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Community energy initiatives to alleviate fuel poverty: the material politics of Energy Cafés

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ABSTRACT

Community action has an increasingly prominent role in the debates surrounding transitions to sustainability. Initiatives such as community energy projects, community gardens, local food networks and car sharing clubs provide new spaces for sustainable consumption, and combinations of technological and social innovations. These initiatives, which are often driven by social good rather than by pure monetary motives, have been conceptualised as grassroots innovations. Previous research in grassroots innovations has largely focused on conceptualising such initiatives and analysing their potential for replication and diffusion; there has been less research in the politics involved in these initiatives. We examine grassroots innovations as forms of political engagement that is different from the 1970s' alternative technology movements. Through an analysis of community-run Energy Cafés in the United Kingdom, we argue that while present-day grassroots innovations appear less explicitly political than their predecessors, they can still represent a form of political participation. Through the analytical lens of material politics, we investigate how Energy Cafés engage in diverse – explicit and implicit, more or less conscious – forms of political engagement. In particular, their work to "demystify" clients' energy bills can unravel into various forms of advocacy and engagement with energy technologies and practices in the home. Some Energy Café practices also make space for a needs-driven approach that acknowledges the embeddedness of energy in the household and wider society.

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Grassroots innovations; material politics; community energy; fuel poverty; Energy Café

1. Introduction

Community action has an increasingly prominent role in the debates surrounding transitions to sustainability (e.g. Barr and Devine-Wright 2012, Aiken 2014). Initiatives such as community energy projects, community gardens, local food networks and car sharing clubs are examples of spaces for combinations of technological and social innovations (Seyfang and Smith 2007, Grimm *et al.* 2013), addressing sustainability of systems such as food, energy and transport (Seyfang and Smith 2007). Such initiates have been conceptualised as grassroots innovations (Seyfang and Smith 2007), i.e. civil society-led initiatives that are often driven by social good, rather than by pure monetary motives. Grassroots innovations can be defined as:

> … networks of activists and organisations generating novel bottom–up solutions for sustainable development; solutions that respond to the local situation and the interests and values of the communities involved. In contrast

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> to mainstream business greening, grassroots initiatives operate in civil society arenas and involve committed activists experimenting with social innovations as well as using greener technologies. (Seyfang and Smith 2007, p. 585)

As civil society-led initiatives, grassroots innovations involve different types of communities and organisational modes, such as cooperatives, local networks and charities (Seyfang *et al.* 2013, Seyfang *et al.* 2014). They utilise a mix of resources, practical knowledge, tacit skills and voluntary effort (e.g. Seyfang *et al.* 2013, Seyfang *et al.* 2014). Within this research, we focus on *community energy* and understand it to mean citizen-led activity in relation to sustainable energy projects (for a detailed discussion on the concept, see, for example, Klein and Coffey 2016). Current forms of grassroots innovations, such as community energy projects, are usually seen as pragmatic and investigated pragmatically (Hargreaves *et al.* 2013, Smith *et al.* 2016). Community energy projects often focus around sustainable energy practices, including initiatives such as energy efficiency measures, neighbourhood renewable energy networks, as well as collective renewable energy purchasing schemes (Smith *et al.* 2016). Some of these initiatives also address energy vulnerability and fuel poverty[1] (or energy poverty) (see, for example, Saunders *et al.* 2012), in order to help those less advantaged in their neighbourhoods.

Much of previous research has focused on conceptualising these initiatives and investigating their potential for diffusion (see, for example, Seyfang and Smith 2007, Seyfang *et al.* 2013, Seyfang *et al.* 2014, Seyfang and Longhurst 2016). While present-day community energy projects – and grassroots innovations in general – can be considered to be less political than their early predecessors (see, for example, Smith (2005)) on the 1970s' alternative technology movement and social activism, and Walker *et al.* (2007) on the early days of community energy in the UK with developments such as the Centre for Alternative Technology (CAT) aiming for self-sufficiency), we are interested in whether and how such projects might still be political – although in less explicit ways than earlier counter-cultural ones.

Some recent research has highlighted ways in which community energy initiatives might be implicitly political. Catney *et al.* (2014) present a critical view of community energy as embodying a concept of "the negative politics of localism", meaning that the United Kingdom (UK) Government's drive to promote localism, i.e. local self-reliance, serves as a justification for austerity measures. Catney *et al.* (2013) also point out that many community energy projects tend to operate from a "deficit model", which fails to recognise people's pre-existing knowledge, networks and practices. This is one way in which community energy projects can be political, but we suggest that there might be others as well. Previous research on ecological citizenship and community action (e.g. Islar and Busch 2016, Kenis 2016) has differentiated politicisation of the individual and the community (Kenis 2016). Kenis (2016), for example, has noted that "many conventional environmental campaigns approach people as objects rather than as subjects of change, and advocate individual instead of collective change" (p. 950). Islar and Busch (2016), meanwhile, studied collective community renewable energy projects in Denmark and Germany. They concluded that even though the projects started with a local, rather than a political, focus, they became part of "national and global narratives" (Islar and Busch 2016, p. 316) on climate change through media stories and green tourism. We complement this literature by drawing on Marres' (2011, 2012, 2013) concept of material politics and Strengers' (2013, 2014) notion of the rational "Resource Man". In doing so, we investigate how community energy initiatives perform particular forms of everyday politics, adding to ecological citizenship, which "emphasizes the necessity of high degree of citizen involvement in decision-making processes of technology as well as investment strategies" needed for a sustainable future (Islar and Busch 2016, p. 315). Moreover, we investigate how local groups combine diverse aims (some more, some less explicitly political) in their everyday work.

