



Net Zero Transition for Low-income Consumers:

A Participatory Action Research Project

A Toynbee Hall report in
partnership with Fair by
Design and Ofgem

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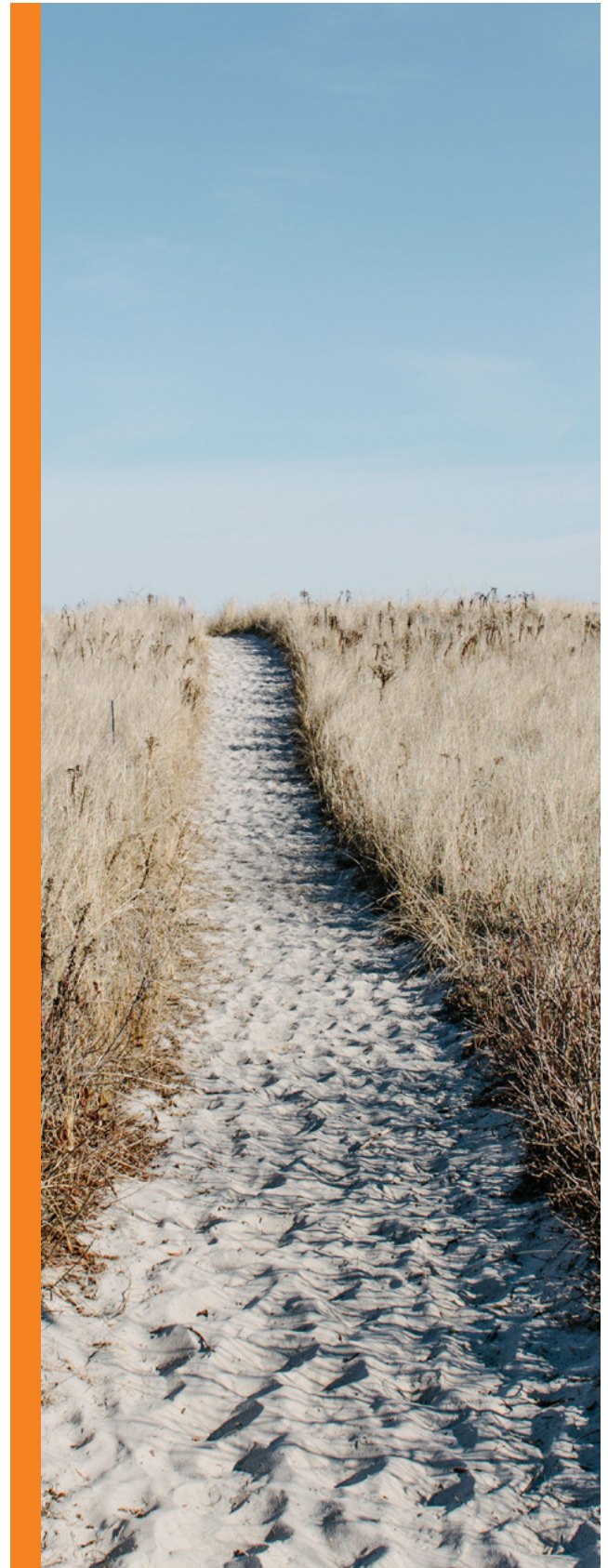


Executive Summary

This is a Toynbee Hall report, supported by Fair by Design and the UK energy regulator Ofgem. The report explores what a fair transition to net zero should look like for low-income consumers, and how to get there.

A Participatory Action Research project, professional researchers and community members with direct experience of the energy poverty premium worked in partnership to co-create research and proposals. 13 peer researchers and 38 community members participated in the project, and Ofgem and Fair by Design played an advisory role at each stage.

We see the transition to net zero as an opportunity to create a future energy system that is fair by design, and at best a market where low-income consumers are not just protected, but actively benefit from the transition. Through inclusive design and a regulatory commitment to fairness in policymaking, the operation of the energy market can play a role in materially increasing equality. We hope the insights and proposals from this research contribute to that goal.



Key findings

Awareness of steps to take to transition to a net zero household is low, and prohibitive costs of 'green' choices could exacerbate inequality in the energy market:

Low-income consumers described difficulty accessing information about their choices when it came to transitioning to a carbon neutral household, both in understanding what everyday behaviour changes could help, to more significant choices about improving their household energy efficiency. Crucially, without policy changes focused on tackling financial barriers, financial barriers to energy efficient appliances, smart technology, structural improvements, and affordable green tariffs, the energy poverty premium will worsen significantly. Policy and practice needs to be fair by design, or it will be impossible to 'level up' the energy market.

Private and social tenants lack power to make green household adaptations and are at risk of being left behind:

Tenants described feeling particularly powerless to make household adaptations. They are not in a position to upgrade to a more efficient boiler for example or insulate their home without action from their landlord. Young private renters described not wanting to request changes because they move so regularly, are time-poor, face competing life stresses, and suspect their requests would not be taken seriously. Social tenants were concerned about increased services fees from modifications to their buildings.

Low income consumers will not be able to transition to net zero without barriers to smart technology being removed:

Fear of increased costs, deep-rooted privacy concerns, and lack of affordability will prove substantial barriers to low-income consumers benefiting from the sector's move to a smart energy system.

Energy companies need to become better at proactively identifying and supporting vulnerable consumers:

A key part of ensuring a fairer transition to net zero will be for energy companies to understand how to practically identify a 'vulnerable consumer' using a dynamic definition of vulnerability. This will necessitate proactive engagement with consumers including reframing vulnerability to eligibility in communications and systemically triggering support offers based on certain consumer behaviour like late payments.

Key recommendations

- 1.** The government needs to develop more extensive support schemes for low-income households to make green changes, from larger structural adaptations to the purchase of smart appliances. Ofgem should also make it mandatory for energy companies to offer a 'green social tariff'. To guarantee a fair transition, Ofgem could introduce an 'affordability standard' for new support schemes to guarantee they will benefit households on lower incomes.
- 2.** Ofgem introduces Key Performance Indicators for energy companies to increase accountability and improve sector-wide standards when it comes to identifying and supporting vulnerable consumers through the net zero transition. Ofgem could help co-design these KPIs with the sector, and would be responsible for penalising or rewarding good outcomes.
- 3.** Ofgem should bring together energy companies, consumer groups, tenants representatives and stakeholders from social and private housing to explore how tenants can have greater power over access to household adaptations. This working group should be informed by findings from peer-led research with social and private tenants.
- 4.** Ofgem commissions peer research into how low-income consumers can feel more confident about their options with smart technology. This can help Ofgem to develop a green empowerment strategy to increase consumer trust and confidence in smart technology.
- 5.** Ofgem spearheads a move towards more inclusive communication practice in the sector. Ofgem co-designs a campaign targeted at low income consumers to communicate how they can improve finances while increasing knowledge about making green choices. Ofgem also promotes pro-active engagement practices from energy companies with vulnerable consumers and advocates for the development of Net Zero Advice Hubs.

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1. Introduction

This is a Toynbee Hall report, supported by Fair by Design and the UK energy regulator Ofgem. The report explores what a fair transition to net zero should look like for low-income consumers, and how to get there. This research responds to Ofgem's recognition that low-income consumers are at risk of financial disadvantage unless the UK energy sector's transition to net zero proactively considers and designs for their specific needs from the start (see Ofgem Decarbonisation Action Plan, 2020). Instead, we see the transition to net-zero as an opportunity to create a future energy system that is fair by design – and at best a market where low-income consumers are not just protected, but actively benefit from the transition, with the operation of the energy market materially increasing equality. We hope the insights and proposals from this research contribute to that goal.

