers, along with debt and energy advice in some food banks, has been helpful in providing a holistic approach to both tackling urgent fuel poverty and addressing its underlying causes (Loopster and Doireann 2017). This model could be replicated, supported with sufficient funding by central government and delivered by local authorities.

Integration of health objectives and health services

Because of its importance to people's health, the National Institute for Health and Care Excellence (NICE) already has extensive guidelines for integrating fuel poverty into healthcare practices (NICE 2015). However, more work could be done to train practitioners to participate in the referral process as well as ensuring that home visits also involve an assessment of the heating capacity of a property. For example, a pilot referral scheme conducted by the Royal College of Practitioners, Warm and Safe Wiltshire and Sheffield Hallam University revealed that while the process of referral was minimally time consuming and not financially burdensome, culture change was difficult to achieve, with GPs finding it difficult to find the time to initiate conversations that would lead to a referral (Eadson et al 2017). In this regard, one suggestion from the report that could stimulate

greater engagement would be the integration of fuel poverty goals with Commissioning for Quality and Innovation (CQUIN) targets, which provide payments for innovations and improvements in health services (University Hospital Southampton NHS Foundation Trust 2016, Citizens Advice 2018).

In addition, where they do not already exist, all local authorities should seek to ensure that there are local energy advice services that can ‘plug in’ to the kinds of existing local council services described in the box above. In this regard, local authorities could follow the model used in Scotland – the Home Energy Efficiency Programme (HEEP) – which is a widely cited example of holistic policymaking that provides multiple access points for fuel-poor consumers. In addition to referrals for energy efficiency upgrades, it offers energy management advice, alerts consumers of any discounted energy rates that might be offered by a supplier and refers fuel-poor consumers for benefits checks that they may be unaware of (Energy Saving Trust 2015a, 2018d). While in England there are some councils that do provide energy advice services, this is not consistent across all local authorities (NEA 2017).

To support local efforts, there should be greater integration of local advice services with national energy advice. While we recognise that the national Energy Savings Advice Service is currently being improved, as part of this improvement, local advice schemes should be able to register with the service, or an expanded Big Energy Saving Network (CFP 2017). These national services could then provide not only on-the-spot energy saving advice, but also refer to local authority advice schemes and check eligibility for benefits following the model in Scotland.

Recommendation: All local authorities should ensure that advice services are in place for fuel-poor consumers that have clear referral routes to and from other services such as debt advice, jobcentres and GP practices. These advice services should register with the national Energy Savings Advice Service (which is currently being redesigned), which could provide referrals for anyone contacting the national helpline.

5.3 MOTIVATING PARTICIPATION FROM GOVERNMENT, CONSUMERS, LANDLORDS AND INDUSTRY

5.3.1 Engaging national government

Energy efficiency policy in England currently has two competing goals: to tackle fuel poverty and to reduce carbon emissions. As we have argued, while energy efficiency policy is vital in addressing fuel poverty, targeting fuel-poor households is not the most effective way of reducing carbon emissions because these households generally use less energy. As one stakeholder from our interviews succinctly put it: ‘ECO is a square peg in a round hole. As originally designed, it was fine to deliver energy efficiency. But fixing fuel poverty is altogether more complicated and the current scheme isn’t up to the challenge’ (local council officer).

As has been suggested throughout this report, we believe that ECO should focus on tackling fuel poverty rather than reducing carbon emissions and we therefore welcome recent government proposals to remove the CERO obligation from the scheme in future.¹⁵ However, as noted in section 5.4.2, we recommend that the focus of a scheme after 2022 should be more rigorously focussed on fuel-poor consumers, not just the HHCRO (Affordable Warmth Group), through the use of proxies (eligibility for certain benefits), using our proposed area-based approach.

¹⁵ The most recent consultation from BEIS on the future of ECO for the 2018–2022 period suggests that the Carbon Emissions Reduction Obligation should be scrapped and the scheme should focus solely on the HHCRO (Affordable Warmth Group) (BEIS 2018b).

However, in order to ensure that energy efficiency continues to be an important part of reducing carbon emissions, we also recommend that the government should create a separate scheme that looks to develop an energy efficiency market among able-to-pay consumers. This would allow the able-to-pay market to focus on delivering energy efficiency measures where cost-effectiveness is determined by how much carbon would be reduced for the least cost (BEIS 2017e). While it is beyond the scope of this report to discuss how such a scheme would function, it is clear that a scheme for able-to-pay consumers would be a more efficient way of reducing carbon emissions due to the positive relationship between energy use and income levels (White et al 2010).

Recommendation: From a central government perspective, ECO should become a policy solely focussed on addressing fuel poverty. However, to ensure that the crucial role that energy efficiency has in reducing emissions is not forgotten, the government should consider developing a new and separate scheme concentrating on the able-to-pay market that focusses on reducing carbon emissions.

5.3.2 Engaging local government

From a local government perspective, local authorities must act to build trust and greater engagement from fuel-poor consumers by aligning objectives across different teams, including economic development teams and health and wellbeing boards (The King's Fund 2016). For example, in Staffordshire the University Hospitals of North Midlands NHS Trust has formed a collaboration with the Beat the Cold initiative whereby revenue from solar panels installed on the hospital goes towards supporting energy saving advice and the health and wellbeing impacts of the initiative are measured over time (University Hospitals of North Midlands NHS Trust 2016). Meanwhile, under flexible eligibility, Nottingham City Council automatically considers a property to be eligible for energy efficiency upgrades if one or more members of the household suffers from an illness that can be exacerbated by cold temperatures such as cardiovascular disease (Nottingham City Council 2018). In order to adopt such initiatives more widely, there must be greater integration and communication of the benefits of energy efficiency to other teams within local authorities.

