

Perspectives on energy poverty and energy vulnerability in the United Kingdom

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Energy poverty and energy vulnerability in the policy debate

In the UK, interventions from public agencies to address lack of access to energy services have usually relied on definitions of fuel poverty, rather than energy poverty. Since the 1980s, official quantitative definitions of fuel poverty (FP) in the UK have been based on the proportion of income households spend on heating to keep their home in a 'satisfactory' condition. It was Brenda Boardman's 1991 book *Fuel poverty: From cold homes to affordable warmth* that crisply defined a threshold for FP as spending more than 10% of a household's income on energy (Boardman 1991). This threshold was adopted in the English Housing Condition Survey's report on housing in 1991.

However, defining a standard of fuel poverty in the UK has been subject to additional political complications. In 1997-98, a variety of powers were devolved from the UK Government to the Northern Irish and Welsh Assemblies and to the Scottish Parliament. Among the powers ceded to these other national governments were powers to determine social and health policy, and some areas of energy policy. In 2010 the Welsh Government published a fuel poverty strategy for Wales, maintaining the 10% threshold for household income (Grey et al., 2017), which

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was also retained by the Northern Irish Assembly as the definition of fuel poverty. The Welsh government approach featured an ambition to eradicate fuel poverty in all households by 2018 as far as is practical. Yet a report on *The Production of Estimated Levels of Fuel Poverty in Wales 2012-2016* (2016) estimated that 23% of Welsh households were in fuel poverty in 2016. The report also indicated that vulnerable households (for which various definitions exist) and social housing tenants had higher rates of fuel poverty, which indicates a need to focus on these households in particular. The Welsh Government introduced two major policy-led schemes to target fuel poverty: *Arbed* (beginning in 2009) and *Nest/Nyth* (beginning in 2011) which addressed energy efficiency of homes with mixed results. Some studies have shown that people who experienced these interventions reported improved thermal comfort, health and wellbeing (Grey et al., 2017), although they appear to have had little effect on helping households escape fuel poverty as defined by the 10% threshold (Atkinson et al., 2017). An updated version of the Welsh Government's fuel poverty strategy is due to be published in 2021.

In 2019, the Scottish Government adopted a new definition of fuel poverty. According to this definition, a household is in fuel poverty if the costs of fuel needed to heat the household to a set temperature for a specific amount of hours are more than 10% of the household's adjusted net income, and the household's remaining income is not enough to maintain an acceptable standard of living. England also adopted a different measure, which draws on the *Hills Review* (2012). This proposed that a household should be considered 'fuel poor' if it had lower than the English median level of equivalised income (i.e. adjusted for household size) and fuel costs higher than English median levels, reflecting the ways in which the material condition of a home (and/or the composition of a household) can contribute to moving a household into FP.

Both the English and Scottish definitions recognise, in different ways, that housing conditions contribute to the existence of fuel poverty, and thus make it harder for households to access adequate heating in particular. At the same time, they share with the Welsh and Northern Irish definitions a quantitative threshold as trigger for defining a household as falling into FP and thus as requiring intervention. It is significant that none of these definitions (unlike some definitions used in EU countries) consider energy poverty – rather than fuel poverty, which focuses only on access to space and water heating – as an appropriate object of policy interventions.

A UK Research Perspective

Recognising the condition of housing is important because poor conditions can increase the fuel costs faced by households. This recognition represents an improvement of definitions of fuel poverty. (Bouzarovski and Tirado Herrero 2017). However, the use of a single quantitative threshold in conjunction with a recognition of the role of housing qualities is still problematic, as is the overarching emphasis on heating services. Some households suffering inadequate access to energy services (including but not limited to space and water heating) fall outside these definitions, and to focus on the condition of housing as a major contributor to fuel or energy poverty invites solutions which are narrowly technical rather than social and more wide-ranging in nature (Middlemiss, 2017). Qualitative research on experiences of fuel and energy poverty shows, by contrast, that a range of conditions (such as being in private rented accommodation, living in a rural location, or having a disability) may make it more likely that a household will suffer inadequate access to energy services (Middlemiss and Gillard 2015). It can thus act as a complement to quantitative research on fuel and energy poverty and help to correct the tendency of quantitative thresholds to oversimplify complex issues, by e.g. positioning households either on one side of the threshold or the other based on a snapshot of their situation (Middlemiss, 2017).

For these reasons, interest in the concept of energy vulnerability has grown (Bouzarovski and Petrova 2015). The concept of energy vulnerability identifies a set of conditions that make it more likely that a given household will suffer from fuel or energy poverty. These conditions may be social, material and economic in nature, and make some households more sensitive to and less able to adapt to difficulties in accessing energy services.

Recent research in the UK has explored the complexities of energy vulnerability, and how understandings of it need to go beyond the identification of vulnerable socio-demographic categories of household, such as those containing elderly or disabled members, or households with young children. In particular, researchers have looked at the ways in which qualitative, longitudinal methods can shed light on how energy vulnerability can develop as life course circumstances for household members change over time (Jenkins et al., 2011; Middlemiss and Gillard, 2015; Middlemiss et al 2019). Further, some research has shown how and why it is important to understand more about people's own experiences of energy poverty and energy vulnerability. For example, experiences can influence how people subsequently act, leading to their energy vulnerability increasing or decreasing. Further, how people respond to such experiences can make their difficulties less visible to agencies with responsibilities to assist those unable to access energy services through policy or other forms of intervention. For example, Longhurst and

Hargreaves (2019) explore how emotional responses to energy vulnerability can deepen it, as people respond by anxiously reducing energy use further, or respond through feelings of shame by refusing to seek help.