Our project aims to:

- Explore the awareness amongst low-income households about the transition to net zero and what interventions would help people best through this transition.
- Understand the needs of low-income consumers when it comes to accessible and affordable household energy, and in creating trust within the energy market during future changes.
- Co-design recommendations for the regulator to best support low-income consumers during and after the transition to net zero.



2. Background

The UK Government has committed to bringing all greenhouse gas emissions to net zero by 2050 (BEIS, 2019). Last October, the UK Government committed to a fully decarbonised power sector by 2035 (BEIS, 2021). In the wake of the invasion of Ukraine by Russia, even more ambitious targets have been set out in the British Energy Security Strategy (BEIS, 2022). In their report 'Net Zero Britain: developing an energy system fit for the future', the energy regulator Ofgem considers that significant reform is required to deliver 'a resilient, low carbon power sector at lowest cost' (Ofgem, 2022). Ofgem points to the need for coordination across the sector to develop infrastructure, the need to optimise the energy system, and tackling challenges facing consumers as key issues during the transition.

The energy sector has two key challenges when it comes to supporting low-income consumers during the green transition. Firstly, it needs to be able to identify who is at risk of detriment from the move to a low-carbon energy system. Secondly, it must respond effectively to the needs of these consumers both in policy and practice.

Identification of vulnerable consumers:

Ofgem has shown leadership in adopting a multidimensional definition of vulnerability: 'We define vulnerability as when a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where he or she is significantly less able than a typical domestic consumer to protect or represent his or her interests; and/or significantly more likely than a typical domestic consumer to suffer detriment or that detriment is likely to be more substantial' (Ofgem, 2019: p. 9.). Low-income consumers who took part in this research project strongly agreed with Ofgem's approach, and described how vulnerability can shift depending on individual circumstances and life events. However, Ofgem's Consumer Vulnerability strategy states that energy companies have expressed difficulty 'operationalising' a multidimensional, dynamic definition of vulnerability in practice (Ofgem, 2019: p. 10.). Our research has revealed a variety of practical ways in which the sector can better identify consumers using a multidimensional definition of vulnerability. Even better,

these approaches overcome some of the stigma and lack of identification with the label 'vulnerable' that can prevent some consumers from seeking help.

A dynamic approach to assessing vulnerability is likely to be even more important in coming years. The London-wide climate risk maps developed by the Greater London Authority and Bloomberg Associates show that 'high climate risk coincides with areas of income and health inequalities' (Greater London Authority and Bloomberg Associates, 2021). For this reason, this project proposes a set of key performance indicators for the current Social Obligations Reporting. These KPIs would allow Ofgem to monitor and incentivise, or where necessary penalise, energy companies based on how well they support vulnerable consumers during the green transition.

The need for 'green choices' to be affordable:

In 2019, the Committee on Climate Change released a report stating that the UK 'will not meet its targets for emissions reduction without near complete decarbonisation of housing stock' (Committee on Climate Change, 2019: p. 11.). The report recommends HM Treasury funds the retrofitting of current stock with low-carbon sources of heating such as heat pumps and heat networks, and loft and wall insulation amongst other measures. Schemes like the Energy Company Obligation (ECO) have helped low-income consumers make these changes, but our research shows barriers exist to accessing such schemes for low-income households and careful and inclusive design is crucial. Indeed, the ECO has been criticised for using benefits data as an ineffective proxy to identify fuel-poor households, with IPPR calculating this has led to £448 million being spent on non-fuel-poor households every year (Institute for Public Policy Research, 2018).

Our findings show that, without inclusive financial support schemes, expensive household adaptations that save money in the long term will not be accessible because of upfront costs, and consumers will once again be disadvantaged by the poverty premium¹. This is not only true of large expenses; our research shows that hairline

¹ The poverty premium refers to the extra costs people on low incomes and in poverty pay for essential products and services. Examples of the poverty premium in the energy market include the extra costs of pre-payment meters compared to direct debit tariffs, and only being able to afford cheaper, less energy efficient appliances

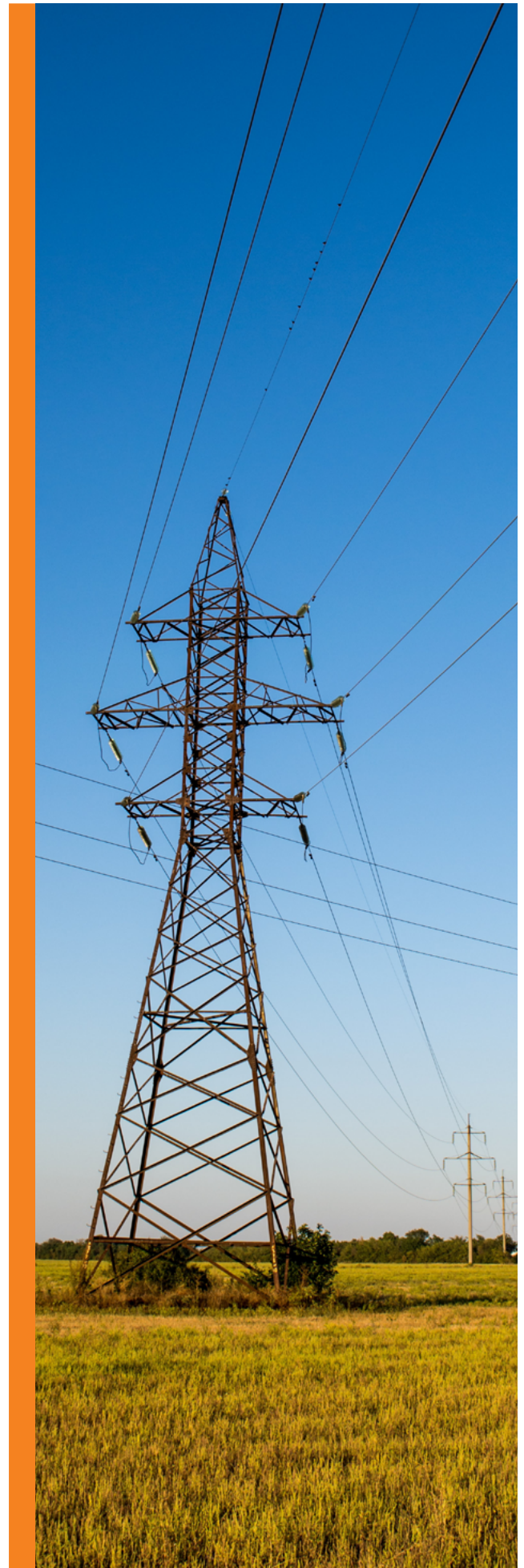
budgets often leave low-income consumers feeling forced to choose a less expensive and less 'green' product over a slightly more expensive, more 'green' choice.

The role of smart technology in reducing household emissions:

Smart technologies are a central plank in the government's net zero strategies (BEIS, Innovate UK and Ofgem, 2021). By 2034, the rollout of smart meters will deliver close to £6 billion of net benefits to consumers, energy suppliers and networks (BEIS, 2019). However, there are significant barriers to uptake and maximisation of smart meters and accompanying smart technologies. Ofgem's consumer survey shows 58% of energy consumers 'would feel uncomfortable with an external company controlling when their heating, appliances or smart chargers run' (Ofgem², 2021: p. 3). The same research indicates a lack of trust as the primary barrier 'with people concerned about safety, reliability and sharing data and information with companies' (Ofgem², 2021: p. 3). Our findings further unpack low-income consumers' concerns about data privacy and affordability, both in terms of worries about costs increasing and inaccessibility of smart technology.

Communication about the green transition in the energy sector:

Citizens Advice identified key lessons for the government from past energy efficiency and low carbon home improvement schemes. Better communication was a key theme, with 'impartial third-party advice, tailored to the consumer and their property' (Citizens Advice, 2020: p. 6.) deemed to be crucial. Another key issue was that consumers need to be helped to identify legitimate traders. This research further develops learning for the energy sector about how to best communicate with low-income and other vulnerable consumers, so they can be empowered to make choices they can trust.



