

# Where is fuel poverty experienced?



## 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 the domestic settings in which fuel poverty occurs.

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](http://www.fuelpovertylibrary.info).

### 1 Social Rented Sector

Social housing has provided significant opportunities for researchers working in energy efficiency, fuel poverty and related fields such as health, debt and exclusion. National policies and targets on climate change, fuel poverty and affordable warmth and decent homes channelled millions of pounds of grants and investment to improve the energy performance of properties managed by Registered Social Landlords (RSLs), housing associations and similar not-for-profit organisations across the United Kingdom (UK). Eaga CT was well placed to support research on these, and over its lifetime has funded many studies that have focused on these and other aspects of fuel poverty in the sector.

#### Involving Residents

A particular theme in research on retrofit is the importance of ensuring that the residents are involved in the process and understand how they can get the best out of their retrofitted home.

- Qualitative research<sup>1</sup> in 2004 assessed the impact on tenants' health of installing new central heating. Positive health benefits were detected and the researchers found that measuring personal and social factors was as important as statistical analysis of heat savings. The authors also highlighted the critical role of communication with tenants and of taking into account their knowledge and understanding.
- A 2014 study into the impact on social housing tenants of the installation of photovoltaic (PV) systems<sup>2</sup> found that, while the installation of such technology did produce financial savings, the level of success was contingent on the knowledge and behaviour of tenants themselves.
- A 2015 Scottish study<sup>3</sup> retrospectively analysed the experiences of tenants and social landlords following the installation of a district heating system. Their findings indicated that residents' knowledge was often patchy and consultation was frequently absent. They recommended that communication is early, prompt, responsive, accessible and ongoing.

### 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.
- Whilst fuel poverty is evident across all housing sectors and in urban and rural settings, experiences of the problem and the range of potential solutions vary across these contexts.
- Across housing types, and within the Private Rented Sector (PRS) in particular, some groups are particularly vulnerable. These include students, disabled people and those in houses of multiple occupancy.
- The social housing sector continues to demonstrate the potential for improvements to energy efficiency at scale in the homes of some of the most vulnerable. It is important, however, to be aware of the ethical implications of tenants being 'guinea pigs' for untested technologies.
- Despite attempts to better regulate energy performance in the PRS, the growth of the sector and the relative powerlessness of tenants to bring about modifications to their homes means that many households are at risk of fuel poverty.
- In the PRS, strong regulation and enforcement is necessary to drive up standards. The rights of private tenants, particularly with respect to security of tenure, require considerable strengthening.
- In rural and remote contexts, fuel poverty is, in some cases, intensified by factors such as reliance on solid fuels and distance from the gas network. Conversely these areas are suitable for specific approaches, such as wood harvesting and hydroelectric, that may offer low-carbon ways to alleviate fuel poverty.

#### Exclusion and Vulnerabilities

Many Eaga CT funded studies have touched on issues relating to social housing within broader surveys and observed connections with vulnerabilities.

- In 1998, Baker's Fuel Poverty Index<sup>4</sup> calculated that vulnerability to fuel poverty was far higher among social housing tenants than the average population.
- A 1999 study into multiple debt and fuel costs<sup>5</sup>, found that over half of a cohort of Citizens Advice clients experiencing multiple debt, including fuel related debts, lived in social housing without double glazing or cavity walling, and a quarter had serious issues with damp.

- A 2004 study of hard to heat homes<sup>6</sup> indicated that the most progress in the UK was occurring in the social housing sector, but that limitations on financial resources were restricting progress.

## 2 Private Rented Sector

The decreasing availability of social housing and the high costs of purchasing a home has meant that an increasing share of the population lives in private rented housing and many low-income households have little choice but to rent. Reflecting the growing interest in this area, Eaga CT has funded five studies since 2011 that were specifically focused on fuel poverty in this sector. In the main, they have used qualitative methods to capture the experience of stakeholders, whether tenants, landlords or professionals working in the field.

