Necessary energy uses and a minimally-decent standard of living in the UK: bringing outcomes of public deliberation into energy justice

Abstract

Access to affordable energy is a core dimension of energy justice, with recent work examining the relation between energy use and well-being in these terms. However, a key question that emerges is why specific energy uses matter to the degree that they can be seen as a form of necessity within a given cultural context. We draw on a longitudinal set of participatory processes focused on defining a minimally-decent living standard in the UK, to consider critically what this evidence can contribute to energy justice thinking. Our secondary analysis shows that energy uses deemed to be necessities are diverse and plural, enabling access to multiple valued energy services, and that their profile has to some degree shifted from 2008 to 2014. We also demonstrate the multidimensional reasoning that has underpinned these outcomes ranging across questions of health, social participation, development and practical living. Whilst public deliberations about necessities can be taken as legitimate grounding for defining minimum standards and therefore the scope of 'doing justice' in terms of fuel poverty policy, they can also be revealing of the escalation of norms of energy dependency in a society that on climate justice grounds must radically reduce energy consumption and carbon emissions.

1. Introduction

Energy justice has recently emerged as a normative concept and frame for academic work focused on the relation between justice principles and energy concerns of many different forms, across different scales of analysis (Sovacool and Dworkin, 2015). The scope and key ideas of energy justice have only begun to be laid out, with recent contributions making significant progress in proposing nascent definitions, core principles and frameworks for locating intersections between justice claims and energy systems (Bickerstaff et al., 2013, Sovacool et al., 2014, Hall et al., 2013, McCauley et al., 2013), as well as investigating particular cases and applications of justice ideas (Heffron and McCauley, 2014, Simcock, 2014, Catney et al., 2014). A constant across this growing body of work has been to position access to and affordability of energy, and the problems of energy or fuel poverty, as core energy justice concerns. Bickerstaff et al (2013), for example, identify energy poverty and the politics of energy consumption as one of two main justice categories. Sovacool et al.

1

(2014: 46) propose as one of their principles of energy justice, 'the affirmative principle', stating that 'if any of the basic goods to which every person is justly entitled can only be secured by means of energy services, then in that case there is a derivative right to the energy service'. They base this principle on a set of assumptions drawn out of bringing energy as an 'instrumental good' into articulation with a range of normative thinking, but particularly the capability approach (Sen, 2009). These authors, and others (Walker and Day, 2012, Roberts, 2008, Day and Walker, 2013), have thus put the relation between energy use and well-being firmly within a justice frame, and have begun to spell out this relation in theoretical terms.

One of the connected steps that this conceptual thinking demands, however, is to move from basic principles and frameworks to grounding these empirically in practice and in situ. This is especially the case when it is acknowledged that there is a necessary relativity involved in either specifying what material necessities are, in any given context (Walzer, 1983), or in specifying the means through which more abstractly defined universal needs (or related notions) are to be satisfied (Doyal and Gough, 1991). In energy terms this means asking, within a given societal context, which energy uses matter and are essential for well-being and quality of life. As already noted energy itself is only ever an instrumental good; it is what energy is for (Shove and Walker, 2014) and used to achieve that matters to well-being. Or, as in the 'affirmative principle' noted above (Sovacool et al., 2014), it is the services that energy provides (heat, light, mobility) that constitute the sensible focus of rights claims (see also Bouzarovski and Petrova, 2015). What then does it mean for someone to have insufficient access to the energy services that they need, potentially to the degree that something 'should be done' to address this situation? Is it only the basics of survival that matter, or energy uses that have become customary and 'normal' in that societal time and place? Or in short, where exactly are the boundaries between 'necessities' and 'wants' and on what basis might these change? We argue that resolving these questions is not amenable simply to expert determination (or the musings of normative theorists), rather some evidence of shared social understandings can is also required through which the specifics of needs and necessities within a given time and place can be articulated.

Our objective in this paper is to utilise an example of such evidence, produced through a participatory and consensual process, to consider critically what this can contribute to an 'in situ' understanding of energy use as a need, as well as to draw out implications for different notions and dimensions of energy justice. As we shall discuss, whilst on the one hand public deliberations about necessities can be taken as a legitimate grounding for defining minimum standards and therefore the scope of state policy for 'doing justice' in terms of energy or fuel poverty, it can also be revealing

of the ongoing escalation of these standards and of norms of energy dependency in a society that on climate justice grounds must move away from an energy and carbon intensive condition (Roberts 2008; Walker 2012; Caney 2014). Reconciling these outwardly competing interpretations and justice claims is possible, we shall argue, although not necessarily easy to achieve.

The particular source of empirical data that we draw on is the stream of 'Minimum Income Standards' (MIS) research outputs, produced by a team at Loughborough University for the Joseph Rowntree Foundation[1] (Bradshaw et al., 2008, Davis et al., 2014) and founded on a 'relative poverty' approach (Townsend, 1979). Over the last eight years, this research has used a consensual, deliberative approach to ascertain the goods and services that members of the public consider to be the basic necessities that everyone in the UK should be able to afford and have present in their everyday lives. We use this data to identify which energy using technologies and services are implicated in shared expectations of a minimally decent living standard in the UK, and also the reasoned grounds on which these judgements are being made. Energy use has not been the focus of analysis of the MIS outputs to-date, so our use of it has a novel character.

We chose to draw on this secondary empirical data for three related reasons. First, it comes from a carefully designed focus group based process stratified across 14 different types of household. This gives the data substantial scale and depth. Second, it covers 4 repeated processes - in 2008, 2010, 2012 and 2014 - providing a unique longitudinal dataset with the potential to reveal change over time (even if the timespan is not long in historical terms). Third, and significantly for our purposes, energy use per se is not the focus of the group discussions. This can be considered a strength, because of the instrumentality of energy use in relation to the achievement of socially valued outcomes. As such, group participants were considering only indirectly and implicitly what energy is for in everyday terms; how, through its powering of technologies of various forms, energy use supports contemporary ways of living. We are therefore able to see through this data how, where and for what reasons energy uses are *implicated* in people's expectations of a minimum standard of living, rather than explicitly deemed to be necessary in these terms. This gives the data a particular character that is distinct from studies where members of the public have been asked to engage directly with questions of energy, climate change or fuel poverty (Wolf and Moser, 2011, Pidgeon et al., 2014, Druckman et al., 2011). We discuss further the implications of different approaches at the end of the paper.