3. Our approach

The Participatory Action Research project involved professional researchers and community members with direct experience of the energy poverty premium (peer researchers) working in partnership to co-create research and proposals directly informed by lived experience. 13 peer researchers co-designed the project scope and focus and agreed on the most appropriate methods. They facilitated workshop discussions with 38 community members with experience of the energy poverty premium. They also analysed the findings and co-designed solutions with Toynbee Hall's research and policy team. Ofgem and Fair by Design played an advisory role at each stage.

Step one: Building a project team

To form our project team, Toynbee Hall drew from an existing network of over 40 trained peer researchers to recruit a representative group of people affected by the energy poverty premium. We co-produced the project with 13 peer researchers. Black, Black British, Asian, Asian British, and White backgrounds were represented in the peer research group, and peer researchers were aged between 37 and 82 years old.

Together, we reached out to a group of 38 participants who took part in research and solution development workshops, having been identified as experiencing the energy poverty premium either through income level, or income level combined with other factors like digital exclusion and disability. 72% had a monthly household income of less than £1480 before tax. Around one fifth were homeowners, another fifth were private tenants, and three-fifths were social tenants. Participants were aged between 18 and 82 years old. 30% were living with a long-term health condition or disability. 6 participants were digitally excluded. Participants were from Asian, Asian British, Black, Black British, Arab and White backgrounds.

All peer researchers and participants lived in London.

Step two: Exploring issues and identifying research focus with peer researchers, Fair by Design and Ofgem

Over four initial workshops, peer researchers were supported to discuss their own awareness of the transition to net zero as well as their lived experiences

of accessing affordable energy and making energy efficiency changes to their households. Ofgem were invited to meet with the group to present the scope of their powers and to explore where they as regulator could act on the issues emerging from discussions so far. Fair by Design also provided expert feedback. The input of Ofgem at this stage shaped the development of the group's key research questions, which focused on finding insights to inform potential policy solutions.

Step three: Collecting insights from public participants

Peer researchers facilitated two initial insight workshops, exploring key discussion themes agreed by the group. This was a solutions-focused project so, following an exploration of issues, the discussions were primarily about proposal development. One of the workshops took place online, and the other in Toynbee Hall's Wellbeing Centre with digitally excluded participants. All participants were given a short presentation on smart meters, smart appliances, smart tariffs and the UK Government and Ofgem's plan to transition to a smart, flexible energy system as part of the transition to net zero. The discussions themes were:

- Understanding the meaning and implications of the move to 'net zero' amongst low-income households;
- Effective support in place to make green choices;
- Effective support for people who are vulnerable to financial harm; and
- The role of new technologies in a fair 'just transition'.

Step four: Co-designing solutions with public participants

Peer researchers reviewed initial findings and the evidence base for different proposals. They agreed a framework to decide which proposals to develop in more depth:

- The extent to which the proposal will help the most vulnerable to participate well and benefit;

- The extent to which the proposals will minimise the anxiety of consumers as they transition to green energy; and
- How feasible implementation of the proposals would be.

Through rounds of voting and discussion the researchers reached consensus on the two proposals to further co-design with participants:

- A workshop to co-design elements of a communication strategy to promote best ways for low-income consumers to transition well to a greener household.
- A workshop to understand how energy bills can be improved to become a better communication tool to help consumers make decisions about energy usage and tariffs for affordability, but also about how to make greener choices. This reflects the fundamental importance for consumers of having clear, accessible information in order to be able to make decisions and take action.

These two design workshops were facilitated by peer researchers. For the communication strategy workshop, which took place on Zoom, an interactive Miro board was used to help participants visualise and feedback on the strategy and key issues. For the bills workshop, an in-person workshop was held with low-income consumers, some of whom were digitally excluded, and a debt advisor. The participants reviewed printed-out examples of energy bills and agreed on the features that constituted a good bill.

Step five: Finalising proposals

The final two workshops with peer researchers focused on continued proposal development. Peer researchers reflected on and developed further both the energy bill guidance and communication strategy. They also agreed longer-term policy proposals for a fair transition in the form of 'road maps', building on the insights and proposals developed across the workshops.

Step six: Disseminating findings

With the aim of influencing change, we organised three dissemination activities to discuss findings and recommendations with Ofgem, Fair by Design and a wider group of stakeholders.



4. Findings and recommendations



4.1 Awareness and power to make green choices

There are a range of interpretations of ‘net zero’ among low-income households. Some of our research participants understood it as meaning having zero carbon footprint or moving to sustainable energy sources. For others however the term was more closely related to personal finances or costs, for example, having zero energy costs or keeping domestic energy bills as low as possible.

“I think the aim is to reduce pollution to such an extent that the whole world is not suffering from global warming.”

“Yeah, I think we can save lots of things like when we go to sleep turned off everything.”

Many low-income households view the transition to net zero and climate change through the lens of inequality. The majority of participants wanted to transition to more energy-efficient households, not only to reduce costs but also to play their part in preventing climate change. However, low-income households face and will continue to face significant barriers to making the kinds of changes that would help them adapt their households to become more energy efficient. This was echoed through workshops and peer researcher meetings, with participants concerned that low-income households would be left behind during the transition to net zero. This is likely to exacerbate unfairness in the energy market as participants felt increases in costs would be borne primarily by consumers and higher-income households and homeowners would continue to reap the benefits of green changes such as better insulation and cheaper energy bills.

“Because as much as in all honesty, I feel like very anxious about the planet, I feel very anxious about the way that I consume energy. But I just feel like it’s something that I can’t really act upon. [...] The fact is there’s many other things as well, you know, decisions like buying a wardrobe or having my own mattress. [...] If I, you know, ate pasta for two weeks. So that’s where energy bills come in the list of all the worries.”

“So if I was, you know, more middle class, more affluent, I would go green with everything. But sadly, it’s kind of the economics that come into it that I have to

take, you know, I have to weigh out what’s good for me as my household, you know, like as a as an individual, [and] what’s better for the planet?”

Awareness of how low-income households can make green choices and the ability to do so are low. The three main barriers were **1.** difficulty accessing information about how to change both everyday behaviour and make adaptations to the home, **2.** financial barriers to appliances, equipment and structural work, and **3.** a lack of power to make modifications for social and private tenants.

“Earlier when we were discussing [...] what we knew about net zero, a lot of what we said was that we don’t know a lot because it’s given to us in an inaccessible way, like the information regarding everything.”

Participants argued that accessible information from trusted sources is not easily available, particularly for tenants and those on low incomes. The role of communication will be discussed further in section 4.4.

“It’s very hard to find information, or at least [...] it’s time consuming. And very often, you’re being told that you’re doing the right thing, and you don’t realise that you’re not because you’re not familiar with all of the different ways in which you can approach paying for energy bills, [and] understanding how energy is provided to you.”

The upfront costs of making energy efficiency changes can leave consumers powerless to make their homes more energy-efficient and to save costs over time. A key issue for participants was that they simply cannot afford to make many of the adaptations available to wealthier households, including boiler upgrades, better insulation, more energy-efficient appliances, and investing in smart appliances. A frequently argued solution from participants was to have a more extensive set of support schemes or grants available to low-income households or those at risk of fuel poverty to help them access green changes such as these. Many felt this could help include low-income households in the drive towards net zero and ensure a fairer transition. The ECO scheme could meet the needs of many but the eligibility criteria are too limited and many are unaware that they exist. Furthermore, some of the

flagship government schemes in this area such as the Boiler Upgrade Scheme (BUS) still require an initial outlay that is arguably too expensive for many, and are only available to homeowners, excluding tenants even if they were affordable to them. Awareness of support schemes also needs to be increased (see section 4.4).

