University of Salford MANCHESTER

SHUSU
Sustainable Housing & Urban Studies Unit

Championing Energy in Pendleton

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This report is one element of an ongoing partnership between University of Salford and Pendleton Together, aiming to deliver impact through evidence-based decision making through academic research, teaching excellence and student creativity.

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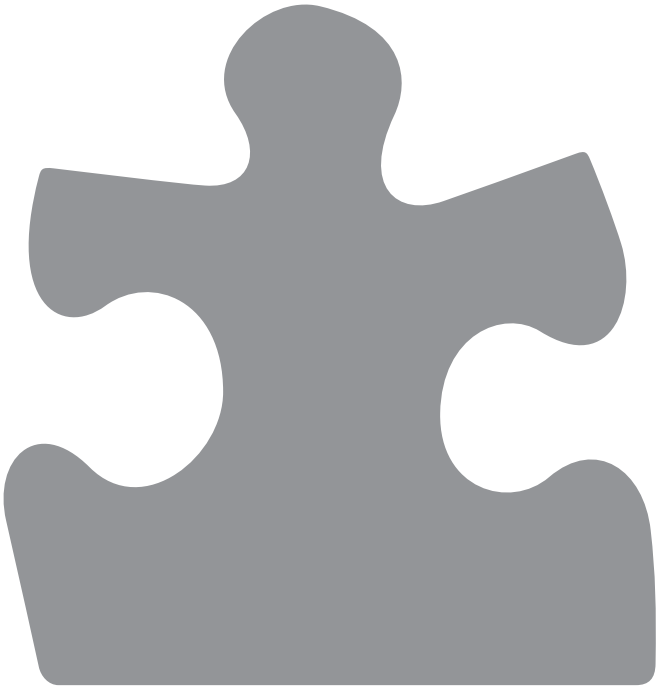
1. Introduction



1.1 About this report

This report considers the potential for engaging with Pendleton residents on energy efficiency. It considers the current context and potential future directions.

Following a summary of the methodology in Chapter 2, Chapter 3 provides an overview of our review of existing research on energy champions, whilst Chapter 4 presents an analysis of the current Pendleton context based on interviews and focus groups. Chapter 5 then considers ways forward for the idea of energy efficiency in Pendleton.

1.2 From energy to energy champions

Housing providers and tenants alike benefit from energy efficiency. Tenants can enjoy a comfortable home at lower cost, reducing pressure on their household budgets. For some, this will mean avoiding or being lifted out of fuel poverty. Energy efficiency can help housing providers meet carbon reduction targets and reduce rent arrears.

Energy consumption is not simply a question of technology, but nor is it only about behaviour. New technologies may fail to deliver savings if they are too difficult to use, and behaviour change messages to 'put on another pullover' instead of turning the heating up can only have a limited effect if buildings are very poorly insulated.

Energy is arguably invisible in many ways. Not only is it literally invisible – i.e., we do not see it come into our homes – in the case of household activities that use energy it is another function (such as comfort, entertainment or cleanliness) that is the primary goal rather than energy consumption per se (Hargreaves et al. 2013). Its consumption is also often the result of habitual activities, whether turning the heating on, washing or cooking a meal; it is generally not energy that the consumer is thinking about, but rather warmth, cleanliness or food preparation. Some energy research has therefore focused on how to challenge habits and encourage people to rethink their energy consumption.

The Energy Saving Trust (2011) uses the term 'trigger points' to describe occasions when such habits may be most open to renegotiation, such as moving house, starting a new job or having children. The extensive refurbishment and retrofit of residential buildings in Pendleton, including insulation and new heating systems, is arguably one such opportunity.

There are many approaches to trying to influence energy-related behaviour. These include encouraging residents to pledge to do things differently; providing real-time information about the costs of consumption; presenting comparisons with neighbours and similar households; appealing to altruism and environmental concerns; and making links with health and wellbeing.

It has become clear through research that people do not necessarily follow what economists would see as rational decision-making models. Vaze and Tindale argue that we should not expect the consumer to be 'homo economicus' (Vaze and Tindale 2011), arguing that decisions are shaped by other factors such as a lack of time, an aversion to change, being overwhelmed by choices and being influenced by celebrity endorsements.

The idea of social practices (Shove et al. 2012), put simply, that we are influenced by those around us and our social networks, has gained support. The concept of 'social norms' (Allcott 2011) is used to explain why some types of behaviours become more dominant than others. It is from these ideas that notions of working with individuals and their social networks arise: that the most powerful influences on behaviour may not be cost savings and environmental concerns, but trusted neighbours, family and friends.

The energy champions approach is based on the idea that individuals, in this case residents and trusted staff, can be mobilised as messengers and ambassadors.

This research takes as its starting point numerous examples of this approach in the UK and beyond and considers their applicability to the residents of Pendleton.

2. Methodology

The overall aims of this study were to:

- identify and learn from energy champions approaches in other areas of the UK and internationally;
- establish and understand the context of energy use and resident engagement following refurbishment in Pendleton; and
- develop ways forward for effective engagement with residents on energy efficiency with a view to helping them save money and Pendleton Together meet its performance targets.

The first task comprised a desk study of available literature on energy champions and related approaches and is documented in Chapter 3. It focused on the UK, with two examples overseas, one of which, from Canada, that featured in a recent retrofit conference in Salford.

In understanding the context of energy use and resident engagement in Pendleton, a series of research meetings with relevant staff and residents were held. These comprised:

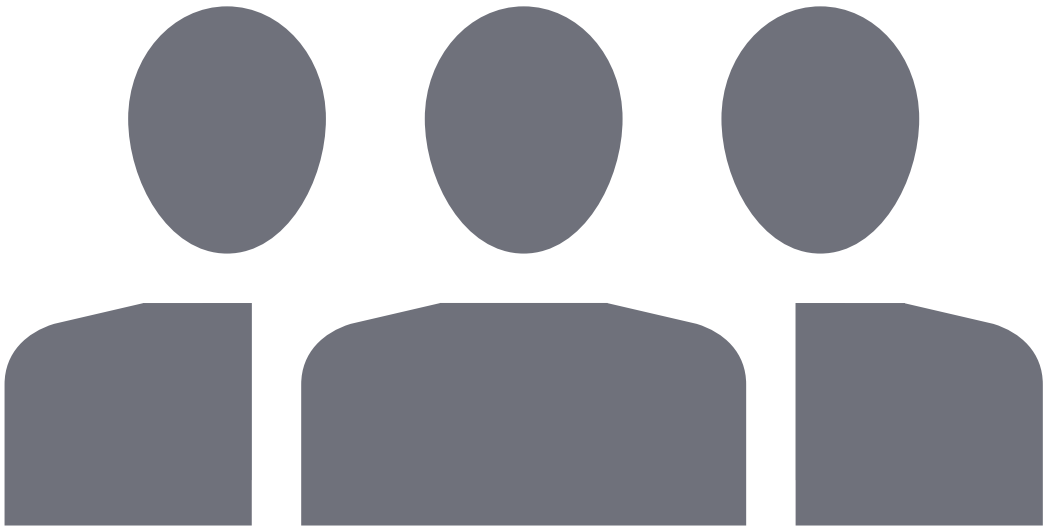
- interviews with two caretakers with direct experience of advising residents on energy;
- interviews with three neighbourhood officers with direct contact with residents;
- a focus group with five resident;
- an individual conversation with a resident who had been helping other residents operate their heating systems; and
- dialogue with representatives from Salford City Council.

Interviewees were selected using a snowball sampling technique – that is, starting with a gatekeeper and asking each interviewee who else they would recommend speaking to. The focus group participants were selected because they had been to recent workshops on the heating system and expressed an interest in learning more.

Given the scope of the work and the wish to keep conversations relatively informal to avoid interviewees feeling under pressure when discussing relatively sensitive issues, one-to-one discussions were not recorded. Instead, detailed notes were taken. This means that quotations provided in the text are approximate. The exception is the residents' focus group, which was recorded and transcribed, and all quotes can therefore be assumed to be verbatim.

To protect the anonymity of interviewees and focus group participants, names and genders are not given.

3. Energy Champions – Review



3.1 Introduction

This chapter provides a rapid review of available literature with a focus on energy efficiency, where the core function involved training members of the public to act as agents of change within residential settings. To bound the review in a way that reflects the scope of this research and ensures relevance to the Pendleton context, literature was deemed relevant for inclusion if part or all of the material met the three following criteria:

- it described roles including, but not limited to, energy champion, household energy advisor, energy advisor, community energy advocate and comparable positions;
- It related to domestic/residential settings only, with particular effort made to locate examples relating to social housing environments;
- It described initiatives occurring in the UK, EU or North America.

Our search

The search encompassed peer-reviewed journal articles, local community websites and government strategies, incorporating both academic and 'grey' literature. It is worth noting that this kind of initiative was not always identifiable by its title – for example, the 'block champions' in Mortlake were undertaking the same activity as the 'energy champions' promoted by Circle Housing in east London, the 'community organisers' of Green Streets 2 and the 'Green Doctors' of the Wandle Valley Low Carbon Zone (LCZ). Often, such roles are obscured within broader projects aimed at engaging the public in energy conservation. It is therefore likely that more examples are available, and that these could be identified with time.