Recommendation: From a local government perspective, councils should act to align fuel poverty objectives with those of health and wellbeing boards and work with local advice services to provide a more connected service with clear access points and referral methods. This will help to create trust and greater engagement among fuel-poor consumers.

5.3.3 Engaging consumers

One of the most important parts of any energy efficiency scheme are the consumers. Yet as outlined in chapter 4, ECO is failing to overcome the challenge of raising the awareness and engagement of consumers. There is therefore a much greater role for advice services in prompting consumers to engage with energy efficiency schemes. Scotland is an example where advice services have received government support (Energy Saving Trust 2018a) and have gone on to facilitate greater engagement with energy efficiency. In a study of advice services for the Scottish government in 2015, the Energy Savings Trust concluded that consumers tend to respond more positively to energy efficiency upgrades if they have been told about them in advance by an advice service and have been reassured that the delivery of these upgrades is coming from a trusted source (Energy Saving Trust 2015b).

All stakeholders in our research cited this support for energy advice as vital to an energy efficiency scheme, with many referencing the Scottish model as a best practice example that should be followed. As one stakeholder concluded:

"You have to have a joined-up approach to represent vulnerable groups. At a local level that means having the tools to identify referrals and provide information and advice, not just on the internet, but also with physical leaflets or a friendly face to help you sign up to things"

Representative from an energy efficiency installer trade group

Recommendation: In order to engage consumers, the Scottish model should be followed and a free energy advice service should be established that refers consumers to, and helps to build their trust in, the multiple services available.

5.3.4 Engaging landlords

In many cases, the main barrier to engagement is not the consumer, but a landlord who is unwilling to fund improvements. Consequently, stakeholders who we interviewed for this research were supportive of recommendations set out by the Committee on Fuel Poverty to increase the maximum cap that landlords can spend on energy efficiency measures to upgrade a household up to a cost of £5,000, create licensing schemes for private landlords, increase local authority enforcement capacity (CFP 2017) and require landlords to increase the EPC rating of rented properties in line with fuel poverty milestones (that is, EPC band C by 2030). As one stakeholder noted: 'One area we're missing is the need to make improvements within the private rented sector and target landlords to upgrade properties' (energy industry representative).

Beyond these recommendations, it is also critical to communicate to landlords that energy efficiency improvements almost always increase property value (European Commission 2018). This messaging is already starting to gain traction at government level, with the Clean Growth Strategy setting out plans to introduce green mortgages that offer more favourable loan terms for properties that are more energy efficient (BEIS 2017b). To make this policy successful, it will be crucial to communicate the benefits of using mechanisms such as green mortgages to landlords and homeowners alike.

Recommendation: Echoing the recommendation of the Committee on Fuel Poverty, enforcement of minimum standards should be increased and the cost cap in the private rented sector should be increased to £5,000. Also, landlord associations should be contacted about the increase in house prices that energy efficiency improvements could produce. This outreach should be conducted by the national delivery body described in section 5.2.3.

5.3.5 Engaging industry stakeholders

We argued in chapter 4 that suppliers will always look to install the lowest-cost measures, which often do not sufficiently address the needs of fuel-poor homes that require more significant and more expensive upgrades. Furthermore, the political sensitivity of levying funds through bills makes it challenging to simply increase the amount that suppliers could spend. To ensure that the motivations of industry participants are aligned with the objectives of a future energy efficiency scheme, energy suppliers should have minimal involvement in such a scheme beyond 2022, aside from sharing data with local authorities as mentioned in section 5.4.1 and referring customers in need to the scheme. Ofgem has recently echoed this view (Ofgem 2018c).

Recommendation: Energy suppliers should have a minimal direct role in a future energy efficiency scheme beyond 2022, with the exception of those business arms of some energy companies that are dedicated to providing energy efficiency upgrades.

A scheme after 2022 would function more effectively with the involvement of industry actors that already have incentives that align with the desired outcomes.

In particular, DNOs and GDNs should be important additional actors within the supply chain of a scheme after 2022. As mentioned in section 5.2.4, this is because they have responsibility for managing energy demand on the local grids. By reducing demand through energy efficiency upgrades, this would avoid or defer the need to reinforce networks to accommodate for any additional demand, speeding up timelines to connect new generation to the grid or reducing the need for new generation altogether, even if the latter benefits may be difficult to monetise (ENA 2017). As one stakeholder also noted:

"Potentially you could envisage DNOs playing a more active role in leading an ECO scheme. That's primarily because they have longer-lasting relationships with consumers [than suppliers] and already have RIIO in place to fund it [demand reduction]"

Representative from an arm's-length government body

However, there are challenges to the involvement of any new industry actors, the biggest of which is uncertainty. For DNOs and GDNs, this is the uncertainty over the energy savings that energy efficiency upgrades in the home will actually generate for their system (ENA 2017). Therefore, we recommend that local authorities, being supported by a national delivery body, invite additional investment from DNOs and GDNs through the aggregation of clusters of fuel-poor households. Doing so would provide a clearer and large-scale demonstration of potential energy savings that network operators could achieve. This in turn would provide an incentive to invest in order to defer the need for greater investment in upgrading the physical networks themselves.

