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This paper reports findings from a 24 month project which ran from 1st April 2010 entitled 'Understanding Local and Community Governance in Energy' (UNLOC), funded by NERC through the UK Energy Research Centre's Energy Demand theme, the project partnership principally involved CES, ECI Oxford and the Centre for Sustainable Energy. The authors are grateful to NERC and UKERC for their financial support and to the policy makers, practitioners and community group representatives who participated in the empirical work programme.

Abstract
This working paper reports findings that were generated through the UKERC project 'Understanding energy governance at local and community levels' (UNLOC) – a 24 month study which began in April 2010. Through a series of in-depth interviews conducted with a range of local authority officers and councillors, the research highlights a series of challenges and opportunities for local government in relation to the sustainable generation and management of energy in their administrative geographies. Notwithstanding the challenges identified, the initiatives and local-level polices described in this paper point to the potential for community level governance of energy and carbon, as well as demonstrating the possibilities for local institutions to act as catalysts or change agents in 'scaling up' and providing leadership in energy and climate issues. As the paper suggests, in order for progress to be made in engaging communities with this agenda, general lessons and good practice in community engagement need to be recognized and considered, especially in understanding the political and cultural factors that shape how public agencies engage with communities. Partnership working, for example, is resource intensive and requires long-term strategy. There is often an assumption that an energy project is 'the way' to bring the community together, and some local authority initiatives have failed – and may well continue to be unsuccessful – because of an over-reliance on this assumption.

1. Introduction

This paper draws on qualitative data gathered through the administration of a series of semi-structured interviews with a small number of English local authorities (and one Welsh local authority) between May and September 2011. The work was conducted under the UKERC-funded project 'Understanding energy governance at local and community levels' – a 24 month project which began in April 2010. The particular work-package in which these interviews were located (entitled 'Local government in energy governance') concentrated on the institutional structure of local governance and how external forces and actors influence local authorities on energy issues. Key areas of inquiry included:

- Exploring the institutional structure of energy governance at the local level;
- Reviewing the changes and modifications of national energy policies in the last few decades and the implications for local government impact on energy policies;
- Examining the relationship between energy policy and decision making in other areas such as housing, planning and transport;
- Evaluation of the future role and impact of local government in energy and climate change decision making.

In total 18 interviews were carried out involving representatives from Bradford Metropolitan District Council, Woking Borough Council, Oxford City Council, Surrey County Council, Kirklees District Council, and Rhondda Cynon Taff County Borough

Council. In Table 1 the positions of the interviewees in the respective councils are set out, together with a 'code' that is used in this document to identify extracted interview quotations. One additional interview was carried out with a representative from the Energy Saving Trust, a non-profit organization jointly funded by the British Government and the private sector. More interviews were carried out with city representatives and local government officials in Minnesota in the United States to provide an international comparative perspective. In each case, interviewees included senior officers who are active in both environment and energy decision making across a range of departments in order to identify the scope and extent of priorities and different perspectives that are apparent within and between the participating local authorities. The questions were structured around three key areas. Firstly, to examine the role of local government in energy decision making in the context of evolving national policy frameworks.

Table 1: Details of interview participants

Local Authority	Position of interviewee	Code for identifying interviewee in this report
Surrey County Council	Senior policy adviser (energy and waste)	SCC 1
Bradford District Council	Strategy Coordinator - Sustainability	BDC 1
Bradford District Council	Environment and Climate Change Manager	BDC 2
Bradford District Council	Sustainable housing team officer	BDC 3
Bradford District Council	Sustainable housing team officer	BDC 4
Bradford District Council	Team Leader Local Development Framework	BDC 5
Bradford District Council	Local Development Framework team - officer	BDC 6
Woking Borough Council	Energy Services Company – Group Managing Director	WBC 1
Woking Borough Council	Energy Services Company – Operations Manager	WBC 2
Woking Borough Council	Strategic Director	WBC 3
Woking Borough Council	Senior Policy Officer	WBC 4
Oxford City Council	Environmental Sustainability Manager	OCC 1
Oxford City Council	Energy and Climate Team Leader	OCC 2
Oxford City Council	City Development Director	OCC 3
Oxford City Council	City Councillor, Cabinet Member	OCC 4
Rhondda Cynon Taff County Council	Resilience & Sustainability Manager	RCT 1
Rhondda Cynon Taff County Council	Resilience & Sustainability Manager	RCT 2
Kirklees District Council	Sustainability Officer	KDC 1
Energy Saving Trust	Senior energy advisor	EST 1

Secondly, to explore the relationship between energy policy/decisions and decision making in other areas such as housing, planning, environment, economy, finance and social exclusion. Finally to consider processes of change and how external forces, including local communities, can (and in some case do) influence the paths taken by local authorities on energy issues.

In terms of governance the challenge of climate change and developing sustainable energy systems is, in part, a challenge in relation to scale. In the 1990s 'think global, act local' emerged as a familiar adage in response to global environmental challenges like climate change. The new millennium brought a dawning realization of how difficult this exhortation was to follow. Global challenges demand global responses. International climate policy claimed centre stage in environmental politics through the Kyoto Protocol. And yet achieving the goals of the Protocol proved elusive. A part of the reason for this was the failure of Kyoto to create a global emissions cap. But even the playing out of reduction targets to the national level turned out to be no recipe for success.

The limitations of top–down national governance in addressing the urgency of climate change are vividly illustrated in the UK during the 1990s (Harding and Newby 1999). Energy privatization had resulted in a 'dash for gas' and a contraction of the coal industry. As a result the UK's greenhouse gas emissions appeared to decline during a period in which climate change started to become a growing international concern. This structural shift enabled the Labour Government of 1997 to set out an early target of a 20% reduction in the UK's CO_2 levels by 2010 according to 1990 baseline levels – more demanding even than the Kyoto target.

But the rather more complex nature of the issue soon became apparent when emissions began to rise again during this time, mostly due to continuing growth in road transport and air travel (Royal Commission, 2000). There was also mounting evidence to suggest that there would now have to be a more direct connection in policy initiatives to household energy demand - responsible for as much as 40% of the UK's CO_2 emissions total (Jones et al., 2000). Critics pointed out that the energy expended due to 'lifestyle factors' and the carbon embedded in demand trends, was evidence that policy initiatives needed to be much more flexible if they were to be effective in addressing climate change.

The reality is that governance itself becomes 'stretched' by the demands of climate change. It must reach upwards to the world stage; downwards to regions, local communities and households. Global targets must mean something to households. Global initiatives must resonate at the local level. In the UK, this dynamic has begun to evolve into a complex, multi-level political structure; demonstrating many of the hallmarks of what Hooghe and Marks (2001) have described as a system of 'multi-level governance'. The UK's energy and climate change policy framework exemplifies this shift. Decision-making and implementation are coordinated through a complex network

of intersections within and between national, international and local levels. The loci for decision-making have become dispersed across a variety of institutional structures. The importance of the local level in this complex 'political triad' has become particularly significant in recent times, where a focus on the behavioural and social changes which will be needed to adapt human society to the constraints of the planet have become increasingly apparent. This recognition has increasingly informed government policy and academic inquiry during the last decade (Jackson 2005, 2008), and has provided the impetus for a diverse range of emergent 'state' and 'non-state' (grassroots) initiatives (Jackson and Michaelis, 2003; Church and Elster, 2002).

In recent years the UK Government has been particularly keen to emphasize the important function that local government and communities can - and should - perform in galvanizing action towards sustainable energy solutions and household carbon reduction. There is increasing consensus amongst policy-makers that projects which can be located within bottom-up solutions hold the potential to be more effective than top-down initiatives, for instance, in enabling individuals to recognize their own role in contributing to more sustainable levels of energy consumption and also in encouraging citizens to engage more fully in the wider political debate on sustainable living. The UK Government proposal on 'localism' is the most recent UK policy statement to emphasize the important role to be played by local government in leading a more local response to the issues of energy and climate change. During the last ten years, this role has been considered through a range of key policy documents, legislation and guidance. Those documents have built upon principles that were first introduced through the Local Agenda 21 programme, which constituted the first substantive political attempt to link together local, global, and intermediary political structures into a more effective framework for the governance of global risk (Agyeman and Evans, 1995).

Some observers suggest that the localism agenda in the UK is an attempt to locate (individually and collectively) the political citizen at the local level — one in which policy development is driven more directly from a grassroots approach. In the UK for instance, the emergence of a new 'energy service sector' will, in theory, allow local authorities to engage communities in shaping the emergence of more distributed systems of energy provision. It is hoped that one of the benefits will be to enable citizen-consumers to understand more fully the consequences of their energy choices and end use decisions. However, the effective integration of such a system demands that appropriate and sustainable structures of engagement must be set in place in order to provide meaningful and realistic opportunities for community involvement. This would include forging appropriate connections with energy providers, funders, regulators, and other communities of practice. More recently, a disparity between shrinking resources and growing social needs, points to further barriers and challenges around engaging communities in policy making at the local level. Although many local authorities across the UK have been slow to take up the challenge of community engagement in practical ways, there is nevertheless growing consensus in policy to suggest that they have an increasingly important and influential role to play, in their capacity as an interface

between citizens and government policy. Although relatively small in number, the instances of 'best practice' cases that do exist serve to demonstrate noteworthy progress that might usefully be replicated, with suitable modifications, on a broader scale.

In the first section of this paper interview extracts are used to explore what the emerging role of local government in energy governance actually is – and might become – from the perspective of local authorities themselves. The second section considers some of the ways in which local government try to incorporate the public into their strategies for sustainable energy policy, focusing in particular on the opportunities and challenges associated with their attempts at 'community engagement'. In the third section the focus is on incorporating local knowledge on sustainability issues into planning and strategy at the local government level. A separate, complementary working paper, will examine in more detail the implications of finance for the effectiveness of local government efforts vis-à-vis community action in local energy governance.

2. Political space: a changing role for local authorities?

In UK policy circles, there is a growing recognition that the interface between policy making and the public, mediated through local government can provide a vital and practicable means through which to deliver carbon reduction at an individual, household and community level. Local action is a recognizable element of the 2009 Low Carbon Transition Plan (DECC, 2009) and a much more mainstream concern in the Coalition Government's Big Society and localism agenda (The Cabinet Office, 2010). Politically, one of the consequences of this has been a higher profile for local authorities in the UK's climate and sustainability agenda, particularly in relation to leading on and engaging with the technological aspects of energy infrastructure and delivery of sustainable demand-side energy management (Roberts, 2010).

In a broader sense, the increasing relevance of energy to a whole range of social issues in the UK – notably fuel poverty, transport, and planning – suggests that a more collaborative approach to policy has become an almost unavoidable reality for local authority decision makers. However, whilst some have grasped this and run with it as an evolving programme of collaboration, for others it remains more of a disaggregated, piecemeal process, typified by a failure or unwillingness to understand the political, cultural and economic challenges that characterize the interface between local government and communities. One of the interviewees from Oxford City Council was keen to stress the importance of this emerging role for local governance, suggesting that it was a vital element of the UK Government's sustainability agenda:

> Given climate change, given the increasing prices of energy, governments and international agencies have taken action about trying to curb the use of energy and switch to renewables and all that kind of thing and individuals and individual companies have obviously responded particularly to the higher energy costs but also the government legislation. And it seems to me

> that local authorities are the meat in the sandwich…that we actually work out in practical terms what that that reduction in energy use or using more renewable energy means at a local level. It's a role we have taken on with some enthusiasm in Oxford (OCC 4).