Furthermore, the limited amount of detail in some sources may mask energy champion-type projects and initiatives with elements of this approach. For example, the Department of Energy and Climate Change (DECC)'s Community Energy Strategy (2014) outline a:

> 'package of Community Energy Advice pilots to identify the most effective community-based approaches to cutting waste and spending less on energy through behaviour change, including a £500,000 scheme to trial and scale up peer-to-peer approaches to energy saving advice in housing associations, which was launched in November [2013]'(Department of Energy & Climate Change 2014: 11).

This also noted that community energy groups in Wales were 'already able to access peer-to-peer support through the Renew Wales scheme, funded by a grant from the Sustainable Steps programme delivered through the Big Lottery Fund' (ibid: 9).

3.2 Identified sources

What was clear from the review is that, within a broad definition, schemes to recruit and develop community advocates to promote messages on energy efficiency are not uncommon in the UK. The literature includes several examples of projects operated by social housing organisations or partnerships involving such agencies. There are several consultancies advertising training packages online with a clear target audience; for example, Centre for Sustainable Energy markets its ability to offer training to *'local authorities, community groups, employers, energy advice providers, housing associations and others'* (Centre for Sustainable Energy 2016), and the Green Consultancy offers a similar pitch on its website). This suggests that such schemes are often seen (at least by the organisers) as applicable across different settings, both occupational and domestic.

We located seven sources that described energy champions-type schemes in social housing settings (either in isolation or as part of a wider project):

- Smart Communities Street Champions;
- Circle Housing Resident Energy Champions;
- 'The Missing Quarter: Integrating Behaviour Change in Low Carbon Housing Retrofit' plus accompanying 'a practical guide for social landlords on engaging with residents / helping to reduce their energy use (Greater Manchester Low Carbon Economic Area Initiative);
- Transition Streets, Devon;
- Groundwork UK Learning Partnership Communities Living Sustainably Energy Learning Report ;
- Toronto: Building Energy Retrofit Programme;
- Wandle Valley LCZ.

In addition, there were 17 references in other sources to energy champion-type schemes operating in residential settings, but which did not specifically refer to social housing. Even where that was the case, a number of individual sources included examples from a range of contexts; owner occupiers, private rentals, etc. alongside studies explicitly focused on social housing. However, they were deemed relevant to the study because the activity described was often similar or identical, albeit in a different environment. The division between the two groups is somewhat artificial, given this significant degree of overlap between them.

The overwhelming majority of sources relate to the past five years.

3.3 Geographical spread

The geographical location of energy champions-type programmes is important, not least because of its potential implications for the transferability of approaches. Of the seven examples of literature with a partial or complete focus on energy champions in social housing settings, three were in London (Smart Communities, Circle Housing and Wandle Valley LCZ), and one in south west England (Transition Streets).

However, the other two UK sources which made references to energy champions in social housing did include examples from other regions. Three of the twelve projects highlighted in the Groundwork CLS report (Ayling et al. 2015) briefly alluded to using an energy champions approach. Two were based in northern England (Irwell Valley Sustainable Communities in Greater Manchester and Sustainable Sunderland in North East England), although only the Sunderland case study specifically mentioned a social housing context. The third example was based in Kent.

'The Missing Quarter' report and its companion guide for social landlords (GMLCEAI, 2011a&b) were developed by the Greater Manchester Low Carbon Economic Area Initiative. The latter includes four examples of energy champions in social housing; three in Greater Manchester and one in Finland. Together with the example from the Irwell Valley (cited above) may indicate that another 'hotspot' exists in Manchester and surrounding areas. Notably, however the report includes examples from places as diverse as Worthing, Watford and Germany and does not discriminate against private rented accommodation or owner occupied housing.

In addition to the Finnish 'Energy Expert Programme' cited in the Greater Manchester report, the Canadian Toronto Building Energy Retrofit Programme was one of only two non-UK sources located which explicitly refer to a social housing setting.

The London and Greater Manchester examples included multiple case studies, which boosted the actual number of initiatives in the capital and the sub-region.

Geographical bias also existed among the 17 additional cases. Warming Barton Pioneer Places was located in Oxfordshire, where the Oxford LCZ and GreenSquare Group energy advisors operated. Four of the six DECC Community Energy Efficiency Outreach Programme (CEEOP) pilots (Databuild Research & Solutions Ltd 2014) were based in the southern UK: Bristol, Milton Keynes, Cornwall and Bridgend (Leeds and Manchester being the locations of the others).

The Green Streets programme (Platt et al. 2011) operated across 14 UK locations, including Hyde Farm in south London, Nottingham and the Western Isles of Scotland. Two projects were in London, three elsewhere in southern England (Suffolk, Wiltshire and Oxfordshire, effectively making five in this region), one in eastern England (Lincolnshire), two in the Midlands (Birmingham and Nottingham), two in West Yorkshire, two in northern England (Cumbria and Northumberland) and one each in Scotland and Wales. Overall, there was a 9:5 geographical bias towards the southern British Isles compared to north of the English Midlands.

As hinted above, it may be the case that the location of examples is influenced by the nearby presence of centres of expertise. For example, the Bristol-based Centre for Sustainable Energy had supported the Bristol Energy Network, and was the location of a CEEOP pilot. Their website explicitly advertised help for social housing energy schemes, as well as energy

champion programmes, and stated how they had helped local groups apply for funding. In addition, the south west England Green Streets site was in Bradford on Avon, approximately 16 miles from Bristol, while another, Tackley village, is close to the city of Oxford, home of the Low Carbon Oxford partnership.

The Buckinghamshire County Council example appeared on the website of the Milton Keynes-based National Energy Foundation (NEF). The NEF also provided funding, co-ordination and professional support to help deliver the 'neighbour to neighbour' scheme in Wolverton, Milton Keynes, one of the six pilots operating under the DECC-funded CEEOP, delivered by Groundwork UK. Likewise, Groundwork UK delivered a variety of energy champion initiatives across the country, in for example, Kirklees, Wandle Valley, Oldham and Rochdale.

The concentration of resources in Greater Manchester may also have influenced the cluster of initiatives identified there. The presence of the Energy Saving Trust Advice centre from 2008-10, dedicated local authority initiatives, agencies active across the area such as Groundwork and the significant University based expertise in all likelihood made fertile ground for the development, funding and delivery of energy champions projects.

3.4 How did the schemes operate?

Those references that alluded to energy champions in social housing settings included some sources that provided extensive details, as well as others that made only minimal reference to the existence of such projects.

The 'Missing Quarter' guide for social landlords highlighted three case studies which are significant for this study. (GMLCEAI, 2011b). The most prominent example was Action for Sustainable Living's (AfSL) Energy Academy programme. Using a model of 'supported volunteers' it included several schemes across Greater Manchester, focused on 'recruiting, training and supporting local people in sharing their new found knowledge and enthusiasm with friends, family and neighbours' (GMLCEAI, 2011b: 14). While not all concentrated on residents, relevant examples included Southway Housing in Manchester, which offered training via a workshop to become 'tenant energy champions' (TECs). Participants were offered vouchers as incentives. Overall AfSL concluded that 100 tenant energy champions had been trained across the sub-region. A second case study focused on St Vincent's Housing Association, which trained over 200 clients as 'Green Community Champions' (ibid:16) at their respective schemes as part of their 'Fit for the Future' campaign. Groundwork Oldham & Rochdale's 'local community champions' make up the third example, although they were working in private housing. But their inclusion within a guide for social landlords suggests that for The Missing Quarter's authors at least, that the particular housing type did not matter as much as the technique for engagement.

The 'Smart Communities' project operates in south London and is run by the charity South West London Environment Network (SWLEN). Their website describes 'Street Champions projects' which *'train members of the community to tell their neighbours about opportunities to save energy and water'* (South West London Environment Network 2016). Street Champions become a 'familiar and friendly face as they spread the energy efficiency word' (Smart Communities 2016a). One operated across nine blocks of flats in Mortlake (Smart Communities 2016d) managed by Richmond Housing Partnership, training 'block champions' to encourage smarter energy use among their neighbours.

Another, operating in Tolworth, Kingston and Surbiton (Smart Communities 2016b), recruited and trained nine energy champions, as well as ten volunteer energy advisors, to work with residents' associations. A third ran in Ham and Petersham (Smart Communities 2016c). This time the term was 'street champions', but they essentially fulfilled the same role. Burchell et al. (2014: 15) conducted academic research on this project and described its goal as *'to encourage a community to discuss, develop and adopt new ways of doing everyday things, such as heating and lighting their homes, so that they consume less energy'*. All three areas are relatively affluent suburbs of owner-occupiers.

In east London, Circle Housing run a 'Resident Energy Champions' programme, operating across all nine of its registered providers. Again, this provides training so that champions can engage with other residents on energy issues and 'provide tips about how to keep the heat in and save money by turning off electrical appliances' (Circle Housing 2016).

As part of the Wandle Valley LCZ, two local residents were employed as 'Green Doctors' to promote take-up of home energy assessments in residential properties in Merton, London. This included checks for benefit entitlement, social tariffs, qualifying referrals and other services, the calculation of financial, CO2 and water savings, and the provision of tailored behavioural advice. The scheme was delivered by Groundwork UK (Mitchell 2012).

'Transition Streets' is, according to its website, *'a tried-and-tested, award-winning behaviour-change project to cut energy use and strengthen your neighbourhood'*. One of many programmes operating under the umbrella of Transition Town Totnes in Devon, it used a different method to the other examples, with professional 'streets-wise' trainers working with small groups of six to ten neighbours at a time .