We investigate the issue of implicit politics in the context of community action related to fuel poverty. Fuel poverty has economic and social causes and implications; people's income is not high enough to meet rising energy bills, while energy inefficient housing locks people into poor

living conditions that can be detrimental to well-being. Furthermore, there are wider implications for energy equity and justice (Boardman 2010, Walker and Day 2012, Mayne *et al.* 2017). Our empirical data draw on research on a particular form of community action to combat fuel poverty: Energy Cafés. Energy Cafés (sometimes called Energy Shops, but we use Energy Café) are community-led initiatives providing energy advice in a "café" or "shop" setting. They are usually funded by grant money (for instance, the Big Energy Saving Network – BESN[2]) and run by volunteers. They have been located in various places, ranging from village halls to libraries and city farms. First and foremost, Energy Cafés provide help for people to understand and manage their energy bills, but they also offer advice on energy efficiency, behavioural measures and renewable energy (see also Section 4.2). We answer the following question: *To what extent, and in what ways, are Energy Cafés political*?

The paper is arranged as follows. Drawing on previous literature, Section 2 discusses the framing of grassroots innovations as political engagement. Section 3 outlines the methods used in the paper, including details of interviews with community groups. Section 4 presents findings on how the political engagement of grassroots innovations manifests in community energy action. Section 5 discusses, while Section 6 concludes.

2. Grassroots innovations as political engagement

2.1. From explicit to implicit and diffuse politics in grassroots innovation

The early grassroots innovations of the 1970s, such as CAT in Wales (Lovell 2007), were explicit products of social movements. According to Eyerman and Jamison (1991) and Jamison (2001), such movements played a central role in knowledge production by introducing a new cognitive praxis with distinctive cosmological, technological and organisational characteristics. For the appropriate technology movement, certain forms of (local, simple and natural) technologies were connected to a particular worldview (the interconnected view of systems ecology) and certain ways of organising work and knowledge production (grassroots democracy) (Eyerman and Jamison 1991).

While advocating for a fundamental shift from industrial to an ecological society, members of the appropriate technology movement experimented on a small scale with technologies such as solar, wind and hydro power, biogas, organic food, autonomous housing, wastewater recycling, heat pumps and craft engineering (Jamison 2001, Smith 2005). These "soft" technologies were *framed* in terms of simplicity and craft skills, local participatory control, small-scale and decentralised solutions, and ecological sensitivity. The appropriate technology movement was overtly political and countercultural (Jamison 2001). It was positioned in opposition to the growth imperative and inhumane technocracy of industrial society (Smith 2005).

Difficulties in resource mobilisation and changes in political and economic culture, such as the neoliberal backlash in the 1980s, led to a decline of the original appropriate technology movement (Smith 2005). Where remnants survived, it was at the cost of a "dilution" of the original radical political message (Jamison 2001, Smith 2005). The original framing of the environmental movement was transformed into various kinds of professional expertise, incorporating some movement members into mainstream culture (Jamison 2001). Some of the small-scale experiments proved commercially viable: wind power, organic farming and waste recycling (Jamison 2001, Lounsbury *et al.* 2003). Yet, as Smith (2007) has pointed out, mainstreaming of green niches also required significant compromise and loss of the counter-cultural organisational forms and ecological commitments of their origins.

2.2. Material politics

Present-day community energy initiatives are less explicitly or cohesively political than their earlier counterparts. They lack a unifying vision of a sustainable energy system (Hielscher *et al.* 2011). Local control is often an aim, but communities also depend on external funding and government

support (e.g. Seyfang *et al.* 2013). They make more use of commercially available components, rather than self-crafted equipment. Moreover, these projects are often distinctively practical and geared towards local concerns (Islar and Busch 2016), rather than explicitly countercultural. Yet, even "diluted" forms, like current-day community energy projects, can be viewed as political, albeit in different and perhaps less explicit ways from their "deep-green" predecessors. Following Marres (2013) and Barry (2013), they can be said to represent a form of *material politics*.

The 1970s' alternative technology movement viewed objects as political in the sense of Mumford (1964): particular technologies were seen as being inherently authoritarian and others democratic. The notion of material politics embodies fewer *a priori* assumptions about the social and political implications of particular technologies (Hawkins 2015), and is thus more sub-political: technological objects are not quite subservient to their masters, as Barry (2013) shows for the Baku–Tbilisi–Ceyhan oil pipeline. From this perspective, technological objects can acquire a range of political capabilities in certain settings and associations, where the association of human and non-human agents creates new political realities (Hawkins 2015). The material politics of technology as described by Marres (2012) and Barry (2013) are thus empirical, emergent and often unexpected.

In this, the notion of material politics builds on science and technology studies (STS), particularly actor-network theory's (e.g. Latour 1990) conceptualisation of the agency of non-human entities. In simplified terms, non-human entities have agency because they can subtly divert action by giving human agents new capabilities (like a gun in the hands of an angry person (Latour 1994)) or blocking capabilities (like an oversized key-holder that stops hotel guests from pocketing keys (Latour 1990)). From this perspective, human action depends on associations of humans and non-humans (Marres 2013).