### Multiple Stakeholders

A large-scale 2016 survey of low-income private rented sector (PRS) households<sup>7</sup> in England, described a situation in which many endure cold, damp and mouldy properties, while at the same time facing significant energy costs, not least due to pre-payment meters. The authors noted that the ability to mitigate this situation was limited due in part to a lack of alternatives and fear of harming relationships with landlords. Most had to prioritise other issues over energy efficiency and thermal comfort when choosing a property. Consequently, there was little incentive to use the protections available to tenants under the 2016 Energy Act. This theme of powerlessness was also central to the narrative in a study of young adults renting<sup>8</sup>.

### Vulnerable Groups within the Private Rented Sector

- A 2013 study<sup>9</sup> concluded that an urgent review of private rented sector housing provision for people with disabilities was necessary in order to understand what steps were required to reduce the vulnerability of this group to fuel poverty.
- The experiences of students in the PRS was the focus of the 2018 project 'Homes Fit for Study'<sup>10</sup>. This suggested that many respondents found their dwellings to be poorly insulated and/or draughty and a third had experienced mould, damp or related conditions.
- Research conducted in 2014 into fuel poverty in Houses in Multiple Occupation (HMOs), a growing feature of the rental market, noted that many tenants in these properties belong to one (or more) highly vulnerable groups and that existing government policy and fuel poverty programmes has largely ignored HMOs<sup>11</sup>. The authors of another study in 2008<sup>12</sup> argued that HMOs should be given a special status in major grant programmes such as Warm Front, the main fuel poverty programme at the time.

### Local Governance

A 2011 study<sup>13</sup> concluded that many local authorities were failing to maximise the regulatory powers over private rented properties available to them through the Housing Health and Safety Rating System due to insufficient resources, as well as inadequate understanding and uncertainty regarding the procedures for assessment and enforcement. Local authorities have a role in ensuring that certain parts of the private rented sector do not miss out on access to schemes such as Green Deal, whether due to lack of information or a lack of financially viable ways to engage<sup>14</sup>. A 2002 study<sup>15</sup> found that public sector bodies needed greater powers and resources to tackle fuel poverty and disrepair in private rented housing, and that research was needed on links between under-occupancy and fuel poverty.

## 3 Owner Occupiers

A number of studies considered fuel poverty among owner occupiers. A 2012 study<sup>16</sup> looked at whether under-occupancy was a risk factor for older people. It suggested that while under occupancy did not present a higher risk than standard occupancy, the fact that many fuel poor households were older people who were under occupying indicated a need for more targeted support and advice aimed at this group. There also needed to be a greater degree of strategic inclusion in energy efficiency grant criteria and policy.

### National Initiatives

Over the past two decades a number of national energy efficiency improvement programmes, such as Warm Front, Green Deal and the Energy Company Obligation (ECO), have targeted this sector. Researchers examining the owner-occupied housing sector have concluded that much more evidence is needed to understand the range of factors influencing fuel poverty in owner-occupied housing.

- A 2008 study<sup>17</sup> used the national 'Act On CO2' calculator to assess what impact local authority energy saving schemes had on household carbon footprints: while there was some reduction, they concluded that targeting measures more precisely at those in fuel poverty would deliver better results.
- In 2011 the Association for the Conservation of Energy looked at the funding model of the ECO<sup>18</sup>, proposing a more equitable distribution of the costs to the consumer. They cautioned that households with low incomes but high consumption would continue to pay more unless more work was targeted at this group.
- Solid Wall Insulation was found in a 2012 study to be broadly positive in terms of comfort, warmth and health, but research<sup>19</sup> highlighted the need to understand residents' behavioural patterns and emphasised the importance of educating them on heating strategies in parallel with installation. This was also emphasised in a study of households who had received a boiler upgrade through the ECO programme<sup>20</sup>.
- A large-scale quantitative 2004 study reviewed the impact of Warm Front on fuel poverty<sup>21</sup>, concluding that single pensioners, occupants of less energy-efficient dwellings and low-income households were underrepresented amongst the grant recipients. The author proposed stricter criteria and better targeting to ensure it reached the truly fuel poor.