> 'After the first kick-off session, you then work together through five practical sessions, guided by a workbook, focusing on energy efficiency, water, waste, travel and food, to make simple changes to reduce your energy use. Then there's a wrap-up session at the end when the group considers what it might like to do next' (Transition Streets 2016)

The Transition Streets final report (Ward, et al. 2011) highlights work with social housing providers, noting that South Devon Rural Housing Association had set up two groups, while Sanctuary Housing had developed another in a supported sheltered housing scheme of 14 flats in two blocks.

The 'Communities Living Sustainably Energy Learning

Report', published by Groundwork UK in 2015, profiled twelve projects, three of which specifically highlighted energy champions. Sustainable Sunderland stated that 'The project aims to increase the awareness and understanding of climate change through activities aimed at reducing fuel poverty; increasing environmental awareness particularly among social housing tenants and school children. Volunteers will also be provided with certified training which aims to improve their employability. The project will also look to engage the BME community who are traditionally less aware of climate change issues.' (Ayling et al. 2015: 32)

The Irwell Valley Sustainable Communities project in Salford indicated that 'A carbon impact tool will also be used by local residents to raise awareness of the impacts behaviour change can have with a focus on fuel bills and energy savings. Green Champions will also support the community by promoting sustainable living.' Finally, in Sheppey (Kent), the Sustainable Sheppey project outlined how 'Employment and skills will also be increased through the provision of environmental awareness courses and training opportunities for energy champions' (Ayling et al. 2015: 32).

The only examples from outside the UK were from Canada and Finland. The Toronto: Building Energy Retrofit Programme was part of a wider renovation programme operating in the city entitled the Building Energy Retrofit Program (Gee and Chiappetta, 2013). To encourage residents' participation, a tenant engagement programme was devised by Toronto Community Housing, which included tenant leadership opportunities, peer education and outreach, tenant–trainer interaction and other elements. The Green Team Resident Advisor Program involved residents being paid to work some hours per month as advisors. Many of the advisors were already active as existing tenant representatives.

The Finland 'Energy Expert Programme' trained three thousand local people across a range of housing sectors: socially and privately rented, as well as owner occupied properties (GMLCEAI, 2011a: 24).

Nevertheless, the role and function of energy champions in other residential settings did not deviate significantly from those in social housing environments. In some of these cases, it was not stated if the households were social housing or private residential dwellings (or a mix).

Training was a common feature across all the relevant sources, whether focused on social housing or not. Groundwork Oldham & Rochdale's 'local community champions' were required to complete a City & Guilds in Energy Awareness before commencing their work. The Toronto scheme included general training workshops for residents, which were designed to be 'casual and fun', with a focus on major energy uses such as lighting, space heating and cooling, while the Green Team Resident Advisors underwent an in-depth three-day course on sustainable practices, communication techniques, meeting facilitation and community-based social marketing strategies.

Buckinghamshire County Council's energy champions scheme (delivered by the NEF) also started with the premise that training was a prerequisite for such a programme. The training involved the development of a toolkit of resources *'suitable for volunteers in the community to use to encourage local residents to save energy and reduce carbon emissions'* (National Energy Foundation 2015a). Likewise, the role described in the information sheet for Kirklees Energy Champions Training offered bespoke three-hour training sessions aimed at local community members in general, promising that the information gained on heating systems, ventilation, etc. *'will empower them to help vulnerable members of the community, particularly those in fuel poverty'* (Kirklees Council/Groundwork 2013).

The sources did not suggest that social housing settings required any specific approach when it came to the initial engagement and recruitment of residents. There were differences in how participants would be recruited, but this was not dependent on housing type. For example, Circle Housing asked residents to contact them if interested, whereas Smart Communities was much more proactive, utilising local intermediaries and social marketing to persuade households to participate. Toronto developed a substantial (and more strategic) package starting from a tenant engagement programme. This was assigned a budget and committed to pay Green Team Resident Advisors to work on average for six to eight hours per month. Although this was not a significant amount of money, this was one of only two examples that offered regular payments to champions. The other was the Green Doctor scheme in the Wandle Valley LCZ, London.

The six pilots described in the CEEOP trialled several different engagement techniques with the aim of assessing which were the most effective at driving energy efficiency. The pilots all employed local community support group-led approaches as a means to persuade domestic householders to sign up to various energy efficiency measures, including 'neighbour-to-neighbour' in-home advice, delivered by the community group, which was used in Wolverton, Milton Keynes. This involved training community group volunteers on delivering energy efficiency advice. Finally, the Warming Barton Pioneer Places scheme used 'well briefed' local volunteers to go door to door on a housing estate in Oxford offering free energy assessments, but again the status of the residences was not clear (Databuild Research & Solutions Ltd 2014). On the other hand, GreenSquare Group, a social housing agency in Oxfordshire utilised an in-house team of energy advisors to assist residents, rather than employing tenant householders in such roles. (GreenSquare Group 2015)

The Bristol Energy Network promotes an energy champion scheme, which is targeted at *'local people like you from all over Bristol, who are interested in giving advice to their friends, neighbours and community on saving electricity and gas'*. This offers an extensive list of possible activities, ranging from taking thermal images to conducting small pieces of research such as energy efficiency surveys. It suggests various ways of doing this from coffee mornings to street parties. Interestingly, it offers a range of specialised roles: retrofitting, school energy, renewable and smart meter energy champions (Bristol Energy Network 2016). In a related local publication, Theme 3: Energy Efficiency and

Low Carbon Technology of Bristol's Community Strategy for Energy (June 2013) recommends *'the use of community energy champions who are trained and kept up to date with grants & opportunities' to help people understand the simple steps they could take, and to provide more systematic advice (Bristol Energy Network 2013: 16).*

3.5 Who was involved?

In all the cases identified, energy champion initiatives were the product of partnerships between a number of agencies. DECC (2014) is explicit as to the potential value of such collaboration:

> 'Partnerships are crucial to community energy activities, with local authorities, commercial organisations and local networks supporting and enabling community action (see Section 3). We will encourage partner organisations to support community energy in all its forms, and help communities to build strong and productive partnerships with the private, public and voluntary sectors' (p. 8).

Kirklees Council's scheme was delivered by Groundwork (as was the Wandle Valley LCZ, itself a partnership), while Warming Barton Pioneer Places was a collaboration between Oxford City Council and local partner the Oxford Low Carbon Hub. GreenSquare Housing Group was also a partner in the Hub. Bristol Energy Network is a multi-agency partnership, as is South West Devon Community Energy Partnership and MK:Smart. Strategic partnerships such as MK:Smart include energy champions (or comparable schemes) as part of a wider programme aimed at whole system change. This hints at the broader web of linkages to other connected issues (e.g., recycling, health and transport). The final report of Transition Streets Totnes details a partnership that involved South Hams District Council, Totnes Town Council, the Energy Saving Trust, Energy Action Devon and installation firm Beco (Ward et al. 2011).

Funding was also sourced from a wide variety of places. Notably, the Smart Communities project was devised (and originally managed) by Kingston University. It received funding from the Greater London Authority's LCZ programme, which aimed 'to create a neighbourhood where energy efficiency and positive energy behaviours are the norm' (Smart Communities 2016c). The Wandle Valley LCZ was funded via the same programme. The street champions aspect had originally been developed with funding from the London Sustainability Exchange and later by the London Borough of Richmond upon Thames. Transition Streets in Totnes was funded by the Calouste Gulbenkian Foundation, DECC and the NESTA Big Green Challenge during its lifetime. The Groundwork Trusts' CLS scheme was Big Lottery Funded, while the Energy Efficiency Outreach Programme they co-ordinated was financed by DECC.

3.6 Evaluation

Several sources included some form of evaluation of their energy champion scheme, which collectively go some way to providing an evidence base of what has and hasn't worked. DECC's Community Energy Strategy included a subsection entitled *'Measuring the impact of community energy and promoting best practice',* which promised a *'One Stop Shop' to enable 'cost effective sharing of new community energy monitoring and evaluation tools and case studies of their use'* (DECC 2014). This indicated that the department would evaluate community energy activities and complete a survey of the sector in early 2016. However, it did acknowledge that *'It remains difficult to model the potential impact of community activity on energy consumption overall, but there are some compelling examples of projects which have had a real and quantified impact' (ibid: 73).*

The British Gas 'Green Streets' project was cited as a key success, and included as a specific case study, as were the Smart Communities programme in south London and Transition Town Totnes (ibid: 74, 77 and 92). The latter indicated several learning points. Firstly, the use of a membership scheme, which residents were invited to join, was important as it enabled organisers to email and phone participants regularly. The use of local identity was also seen as significant, with people more motivated by place than by abstract notions of community or energy. Also, the use of community action and social marketing was seen as a vital contributory factor behind its success. Home visits provided demonstrations of, and guidance on, relevant technology, rather than *'lists of generic tips and advice or simply auditing'* (ibid: 77). The recruitment of local people as champions (as opposed to staff from energy firms, local authorities or housing agencies) was noted, although a note of caution was added with regard to the significant demands on time and the possible barriers to scaling the work up.

