

How can fuel poverty be addressed?



A series of policy-relevant briefings on the legacy of research supported by Eaga Charitable Trust.

Following 25 years of supporting research on fuel poverty, the Eaga Charitable Trust (Eaga CT) closed in 2019. This series of research digests presents a summary of the research evidence under five themes: homes, people, impacts, approaches and concepts. This briefing focuses on approaches to tackling fuel poverty. Readers can find more on these issues and the full breadth of Eaga CT's output in the new online fuel poverty library: www.fuelpovertylibrary.info.

1 Advice, Education and Information

Advice, education and information feature in some way in the majority of Eaga CT funded studies. This may be in relation to the effectiveness of communication with households experiencing fuel poverty, accessibility and awareness of relevant support, engagement with the energy market through switching or dealing with energy billing, as well as levels of understanding of how to operate newly installed equipment.

Improving Take-up of Advice, Education and Support

Even when readily available, the take up of energy-related advice and support is often low and what makes energy-related advice, education and information 'effective' is poorly understood. Several studies have sought to better understand the challenges in the provision of and barriers to taking up energy-related support.

A number of studies have focused specifically on how energy supplier processes and provision can be a barrier to the take-up of support:

- An early report¹ in 1997 criticised failings in suppliers' codes of practice on advice services, including out of date or incorrect information, a shortage of tailored advice and a lack of monitoring as to whether their offer was effective.
- In 1999, a large-scale study² of households across the UK concluded that suppliers' energy advice was unsatisfactory, with most respondents preferring independent sources of advice.
- A 2010 study³ compared supplier approaches across the water and energy industries, exploring reasons why support packages in the latter, such as direct payment schemes or payment matching schemes (whereby a supplier matches or part-matches payments that a consumer makes towards their bill, also known as 'restart schemes'), were under-utilised.
- A 2011 study⁴ analysed energy suppliers' advice and information services and highlighted that consumers, particularly vulnerable people, face numerous challenges in accessing support. Dominant issues include convoluted helplines, complex bills and inconsistent information. Certain groups are more likely to face barriers: those with physical and/or mental health issues; those with learning disabilities, low literacy or language barriers; and those with restricted time due to caring responsibilities.

Key Points

- Fuel poverty continues to be a reality for many households in the United Kingdom and beyond. Action is needed to reduce the incidence and severity of this social issue in order to reduce the severe impact it has on health and wellbeing.
- Approaches to tackling fuel poverty include: advice, education and support; financial support; improvements to the fabric or technology of the home; and renewable energy initiatives.
- Such approaches can have a limited effect in isolation. For example, advice and engagement are an important complement to retrofit and technology interventions.
- Factors influencing the take up and effectiveness of interventions include awareness, of both the problem and the opportunities available, understanding of the nature of the approach, access to capital and financial support, trust in the provider, and accessibility of the information provided. Tenancy can also limit the ability of the householder to pursue improvements to the home.
- Political will, policy consistency and the capacity of frontline organisations all play a key role in whether or not fuel poverty alleviation is effective.
- Renewable technologies offer potentially cost-effective ways to provide affordable energy to fuel poor households, particularly those off the gas network, as well as to build synergy with carbon mitigation efforts. Without appropriate policy support, however, there is a risk that these measures are out of the reach of the fuel poor.
- There is a growing evidence base on the potential impacts of relatively small-scale fuel poverty initiatives and an opportunity for research that brings together these findings to form a coherent picture of what approaches are most effective, where and for what communities.

Considering localised advice provision, a 2010 study⁵ noted that many people experiencing financial exclusion (including fuel poverty) were not being reached by advice and support, despite it being readily and locally available. As with studies focused on energy suppliers, a lack of institutional trust was noted as a key reason for poor take-up, as well as insufficient information on issues related to energy supply, cost and efficiency.