## 4 Rural and Remote Areas

Until the mid-1990s, no detailed exploration of fuel poverty in remote and rural areas had been undertaken, representing a major gap in the evidence base. This absence was surprising, since rural areas were known to contain significant numbers of older, less energy-efficient properties and a much higher proportion of off-grid homes. They were therefore reliant on expensive heating fuels such as electricity, oil, solid fuel and Liquefied Petroleum Gas (LPG). Furthermore, there was considerable overlap with other core issues on the fuel poverty agenda including the proportion of low-income households, older residents and inferior access to infrastructure in general. In addition, both the existing evidence base and the interventions designed to tackle fuel poverty overwhelmingly related to urban environments, raising the question to what extent they were applicable to rural locations.

A 1997 study<sup>22</sup> sought to understand the nature of the issue and identify the differences between urban and rural areas, in terms of the extent of fuel poverty and appropriate ways to address it. It found evidence of experiences of fuel poverty in rural areas and noted particular challenges - being off-grid, for example. In 2001, Eaga CT and the Centre for Sustainable Energy organised two conferences to bring together current knowledge and co-ordinate a strategic programme of research across the UK and Ireland<sup>23</sup>. A 2008 study provided a detailed overview<sup>24</sup>. Using detailed national datasets, the researchers concluded that the differences between rural and urban areas meant 'one size fits all' approaches to tackling fuel poverty were not appropriate and that schemes, such as Warm Front, should be adjusted to provide additional support and options for rural communities.

## 5 Scotland, Wales, Northern Ireland, Republic of Ireland and Beyond

In recognition of the distinctive issues facing particular parts of the country, several studies have focused on the devolved administrations of the United Kingdom and on the rural experience in particular. In 1995 a conference was held by Heat and Energy Action Tallaght and National Energy Action Northern Ireland<sup>25</sup>, responding to a growing focus on fuel poverty and energy efficiency in Northern Ireland the Republic of Ireland (ROI). A 1997 report emphasised the importance of taking account of fuel poverty in Northern Ireland<sup>26</sup>, noting that energy spend was 20% more than the UK average and calling for an evidence-based fuel poverty strategy.

- More recently, a 2012 study considered the potential of locally sourced wood biofuel as a solution for homes in rural Scotland<sup>27</sup>. It found a potential benefit for this approach but concluded that this may be limited by low awareness of fuel poverty, the cost of burner installation and householder perceptions.
- A 2016 report examined whether energy consumption patterns differed between rural and urban locations and, if so, what implications this would have for standard fuel poverty assessments<sup>28</sup>. The authors warned that complexities in rural fuel poverty mean that accepted predictors and indicators of fuel poverty have limitations and could obscure significant pockets of fuel poverty.
- Another 2016 study highlighted the potential of a community hydro-electric scheme in Wales to tackle rural fuel poverty<sup>29</sup> but emphasised the need to understand and address the reasons why people may be reluctant to partake in such schemes. It found that concern over a loss of control over energy use, especially the implication of variable tariffs, was a barrier to adoption.

A recent study into low carbon heat and rural fuel poverty<sup>30</sup> sought to find lessons from across Europe and noted that there is a complex relationship between fuel poverty and investment in low-carbon heat infrastructure and no simple cause and effect. Wider factors must be taken into account, the authors argued, and these include unstable or fragile economies, low incomes and welfare provision. They found, however, that this infrastructure tends to be successful in combatting fuel poverty when it is part of long-term strategic programmes that combine significant capital investment with strong policy measures and effective governance.