Another approach, which was emphasised by Smart Communities, was to talk about energy consumption rather than climate change: *'many people seem to want to act on energy for reasons other than climate change (in particular, the cost of energy), and we feel that many people joined Smart Communities who would not have joined a climate change project'* (Burchell et al. 2014: 47). The Wandle Valley LCZ found that rather than focusing on carbon emissions, it was more effective when they emphasised outcomes from the activities that they deemed to be meaningful to the householders, such as cost savings, increased comfort and opportunities for skills and qualifications (Mitchell 2012). This was also highlighted by GreenSquare, a social housing provider in Oxfordshire, which noted that:

> 'The project aims to show that by generating and using green electricity within a community it can cut energy bills, benefit the environment and give residents more control over the way they use their energy' (GreenSquare Group 2015).

Burchell et al. (2014) also found that it was common for project members to experience anxiety and mistrust relating to energy from commercial interests such as utility companies. The Wandle Valley LCZ also identified that a lack of trust in the offer being promoted and initial scepticism about the project's 'brand' posed similar challenges.

Conversely, Burchell et al. noted that the most consistent and substantial changes observed followed intensive engagement

between project members and the local 'lay experts'. A further useful observation relates to the importance of schools, both for their receptivity to notions of energy efficiency and for their links and credibility with the wider community.

Evaluation of the Warming Barton Pioneer Places scheme concluded that 'Making connections with existing local groups, including the newly formed Low Carbon Barton environmental group, has been a key part of the successful campaign' (Carr 2013). This echoed The Missing Quarter report's recommendations for better household engagement, which stressed the role of champions, 'from any community association, not necessarily one devoted to pro-environmental action' (GMLCEAI, 2011a: 5), who should be trained and incentivised. Nevertheless, while many case studies were included in the main report and associated guide, reflections were fairly limited. The SVHA case study simply noted that 'results showed that face to face communication combined with other channels is considerably more effective than using a single channel, such as a leaflet drop' (GMLCEAI, 2011b: 18), without indicating what those results were. Southway Housing Trust 'found that a great deal of on-going encouragement and support to volunteers / TECs was needed to have them effectively support other tenants'. (ibid: 31). The repeated use of 'could', 'will' or 'may' throughout the documents indicate far more was projected than already achieved.

Increasing visibility by using trusted communication channels within the community such as schools fairs, faith groups and GP surgeries, whilst also supporting other groups, was deemed a critical factor in overcoming suspicion in the Wandle Valley LCZ. Evaluation of the Smart Communities project by DECC found that approximately 400 out of 2000 households signed up, attributing this to the strong local identity of the project.

The Green Streets programme was extensively evaluated by the Institute for Public Policy Research, under a commission from DECC. This identified a number of factors crucial to the success of energy champions-type schemes. The first was the capacity and expertise of organisers: *'A range of skills and human resources are required to run projects such as those featured in Green Streets 2'* (Platt et al. 2011: 43). However, the authors cautioned that:

> 'Socio-economic conditions influence the human resources a community has available to run a project (Coote 2010, IPPR and PWC 2010). Communities in deprived areas are generally less well resourced, although thriving community organisations can sometimes be present. Several of the Green Streets projects were in highly disadvantaged areas' (ibid: 14).

The report concluded that the most successful projects were those that were supported by existing community groups with a good reputation, which was key to engaging people, but also because they had the time, capacity and organisational resources to drive them forward.

DECC also commissioned a lengthy evaluation of its CEEOP operated by Groundwork (Databuild Research & Solutions Ltd 2014). Perhaps the most comprehensive evaluation of its type, the Programme focused on the effectiveness of community engagement techniques in household energy efficiency schemes, detailing the successes and challenges involved. The authors concluded that the main factors behind successful programmes were local knowledge, local reputation and existing contacts and networks. They found that energy efficiency schemes were more effective when 'done through trusted local peers. For example, the 'neighbour-to-neighbour' door stepping approach used by Milton Keynes resulted in a sign up rate four times higher than the professional door-stepping company working in the same streets' (which a footnote indicates was hired to boost numbers). On the other hand, there were challenges using community group volunteers – participants lost morale when confronted with negative reactions from neighbours (ibid: 10).

DECC's Community Energy Strategy (DECC 2014) cited the Reducing Energy Consumption through Community Knowledge Networks unit's own research, which concluded that the key factors for success were enabling community discussions on energy use as part of the process, the use of social norms techniques, allowing neighbours to compare usage, and the installation of energy use monitors to kick-start conversations:

> 'Through community discussions on energy use participants were able to develop their understanding. Because participants had opportunities to ask questions and learn from their own and others' experiences, the information and advice they received had a greater impact on their knowledge of energy use and on their energy behaviour' (ibid: 75).

Another important evaluation in this regard is *'Social Impacts of Transition Together (SITT): Investigating the social impacts, benefits and sustainability of the Transition Together/Transition Streets initiative in Totnes'*. The stated aim was to identify the lessons from the community engagement processes used in the programme. It concluded that a mix of opportunity and committed individuals had driven group formation.

Opportunity often meant there was a pre-existing link between individuals (e.g. book club, dog walking). In terms of individuals, there were four main motivations: their own personal empowerment, their desire to learn how to make a difference, the opportunity to gain access to information or technology they were already interested in, and those who were already involved in the Transition Streets initiative. However, building links with the neighbours was rated as the most important reason for engagement and social/community benefit was rated the most important result, as it enabled people to get to know residents they hadn't spoken to before and gave a reason to visit them (Beetham 2011).

Resident feedback following Green Doctor visits in Wandle Valley was very positive, with 100% saying they would recommend the service (Mitchell 2012). Positive feedback included an increased sense of control over their bills, a reduced need for residents to invest their own time in finding the appropriate solutions for an efficient home, feeling that they were doing the right thing for themselves and the environment, and that it helped to spread behavioural change

amongst all household occupants.

In Toronto, the tenant engagement programme co-ordinators reflected that on the whole they had not achieved the anticipated level of intensive face-to-face interaction with a majority of residents. They attributed this in part to the time-intensive nature of the mediation element of the task: for example, even the task of communicating the details of the plans was very time-consuming. They also reflected on the importance of strong facilitation and conflict management skills, particularly in multicultural and low-income communities: knowledge of energy issues and behaviour change was necessary but not sufficient without this more practical community experience.

Finally, it is worth mentioning the role of schools. There is clear evidence that schools were being targeted as an indirect way of reaching adult residents in both Wandle Valley LCZ and Smart Communities. For example, a report from the latter stated:

> 'After a relatively short period of activity, energy can become an integral part of primary school life. In addition, Smart Communities suggests that recruitment through a primary school can be highly effective, and that parents' commitment to using less energy increased when they thought about it in the context of their children's education and the activity in school. However, Smart Communities shows that this is highly dependent on the personal preferences and commitment of the head teacher and makes considerable demands on school staff. The Smart Communities research suggests that giving energy efficiency a more formal place in the curriculum and reintroducing programmes designed to improve the sustainability of schools would be of great benefit, both within school and beyond' (Burchell et al. 2014: 47).

3.7 What were the outcomes?

The achievements and/or impact of energy champions schemes are often measured in quantitative terms: on the one hand, the number participating, on the other hand, the change in consumption. For example, in the project report for the Wandle Valley LCZ it is estimated that reductions of between 12 and 16% were achieved through a combination of physical measures and behavioural change (Mitchell n.d.). The Warming Barton project 'had a very positive reception from householders and within just two weeks 108 households had signed up for the free energy assessments'. This led to 119 assessments, 61 of which included full Green Deal Advice reports. The overall result was '579 recommended actions, 206 tCO2 potential annual savings and the potential for each household to save an average of £450 each on their bills'. (Carr, J. 2016).

The Wolverton 'neighbour to neighbour' scheme led to a significantly higher conversion rate to full Green Deal assessments than those trials that did not use such an approach, a factor put down to the pre-existing influence, trust and networks within the community (Databuild Research & Solutions Ltd 2014). The evaluation of Transition Streets (Ward et al. 2011) groups found that 100% of participants described some impact from their involvement and 25% had made 'a lot' of changes, including using cars less and public transport more, reducing energy consumption and switching to more 'green' tariffs.

As part of their profile of the two energy champions schemes in Buckinghamshire (National Energy Foundation 2015a) and the Thames Valley (National Energy Foundation 2015b), the NEF published a list of outcomes and insights, which included:

- Increased awareness of fuel poverty and resource efficiency.
- Increased referrals to income maximisation services and for heating/insulation measures.

Notably, the Finnish Energy Expert Programme concluded that social housing residents in particular were more likely to engage if economic incentives such as rebates on utilities were offered (GMLCEAI, 2011a).

Explicit mentions of wider social outcomes (e.g., more interaction with neighbours, greater feelings of belonging or empowerment, etc.) are much rarer in the literature.

3.8 Discussion

This review demonstrates that schemes to recruit, train and assess energy champions (or comparable roles) among local resident populations are not uncommon, even if the evidence from social housing is limited.

One significant finding is that there is no single definition of what a 'champion' is – what the role consists of, what its boundaries are, what the intention was in the first place and what outcomes are expected. For example, energy champions may be a number of individuals with no prior association who are trained as 'experts' to encourage neighbours to be more energy-efficient, or they may be a community network with established organisational capacity, who all subscribe to the programme.

However, there are some notable gaps in the literature. Academic literature on energy champions (or comparable roles) is very limited, the majority of references occurring on organisations' websites or in public sector documents. This may be because, as several authors note, there is an a priori assumption that such initiatives are inherently positive (i.e., community participation, lower consumption). Where it touches on practical examples of community energy efficiency schemes, academic work largely concentrates on models of behaviour change.