This data is rooted in the particular context of UK society over a particular period of time. This situatedness is important. The UK is a technologically advanced and economically prosperous

---

[1] The JRF is a UK-based charity which campaigns and researches in issues of poverty and social justice

country in which a multitude of energy uses have become part of everyday living, but in ways that cannot be presumed to be entirely shared with countries with similar technological or economic characteristics. The period from 2008-2014 spans the onset of a global and domestic economic crisis and related austerity policies, but also a time over which new technologies, cultural tropes and social expectations continued to evolve. The UK is also a country where the notion of 'fuel poverty' and of state actions to support people's access to affordable energy services, have become strongly embedded (Boardman, 2010, Walker and Day, 2012). Whilst this policy context should not necessarily directly affect the public deliberations that we draw on (given that they do not focus explicitly on energy use), it does shape the implications that will be drawn out of our analysis.

We begin by outlining the underlying principles of the MIS approach, how the method has been applied and the outputs that we draw on. We then present a secondary analysis of the energy-using items that have been included in the MIS results across the 4 iterations of the method, and the reasoning in the focus groups that has underpinned their inclusion. Following further discussion of the dynamics of change and the processes involved in these, we then draw out implications specifically for fuel poverty policy in the UK, but also more generally for energy demand reduction related to climate mitigation, and for further development of the participatory approach we have advocated.

2. The consensual approach and the MIS research

2.1 Underlying principles of the MIS process

The MIS process is based on an understanding of needs as the tangible and material goods and services that a person requires, at a minimum, in order to be able to participate in the society in which they live (Mack and Lansley, 1985). As Bradshaw et al. (2008, p.14) explain:

> *"A minimum standard of living in Britain today includes, but is more than just, food, clothes and shelter. It is about having what you need in order to have the opportunities and choices necessary to participate in society"*

This understanding of need is one informed by ideas of 'relative poverty' that resist the search for universal moral or objective resolutions (at least in terms of material needs). Pioneered by Peter Townsend in the 1970s and 80s, this approach argues that the goods and services necessary for a decent life free from poverty have to been seen as relative to the prevailing standards and customs of a particular society, differing between cultures and evolving over time as customary ways of life

change (Townsend, 1979; Walzer, 1983; Lister, 2004). Therefore, in many societies 'basic necessities' encompass much more than only the very basics of survival, but also include those items that enable people to have living a minimum standard of living that reflect contemporary norms (Townsend, 1962; Lister, 2004). As Townsend outlines:

> *"Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities, and have the living conditions and amenities which are customary, or at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary patterns, customs and activities".* (Townsend, 1979)

It follows that to operationalise any specification of minimum necessities, a method is needed that is reflective of the prevailing societal context. Here, as noted earlier, there are strong arguments for following a 'consensual approach' in which the basic necessities of a given society are decided by some form of public process (Hillyard et al., 2003; Pantazis et al., 2006). This has been considered the most legitimate way of defining necessities (Mack and Lansley, 1985; Walker, 1987; Gordon et al., 2013), underpinned by the belief that whether a good or service is 'essential' is socially constructed and determined by the 'shared understanding' of a society (Walzer, 1983). As Mack and Lansley (1985, p.38) state, *"Items become 'necessities' only when they are socially perceived to be so",* a position logically leading to involving members of the public in some way in order to determine what these necessities may be (Veit-Wilson, 1987; Walker, 1987).

2.2 The MIS Method

The MIS uses a particular type of consensual method based on sets of focus group discussions. Whilst all consensual approaches broadly aim to capture public opinion, there are different ways of achieving this. For example, some studies utilise a survey methodology, asking participants to choose which items from a pre-defined list they consider to be essential. Such methods have been critiqued, with Walker (1987) arguing that in survey approaches *"[participants] are typically asked for immediate responses to tightly worded questions about complex and sensitive issues to which few of them will previously have given much thought"* (p.213-214). He argues that, in order to come to a reasoned judgement people need to be able to reflect, grapple with complexities, and to hear the views of others.[2] As well as these strengths, the focus group methodology enables more

---

[2] This resonates with arguments made in theories of deliberative democracy more broadly (e.g. Young, 2000).

transparency as to the types of reasoning underpinning why particular goods and services are considered to be necessities.

In outline the MIS process asks the groups to specify the items and activities that they think households of different types need to include in their household budget in order to reach a *"minimum-acceptable standard of living"* (Davis et al 2014: 3).[3] There is a strong steer for the participants to focus on *necessities* to achieve a minimal standard, rather than wants, and to make careful and reasoned distinctions in these terms. Across the iterations of the method there is some variation as to the profile and number of groups. In the full method separate sets of focus groups are held for fourteen different types of household composition.[4] Each group is asked to decide what constitutes a necessity for their type of household. For example, the list of items for single female pensioners is developed by groups of single female pensioners, lone parents by lone parents, and so on. In the first running of the full method for all household types there were 42 focus groups in total, including approximately 300 participants. The participants of each focus group are purposively selected to ensure a range of socio-economic circumstances, in order to avoid the issue of 'adaptive preferences' whereby those on low-incomes have lower expectations than others in society (Nussbaum, 2011). During the focus groups, participants are asked to use a method of 'projection', whereby *"group members are asked not to think of their own needs and tastes but of those of hypothetical individuals … Participants are asked to imagine walking round the home of the individuals under discussion, to develop a picture of how they would live, in order to reach [the minimum acceptable living standard]"* (Davis et al., 2014, p.9).

In drawing on the outputs from this research we include all 4 iterations. 2008 was the year of the original research, and as shown in Table 1 every two years since the list of necessities has either been reviewed (asking groups to consider whether existing budgets need selective changes), or fully 'rebased' (the original research method repeated to create new budgets from scratch) by fresh sets of participants.