1. Meryl Basham, Andy Barton, Steve Shaw (2004) Central Heating: Uncovering the Impact on Social Relationships and Household Management (Project 41)
2. Changeworks (2014) Using Solar PV to Tackle Fuel Poverty (Project 94)
3. Tessa Clark (2015) Identifying the Fair Share: Research Into Social Landlords' Experiences of District Heating (Project 99)
4. William Baker (1998) The Liverpool Fuel Poverty Survey (Project 14)
5. Social Welfare Research Unit (1999) Multiple Debt and Fuel Costs: A Review of the Literature and a Survey of Citizens Advice Bureau Clients. A Report to National Association of Citizens Advice Bureau [North Region] by the Social Welfare Research Unit (Project 22)
6. Jacky Pett (2004) Affordable Warmth in 'Hard to Heat' Homes: A Progress Report (Project 42)
7. Aimee Ambrose, Lindsey McCarthy, James Pinder (2016) Energy (In) Efficiency: What Tenants Expect and Endure in Private Rented Housing (Project 106)
8. Danielle Butler (2015) An Interpretative Phenomenological Analysis of the Perceptions, Attitudes and Experiences of Energy Vulnerability Among Urban Young Adults (Master's Research Dissertation) (Project 101)
9. Carolyn Snell, Mark Bevan, Harriet Thomson (2013) Fuel Poverty and Disabled People: The Impact of Policy Change (Project 90)
10. National Union of Students (NUS) (2018) Homes Fit for Study - Research Into Student Experiences of Energy in the Private Rented Sector (Project 110)
11. Jenni Viitanen, David Weatherall (2014) Housing in Multiple Occupancy: Energy Issues and Policy (Project 98)
12. Ian Preston, Richard Moore, Pedro Guertler (2008) How Much? - the Cost of Alleviating Fuel Poverty (Project 57)
13. 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)
14. Joanne Wade, Emma Jones (2012) Local Councils and the Green Deal - Can Parish, Town and Community Councils Increase the Equity of Green Deal Implementation? (Project 83)
15. Various (2002) Warm Justice: Sustainable Solutions to Fuel Poverty (Project 33)
16. Trevor Houghton, Hugh Bown (2012) Too Big to Be Warm: Fuel Poverty and Under-occupation in Private Homes (Project 87)
17. Jacky Pett (2008) Fuel Poverty Carbon Footprint (Project 60)
18. Association of the Conservation of Energy (ACE) (2011) Costs of the Eco: The Impact on Fuel Poverty (Project 77)
19. Nick Banks, Vicki White (2012) Evaluation of Solid Wall Insulation in Fuel Poor Households in the Private Sector (Project 82)
20. Karen Smith (2014) Fuel Poverty and Energy Behaviours: Does a Post-Boiler Upgrade Intervention Increase Energy Efficiency? (Master's Research Dissertation) (Project 97)
21. Tom Sefton (2004) Aiming High - an Evaluation of the Potential Contribution of Warm Front Towards Meeting the Government's Fuel Poverty Target in England (Project 39)
22. Energy for Sustainable Development Ltd. (1997) Rural Fuel Poverty - a Project in South West Wiltshire to Study Rural Fuel Poverty and Develop Practical Solutions (Project 8)
23. William Baker (2002) Rural Fuel Poverty - Defining a Research Agenda (Project 34)
24. William Baker (2009) Quantifying and Classifying Rural Fuel Poverty (Project 65)
25. Heat and Energy Action Tallaght (HEAT), National Energy Action (NEA) Northern Ireland (1996) Paying the Price - Fuel Poverty in Ireland, North and South (Project 4)
26. Brian Harvey (1997) Fuel Poverty in Northern Ireland (Project 11)
27. Ivan Delev (2012) Fuel Poverty and the Re-Emergence of Wood as a Sustainable Source of Energy in Fife, Scotland and Beyond (Master's Research Dissertation) (Project 84)
28. Keith Baker, Ron Mould, Scott Restricks (2016) the Spéird Project: Understanding Influences on Fuel Poverty in Rural and Island Scotland (Project 102)
29. Jane Kelly (2016) Investigating a New Way of Delivery Energy to Tackle Fuel Poverty Using Case Studies in Wales and Scotland (Master's Research Dissertation) (Project 104)
30. Jennifer Hannam, Tim Jones (2017) Low Carbon Heat and Rural Fuel Poverty: Lessons From Across Europe (Project 107)

All references are available online in the Fuel Poverty Library: [www.fuelpovertylibrary.info/projects](http://www.fuelpovertylibrary.info/projects)

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