Material politics is distinctively sub-political (Beck 1996), i.e. it focuses on politics outside and beyond the institutions of the political system, exploring ad hoc coalitions (or associations) that arise in everyday life, at work, in science and technology. Politics emerge here in the interaction between material objects and humans, where material objects both wield their subtle power and enable the visualisation and theorisation of particular social orders (Marres 2011, 2013). Marres (2013) illustrates with an analysis of eco-show homes (i.e. demonstrational eco-homes displayed to the public) as material devices of participation, i.e. as instruments to engage residents, stakeholders and wider audiences in a proposition of eco-living. Here, Marres (2013) does not only pay attention to the energy efficiency measures installed to automatically and *implicitly* reduce energy consumption, but also to the ways in which the "message" of these homes is demonstrated (e.g. see-through panelling to show insulation; metres that monitor and display energy consumption; signs advocating careful ventilation; or the documentation by one resident group of their struggles to gain renovation permits). These *explicit* forms of material demonstration serve to (1) showcase and demonstrate, but also to (2) detect and display material performance and finally, to (3) articulate for various publics the distinctively material (domestic) modes of participation in eco-homes (Marres 2013).

A further concept that Marres (2011) brings to material politics is its *multivalence*. Using the example of a smart electricity meter, she highlights the fact that the meter seamlessly displays kilowatt hours (kWhs), costs and carbon dioxide (CO_2) emissions. Such devices thus serve to frame action in multiple registers, bringing together diverse frames and voices (for example, a neoliberal frame of effortless participation, a domestic frame of the effort of changing routines and learning new skills, and a critical frame on the fair distribution of costs and benefits). Hence, unlike conventional conceptions of public participation, which suggest action in a separate domain removed from everyday domestic concerns, material engagement co-articulates political consequences with the material associations, habits and interests of everyday life. This multivalence highlights the normative adaptability, instability and ambivalence of these technologies of participation. The interpretive openness of sustainable interventions has also been highlighted by Hobson (2013), and it can be seen as a potential opening for a more agonistic politics (Amin 2005) of energy citizenship (i.e. a form of politics that accepts conflicting viewpoints and seeks to engage them in debate).

The politics of such material practices become evident when we consider for whom "smart" and "sustainable" energy systems are designed (Strengers 2013). Are they designed for the rational, data-driven and efficient "Resource Man", who wants to optimise and rationalise energy use with latest technologies? Or do they also incorporate and even respect and support the *messiness* of everyday life (which might consist of quite doable routines from the householders' perspective)? Do they capture the *diversity* of people, pets and things occupying households, and might they also support *design for* "slow" and apparently inefficient – but potentially quite decarbonised – time use? (Strengers 2014). We can ask these same questions of grassroots innovations such as community energy initiatives. For whom are they designed, by whom and who benefits (see, for example, Walker and Devine-Wright 2008)? Are some people imposing their conception of order on others (Catney *et al.* 2013)?

Hence, while present-day material engagement with novel domestic energy practices does not support a consistent counter-cultural, anti-industrial frame like the alternative technology movement did (Smith 2005), following Marres (2011, 2013), it is not apolitical, either. Rather, it is characterised by several different modes and forms of politics, implicit and explicit, some even mutually contradictory.

2.3. Whose politics?

If community energy initiatives are political, in spite of their lack of explicit and consistent political message, we can also ask whose politics such projects promote. Catney *et al.* (2014) are critical of the "negative politics of localism" promoted by the UK Government's funding of renewable energy projects. They argue that such initiatives have increasingly mobilised the rhetoric of community self-reliance as a justification and solution to financial austerity. Catney *et al.* (2014) also present an empirical critique by investigating why community energy projects get off the ground in some communities, but not others. They found that in financially, socially and politically deprived areas, no community group had been able to start renewable energy schemes, due to high levels of deprivation, social exclusion and severe everyday problems, as well as the simple reason that most households did not own their dwelling. Empirically, they point to the need to investigate why community energy projects develop in some communities and not in others, and what the nature of the struggle is. Conceptually, they criticise the notion that the local scale is more democratic, just, or more effective than other scales (Catney *et al.* 2014).

Catney *et al.* (2013) also emphasise that the politics inherent in how community energy projects targeting hard-pressed communities can represent forms of cultural domination. Along these lines, Catney *et al.* (2014), as well as Amin (2005), raise questions about central government's moralising expectations towards disadvantaged communities: through community programmes, such communities are expected to become more morally upright, conformist and better organised in managing their resources (echoing the Resource Man argument made by Stengers 2014).

Smith *et al.* (2016) present a more bottom-up analysis of community energy projects as grassroots innovations, identifying two particular forms of politics. One is "niche policy advocacy" (p. 409), in which grassroots innovations gain influence through targeted lobbying for broader (government) policy facilitation of the community energy solutions that are developing and demonstrating. They push pragmatically for reforms that do not depart radically from mainstream agendas. Another political form is a "critical niche" (Smith *et al.* 2016, p. 409), which explicitly aims to unsettle the existing order. Such projects often exhibit a poor fit with current market and policy conditions, due to their ambitions, lack of community resources, or mismatches between government and community practices. It is this "misfit" character that makes such projects potentially important mirrors to critique the existing system. However, Smith *et al.* (2016) conclude that critical niches often lack the resources to drive through the implementation of their critical insights.

Given that the politics of community energy and grassroots innovations are highly contested, and can be explored from a wide range of perspectives, we aim to open up, rather than close down, the

debate by exploring it from a variety of perspectives. We do so by investigating, through empirical cases, the practices of project organisers and the way in which they experience contradictions and "mixed" forms of politics (Middlemiss 2014) in grassroots innovations:

(1) Do the grassroots innovations voice explicitly political claims and how are these realised in their everyday practice?
(2) How inclusive and accessible are grassroots innovations for marginalised groups in society?
(3) Which types of practices and material configurations do the grassroots innovations engender, embody, enact and visualise?
(4) Do the grassroots innovations assume, or even impose, a particular notion of rationality on participants, and do they allow for multiple interpretations and conflicting views within the community and beyond?