As a 2011 study⁶ argued, most initiatives whether government or supplier led had been top down, neglecting the critical importance of collective, grass roots action. A 2008 study⁷ noted that in many cases, the views of

householders are overlooked or not included. Consequently, a full understanding of what does and does not work in terms of advice, education and information is limited. Drawing on interview data, the study concluded that barriers such as a lack of clarity over what is being offered, a lack of trust of institutionally devised resources and problematic eligibility rules all play a part.

An interesting exploration of take-up can be found in a 2016 study⁸ investigating community energy projects. The study found that despite the existence of many innovative schemes that offered considerable financial, social and ethical benefits, the reasons why different households took up or declined particular opportunities were poorly understood. Concerns about ceding control over power and heating arrangements and wariness of smart meter systems were important psychological factors. A major limitation identified was the inability to include prepayment mechanisms in such schemes, a method preferred by many householders, including a disproportionate number living in fuel poverty.

Target Audiences

Some studies have focused on advice, education and information targeted at specific audiences:

- A 2008 study⁹ focused on older people experiencing fuel poverty in Scotland used feedback from householders and relevant organisations to redesign more effective core messaging and materials for the Scottish Government's Warm Deal and Central Heating Programmes.
- The difficulties faced by older people in understanding information about energy grants were the focus of a 2010 study¹⁰ in Nottingham.
- A 2014 study¹¹ focused on households following the installation of a new boiler highlighted the importance of providing effective printed information, verbal advice from an installer or engineer, as well as being able to understand how to use the system.
- Support for families experiencing fuel poverty was the focus of a 2014 evaluation¹² that outlined multiple barriers faced in accessing such support schemes.

At times this work has focused explicitly on the advice and information needs among certain people with specific disabilities or health conditions. A 2013 study¹³, for example, investigated energy saving advice for individuals with a learning disability. Householders with visual impairments were the focus of a 1998 study¹⁴, where identified challenges included print size of leaflets and bills, difficulty reading meters and the availability of resources such as instruction manuals in accessible fonts.

Recommendations and Resources

Across the studies, a number of recommendations for improving the provision or effectiveness of advice, education and information related to fuel poverty are set out.

A 2008 study¹⁵ argued that in general simpler information is needed, alongside better partnership working to reach and support those experiencing fuel poverty. In agreement, a 2011 study¹⁶ went on to state that such processes should be overseen by government and relevant regulatory bodies.

Regarding the type of advice, the benefits of face-to-face support over other provision such as that by telephone or online were noted in one of the earliest Eaga CT publications - 'Advice into Action' - released in 1998¹⁷. Access to an advisor with good communication skills, technical knowledge and awareness of other local services was recommended. Again, householder trust was a critical factor in determining effectiveness. Accessibility in terms of the location of face-to-face services is also key, and a 2014 study¹⁸ suggested that children's centres play a vital role in reaching families in need.

The timing of advice and support is also important, and in Advice into Action was considered most effective when provided at opportune moments, such as the installation of a new heating system. The importance of targeted and tailored information at key moments was also recommended in a later study¹⁹ in 2014. This called for the use of participatory techniques to involve householders in the learning and communication process.

To ensure that advice, education and information is as inclusive as possible, a 2011 review²⁰ called for specialist training for advisors, as well as the provision of tailored alternatives such as non-voice activated options for customers with speech difficulties or home visits for older and less mobile consumers.

Energy suppliers building a more detailed understanding of their customer base, especially those considered to be vulnerable, was an important consideration highlighted in a 1999 study²¹. More detailed customer profiling was suggested in a 2010 study²² using mechanisms such as social tariffs or Department for Work and Pensions data were noted.

Eaga CT has also funded the development of advice, education and information resources, along with studies that have evaluated the effectiveness of, and in some cases redesigned, existing resources.