---

[3] In a second stage to the MIS process the research team translates each of these items into a figure for the cost of purchasing and running these items, adding these up in order to then set a benchmark of the minimum annual income required to reach an acceptable living standard. In our use of the data we do not draw on the translation into costs, rather we are focused on the lists of necessary items and the reasoning that underpin these.

[4] Specifically, the separate groups were: single working-age female; single working-age male; working-age couple; single female pensioner; single male pensioner; pensioner couple; lone parent one (toddler) child; lone parent two children (preschool, primary school); lone parent three children (pre-school, primary school, secondary school); couple one (toddler) child; couple two children (preschool, primary school); couple three children (pre-school, primary school, secondary school); Couple four children, toddler, pre-school, primary school, secondary school

[Table 1 Here]

The research outputs that we draw on consist of:

(i) the lists of 'necessities' for different household groups decided upon during the consensual processes as published online[5] . We use these as a data source to identify and separate out those items that obviously and directly require the use of energy i.e. that are energy dependent. In making these selections we have only included energy using items that would in some way contribute to the energy costs of the household – to their electricity, gas, petrol or similar fuel costs. Where goods and activities involve an indirect use of energy outside of the home – for example through members of the household making use of public transport, taking taxis or watching a film at the cinema – these are not included, although we do comment on some of these cases in later discussion, particularly where they feature as alternatives to more direct household energy use.[6]

(ii) published discussion of the MIS results in five full project reports, alongside a series of supplementary reports and working papers. We have utilised these reports in particular where they reveal explanations of the reasoning used in the groups. We were unable to access original focus group transcripts because of commitments given by the MIS researchers to group participants regarding confidentiality[7]. This means that we are reliant on the analysis undertaken by the original project team and how and to what degree they have discussed the energy-dependent items we are interested in across their published reports.

3. What energy uses are considered essential and for what reasons?

Table 2 lays out the energy-using items included in the lists from the 2008, 2010, 2012 and 2014 MIS studies, organised into 6 categories related to the form of energy use outcome or service involved - heating, lighting, entertainment and communication, food-related, cleanliness and personal care, gardening and mobility. We also indicate where these items are differentiated between household types, and where changes have taken place from one iteration to the next. We discuss what Table 2 shows in relation to two themes: diversity and multidimensionality and change over time.

---

[5] http://www.lboro.ac.uk/research/crsp/mis/results/
[6] We also do not account for the energy use embedded in the making, selling or movement of goods or services, given that this would takes us into methods of accounting that are beyond our purpose and focus
[7] In any case the scale of work that would have been involved in re-analysing the original data (from 42 focus groups just in this first iteration) would have been very significant.

3.1 Diversity and Multidimensionality

Across the household types a range of energy-dependent items have been deemed necessities by the group participants, relating to diverse aspects of everyday life. Some of the items defined as necessities have been widespread in domestic ownership and use in the UK for many years – for example, fridge-freezers, cookers and electric lighting – with central heating noticeably now seen as both normal and necessary as a consequence of its progressive introduction in the housing stock since the 1950s (Rudge, 2012). However other items that could be described as normal or customary to own and use have not featured as necessities, or do so only selectively. For example, dishwashers have not featured at all, and tumble dryers and cars only entered as necessities in 2012 and 2014 for specific categories of households (discussed further below).

The diversity of energy using items in Table 2 begs the question of why they are each included, what the reasoning of the MIS groups has been. Evidently there is not one constant rationale that can explain why a telephone, a cooker and a fan heater are each considered to be everyday necessities. Drawing on a recent analysis by the MIS research team of the overlapping rationales deployed in the focus groups (Davis et al., 2015), four of these are relevant to the inclusion of directly energy consuming items – health and well-being, social participation and interaction, development and opportunity and living life in a practical way.

Health and well-being, not surprisingly, has featured as a core rationale in the group discussions, matching theoretical accounts which in particular see bodily and mental health as a core element of 'what matters most' (for example, Doyal and Gough, 1991; Max-Neef, 1992). In energy terms the need for an effective heating system was most directly linked to a health rationale. This was established in the first iteration of the MIS in terms of not just the need for heating technology, but also an adequate heating regime (Oldfield, 2008). Here lay deliberation was supplemented with expertise from a 'heating engineer' who aligned with the World Health Organisation recommendations for good health (21°C in the living area and 18°C in other occupied rooms) in order to ensure that an *"adequate standard of warmth"* was achieved, and the health of occupants would not be compromised (Oldfield, 2008: 1). Interestingly these temperature standards were higher than those initially suggested as acceptable by group participants. Other energy using items have also been seen to contribute to health, for example a fridge for '*keeping ingredients fresh, in a world in which daily shopping is not the norm*' (Davies et al 2015: 17), an electric fan for older people (because of physiological vulnerabilities during hot weather), and lighting (interior and exterior) to contribute to both physical safety and feeling safe and secure at home.

Social participation and interaction as a rationale gives attention to the means through which people are able to be part of society, to connect and communicate with others and be involved in meaningful interaction. Whilst this most obviously has related to communication technologies (phones and computers) it has also more subtly been about having what is necessary in order to be able to invite people into your home (including adequate heating and lighting and a vacuum for keeping the home tidy), being able share common experiences within social interaction (part of the justification for including TVs), and being able to be presentable in public (including hot water for bodily cleaning, and an iron for pressing clothes). Davis et al (2015: 16) note that this need to be presentable was '*particularly important for school aged children, who are more likely to be conscious of 'fitting in' with their peers*', explaining the inclusion of (inexpensive) hair straighteners for secondary school age children and working-age females in later editions of the MIS.

Development and opportunity as a rationale is noted by Davies et al. (2015: 18) as relating primarily to necessities relevant to education and employment. In terms of energy consuming items this has included computers and the internet, which the focus groups have seen as becoming essential for finding and applying for jobs and for undertaking home work for children (see further discussion in the next section). Also a radio alarm clock for being able to get up on time for school or work, and items related to being able to dress appropriately (including a washing machine and iron as noted previously). Access to transport has also been discussed in terms of opportunity, so that people are able to travel to education and work opportunities that are beyond realistic walking distances.