Many low-income consumers cannot afford the usually higher rates for green tariffs, particularly amidst the cost-of-living crisis. Participants who did want to opt for green tariffs were frustrated that they felt forced to choose between an affordable tariff and a low-carbon one.

Private and social tenants often lack the power to make green choices. Many low-income consumers are social or private tenants, severely limiting their options as individuals to make green changes to their households. As tenants, they are not in a position to upgrade to a more efficient boiler, for example, or insulate their home without action by their landlord. This is consistent with research by Generation Rent (2021), which found that landlords were typically unwilling to make changes upon request. Others live in buildings where there are shared heating systems in place, which limits the extent to which they can control their costs through careful energy usage but also their ability to switch their energy provider or tariff.

“The solar panel is impossible. I mean, I live in a building monitored by a housing association that will never enable me to fix one on the roof, just for myself, the solar panel - even if I want and even if maybe I find the funding through the government.”

Young private renters in particular felt a lack of control over making green changes to their homes stemming from a range of issues, including moving home regularly, being time-poor, facing competing life stresses and, partly as a result of these issues, also facing barriers to getting advice and support.

“My perspective (as a young private renter) is very much, you know, that of a[...] late 20s kind of perspective, but it just feels, everything feels very discouraging, everything feels just so difficult and heavy. [...] So then, you know, when I have a minute to breathe, then I have to make these choices... it just becomes overwhelming. [...] I often speak to [letting] agencies or whatever [...] they don't want to spend money, they don't want to make changes, they want you to spend the money that you agree to spend on whatever

premises they've given you. And that's it. And you'll be taken as like, Oh, you're too young, you don't know about this, you're a bit, you're a bit silly.”

There was interest in addressing the lack of power tenants have to make changes through collective bidding or a forum for tenants to ask for changes that need whole-building or estate approval. These included collective biddings schemes for tariffs run by councils, which several participants have had a positive experience with, and collective advocacy for building changes by social housing tenants through tenant boards and Tenants and Residents Associations. Some social housing tenants however were concerned that changes to their building or household may result in unaffordable service charges. It was discussed that tenant forums are often less available to private renters, and some felt there needed to be more opportunities for communities to ask for collective improvements to increase energy efficiency as part of the transition to net zero. These findings underpin the recommendation for Ofgem to convene energy companies, housing associations, the National Residential Landlords Association and consumer groups to explore how tenants can have greater power over access to household adaptations or equipment.

To increase people's awareness and power to make green choices, support needs to go beyond just information provision for low-income consumers to be fully aware and empowered to make changes. A home visit support service or 'green property MOTs' were suggested as ways for consumers to fully understand the energy efficiency issues specific to their household, and their options to make greener choices. A home visit support service was proposed several times as one way for consumers to get bespoke advice on the particular issues within the home that currently lead to higher energy usage, what action the householder can take, and the support schemes available that could help.

“Yes, it truly is not only about paperwork, a demonstration (is needed) to show people what to change.”

“You have MOTs with cars, don't you, that [is] a legal requirement... So, you know, it would be interesting if someone took on the initiative to have MOTs for houses. [...] But I know that there are areas of the house that I should probably insulate, but I don't know much about it really. [...] But it would be quite useful to have a visit. And at that time, you could

probably identify vulnerable, you know, you could have a category of vulnerable people identified?"

'Green property MOTs' would take a more structural approach to ascertaining the energy efficiency of a building, with for example formal assessment of insulation and household equipment and appliances. For homeowners, a checklist of changes and support could be provided to help them make adaptations. For social and private tenants, 'green property MOTs' provide an assessment that could be used to hold landlords accountable for net zero-related upgrades to homes they rent out. Property MOTs were also suggested as one way to improve the identification of vulnerable consumers. The revised Decent Homes Standard and its extension to the private rental sector could be a vehicle for Green Property MOTs, as could an adaptation of the Energy Performance Certificate assessments required to be completed by landlords.

Pre-payment meters have a role in managing finances in the green transition. A number of participants suggested pre-payment meters should form part of the transition to net zero. These help those on low incomes to budget, with many using them to manage during the current cost-of-living crisis. This was on the proviso that they become as affordable as other forms of payment like direct debit, and consumers would like access to green affordable pre-payment tariffs.

Standing charges were viewed as unfair. Participants saw the standing charge as fundamentally unfair because while low-income households use less energy on average, everyone is charged the same flat rate for the standing charge. There was concern that if standing charges were to go up again, low-income households may be put in a position where significantly cutting their energy usage has little impact on overall cost savings. The costs of supplier failure being passed to consumers through the standing charge was seen to be particularly unfair.





4.2 Identification and support of vulnerable consumers

Energy companies are failing to support many who are experiencing fuel poverty. Participants with lived experiences highlighted failures in energy companies' vulnerable consumer policies. This is consistent with Ofgem's Consumer Protection Report: Autumn, which shows that some energy suppliers are not doing enough to identify vulnerability (Ofgem¹, 2021). Our research participants argued for Ofgem to hold energy companies accountable for providing quality support, with peer researchers strongly supporting KPIs for energy companies to report on their performance. Some recommended for energy companies being required to show they are supporting a quota of vulnerable clients.

A key part of ensuring a fairer transition to net zero will be for energy companies to understand how to practically identify a 'vulnerable consumer' using a 'multi-dimensional' definition of vulnerability.

Low-income consumers are concerned that financial support schemes use eligibility for welfare benefits as the only proxy for vulnerability. They raised a variety of circumstances where non-benefit recipients might be considered financially vulnerable: people with disabilities

or long-term health conditions, those who are in low-paid work or on zero-hours contracts, carers, single parents, large families, and the elderly. Participants suggested that while it is vital to consider household income, other factors can put households with slightly higher incomes at risk of financial harm or increase their energy needs. Participants highlighted that processes to identify vulnerable consumers also need to better take into account how quickly someone's circumstances can change and for identification systems to be responsive to this. Priority Services Register (PSR) data is not always up to date and ill-equipped to respond to the changing circumstances of consumers (Ofgem, 2021).

"You can use the word vulnerable to identify as the overall kind of catch-all group, and you include your people with medical equipment, [...] a child at primary school in the household, people [...] at pensionable age, [...] anybody in the household (who) is pregnant."

“It’s interesting, because we (people with different challenging circumstances) are all vulnerable consumers. Is that what you mean? Or you mean, specifically, people that are going to have their power switched off?”

In terms of companies better identifying vulnerability, the 13 consumer archetypes developed by the Centre for Sustainable Energy (CSE¹, 2020) for Ofgem provide an evaluation tool that includes many of the factors participants cited as important. This could provide a good starting point to operationalising a multi-dimensional definition of vulnerability within energy companies. However, our research participants stressed that energy companies should pro-actively identify and engage with vulnerable consumers using the multi-dimensional, dynamic definition.

“I don’t know, is it the right thing or not to have them (vulnerable consumers) on a watch list where [...] whoever took them on as an energy company, energy companies would have to, for instance, have 20% of their clients [...] (being) vulnerable clients, [...] then they would have to then take responsibility for checking to see whether or not people were able to pay their bills. I mean, if somebody always pays their bills 10 days late, then maybe it is a big problem.”

Such a proactive approach should also include a change of framing on vulnerability. It was suggested that when talking to customers about support, companies should frame the offer in terms of ‘eligibility’ rather than vulnerability. This was felt to be less jargony, and avoided consumers disqualifying themselves for support because they do not identify with the term or attach shame to needing support.

“You can do ‘eligible’ ... that’s the normal way, everyone know it [...] so the easy word. [...] Sometimes with ‘vulnerable’ it’s a posh word; [...] a lot of people thinking ‘I’m not vulnerable’ [...] If we don’t understand ‘vulnerable’, [...] ‘eligible’ for every single person [is understood].”