Research recently conducted by Cardiff University in 2017-20 as part of the FLEXIS project (<http://flexis.wales>) and Welsh Government-funded *Better Energy Futures* project continues this qualitative, longitudinal focus on how experiences of energy poverty can change over time by exploring experiences of energy-vulnerable households in the village of Caerau in south Wales. The research design includes annual interviews with participants (on four occasions to date, with further waves of interviews planned for 2021-2022). Interviewees are residents of an ex-mining community in the South Wales Valleys that has been described as an area of deep-rooted deprivation with high rates of unemployment and income deprivation (WIMD, 2019). The community is the site of a planned geothermal district heating scheme (due to be constructed in 2021) that will use heat from water in disused mine workings to heat local homes. Alongside discussion of the mine water scheme, the interviews explored energy use in everyday life and experiences of energy vulnerability over time. Interviews were conducted as part of the social science element of the interdisciplinary FLEXIS project, which is exploring potential route maps for decarbonising the energy system in Wales. Across the first round of interviews, discussions of the affordability of energy were prominent and as such, more focus was given to issues of affordability in later waves of interviews. A small number of second round interviews were conducted as part of the *Better Energy Futures* project, which sought to explore experiences of fuel poverty and energy vulnerability (Groves et al., 2019).

Many participants described issues with the material fabric of housing that made homes harder to heat, or resulted in inefficient energy use. Similar issues pertaining to lived experiences connected to the material fabric of hard-to-treat homes are particularly highlighted in related research conducted with rural communities in other parts of Wales (Roberts and Henwood 2019). Most participants lived in solid stone wall terraced properties, which were prone to dampness, making them hard to heat. Given their small size and the potential for additional external or internal insulation to interact with damp, the thermal properties of such homes may also be hard to treat or improve. While homeowners were able to make changes to their properties to improve energy efficiency, such as installing double glazing or upgrading the boiler, this was often done in a piecemeal way when financial resources became available, such as 'buying a window at a time', as one interviewee in her 70s put it. Participants in private rented accommodation often described challenges in getting their landlord to make alterations to the property. For example, one participant in her 30s was living in a privately rented house with poor quality glazing, which, exacerbated by an

inefficient heating system, made achieving a comfortable living temperature difficult. As she put it, 'we've got no thermostats or anything, so it is purely on or off. So, you either bake or you freeze'.

These problematic material conditions create pressures on households to adapt to inadequate energy services, should they be unable to improve their situation. Adaptation can itself create problems for physical and mental health, and obstruct people's ability to participate more fully in society in other ways. One participant in her 30s reported being unable to get her social landlord to fix persistent dampness and other problems in her house, which she associated with reductions in thermal comfort. Moving her daughter into her own bedroom to provide her with a healthier space to sleep, the participant spent a long period of time sleeping on a sofa, which resulted in severe back pain.

This need to adapt, but without the power to make adaptations that have positive consequences for wellbeing, is reflected in the need to make desperate choices. For example, the choice to 'heat or eat' has become a powerful rhetorical tool in the current era of austerity and welfare reform (Snell et al., 2018), marking a point at which too much of a valued way of life has had to be given up in response to energy poverty. Several of the participants described food as an area where compromises could be made in order to be able to afford adequate heating. They talked about buying food cheaply, or relying on local foodbanks and food donation schemes. In contrast energy bills were seen as inflexible, described by one participant as a 'brick wall' that had to be got over before any other money could be spent. Despite these challenges, most participants were reluctant to describe themselves as vulnerable, often because they could identify others in worse situations, or because they recounted stories of offering help to others; through lending and sharing of money, energy or food (Shirani et al., 2021).

Typically, criteria used in the UK for identifying households as vulnerable are demographic and fixed in nature, such as whether household members are elderly, are on low incomes or live with long-term illness/disability (Citizens Advice, 2017; Jenkins et al., 2011). But being able to draw on data relating to people's subjective experiences of difficulties in obtaining adequate energy services reveals how vulnerability to losing access to energy services is complex, may increase or lessen over time, and may be less visible than the fixed demographic characteristics generally associated with vulnerability. As other research has shown (e.g. Longhurst and Hargreaves, 2019) an unwillingness to risk being identified as vulnerable to energy poverty may be a result of fear of stigmatisation. We found that, as well as contrasting themselves favourably with others who they felt to be worse off, some interviewees emphasised, across their interviews, how they felt they had exercised self-reliance, even where such self-reliance had meant making

decisions to cut back on food expenditure, so as to heat their homes. Evident vulnerability can therefore co-exist with a sense of having been able to maintain a sense of resilience, flexibility and stability amidst instability and unpredictability (Groves et al., 2019).

These insights from the FLEXIS and *Better Energy Futures* projects at Cardiff University highlights the importance of qualitative research in understanding the lived experience of energy vulnerability. A qualitative approach complements quantitative work on fuel and energy poverty by presenting detailed participant accounts that powerfully illustrate the challenges of energy vulnerability and how they change over time and shifting circumstances. The longitudinal nature of this study provides opportunity for the accumulation of detailed information on this topic, while additional waves of interviews (as we have planned in 2021-2022) will enable further exploration of changes in circumstances over time. In particular, this methodological approach means that the research project is well-placed to explore the impact of the Covid-19 pandemic on experiences of energy vulnerability. We suggest that qualitative longitudinal methodologies are particularly suited to addressing dynamic issues, such as energy vulnerability, and thus advocate further research in this vein.

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Source: EP-pedia Website

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