Recommendation: Local authorities should work with a national delivery body to cluster households together with clear energy saving projections to incentivise additional investment.

As noted in chapter 4, uncertainty and lack of experience are also matters that are pertinent to installers and have resulted in issues with quality control during the installation of energy efficiency measures. In addition, certain measures are particularly time and labour intensive, meaning that installers tend to specialise in easier-to-fit energy efficiency upgrades.

One way of addressing this quality control issue, as well as widening the pool of installers trained in delivering deeper retrofits, would be to provide training to these companies. Several options could be explored to achieve this, including more formal linkages between universities and installation companies. Training to improve quality in the sector is also being considered as part of the Each Home Counts Review (Bonfield 2017). An upcoming report from IPPR will be looking into the skills gaps in the energy sector and will explore specific recommendations on this issue in greater detail.

Recommendation: Policy options for providing training to installers should be explored in order to address quality control issues as well as increase the number of installers who are able to provide more difficult-to-install measures.

5.4 MORE RIGOROUS TARGETING

As we argued in chapter 4, a fuel poverty policy that does not reach most fuel-poor households is not fit for purpose. Under the current scheme, at least 20 per cent of fuel-poor households are excluded because they are either ineligible for the qualifying benefits or do not know that they are eligible. Moreover, due to difficulties in identifying fuel-poor homes, IPPR analysis of CPF (2017) suggests that there will be a spending leakage of £448 million on non-fuel-poor consumers every year. Furthermore, administrative costs of the scheme remain high and

efforts to improve targeting by introducing flexible eligibility have had a low take-up by local councils.

Any future scheme must therefore ensure that all fuel-poor households are eligible for the scheme and it would need to reach fuel-poor consumers much more effectively than current methods do. Our two main recommendations for achieving this are through improved data sharing and improved data being gathered.

5.4.1 Sharing data to improve targeting

One way of reducing leakage and ensuring that it is fuel-poor households who benefit from any energy efficiency scheme is through the sharing of benefits data between public authorities and energy suppliers, allowing suppliers to utilise the data to identify which households are eligible for energy efficiency measures. A recent consultation by BEIS (2018b) looked into this issue but as a means to put fuel-poor consumers on 'safeguard tariffs' (price-capped pre-payment meter tariffs) more quickly.

For as long as ECO is still a supplier-led scheme, this data could also be used by energy companies to identify which households are eligible for energy efficiency measures as well as a new tariff. This would promote a more proactive approach, rather than relying on consumers to declare their receipt of certain benefits (Ofgem 2018d).

As well as sharing benefits data, there is also considerable merit in combining that data and EPC information that councils already hold, with energy consumption and billing data held by the energy suppliers. Aggregating this data would provide a more accurate picture of which households are likely to be living in fuel poverty or living close to the LIHC definition of fuel poverty.

In the short term, the Committee on Fuel Poverty illustrates how the new methodologies for data collection to identify households eligible for the Warm Home Discount could be extended to ECO from 2018 to 2022 (CFP 2017). This would involve the Valuation Office Agency (VOA) – which provides government with the data and advice to set council tax and benefits rates – providing figures on the size and age of properties. This data would then be passed on to BEIS where it would be ranked in terms of the most likely households to have high energy costs and then overlaid with benefits data by the Department for Work and Pensions (DWP). If this method could also add data from the National Energy Efficiency Data-Framework (NEED), it could be applied to a future fuel poverty scheme.¹⁶

Recommendation: From 2018 to 2022, benefits data and EPC information held by councils should be shared with energy suppliers.

However, beyond 2022 we would argue that it is local authorities that are best placed to utilise this data rather than energy suppliers. There are strong accountability reasons for this, not least because local authorities are democratically elected and subject to great transparency.¹⁷ Furthermore, despite the additional burden this would place on local authorities, provided they were properly resourced, obtaining billing and energy consumption data would enable councils to identify fuel-poor households more accurately than suppliers

¹⁶ The National Energy Efficiency Data-Framework (NEED) was set up to provide a better understanding of energy use and energy efficiency in domestic and non-domestic buildings in Great Britain. The data framework matches gas and electricity consumption data, collected for BEIS subnational energy consumption statistics, with information on energy efficiency measures installed in homes, from the Homes Energy Efficiency Database (HEED), Green Deal, ECO and the Feed-in Tariff scheme. It also includes data about property attributes and household characteristics, obtained from a range of sources.

¹⁷ As an aside, due to section 37 (1) and (2) of the new Digital Economy Act 2017 (Legislation.gov.uk 2017), there are no legal barriers to suppliers sharing data with local authorities provided that it used to tackle fuel poverty.

(Nottingham City Council 2018), who have less knowledge of the efficiency of local housing stocks (Platt et al 2012, ACE et al 2015).

In addition, as the rollout of smart meters continues, the accuracy of energy consumption and billing data should be improved, giving local authorities more reliable information and enabling them to create more accurate maps that show the distribution of fuel-poor homes in their area (Citizens Advice Bureau 2014). A full flow diagram of how we envisage this data mapping being produced can be found in appendix 2, figure A2.2.

While suppliers may raise objections to sharing data with local authorities on the grounds of commercial sensitivity, some suppliers have argued that there should be more transparency in the prices that consumers are being charged (House of Commons 2017). Sharing billing data would therefore be a step towards greater transparency as it would become clear how tariffs vary from household to household.

Recommendation: Beyond 2022, the direction of information should be reversed, with energy suppliers sharing energy consumption and billing information with local authorities.