- In 1997, sessions²³ on energy conservation were developed to support adults with learning disabilities.
- A 1998 study²⁴ focused on the needs of people with a visual impairment developed an information pack and training resource for advisors, installers and suppliers.
- In 1998, two educational packages were developed: one for teachers to introduce energy and energy efficiency to primary and secondary pupils²⁵; and the second²⁶ for Girl Guide leaders.
- Two resources²⁷ titled 'Fuel for Numbers' and 'Fuel for Words' were developed in 1999 to support energy-related learning in the context of basic skills provision.
- A 2004 toolkit²⁸ was developed with the aim of helping public policy makers and managers involved in community consultation to develop effective community participation methods when building strategic approaches to fuel poverty.
- In 2003, a toolkit²⁹ for health professionals was published which included guidance on how to enable front line workers to recognise households in fuel poverty and what sort of alleviation measures to promote (e.g. grant schemes).
- In a 2008 study³⁰ leaflets detailing support available to older people in Scotland were redeveloped based on feedback from householders and relevant organisations.
- In 2008, the Leeds Animation Workshop developed the 'Energy - Save It' video³¹.
- A web-based pack³² developed in 2011 aimed to provide a way for social landlords to develop a tenant-led programme for tackling fuel poverty.
- A 1994 information pack³³ was developed with the aim of guiding residents and staff at sheltered accommodation and nursing homes on how to identify the potential for energy efficiency and how to explore the options to improve building performance.

2 Energy Retrofit

Retrofit of the housing stock has been the primary mechanism for tackling fuel poverty in UK government policy. As such, investment in retrofit schemes in both private and social housing has provided ample opportunity for research in this area. A wide variety of different national and local programmes, large and small in scale, across different tenures and locations, and using different technologies have been covered in Eaga CT funded work.

Research on retrofit touches on a multitude of other issues, such as health and wellbeing, the social and private housing sectors, sustainability and climate change, advice and guidance, low income households, policies and programmes, and renewables. All of these issues are discussed separately in this and other summaries.

Since 2010, public money available for retrofit has dropped considerably and many programmes such as Green Deal have ended, leaving a question mark over where future investment would come from. This is particularly relevant to owner occupiers unable to meet upfront costs for necessary improvements to their property. One strategy to fund low-cost measures, tested in 2010³⁴, sought to incentivise older people to use their Winter Fuel Payment to fund such work. Additionally, a 2013 study³⁵ considered the use of Social Impact Bonds as a funding model.

Generally, where retrofit has featured in research³⁶ there has been some focus on health benefits. A 2004 study³⁷, for instance, detailed the positive health impact of retrofit installation in social housing among people living in South West England.

Other studies have examined how benefits could be measured, typically looking to the use of large-scale housing and health datasets:

- A 2001 study³⁸ developed a methodology for calculating the benefits of energy efficiency improvements among low income households, with a particular focus on health.
- Data from the Housing Condition Survey was used in a 2004 study³⁹ to assess progress in terms of improving the energy efficiency of housing, with the social housing sector having performed the best.

Some studies have considered the benefits of retrofit in terms of financial gains for householders, where energy use and therefore costs are reduced as a result. However, as highlighted in a 2012 study⁴⁰ of households in severe fuel poverty, while retrofit may result in improved comfort, there isn't always financial gain or saving. Previous habits, use of space, perceptions of comfort and knowledge of how to work the heating system effectively were outlined as factors at play. Installation, it was argued, must go hand in hand with advice and education. There has often been the assumption that retrofit measures alone will alleviate fuel poverty and reduce energy consumption but a number of studies have demonstrated this is not necessarily the case.

As a result, several studies have focused on the householder in the process of retrofit, and their experience, needs and behaviours, to better understand associated benefits and challenges.

- A 2014 study⁴¹ highlighted shortcomings in advice and guidance given to householders following installation of retrofit measures and outlined recommendations to overcome this.
- While another 2014 study⁴² showed that the installation of photovoltaic technology in social housing provided financial savings, this was highly dependent on the knowledge and behaviour of the tenants.
- Offering energy advice alongside smart meter installation was the focus of a 2016 study⁴³. This study found that such advice had a positive impact on the householder's engagement with the technology.

As listed in detail in the previous section, Eaga CT has also funded the development and evaluation of many resources and toolkits for use across a range of sectors that work on reducing or mitigating the impacts of fuel poverty. A large majority of these resources have energy efficiency as part of their core aim or messaging.