3. Research design and methods

Our data build on six case studies of Energy Café initiatives run in various parts of the UK since 2013. These case studies were selected from about a dozen community groups that have hosted Energy Cafés in the UK. Given that many community groups rely on volunteers and have limited resources, case selection was influenced by the availability of groups to give their time for the research. In other words, groups were chosen by the following criteria:

- A community group that had run an energy advice desk in the context of a café/shop
- An above-mentioned community group that had contact details available and could find the time to participate in the research.

The case studies draw on semi-structured interview data (Hakim 2000) with six Energy Café organisers totalling ten interviews. First, six interviews were conducted in September 2015 as part of a research project funded by Chesshire Lehmann Fund (Martiskainen and Speciale 2016). Organisers were asked about their group's aims, service they provide, financial and skills resources, choice of Energy Café location, as well as details of their networking, learning and best practice. All interviews were digitally recorded and noted. The interview data were coded thematically by two researchers and analysed according to key themes emerging from the data.

The politics of Energy Cafés was not the original purpose of the Chesshire Lehmann Fund study, but a theme that emerged when analysing the data. In order to refine our understanding, four complementary interviews were conducted in October 2016 with those groups that did not provide sufficient details in the first round of interviews in relation to: any explicit political aims and measures among the groups, and the extent to which the advice provided was driven by perceptions of recipients' needs or some pre-existing energy management logic. The analysis is qualitative, and does not attempt to comment on the prevalence of particular practices in Energy Cafés (within or outside the sample), but rather to open up a new vantage point on the kinds of politics that such community energy initiatives can embody.

4. Community-led Energy Cafés as a form of political engagement

While energy generation, energy efficiency and other major areas of the energy system have traditionally been dominated by incumbent energy companies, civil society-led organisations have increasingly entered into this domain. Energy Cafés are a new format for community organisations to engage with energy locally, with an aim to combat fuel poverty and promote energy efficiency.

4.1. Fuel poverty in the UK

The UK is one of the most affluent countries in the world. However, inequalities remain rife, with widening income gaps and various forms of poverty affecting many people (Poinasamy 2013). Fuel poverty is an ongoing problem in the UK (e.g. DECC 2016). Whilst fuel poverty is often regarded as a household having to spend more than 10% of their income for energy services,[3] it is not easy to define. Fuel poverty can be approached as "the inability to attain a socially and materially necessitated level of domestic energy services" (Bouzarovski and Petrova 2015, p. 31) and often, fuel poverty is one of complex issues that a household vulnerable to it might face (Middlemiss and Gillard 2015). Fuel poverty is usually, though not exclusively, attributed to: (1) the quality of housing stock, (2) cost of energy bills and (3) household income (Boardman 2010). Furthermore, fuel poverty can affect certain groups more, such as the elderly, larger households, those on low incomes (Lorenc *et al.* 2013), and those with disabilities or pre-existing health conditions (Snell *et al.* 2015).

Despite several government programmes and pledges to eradicate fuel poverty (e.g. Kern *et al.* 2017), rising living costs and energy bills have meant that the number of fuel poor in the UK has remained largely unchanged in the past 10 years (DECC 2016). In 2014, fuel poverty affected an estimated 2.38 million, or 10.6% of English households, up from 2.35 million in 2013 (DECC 2015a).

Fuel poverty also has health implications, as cold homes can lead to respiratory, circulatory and mental health problems (Middlemiss and Gillard 2015). It is estimated that fuel poverty costs £1.3 billion annually for the National Health Service in England alone (DECC 2015b). The poor housing stock that partly contributes to fuel poverty also has climate change implications as household energy consumption is responsible for 25% of the UK's greenhouse gas emissions (Palmer and Cooper 2013). In other words, fuel poverty is a politically contested issue which has not only energy, but also social and health policy implications.

4.2. The concept of community-led Energy Café

Recent government cuts in public service spending (see Poinasamy 2013) have reduced services by local authorities, and community organisations have emerged to address economic and social policy issues, with a motivation of helping those in need. One such example has been community-led Energy Cafés.

An Energy Café is usually a short-term initiative, run by volunteers in a "pop-up shop" format with grant money support. In the UK, approximately a dozen community organisations have run such cafés in various locations, e.g. town centre shops, cafés, city farms, community centres and village greens, across the country (Martiskainen and Speciale 2016). These initiatives provide information and advice, with an aim to "demystify" energy bills, provide advice on energy prices, and how to switch to a cheaper tariff or supplier. They also aid low carbon transition by providing advice on energy efficiency, renewable energy and behaviour change. Table 1 presents an overview of the Energy Cafés investigated for this research.

4.3. Explicit and implicit politics of Energy Cafés

The following analysis shows the methods and experiences of Energy Café organisers from a political perspective. We first investigate the extent to which the groups organising them have explicit political aims, linking these to the particular means that the groups employ in Energy Cafés. We then turn to issues of access and inclusion: how do the practices of Energy Cafés influence who is served? We then address the material practices and configurations created by Energy Cafés. To conclude, we analyse the extent to which Energy Cafés allow for the messiness of everyday energy practices and for multivalence in interpreting the types of service they provide.

Table 1. Summary of Energy Cafés.