5.4.2 Moving beyond proxies to identify fuel-poor households

We recognise that our recommendation for sharing data would still have the limitations of being reliant on benefits data as a proxy for low income. We believe that there is a need for government to consider a more comprehensive approach. IPPR has previously recommended a house-by-house approach where local organisations provide free EPC assessments but also include questions about household income (Platt et al 2013). A house-by-house approach would provide a much more accurate picture of the levels of fuel poverty within every local authority and would therefore enable councils to undertake a much more effective area-based approach to delivering energy efficiency upgrades. Finally, whether or not a household was found to be fuel-poor, a house-by-house approach would have the benefit of being able to provide on-the-spot energy saving advice and referral to additional council services if necessary.

Full consideration and, in particular, the resources needed to deliver it are beyond the scope of this report but we believe that serious consideration should be given to alternative methods of identifying fuel-poor households, of which this is a key option.

Recommendation: Beyond 2022, the government should consider providing funding for a house-by-house assessment of the efficiency of properties, including questions on income. This funding could be distributed according to the original estimates of fuel poverty within each local authority.

5.5 FAIRER AND SUFFICIENT FUNDING

The current levy on bills is regressive and any future energy efficiency scheme beyond 2022 should not be funded in this way. Given the short timeframe of the ECO consultation, the mechanism of a levy on bills is unlikely to change in the period between 2018 and 2022. After this period, however, we recommend a new method of funding to support the new structure and governance that we have outlined. Stakeholders in our research proposed several alternative funding methods to address both the scale and social equity challenges of the current ECO scheme. Overall, their suggestions can be grouped into four main approaches:

- levying funds through general taxation rather than on bills (Barrett et al 2018)
- energy performance contracting between local councils and installers (Webb et al 2017)

- applying for funding on a council-by-council basis through Local Growth Deals where local authorities offer to share responsibility for EPC band C targets
- redistributing benefits payments such as the Warm Home Discount and the Winter Fuel Payment (Howard 2015) more effectively.

5.5.1 Increasing funding from multiple sources for ECO from 2018 to 2022

Within the 2018–2022 ECO cycle (called ‘ECO3’), focusing all existing funding towards the HHCRO (Affordable Warmth Group), even though this does not capture all fuel-poor homes perfectly, seems to be the most likely reform based on the most recent consultation issued (BEIS 2018b). On the basis that the *method* of funding for this period is unlikely to change, at least increasing the *amount* available to deliver measures for fuel-poor consumers is welcome.

However, in this interim period, we would nevertheless recommend a substantial increase in funding, committing to £14.4 billion from 2019 to 2030, in line with projections from the Committee on Fuel Poverty (CPF 2017). While some of this funding gap would be met by obligations placed on landlords, we recommend that the additional sources of revenue cited by stakeholders above should be considered for the upcoming ECO3 period. The benefits of each method are discussed in the box below.

SUPPLEMENTAL FINANCING METHODS TO GENERAL TAXATION

DNO and GDN investment

As mentioned in section 5.3.5, DNOs and GDNs are well placed to provide additional investment on a project-by-project basis, where the energy savings from energy efficiency upgrades are clear and sufficiently large. This is because DNOs and GDNs are responsible for maintaining energy demand on the medium and low voltage power lines and gas networks that bring electricity and gas from the grid to households. By reducing energy demand through energy efficiency measures, this defers or removes the need for DNOs and GDNs to invest in new and expensive cables and pipelines. In addition, under the RII framework, it would also be possible to share a proportion of savings with consumers, thereby reducing the amount levied from energy bills (ENA 2017).

Redistributing the Winter Fuel Payment and the Warm Home Discount

According to the Committee on Fuel Poverty, less than 10 per cent of the approximately £2.1 billion annual funding for the Winter Fuel Payment and the Warm Home Discount reaches fuel-poor households (CFP 2017). While recommendations for totally redesigning these schemes is beyond the scope of this report, many stakeholders in our research pointed out that funding from these two schemes could be more effectively redistributed if it was invested in energy efficiency as a long-term solution rather than as an annual handout. A report from the Policy Exchange supports this, which suggests that turning the Winter Fuel Payment into an opt-in policy could free up £400 million a year, which could be reinvested into energy efficiency measures (Howard 2015).

Recommendation: From 2018 to 2022, the method of funding is unlikely to change. However, in this interim period, there should nevertheless be a substantial increase in funding, committing to £14.4 billion from 2019 to 2030, in line with projections from the Committee on Fuel Poverty. While some of this funding gap would be met by obligations placed on landlords, there are several additional funding sources that could be explored.

5.5.2 A move to an energy efficiency scheme funded through general taxation beyond 2022

While the sources of fundraising that stakeholders cited would be welcome as additional funding methods for ECO3, we argue that, in the longer term, the preferred method for funding a future energy efficiency scheme would be through general taxation. However, as one stakeholder cautiously noted during our interviews, such a substantial change could involve a degree of political risk:

"I think we're all pretty clear that your on-bill financing is regressive and you need to move it towards something else like general taxation. The nervousness is that ECO funding would just be removed if you made too big a change and wouldn't be replaced by something else"

Energy economist from an energy consultancy firm

However, despite the potentially greater political sensitivity around transferring funding from bills to the whole population (BEIS 2018b), recent research from the UK Energy Research Centre (UKERC) demonstrates that the overall burden on the population would be small. Specifically, it finds that, if the cost of all energy policies including ECO were transferred from levies on bills to general taxation, 70 per cent of UK households would save an average of £102 a year and the richest 30 per cent of households would pay an extra £410 a year (£8 a week) (Barrett et al 2018).