The final rationale 'living life in a practical way' particularly focuses on the interconnections between 'time, ubiquity and economy' (ibid: 20). MIS participants have reasoned that the time pressures involved in contemporary living mean that goods and services which save time are important, especially if they enabled more to be achieved without incurring high financial costs. In terms of energy using items, electric kettles and microwaves are highlighted as two example of where significant time savings can be achieved without incurring significant costs (or indeed reducing costs in terms of energy consumption relative to alternatives), contrasted with a dishwasher which given its upfront cost has not been seen as essential in any of MIS iterations. A tumble dryer is similarly expensive, but was entered in the specific case of large families in 2012, because of their particularly acute time pressures, along with concerns about the implications for damp problems if large amounts of clothing are dried indoors (Hirsch et al 2012). Groups discussed the needs of a household with one or two children and decided that laundry could reasonably be dried using a combination of outdoor drying, an airer and indoor radiators. A family size of 3 or more children was

seen as a 'tipping point' which made a tumble dryer a necessity, even though the cost implications in terms of energy use were recognised as significant - over 8 times as high as the weekly cost of paying for the machine itself.

These various rationales demonstrate that carefully considered and multiple reasons have been deployed for including various energy-dependant items as necessities, and that clear discriminations have been made in working out what is a necessity rather than a 'nice to have' or a luxury. It is also evident that the groups' deliberations are culturally embedded, with their rationales repeatedly reflecting on what is normal, customary or practically possible in relation to their experience of living in the UK at a given point in time. We should expect this cultural relativity to be reflected in changes in the lists over time, and it is to this that we now turn.

3.2 Changes over time

With the 4 iterations of the MIS method we are able, potentially, to identify evidence of change over time (even though 6 years is a relatively short period). For the MIS results as whole the list of necessities stayed relatively constant between 2008 and 2014, meaning that people's views on minimum needs remained relatively stable. Accordingly energy-using items such as a fridge-freezer, vacuum, washing machine, cooker and iron, for example, all remained in place between 2008 and 2014. However, Table 2 highlights that communication and information technology has been an area of comparatively rapid change in people's expectations. This category also includes the most notable removal of a technology, when working-age adults without children decided in 2014 that a landline telephone was no longer a necessity. Other additions to the energy-using list have included a car for families with children (in 2012), a bigger screen size of TV (in 2012 for pensioners, then all families in 2014) and an electric fan (2014 for pensioners).

Whilst the scale of change is limited, these particular cases are still revealing and indicative of processes that are likely to render more significant shifts over longer time-scales. In the wider sociological literature there is a recognition of the constant dynamism in patterns of everyday living (at least in more advanced or emerging economies), with some arguing there has been a recent acceleration of processes of change (Rosa and Scheuerman, 2009). Shove (2003: 188), for example, refers to the '*continual creep of convention and the escalation of ordinary consumption*' in which there is both a circulation of standardisations (such as a convergence of understandings of a comfortable room temperature) and 'path-dependent racheting' in which new elements and shifts in ways of life become progressively locked-in. In relation to the dynamics specifically of 'need

creation', Wilk (2001) conceives of interacting processes of 'cultivation' in which new 'wants' emerge as distinct from the habitus (Bourdieu, 1977) of daily routine, and 'naturalization' in which what have been wants become so embedded in daily life that they become taken-for-granted needs. In these and other accounts, new technologies are important in both providing for the possibilities of change, and in forming patterns of dependency within routine practices which become in Wilk's terms 'naturalized'. As he notes, '*only when practices have been successfully cultivated and naturalized, is there a potential for technology to play a transformative role*' (Wilk 2001:116).

Whilst we cannot here provide a fully developed account, the emergence of information and computing technologies in the MIS iterations provides an example of where new devices have become 'cultivated' first as wants and then embedded and 'naturalized' as essential elements of everyday practices. This is in part because of the novel possibilities of communication, interaction and information collation that they provide, but also because of how once they have spread and become more commonplace they become assumed replacements or extensions of established ways of doing things. In the MIS groups it was, for example, recognised that schools increasingly assumed that their pupils would have access to computers and the internet to do their home-work, that various official administrative systems now similarly expected people to be able use web-based interfaces and that job seeking increasingly relied on internet searching and applications. These forms of dependency moved progressively through the different demographics of the groups. In 2010 it was explained that:

> '*The working-age participants … argued that the Internet is now used so widely in life – from applying for jobs to getting discounts – that people without it are disadvantaged'* (Davies et al 2010).

Whereas for pensioners:

> '*In 2008, 2010 and 2012 groups debated whether this was a 'nice to have' or a 'need to have' item, with eventual agreement that it was not a necessity for every pensioner household and that if people wished to they could access it at public libraries. However in 2014 all pensioner groups thought that it should be included … This change has occurred against a backdrop of public library closures and cutbacks … meaning that access to the internet in public spaces may be perceived as more limited in 2014*' (Davies et al. 2015)

The role of wider changes in the provision of alternatives to direct ownership and use, and how shifts in public policy affect these, is also relevant to the inclusion of a car as a necessity for families

with children in 2012. There has been extended debate across the MIS iterations about whether a car should be seen as a necessity. Here clearly we are not talking about the embedding of a new energy-using technology (at least not during the MIS period), but rather the status of an existing and commonplace one.   For most of these discussions, it was resolved that public transport along with occasional use of taxis and walking on foot, provide reasonable and practical alternatives to car ownership. However, discussions focused on the needs of families, particularly related to the rationale of 'living life in a practical way', broke with this position. Due to shifts in public policy, it was argued that public transport had become increasingly expensive for a family to use and was often insufficiently flexible to meet the needs of busy and time-pressed families (Davis et al., 2012; 2014). Not having a car would therefore make reasonable expectations of family life, and of a child's up-bringing, impossible to realise. The following extract from a focus group discussion (a young parents group in 2012) illustrates this combined rationale:

> Women A: *'If you think about Tom, obviously we want him to walk to school if possible, but if he takes part in a couple of activities is it a luxury to be able to drive Tom to swimming lessons? I couldn't take my children, I couldn't walk with them if I didn't have a car, they wouldn't be able to swim*' (quoted in Davies et al. 2015)

Again, we can see a careful reasoned account of how a transition from want to need is justified, and an insight into the complex social dynamics that have in the past, and will in the future, underpin changes in energy uses and energy dependency over longer time scales (Shove et al., 2012). Change in cultural embedded understandings of need is in part about shifting shared expectations of normal life, but also about how new technologies and associated practices become embedded and locked in and how public systems of provision and shared infrastructures do or do not provide accessible alternatives to privately owned and used alternatives.