Group	Pop-up or permanent	Location	Duration	Staffing	Reach	Funding
East Sussex	Pop-up shop	Urban high-street The choice of location was not dictated by geographical incidence of fuel poverty The choice of location was dictated by availability. However, the shop was not far from geographical areas with a high incidence of fuel poverty	1 week, open every day 10–6 pm	Volunteers	200 people in one week	Local authority Big Energy Saving Network UK Power Networks Referral fees from a green energy supplier
East and West Sussex	Pop-up Energy Cafés	Church halls, community buildings, foyers of council offices in market towns and villages The choice of location was not dictated by geographical incidence of fuel poverty The choice of location was dictated by what will attract high numbers of clients seeking advice in different locations (e.g. a high-street location with high footfall in urban areas and villages, a central community location such as a village hall)	Approx. 30 sessions, each for one week, open 9.30–5 pm	Volunteers	Up to 400 people in one week	Big Energy Saving Network Energy suppliers Sponsorship from local authority and energy supplier in person time
North Yorkshire	Permanent Energy Centre as part of a city farm Part of a range of interventions including home visits and talks	The Energy Centre is an add-on to the City Farm The choice of location was not dictated by geographical incidence of fuel poverty The Energy Café is not far from areas where there is a high incidence of fuel poverty	Tuesday – Thursday, 11 am–3 pm	Some permanent staff and volunteers All have City and Guilds Level 3 Certificate in Energy Awareness	1000 people in one year	Local authority Big Energy Saving Network Energy supplier Public health funding source
North Cornwall	Permanent Shop (closed in Spring 2016)	High-street in market town The choice of location was not dictated by geographical incidence of fuel poverty The shop has a high footfall and this was the main factor effecting choice of location	Monday- Friday, 11 am–4 pm Also advice desk at foodbank	Two staff members and group of volunteers	800–1000 people in one year	Local authority Big Energy Saving Network European Union Received some referral fees from a renewable energy installers
West Cornwall	Pop-up Energy Café	Town centre café in two towns The choice of location was not dictated by geographical incidence of fuel poverty The choice of location was entirely dictated by its availability	Two sessions per week for two weeks on weekday evenings, 5 pm–7 pm	Run by staff on a sessional fee and supported by National Energy Action staff member	Six people visited in one week	A programme of activities that included the café funded by Community Energy Saving Competition
Worthing	Semi-permanent Shop	On way to town centre The choice of location was not dictated by geographical incidence of fuel poverty The choice of location was dictated by its availability, but it is not far from geographical areas where there is a high incidence of fuel poverty	Wednesday 10–3.30 pm Also advice in local library	Volunteers	250 people visited in two months	Local authority Big Energy Saving Network Local community fund Received some referral fees from local energy efficiency businesses and switching suppliers

4.3.1. Explicit political aims and implicit everyday means

Community groups organising Energy Cafés had varying motivations, including promoting low carbon transition, aiding local economic development, providing a public service and improving health. We could not identify a unified vision among the groups. One group especially was motivated by the desire to phase out nuclear energy and move towards a renewable energy society. They wanted to highlight that if people were customers of one specific nuclear energy utility, "they are contributing to a toxic industry". They also believed that their duty was to be impartial, but that "impartiality also involves information about the sources of energy and the impact of those sources of energy". However, that same group also saw that energy policy, for example, in Germany, was much better as it "is not related to politics, clearly the UK system is broken".

Not all groups were originally engaged in energy policy issues. Instead, some came to energy from other local concerns (see also Seyfang *et al.* 2013):

> [Our group] was formed 5–6 years ago when a group of people who were concerned about multiple planning applications for supermarkets launched a campaign. When that was over, one of the key members of that group suggested that the group should start to work on being pro something rather than just being anti something and alighted on the idea of using renewable energy to enhance the value of the local economy.

The aim to provide a public service featured heavily with two groups, while two groups were active in local political discourse, engaging in energy debates. Of the latter two, one group had good links to local politicians and there was a lot of excitement around their Energy Café, indicating how the initiative itself provided a space for local energy debates. The other group worked especially with their local authority and stakeholders to "shape their thinking about distributed energy" for the region, involving a project on smart energy systems and the practicalities on how the region could extract value from the energy economy.

Three of the Energy Cafés had actively engaged with their members of parliament, one even having a visit from the Energy Minister, while one group had advised the then Department of Energy and Climate Change's (DECC) Community Energy Unit. Five of the groups had close contact with their local authority councillors, and most groups also mentioned that they had responded to selected local authority and government consultations when they had the time. However, for community groups operating on limited resources and funding, policy engagement is not necessarily easy, or the most relevant activity to undertake. This is especially the case considering the systemic causes of fuel poverty and the complexity of other issues that those vulnerable to fuel poverty may face, including debt issues, mental health problems and family disputes. While community groups may want to be more politically active, many of them do not have the resources to do so, especially as many of the volunteers working in the Energy Cafés may hold several "green hats" at the same time, volunteering for different green groups and causes. In other words, volunteering in the community energy sector requires stamina, especially when resources are scarce (Seyfang *et al.* 2014, Martiskainen 2017).

The politics of the everyday were visible in the way the groups worked. "Demystifying" energy bills was an important part of the Energy Café concept, acknowledging that energy bills are difficult to understand for the majority of people. Particularly vulnerable people may struggle to navigate and manage their energy supply contracts so as to get a fair deal. All of the groups helped local people to switch suppliers and save on energy bills through better deals. One group, in particular, was deeply embroiled in defending customers against their energy provider:

> We had people call us afterwards to say that their energy suppliers wouldn't allow them to switch and we walked them through the process of complaining. For example, one customer had a £900 bill over a period in which her meter was changed three times. The second of these meters was faulty. They were not allowing her to switch so we're supporting her – she's being bullied by her energy supplier.