In addition, it is also worth bearing in mind the secondary benefits that are currently not factored into cost-benefit assessments of ECO. In particular, the secondary health benefits from energy efficiency are substantial and would indirectly pay back the Treasury's spending by alleviating a substantial burden on the NHS. As one stakeholder from our interviews noted:

"It's really critical to recognise the economics benefits to society from improvements in health, the regenerative effect on improving households in an area, and the effects on criminality and antisocial behaviour. Unfortunately, this is isn't a monetised incentive under the current delivery method"

Local council officer

As we noted in chapter 3, according to Age UK, the NHS spends approximately £1.36 billion every year on hospital and care costs caused by cold homes leading to ill health (Age UK 2012). We recommend that the Treasury conducts a cost-benefit analysis of energy efficiency that includes the secondary health benefits of delivering such a scheme. This would help to provide further justification of a scheme funded through general taxation.

Recommendation: After 2022, a new energy efficiency scheme should be funded through general taxation and distributed to local authorities according to the number of fuel-poor homes in each area.

Recommendation: To support this move, the Treasury should conduct a thorough cost-benefit analysis that includes the secondary economic benefits of energy efficiency, including improved health, as these should demonstrate the substantial savings that can be achieved and thereby justify a move to funding through general taxation.

5.5.3 Providing funding for local authority capacity

If a future energy efficiency scheme involves local authorities overseeing its delivery, it is critical that any future funding takes staffing costs into account. As mentioned in section 5.2.1, this is supported by previous IPPR research showing that an investment of £40 million into local authority staffing would yield a net economic benefit of £90 million (Platt et al 2012). Funding for staffing costs would also have a catalytic effect on local authorities' ability to raise even more funds

through the supplemental methods suggested above. Given this clear benefit, in addition to funding through general taxation, central government should provide this funding to local authorities, distributed through a national delivery body.

Recommendation: The government should provide an investment of £40 million into local authority staffing to ensure that councils are well equipped for the additional responsibility that a local authority-led scheme would require.

5.6 A FUTURE-PROOFED ENERGY EFFICIENCY SCHEME

As mentioned in section 4.7, there is great uncertainty over the future of heating in the UK.

5.6.1 Prioritising future-proofed energy efficiency technologies

To accommodate for the uncertainty, local authorities should prioritise the delivery of energy efficiency measures that are resilient to possible future heating systems *and* deliver effective improvements to fuel-poor consumers. The government's Boiler Plus policy, where the upgrading of boilers must be accompanied by heating controls, is a step towards future-proofing. However, the delivery of energy efficiency improvements, including solid wall installation, cavity wall installation and temperature controls, could be substantially increased (BEIS 2017g, SEA 2017).

BEIS should seek to work with Ofgem to revise the list of eligible energy efficiency technologies (Ofgem 2018e) to identify and give priority to those technologies that satisfy both criteria. Local authorities could then be incentivised to prioritise these measures. In addition, relevant technologies could be incorporated as standard into local authority procurement guidelines.

5.6.2 Only permitting limited innovation

As part of the future-proofing debate, a key topic of discussion within the most recent consultation on the future of ECO for 2018 to 2022 was innovation (BEIS 2018a). There are however, several reasons why innovation for fuel-poor households can be problematic:

- the risks of innovations not being fit for purpose are particularly dangerous for fuel-poor consumers who would not be able to afford alternatives if the technologies failed
- fuel-poor consumers should not be expected to provide any financial contribution to any pilot, placing further financial burden on local authorities or energy service companies
- given the limited financial resources available, funding for innovation would have to be additional to spending on technologies that are already future-proof and proven to be effective for fuel-poor consumers
- even if energy performance for new technologies was guaranteed under strict warranty, this would add further costs to such projects
- even if technology improvements themselves performed well, evidence from the Bonfield Review suggests that lack of knowledge of these new measures could lead to higher volumes of poorly delivered installations (Bonfield 2016).

Nevertheless, it is important that fuel-poor consumers are not left behind and the scheme should effectively incorporate new technologies with proven benefits. In addition, there are forms of innovation that might be more suitable for fuel-poor consumers such as those focussed on processes rather than a particular technology. As one stakeholder pointed out during our roundtable:

"There's a difference between innovative processes and new products. In this respect, housing associations would be a good place to start because they have a responsibility to look after their homes and have the capacity to deal with it if it all goes wrong"

Local council officer

As an example to support this call for process innovation, a new installation approach known as EnergieSprong is currently being trialled by Nottingham City Council, which seeks to install all necessary measures in a matter of days with minimal future disruption (EnergieSprong 2017). Provided they were carefully managed, pilots primarily focussed on process innovation could feasibly be introduced for fuel-poor households.

Recommendation: Priority should be given to technologies that would be appropriate for any kind of heating system, such as wall and loft insulation. This prioritisation could take the form of negotiated targets with local authorities to deliver a certain number of future-proof measures in return for additional funding. In addition, relevant technologies could be incorporated as standard into local authority procurement guidelines.

Recommendation: Although BEIS has suggested that innovation could play a role in ECO from 2018 to 2022, we would not recommend the inclusion of policy support for innovation trials within this scheme or future schemes focussed on fuel poverty, except in circumstances where local authorities had sufficient capacity to address any issues that may occur.