The City Development Director from the same local authority also agreed that there is a space opening up in this area which could enable local authorities to become civic leaders in energy related policy matters. He argued that that one of the key elements here was that they were becoming, or being asked to become, 'doers' rather than 'enablers':

> There's an element for the local authority to be a civic leader. Local authorities have changed from being 'doers' in certain areas to being 'enablers'. If you actually look at what we've been doing in lots of areas. I mean this council actually having said all that is probably a doer in certain areas where other councils aren't. Generally, councils overall have stepped away from a lot of hands-on stuff but nevertheless we do have a growing role in leadership and therefore, in this whole area, it's going to do what we can to help business but particularly residents, make it easy for them, to do the right thing in relation to energy (OCC 3).

A similar viewpoint was expressed by one of the Woking Borough Council interviewees, who argued that:

> I guess we've seen some recent peaks in fossil fuel prices and energy costs so it's certainly brings it to the authority's attention and probably to members of the public's attention and, yeah, it's been a significant part of national media coverage really so, yes, I'd say, yes. I've been working here now for about nine years and, when I started here I felt that the council's energy agenda was kind of a bit of a bold-ish step which was quite, possibly not going with the grain of energy policy or direction in the country. But now I feel it's kind of more something that other authorities are going to be considering, and is an important consideration for the UK as a whole (WBC 4).

Several interviewees pointed to the influence of energy issues on many other areas of local authority service provision. It was suggested that because of this influence it is almost inevitable that they will come to have a larger role in making decisions around energy in their jurisdictions: *'…well as far as Oxford City Council is concerned, we see climate change as absolutely central, and saving money on energy use and so on, so that we've got four or five priorities for the council; housing is another, tackling fuel poverty and so on…but climate change is one of those and has been now for two years and so it affects everything we do'* (OCC2).The issue of fuel poverty, for instance, was seen by the following interviewee to be one such 'catalyst'. He argued that the issue of fuel poverty had been instrumental in beginning to get local authorities to think more strategically about energy:

> It used to be [energy at the local authority level] more a focus on fuel poverty. I think you used to find this time 10-years ago, local authorities would have an interest in minimizing fuel poverty within their wider remits, so within the borough there wasn't really an energy efficiency driver other than minimizing the cost for someone to heat or run their home. So the wider concept about promoting energy efficiency, promoting energy efficiency and fuel rich and the larger consumers, wasn't really on people's radar. I think that change now has moved away from being

> just worried about ensuring that the fuel poor can survive to minimizing the overall carbon impact of the area, and so a much greater focus on improving energy performance across the industrial sector and across the fuel rich; people who can be larger consumers (WBC 3).

This interviewee suggested that energy itself had brought environmental issues much more to the fore, and had made it more acceptable for local authorities to have a greater influence in developing a much more coherent policy framework. As he argued:

> Traditionally local authorities, and Bradford is no exception, had environment sat in different bits so, in some areas environment meant emptying the bins, cleaning the streets, some areas it meant managing parks and open spaces as in biodiversity, environmental – all very fragmented. We've still got some of that fragmentation but what we're beginning to do is try to weave a thread of environmental thinking through all our strategy policy. So it's about a sort of climate, carbon, environment grouping, what we do moving ahead. So, in a sense, what we've been trying to do is put in place the networks, the communication channels and so on, to begin that process (BDC 2).

Whilst most of the interviewees in this research recognized the significance of the above views, not all interviewees were convinced that the emergence of these issues necessarily implies a leading role for local authorities in *governing* the supply and demand of energy in the UK. One interviewee, who had worked with Surrey County Council, for example, was noticeably more reserved in relation to some of the more ambitious claims around local authorities stepping into this kind of a leadership role. He observed that, originally, local authorities had had a big role in governing the energy structure in the UK, but pointed out that the shift of post-war political economy towards, firstly central government leadership and then a market-led approach, had bequeathed a legacy of centralisation, effectively marginalizing the role of local authorities as energy players. He made the observation that this role had been reduced from quite a high profile role in UK energy governance, firstly by nationalization and the centralization of energy utilities, and then by market liberalization, where control had bypassed local government influence to the big energy companies. He reasoned that this had also been accompanied by an overall reduction in political status – primarily by the Conservative Government ethos around 'best value' based service provision which had characterized the 80s and 90s. As he explained:

> You've still got, I think, a very limited concept of what local authorities can do by way of energy governance even though the demand for them to do that has gone up. So, for example, there's been in the last 10 years a clear expectation that local authorities will do things about climate change: mitigation as well as adaptation. A clear expectation that they should have some kind of sustainable development vision, and they are also meant to be brokers of local consensus between cross sectors through local strategic partnerships and the local area agreement (SCC 1).

He went on to point out that, while there has been a move towards shifting a degree of responsibility down to local authority level, and an acknowledgement that a low carbon transition would need involve some kind of framework around governing energy at the local level, there are several structural issues which remain; notably in changing the production system and all of the different actors and issues that remain controllers of

the energy market. As he emphasized, local authorities generally don't 'do' energy for its own sake. Where they have become more involved in energy decision making, it has generally been as a means through which to deliver other objectives; notably now around the increased urgency of national climate targets and also fuel poverty objectives. Indeed, the issue of fuel poverty was perhaps the first issue to connect local authority duties to energy – and by implication carbon – where some measure of influence was invariably unavoidable. As this interviewee from Oxford City Council argued, the more recent role of the local authority in energy matters had emerged from a fuel poverty issue in the area: *"…my understanding there has been a fuel poverty agenda for some time that morphed into a carbon/climate change"* (OCC 1).

The interviewee from Surrey County Council emphasised that, successful local authority leadership is invariably the result of many different influences combining to encourage greater political leverage at the local level, greater policy focus and ways in which to 'scale up' activity, by garnering a critical mass of support at the local level. He felt that this alliance building – both within councils and around the wider community – is a particularly important aspect of influencing policy at both a broader and a more grassroots level. He also felt that building a critical mass of support was important in challenging the barriers around what was in effect still a macro level system of provision and in minimizing some of the risks attached to the development of innovative policies around energy. As he pointed out, the regulatory framework in the UK means that it is in effect a risk for an actor at the local level to take the lead on energy and that in general local authorities are 'risk averse':

> It's been because somebody has put some targeted resources in or it's been sheer luck because you happened to have just the right confluence of political and technical leadership, as in Woking. So, either way – you're either dependent on a stream of funding which might not last, or your dependent on a constellation of political figures and technical people which, again, might not last; it certainly won't. So I'd say that the policy framework has been moving towards, and the expectation of local authorities will be more ambitious, they will have more of a philosophy of governance, they will have something coherent to say about sustainability for their area, and all of that ought to imply that they become much more coordinated and ambitious about energy governance. In practice, the kind of legacy of not having enough money…and being often in a very weak position when it comes to bargaining with the private sector, means that that promise is not really fulfilled yet (SCC 1).

It was suggested that the most important factor currently hampering a more substantive role for local authorities in relation to UK energy governance remains the continuing legacy of a centralized system of energy production and provision, where end users have traditionally been treated as 'passive consumers' with little or no ownership over energy and its management. Variable uptake of renewable energy infrastructure, for instance, has often been linked to different levels of social acceptability and has been viewed as a problem of 'nudging' behaviours and attitudes by providing the 'correct information'; i.e. people will make the right choices when the options are explained to them and this can encourage a 'critical mass' of support

amongst the public. As he pointed out though, much of this is new territory for local authorities where their input has been minimal and not very clearly defined:

> There was no memory of the local authority being in any way involved in a kind of significant sense in the energy system because it had been privatized, and before that it had been nationalized, so the days when the local authority was in fact the utility provider and governor was long gone. As I say the main area where you could see some of that role coming back was in relation to energy from waste. I think you'll find many local authorities would still be quite baffled at the idea of energy governance. They would know what you're talking about in the sense of trying to squeeze maximum value out of their energy bills and so on, but they wouldn't see themselves, as I say, as governors of the system (SCC 1).

As he explained, Surrey County Council had come to assume a measure of influence over this issue almost by default and a series of *ad hoc* developments which had led to a slow revision of its role, and what its duties and responsibilities might come to mean in an era where energy and environmental issues are beginning to gain more prominence at all levels of policy and decision making:

> We didn't have a role in energy governance except by way of being a customer where we did exert some influence along the supply chain. And that was by virtue of being the biggest employer in the county…you know having a lot of sites so you'd have in theory quite a lot of purchasing power. The other aspect in which energy governance came in was that we did, at that time, have Audit Commission set, and government set, national indicators to meet on climate change. So there were two targets on emissions reduction, one in the local authority's estates and one in the whole area. Now, because you were being held to account, although you weren't going to lose any money necessarily by not meeting either of those goals, you were being held to account and that meant that you had to be mindful of all the ways in which you could reduce emissions in your estates which also meant that you'd be looking not just at getting a better deal off the energy supplier but also looking at energy efficiencies (SCC 1).

He reasoned that while there might be an emerging role for local authorities around energy, this is generally occurring on a piecemeal basis, characterized by 'scattered' political and financial frameworks, which are not currently aligned enough to encourage a clear sense of duty or obligation at the level of local governance.

Several interviewees argued that developing internal cohesion within a local authority also poses its own challenge. It was suggested that local government has evolved very much in relation to the two principal political ideologies around the primacy of either state or market in the UK, and this has a big influence in where local authorities have been situated in post-war politics in the UK. Whilst energy as an emerging issue at the local level has begun to challenge current working practices and ideas at council level, different departments and personalities have not always worked together effectively around either the need to act or in respect of how, practically, to address these issues. This is true also within departments, where there is often disagreement over whether energy and environmental issues should be prioritized. Consequently, there is often a problem with coordinating clarity and cohesion on these issues *across* departments; and very often mobilizing the appropriate level of expertise and capability in relation to implementation. These issues have emerged as both barriers and challenges in relation

to a clear sense of direction for local energy governance, as this interviewee from Bradford District Council observed:

> Part of the challenge then and because of where I work in the organization and where we're at as an organization, part of the challenge then as a leadership perspective is to be able to say, 'how does this look from a leadership perspective?' And what that means as far as the conversation we've had with the Chief Executive and with other senior colleagues is, 'how do you look at this from a whole systems point of view'? And what they're saying is, 'hold on, planning have got a different perspective on energy, Housing have got a different perspective on energy, Jamie you have got a different perspective on energy, so, come on you lot, join it all up for us and get it to hang together because, what we're ending up having to do at the top of the organization is deal with all of these competing different views. What we want is a clearer idea about any of the single issues, like energy, from a whole systems thinking and a whole systems action point of view. So, the other observation is, generally we're not bad at doing whole systems thinking, i.e.: it's getting easier and easier to get groups of people with different opinions and different responsibilities in a room together to do the whole systems thinking bit (BDC 1).

The interviewee went on to argue:

> Local government and its politicians still see its prime responsibilities about its service provision rather than the outcomes for a locality. So, part of the conversation about changing Bradford Council is, 'how do we become an outcomes based organization that puts the sustainable wellbeing and resilience of the district into the DNA of the organization'? And then match that, with the short term urgent demands of keeping the ship afloat, making sure nothing goes disastrously wrong, making sure that we can be seen to be a responsible organization in the short term (BDC 1)

One of the interviewees from Oxford City Council concurred with this statement, adding the proviso, however, that local authorities needed to get their own 'house in order' if they are to take on greater responsibility over energy matters. He suggested this is particularly important if they are to provide political influence in reaching the wider community in relation to the sustainability message:

> It's no mistake that the carbon management programme [adopted by the City Council in Oxford] is called *Getting Our House in Order*. We took a very conscious step to do just that before we went out to the broader community across the city and started to engage with them around what they could do. So, for example, as part of Low Carbon Oxford we are running a a synergy forum, for energy managers from across the city just to share technical knowledge in retrofitting stuff (or not, or brand new, where people have got the opportunity but typically we're retrofitting). And we're now able to share our expertise. Our energy manager can go and share his expertise through that forum and we're able to share our experience around things like the feed-in tariff and how we're procuring that, and handling that. So there's an example, and wanting to be seen to be proactive in the space; and then there's a practical application as well (OCC 2).