However, a number of other sources do include extensive discussions of such schemes. Many are related to UK government-funded initiatives during the period 2010–15. It is worth noting that the DECC Community Energy Strategy included a blueprint for 'what works' in community energy advice (DECC 2014: 78). One issue is the overlap between literature that explicitly focuses on dedicated energy champion schemes and more general work on energy use and behaviour change or energy use and citizen participation.

Sometimes this interconnection is made explicit – for example

Transition Town Totnes in Devon, which describes itself as 'a dynamic umbrella organisation consisting of different theme groups, for example food, building and housing, business and the local economy', publicised the free energy champions training programme offered by South West Devon Community Energy Partnership – but often it is hard to untangle dedicated energy champions schemes from broader projects.

It is possibly significant that many of the case studies cited as successful examples are located in places known for active communities with a history of self-organisation (e.g. Bristol, Oxford and south London). In addition, the same projects and organisations (e.g., Groundwork UK) did resurface across different literature, indicating that the number of examples may be more limited than the number of citations would suggest.

The Smart Communities target areas reflected the correlation between energy consumption and affluence: i.e., richer households consume more energy and therefore have a greater potential to save energy. Whilst carbon reduction goals may therefore be more prominent, fuel poverty may be less so. Whilst this placed the project in a different socio-economic setting to Pendleton, it does provide some useful lessons that may be relevant. However, it is important to recognise that different demographic profiles may impact the take-up of schemes, however well planned, as indicated by the Toronto evaluation.

Nevertheless, even with these caveats, the available literature is evidence that such an approach can work, and that there are a number of factors that contribute towards success. These are primarily: a local identity, support from a trusted local resource, a managed, but flexible plan and the presence of an existing network among the people involved.

4. The Pendleton Context

4.1 Introduction

This chapter reports on the research carried out with Pendleton Together tenants and staff to establish the current context of energy and related issues.

4.2 Energy retrofit in Pendleton

As part of the regeneration programme in Pendleton, Together Housing and Keepmoat have implemented a range of measures that could impact upon tenants' consumption of energy.

These include the replacement of the previous gas boilers by the NIBE air source heat pump system in flats and more modern combi boilers in houses. In both cases, a new and more complex digital thermostatic control system has replaced less sophisticated timer systems. Additionally, physical measures aim to improve insulation and reduce heat loss; these include replacement windows and doors, together with roof insulation for the homes and external wall insulation on the outside of the blocks.

As of the end of January 2016, Pendleton Together reports that 1062 new and fully refurbished homes had been completed, 700 high rise and 362 low rise. 66% of these have achieved Energy Performance Rating band B and 34% band C. The target of the programme is 90% band B and 10% band C.

Staff and resident interviewees shared the expectation that the properties would to some extent 'automatically' be more energy-efficient by virtue of the newly installed technologies, and attributed this to messaging from Pendleton Together over the course of the works. This related not only to heating, but also to lighting: one interview summed this up with *'[the heating system] is meant to be energy-efficient so you don't have to do anything…'* (Interview, approx. quote). This interviewee also alluded, however, to the continuing importance of occupant behaviour in this equation: *'the [new energy-efficient] light bulbs are energy-efficient as long as you don't leave them on'*. These points highlight the relationship between residents and technology: the technology can facilitate energy efficiency but its performance may be affected by the ways in which residents make use of it.

4.3 Technological context

Whilst the objectives of this research do not include the investigation of specific technologies and approaches to retrofit, it is important to understand one particular aspect of the retrofit, as the context it creates has important implications for moving forward on energy efficiency in Pendleton.

The new heating system, which consists of an exhaust air source heat pump with digital controls, has been installed in each of the flats, replacing the individual gas boilers. In addition to providing heating, Pendleton Together report that the new system is intended to reduce condensation without the need for additional ventilation, deliver improved indoor air quality, eliminate the risk of carbon monoxide and, by using electricity rather than gas, give residents the flexibility to choose their own supplier and therefore tariff.

There is evidence that residents are concerned about the new heating system, and the following list summarises the reasons given for this. It includes reasons given directly by residents during the research and reasons relayed by staff on the residents' behalf:

- Cost. Residents are concerned that the new system is costing more to achieve the desired temperature than the old system. This was reflected by residents, not only out of concern for their own costs but also out of a sense of fairness:

  > 'And I just think it's so unfair to put in a system like that. I'm unemployed and I struggle, let alone what they are on. Refugees are only on about £33 a week. They are only a really small amount, and for them to say that they can't even put the heating on and then to put it in, it's not fair' (Focus group).

- Noise. The system can be noisy and therefore a disturbance for the residents. '*It's just too noisy. It's a pain, do you know what I mean, just to switch it off just to stop hearing that bloody noise*' (Focus group).

- Aesthetics. The units are large and can dominate flats aesthetically. They involve a degree of lost space in the kitchens. *'It's massive.' 'You know, that space that they've got there and they have used it to get our heating, it's not right'* (Focus group).

- Complexity. Compared with the previously installed conventional gas boilers, the system has a more complex operating system. There is a sense, reported in the research by both parties, that staff and residents are still learning how to get the best performance out of it. Staff noted that some residents have reported not being able to achieve a sufficient internal temperature.

- Imposition. Residents expressed concerns that the system had been imposed on them and that, whilst Pendleton Together had selected the technology, any increase in costs and any inconvenience are borne by the tenant. This was reflected in concerns about liability for using the system, particularly if high costs are experienced despite following advice : '*It doesn't matter because I'm the one paying it*'. In response to advice to turn it off: '*If it goes wrong, who is liable for it then? Are they liable or are you liable because you turn the machine off?*'

- Control. A function of complexity and costs, one resident expressed feeling a lack of control over her heating system, both in terms of achieving the desired indoor temperature and being able to predict costs and budget for them.

- Sensory experience. A commonly reported issue with exhaust air source heat technology is that it provides 'slow heat' and a steady temperature rather than the warm feeling of sitting next to a hot radiator. This is a different sensory experience.

It is important to note that these concerns reflect upon the new heating system as a whole, rather than simply the NIBE units; the nature of this particular configuration should also be borne in mind. These resident concerns should, in turn, be understood within the following context, which has been drawn from documentary evidence and discussions with staff:

- The new system requires a new conceptual model of use: residents should not turn it off and on as warmth is required, but programme the required temperature and leave the unit switched on to maintain this temperature. Taking a more conventional approach, e.g., switching it off overnight, can lead to higher energy costs.

- There has been some negative publicity focused specifically on the NIBE system. The BBC's 'Rip Off Britain' programme has reported on it several times, with a recent report focusing on the systems in Pendleton. The coverage focused on residents reporting unexpectedly high electricity bills. Residents attending the focus group knew about the negative reception of NIBE in other areas:

  > 'You only have to go on the Internet that they've had to pull that heating out of plenty of houses: social housing, and they've had to pay the bill because people have been complaining about it' (Focus group).

- There have also been some prominent resident voices sharing negative experiences and raising concerns about high costs. It is not the place of this research to validate the concerns of residents and the BBC reports, but it is important to note that they appear to be creating an atmosphere of negativity and suspicion around the system.

- It has been difficult to assess the true costs of the systems, particularly since residents have not yet experienced a full year, and there is a need to take into account the shift from a combination of gas and electricity to electricity alone. There is some evidence that not all residents are fully able to understand and get the best performance out of the system. It is also the case that few, if any, residents were previously monitoring their electricity costs and there is therefore a lack of a baseline. There have been reports of residents blaming the NIBE system for their whole electricity bills, without taking into account relatively energy-intensive appliances such as computer servers and multiple television screens.

- It is apparent – although beyond the scope of this research to confirm – that negative voices have been dominant, whilst staff report that, generally speaking, a lot of residents are satisfied with the system. Staff interviewees reported that it is a minority of residents who are really struggling with it.

- Interviewees pointed out that transitional issues such as renovation work and external cladding still being under way may have affected performance.

These factors have meant that the major share of

communications from Pendleton Together on energy have concerned the NIBE units, in part seeking to combat some of the negativity around them and in part providing advice on their cost-effective use.

This context has a number of important implications for any discussion of energy in Pendleton.

Firstly, it is evidently difficult to talk about energy issues with staff or residents without NIBE becoming the focus of discussion. This was observed during all elements of the research and reflects quite genuine concerns from both staff and residents that the new system may be causing financial hardship. There is therefore an urgent need to make sure that the NIBE units are performing well and that residents are properly informed about how to operate them cost-effectively and assured that the system is fit for purpose.

Secondly, there is a risk that claims made so far about the potential for NIBE and the other energy-related measures to cut costs may limit the receptivity of residents to further messaging on energy efficiency, particularly if it is perceived that these measures have not realised the anticipated savings and that further behavioural change is seen as a way of compensating for this underperformance.

Thirdly, and conversely, it is fair to say that the situation with NIBE has got people talking about home heating and energy costs to a greater extent than before, whether in conversations that residents reported overhearing in the lifts, or the issues that they raise with the caretakers. Notwithstanding the challenging nature of the situation and the narrow focus on NIBE, it is also potentially an opportunity to engage residents and staff on energy issues. *'You can just stand in the lift and you can hear people "It's costing me £15 a week this. It's a nightmare"'* (Focus group).