4. Justice implications and policy tensions

Having laid out what the participatory and consensual approach of the MIS research can tell us about socially shared understandings of necessities (in their place and time), and specifically how these understandings relate to elements of (and dependencies on) household energy use, we can now return to the opening themes of the paper on energy justice. Most directly, as we laid out in the introduction, there are insights from the empirically-grounded MIS work that are directly relevant to energy justice as centred on energy use and well-being, and therefore for the scope of

fuel poverty policy (as understood in a UK context). However, there are also implications for energy justice conceived at a more global scale, relating to responsibility for past, current and future carbon emissions (Bickerstaff et al., 2013). We address each of these in turn before considering their interaction.

4.1 Necessary energy uses and fuel poverty policy

We have argued that participatory processes like the MIS can provide an empirically grounded basis for operationalising theoretical assertions about the normative status of energy use (or access to energy services) as a basic necessity that should be accessible to all. In this light our analysis of the MIS results tells us two things. First, that energy uses deemed to be necessities in contemporary UK society are diverse and plural, producing access to multiple valued energy services – heat, mobility, refrigeration, light, communication and others. Second, that this profile of necessary energy uses shifts over time and is to some degree differentiated across different demographic groups. It is important to note though that the MIS process does not at all reliably tell us how *much* energy use is needed (i.e. the necessary level of use of different devices or their technological efficiency) and this is a point we will return to in the next section.

The most obvious relevance of these findings for public policy centres on the scope of the energy uses supported by fuel poverty measures. Can these findings usefully help guide how the state should be expected to act to support different uses of household energy? The case of the UK is instructive in reflecting on this question. As noted earlier the UK has a long-standing fuel poverty agenda, but even so the question of what energy uses matter and are worthy of state support on welfare grounds has not been clearly resolved and remains problematic. In the current official definition of fuel poverty (in England[8]) a household is in fuel poverty if:

> "*they have required fuel costs that are above average (the national median level) and were they to spend that amount, they would be left with a residual income below the official poverty line.*" (DECC 2013)

For our interest in the energy uses that are included within the scope of how fuel poverty is understood and responded to, the key term here is 'required fuel costs'. Exactly what fuel consumption is deemed to be 'required' and for what purposes? 'Required fuel' is modelled within

---

[8] Different definitions apply in Scotland and Wales, although they also similarly include the notion of required fuel or energy costs

the calculations that underpin the regular generation of statistics on the incidence of fuel poverty (Simcock and Walker 2015) and includes energy consumption for five categories of energy use – heating, cooking, lighting, hot water and a general category of 'appliances'(DECC 2014). These calculations also track changing patterns of consumption within these categories over time.

At a basic level then, we can find some alignment between the scope of current policy and the outcomes of our analysis of the MIS results – fuel poverty is defined in terms of a range of energy uses and is open to the energy that is 'required' shifting over time following societal norms. However this is only one indicator of how fuel poverty is understood in the UK, as in practice nearly all public discourse, policy discussion and policy intervention focuses on heating, with very little recognition or addressing of the other energy uses that are part of the official definition (see Simcock and Walker 2015 for a more detailed analysis). Exactly why the official definition extends beyond heating was not examined in a recent major review of fuel poverty policy (Hills, 2011, Hills, 2012), and the way that non-heating energy uses are incorporated into the modelling and generation of statistics does not reflect a considered or detailed determination of what is a necessity. For example, the 'appliances' category is an estimation of the average 'required' consumption of all 'plugged in' devices used in the home – so therefore including appliances such as dishwashers, tumble-driers and others excluded by the MIS deliberations. Similarly, the tracking of changing levels of energy consumption over time is very basic, following data on average data consumption across a general sample of households, rather than based on a specific understanding of what constitutes a necessity having shifted over time.

While there is therefore a specific debate to be developed about the scope and specification of UK fuel poverty policy, this demonstrates how a participatory process such as the MIS could bring carefully reasoned and democratically-based insights into resolving a core policy question of what everyday energy uses matter as basic necessities. This conclusion therefore has wider relevance for other settings in which energy or fuel poverty policies are being developed.

4.2 Climate justice and energy reduction

Moving to another scale for thinking about energy justice can, however, appear to problematize the use of historically produced ideas of 'necessary' energy use to inform policy in this way. Simply accepting and following ongoing patterns of 'cultivation' and 'naturalization' and the creation of new energy using necessities (Wilk 2001)in a country such as the UK - that already has a high level of per-

capita energy use and associated carbon emission – can seem wrong in global climate justice terms. Indeed the list of items on the MIS might in these terms be seen as entirely indicative of a 'western' pattern of unsustainable over-consumption, and to support this profile of energy uses as a need ethically problematic.

There are two immediate objections that can be made to such arguments. First, per capita and aggregate carbon and energy figures are blind to the distributional inequalities within countries, and as in the UK it is those that are wealthy and on high incomes that are most responsible for carbon emissions, rather than the fuel poor (Brand and Boardman, 2008; Gough et al. 2011; Preston et al, 2013). Second, defining fuel poverty in terms of prevailing understandings of energy use and adopting measures to support these does not *have* to result in sustaining or increasing aggregate energy consumption. By focusing not on energy consumption (in kWh or therms), but instead on enabling access to energy *services*, inequalities can be reduced by investment in improving technical energy efficiency (of homes, heating systems, lighting, fridges and so on) and maximising the use of natural energy flows. Hence in the UK and other countries the importance of programmes focused on such infrastructural and technical efficiency improvements for fuel poor households (Heyman et al., 2005, Harrington et al., 2005, Boardman, 2010). The affirmative principle of Sovacool et al. (2014), referred to earlier, is in this respect careful to point out that it is energy services that should be the unit to which rights claims refer, not a particular level of energy consumption per se.