'Getting the local authority house in order' was also a point also raised by one of the interviewees from Woking Borough Council, who suggested that:

> In our local area, we have two major aspects [in relation to their sustainable energy strategy] : (1) keeping our house in order and that's a local policy choice that the organization's obviously taken

> a proactive role on minimizing our carbon footprint and that's to do with our local political standpoint. And, being a major employer, quite a large asset owner, obviously we have a significant impact on the local area. Just weren't treating our own things we can deal with directly, our influence over the wider community, probably the change over the last 10-year period, there's a greater focus on our influencing role, encouraging others to adapt (WBC 1).

Another interviewee suggested that a part of this leadership meant that local authorities must show the level of expertise needed to engage with the particular issues around energy in their jurisdiction – especially important given the fact that the majority of local authorities have traditionally not been involved in the major decisions around energy supply and demand. He pointed out that in order to perform this role effectively, local authorities should be able to have a 'whole system' understanding of energy; its role in their local communities; and what sustainability pathways might be possible in relation to both energy infrastructure and wider community practices and behaviours:

> From a political and a moral and a democratic perspective, local government at least needs to understand how energy is currently managed within that system because it may have views that Bradford District really needs might be completely different from Hull and Humberside, it might be completely different from a London borough. It might be completely different, or it might be completely the same, as Freiburg. But, to what extent have we got the ability to understand the current system in order to make changes to that system for the wellbeing of the district? (BDC 1).

He went on to suggest that:

> I'd have to say yes [the Council have a role in overseeing sustainability] because not least professionally and personally, there is the notion of being a public servant and serving the public and, are we then serving the public if we're not aware of the risks and uncertainties and issues that that poses? Have to do that because the vision and values of the Council are based on a constitution that says our primary objective is to secure the wellbeing and sustainable development of the district. But the need to be able to look at energy as a business resource is key for local authorities. It's always been there in the background (BDC 1).

The following interviewee from the Energy Saving Trust made the argument that it was vital for local authorities to have the guidance of a coherent national framework within which to develop a higher profile around energy and environmental issues. He pointed out that the introduction of the Home Energy Conservation Act, for instance, had been a good example of a policy conceived around national objectives (energy and environmental goals), which had been implemented at local level; in this case to guide and encourage local authorities to initiate action at local and household levels on energy issues. Whilst not overtly designed to address climate issues, the introduction of HECA did enable local authorities to use the policy as a way in which to frame action on energy. As he argued, the framework for HECA enabled some of the more ambitious local authorities to develop initiatives at the local level:

> It meant that monitoring carbon became the business of local authorities as well as just the domestic energy efficiency side, and in a lot of cases, we found that that did make local authorities really start to think in a much more strategic way about what they should be doing on

> carbon emissions, and that produced a lot more kind of interesting initiatives from authorities, you know, because basically it meant that anytime somebody approached them about a carbon-saving project, they immediately had something they could hang it on, that, you know, "Oh well, that will deliver on our indicator on climate change," and, you know, the vast majority of local authorities did sign up (EST 1).

In the same vein, the interviewee spoke about the introduction of national indicators:

> I think it was something like two-thirds of authorities signed up for that indicator, and it did make a…a huge difference, and it made local authorities, you know, quite a major player in the field of carbon reduction generally. The kind of combination of those two things and the evolution of that did make a really big difference because, and I think, basically, you know, a lot of it comes down to the fact that local authorities have a key role to play in, you know, as sort of local regulator, local leadership role…and a [powerful] facilitator and funder potentially as well. There are a lot of people within local authorities who are really keen to do something, but they do need, because the local authority has such a diverse portfolio of activities, they have to have some kind of statutory framework for that or it's just going to be the first thing to go every time there's cuts (EST 1).

This interviewee from Thameswey – Woking Borough Council's energy service company, pointed out that HECA had been instrumental in providing an overarching framework for the council's ambitious, local energy agenda:

> Woking was by far and way ahead of the game in terms of investing money that they had saved from energy efficiency into local projects through HECA – well, they were delivering it under the HECA banner so they set up insulation schemes and they set up a condensing boiler scheme before condensing boilers were law to install. So all of these things were kind of done off their own bat really rather than being forced by central government, because they could have just reported like every other local authority was reporting and not really done a huge amount (WBC 2).

2.1 Political Space – section summary

The interview data reflect a range of views on the extent to which there is a recognizable political space opening up for local authorities around energy. The more recent policy landscape in the UK – particularly *The Low Carbon Transition Plan*, *The Localism Act,* and also the forthcoming *Green Deal* – all suggest that there *is* a larger role for local authorities to play in coordinating a more sustainable and much more secure energy system at the local level. However, the interviewees in this section suggest that there must be a degree of caution exercised in some of the grander claims made for this role within a system that still retains a large degree of centralization in key areas of practice and influence. Whilst some agreed that there had been a shift towards local government decision making around different aspects of energy, it is acknowledged that this remains rather disjointed, with no clear picture emerging around how these roles and responsibilities might be coordinated both within and between local authorities.

3. Community Engagement

It has been suggested that the links between institutions, communities and individuals are critical in carving out more sustainable pathways (see for example Roberts, 2010 and Peters *et al*, 2010). In the previous section, several interviewees stressed that engaging with the public would be an important aspect of developing an effective vision around sustainability at the local level. There were two broad themes in relation to community engagement which arose from the interviews. In the first theme, responses focused on particular initiatives developed by the local authorities, where involvement of the community has played a central role. The second theme includes responses that refer to the broader, strategic aims of local government in combining democratic and institutional renewal towards a more sustainable future.

The attempts to engage community members described by the participating local authorities in this research are indicative of a range of initiatives developed both by local government and grassroots groups, particularly over the last 5-10 years, which aim to encourage the realization of sustainable energy solutions and shifts to lower carbon lifestyles. As well as demonstrating several opportunities and benefits associated with these endeavors (including the provision of resources: education, information, advice, physical and cognitive space; and pointers to practical action), recent evidence also reveals a series of barriers facing community-oriented energy/climate change initiatives, particularly in relation to engagement (CSE, 2007). The primary obstacle is well known, relating to the difficulty of generating interest and participation beyond those already routinely engaged in 'pro-environmental' behaviours and with an existing interest in sustainability issues. The problem of connecting with society more broadly remains a persistent challenge. Almost inevitably, making this connection requires some recognition of difference and diversity among individuals of the same community. Defining the term 'community' can itself be problematic as society is decreasingly made up of discrete, geographically identifiable communities and is increasingly composed of many diverse communities – which often overlap and sometimes exist in complete isolation from one another (for a full treatment of this issue see Peters et al, 2010 and Peters, 2010).

Barriers to engagement are also symptomatic of broader problems associated with, particularly, a reliance on local authorities as change agents in addressing the more intractable challenges of sustainable development (Byrne, 2000; Fudge and Peters, 2009). Even for local authorities committed to community engagement as a key focus for their energy and climate change agendas, problems of poor image and perception in the community, associated historically with low levels of trust and a lack of confidence in local government policies, invariably serve to hamper the effectiveness of locally focused sustainability initiatives in many cases.

In addition to the problem of institutional barriers to community engagement in policy, a growing body of evidence indicates that individuals are not currently consistently willing and/or able to take personal action on climate change *per se* (e.g. Norton and Leaman, 2004; Lorenzoni *et al*, 2007; Spence, *et al*, 2011). Although there is generally a

high level of awareness of environmental issues in the UK amongst the general public, concern about the threat of climate change remains relatively low in priority for most people and has in fact declined in perceived significance in recent years, together with a slight increase in skepticism on the issues of impact severity and human influence (Spence, et al, 2011). The literature in this area suggests broadly that limited public concern is one major factor, and also that the link between attitudes and behaviour is currently weak. As Platt (2011) points out, changing attitudes and behaviour remains a critical factor in the success of initiatives to tackle climate change, suggesting in turn that even after the introduction of the Green Deal[1] in autumn 2012, the creation of consumer demand for energy efficiency measures will continue to be problematic. Platt suggests that community energy projects could play an important role in generating public support for the broader task of investment in and construction of new energy infrastructure, but evidence suggests that there is a long way to go before these contribute to energy policy in the UK in a substantial way.

3.1 Community engagement via council-led initiatives

In one of the Oxford Council interviews it was explained that, under the last Labour government, the council became a 'Pathfinder Authority', recognized for taking a lead in the area of climate change. Since then the council has obtained a small amount of money from the national government to develop this position, a key part of which has been promoting the community groups in Oxford City Council's sustainability agenda. A key stepping stone in this regard was the establishment of a local community initiative. As the interviewee explained:

> Low Carbon West Oxford happened to have a lot of enthusiasts but also a lot of experts and key people. I think it is probably one of the best community groups in the country in terms of reducing carbon footprint. And the things that they're doing in encouraging the changes in lifestyle and insulation in houses, getting solar panels on roofs of schools, and all sort of things. (OCC 4).

This 'model' has subsequently been rolled out to involve residents across a greater geographical area of Oxford and now includes Low Carbon North Oxford, Low Carbon South Oxford and Low Carbon Barton. The interviewee suggested that the roll out of this programme might well be difficult to replicate or transfer to other local authority areas, where effective engagement was invariably reliant on an effective level of public support. Therefore, he made the point that, in Oxford, the public are:

> Probably more aware and more supportive of these kind of initiatives than in a lot of parts of the country and so local people are just very keen to get involved and to do something, and we're encouraging that (OCC 4).

[1] A UK Government policy, introduced October 2012, and fully established 28th January 2013, which is designed to accelerate installation of energy efficiency measures in the UK's housing stock. Consumers will be able to pay for installation through the cost savings that the measures deliver (Platt, 2011).

Outline details of the Low Carbon Oxford initiative are provided in Table 2, and details of initiatives developed by two of the other participating councils are presented in Tables 3 and 4.

Table 2: Outline details of Oxford City Council's 'Low Carbon Oxford' initiative

Name of initiative	**Low Carbon Oxford**
Operator	Oxford City Council/Oxford Strategic Partnership
Brief details	A city-wide programme of collaboration between private, public and non-profit organisations with the aim of ensuring Oxford's future as a sustainable and low carbon city.
Date established	Led by the Oxford Strategic Partnership, the Low Carbon Oxford programme was launched on 14 October 2010 when 15 Pathfinder organisations signed the Low Carbon Oxford Charter
Status	On-going
Main objectives	• to reduce the overall carbon emissions of the city by 3% year on year – achieving an 80% reduction by 2050, • the creation of more 'green jobs' and a sustainable economy, • for Oxford to become an exemplar low carbon city for the UK
Progress	The programme is rapidly gathering momentum; there are now 23 pathfinder organisations committed to the charter. The programme has 3 key strands: **Pathfinder Programme:** A set of collaboration projects which Pathfinder organisations from the public sector, private sector and the community will work together to develop and which will lead to short-term impacts on carbon emissions. **Measuring, Monitoring and Mapping:** Academics and experts in field of carbon footprinting collaborating to develop standard methodologies for measuring and monitoring of carbon footprint and emissions of organisations and individuals in Oxford and for mapping an overall carbon footprint for the city. **Oxford Futures:** In order to tackle the problem of climate change and adapt for future conditions some large scale forward thinking is required. Oxford Futures is the arm of the programme which is concerned with cutting edge technologies and large scale solutions for the sustainability of the whole city; working with universities and researchers to reach 2050 targets as soon as possible.
Economic dimensions	Since its inception the programme has attracted over £300,000 in funding and there are a number of projects in place which aim to contribute to carbon reduction across the city.
Social aspects	There is a strand of the programme entitled 'Low Carbon Oxford for Communities and Individuals' within which the OxCO2 project is located. This project is developing a structured approach to community action on climate change across the City of Oxford. The project is funding the development of city-wide social enterprises, a low carbon communities toolkit and 3 pilot communities. A suite of mentoring and training packages are being developed to support new low carbon communities to get going. The replication of this approach will be tested in 3 communities across Oxford: Low Carbon Oxford North, an affluent community already active; Barton, a deprived community with no activity; and Low Carbon South Oxford, a mixed community struggling to get going. Around 20% of the City will be covered in the pilot programme. After September 2011, the social enterprise will roll out the approach across the rest of the City and the County. It is expected that the project will be self-sustaining until at least 2050.