Quotes from the focus group emphasise the first two points and the centrality of NIBE within energy discussions. When asked if energy efficiency could be approached independently of NIBE, a focus group participant responded: '*But it's not, the NIBE is not independent of energy efficiency. If you are pushing the agenda, you have to remember that. Like telling me to turn off the kettle and turn off the light while I've got this monstrosity in the house*' (Focus group). Another reinforced this point: '*Yes, if you knocked on somebody's door and you said "Can I talk to you about energy?", they'd just say "Get rid of that", so you have got to be trained in both really'* (Focus group).

The situation in the houses is different. These properties and the low-rise flats did not have NIBE units installed, instead receiving more modern combi boilers. These have reportedly been well received, but in some instances residents had experienced difficulties with the new control panel. The panel replaced a conventional analogue clock timer with no thermostatic control and therefore represents a much more sophisticated system and one that allows more precision when setting schedules and temperature. Some older residents in particular have needed support from staff in operating this, and this could open up opportunities to discuss energy use more generally, but there is no evidence to suggest that this has been as problematic or controversial as the NIBE system.

4.4 Approaches to communicating 'energy'

Overview

There have been a range of approaches to informing residents about the changes to their home heating. These have included show flat drop-in sessions, one-to-one training when a tenant moves in, similar training in small groups on a block basis, and other communication events. Instructional videos focused on NIBE are also being developed. Additionally, neighbourhood officers and caretakers have received some training, which one member of staff described as 'competent user training'. The intention is that this means they are able to advise residents on the operation of the system but not to perform maintenance; for the latter, a qualified engineer should be called out.

Training on NIBE

Reflecting the complex context that the new heating system presents, some residents have been involved in the creation of communications materials, most recently an Internet video. There have been some reportedly 'heated' meetings around NIBE, with residents stating their concerns to Pendleton Together, including the involvement of a small ad hoc group that formed to raise concerns about the heating system.

The caretakers interviewed reported that heating and energy bills were among the things that they spoke to tenants about on a regular basis. They had developed strategies for dealing with these issues, including a checklist for ensuring the NIBE units were kept in good condition, and had found that certain analogies were helping people to understand the system. They had found that comparing it to a kettle, for example, helped convey the concept that turning it off overnight would require a body of water to be reheated in the morning. Similarly, comparing it to a fridge helped to emphasise that it should not be turned off, even when leaving the flat for a week. We were not, however, able to test how effective or appropriate these analogies were.

However, despite the caretakers' confidence that they were providing suitable training, the residents attending the focus group were more sceptical about the training offered by Pendleton Together as a whole:

> 'As training goes, we've not really had much training regarding it… I came to a training group with some friends and my partner and basically they said that button does that, that button does that and that does that, there is your training, that's it. It's like what!' (Focus Group).

Importantly for our consideration of an energy champions approach, they highlighted the value of learning from other residents:

> 'Yes, the caretakers. They don't listen. They don't know enough about it. I found out more from [name of resident] and the residents than I did from the caretaker… … … I'm better off calling that guy [name of resident] or that guy [name of resident] because they know more than the caretakers… The caretaker assured me that there was nothing wrong with the machine, or the filter. Then the very next day the machine broke down' (Focus Group).

There seemed to remain some 'confusion' over the operation of the system and the 'leave it switched on' message had not been universally accepted. If it is the case that leaving the unit running represents the most efficient way to run it, then this would suggest that residents are not choosing the lowest-cost option:

> 'If you are a couple of days away, then it's going to start costing you, but I switch it off because I'm not going to be paying £3 a day. I can't afford £3 a day to keep that thing going.'

> 'Yes, I'll switch it [off] because if it's not a cold night, and stuff like that. I'll put my duvet cover on and I'll switch it off and I'll wake about 6:00 and switch it back on.'

Community Switch and finance

'Community Switch', whereby a web-based platform assists the residents in choosing the most competitive tariff for their needs, is something that neighbourhood staff and caretakers have been promoting to tenants. There is also reportedly some word-of-mouth promotion of it happening in the blocks of flats, evidencing the potential for residents to highlight opportunities to save money on energy to each other.

However, some residents have not taken up this opportunity. The reasons given include stability, i.e., staying with the supplier they have always been with, and risk, i.e., not trusting that it will necessarily be better when they change. This highlights the importance of understanding energy choices as complex decisions, which cannot necessarily be reduced to price per kilowatt-hour.

Community Switch, however, whilst directly addressing the cost issues associated with energy use, does touch on other issues of energy consumption such as health and greenhouse gas emissions; in fact, lower costs could result in higher energy consumption.

Understanding the relationship between personal finance and energy is, however, important, and there is a need to ensure that residents can factor in energy when budgeting and appreciate the ways it can affect their bills. Interviewees reported being asked by residents how they could increase the temperature of their heating without increasing their bills, perhaps demonstrating a limited understanding of this.

4.5 The potential role of energy champions

Recognition of the concept

Anecdotally, residents already display a degree of energy efficiency in their behaviour since they are generally cost-conscious and, in particular, those who are using pre-payment meters need to budget carefully. However, interviewees conceded that being cost-conscious does not necessarily equate to knowing how best to be energy-efficient or understanding which appliances are using the most energy. There could therefore be, it was felt, a potential benefit from education and awareness-raising on how to be energy-efficient.

The opinions expressed in the focus group reflected this situation, noting that '*some people are quite wasteful and they don't even realise it*' whilst '*some of us, like myself, I am very, very, very thrifty, extremely thrifty to a tee*' (Focus group).

The concept of an energy champion was recognised by all interviewees, with a consensus that it referred to people, whether staff or residents, who could provide information on energy and motivate people to be more energy-efficient.

Current activities

Examples were given of related practices that are already occurring. In one of the blocks, for example, a resident has become known as a 'recycling ambassador' as s/he has been helping people to understand the recycling system and contributing to resolving problems with the system.

One resident has become known informally as a NIBE expert and had been helping other residents with their systems. He estimated that he has helped around 25 to 30 people in his own block. He sees this as '*helping other people get the best for their money' (Interview)*. He observed that a lot of older people, in particular, have difficulty understanding the system and he does not mind helping them; they've been used to the older simple on-off systems and need to understand that they need to 'fiddle' with this system less. He also invited people into his flat to see how he manages his system, and feels that this helps to avoid him being perceived as being 'preachy'; it makes it less about them and more about sharing his experiences.

Given that there is some informal championing of recycling and energy already happening, the idea of 'sustainable champions' was posited by the researcher. This idea was not met with resistance, although staff and residents alike were cautious about the level of understanding of 'sustainability' and its connotations.

Nevertheless, this hinted at the potential for a champions role that encompassed sustainability more broadly rather than one which focused solely on energy, albeit not necessarily with this name. Whilst sustainability may be a suitable conceptualisation, residents in the focus groups felt that a 'green' or climate

change approach could be counterproductive: '*They'd say, I'm not voting for the Green Party, **** off*', '*You have to quote it not as in conservation for the environment. You'd have to quote it for conservation of money*' (Focus group).

There was an acceptance that residents talking to each other about energy issues would be a positive thing. As evidenced already in relation to Community Switch, there is the potential for residents to be a trusted source of information and to share their own positive (and of course negative) experiences.

Training for champions

Interviewees agreed that, in the current context, any champions or advisors should have a certain degree of knowledge about NIBE. This should extend to being able to counter any common misconceptions and address some of the more basic issues with operating the units and be sufficient to avoid passing on any inaccuracies that could negatively affect system performance. Conversely, concerns were raised that they should not be expected to have 'too much' knowledge and that limits might have to be placed on the level of technical advice they would be able to give: technical issues should be dealt with by staff and NIBE engineers, where appropriate. The implications for complaints and claims for compensation were mentioned: if energy champions were seen to be endorsed and supported by Pendleton Together, then any false advice could result in blame being passed on to the organisation.

Staff indicated that they may be able to identify residents who would be appropriate to trial an energy champions role. They felt that proper incentives would be needed, but that it would also be important to avoid any implication that the role was in any way about paying residents to help sort out issues that had arisen from NIBE.

As well as identifying the potential for resident energy champions, staff gave examples of ways in which they already deal with energy-related issues in the blocks and houses. Whilst they felt it was possible to use these opportunities to be proactive about energy efficiency, i.e., introducing new ideas and motivating residents as well as responding to their immediate enquiry, this is not something that was done as yet.

The role of champions

Staff and residents envisaged that energy champions would convey the kinds of messages commonly associated with the role, such as not boiling a full kettle for a single cup, having showers instead of baths, and not using windows to cool the property with the heating on full, but, at least in the short term, would need to be prepared to answer questions on the heating system. As well as being ready to respond to issues relating to NIBE, there is the potential for proactive messages around getting the most from NIBE, such as not opening the windows in winter.

On the one hand, there was a clear risk, identified by staff, of '*telling people how to live their lives*', suggesting the need for a sensitive balance between advice and 'preaching'. On the other hand, there is an opportunity to make the most of the context of concerns around NIBE to further engage on energy efficiency and offer residents further cost savings.

Residents in the focus group recognised the concept of an energy champion and associated it not only with giving advice on energy-saving approaches but also with providing practical help, such as adjusting ventilation and setting up the NIBE units. They saw value in an approach that was centred around advice from fellow residents and one participant noted that this could help to create empathy:

> 'But the thing is, I think it has to be a member of the public who has to do this energy championing because it is someone who is directly affected, therefore is a little bit more heartstring with it.'