6. CONCLUSION

No one should lack the financial means to keep their home warm. Yet, as we set out in chapter 3, the sad fact is that 2.5 million households in England face such a crisis. While there are many broader societal factors that lead to fuel poverty, one of the leading causes is energy inefficient housing.

ECO in its current form is well intentioned but, as we highlighted in chapter 4, it falls well short of the step-change that is needed in the energy efficiency of England's housing stock. There is currently a £14.4 billion gap in funding for the period from 2019 to 2030 if the government intends to upgrade all fuel-poor homes to an energy efficiency rating of C by 2030. Yet there is no guarantee that this money would even be spent on fuel-poor consumers because of very poor methods of identifying where these consumers are and the difficulties they face in accessing the scheme. At its current rate, we estimate that the ECO scheme would not upgrade the efficiency of England's 2.5 million fuel-poor households to an EPC rating of C until 2091 at the very earliest. In other words, the government is on track to deliver on its ambition 61 years late.

It is within this context that we have discussed in this report the need for new approaches to reform and rejuvenate fuel poverty policy in England. As we proposed in chapter 5, our overarching recommendation to achieve this is a substantially reformed energy efficiency scheme focussed solely on fuel-poor consumers. This scheme should be considered beyond the upcoming ECO phase of 2018–2022 and would have the following key features:

- an area-based approach delivered by local authorities
- a national delivery body to support local authorities
- alignment of the drivers for all participants to the overall objectives of the scheme
- a more rigorous approach to targeting fuel-poor consumers
- fairer and sufficient funding
- a future-proofed energy efficiency scheme.

Without these long-term reforms, we believe that ECO is destined to be a complex and unwieldy scheme that suffers from the retention of old legacy approaches and does not deliver on what is now its primary objective of helping fuel-poor consumers. Indeed, although originally including carbon reduction objectives, ECO is no longer an energy obligation – it is a social one. In future, it should be treated as such and given the proper structure, governance and funding that such a social policy requires.

6.1 SUMMARY OF RECOMMENDATIONS

6.1.1 Creating an accessible supply chain

- An area-based approach to delivering energy efficiency upgrades should be adopted. For remote rural schemes in particular, this will require local authorities to engage with rural community councils and local energy champions.
- The current ECO scheme should be reformed to establish a supply chain that is primarily led by local authorities.

- A national delivery body should be created that would have several key functions, including supporting local authorities to develop area-based approaches.
- Local authorities should engage with DNOs and GDNs and share projections of energy savings among clusters of households to encourage additional investment.
- All local authorities should ensure that advice services are in place for fuel-poor consumers that have clear referral routes to and from other services such as debt advice, jobcentres and GP practices.
- These advice services should register with the national Energy Savings Advice Service (which is currently being redesigned), which could provide referrals for anyone contacting the national helpline.

6.1.2 Motivating participation from government, consumers, landlords and industry

- From a central government perspective, ECO should become a policy solely focussed on addressing fuel poverty. However, to ensure that the crucial role that energy efficiency has in reducing carbon emissions is not forgotten, the government should consider developing a new and separate scheme concentrating on the able-to-pay market that focusses on reducing carbon emissions.
- From a local government perspective, councils should act to align fuel poverty objectives with those of health and wellbeing boards and work with local advice services to provide a more connected service with clear access points and referral methods.
- In order to engage consumers, the Scottish model should be followed and a free energy advice service should be established that refers consumers to, and helps to build their trust in, the multiple services available.
- Echoing the recommendation of the Committee on Fuel Poverty, enforcement of minimum standards should be increased and the cost cap in the private rented sector should be increased to £5,000. Also, landlord associations should be contacted about the increase in house prices that energy efficiency improvements could produce.
- Energy suppliers should have a minimal direct role in a future energy efficiency scheme beyond 2022, with the exception of those business arms of some energy companies that are dedicated to providing energy efficiency upgrades.
- Local authorities should work with a national delivery body to cluster households together with clear energy saving projections to incentivise additional investment.
- Policy options for providing training to installers should be explored in order to address quality control issues as well as increase the number of installers who are able to provide more difficult-to-install measures.

6.1.3 More rigorous targeting

- From 2018 to 2022, benefits data and EPC information held by councils should be shared with energy suppliers.
- Beyond 2022, the direction of information should be reversed, with energy suppliers sharing energy consumption and billing information with local authorities.
- Beyond 2022, the government should consider providing funding for a house-by-house assessment of the efficiency of properties, including questions on income. This funding could be distributed according to the original estimates of fuel poverty within each local authority.

6.1.4 Fairer and sufficient funding

- From 2018 to 2022, the method of funding is unlikely to change. However, in this interim period, there should nevertheless be a substantial increase in funding, committing to £14.4 billion from 2019 to 2030, in line with projections from the Committee on Fuel Poverty. While some of this funding gap would be met by obligations placed on landlords, there are several additional funding sources that could be explored.
- After 2022, a new energy efficiency scheme should be funded through general taxation and distributed to local authorities according to the number of fuel-poor homes in each area.
- To support this move, the Treasury should conduct a thorough cost-benefit analysis that includes the secondary economic benefits of energy efficiency, including improved health, as these should demonstrate the substantial savings that can be achieved and thereby justify a move to funding through general taxation.
- The government should provide an investment of £40 million into local authority staffing to ensure that councils are well equipped for the additional responsibility that a local authority-led scheme would require.