Table 3: Outline details of Bradford District Council's 'Community Warmth' initiative

Name of initiative	**Community Warmth**
Operator	Bradford Metropolitan District Council (BDC)
Brief details	BDC worked in partnership with NPower to offer free loft and cavity wall insulation to residents over 60 and those in receipt of certain benefits. In addition, all private sector residents could benefit from the scheme by receiving heavily subsidised insulation even if they did not qualify for free work.
Date established	September 2008 – March 2011
Status	The initiative has ended
Main objectives	• The scheme offered a free home energy service by a qualified surveyor, who also asked residents if they had fuel payment problems or if they would like a benefit entitlement check. • Residents were also referred to the Fire Service for a free smoke detector (if they did not have a working one), and every household surveyed received two free energy-saving light bulbs.
Progress/Forms of technology involved	• Work at each property was carried out by Community Warmth's specialist team of contractors, usually being completed in less than a day. • Bradford has polarised wealth distribution. Measures were moved round so that all areas had opportunity to benefit. The scheme was successful in relation to carbon saving and also in addressing the fuel poverty and health agenda.
Economic dimensions	The project was financed as a partnership effort between the council and NPower.
Social aspects	An N Power brand, working with community groups. The BCC side of the partnership demonstrates the value of local authorities – local people *'tend to trust the LA because we're not making a profit and if you're not happy you can complain'.*

Table 4: Outline details of Woking Borough Council's 'Oak Tree House' initiative

Name of initiative	**Oak Tree demonstration house**
Operator	Woking Borough Council
Brief details	A 1930s three bedroom detached house which has been transformed into Woking's first low carbon demonstration home – a showcase for energy efficiency, renewable technology and water saving improvements.
Date established	Autumn 2009
Status	On-going
Main objectives	• To show local people the types of measures they can implement in their own homes to help reduce their energy use and water consumption. • The refurbishment was designed to minimize the environmental impact of the house. It has been furnished using sustainable materials wherever possible and is intended to show that an energy and water efficient house can also be a welcoming, attractive and comfortable home.

Progress/Forms of technology involved	The house has three different types of insulation to reduce heat loss and has a high efficiency boiler and heating controls to provide heat where and when it is needed. Much of the hot water required in the house is provided by a solar hot water system. Energy saving lights and appliances help to reduce the amount of electricity used in the house. A 2 kWp solar photovoltaic system has also been installed. Simple water efficient shower and tap fittings reduce water consumption and a rainwater harvesting system provides water for flushing the toilet and for taps in the garden. This system and the permeable paving on the driveway also contribute to efforts to reduce the risk of flash flooding in the borough. The garden at Oak Tree House has been designed with water and energy conservation in mind, too, with drought-tolerant planting and low maintenance wildflower turf.
Economic dimensions	The project was financed as part of Woking Council's broader 'Oak Tree Programme' – a partnership involving the council, its energy company, the Energy Centre for Sustainable Communities (ecsc) Ltd, building partner (Mansell Plc) and environmental partner (Woking LA21).
Social aspects	By spring 2012 the ambition is that the Oak Tree programme will recruit 1000 households and will help each one along the pathway to becoming a 'Low Carbon Home'. It is anticipated that reductions in emissions from household energy use of 60 per cent to 80 per cent or more (equivalent to 4.0 to 5.4 tonnes or more of carbon per household per year) and reductions in water consumption of 30 per cent or more (equivalent to 50,000 litres or more per household per year) should be achievable from a range of practical and effective energy and water saving measures, as showcased in Oak Tree House, supported by simple behavioural changes. Residents will be encouraged to implement measures within Oak Tree House in their own homes and to make further savings by using their homes more efficiently. The programme is intended to provide a pathway for all Woking residents to follow, with measures grouped in easy-to- understand packages to suit different levels of expenditure and commitment.

As the findings which emerged in Section 1 demonstrate, one of the challenges in providing effective leadership around energy and environmental objectives at local authority level, relates to the difficulties in getting different departments and individuals to 'buy in' to a common, local, vision of sustainability. Local government institutions are involved in a number of roles and types of service provision; some of which might well conflict with more recent goals in relation to the provision of leadership on energy. In addition, there may be employees within the local authority who are less convinced about the threat of climate change and are unwilling to sanction or collaborate on environmental initiatives led by the council.

An example of how improving environmental performance can work to provide a focal point around which different parts of a council can unite is provided in the case of Oxford City Council's decision to utilize the Energy Saving Trust's Smarter Driver Training scheme. As this interviewee argued, one of the reasons for the council's involvement in the scheme relates to a broader policy of:

> …seeking out external recognition for what we do… it's powerful internally and it's the pat on the back – people getting told that they're doing a good job by someone with an independent measuring stick…and that's really useful to keep people's enthusiasm (OCC 4).

Participation in the scheme involved the Energy Saving Trust leading the training for 350 drivers. This, in itself, proved beneficial in relation to developing a sense of internal cohesion: *"…the organization came together, which doesn't always happen I can tell you, but it came together and it was just ticking everybody's boxes at a certain time"* (OCC 4). The council operates a fleet of vans, so the idea of trained drivers being able to put less wear and tear on the vehicles was considered to be a major potential benefit in respect of maintenance costs. The scheme also tied in with safety issues and recent legislation about liability of the authority if anybody has an accident in one of their vehicles: *"because greener driving is safer driving anyway"* (OCC 4). The training was carried out locally in one-hour sessions over the course of two weeks. The Chief Executive did the training as well. The average saving in fuel consumption was around 18% relating to approximately £70,000 per year in fuel costs. This resulted in the Council receiving the Energy Saving Trust's Smarter Driver Award for fleet drivers, which together with the national coverage that the story received in the print media, *"all adds to the feeling that we're doing something useful and there's political capital in it as well if we're standing out and being reported on in the New Scientist and The Guardian and so on"* (OCC 4).

A recurrent issue with regard to the 'internal' dimension of a council addressing energy issues related to the differing relevance of the issues for different council departments. Speaking of Oxford council's policy strategy for climate change and sustainable energy one interviewee argued that *"…it can feel like banging your head against a brick wall at times. Colleagues in estates and domestic management weren't particularly interested in this agenda. It was member support and senior management support that helped us drive our agenda internally certainly. It's harder for the departments that wouldn't have been so naturally inclined to align themselves to these issues"* (OCC 3).

3.2 Barriers and challenges to community engagement

One of the barriers to engaging the community in council policy alluded to by several participants, centred on the recent shrinkage of financial resources available to local authorities, which some interviewees felt can reduce the capacity of councils to drive forward their agendas for community engagement in the sustainable generation and management of energy. For example, one of the participants, representing Woking's Energy Service Company Thameswey, explained how dwindling resources have impacted negatively on the attendance of local authority officers involved in a network which Thameswey run the secretariat for in the South East. The network involves local authority officers throughout the UK, originally focused on sharing experiences and best practice in relation to engagement initiatives around the Home Energy Conservation Act (HECA). It is now called the Carbon Action Network (CAN). The network meets on a

quarterly basis to discuss what they are doing and what initiatives they have been involved in, but as he explained *"…that's tailing off a little bit because of budget cuts, so we've seen attendance at those kind of meetings diminish"* (WBC 2). Finance and budgeting problems were also seen as problem for the following interviewee as he explained the changes which were taking place in Bradford District Council due to the recession:

> Bradford Council is going through the most unprecedented changes as an organisation, most of which in the short term are definitely cost and finance driven to the extent where we have to remove about £60M odd from this year's budget and another £25M next year. This runs in parallel with a story that started before that cost challenge which was, if the Council exists to serve the district and some of the problems in the district are fundamentally intractable, and the Council cannot solve it even with its public partners, and we're not going to get as much money as we used to get (BDC 1).

The specific challenge of connecting with different socio-demographic areas in the community was also an issue raised by several interviewees representing different local authorities. In Oxford, for example, it was pointed out that different approaches are being used in different areas so as to improve the traction of their appeals for individuals to engage in sustainable energy and climate change action. In particular, with regard to reaching and influencing less affluent areas, several interviewees argued that this requires special attention to the approaches used, as an intrinsic lack of social cohesion is often deemed to characterise those parts of the community. Explaining how the Low Carbon West Oxford model is being applied to different areas of the city, this interviewee explained:

> We've got the Barton area of deprivation so it's got different issues from West Oxford which is a fairly mixed area, professional, ethnic minorities, social housing. And then you've got North Oxford which is very wealthy so it's got a different set of issues, and then South Oxford which is a mixed area again. So I think one of the findings of that is that areas of deprivation don't have all those interlinking things going on anyway there's very little reason for the community to get together. So you've got a harder job getting it established and you've got to find ways of pushing the local buttons. So they're fronting it as a green space thing in Barton, so it's about Barton's getting expanded, new housing development… so it's protection of green space, but with the low carbon message associated with that (OCC 1).

In a similar vein it was made clear that engaging effectively with the multiplicity of needs and priorities that exist in a community remains a core challenge to this strategy. Connecting with people 'where they are at' in their lives came across as a key issue that local authorities are now beginning to grapple with, for example:

> I think, when you're a politician, local or whatever, people see these big problems and they expect the local council to come up with the solutions – acceptable - solutions that are acceptable to them. That's what my job is I think, to make it easy for people in Oxford to cope with climate change and reduce their use of non renewable energy in a way which means that they've still got a job, they've still got a home, they can still travel around, and that's what they expect me and other councillors to deliver. And, if we can't deliver it, they'll vote in somebody else (OCC 1).

The following interviewee – from Bradford District Council – pointed out that whilst the the realities of many people's lives can hide the carbon embedded in certain behaviours and lifestyles, experiencing issues such as fuel poverty can also make carbon visible to them:

> ...carbon and energy in themselves may not mean much but keeping warm and saving money almost certainly do... (BDC 3).

3.3 The relevance of community engagement in local energy governance

Two key issues relating to the changing role of local authorities in energy, or decision making over the governance of energy over the last decade, which formed points of consensus across the participating councils were:

i. Local authorities have not traditionally been a major player with regard to energy generation or distribution. Although this remains the case in many respects, there is an increasing expectation that local authorities will now assume a role of growing importance in the delivery of the Government's strategy for transitioning to a low carbon energy economy;

ii. As a result of (i) above, the term 'energy governance' has not been an intrinsic part of local authority parlance – or understanding – until relatively recently, and in fact still remains as a somewhat obscure phrase with regard to practical ramifications and actions associated with it.