Despite these caveats, our earlier analysis of changes across the iterations of the MIS process and related discussion of the social and technological dynamics involved, points to the potential for a growing proliferation of energy uses to become normal and needed over time. Therefore, despite the potential for substantial energy efficiency gains, the challenges involved in making these bite within an evolving and potentially increasingly energy-dependant social world are very real. The increasing size of TV seen as a necessity in the MIS iterations is maybe instructive in this regard, and we could clearly speculate how future MIS processes might increase this from the current 32" inch screen, or bring larger versions of other technologies, or eventually incorporate current 'luxuries' into the realm of energy using necessities. There is therefore a need for engagement with the energy consumption and global justice implications of creeping understandings of what is normal and the making of new needs (Sayer 2013; Ropke and Christensen 2013). One direction to go here is exemplified by a separate set of group discussions that was carried out with MIS participants in 2011 in which they were asked to consider how the list of essential items might be recalibrated with a view to their sustainability implications (Druckman et al., 2011). However, this remains a rather

hypothetical exercise, rather than one immersed in practical action and the deeply habituated embedding of energy use in everyday practice (Shove and Walker 2014).

Another route to pursue is to recognise the roles of a whole range of policies that can serve to shape the degree to which particular energy services become seen as 'necessities'. Here again the MIS research is instructive in pointing out, in examples discussed earlier, how changes in the quality and affordability of public transport and in the number of public libraries had direct implications on how participants reasoned about the necessity of having a car and using a computer at home. It is also important to recognise that in focusing on energy using devices in the MIS iterations we were not picking up where items had been introduced which could serve to *reduce* energy dependency. The introduction of a bicycle as a necessary list item for pensioners in 2014 is a good example of how needs might shift in ways that are better for energy use outcomes, a move that can clearly be supported by public investment in infrastructure such as cycle paths, in subsidies for bike purchasing and the promotion of cycling skills (Watson 2013).   It is therefore important to remember, as Sovacool et al. (2014) and Walker (2013) point out, that energy services are only *instrumentally* important ways of achieving more fundamental and intrinsically valuable ends. Theoretically, these ends could be achieved through other means and the relative 'necessity' of some energy services reduced. As O'Neill comments:

> *"There are a variety of different ways in which the needs for nutrition, affiliation and so on can be met ... The possibility for such substitutability is a condition for the possibility of shifting to strategies of satisfying needs which have lower material and energy impacts and hence for sustainability"* (O'Neill, 2012, p.34)

Here, then, we can see the necessary territory for reconciling tensions in potentially competing energy justice objectives, making a transition to a lower-carbon society whilst simultaneously supporting (where necessary) and reducing (wherever possible) the role of energy use in contributing to everyday well-being. Identifying energy using necessities can provide in this light an important starting point for targeting such action where it is most needed.

Conclusion

We have argued and demonstrated that there is significant value in looking to a participatory process involving deliberations by ordinary people, to both ground and contribute to the growing

body of theoretical accounts of how energy use can be seen as a matter of justice (Walker and Day 2012; Sovacool et al. 2014). In so doing we have aligned ourselves with perspectives that see material necessities and associated energy uses in culturally relative terms rather than amenable to some form of universal determination. We have also argued that participatory processes are the most legitimate way of defining these 'necessities' in any given society (Sen, 1999), introducing an important element of procedural justice into the way that energy is given normative value and distinctions between necessities and wants are being made.

Our analysis isolating items in the MIS research that are dependent on direct energy use by households, has revealed their diversity and multiplicity, the different and careful modes of reasoning underpinning these being seen as necessities rather than wants (reasonings extending far beyond ensuring just the basics of minimal survival) and, to some degree at least, the processes involved in the profile of energy-using necessities shifting over time. This empirical evidence from public deliberation, we then argued, plays into tensions between different forms and scales of energy justice. On the one hand it can be taken as a legitimate grounding for defining minimum standards and therefore the scope of state policy for supporting access to affordable energy and 'doing justice' in terms of fuel poverty. On the other, it can be interpreted as showing the ongoing escalation of these standards and of norms of energy dependency and consumption in a society already in an energy and carbon intensive condition. Doing justice in terms of global climate change therefore arguably entails challenging embedded norms rather than following them. We have suggested ways through these tensions without seeking to diminish the complexities and political challenges involved in their reconciliation.

There is clearly scope for similar participatory processes to be looked to in other cultural contexts[9], recognising that whilst our conclusions - that necessities are diverse and reasonings are multidimensional - might generally apply, the outcomes of public deliberation about what constitutes an (energy-using) necessity will inevitably vary. An immediate example is the very different status of heating and cooling technologies in different parts of the world (Harrison and Popke, 2011, Hitchings, 2011, Sahakian, 2011) and the variable means of achieving thermal comfort (Wilhite, 2008). Much else though is also likely to be culturally variable relating, for example, to different traditions of cooking and eating, practices of dressing and cleaning and patterns of dependence in use of the car. Whilst there are undoubtedly processes of global standardisation and convergence underway (Shove, 2003), for example around use and dependencies on communication

---

[9] See http://www.lboro.ac.uk/research/crsp/mis/other_countries/ for international examples

technologies, there is also still much geographic and cultural variation in what energy uses are likely to matter most in everyday terms.