Energy companies can both directly ask whether people are struggling to pay their energy bills and also monitor for ‘trigger’ behaviours. In every interaction, customer services advisors should ask if someone is struggling to pay their bills, and provide

a number to call where the consumer can discuss their circumstances and eligibility for support. Many participants felt that companies could also pro-actively identify customers that trigger vulnerability concerns through their actions. For example, companies could monitor which customers are not paying the full bill or are often late with payments, and actively contact these customers to offer support.

The role of trusted intermediaries is essential for some vulnerable consumers. Our research participants recommended that community centres and Net Zero Advice Hubs should play a role in identifying those who need support or are eligible for support, in part to reach digitally excluded consumers. As well as being unable to fill in online forms, several said they would prefer to talk to a person face-to-face to explain their circumstances and give that broader picture of their costs and needs. Ofgem were also largely seen as independent and therefore trustable for both information provision and to act as an intermediary in brokering affordable energy/support schemes.



4.3 Tackling the ‘technology problem’

Low-income households, particularly those who are digitally excluded, will need support to understand and benefit from smart energy system.

Some participants expressed worries that they would find it difficult to use and understand smart technologies. Some felt not being tech-savvy would see them left behind while others benefit from lower costs and lower carbon energy bills. As the UK energy system transitions towards integrating smart technologies, digitally excluded consumers called for training to be made available around understanding and taking advantage of these changes. Participants envisaged workshops that helped members of the public understand how smart devices and equipment work in practice, to help people to make choices about getting a smart meter, choosing a smart tariff and using smart appliances. Home visits were also suggested as a way for digitally excluded customers to get tailored advice (see section 4.4).

Low-income households have low trust in smart meters.

While some have found smart meters useful for managing energy usage, many low-income households we talked to have low trust in smart meters. Concerns ranged from the feeling that they were being imposed by energy companies for unclear motives, to a lack of clarity over whether they are truly helpful for reducing energy usage and even health concerns. Some participants also felt that their costs, or those of people they knew, actually increased after installing smart meters. This led some to be suspicious of why energy companies were promoting them and the speculation that the primary reason for energy companies to introduce them was to save staffing costs and increase profits. One example of how poor information leads to mistrust was when one participant raised a concern that smart meters could be harmful to health due to radiation. This speaks to early concerns about the safety of smart meters that sparked global protest and have not since been adequately addressed by energy stakeholders². Word of mouth is a primary form of information transmission among low-income households, so creating channels and space for people to raise concerns, and have those concerns addressed promptly and comprehensively, is essential for building and maintaining trust.

“The amount of radiation has been emitted from the smart meters, could be unhelpful and unhealthy.”

“For example, my neighbours, they changed to a smart meter but it looks like they are getting higher bills, compared to me, like, we’ve got more people in our house as well. But they’re getting more bills than us. So that made me confused, like, I don’t want to change to a smart meter now.”

“I do have a concern about a smart tariffs. And how accurate it is, how do we know that you know, that when we are trying to be careful with using the energy and other and we using them at the right time, hopefully to save energy that we are charged at the right rate.”

A minority of participants had positive experiences of smart meters. Some reported using them to help build an understanding of what household activities or appliances were using a lot of energy. Others felt that their bills now more accurately reflected their energy usage. There seems to be an opportunity for low-income consumers to benefit from devices that support budgeting if trust in them can be built.

There are significant privacy concerns regarding smart meters. Many had a lack of confidence around data privacy and argued for clear and accessible information on what data was being shared, with who, and for what purpose. It was raised that energy providers could tell whether you were at home or had visitors at certain times, and this made participants uncomfortable. Another issue raised was smart meters being situated in shared areas such as a common corridor, potentially posing a security risk where people could ascertain whether the householders is home or not. Fears about data security are not unfounded: a report from Energy Systems Catapult and Citizens Advice (2018) points out that households with vulnerable residents ‘may need stronger safety precautions around who has access to their data’, and another research paper notes that the potential for bias in consumer algorithms is well-established (Akter, Dwivedi, Biswas, Michael, Bandara, and Shahriar, 2021).

² See ‘New Electricity Meters Stir Fears’ (2011), <https://www.nytimes.com/2011/01/31/science/earth/31meters.html> and the website of campaign groups ‘Stop Smart Meters’ <https://stopsmartmeters.org/>.

“If my usage spikes for few weeks or even dips my energy provider will know I have guests or (been) away...which is quite personal I believe.”

“You know, where is the data going? That’s [...] a concern. For me, it’s like, what else is going to come out from it as well? What are they going to use it for?”

“Sometimes I tend to read like, you know, having big brother over you, which is the reference to 1984. So in that sense that you feel that you’re always being watched or everything that you do is itemised. So your fridge might end up telling you, are you eating that carrot today?”

A significant barrier to low-income households benefitting from smart tariffs and technologies will be affordability. As discussed in section 4.1, the upfront cost of upgrading to smart appliances will be one of the foremost barriers in low-income households moving to smart appliances. It is clear that from a purely practical perspective, affordability will almost always be the deciding factor in low-income consumers’ choice of appliance over its ‘greenness’, even when net zero concerns are important to the consumer. For a fair transition, low-income consumers must be supported to access green appliances, potentially through grants.

“The barrier is the cost for everyone. Because if I need to replace a fridge or a washing machine, I want to go for the most efficient ones, sometimes it’s not an option, because you cannot afford it.”

Low-income households want assurances about how smart tariffs will affect their bills to feel confident switching to one. This would include clear information about the cost implications over time linked to their household and usage specifically, with a guarantee that their costs will not go up as a result. Some suggested a trial period or a clear breakdown of what their last few bills would have cost them with a smart tariff. This stemmed from several feeling that smart tariffs could easily end up costing them more. There were also concerns around how accurate they would be.

Participants also reiterated the point that some households do not have the flexibility of adjusting when they are using energy to off-peak hours. Some

consumers may not be able to shift their energy usage to off-peak times for a number of reasons. These could include whether they are a carer, use energy for medical equipment during peak times, or simply need to be at home during peak hours. These barriers highlight the need for targeted support to ensure that particular groups are not shut out of the benefits of the transition to net-zero while bearing some of the costs.

“(On what would help them trust a smart meter) If they give me a guarantee for life saying that it will definitely reduce my bill, or [...] written confirmation [in a] contract.”

These findings highlight the risks that a transition to a smart energy system could create further unfairness and inequality in the energy market without intervention. Tools such as the Centre for Sustainable Energy’s ‘Offer Profiling Tool’ may be useful in matching smart energy offers with certain households depending on their circumstances and capability. These findings also speak to Energy Systems Catapult’s recommendation to include vulnerable consumers in smart energy innovation processes (Centre for Sustainable Energy, 2020). Such offers could be less effective if they stand alone. Our participants suggested that the third sector can play a role in supporting consumers to understand and feel confident to use new technologies, especially those who will be less likely to engage with an offer of support from an energy company due to trust or language barriers. The role of intermediaries in supporting consumers will be discussed further in the next section.

Standing charges are perceived to be increased by smart meters. Some participants thought a significant part of standing charges contributed to smart meter installations and argued that this is unfair if they do not have one and are not interested in getting one. Others thought that it was primarily to pay for in-person meter readings, querying why they are still high when so many households have switched to a smart meter.



4.4 The role of communication

Grappling with complex information to understand different energy options and their implications is a real challenge to low-income consumers. Participants described how stressful and energy-sapping selecting a new tariff, making efficiency changes to their households, adopting new technologies, and accessing support schemes can be in the context of more immediate competing demands on their time. Awareness of options is often low, and it is particularly difficult for people to work out the various cost implications based on their own situations, energy needs and housing types with limited free time. This can be particularly frustrating when consumers have little power to make changes, for example, because they are a tenant or because they have to use more energy for medical reasons.