Echoing a point made in the first section of this paper, several interviewees stressed that there was a balance between 'doing' and 'enabling' that had yet to be worked out around the decision making infrastructure in the UK. As Vaze and Tindale (2011:42) have pointed out: 'local government in the UK lacks many of the powers held by sub-central government in the US and in other European countries'. The reality of this issue, and the link between community engagement and an increased emphasis on local authorities in delivering sustainable energy policy, was made by the following two interviewees:

> I think traditionally local government hasn't been seen as a player in the energy market, in the energy sector. Traditionally, it's not been a role for local authorities to lead on the district energy debate – it just comes down the wires, down the pipes to people's houses or businesses from the energy providers. What we're being forced to do now is think about it differently, think about what our story is, and then think about how we take that back to test it with communities (OCC 2).

Another point raised was that difficulties associated with engaging ommunity groups around energy is often related to broader problems around social engagement. He argued that, because energy was a relatively new policy area in relation to local level

decision making, it might take time to build close relationships between local authorities and their surrounding communities:

> There's not a long history of community engagement around energy issues because of this thing about the energy marketplace and renewals and so on being relatively new. And there are the usual suspects and I'm speaking somebody today about community wind energy, as it happens in a town not five miles from here. So we've got an ongoing engagement with people where there bits of interest going and through things like the transition town movements, local Friends of the Earth group, and so on. There has been a drive to look at domestic energy efficiency driven by issues around fuel poverty and housing (OCC 3)..

A connection was also made by some interviewees between community engagement and the capacity of local authorities to act as facilitators and enablers in this way. This facilitating role was felt by some to reflect a general change of position for local government in energy governance, politically and practically, during the last decade.

One of the participating officers from Woking Borough Council who referred to the barriers and opportunities around the growing focus on the authority's influencing role, particularly in terms of encouraging others to adapt. In Woking it was stated, for example, that:

> There used to be more of a focus on fuel poverty… This time 10-years ago, local authorities would have an interest in minimising fuel poverty within their wider remits, so within the borough there wasn't really an energy efficiency driver other than minimising the cost for someone to heat or run their home. So the wider concept about promoting energy efficiency, particularly in respect of the fuel rich and the larger consumers, wasn't really on people's radar (WBC 3).

Returning to points made in the previous section, the same interviewee went on to suggest that for many local authorities, their role in relation to energy has now moved towards a broader set of responsibilities regarding the carbon impact of the area, *"…and so a much greater focus on improving energy performance across the industrial sector and across the fuel rich; people who can be larger consumers"* (WBC 3).

As the previous section highlighted, leading by example was considered by many interviewees to be a core – and necessary – element of local authority engagement on energy issues; particularly in relation to coordinating the necessary degree of cooperation from the business and residential sectors in such activities. Several interviewees referred to the importance of leadership in respect of the behavioural and practical aspects of delivering sustainable energy governance. It was suggested, for example, by one of the Bradford Council interviewees that 'getting our own house in order' was a key priority when he first took up his post five years ago, so that "…*if we were going to go out and proselytise about energy efficiency and new energy sources that we were at least starting to do some of that stuff ourselves"* (BDC 2).

3.4 Making energy more relevant and grounded in everyday concerns

Several participants pointed to the intangibility of carbon for 'regular householders' and difficulties for them in grappling with the magnitude of climate change and its ramifications. In the literature O'Neill and Hulme (2009: 402) have pointed out that 'climate change is an issue that is difficult to connect with in a tangible way at individual level', while Lorenzi and Pidgeon (2006) assert that the issue itself is 'remote both in space and time and it is perceived as affecting other communities and future generations'. In relation to policy, Whitmarsh (2008: 14) makes the point that 'government exhortations to reduce energy consumption will go unheeded if they are incongruous with the social and physical context of everyday life'.

In order to make requests for engaging in sustainable energy action more appealing, it was suggested by some of the interviewees in this research that there is a need for local authorities to recognize the types of energy related issues that are more understandable and immediately relevant to people's lives, and to incorporate these issues into their community engagement initiatives and outreach strategies. The following quotations highlight the relevance of these issues for some of the local authorities who took part in this study:

> I would suggest people are more worried about things like energy security because it feels a bit more immediate and real than carbon and climate change, and actually it's about your lights going out. I think, when I say carbon puts people off, actually I mean carbon, energy, environmental, anything to do with climate change …I think it's about tapping into how you run your women's network to include these things, not how you go and talk to them about carbon. It's about leverage (OCC 1).

> The big task for me is to help people understand that energy is an equally important issue alongside things like child poverty and the other social things (BCC 1).

> I think if you went to my Nan, for example, and talked to her about carbon, she's just say, 'oh, it's lovely dear'. Which is quite different from saying, 'actually Nan, you can get this for free, installed in your house, and you'd be cosy all winter'. It's a very different type of engagement (OCC 1).

3.5 Reaching beyond the environmentally pro-active: making use of existing community groups and networks

The evidence from our interviews signals clearly that local authorities seem to think that they need to work more closely with a wider range of community groups in order to improve the receptivity of their messages on sustainable energy consumption. The implicit assumption that broadcasting messages via such groups and their networks as an effective means to engage people, draws strength from a long intellectual pedigree including a range of predominantly social psychological theories and conceptual frameworks. There is substantial evidence, for example, that individuals are often more willing to take action when they are part of a physical or virtual community, or any such network that allows them to take action with others (Jackson, 2005; Peters et al, 2010).

Among such communities or networks, non-governmental organizations and the 'third sector' (which includes national voluntary organizations, local community groups, trade unions, co-operatives and faith communities) play a prominent and influential role in society.

Hale (2010) identifies a need to establish a widespread understanding of the connections between climate change and a range of issues that are important to many of these groups, such as poverty, housing, health, security and well-being. The evidence underpins the development in recent years of theories of how group memberships and social relations contribute to organisational life. These approaches are principally social psychological, deriving from a tradition developed by Henri Tajfel and John Turner:

> "...in our judgements of other people, ... in our work relations, in our concern with justice, we do not act as isolated individuals but as social beings who derive an important part of our identity from the human groups and social categories we belong to; and we act in accordance with this awareness" (Tajfel, Jaspars and Fraser, 1984, p.5).

The idea here is that groups are not only external features of the world that people encounter and interact with, they are also internalized, thus contributing to a person's 'sense of self'. In recognition of these points, Tajfel (1981) coined the term "social identity" to refer to that part of a person's self-concept that derives from his or her group memberships. Social identity plays a critical function in shaping organizational members' evaluations of and responses to situations. It forms a basis for distinguishing between similar and dissimilar others and as such provides the criteria that lie behind perceptions of the self and the social environment. However, as Wharton points out much more needs to be done with respect to understanding how particular social identities become salient, and the consequences of salience for community organizations and their members (Wharton, 1992, p. 67). One possibility is known as 'diffusion', the means by which environmental and other behaviours can be propagated by influential individuals in social networks (Fell et al, 2009).

The interviews conducted for this research revealed a high level of appreciation of the value that connections with existing community groups and their networks could yield in relation to engaging people in local authority strategies for sustainable energy. The following extracts reflect the views that were expressed by some of the local authority interviewees:

> With community groups, we're seeking constantly to encourage them and you know listen to them and to facilitate their next steps (OCC 1).

> There will be pockets of energy poverty and pockets of energy affluence because across a district like this, there's two thirds rural, that means using our community structures, neighbourhood forums, and things like that and our members' representatives' structures, again to begin to help develop some capacity and language to be able to talk about energy at community level" (BCC 2).

> Without those relationships at the local level there is no energy ecology. Part of it is a lot of those relationships tend to be based on certain agendas, or on certain parameters, so the challenge then is to possibly look at the multitude of relationships that we've currently got. Just about every one of our customers/citizens is an energy user (BCC 1).

Notwithstanding a clear interest in 'carbon-interested' groups (who it was stated 'are doing fabulous work') Oxford council's Environmental Sustainability Manager suggested that for her *"…it's more the networks we can tap into that are not carbon related that will help us to deliver something like the Green Deal. So that will help us to engage with bits of the community who wouldn't ever, who will never, get switched onto to carbon, but actually who could benefit from something like the Green Deal"* (OCC 1). In her opinion – which was reflected largely by that of the equivalent officers in the other participating local authorities – there are large sections of 'the community' for whom carbon alone and climate change are somewhat remote concepts:

> What we're seeking to do is to ensure that every individual householder in Oxford has access, essentially, to energy efficiency advice and measures. And also that we continue to address the fuel poverty agenda which is a slightly separate issue. Now, accessing all those individuals is a challenge and I don't believe that talking to them about climate change will do it for probably, you know probably more than 50 or 60% in reality. So how do we use other community groups? How do we engage with Mother and Toddler groups, or the WI, or Asian women's groups – you know, who've got absolutely nothing to do with this agenda but actually in the first instance whose core values may well match and ultimately who may well simply be interested in saving money and having a more comfortable home. Because, actually, ultimately, that probably captures about 80% of the population who would like to have a more comfortable life (OCC 1).

Extending community engagement beyond the 'already converted' was highlighted as a particular challenge by *all* participating local authorities. In Bradford, for example, one interviewee suggested that energy issues, and particularly renewable energy, are perceived as *"very middle class, soft, green issues".* He went on to say that the interesting work for them is in developing an equitable approach to community engagement around energy that does more than just respond to the 'green vote':

> …because, if you can spread that across all the other communities of place and the communities of interest in the district, that's when the district's resilience in terms of energy management starts to increase" (BCC 2).

One reason given for the difficulties associated with achieving broader community engagement was argued to be limited interaction with individual households by local authorities themselves - a reality alluded to by several participants from different councils.

> On an individual level, we have very little interaction with members of the public so we have a very limited interaction with – or relationship with – individual householders across the city on this issue and that's broadly because we've done nothing to really go out and talk to them. We do run an Oxford Is My World website which has got bags of information about a whole range of things across the subject, but I would hesitate to say we had a relationship with people through that

> website. The usage levels are really good for it but in terms of actual dialogue that's across a relationship, it's not massive. But at this time, we don't have the resources or indeed the staff to talk to them on a one-to-one level. about. I think something like the Green Deal will provide us with the medium to go and engage with individual householders (OCC 2).
>
> Sometimes it can switch people off hearing the carbon message, so we probably need to have some quite frank conversations around that as part of a broader strategy for improving engagement (WBC 1).

Despite varying levels of engagement, and different approaches to community participation on energy issues amongst different local authority interviewees, the importance of getting the public on side in this agenda, was emphasised by the following interviewee, who argued:

> I think we're fortunate in Oxford in that there's probably more support than in most other places and that's a real help. I think the public on the whole are ahead of us, well, a lot of the public I should say. I think there are also members of the public who say 'well, this is all about me having to do things to my house that I can't afford, they want me to stop driving, they to restrict what I'm doing', and that's not a popular message. So as long as you can put in a way which says, 'look, we want to make life better for you so that you don't have to travel as much, so that your house is more comfortable, it's cheaper to heat', then people will listen. I think if we go round telling people what they can't do, then people are going to turn off. Well turn off their minds, not their lights (OCC 2).

3.6 Community engagement – section summary

The evidence from our research points to an awareness amongst local authorities that carving out links between institutions, communities and individuals will be a critical aspect of developing sustainability initiatives and strategies at the local level. An illustration of political attempts to capture this emerging policy landscape – particularly in the increased emphasis on individuals and communities in relation to the influence of government and business interests – is illustrated in the Coalition Government's 'localism agenda', where it has been stated that '*…it is time for a fundamental shift of power from Westminster to the people. We will promote decentralisation and democratic engagement, and we will end the era of top-down government by giving new powers to local councils, communities, neighbourhoods and individuals*' (HM Government, 2011:2). It was pointed out, however that, whilst local authorities would seem to be the best placed fora to encourage this, there is currently a lack of appropriate engagement structures in place to provide meaningful opportunities for community involvement, particularly in terms of effective connections to energy providers, funders, regulators, and other communities of practice. It was also felt that there were traditional barriers to overcome in relation to effective local authority-community working relationships; particularly in relation to trust.