Politics were thus not an explicit part of the Energy Café concept. Energy Cafés are not like the Parisian cafés of pre-Revolutionary times where politics were hotly debated. Yet, community group

engagement with energy bills and advice in a public space, at times mixed with diverse forms of advocacy and visibility, serve in some instances to render energy at least slightly more political (in a conventional sense) than it usually is in everyday life.

4.3.2. Accessibility and inclusiveness of Energy Cafés for marginalised groups

Catney *et al.* (2014) have been critical of the "negative politics of localism" promoted by the way in which community energy projects are funded. Their analysis also suggests that deprived communities cannot make use of the services provided for community renewable energy due to lacking resources, as well as severe and urgent everyday problems. While the Energy Cafés did not immediately tackle this problem, our data suggest that they did serve to include and provide access to at least basic levels of energy advice and empowerment to less advantaged groups.

In this respect, location and spatiality of Energy Cafés are important in their operation and impact. While the Energy Cafés were held in varying locations, none of the groups selected their location based on geographical proximity to high incidences of fuel poverty. Instead, due to limited funding streams, locations were chosen on the basis of them either being free or costing very little. However, location close to those who are affected by fuel poverty was considered key for reaching those who most need help. The accessibility, and even forcefulness, of groups at their most active is illustrated below:

> We did a pop-up for one week – seven days in a row on a busy high street. We were literally out in front of the shop stopping people saying "We're a cooperative, not for profit, we'll give you impartial advice"; that's how we got people into the shop. The problem is, though, that people don't walk around all the time with their energy bills. We gave energy advice to 200 people in that one week. We saved people approximately £5000.

The physical presence of Energy Cafés might thus represent a first step towards making community energy more accessible and "doable" for people who have previously not engaged with it. Indeed, one of the groups sought to engage residents with energy via other activities:

> The building is part of the city farm site so [it] benefits from traffic to the city farm. We have had to think of ways of attracting people to the centre. So we run an intergenerational craft group, we also go out to do soup kitchens and have a social café on site. We have to do pop-up events to get people to the visitor's centre who will then engage with the energy issues.

Even though groups targeted the fuel poor, Energy Cafés were not exclusive to the fuel poor, but welcomed everyone. The reach of the Energy Cafés varied considerably, with one attracting 200 clients in one week whilst another had only 6 clients. Organisers struggled to identify which share of their clients could be deemed fuel poor, with estimates ranging from 30% to "the majority". However, they were also quite critical of official definitions of fuel poverty: most Energy Café organisers identified that fuel poverty is linked to wider issues than energy, and that perhaps formal indicators of fuel poverty are not so relevant:

> It is very difficult to tell whether people are in fuel poverty. I see fuel poverty as a sliding scale. Since everyone can benefit from the service, it isn't useful to know whether people are fuel poor according to an indicator.

In particular, several groups mentioned the lack of Internet access and Internet proficiency as reasons why people might be disenfranchised by present-day energy markets. Several groups helped people to switch suppliers by making the switch online in the Energy Cafés. Elderly people, or people in various kinds of crises, were seen as people who struggle to function according to the dominant expectations of present-day energy markets. Energy Cafés offered a practical service to people in such circumstances, though they lacked the capacity to alter these dominant expectations.

Energy Cafés provide physical spaces for energy engagement where people are invited to discuss their private matter of domestic energy consumption in a rather public setting. One of the interviewees mentioned that in small communities where people know each other well, they may feel quite visible and hence might not want to be seen seeking help. There can be stigma attached to being fuel

poor and needing help (Hards 2013). Energy Cafés thus operate in a cross between a private and public space, which may be one reason to avoid targeting specifically "the fuel poor".

4.3.3. The material politics of Energy Cafés

An explicit aim of the Energy Cafés was to ensure that clients understand energy bills, how their energy consumption is billed and reported back to them, with many Energy Cafés providing actual energy price calculations for switching suppliers. Ideally, advice was tailored, though this was not always possible, as clients could not always provide their energy bills. In addition, the Energy Cafés provided advice on energy efficiency, behavioural measures and renewable energy. Materials used to aid this process included, for example, free samples of energy efficiency measures such as low energy light bulbs, door brushes, draft-proofing kits, chimney balloons or low-flow shower heads. There were also groups who provided home visits, talks and training for other workers dealing with fuel poverty.

Energy Cafés, at least in some of the cases, attempted to build a concrete link between people's energy bills and the opportunity to save via switching, and the broader issue of climate change. People were encouraged to enter via the hope of concrete savings, but the engagement provided via energy bills – and in some cases from there on via free energy-saving kits – was extended to broader issues of energy saving and climate change. This was particularly marked in the case of one group, which leases cooperatively owned energy efficiency and renewable energy measures (PV, solar thermal) to households at risk of fuel poverty:

> We discovered that there are quite a few people who don't understand their fuel bills, who are paying too much and who are in fuel poverty and who cannot stay warm in winter. We use energy prices as a way of attracting people to use our services. We are trying to create a paradigm shift away from fossil fuels. […] We had all the little bits of energy saving kit to give away: demo draft-proofing, LED lights, chimney balloons, we asked people questions about their homes and where they thought they were losing heat. You can see a lot from people's consumption data and by asking how many rooms they have and we whittled down where the losses were. It was a two pronged strategy: switching to reduce energy bills but also enabling people to reduce their consumption.