“It’s very hard to find information, or at least it’s time-consuming.”

“Sometimes they knock the door and just come in but how can you trust them, that they’re giving you the cheaper one. [...] When

they come they sit down, they fill up the whole form and everything altogether. And then they want you to take it straight away [the deal].”

“Like when you go online [...] there’s some hidden charges there sometimes.”

Young private renters and migrants will face particular barriers. Both groups reported lacking information or places and people to go to for advice and support, with private renters saying they often do not have the time to visit local charities or advice centres. Young private renters described having a lack of information and support due to feeling time poor, frequently moving, and juggling work and study. Migrants described struggling to get to grips with how energy in the UK works. Choosing from an array of suppliers, difficulty using unfamiliar technology like key meters and a lack of accessible information were barriers to taking control of their energy use.

“When I came around here it was probably 2014/2015. I was very young, I was 18 so I had no idea (about how energy works). And there was nothing that was really accessible either. Like the first house that I moved in there was a key that I needed to top up. I was so confused about that.”

Energy companies need to pro-actively communicate with low-income consumers and offer more diverse channels of communication.

Participants’ trust in energy companies to help them financially was low, primarily because they were viewed as profit-driven. However, energy companies were seen as well placed to offer expert information such as switching to the best tariff. Low-income consumers would ideally like energy companies to build more trusting relationships with them by regularly communicating useful information about tariff options and showing initiative in helping loyal consumers save money. They want companies to pro-actively communicate their options to them, via text, email and bills. Participants also advocated for there to be multiple ways for consumers to reach out for support including helplines and chatbots with real people. This reflects and supports the Money and Mental Health Institute’s recommendation for suppliers to enable consumers to get in touch via multiple channels during this cost-of-living crisis in particular (Money and Mental Health Institute, 2022).

Ofgem and the government need to support low-income consumers to access advice on household energy in ways which respond to diverse needs and living situations. The energy sector’s communication strategies need to become diverse and inclusive in order to reach everyone. Offline information and advice need to be preserved alongside digital resources. Sources of information and advice need to be rolled out to trusted partners at local level. Digitally-confident participants felt there would be a benefit from investment in trusted websites that clearly break down options and their potential implications, relating them to different kinds of households and accessibility requirements.

For low-income consumers, in-person advice and support are invaluable, especially for those who are digitally excluded, disabled, or have interpretation needs. People want to go somewhere they trust and where they feel comfortable to get advice, and strongly supported the idea of having energy experts – especially if they are independent of energy companies – visit community centres.

Participants also argued for having more community energy champions, with some having had positive experiences of getting advice through them. Elderly and digitally excluded consumers in particular would benefit from this face-to-face support to understand, adopt and use smart technologies. Participants suggested energy champions to talk consumers through the steps and demonstrate how to use smart technologies. The ‘enhanced’ meter installation study (British Gas, JRF and CSE, 2018. p. 125) indicated the potential value of face-to-face support with regards to smart technologies. It involved either a follow-up home visit or advice over the phone to demonstrate how the device works and how to use it, with people reporting feeling reassured and confident in using the meter’s in-home display to understand their energy usage.

Digitally excluded and disabled consumers would benefit from face-to-face advice around accessing government support schemes or support from their energy company. Some feedback that it would be far easier to explain your overall situation – including income, energy needs, accessibility needs and disabilities or health conditions – in-person at a trusted advice or community centre and that this could flag if they are eligible for support. For digitally excluded consumers this would help them to learn about and access support schemes.

There is an important role for trusted intermediaries in communicating information about energy options to consumers based on their circumstances.

Many consumers we talked to simply don’t trust energy companies to provide information that will help them save on costs. Suggestions for trusted intermediaries included Ofgem, local councils and advice and community centres. Trusted intermediaries have a role in providing or certifying advice and information around tariffs. Some participants find online comparison websites difficult to navigate and raised trust issues with these. They argued for a trustworthy comparison website approved by Ofgem.

Low-income consumers pointed to schemes like ‘East End Energy Fit’ at the Bromley by Bow Centre as an example of a trusted place to get information on energy, alongside advice and community centres more generally. Existing infrastructure can be developed into ‘Net Zero Advice Hubs’, with energy support projects built around existing advice centres and community centres, which will be best placed as a trusted intermediary to provide workshops, information and home visit schemes. There is a role for trusted personalities such as Martin Lewis or David Attenborough for disseminating advice and information about saving costs and making net zero related changes which are accessible to low-income households. The local council are also seen as a trusted intermediary in offering advice on switching, and the

collective switching scheme in Tower Hamlets³ has been put forward as a valuable model for making sure consumers get the best deal.

“I just type in Martin Lewis, and then and then his website comes up. But there’s a lot of other websites that are very similar in name and it can be really misleading. It’s kind of like fake news [...] Is it the companies themselves that are advertising this? So I make sure that I kind of go directly with Martin Lewis.”

Low-income consumers want advice and information that takes into account both the affordability and the ‘greenness’ of available tariffs. Almost all research participants said that their primary concern when it comes to choosing a tariff will be affordability, however they would like to choose a green option if they could afford one. Having clear advice that balances information about affordability and greenness would be helpful. Low-income households want clear information about where and how they can access affordable, energy efficient appliances. They also want accessible information on how much energy different household activities and appliances use, and the benefits making certain changes could have for the environment and the transition to net zero.

A key challenge for the energy sector will be proving the benefits of smart meters to low-income consumers. Ofgem are trusted to provide information and reassurance around how smart meters, smart appliances and smart tariffs work. As well as clear online and print materials, participants recommended Ofgem can provide online videos about smart technologies to explain advantages/disadvantages, and it was suggested that these videos should be developed in collaboration with low-income consumers. Ofgem-approved terms and conditions for smart tariffs were also suggested, or Ofgem rating systems of smart tariffs. The development of a ‘better off’ calculator was suggested to see on average how much people saved when they switched to a smart meter.

Energy companies also have a role to play. Participants requested clear communication about privacy protections in relation to smart meters. On affordability, energy companies need to offer clear predictions based on a consumer’s past usage and situation around cost implications of switching to smart tariffs. Ideally this would come with a guarantee that costs will not go up as a result of switching to a smart meter/smart tariff system.

Energy companies should provide regular updates (weekly for example) on expenditure as the month goes on if a consumer is on a smart tariff.

The third sector are also trusted to provide information about smart meters, smart appliances and smart tariffs through one-off workshops and one-to-one support to work out the cost implications of these changes for themselves over time. The ‘Net Zero Advice Hub’ proposal could be a vehicle for this support and training.

Our research insights highlight that energy bills can be a tool to empower low-income consumers.

Energy companies need to adopt co-designed guidance on how to best communicate about support available to customers, including inclusive language and design. They should also send support scheme information with bills (including eligibility information), both for government schemes and individual energy schemes, and information about how to make green choices.

For more information, please go to <https://www.toynbeehall.org.uk/research/> to see the energy bill brief co-designed as part of this project.



³ Tower Hamlets Energy Community Power scheme: https://www.towerhamlets.gov.uk/ignl/environment_and_waste/Sustainability/Tower_Hamlets_Energy/big_london_energy_switch.aspx#:~:text=The%20council%20runs%20a%20scheme,are%20registered%20on%20the%20scheme.

5. Roadmaps and strategy

Our position, and the position of our peer researchers, is that decisions are only likely to be effective when shaped with the people who are likely to be impacted. Many of the issues highlighted in this report could have been prevented by including low-income consumers in the design of the policy or practice in question, for example, policies that exacerbate the poverty premium like the additional costs of using a pre-payment meter. Participatory policymaking is an effective tool in foreseeing and tackling unfairness in the sector as we move forward to a zero-carbon future.