Renewable Energy

Eaga CT has funded several studies that have explored a wide range of renewable sources of energy and technologies. These include micro-generation systems, such as solar panels, ground source heat pumps and the use of wood pulp and other biomass products. An important question in much of this work has been to consider the extent to which low income, vulnerable households experiencing fuel poverty might be excluded from such schemes, due to accessibility, awareness and in many cases large upfront costs.

- A 2010 study⁴⁴ analysed the implementation of the Feed In Tariff (FIT) and the Renewable Heat Incentive (RHI) grants, both aimed at encouraging domestic consumers to take up renewable forms of energy generation. Focused on deprived areas in England, the study highlighted the benefits of targeted measures that support low income households' access to micro-generation technologies, including a reduction in fuel poverty.
- Addressing a gap in evidence, a 2014 survey study⁴⁵ assessed the impact of photovoltaic (PV) systems on fuel poverty in social housing and demonstrated significant costs savings in energy post-installation.
- A 2012 study⁴⁶ investigated the use of woodchip biomass as a feasible fuel source for rural households in Scotland. Such households are often off grid and have traditionally relied on expensive oil deliveries.
- A local community hydro-electric scheme in Wales and a project using wind turbines and other renewables in Scotland was the focus of a 2016 study⁴⁷. This set out a model using cooperative community involvement for tackling fuel poverty in rural areas.

Improving Take-up of Energy Retrofit

Studies focused on the take-up of advice and support are discussed in detail above. Much of this focus on early engagement, however, might be understood as a first step in take-up. Subsequent steps involved the take-up of grants and installation of measures or technologies aimed at reducing energy costs, improving efficiency, saving money, and ultimately reducing fuel poverty.

As such, many of the studies noted in the previous sections have in some way focused on effectiveness in terms of ensuring that as many households as possible participate, and therefore benefit from, the implementation of different schemes or installation of different measures, even if this has not always been explicit. Some of the key points relating to take-up of measures or technology have included:

- Looking at community energy projects, a 2016 study⁴⁸ highlighted that refusal to participate was linked to both psychological barriers (such as suspicion about smart metering or fear of losing control over heating arrangements) and technical barriers (such as inability of prepayment facility on such schemes).
- A lack of trust in institutions was noted as a key factor in the refusal to take up various forms of energy-related support, including energy efficiency measures, in a 2010 study⁴⁹.
- The value of providing the skills and knowledge to support community-based delivery of fuel poverty schemes was demonstrated in a 2011 study⁵⁰. This shunned more traditional top-down approaches, instead adopting an approach which fostered collective, grassroots action among social housing tenants.
- A 2008 study⁵¹ highlighted that research on the take up of fuel poverty schemes often omitted the people themselves. This prevented a fuller understanding of actual and perceived obstacles, what works, and what differences exist among different subgroups, whether due to location or other factors. Using a participatory approach, the study identified a range of factors hindering take-up, including lack of trust, awareness of what was being offered and problematic eligibility rules.