4. Planning and strategy – incorporating 'local knowledge' on sustainability

Changes in planning, and the regulatory frameworks around planning, have begun to take on increasing importance as levers which will help to enable the shift to a more bottom-up response to energy and climate issues in the UK. Whilst local authorities have always had a degree of influence over planning in the UK, it is apparent for instance, that both design and future strategies around housing infrastructure, transport and mobility, and the possibilities for new and innovative technologies to be developed at local and community levels, are only likely take place with further changes in the UK system.. As Ludhe-Thompson and Ellis (2008) have observed, the future of planning has a particular contribution to make to meet the climate challenge, where a revised planning should be able to facilitate an effective policy agenda in several ways:

- Firstly, it can promote policies which expect the highest standards of resource use and energy efficiency, and substantially reduce the need for and propensity to travel by unsustainable modes (car and plane);
- It can make more effective use of land and sustainable transport modes through connecting work, schools, shops and healthcare facilities;
- It can promote an effective supply of renewable and low carbon energy from decentralized sources and maximize the efficient use of resources whilst minimizing waste;
- It can adapt to drought, flood risk and heat waves, build resilience into the man made environment and increase its biodiversity;
- Finally, it has the opportunity to incentivize markets for new technologies that will help in mitigating climate change

(Ludhe-Thompson and Ellis, 2008:45)

The above issues, and their relationship to the planning agenda in the UK, have become an increasingly important issue for local government, where anticipated leadership over energy and environmental issues from this level will be largely dependent on how effectively such a role is able to become incorporated into what has been a traditionally centralized UK planning framework. The 2009 *Low Carbon Transition Plan* (DECC, 2009) flagged up the increased urgency of energy and climate issues and the significance of encouraging policy actions to address the ways in which energy and carbon are consumed and expended at the level of 'place based' actions. The intention here is that a more 'networked' governance approach centred on localized decision making for planning in UK would enable greater engagement by individuals and communities themselves. As this interviewee reasoned:

> I think in planning, in a sense, over the last 10 years areas, one of the biggest areas has been the planning policy response to energy in its broadest sense. And at one level I think town planners

> would argue that, whilst the terminology changes, we've always been interested in sustainable development in this country. In a sense that the whole 'why we've got a planning system', 'why we've got policies', obviously we're a small island with a strong economy and a growing population and we've had to balance decision making between the needs of development against respecting the environment ever since the Second World War (OCC 3).

He made that point that changes to involve more localized forms of decision making around planning were not just driven by energy and environmental issues but also held a focus on sustainability in a more holistic sense. The importance of changes to the planning and regulatory framework in the UK around energy and sustainability was recognized in the *UK Sustainable Development Strategy* (1999, 2005), where it was felt that a revised approach to the current planning system would be a key lever in engaging a more local response to meeting both climate change and more sustainable energy targets in the UK. This has more recently been reiterated in the Coalition government's localism agenda, confirming the aim of continuing to devolve more powers and responsibilities to individuals, communities and local government. Announced in the Queen's Speech on 25th May 2010, the *Decentralisation and Localism Bill* (HM Government, 2010) has a range of aims linked to this agenda, including significantly, returning decision-making powers on housing and planning to local councils. However, Ludhe-Thompson and Ellis (2008:50) add the proviso: 'in order for climate change action to be taken through planning, it is necessary to point out the different policies which address climate change that can be framed at local level, and also the kind of development and adaptation which should be the result of these policies. Both mitigation and adaptation policies should be integral to all local plans across the UK (Ludhe-Thompson and Ellis, 2008:50). Arguably this remains a far from coherent programme, particularly in relation to sustainability. The problem of addressing the energy efficiency of an aging housing stock in the UK has been a particular case in point. Whilst local authorities would seem to be ideally placed to coordinate the various agencies who might be able to effect change in this area, this has so far proved to be problematic – particularly in coordinating energy and planning regulations. As this interviewee argued:

> I mean if we start with, obviously the easiest bit, which is building control. Building control simply works to see that the developments meet the national building control regulations. It is competitive in as much as builders/developers don't have to come and get their plans approved by the city council or local authorities any more, they can go to what's called approved inspectors. But actually, we get a whisker short of 90% of all developments goes – works through our own Building Control section and we've, in the last few years, tried harder to work with particularly the bigger commercial clients, university clients, over building regulations. But, in terms of the energy field, it's entirely led by national regulations which over the years have changed and are continuing to change (OCC 3).

The following interviewee in Woking pointed out that they had worked to engage with developers early in generating a vision around more sustainable buildings and residences in the area:

> Woking has worked very hard under its climate change policy that was put in place some years ago now, to try and deliver buildings that, if you like, conform to that policy on CO2 reduction and general sustainability. Because it had to do it in a non-statutory way, what it has done is engage with any developers that have been interested in developing in the borough and in order to make sure that what developers were bringing forward, they would produce good buildings if you like. We do our best within the constraints, or the lack of constraints, of the planning system (WBC 3).

4.1 The planning system and renewable energy

The appearance of the UK Government's *Planning Policy Statement 1* (PPS1) in 2005 proved to be a key development in identifying ways to align local government with localized planning objectives in the delivery of national sustainability objectives. Of particular significance, the *Planning and Climate Change* section of PPS1 (2006) contained 'new requirements for local planning authorities to ensure that tackling climate change [becomes] a primary concern for planning policy development and decision-making' (Ludhe-Thompson and Ellis, 2008: 51). Whilst PPS1 was designed overall to provide a more coherent framework for local planning in order to reflect the aims outlined in the *UK Sustainable Development Strategy, The Planning and Climate Change* section of PPS1 aimed to provide clarification on how activities and initiatives on reducing carbon emissions should now begin to be distributed between national, regional and local tiers of governance: 'ensuring that decisions are made at the most appropriate level and in a timely fashion to deliver the urgent action needed' (HMSO, 2005: 3). The particular issues to be taken into account at the local level of decision-making and implementation should now include:

- Helping to drive the delivery of renewable and low-carbon energy initiatives;
- Using place and infrastructural shaping influence to encourage viable resource use, energy efficiency and reductions in emissions;
- Reducing the need to travel alongside growth;
- Considering social issues when developing places and ensuring they are resilient to climate change;
- Conserving and enhancing biodiversity;
- Responding to the needs of communities and businesses within this sustainability objectives.

Policy Planning Statement 22: Renewable Energy is significant in that sets out a guiding agenda through which local authorities in the UK can in principle develop renewable energy initiatives at the local level. The *2003 Energy White Paper* had stated the case for continuing to encourage a greater percentage of renewable energy initiatives to meet

both carbon targets and energy security issues in the UK. However, as Wade *et al* (2007:423) have observed, 'historically, the spatial planning framework in the UK restricted the development of renewable energy installations: the presumption was that installations would be damaging to the local environment and developers had to prove otherwise if they were to be granted permission for the development'. Publication of *PPS 22* started a process of moving the emphasis towards a much more flexible regulatory system capable of accommodating 'niche' initiatives around wave, solar, wind and micro-generation. Local authorities were now encouraged to prioritize the installation of renewable energy technologies if appropriate and to provide a link to broader incorporation of these into the planning, design and decision-making of buildings, residential housing, parks and greenbelts.

The year 2006 also saw the introduction of the *UK Microgeneration Strategy* (DTI, 2006), setting out the Government's aspirations for creating conditions in which the market for small-scale renewable energy technologies could develop (Wade *et al,* 2007). This strategy again noted the key role of local authorities in enhancing its effectiveness, particularly in respect of leading local decision making on decentralized energy and micro-generation technologies.
In addition to the general increase in policy attention following the Climate Change Act 2008, there have been a number of specific policy developments recently that have prompted further changes in national planning policy. These include:

- EU Directive 2009/28/EC on the promotion of the use of energy from renewable energy sources, where the UK has committed to sourcing 15 per cent of its energy from renewable sources by 2020 – an increase in the share of renewables by almost a factor of seven from about 2.25 per cent in 2008, in scarcely more than a decade;

- The *Household Energy Management Strategy* (published on 2 March 2010), which placed a greater emphasis on district heating schemes and identified an essential role for planning in facilitating delivery of these and other community-scale energy schemes;

- Publication of the proposed definition of zero carbon homes and the timetable within which all new developments must reach a zero carbon standard. Meeting the zero carbon standard involves a combination of energy efficiency measures and the use of decentralized energy solutions, to be set out through Building Regulations and through use of a range of 'allowable solutions', the details of which are still to be decided;

- *The Local Democracy, Economic Development and Construction Act 2009,* which replaced the requirement for a regional spatial strategy and regional economic strategy with a single regional strategy (RS) from April 2010. Climate change, along

with economic development and housing, were identified as priority issues for the regional strategies;

- *The Energy Act 2008,* which established powers for the introduction of a Feed-In Tariff and the Renewable Heat Incentive aimed at driving an increase in renewable energy generating capacity;

- *Draft National Planning Policy Framework 2011* that set out an agenda and a vision for the role of local planning authorities to be able to implement and coordinate strategic priorities for their local area around the provision of infrastructure for transport, minerals, waste, energy, telecoms, water supply and water quality. Climate change mitigation and adaptation are to be an integral part of these strategies.

The above observations become pertinent, as the following interview extract (Bradford District Council representative) highlights, due to the fact that traditionally local government hasn't been seen as a player over the structures in which energy production and supply have been articulated over the last 60 years or so. This means that local authorities have had very little influence, for instance, in terms of developing possibilities for decentralized energy supply, and equally their ability to encourage collaborations with communities around renewable energy supply:

> Traditionally it's not been a role for local authorities to lead on the district energy debate. It just comes down the wires, down the pipes to people's houses or businesses from the energy providers. What we're being forced to do now is think about it differently, think about what our story is, and then think about how we take that back to test it with communities (BDC 2).

The interviewee above pointed out that the many changes to have been developed in the last few years to encourage local energy governance have meant that many local authorities are currently lacking the skills and capacity to develop at the pace of change that would be required for them to be able to lead on a more locally based system of energy generation:

> If we weren't trying to do this kind of up-skilling, develop the ability to understand the language of the industry, then people would rightly be able to view us suspiciously because it's not our normal skill set. But we are developing those skills now to be able to do that confidently so we can hold our own with all the folks in the energy industry (BDC 2).

This was not, however, a view held by all interviewees. The Director of City Development, Oxford City Council, for example, argued that changes in planning *had* enabled them to take a more proactive role in this area giving them opportunities to begin to plan out their activities in a more strategic way, both on energy and environmental issues. He argued that the City council itself had been able to map out

their own series of guideline documents and strategies. He argued that these had been instigated largely by changes in the UK political landscape on energy. For instance, he stated that Oxford City Council had been able to develop a series of energy plans around the *National Resource Impact Assessment* (which had itself been incorporated from Regulation 19 of the *Town and County Planning Regulations 2004*). It was argued that this now had a particular influence on the way in which the council was beginning to develop a raft of policies through which to oversee and to make decisions on the role of energy in their area:

> There's been quite a lot of professional thought around whether actually the planning system ought, or ought not, to be stepping into the whole issue in relation to energy. So, for example this authority has a particular way in which we, in planning terms, have it called a Natural Resource Impact Assessment. So you've got a policy statement around it and then we developed that further through what we call Further Guidance. So we have a policy in which there is an Adopted Local Plan, more recently carried forward into a planning document called the Core Strategy, basically stating we are going to assess all developments against their impact on the environment, particularly in relation to the energy side of things (OCC 3).