Whilst we have clearly found value in making use of the MIS research, we can usefully reflect again on its process and method as a specific approach to public deliberation on minimum decent standards of living. In the introduction to the paper we outlined the advantages of the data for our purposes; its depth, longitudinal profile and its focus not on energy use per se but on necessities in general. This last characteristic we argued was advantageous because of the instrumentality of everyday energy use, given that energy is consumed as an ingredient of a whole range of practices with valued outcomes (Shove and Walker 2014), rather than valued in and of itself. This remains an important consideration but there are potential downsides as well. The MIS process focuses on material goods and services rather than starting with deliberating what a minimum standard of well-being might be (its dimensions and qualities) and working back from that point. In the reasoning that takes place in the groups, fundamental dimensions of well-being do emerge as core rationales for material items being categorised as necessities, but it may be that a different starting point would generate different streams of discussion. Designing a deliberative process tuned more specifically to generating evidence about the necessity of different instances energy use - for example, to provide a properly reasoned basis for the scope of UK fuel poverty policy and its interaction with low carbon objectives - could also enable both more depth to be achieved and for alternatives to energy use to be explored in greater detail.

Acknowledgements

References

Bickerstaff, K., Walker, G. & Bulkeley, H. (eds.) (2013) *Energy Justice in a Changing Climate.* London: Zed.

Boardman, B. (2010) *Fixing Fuel Poverty: Challenges and Solutions.* London: Earthscan.

Bourdieu, P. (1977) *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

Bouzarovski, S and Petrova, S (2015) 'A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary', *Energy Research and Social Science*, 10, 31-40.

Bradshaw, J., Middleton, S., Davis, A., Oldfield, N., Smith, N., Cusworth, L. & Williams, J. (2008) *A minimum income standard for Britain: What people think.* York: Joseph Rowntree Foundation.

Brand, C. & Boardman, B. (2008) 'Taming of the few - The unequal distribution of greenhouse gas emissions from personal travel in the UK'. *Energy Policy,* 36**,** 224-238.

Brock, G. (ed.) (1998) *Necessary goods: our responsibilities to meet others' needs.* London: Rowman & Littlefield Publishers.

Caney, S. (2014) 'Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens' *The Journal of Political Philosophy*, 22(2), 125-149.

Catney, P., Macgregor, S., Dobson, A., Hall, S. M., Royston, S., Robinson, Z., Ormerod, M. & Ross, S. (2014) 'Big society, little justice? Community renewable energy and the politics of localism'. *Local Environment,* 19**,** 715-730.

Davis, A., Hirsch, D., Smith, N., Beckhelling, J. and Padley, M. (2012) *A minimimum income standard for the UK in 2012: Keeping up in hard times.* York: Joseph Rowntree Foundation.

Davis, A., Hirsch, D. & Padley, M. (2014) *A minimum income standard for the UK in 2014.* York: Joseph Rowntree Foundation.

Davis, A., Hirsch, D., Padley, M. & Marshall, L. (2015) *How much is enough? Reaching consensus on minimum household needs.* Loughborough University: Centre for Research in Social Policy.

Day, R. & Walker, G. 2013. Household Energy Vulnerability as Assemblage In*:* Bickerstaff, K., Walker, G. and Bulkeley, H. (eds.) *Energy Justice in a Changing Climate: social equity and low carbon energy.* London: Zed.

Department of Energy and Climate Change (2013) 'Fuel poverty statistics'. Online at: https://www.gov.uk/government/collections/fuel-poverty-statistics

Department of Energy and Climate Change (2014) *The Fuel Poverty Statistics Methodology and User Manual*. London: DECC

Doyal, L. & Gough, I. (1991) *A Theory of Human Need.* New York: Palgrave Macmillan.

Druckman, A., Hartfree, Y., Hirsch, D. & Perren, K. (2011) *Sustainable income standards: towards a greener minimum?* York: Joseph Rowntree Foundation.

Gordon, D., Mack, J., Lansley, S., Main, G., Nandy, S., Patsios, D., and Pomati, M. (2013) *The impoverishment of the UK: PSE UK first results: Living Standards*. Bristol: University of Bristol.

Gough, I., Abdallah, S., Johnson, V., Ryan-Collins, J. and Smith, C. (2011) *The distribution of total greenhouse gas emissions by households in the UK, and some implications for social policy*. London: Centre for Analysis of Social Exclusion

Hall, M. S., Hards, S. & Bulkeley, H. (2013) 'New approaches to energy: equity, justice and vulnerability: An introduction to the special issue'. *Local Environment: The International Journal of Justice and Sustainability,* 18**,** 413-421.

Harrington, B. E., Heyman, B., Merleau-Ponty, N., Stockton, H., Ritchie, N. & Heyman, A. (2005) 'Keeping warm and staying well: findings from the qualitative arm of the Warm Homes Project'. *Health & Social Care in the Community,* 13**,** 259-267.

Harrison, C. & Popke, J. (2011) '"Because You Got to Have Heat": The Networked Assemblage of Energy Poverty in Eastern North Carolina'. *Annals of the Association of American Geographers,* 101**,** 949-961.

Heffron, R. & Mccauley, D. (2014) 'Sustainable supply chains and energy justice'. *Applied Energy,* 123**,** 435-437.

Heyman, B., Harrington, B. E., Merleau-Ponty, N., Stockton, H., Ritchie, N. & Allan, T. F. (2005) 'Keeping warm and staying well. Does home energy efficiency mediate the relationship between socio-economic status and the risk of poorer health?'. *Housing Studies,* 20**,** 649-664.

Heywood, A. (2007) *Politics.* Basingstoke: Palgrave Macmillan.

Hills, J. (2011) *Fuel Poverty - The problem and its measurement: Interim Report of the Fuel Poverty Review.* London: Centre for Analysis of Social Exclusion, London School of Economics.

Hills, J. (2012) *Final Report of the Fuel Poverty Review: getting the measure of fuel poverty*, CASE report 72. London: Centre for Analysis of Social Exclusion, London School of Economics

Hillyward, P., Kelly, G., McLaughlin, E., Patsios, D. and Tomlinson, M. (2003) *Bare Necessities: Poverty and Social Exclusion in Northern Ireland*. Belfast: Democratic Dialogue.

Hirsch, D., Sutton, L. and Beckhelling, J. (2012) *The cost of a child in the twenty-first century.* London: Child Poverty Action Group.

Hitchings, R. (2011) 'Coping with the immediate experience of climate: regional variations and indoor trajectories'. *WIRES Climate Change,* 2**,** 170-184.

Lister, R. (2004) *Poverty*. Cambridge: Polity Press.