They saw this as having a positive impact on the lives of residents:

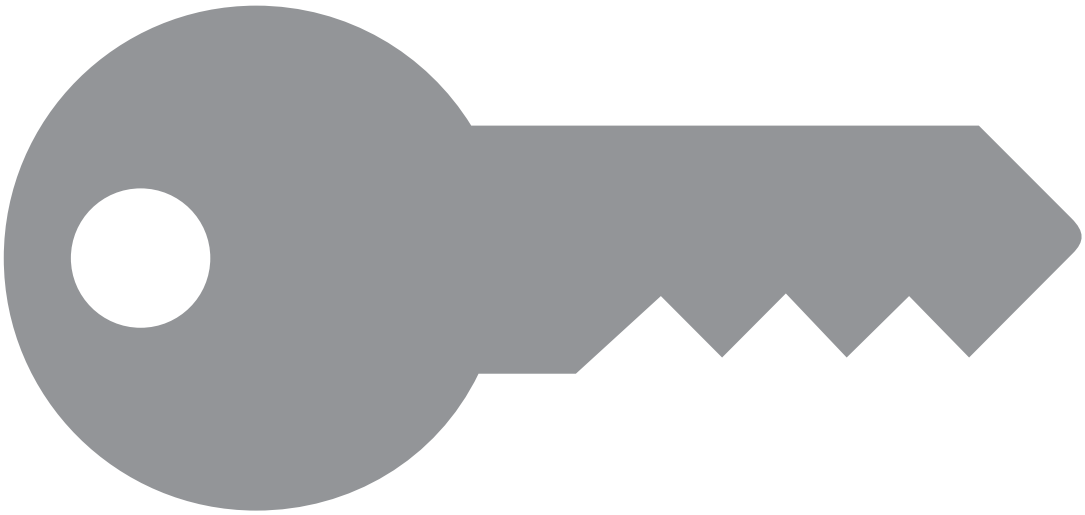
> 'I speak on behalf of the community and put it across to people that we need to make changes and we need to make it cheaper for people to live. They shouldn't have to turn off the NIBE system. They shouldn't have to turn off lights and kettles in order to make their electric last longer. I would. I'd be quite happy to speak on behalf of that.'

It was felt that such a champions role, however, would need to be around energy rather than NIBE and that energy champions should not be seen as 'NIBE representatives', particularly when the technical performance of NIBE is currently not completely understood:

> 'They've also wanted me to champion it, and I've refused to do on the ground it has not done 12 months yet… I wouldn't be a NIBE champion, I'd be an energy champion, but I wouldn't be a NIBE champion. I refuse to do that.' (Focus Group)

A role for more general advice was also recognised and straightforward information on potential savings from different energy-related activities was suggested by one resident. This would help any energy champions back up their advice and apply financial metrics. Conversely, the leaflets could be used as a way of offering a 'follow-up chat' with an energy champion to those with concerns about their energy use.

5. Ways Forward in Pendleton



5.1 UK context

Our literature review reveals a wealth of initiatives in the UK that, to a greater or lesser extent, incorporate an energy champions approach; that is, they involve residents talking to other residents about energy issues, usually with some degree of formalisation, training and support.

However, our rapid review also suggested that there may be a more limited amount of in-depth rigorous academic research on the subject, with 'grey literature' predominating in source material, not least evaluations written for funders. Whilst such literature is valuable, it is possible that it may mask some of the fundamental challenges in understanding this approach, including the extent of actual energy savings, the causality behind changes (e.g., can they be attributed to energy visits or to contextual factors instead, such as changing relationships or items on the news?), and the longevity of any impacts beyond the necessarily limited lifespan of these initiatives.

There is also, on the whole, a suggestion of an underlying assumption that an energy champions approach is inherently beneficial, rather than a critical investigation of its effectiveness in reducing energy consumption.

Nevertheless, the literature provides evidence of the potential for such an approach to have an impact on energy-related practices. It also enables us to distil a list of favourable characteristics for an energy champions initiative. These are: having a local identity, a local trusted resource, a managed but flexible plan and the presence of an existing network among the people involved.

It also highlighted the value of engaging with the existing community through hubs such as schools and community centres, as 'ways into' the community, and also demonstrating the potential for energy efficiency to genuinely benefit locations that are important to many.

5.2 Moving forward in Pendleton

Working with the heating system

This research suggests that the recent refurbishment and retrofit that has taken place in Pendleton has prompted some residents to become interested in energy and its costs. The new heating systems are an important component of this. It is clear that there is some negative feeling towards them, which stems from some experiences of increased bills and concerns from residents about some other factors including noise, aesthetics and complexity of operation. On the one hand, there is a risk that this context decreases receptivity to wider energy efficiency issues; on the other hand, it implies a relatively high level of awareness about energy and its associated costs.

This means, however, that any strategy for engaging with residents on energy efficiency has to take account of the heating systems. If residents feel that they are paying more than they need to and perceive this as attributable to the heating system then they are unlikely to be receptive to broader energy efficiency messages. Moreover, as the efficient operation of the system depends on residents learning how to optimise the settings for their flat and preferences and understanding the relationship between costs and heating levels, there is therefore an element of training and behaviour change.

There has been some engagement to date, with officers and caretakers liaising with residents to help them understand how to operate the heating system and to seek to address any issues and concerns. There has also been a campaign to promote tariff switching to ensure that residents are on the best deal financially. The evidence is that this has been well received, even if it has not been universally followed. Residents relay concerns about the risks of switching – perceiving the new supplier as an unknown and therefore a risk – and the peace of mind and sense of control of using a pre-payment meter, even though costs may be greater. These factors imply that residents may benefit from energy issues being integrated into any financial advice that the residents receive, e.g., including information about payment options and example costs for typical appliances in budgeting training.

A three-way approach

An approach to energy efficiency in Pendleton would therefore have three core elements:

- A particular focus upon helping residents adapt to the new heating system, including training and awareness-raising alongside any adjustments and maintenance that are needed as it 'settles in'.
- Promotion of tariff switching and the provision of general financial advice on how to manage bills and payments.
- Promotion of behaviour changes around energy saving. Whilst these may include advice relating to the heating system, it is also focused on more conventional energy efficiency advice such as closing windows and not filling the kettle.

Energy champions

The research suggests that some kind of energy champions approach could work for all three of these elements. Word of mouth has been valuable in informing residents about NIBE and tariff switching and the research suggests that friends and neighbours are seen as trusted sources. This may be particularly important in the current context, as the negativity around the heating systems may be associated with the housing provider, as some residents have implied.

However, the advantage of using trusted social networks to convey messaging on energy is contrasted by some risks, and it is important to be realistic about these:

- volunteers becoming 'burnt out' or their circumstances changing – e.g., having children, changing jobs;
- a potentially limited reach if volunteers are unable to make connections with people outside their own circles – although this is not necessarily the case;
- advice being unhelpful or inaccurate, which can be mitigated with good training and support;
- risks of the volunteers becoming associated with some of the negativity around NIBE -this could have negative implications for the individuals and for the issue of energy efficiency in general.

Given these potential limitations, it seems prudent not to base an energy efficiency strategy entirely on volunteer energy champions. Furthermore, to do so would be to miss the opportunity to build on the good work already being carried out within the Pendleton Together structure.

Additionally, the challenging context presented by NIBE raises the risk of volunteer burn-out, since proactive residents may be met with negativity and scepticism. Pendleton Together needs to think carefully about engaging in a full energy champions programme whilst the heating system is still a live issue.

The research suggests that the most appropriate approach would be to resolve any remaining issues with the heating systems before beginning to be more proactive on energy efficiency.

It makes sense, then, that an energy champions scheme should be seen as a complement to the existing structure rather than something separate. Connections can and should be made with the more conventional communications mechanisms. Leaflets on energy efficiency can become a 'calling card' for energy champions that provides them with a way in to speak with residents, as well as being a route for residents to request a follow-up chat from an energy advisor.

Similarly, the videos currently produced on getting the best out of NIBE could become a tool for energy champions to use on visits and an informative approach for residents who may prefer to investigate approaches themselves. The interest in NIBE creates an opportunity for 'did you know you can also cut energy costs in the following ways?' style messaging on leaflets. In this way, the issues with NIBE provide an opportunity to discuss energy more broadly.

The role of caretakers and officers should not be underestimated and it is important that they are well equipped to talk to tenants about their concerns, both reactively (addressing problems stemming from energy use) and proactively (informing them of potential energy savings they could make). However, there is a need to ensure that the advice they are giving is accurate and consistent, and therefore for ongoing training and support.

The challenges with NIBE appear to be experienced differently across the blocks, and this is likely to be the case for other energy issues. There may be value in beginning by targeting an energy champions approach at specific groups. For example, it seems that older people who have particular difficulty with

the interface are more likely to feel the cold and not be at work during the day. Residents for whom English is not their first language may also respond well to advice in their own language. People who are at work during the day may have different heating needs, and more limited availability. To this end, it may be useful to focus meetings, workshops or energy champions on particular subsections of the community. Residents should be involved in designing this approach, helping ensure that it is well targeted and also increasing buy-in. The name for the people involved in this process should be decided in consultation with them: e.g., 'energy champion' may not fit the local context.

Residents were clear that they would need some support if they were to fulfil the role of a champion. Part of this would be the provision of some written materials that they could use. Importance was placed on these materials containing cost estimates of 'how much you can save', whilst it was understood that such figures are always estimated and are dependent on residents' comfort preferences. Residents implied that they would like to see officers and caretakers have updated training on NIBE (and that seeing that this is happening may be as important as it actually happening) and that any training they receive on NIBE would be better received if it came from NIBE experts rather than Pendleton Together staff.