1. National Energy Action (NEA) (1997) Energy Efficiency Advice: Provision by Fuel Suppliers (Project 5)
2. William Baker (1999) Gas and Electricity Competition... Who Benefits? (Project 23)
3. Lauryn Probert (2010) What Are the Factors That Prevent Those in Fuel and Water Poverty Accessing Financial Support Mechanisms? (Research Dissertation) (Project 72)
4. Mike George, Cosmo Graham, Linda Lennard (2011) Too Many Hurdles: Information and Advice Barriers in the Energy Market (Project 78)
5. Liam Purcell, Sharon Gollan (2010) The Community Financial Inclusion Project (Project 69)
6. Impetus Consulting and National Energy Action (2011) Tackling Fuel Poverty in the Private Rented Sector Using the Housing Health and Safety Rating System (HHSRS) (Project 79)
7. Lyn Dodds (2008) Tackling Barriers to Take-Up of Fuel Poverty Alleviation Measures (Project 62)
8. Jane Kelly (2016) Investigating a New Way of Delivery Energy to Tackle Fuel Poverty Using Case Studies in Wales and Scotland (Research Dissertation) (Project 104)
9. Amanda Palmer (2008) Evaluating and Improving Energy Efficiency Grant Leaflet Information for the Elderly Fuel-Poor (Research Dissertation) (Project 59)
10. Norwich City Council, National Energy Action (NEA) (2010) 'Warm for Life' - an Investigation Into the Effectiveness of the Winter Fuel Payment System as a Means of Tackling Fuel Poverty and the Delivery of an 'Invest-to-Save' Winter Fuel Payments Pilot (Project 73)
11. Karen Smith (2014) Fuel Poverty and Energy Behaviours: Does a Post-Boiler Upgrade Intervention Increase Energy Efficiency? (Research Dissertation) (Project 97)
12. Sarah Royston, Sam Royston, Pedro Guertler (2014) Reaching Fuel Poor Families: Informing New Approaches to Promoting Take-Up of Fuel Poverty Assistance Among Families With Children (Project 95)
13. Jane Pettingell (2013) Generate Opportunities: Winter Warmer Project (Project 88)
14. National Energy Action (NEA) (1998) Energy Advice Needs of Visually Impaired People (Project 12)
15. Lyn Dodds (2008) Tackling Barriers to Take-Up of Fuel Poverty Alleviation Measures (Project 62)
16. Mike George, Cosmo Graham, Linda Lennard (2011) Too Many Hurdles: Information and Advice Barriers in the Energy Market (Project 78)
17. Julia Green, Sarah Darby, Catrin Maby, Brenda Boardman (1998) Advice Into Action - an Evaluation of the Effectiveness of Energy Advice to Low Income Households (Project 17)
18. Sarah Royston, Sam Royston, Pedro Guertler (2014) Reaching Fuel Poor Families: Informing New Approaches to Promoting Take-Up of Fuel Poverty Assistance Among Families With Children (Project 95)
19. Karen Smith (2014) Fuel Poverty and Energy Behaviours: Does a Post-Boiler Upgrade Intervention Increase Energy Efficiency? (Research Dissertation) (Project 97)
20. Mike George, Cosmo Graham, Linda Lennard (2011) Too Many Hurdles: Information and Advice Barriers in the Energy Market (Project 78)
21. William Baker (1999) Gas and Electricity Competition... Who Benefits? (Project 23)
22. Lauryn Probert (2010) What Are the Factors That Prevent Those in Fuel and Water Poverty Accessing Financial Support Mechanisms? (Research Dissertation) (Project 72)
23. East Essex Adult Community College (1997) Warmth Without Waste (Project 9)
24. National Energy Action (NEA) (1998) Energy Advice Needs of Visually Impaired People (Project 12)
25. Colin Kruger, Mike Summers, Jenny Mant, Ann Childs, Jane McNicholl (1998) Teaching Energy and Energy Efficiency Effectively - Concepts and Practice for Primary and Non-Specialist Secondary Teacher Education (Project 18)
26. Koren Calder (1998) The Energy Efficiency Challenge (Project 16)
27. Catrin Maby (1999) Fuel for Numbers (Project 25); Catrin Maby (1999) Fuel for Words (Project 26)
28. Impetus Consulting (2004) Addressing Fuel Poverty Through Community Planning - a Toolkit: Developing Effective Community Participation and Partnerships (Project 44)