In Energy Cafés, energy bills serve as a concrete entry point, both for engaging clients and for unravelling the material devices and practices in the home. The energy bill is interesting and important for people struggling to pay it: solving the problem can include switching to a better tariff, or measures taken in the home. The following interview excerpt shows how diverse material politics were used to gain insight into and influence over the devices in the homes and the ways they are used:

> I: As a core advice we've been offering energy bill advice – that is the basis of it all. If you get to someone's energy bill you are opening up their house. And then insulation advice, energy efficiency, solar innovations, energy monitoring, behaviour change, advice about light measures.
>
> R: Functioning as a café?
>
> I: Tea and cake is vital. If someone sits down with a cup of tea and a slice of cake you can really engage with them. Lemon drizzle works the best. All of our cakes are hand-made. We have a team of Mums that make cake. They are extremely good. But I'm serious …
>
> R: And do you offer other incentives?
>
> I: We have done that in the past. We've done energy bags – people love freebies. What we've tried to do with energy bag is go through it with people so that people actually use it and don't just take the whole bag.

The energy bill is clearly key in the Energy Café concept. While the cakes and free kits serve as a way to gain clients' buy-in and enthusiasm, the energy bill and the concerns that people have about paying too much is the service that gains people's engagement. This service is particularly important for people who lack Internet access and are unable to switch energy providers themselves. Energy bills thus serve the dual purpose of rendering a genuinely valuable service to individuals, while

also serving as an entry point into broader discussions concerning energy use in the home, climate change, fairness and the future of the community.

The energy bill is thus rendered a political object which enables a new form of control by making energy practices in the home (to some extent) visible, discussable and negotiable. It is not inherently a benign or democratic object. Yet, it has the inherent capability of summarising some aspects of energy use in the home and making these aspects "portable". When the energy bill is brought to an Energy Café and analysed, it can further be theorised in order to display the environmental consequences of people's private, everyday arrangements (Marres 2013) in ways that provide alternative courses of action to material settings (Marres 2011).

4.3.4. Acknowledging messiness and allowing for multivalence

Energy saving might be political also insofar as it disregards, or acknowledges the messiness of everyday life (Strengers 2014). In concrete terms, an advice session might either take an approach of demonstrating how illogical current energy behaviour is and then demonstrate a more logical approach, or the advisor can listen and respond to needs as described by the client. While different energy advice training organisations take different approaches, we found traces of both in the on-the-ground work of the Energy Cafés.

Despite the focus on energy bills, those running Energy Cafés also realise that money cannot be the only focus when health and well-being are at stake. The focus on fuel poverty appeared to alert some of the more sensitive organisers, with extensive experience in community work, to the potential sources and wider issues that contribute to fuel poverty, as illustrated in this quote:

> We have a referral route into the local CAB [Citizens Advice Bureau] and into the food bank. The food bank has a hardship fund. We have a small but significant number of people who I would describe as vulnerable because of a housing, benefits, or a relationship problem. There seem to be particular problems in transitioning from one benefit to another. Fuel poverty always seems to be associated with wider issues.

While perhaps not completely needs-driven, the Energy Cafés at least serve as a bridge between the Resource Man logic of the current energy system and the capabilities and everyday practices of people. Many of the clients appeared to be confused by the energy market information surrounding them and completely unable to play the role of Resource Man:

> Different people are at different points in their journey from "energy dissent". Some are dissatisfied because they cannot afford their fuel bills whilst others may feel guilty about their CO_2 emissions. The conversation is targeted at their needs so that everyone is getting the service that they believe they need.

Given their focus on demystifying energy bills, it might at first appear that Energy Cafés promote the Resource Man rationality that might obscure or even contradict more practice-based notions of "messiness" and "inefficiency" as alternative ways to approach energy in everyday life (Strengers 2014), or might even be propagating pre-set notions of moral uprightness and conformity (Amin 2005). Closer analysis, however, shows that some of these initiatives do respect the messiness of everyday life and recognise the diversity of clients (Strengers 2014) – by, for example, advocating "needs-based" energy advice and offering a bridge between the energy market and everyday practices. One group, for instance, said that their approach is entirely client-led: "the customer tells us what is going on with them and we help them as best as we can", while another group advocated a similar approach:

> It's answering the question that people are coming with, and also doing more holistic advice where you are asking around the subject to see what else you could actually provide. When you have the client there you have to try and check everything you can really. The initial query is often just the door opener.

The practices of Energy Cafés smoothly combine demystification of energy bills, Internet access, crafts, cakes, concerns over nuclear energy, free handouts of energy-saving devices and debates over what fuel poverty means. Moreover, these diverse and multivalent practices are shared with a range and varying combinations of stakeholders. In some instances, Energy Cafés provided a space for local energy debates to form, with groups getting involved in local energy discourse,

connecting with local politicians, responding to consultations, linking with doctors, food banks and other service providers, and having an active presence on platforms such as social media (Martiskainen and Speciale 2016). Following Marres (2011), Energy Cafés can bring together diverse frames and voices to fuel poverty debates, demonstrating how community-led initiatives can also address the challenge of equity within the energy system (e.g. Walker and Day 2012).

5. Discussion

Our findings suggest that there are interesting politics in community energy projects, even when they may not form as a coherent political movement with shared visions as their earlier 1970s' counterparts did (cf. Smith 2005, Hielscher *et al.* 2011). While the community groups studied were more or less explicit in their (diverse) political claims, their activities nevertheless can be seen political in relation to practices, devices, inclusiveness and access, offering space for multiple interpretations (e.g. Marres 2013, Strengers 2014).