The wider community

Our literature review highlights the potential for work with schools and community centres to be a tool for raising awareness, getting buy-in, embedding learning on energy efficiency in the community and demonstrating the potential impact of savings, e.g., on school funds. A similar approach could be taken with community centres and other community assets, such as Salford Arts Theatre and Gateway Health Centre.

5.3 Recommendations

Whilst this research set out to explore the potential for a proactive energy champions approach in Pendleton, it is clear that the context demands an approach that is also able to respond to resident concerns about the impact of the new heating systems on their energy use. A 'Pendleton Model' for energy champions must reflect this specific and challenging set of circumstances.

Whilst this context means that energy is somewhat of a controversial subject, it does mean that it is a talking point, potentially providing a way in to discuss wider energy efficiency measures and their potential benefits. However, and importantly, there is a strong risk that any proactive energy efficiency messages will be overshadowed by concern and negativity relating to the heating systems and that this could result in a lukewarm reception for energy efficiency messages and stress and burn-out for the volunteers.

The implication is that there is a need first for preparatory and contextual work that anticipates and accommodates an energy champions approach. These recommendations provide a set of steps towards that.

First steps

- Continue to research the performance and cost implications of the NIBE systems, ensuring that data collection is reliable and robust. Report the research in a way that is transparent and accessible to residents.
- Use the research to produce technically informed, positive news stories about NIBE whilst also finding ways to address any remaining issues following the retrofit and heating system installation.
- Work with interested local residents to communicate information about NIBE and offer basic advice. Help those experiencing most issues with NIBE. This could be seen as an informal way to test out the energy champions project.
- Prepare an energy toolkit that can be used in a range of contexts: e.g., a website resource, a set of leaflets, and/or a guide to talk to residents about energy. This should be available for all, including residents, officers and caretakers. The material should give practical examples of energy efficiency made relevant for the Pendleton context and make clear the potential cost savings from energy efficiency and the costs of energy inefficiency, but also highlight other benefits, including a sense of control over budgets, being 'green' and having a healthy home.

Changes to existing procedures and practices

- Continue to raise the profile of energy efficiency in regular communications through practical examples and evidence of cost-cutting drawn from the toolkit.
- Integrate energy cost-cutting opportunities into all financial and budgeting advice to residents.
- Continue to ensure that staff have NIBE training, and agree and document a common set of responses to issues arising with residents' NIBE systems.

Wider engagement

- Set up and promote an energy efficiency programme at Brotherton House. Publicise this to show that staff are leading by example.
- Develop an energy efficiency project with one or more schools in the area that involves making energy efficiency improvements, if possible showing financial savings for the schools. Consider also working with other community assets, e.g. the Salford Arts Theatre, in this way.

Energy champions – medium term

- Building on the conversations started through this research and using the toolkit, carrying out sessions with residents with a view to training energy champions. Residents should be closely involved with deciding what name should be given to this role, what form it should take, how those selected will approach residents and what support they would need from staff.
- Implement an energy champions programme shaped by residents and trialling a range of approaches determined by them. Such activities could include home visits, drop-ins in the library, special energy meetings and question and answer sessions as part of existing community meetings.
- Carry out a thorough evaluation of the energy champions programme over the medium term, including researching the experiences of the champions and the residents they aim to help.

5.4 Contributions from research

This report has been developed by the Sustainable Housing and Urban Studies Unit (SHUSU), which is well equipped to offer support in Pendleton's energy efficiency journey. In particular, academic teaching and research can contribute by:

- providing training on energy and related issues – potentially with links to qualifications;
- carrying out a robust evaluation of an energy champions (or similar) programme;
- providing research services relating to energy monitoring;
- contributing to the development of an energy efficiency information toolkit.

6. References

Allcott, H.(2011) Social norms and energy conservation. Journal of Public Economics, 95(9–10), pp. 1082–1095. Available at: http://dx.doi.org/10.1016/j.jpubeco.2011.03.003

Ayling, G., Ansell, S. and Neate, P. (2015) Groundwork UK Learning Partnership Communities Living Sustainably Learning Report: Growing and Green Space.

Beetham, H. (2011) Social Impacts of Transition Together (SITT): Investigating the social impacts, benefits and sustainability of the Transition Together. Transition Streets initiative in Totnes. Available at: http://www.transitiontogether.org.uk/wp-content/uploads/2012/07/SocialimpactsofTransitionStreets-finalreport.pdf

Bristol Energy Network (2013) Bristol Community Strategy for Energy. Available at: http://www.bristolenergynetwork.org/strategy

Bristol Energy Network (2016) Energy Champions. Available at: http://www.bristolenergynetwork.org/content/energy-champions-0

Burchell, K., Rettie, R. and Roberts, T. (2014). Working together to save energy? Report of the Smart Communities project Available at http://business.kingston.ac.uk/sites/all/themes/kingston_business/charmproject/smartcommunities.pdf

Carr, J. (2013) Warming Barton – an article by Jenny Carr. Available at: http://lowcarbonoxford.org/warming-barton-an-article-by-jenny-carr/

Centre for Sustainable Energy (2016) Building capacity through training Available at: https://www.cse.org.uk/projects/view/1265

Circle Housing (2016) Resident Energy Champions. Available at: http://www.circle.org.uk/get-advice/energy-advice/resident-energy-champions

Databuild Research & Solutions Ltd (2014) Learnings from the DECC Community Energy Efficiency Outreach Programme. Available at: https://www.gov.uk/government/publications/learnings-from-the-decc-community-energy-efficiency-outreach-programme

Department of Energy & Climate Change (2014) Community Energy Strategy: Full Report, Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/275169/20140126Community_Energy_Strategy.pdf

Energy Saving Trust (2011) Trigger points: a convenient truth. http://www.energysavingtrust.org.uk/sites/default/files/reports/EST_Trigger_Points_report.pdf

Gee, P. and L. Chiappetta (2013) Engaging residents in multifamily building retrofits: Reducing energy consumption and enhancing resident satisfaction in Swan, W. and P. Brown Retrofitting the Built Environment Wiley Blackwell, Chichester

Greater Manchester Low Carbon Economic Area Initiative (2011a). The Missing Quarter - Integrating Behaviour Change in Low Carbon Housing Retrofit. Available at: http://www.salford.ac.uk/__data/assets/pdf_file/0005/593258/Missing-Quarter-Behaviour-Change-report.pdf

Greater Manchester Low Carbon Economic Area Initiative (2011b) A practical guide for social landlords on engaging with residents / helping to reduce their energy use. Available at: http://www.svha.co.uk/downloads/svha_downloads/behaviour%20change%20toolkit.pdf

GreenSquare Group (2015) New project brings greener energy to Rose Hill. http://www.greensquaregroup.com/news/new-project-brings-greener-energy-to-rose-hill

Hargreaves, T., Nye, M. and Burgess, J. (2013) Keeping energy visible? Exploring how householders interact with feedback from smart energy monitors in the longer term. Energy Policy, 52, pp. 126–134. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0301421512002327

Mitchell, R. (2012) The Wandle Valley Low Carbon Zone Community action, CO2 reduction, encouraging behaviour change and other opportunities. Available at: https://www.merton.gov.uk/wvlcz_final_report_2012.pdf

Kirklees Council / Groundwork (2013). Kirklees Energy Champions Training. Available at: http://www.hott.org.uk/wp-content/uploads/2013/03/Energy-Champions-Training.pdf

National Energy Foundation (2015a) Buckinghamshire County Council – community Energy Champions development. Available at: http://www.nef.org.uk/success-stories/case-studies/buckinghamshire-county-council-community-energy-champions-development

National Energy Foundation (2015b) Thames Valley Police – Environment Champions training. Available at: http://www.nef.org.uk/success-stories/case-studies/thames-valley-police-environment-champions-training

Platt, R., Cook, W. and Pendleton, A. (2011) Green streets, strong communities What communities can do for emissions reductions and what emissions reductions can do for communities, Institute for Public Policy Research.

Shove, E., Pantzar, M. and Watson, M. (2012) The Dynamics of Social Practice: Everyday Life and How it Changes. London: Sage.

Smart Communities (2016a) About Us. Available at: http://smartcommunities.org.uk/about-2/

Smart Communities (2016b) Community Energy Saving: Tolworth and North Kingston. Available at: http://smartcommunities.org.uk/about-2/community-energy-saving-tolworth-and-north-kingston/

Smart Communities (2016c) Ham and Petersham Street Champions. Available at: http://smartcommunities.org.uk/ham-and-petersham-street-champions/

Smart Communities (2016d) Mortlake Block Champions. Available at: http://smartcommunities.org.uk/mortlake-block-champions/

South West London Environment Network (2016) Our work. Available at: http://www.swlen.org.uk/our-work/

Transition Streets (2016). FAQs. Transition Town Totnes (TTT) Available at: http://www.transitionstreets.org.uk/faqs/

Vaze, P. and S. Tindale (2011) Repowering Communities: Small-Scale Solutions for Large-Scale Energy Problems. Routledge.

Ward, F., Porter, A., Popham, M. (2011) Transition Streets Final project report. Transition Town Totnes. Available at: http://www.transitiontowntotnes.org/wp-content/uploads/2012/02/Transition-Streets-final-report-27-Sep-2011.pdf

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