6.1.5 A future-proofed energy efficiency scheme

- Priority should be given to technologies that would be appropriate for any kind of heating system, such as wall and loft insulation. This prioritisation could take the form of negotiated targets with local authorities to deliver a certain number of future-proof measures in return for additional funding. In addition, relevant technologies could be incorporated as standard into local authority procurement guidelines.
- Although BEIS has suggested that innovation could play a role in ECO from 2018 to 2022, we would not recommend the inclusion of policy support for innovation trials within this scheme or future schemes focussed on fuel poverty, except in circumstances where local authorities had sufficient capacity to address any issues that may occur.

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APPENDIX 1

A1.1 LIST OF STAKEHOLDERS PARTICIPATING IN THE ROUNDTABLE AND IN-DEPTH INTERVIEWS FOR THIS RESEARCH

- Arup
- Bristol City Council
- Calor Gas
- Camden Council
- Centre for Sustainable Energy (CSE)
- Citizens Advice
- Committee on Climate Change (CCC)
- Committee on Fuel Poverty (CFP)
- Distribution Network Operator (DNO)
- E3G
- End Fuel Poverty Coalition
- Energy and Utilities Alliance (EUA)
- Energy Efficiency Infrastructure Group (EEIG)
- Energy Networks Association (ENA)
- Energy Savings Trust
- Energy UK
- E.ON
- Frontier Economics
- Islington Council
- National Energy Action (NEA)
- National Infrastructure Commission (NIC)
- Nottingham City Council
- Ofgem
- Sustainable Development Unit (SDU)
- Sustainable Energy Association
- UK Energy Research Centre
- UK Power Networks

A1.2 INTERVIEW DISCUSSION GUIDE

A1.2.1 The purpose of the research

IPPR has been commissioned by Citizens Advice to explore how the future of fuel poverty support can deliver on the government's 2015 Fuel Poverty Strategy. The research predominantly focusses on the Energy Company Obligation (ECO), its shortcomings in addressing the needs of fuel-poor consumers and how energy efficiency policy could be better designed in future to address fuel poverty more effectively.

A1.2.2 Current and future energy efficiency delivery for fuel poverty

Since its inception in 2013, ECO has undergone many changes, which now trend towards a greater focus on fuel poverty. While income support schemes such as the Warm Home Discount and, to a lesser extent, the Winter Fuel Payment also exist to alleviate fuel poverty, ECO is currently the only scheme that offers the potential to lift consumers out of fuel poverty without them having to rely on benefits by providing energy efficiency measures. It is a key part of the government's 2015 Fuel Poverty Strategy. However, ECO is also the *only* England-wide energy efficiency scheme and it has two objectives – to deliver energy efficiency upgrades to reduce carbon emissions and to alleviate fuel poverty – that are not currently aligned. Meanwhile recent changes to ECO that place a greater emphasis on the Affordable Warmth Group aim to upgrade more fuel-poor homes.

We are therefore interested in exploring how ECO could be changed, replaced, or even added to by a separate policy that focusses solely on delivering on the Fuel Poverty Strategy rather than the current situation where the attention of one scheme is divided between energy efficiency upgrades for fuel-poor and non-fuel-poor consumers. In particular, we are interested in the following questions.

- What do you think are the most significant challenges for the current ECO scheme (ECO2t) in delivering energy efficiency to fuel-poor consumers?
- What are the challenges to improving the targeting of fuel-poor consumers? How might this be improved?
- To what extent would changing benefit thresholds help target ECO?
- How helpful do you think the flexible eligibility mechanism has been?
- How could it be improved?
- To what extent do you think area-based approaches would be more effective at tackling fuel poverty than current methods?
- What administration would need to be in place to deliver this?
- What might the challenges be to area-based delivery and how might they be overcome?
- Do you think the supplier-led model works well in delivering ECO? What could better replace it? What are the challenges to this approach?
- How can consumer engagement in adopting energy efficiency measures by fuel-poor consumers be improved?
- What role do you think innovation should play in any future energy efficiency scheme?
- How helpful do you think local authorities and affiliated services have been in providing assistance to fuel-poor consumers? What have been the benefits and challenges of this?

A1.2.3 The state of the energy market

In light of evolving price support within the retail energy market, we are interested in what policies would need to be in place to make it easier for fuel-poor consumers to engage in the market. In particular, we are interested in the following questions.

- To what extent do you think fuel-poor consumers will benefit from the price cap and safeguard tariff?
- What are the synergies and tensions between price support and energy efficiency delivery?
- How helpful do you think advice on energy has been for engaging fuel-poor consumers?

A1.2.4 Future-proofing

In light of the development of new low carbon technologies, we are interested in how these changes, in conjunction with any future energy efficiency scheme, will impact those currently living in fuel poverty. In particular, we are interested in the following questions.

- To what extent will the rollout of smart meters help with targeting fuel-poor consumers under ECO through greater data availability?
- To what extent do you think demand-side response technologies and third parties could help with the delivery of fuel poverty support?
- What protections would have to be in place to safeguard fuel-poor consumers?
- How important do you think future-proofing should be as a principle within any future energy efficiency scheme?