An important part of this Participatory Action Research was co-producing policy recommendations with peer researchers based on our solutions-focused research. The individual roadmaps below set out the steps peer researchers have developed with Toynbee Hall's research and policy team to achieve a fair transition to a net zero that includes low-income consumers in decision-making and policy development at every step. The roadmaps are accompanied by a communications strategy that was iteratively co-designed throughout the project and offers a three-stranded approach to empowering low-income consumers through better information and advice.





5.1 Roadmap to increasing awareness and power to make green choices

The following “awareness roadmap” contains a set of co-produced recommendations which, if implemented in the sequence listed, would lead to significantly greater awareness among low-income consumers about the green choices available to them:

- 1.** Ofgem should propose that the government funds ‘Net Zero Hubs’ – advice centres where consumers could access trusted help to make the best green decisions that support good financial health. See communication strategy for more information.
- 2.** The Government should explore the best vehicle for green property MOTs, potentially as part of the Decent Homes Standard review or EPC assessments, and roll out new requirements as supply chains become ready. Landlords become responsible for taking action on adaptations. Tenants should be involved in designing this scheme.
- 3.** Ofgem should then convene energy companies, consumer groups, tenants representatives and stakeholders from social and private housing to explore how tenants can have greater power over access to household adaptations. This working group should be informed by findings from peer-led research with social and private tenants.
- 4.** Government should legislate for or fund the implementation of the recommendations emerging from the landlord working group.
- 5.** Government should then develop a more extensive system of support schemes for low-income households to make green changes. Additionally, Government should implement an affordability standard for any new or existing support schemes and grants for low-income households, to make energy efficiency changes to their households, so all schemes are equally accessible to those on lower/higher incomes.
- 6.** Energy suppliers should provide a green social tariff option where the investment in renewables part of the bill is not paid by the individual eligible household. Peer researchers favoured a tax on energy company investors or a levy on fossil fuel company profits. Government and Ofgem should work with energy companies to ensure there are affordable green tariffs, co-designed with consumers, while the system becomes 100% zero carbon. It is only fair that people on low incomes can make consumer choices based on their values. The price difference between green and non-green tariffs is lessening but even small discrepancies will lead to many low-income consumers opting for non-green energy. The unfairness in blanket standing charge costs could be addressed in the design of the tariff.
- 7.** Ofgem should integrate participatory processes into current working groups looking at the role of pre-payment meters in the green transition. This could be achieved by integrating participatory research approaches into the key questions being considered by these groups, such as creating a green affordable tariff for pre-payment meters or tackling the poverty premium



5.2 Roadmap to identifying and supporting vulnerable consumers

The following “vulnerable circumstances support roadmap” contains a set of co-produced recommendations which, if implemented in the sequence listed, would lead to significantly better outcomes for consumers in vulnerable circumstances.

- 1.** Ofgem should commission research to co-design proposals with consumers that aim to help companies better identify the types of vulnerable circumstances, and which consumers experience them, which need additional support during the transition to net zero. Proposals might include re-framing vulnerability to eligibility in communications with customers and changing how consumers in vulnerable circumstances are identified. Our research suggests companies can pro-actively identify customers that trigger vulnerability concerns through their actions e.g. not paying the full bill/being late with a payment, but also through monitoring demographics, for example, whether a customer is on a low-income, of pension age, has dependent children or has recently had a baby, etc. Our research also suggests a ‘pro-active communication’ approach with multiple ways for customers to be contacted about support.
- 2.** Co-designed proposals should include a set of KPIs (Key Performance Indicators). These KPIs could help assess how successfully energy companies have supported customers in vulnerable circumstances, and how well low-income consumers have been protected from green energy-related cost increases. Some KPIs suggested by peer researchers were for companies to report on the percentage of their customers who are in vulnerable circumstances
- 3.** Ofgem should commission a pilot where an energy company is incentivised to implement the proposals. For example, this could include providing better support to participants to access financial support and support to make green choices. The pilot should be assessed using the co-designed KPIs to trial their effectiveness.
- 4.** The government should undertake a consultation process to get wider stakeholder feedback on introducing the co-designed KPIs. If implemented, these KPIs will allow the regulator (Ofgem) to assess companies’ success in protecting vulnerable consumers during the green transition and reward/penalise them depending on performance⁴. These KPIs should be reviewed regularly in consultation with the sector and based on research with experts by experience on evolving vulnerabilities.
- 5.** Finally, Ofgem should release guidance to energy companies with the results of the pilot, asking them, for example, to include a ‘pro-active’ approach to communication in their “supporting consumers in vulnerable circumstances” policy.

⁴ The Regulator of Social Housing has recently been through a similar process to develop Tenant Satisfaction Measures.

5.3 Roadmap to technology empowering consumers in the green transition

The following “empowering green technology roadmap” contains a set of co-produced recommendations which, if implemented in the sequence listed, would lead to significantly greater levels of confidence among low-income consumers to use green technology:

- 1.** Ofgem should commission peer action research to co-design effective solutions which overcome the barriers low-income consumers experience when accessing and using smart technology. This research would produce a set of co-designed recommendations for measures to build consumers’ trust and confidence in the decisions they make regarding smart meters, devices and tariffs. This research would also both build on existing knowledge of barriers from low-income consumers and academic research, and address knowledge deficits about the needs of specific demographics within this consumer group.
- 2.** Ofgem should develop a green empowerment strategy to enforce the peer-recommended solutions to increase trust and confidence in smart technology. The strategy should operationalise the action research findings, including how to overcome initial barriers to engagement, such as privacy, and how to design inclusive support schemes. The strategy should complement Ofgem’s vulnerability strategy but go further in laying out specific and measurable goals for the regulator and energy companies to tackle barriers to adoption.
- 3.** Government should develop a more extensive system of support schemes for low-income households to access smart technologies and incentivise entrepreneurs to create affordable smart technology. Innovation in products should be supported by workshops with experts by experience of the energy poverty premium. Landlords would also potentially play a role in supplying smart white products, as would net zero hubs in sourcing affordable technology (see recommendations in 5.1).
- 4.** Ofgem should spearhead communication strategies to increase trust in smart meters, working in partnership with other relevant agencies such as Smart Energy GB and BEIS (See 5.4).





5.4 A communication strategy to support a fair green transition

The following communications strategy contains a set of co-produced recommendations which, if implemented in the sequence listed, would lead to significantly more effective awareness amongst low-income consumers about their available affordable green energy options, and thus improved consumer outcomes.

1. Ofgem should run an inclusive and accessible campaign aimed at low-income consumers to promote ways to improve their finances while simultaneously increasing their knowledge about making green choices ('Fairer energy: starting now'): The backbone of this communications strategy should be an information pack, co-produced with Ofgem, customers on low incomes, and consumer advocacy groups.

Printed and available online, it should include:

- Introduction to the 'move to net zero'.
- Details of Ofgem-accredited switching sites.
- Details of national support schemes such as the Warm Home Discount.
- A guide on how to ask energy companies for support when costs become unmanageable.
- A simple co-designed explanation of how smart meters, tariffs and appliances work, their advantages, and their role in the green transition. Videos should accompany this, co-designed with low-income consumers.

- Signpost to government support schemes to make household adaptations.
- Ideas of simple ways to reduce household energy use.
- Advice on how tenants can ask for green changes from social and private landlords.