29. Vivienne Press, Paul Lincoln (2003) Fuel Poverty and Health: A Guide for Primary Care Organisations, and Public Health and Primary Care Professionals (Project 40)
30. Amanda Palmer (2008) Evaluating and Improving Energy Efficiency Grant Leaflet Information for the Elderly Fuel-Poor (Research Dissertation) (Project 59)
31. Leeds Animation Workshop (2008) Leeds Animation Workshop Project: Everyone Can Save Energy (Project 58)
32. Impetus Consulting and National Energy Action (2011) Tackling Fuel Poverty in the Private Rented Sector Using the Housing Health and Safety Rating System (HHSRS) (Project 79)
33. Neighbourhood Energy Action, The Abbeyfield Society (1994) Energy Efficiency Information Pack (Project 1)
34. Norwich City Council, National Energy Action (2010) 'Warm for Life' - an Investigation Into the Effectiveness of the Winter Fuel Payment System as a Means of Tackling Fuel Poverty and the Delivery of an 'Invest-to-Save' Winter Fuel Payments Pilot Project (Project 73)
35. Ian Preston, Nick Banks, Emma Sturtevant (2013) Fuel Poverty Social Impact Bonds: Their Potential Role and Associated Challenges (Project 92)
36. Margaret Somerville, Ian F Mackenzie, Pat Owen, Emma Sturtevant, James Bolt (2000) Housing and Health - the Cornwall Intervention Study (Project 30)
- Ludmilla Kosmina, Bill Sheldrick (1995) Lilybank - Tackling Fuel Poverty (Project 2)
- Stirling Howieson, Gillian R. Wright, Charles McSharry, Alex D. McMahon, Rekha Chaudhuri (2013) Effect of Improved Home Ventilation on Asthma Control and House Dust Mite Allergen Levels (Project 91)
- Roger Critchley, Rob Howard, Tadj Oreszczy (2000) The Nottingham Energy Health and Housing Study. A Demonstration Project to Reduce Humidities, House Dust Mites and Asthma. (Project 31)
37. Meryl Basham, Andy Barton, Steve Shaw (2004) Central Heating: Uncovering the Impact on Social Relationships and Household Management (Project 41)
38. Janet Rudge (2001) Developing a Methodology to Evaluate the Outcome of Investment in Affordable Warmth (Project 32)
39. Jacky Pett (2004) Affordable Warmth in 'Hard to Heat' Homes: A Progress Report (Project 42)
40. Nick Banks, Vicki White (2012) Evaluation of Solid Wall Insulation in Fuel Poor Households in the Private Sector (Project 82)
41. Karen Smith (2014) Fuel Poverty and Energy Behaviours: Does a Post-Boiler Upgrade Intervention Increase Energy Efficiency? (Research Dissertation) (Project 97)
42. Changeworks (2014) Using Solar PV to Tackle Fuel Poverty (Project 94)
43. Nicky Hodges, Simon Roberts, Karen Smith, Toby Bridgeman, Nick Banks (2016) Smart Prepayment and Fuel Poverty (Project 103)
44. Robert Saunders (2010) What Barriers and Opportunities Exist for FITs and RHIs to Contribute Positively to Fuel Poverty, Equality and Social Inclusion While Maximising Renewable Energy Uptake? (Research Dissertation) (Project 71)
45. Changeworks (2014) Using Solar PV to Tackle Fuel Poverty (Project 94)
46. Ivan Delev (2012) Fuel Poverty and the Re-Emergence of Wood as a Sustainable Source of Energy in Fife, Scotland and Beyond (Research Dissertation) (Project 84)
47. Jane Kelly (2016) Investigating a New Way of Delivery Energy to Tackle Fuel Poverty Using Case Studies in Wales and Scotland (Research Dissertation) (Project 104)
48. Jane Kelly (2016) Investigating a New Way of Delivery Energy to Tackle Fuel Poverty Using Case Studies in Wales and Scotland (Research Dissertation) (Project 104)
49. Liam Purcell, Sharon Gollan (2010) The Community Financial Inclusion Project (Project 69)
50. Impetus Consulting and National Energy Action (2011) Tackling Fuel Poverty in the Private Rented Sector Using the Housing Health and Safety Rating System (HHSRS) (Project 79)
51. Lyn Dodds (2008) Tackling Barriers to Take-Up of Fuel Poverty Alleviation Measures (Project 62)

All references are available online in the Fuel Poverty Library: www.fuelpovertylibrary.info/projects

This Topic Guide was produced by Graeme Sherriff, Phillip Martin and Danielle Butler at University of Salford as part of the Eaga CT Archive and Legacy Project.