Mack, J. & Lansley, S. 1985. How poor is too poor? Defining poverty. In: Mack, J. & Lansley, S. (eds.) *Poor Britain.* London: George Allen & Unwin.

Max-Neef, M. (1992) 'Development and Human Needs'. In: Ekins and Max-Neef (eds.) *Real-life economics: understanding wealth creation.* London: Routledge, pp.197-213.

Mccauley, D., Heffron, J. R., Stephan, H. & Jenkins, K. (2013) 'Advancing energy justice: the triumvirate of tenets'. *International Energy Law Review,* 32**,** 107-110.

Nussbaum, M. (2011) *Creating Capabilities: The Human Development Approach.* Belknap Press, London.

O'Neill, J. (2011) 'The overshadowing of needs'. In: Rauschmayer et al. (eds.) *Sustainable Development: Capabilities, needs, and well-being.* Abingdon: Routledge, pp.25-42

Oldfield, N. (2008) *The fuel budget standard*. Minimum Income Standard working paper. Department of Social Policy and Social Work: University of York.

Pantazis, C., Gordon, D. and Levitas, R. (2006) *Poverty and Social Exclusion in Britain*. Bristol, The Policy Press.

Pidgeon, N., Demski, C., Butler, C., Parkhill, K. & Spence, A. (2014) 'Creating a national citizen engagement process for energy policy'. *Proceedings of the National Academy of Sciences of the United States of America,* 111**,** 13606-13613.

Preston, I., White, V. and Thumim, J.B. (2013a) *Fair and effective or unjust and weak? Implications of the distribution of emissions for domestic energy policy*. York: Joseph Rowntree Foundation

Roberts, S. (2008) 'Energy, equity and the future of the fuel poor'. *Energy Policy,* 36**,** 4471-4474.

Ropke, I. and Sorenson, T. H. (2013) 'Transitions in the wrong direction? Digital technologies and daily life', *In Spurling, N. and Shove, E. (eds) Sustainable Practices: social theory and climate change, Abingdon: Routledge.*

Rosa, H. & Scheuerman, W. E. (eds.) (2009) *High-Speed Society: social acceleration, power and modernity.* PA: Penn State University Press.

Rudge, J. (2012) 'Coal fires, fresh air and the hardy British: A historical view of domestic energy efficiency and thermal comfort in Britain'. *Energy Policy,* 49**,** 6-11.

Sahakian, M. D. (2011) 'Understanding household energy consumption patterns: When ''West Is Best''in Metro Manila'. *Energy Policy,* 39**,** 596-602.

Sayer, A (2013) 'Power, sustainability and well-being: an outsiders view' In Spurling, N. and Shove, E. (eds) *Sustainable Practices: social theory and climate change*, Abingdon: Routledge.

Sen, A (1999) *Development as Freedom*. New York: Anchor Books.

Sen, A. (2009) *The Idea of Justice.* London: Allen Lane.

Shove, E. (2003) *Comfort, Cleanliness and Convenience: the social organization of normality.* Oxford: Berg.

Shove, E., Pantzar, M. & Watson, M. (2012) *The Dynamics of Social Practice: everyday life and how it changes.* London: Sage.

Shove, E. & Walker, G. (2014) 'What is energy for? Social practice and energy demand'. *Theory, Culture and Society,* 31**,** 41-58.

Simcock, N. (2013) 'Exploring how stakeholders in two community wind projects use a "those affected" principle to evaluate the fairness of each project's spatial boundary'. *Local Environment,* 19**,** 241-258.

Simcock, N. and Walker, G. (2015) *Fuel Poverty Policy and Non-Heating Energy Uses*. DEMAND Centre Working Paper 18. Lancaster: DEMAND Centre.

Sovacool, B.K. and Dworkin, M.H. (2015) 'Energy justice: Conceptual insights and practical applications'. *Applied Energy*, 142, 435-444.

Sovacool, B. K., Sidortsov, R. V. & Jones, B. R. (eds.) (2014) *Energy Security, Equality and Justice.* London: Routledge.

Townsend, P. (1962) 'The meaning of poverty', *British Journal of Sociology*, 13 (3), pp.210-227.

Townsend, P. (1979) *Poverty in the United Kingdom*. London: Allen Lane and Penguin Books.

Veit-Wilson, 1987, J.H. (1987) 'Consensual Approaches to Poverty Lines and Social Security'. *Journal of Social Policy*, 16(2), 183-211.

Walker, G. (2012) *Environmental Justice: Concepts, Evidence and Politics*. Abingdon: Routledge.

Walker, G. & Day, R. (2012) 'Fuel poverty as injustice: Integrating distribution, recognition and procedure in the struggle for affordable warmth'. *Energy Policy,* 49**,** 69-75.

Walker, G (2013) 'Inequality, sustainability and capability: locating justice in social practice', In Spurling, N. and Shove, E. (eds) *Sustainable Practices: social theory and climate change*, Abingdon: Routledge.

Walker, R. (1987) 'Consensual Approaches to the Definition of Poverty: Towards an Alternative Methodology'. *Journal of Social Policy*, 16(2), 213-226

Walzer, M. (1983) *Spheres of Justice.* New York: Basic Books.

Watson, M (2013) 'Building Future Systems of Velomobility' In Spurling, N. and Shove, E. (eds) *Sustainable Practices: social theory and climate change*, Abingdon: Routledge.

Wilhite, H. (2008) 'New thinking on the agentive relationship between end-use technologies and energy-using practices'. *Energy Efficiency,* 1**,** 121-130.

Wilk, R. 2001. Towards an Archaeology of Needs., edited by Michael Schiffer.University of New Mexico Press. Pp. 107-122. In*:* Schiffer, M. (ed.) *Anthropological Perspectives on Technology.* Albuquerque: University of New Mexico Press.

Wolf, J. & Moser, S. C. (2011) 'Individual understandings, perceptions, and engagement with climate change: insights from in-depth studies across the world'. *WIREs Climate Change,* 2**,** 547-569.

Young, I.M (2000) *Inclusion and Democracy*. Oxford: Oxford University Press.