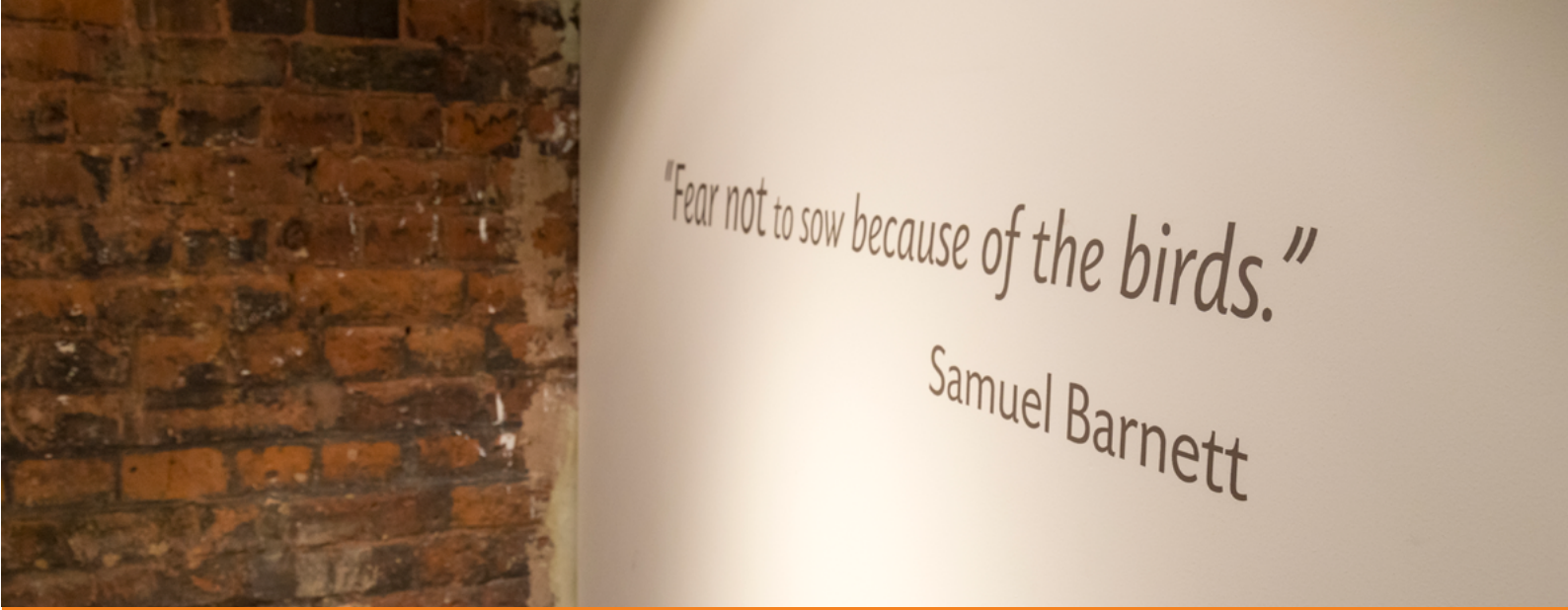
The guide should state that it is created through a partnership with Ofgem, consumer advocacy groups and customers on low incomes. Ofgem should take an inclusive approach to dissemination, sending the information pack and videos to every local authority, with instructions to cascade to:

- Community and advice centres;
- Local education providers;
- Housing providers; and
- Healthcare providers.

An accompanying social media campaign headed by a trusted spokesperson would increase awareness.

2. Energy companies should adapt their communication strategies, with a culture shift to co-designed, proactive communication.

Energy companies should incorporate proposals co-designed with low-income consumers into their communication strategies. Guidance on better communication should be co-designed with low-income



"Fear not to sow because of the birds."

Samuel Barnett

consumers. Ofgem should share with energy companies co-designed advice on communication with low-income consumers, tested to demonstrate effective impact. Guidance should include:

- Proactive identification of customers who may need support. Widened eligibility criteria considering behaviour (for example, missed bills) and demographics (low income/single parent/Disabled).
 - Proactive contact with low-income consumers via text and email or bills to raise awareness that better options are available and awareness of support schemes.
 - Online chats with real people rather than bots, and a free helpline to talk through tariff options or support needs.
 - Information about 'greenness' of tariffs routinely presented over the phone or online alongside information about price and other terms by the energy company.
 - A different approach to communication about smart meters, tariffs and appliances: Clear, co-designed communication about data sharing policies, the impact of meters on energy costs, and reassurances on key concerns.
- 3.** Net Zero Advice Hubs should be created: Central government should allocate funding to a net zero advice hub in areas of greatest deprivation in the UK to provide face-to-face personalised support, enabling low-income consumers and consumers in vulnerable circumstances to make green choices over energy,

housing, and transport use. Hubs should be provided through adaptation of current council or independent advice services, with a view to reaching those most excluded by mainstream channels for support/advice and information.

Hubs should offer:

- Face-to-face advice on switching tariffs (including weighing up affordability and 'greenness') and accessing support schemes, and how to buy greener appliances affordably.
- Accessible venues and interpreters.
- Workshops on how smart meters, tariffs and appliances work, and how to make green changes through behaviour change and accessing support schemes to improve insulation, install solar panels etc.
- Energy champions should support low-income consumers to take a holistic approach to household changes.
- Local people should be supported to speak to providers online where that is more accessible to them.
- Hubs should offer a home visit support service that helps consumers make the best green decisions that support good financial health.
- Support making green choices about transport.

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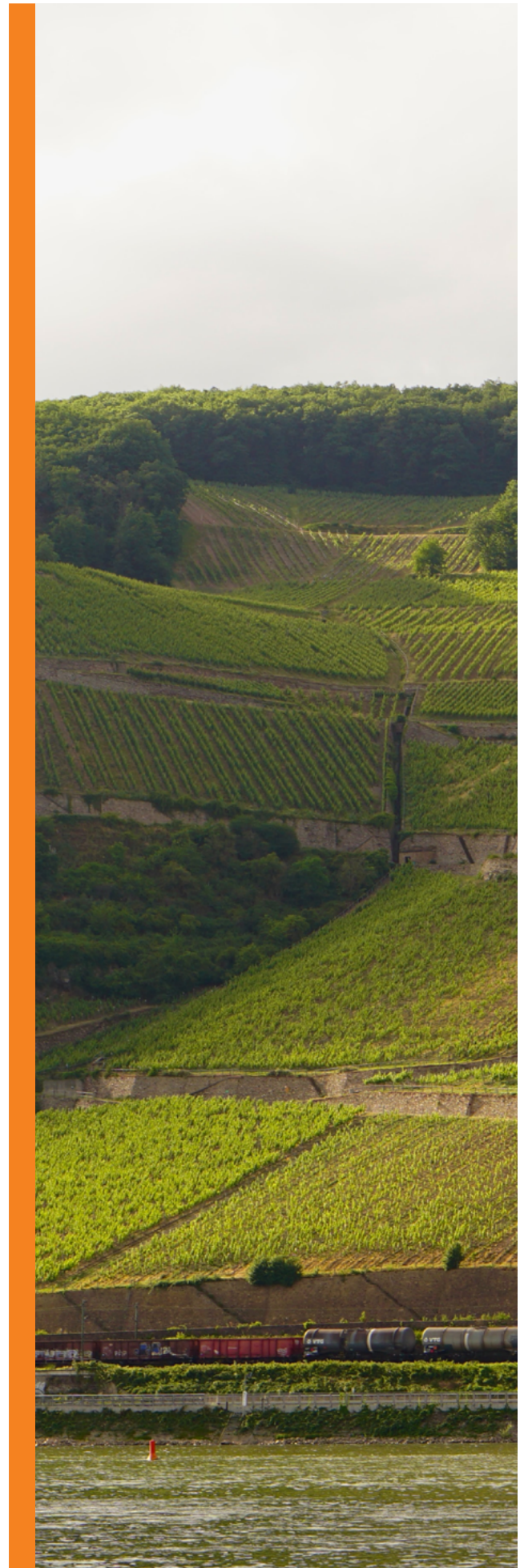
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