In terms of practices and devices related to Energy Cafés, by starting with the demystification of the energy bill, Energy Cafés open up for various forms of advocacy, highlighting a broken link between the expectations of the energy markets and energy practices in the home. The energy bill turned out to be a highly multivalent political object, making a snapshot of home energy use "portable" and allowing for various ways of theorising on why and how energy use in the home or in society should be changed.

In relation to inclusiveness and access, our data suggest that while Energy Cafés do not immediately tackle the problem of the lack of community energy projects in deprived communities (cf. Catney *et al.* 2014), they do provide access to energy engagement and empowerment to less advantaged groups. Even though the availability of a cheap venue and footfall generally dictated the choice of Energy Café locations, groups recognised that setting these initiatives near areas of high incidences of fuel poverty is important. Some of the Energy Cafés acted as a space for local energy debates, providing opportunities to link with local decision-makers and other organisations addressing fuel poverty. Therefore, Energy Cafés could aid in the process of enabling community group members, whether located in advantaged or disadvantaged regions, to move towards ecological citizenship (Islar and Busch 2016, Kenis 2016) and become more political. Furthermore, as a relatively low-cost activity to run, in comparison to more expensive measures such as setting up renewable energy generation schemes, for example, Energy Cafés could also be an activity that disadvantaged communities could undertake themselves.

Our findings also highlight the sub-politics (Beck 1996) of community energy through an exploration of the emergent politics of localism and material politics performed in Energy Cafés. Energy Cafés might be assumed to suffer from the ills of "negative politics of localism" (Catney *et al.* 2014): unfounded reliance on local self-help and a moralising attitude towards vulnerable groups; yet, our findings display a more mixed picture. Since Energy Cafés provided by financially struggling civil society organisations replace services that perhaps should be provided by the government or energy suppliers, this can be seen as a way to delegate corporate or government responsibilities to local groups (Catney *et al.* 2014). Indeed, Energy Cafés to some extent fulfil a service that incumbent energy utilities in the UK used to provide, i.e. by providing a presence and energy advice in a high-street shop setting to the general public (Martiskainen and Speciale 2016). Some Energy Cafés also provide services that government or energy suppliers might not, such as switching suppliers or supporting clients in energy bill disputes. In a trend towards more localised and decentralised energy system, perhaps local community groups, rather than incumbents, are better placed to access vulnerable and disadvantaged groups (De Haro and Koslowski 2013, Seyfang *et al.* 2014). Yet, to do so, community groups need resources and having to rely on uncertain streams of funding and volunteers can be a constant issue of concern.

Our findings are preliminary and indicative. We have captured the Energy Café organisers' perspective – other group members, clients and other local stakeholders should be heard as well.

There are limitations to using interview data, and ethnographic observation might offer more in-depth insights on the practices of Energy Cafés. Since the Energy Cafés and the groups running them are highly diverse, we cannot comment on the prevalence of particular practices in such forms of community energy. Marres' (2011) concept of multivalence aptly captures the diversity and mixed nature of the politics produced in the grassroots innovations that we investigated. Our analysis thus suggests that it is worth pursuing further the politics of grassroots innovations of different kinds, and Energy Cafés offer a good empirical case for further analysis.

6. Conclusions

We illustrated how community groups in the UK have addressed fuel poverty via Energy Cafés, grassroots initiatives which aim to draw people in to receive advice on energy bills over tea and cake. Fuel poverty is an issue in the UK that consecutive governments and incumbents have failed to tackle in full. Government initiatives, although helpful, have not met the objectives of eradicating fuel poverty, indicating a more systemic cause to the problem. Energy Cafés offer a small step towards alleviating – but certainly not eradicating – fuel poverty. Using the lenses of material politics (Marres 2011, 2013), we set out to analyse the politics related to Energy Cafes.

Whilst on the outset, Energy Cafés might seem "moralising" or to be focusing on the Resource Man of rationality (Strengers 2014), they also provide small spaces for low carbon transition, local economic development, health improvement and public service provision – as well as acknowledgement of the various sources of people's crises and vulnerability. In this sense, they embody some of the characteristics of "critical niches" (Smith *et al.* 2016), also insofar as they lack the resources to drive through the implementation of their critical insights.

A low carbon energy transition is necessary to meet the challenge of climate change, requiring action at all levels. In this sense, the Energy Cafés attempt to deal with an important problem. The existence – and visibility in high streets – of Energy Cafés indicates that official action is not providing sufficient solutions to fuel poverty in the UK. However, the choices made by community groups in Energy Cafés have consequences for how (new) social policies and climate policies are integrated and for what kinds of visions and practices of energy stewardship emerge in UK communities.

Notes

1. Fuel poverty is usually defined as the need to spend more than 10% of a households' income in order to keep their home adequately warm, but this is not a straightforward indicator.
2. Big Energy Saving Network, Available from https://www.gov.uk/government/publications/big-energy-saving-network-grant-offer-fund [Accessed 23 August 2017].
3. Up until 2013, fuel poverty in England was defined as the need to use more than 10% of a household's income to keep a home adequately warm (21°C in living rooms, 18°C in other rooms). While this definition is still used in Wales and Scotland, in England, fuel poverty is measured by Low Income High Costs definition – a household is fuel poor if their fuel costs were above average of the national median level, and if they were to spend that amount, they would be left with a residual income below the official poverty line (DECC 2016).

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