APPENDIX 2

FIGURE A2.1

A proposed supply chain for a potential future energy efficiency scheme

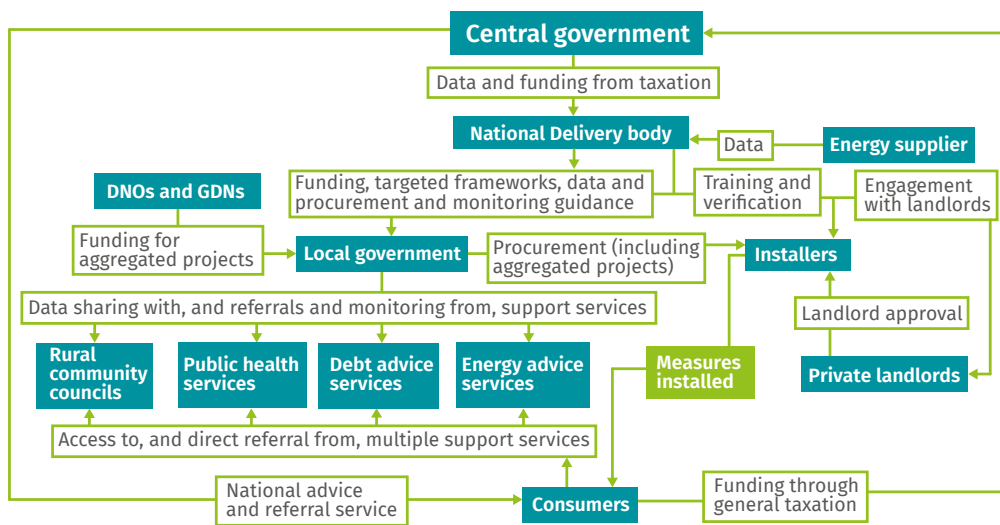


TABLE A2.1

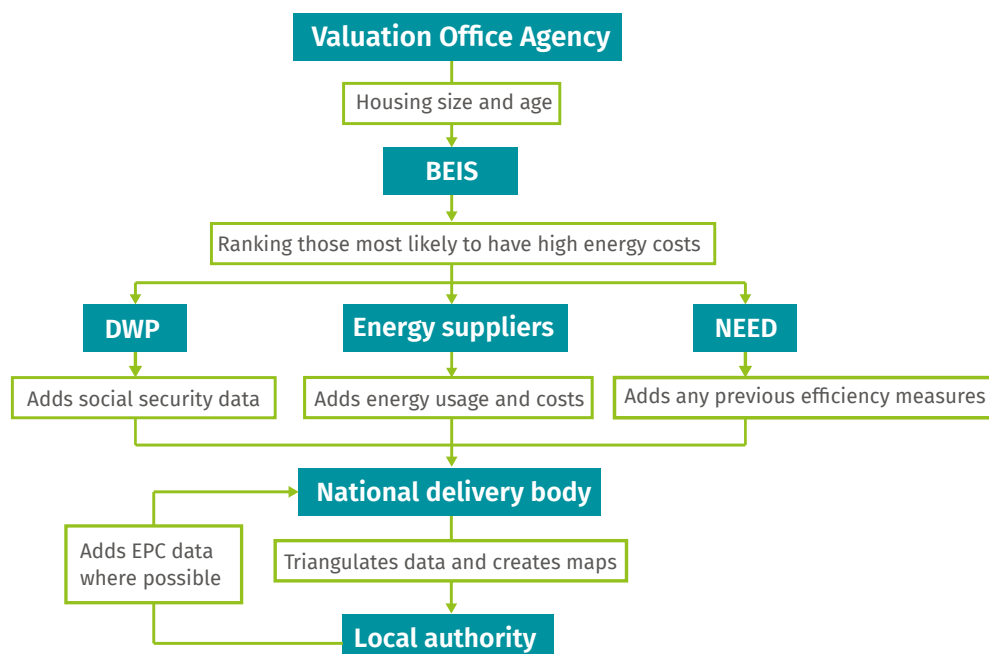
Comparison of a potential future energy efficiency scheme led by local authorities and by DNOs/GDNs

	Led by local authorities	Led by DNOs and GDNs
Identifying a target market	Collating and analysing all data (supported by a national delivery body), including building efficiency and smart meter data, would enable local authorities to develop detailed area-based approaches to identifying fuel-poor households	Investment in local authorities and a national delivery body for energy efficiency would be less necessary DNOs and GDNs could develop area-based approaches as they serve geographically cohesive parts of the country While they could acquire smart meter data, this would require additional policy changes to the smart meter rollout
Ensuring that the drivers of participants are aligned	Energy efficiency schemes would be very effective in helping local authorities to deliver on other priorities such as health and wellbeing and regeneration	DNOs and GDNs would have a financial incentive to deliver energy efficiency upgrades through deferred costs of upgrading networks

Ensuring a supply chain with multiple access points	Local authorities can coordinate multiple local government services, providing consumers with multiple access points With proper investment in staffing costs, local authorities would be able to project manage the delivery of the scheme themselves	DNOs and GDNs do not have as much experience in delivering energy efficiency upgrades, nor in consumer interactions, meaning they would be more likely to outsource project management
Providing sufficient and fair funding	General taxation distributed to local authorities is a much more equitable method of fundraising than on-bill financing	DNOs and GDNs would raise money through the RIIO framework, which would effectively be the same as a levy on bills Although any savings made by DNOs and GDNs could be shared with consumers, economic analysis is needed to quantify how much this would be
Ensuring permanence through future-proofing	Individual local authorities with the capacity to manage technology and installation process pilots very carefully would be able to do so	The RIIO framework inherently encourages innovation. However, this may not be appropriate for fuel-poor consumers and DNOs and GDNs may be less well equipped to troubleshoot if any problems with the performance of new technologies arose

FIGURE A2.2

Proposed supply chain of data to be used in local authority area-based approaches



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