It was highlighted in several interviews that some of the more 'forward-thinking' local authorities in the UK are now often in a position to drive or influence the policy agenda at the regional and national level. A key example of this has been the development and implementation of 'the Merton Rule'. This planning policy, which requires a proportion of the energy demand of a new development to be met from on-site renewable energy generation technologies, was first developed by planners at the London Borough of Merton. At the time, the legal power for local authorities to develop such policies was uncertain and had to be tested. Once this was established in the case of Merton, other authorities were able to follow the Council's lead and develop and implement similar policies. The policy also became reflected in Regional Spatial Strategies across England, increasing the pressure for its use in other local authority planning documents. It was arguably this increase in activity within the planning system – initiated largely by a few pro-active individuals – which has been one of the principal drivers behind new national building standards, and more recent government regulations concerning 'zero carbon housing' by 2019. As this Oxford City Council interview argued, the 'Merton Rule' had been hugely influential in beginning to changing the prevailing local authority perspective around sustainability:

> In terms of the planning aspect, local authorities can have quite a large amount of influence on the delivery of more energy efficient buildings. I mean there's been a plethora of Merton Rule etc that has come through, that was really local authority led in the first instance, which can have a huge impact on the sustainability of the buildings, and of new build that's being developed (OCC 3).

He suggested that the council had been able to initiate a number of changes through the introduction of the Merton Rule, in particular a 20% target for onsite renewables as well as to assist the assessment of energy, water and construction materials (OCC 3).

The interviewee pointed out that Oxford City Council had responded quickly in relation to changes which had been introduced at both national and European level around the possibilities for more sustainable planning and building design, which could only be implemented at the local authority level:

> It was very much driven by politicians so you know officers have responded to the strong political interest in that, and so we responded probably quicker than certainly our neighbours in Oxfordshire, one of the leading authorities in the country in trying to express it in town planning terms. If you're designing a building you can think about energy right at the very early stages, you can build it in better from the outset rather than retro-fitting it a few years down the line. You've got your planning permission and then you start to move onto detailed building regulations (OCC 3).

As he pointed out, in order to begin to address the overall poor performance in the UK's housing stock, it was important to have a strategy in place for new build homes, especially in terms of orientation, design and the embodied energy in the materials used.

4.2 Planning and strategy - section summary

There has been increasing awareness in recent years of the need to change the regulatory framework for planning in the UK. It was felt by those interviewed for this study that this is particularly important if there is going to be a greater role for local government in coordinating energy where there is a strong need to continue to devolve the current regulatory framework to local level decision making. Our interviewees considered that current powers over housing, transport, and procurement in many ways make local authorities the ideal sites through which to address these areas of energy use more effectively. Echoing some of the findings in the other sections however, it was felt that the piecemeal nature of policy development means that there is currently a lack of coherence, with some local authorities using current planning regulations to good effect and others feeling that there are barriers to overcome before they will be able to make progress. More recently, in July 2011, the UK Government published a draft National Planning Policy Framework in July 2011 (CLG, 2011). According to Climate Change Minister Greg Barker, developing the programme around this framework will be instrumental in setting out both the agenda and also the vision for the role of local energy economies in the UK. Local planning authorities will be expected to set out the strategic priorities for their local area including policies to deliver, *inter alia*, 'the provision of infrastructure for transport, minerals, waste, energy, telecoms, water supply and water quality' and 'climate change mitigation and adaptation' (CLG, 2011)

5. Technology and technological innovation

Observers such as Smith (2012) suggest that, as well as engaging in experimentation with local partnerships and models of behaviour change and community action, the changing policy landscape around energy in the UK also offers the chance for local

authorities to act as 'niche' sites for technologically driven pathways to sustainability. Whilst so far being fairly embryonic, this kind of emerging 'governing actors' network in energy supply and generation can, in fact, be observed in several local authority areas including Woking, Kirklees, Gateshead, Milton Keynes, and Leicester. Here local councils have begun to initiate and develop a number of decentralized forms of energy distribution and supply, demonstrating workable and potential alternatives to the UK's traditionally centralized energy supply infrastructure. Whilst these developments remain the exception rather than the rule, there is no doubt that, spurred on by emerging changes in the use and conceptualisation of energy as well as the planning changes outlined in the previous section, the likelihood is that local authorities will be expected to become more engaged in the technological aspects of the UK's shift towards a low carbon energy infrastructure in the coming years.

The following interviewee highlighted some of the 'niche' possibilities through which local government might be able to exert an increasing measure of influence over infrastructural change and geographical areas through which to nurture innovations in technology. As he argued, identifying and encouraging local knowledge and 'what works best' were important to the success of this process:

> So, yes, there are initiatives, yes, we can point to activities, yes, we can point to new boiler systems and new ways of monitoring our energy internally and some of the conversations we're now having inside the district. But there's something for me about how we're trying to move away from initiatives and activity to have a much better sense from a systems point of view (BDC 1).

He made the point that local authorities are probably the best placed agencies to pull together and coordinate such expertise at a practical level of implementation – whether communities, business or architects – as a way in which to decide and implement the most appropriate sustainability strategy for the particular conditions and circumstances that exist in that area. He provided an illustration of the particular situation in Bradford:

> As one of the largest geographical areas of a local authority of anywhere in England, we get a whole load of solar radiation coming into this district. But, at the moment, we've got no understanding about what the solar potential is for Bradford, how that solar potential could be harnessed with current technology, or how that solar potential is already harnessed by plants, animals and human beings…because we are then trapped by conventional thinking about energy systems (BDC 1).

As he argued, there exist many complexities around implementing effective sustainability initiatives in local authority areas which are often very different from place to place in terms of geography, population, resources, levels of capacity, and internal cohesion around policy aims and objectives. This means that ultimately appropriate strategies for technology choice can only be successful if they are led from the local level:

> Wind farm developments for example. In Bradford, most of our towns sit in the bottom of river valleys, so, theoretically from the high moors, we've got a lot of wind energy potential but,

> because there's bio-geographical constraints on designated sites and so on, our wind potential maybe restricted to quite a small sector of upland area that we can actually tap into. So it's about thinking about land use in lots of ways and how our land use priorities sit bearing in mind the shape of the district in 10, 15, 20 years' time (BDC 1).

It was also stressed however, that the interrelationship between risk and finance invariably underpins debates which occur at local political level on the possibilities for backing and implementing technology, and indeed whether a particular choice might be viable and/or effective: *"…one person's solar panel renewable energy must-have-one-of-those becomes one of our waste colleague's nightmares"* (BDC 1).

In Surrey, the County Council's programme of sustainable energy technology was originally developed in relation to the Council's problem with waste management. Our Surrey County Council interviewee suggested that energy itself had almost been incidental to the County's waste management issue, but a strategic approach to converting waste that was going to landfill into useable energy – through anaerobic digestion, aerobic digestion or gasification – had made energy a commercially viable commodity for the Council, and had helped to enable the degree of consensus necessary to push the programme forward. He argued that, in the end, Surrey County Council used a pragmatic approach to sustainability which was driven by a number of different influences. The technological emphasis itself came out of the process by which the County Council decided that they were going to address sustainability in the area – a problem which needed to be solved by trying to develop a more innovative way of dealing with their waste problem:

> We had a huge problem with landfill. You could either sit there and get fined for sending waste to landfill or you could increase the recycling rate, which we did up to a 60% target. And the quid pro quo for that is that we would have to accept energy from waste caps of 40% of the non-recycled waste. So that was quite a good strategy overall. And we calculated that we'd be able to provide electricity for something like 20,000 households from this plant, maybe also do domestic heating from the waste heat. So, that was the top down bit of energy governance (SCC 1).

Using the above situation in Surrey as an example, it was suggested that, in instances where a local authority might be in a position to run with a particular technologic solution to a sustainability issue, such an agenda first has to be 'sold' to the council members in terms of risk assessment criteria – mainly related to the financial implications in taking on such programmes.

Drawing these issues together, he made the point that the incentives for local authorities were not currently substantial enough to encourage this kind of local leadership on a large scale; particularly in relation to hosting some of the more ambitious technological possibilities around sustainability. He argued that 'going it

alone' was not a realistic proposition for the majority of local authorities particularly in relation to the risks attached to large or unproven financial investments.

A separate case, Woking Borough Council, has actively encouraged the development of an advanced technological vision around sustainability in its administrative geography. The situation in Woking is fairly novel however in that it is underpinned by a partnership that has been developed between the Borough Council in collaboration with their energy services company Thameswey. The focus for this partnership is structured around a set of identified sustainability issues in the area. As Vaze and Tindale (2011:77) have pointed out: 'it has a number of novel features that look at the energy needs of central Woking in a long-term and systematic way. The town's officers Ray Morgan and Allan Jones worked with Danish technical partners to form the ESCO Thameswey, which has developed a highly integrated scheme that uses 13 CHP units, DH and revised planning guidelines on all new developments, which requires new buildings near the centre of town to connect to the heat network. The council also installed photovoltaic panels using grants from the European Commission and the UK national government'.

One of the representative officers from the Borough Council who we interviewed stated that *"Thameswey was set up about 10-years ago by Woking Borough Council, essentially to deliver their climate change strategy. They were one of the first local authorities to adopt one and, within that, they have quite a strong focus on reduction of energy both on their own estate and within the local community. So, the first thing they really concentrated on was the energy efficiency of their own estate and, rather than spend the savings elsewhere, they reinvested it very, very early on. And they started to reinvest that money into energy projects within their own estate"* (WBC 2).

Another interviewee pointed out that this programme had enabled Woking to build an influential consensus at local authority level and, more importantly, a set of longer term goals through which to develop both political and financial capacity: '*The climate change strategy is deeply embedded in the core decision-making process of the Council, so there is no physical conflict if you like with anything that the Council is trying to do. The Council is totally orientated towards sustainability and renewables. That's at the policy level. When you get to the political level, even though the Conservative group is the one who originally set up Thameswey*' (WBC 3). The interviewee argued that Thameswey was particularly vital in providing a *financial base* for their activities:

> The Council is the banker of first choice for Thameswey and its developments so we would naturally go to the Council for cash borrowing for shareholder loans. The Council borrows from Public Works Loan Board at 3.5%, lends at fixed interest for 50-years to Thameswey at 7 and 7.5%, and that's the ideal kind of financial relationship that a sustainability development business needs. We look for an 8% internal rate of return on shareholder equity within Woking, 14% and 12% outside (WBC 3).

He argued that this is where problems have begun to occur in more recent times, as a business model that is able to scale up beyond its commercial interests in Woking. The

partnership between Woking Borough Council and Thameswey has been trying to scale up in order to sell energy outside of the Borough, but this has sometimes been met with opposition, both within the council and also in the wider community:

> That's where the conflict lies because, in order to get re-elected in the current political climate and financial climate, debt is bad. The fact that's entrepreneurial debt is something that the Council has seemed unable to explain at the doorstep. So there's unwillingness from the current councilor groups to engage in, first of all, more debt at the simple level, and certainly to engage in more debt for developments outside the borough. And Thameswey, although it was originally set up do sustainable development within the borough, its remit was extended to make profits outside the borough that would then be spent on sustainability inside the borough. The political backlash from, as they say, keeping the residents of Milton Keynes with Woking taxpayers' money has been quite severe so, therefore, there is a conflict at the political level, the democratic political structure level, but not at the policy philosophical level (WBC 3).

The above interviewee argued that this was a model which *could* be followed by other local authorities but that it was often the perception of the risks attached to such a venture that dissuaded many from following the same route. He pointed out that he had spoken to quite a few councillors from other local authority areas who expressed interest in the Woking model but argued that, in financial terms, it was a not a viable option.

Kirklees District Council has been another UK local authority to have followed a predominantly technological pathway (albeit a different approach from the one taken by Woking) in order to engage with some of the broader sustainability challenges in the area. Kirklees' vision of sustainability has been a mixture of both responses to national targets on CO_2 emission reductions and more immediate issues at the local level in relation to the supply and demand of energy. Fuel poverty, for example, has been a major problem in the area in recent years. As this interviewee argued in relation to some of the drivers behind Kirklees's sustainability agenda:

> Kirklees, and indeed all UK local authorities have been responsible for a series of primarily indirect, or devolved, legally derived or strategic policy obligations supporting the national and global agenda for reductions in CO_2 and other greenhouse gas emissions. Some of these have extended beyond LA operations to also encompass the concept of LA influence with the domestic, charitable and business sectors (KCC 1)

The *Sustainable Community Strategy* that has been developed in Kirklees has its origins in both the *Affordable Warmth Strategy* and *Kirklees Warmth Zone*. Both of these initiatives were constructed around the *Home Energy Conservation Act* which provided a framework for the Council to be able to deliver both greater energy efficiency with the Borough and more social equity around energy consumption. Significantly, during the reporting period 1st April 2007 to 31st March 2008, Kirklees showed an 39.98% improvement in energy efficiency from the period of the first HECA report in 1996 (Kirklees Council, 2011). As a major part of its sustainability strategy, Kirklees has been successful in drawing from different sources of funding. For instance, they were one of the first local authorities in the UK to access money from the EU, where European regeneration money provided the capital for the

Council to launch retrofit solar thermal panels in social housing residencies in the Almondbury area in 1995. During the subsequent years, this retrofitting programme has proven to be so successful that that, by 2005, Kirklees District Council had installed 4.9% of the total UK Solar Photovoltaic and Thermal capacity from European Commission funding, and 50% funding for project costs from the UK Government's Major Demonstration Programme, enabling further work to be carried out between 2000 and 2006. As the interviewee pointed out:

> This provided low cost hot water for some of our most economically disadvantaged householders and the primary objective at this point was affordable warmth provision. As this investment was rewarded by the positive engagement of householders - in the form of enthusiastic conversations with visitors to the projects - it became gradually easier to introduce the co-aims of carbon reduction and climate change Kirklees' Warm Zone Scheme, implemented 2007-2010 was one of the largest such domestic energy efficiency programmes in the UK, covering the entire authority area. As a result, 42,999 properties had loft insulation and 21,473 homes had cavity wall insulation installed (KDC 1).

The principle ethos behind Kirklees' vision for the area is to 'ensure our regeneration activity brings social inclusion and environmental sustainability' (Kirklees Council, 2012). This objective has been particularly well illustrated in two renewable energy projects that have been developed by the Council in the last couple of years:

- **Hillhouse Greening the Gap** 2010-2012. This project was funded by the Low Carbon Communities Challenge and involved the installation of free PV onto 70+ homes and a number of community centres in one of the most deprived neighbourhoods in the UK. This was done under agreements that the FIT income (around £30,000 p.a.) would then be devolved back into a community fund sponsoring similar work in the area.

- **RE-charge**, launched in 2008. In this project, Council investment provides loan funding for people to purchase and install renewable energy and low carbon technologies for their homes. This is based on a low interest rate, second charge being placed on the home owner's mortgage as the financing/payback mechanism. Under this scheme, individuals keep any FIT/RHI payments themselves and ultimately benefit financially. This is almost a local prequel to the Green Deal concept (KDC 1)

Whilst the technological pathway developed by Woking has been fairly top-down in its approach – particularly illustrated in the business model developed through Thameswey – the sustainability agenda pursued by Kirklees has been based more upon securing the necessary funding and upfront capital to develop its vision through an emphasis on

more effective partnership working. As with Surrey County Council, sustainability has been viewed as a particular local issue to be developed in relation to the already existing strengths of the local authority itself. This more pragmatic approach to the possibilities for technological and infrastructural change, and its need to be considered within the context of other issues, was pointed out by the following interviewee from Bradford District Council. He suggested that not all local authorities were in a financial position to lead on technology; particularly in the way that Woking had been. He also added the proviso that solutions driven purely by technology were not always sensible and that, often, a more strategic approach was needed:

> Generally there's a view that this stuff can be engineered away. There is a solution and, as long as you're able to afford the right solution, you can find a remedy. But actually, looking after the district and its energy system and the relationship between the way that people and communities and organisations in this district live their lives, is fundamentally a wicked issue (Bradford City Council, strategy coordinator sustainability)

5.1 Technology and technological innovation – section summary

The changing policy landscape around energy in the UK offers the chance for some local authorities to evolve as 'niches' around technologically driven pathway solutions. Councils in Birmingham, Kirklees, Southampton and Leicestershire have all developed niche activities around renewable and distributed energy generation. In terms of the participating local authorities in the current study, Woking Borough Council stands out as the most observable example of technological leadership in energy supply and generation. Over several years the council has established a range of distributed forms of energy generation and supply in attempts to demonstrate the practicality and potential of these alternatives to the UK's traditionally centralized energy infrastructure.

Key issues which emerged as being particularly relevant to this topic include:

- Changes in planning which are now becoming important in offering local authorities possibilities through which they might be able to exert influence over infrastructural change through which to nurture innovations in technology;
- Complexities around implementing effective sustainability initiatives in local authority areas that are more likely to be successful if led from the local level, taking into account the unique characteristic of different administrative geographies, including demography, resources, levels of capacity, and internal cohesion around policy objectives;

- The interrelationship between risk and finance which invariably underpins local political debates on the opportunities for technology, and whether a particular choice might be viable and effective;
- Incentives for local authorities that are not currently substantial enough to encourage large scale technological leadership - particularly in relation to hosting some of the more ambitious technological possibilities;
- The reality that more 'progressive' technology-oriented local authorities (e.g. Woking) are currently in the minority – partly as a result of the perceived risks associated with large or unproven financial investments. In the case of Woking technology-oriented progress has been underpinned by a partnership developed between the council and its own energy services company.

In the final analysis there is little doubt that local authorities will be expected to become more engaged in the technological details of the UK's shift towards a low carbon energy infrastructure in the coming years - spurred on by emerging changes to the ways in which energy is being used and conceptualised.

6. Concluding remarks

This paper, and the empirical research study on which it is based, clearly demonstrates that there is both consensus and conflict between and within UK local authorities as to the role that local government could (or should) play in energy governance at the local level. Many of the 'official' policy documents highlighted in the paper repeatedly point out that local authorities are well placed to drive and influence emissions reductions by engaging their communities in more efficient energy practices and through the establishment of sustainable energy infrastructure and technologies in their jurisdictions. In spite of this, it is undeniably apparent from our interview data that the complexities of energy issues and sustainability in a broader sense, means that no one agent can effect change in isolation and that collaboration is – and will continue to be – very important.

In the UK it is arguably local authorities who act as the intermediaries for 'translating' national (and beyond) policy down to the local level. An illustration of political attempts to encourage this emerging policy landscape – particularly the increased emphasis on empowering local level responses through individuals and communities – is the UK Coalition Government's 'localism agenda', where it has been stated that '*the Government believes that it is time for a fundamental shift of power from Westminster to the people. We will promote decentralisation and democratic engagement, and we will end the era of top-down government by giving new powers to local councils, communities, neighbourhoods and individuals*' (The Cabinet Office, 2010). However,

whilst it was pointed by local authority interviewees that they would seem to be ideally situated to encourage this agenda, it was argued that there is currently a lack of appropriate structures in place to provide meaningful opportunities for community involvement, particularly in relation to effective connections to energy providers, funders, regulators, and other communities of practice.

It was also acknowledged that there are a number of traditional barriers to overcome in relation to effective local authority-community working relationships; particularly in terms of trust. Several interviewees felt that one of the main problems relates to a lack of clarity over whether they are now seen as 'doers' or 'enablers' in energy. As pointed out by some of the interviewees, traditionally local authorities' role in energy has been enabling and providing services rather than leading on energy policy. It was felt that there is confusion over leadership and responsibilities – a legacy of previous top-down policy approaches to energy in the UK. A recent *Green Alliance Report* suggests that local authorities themselves are uncertain that the new localism agenda will empower them to influence energy and environmental issues in any significant way. Furthermore, local government often struggles to grapple with the practical, cultural and psychological factors that can prevent effective links being made with communities in relation to broader behaviour change objectives - particularly in the most vulnerable and disadvantaged communities.

It is evident that the scale of change that is needed to improve the agency of local authorities in energy governance and to reduce CO_2 emissions, will not be solved at a single point of intervention. Effective action at the local level is increasingly recognized as a vital element of a low carbon transition. However, as pointed out in the paper, there is currently little incentive for local actors to risk leadership around the depth of change needed without others doing the same or providing suitable support. In addition, there is a struggle with shrinking resources, growing social needs and a lack of clear direction with regard to addressing climate change. These issues continue to pose challenges for engaging local authorities and their communities in more localized forms of energy governance. Even in the 'leading' local authorities progress is often fragile and dependent on the skills and preferences of certain key individuals. There is a reasonable argument to suggest that this does not provide a stable basis for participative governance at the local level.

Notwithstanding the challenges identified, the initiatives and local-level polices described in this paper point to the potential for community level governance of energy and carbon, as well as demonstrating the possibilities for local institutions to act as catalysts or change agents in 'scaling up' and providing leadership in energy and climate issues. Roberts (2010) has suggested that any influence that local government might bring to bear in this regard derives principally from the services they already deliver; the strategic roles they play; the regulatory influence they have to enforce national standards and directives. Some of the more environmentally progressive UK-based local authority initiatives described in this paper demonstrate the role that local authorities

might play in facilitating relationships between different stakeholders, local residents, the voluntary and business sector and/or other public bodies in their vicinity, in addition to providing crucial local leadership. However, as this paper suggests in order for progress to be made in engaging communities with this agenda general lessons and good practice in community engagement need to be recognized and considered in understanding the political and cultural factors that shape how public agencies engage with communities. Partnership working is resource intensive and requires long-term strategy. There is often an assumption that an energy project is the way to bring the community together, and some local authority initiatives have failed – and may well continue to be unsuccessful – because of an over-reliance on this assumption.

References

Agyeman, J and Evans, B (1995) 'Sustainability and Democracy: Community Participation in Local Agenda 21'. *Local Government Policy Making.* Vol 22 No 2 pp 35-40.

Byrne, T. (2000). Local Government in Britain – everyone's guide to how it all works. Penguin, London.

CLG (2006), Strong and Prosperous Communities – the Local Government White Paper. Department for Communities and Local Government, London. Available online: http://www.communities.gov.uk/publications/localgovernment/strongprosperous

CLG (2011) Draft National Planning Policy Framework. Available online: https://www.gov.uk/government/policies/making-the-planning-system-work-more-efficiently-and-effectively

CSE (2007), *Mobilising Individual Behavioural Change through Community Initiatives: Lessons for Climate Change*, report by the Centre for Sustainable Energy and Community Development Exchange, London: HMSO, available at www.defra.gov.uk/Environment/climatechange/uk/individual/pdf/study1-0207.pdf (accessed 12/06/11)

Church, C. and J. Elster (2002), Thinking Locally, Acting Nationally: Lessons for National Policy from Work on Local Sustainability, York: Joseph Rowntree

DECC (2009). *The UK Low Carbon Transition Plan: National Strategy for Climate and Energy*, Department of Energy and Climate Change: London, UK and The Stationary Office: Norwich, UK, July 2009.

DTI (2003) Our Energy Future: Creating a Low Carbon Economy. Department of Trade and Industry, CM 5761

DTI (2006) Microgeneration Strategy. Department of Trade and Industry http://webarchive.nationalarchives.gov.uk/tna/+/http://www.dti.gov.uk/files/file27575.pdf/

Fell, D., Austin, A., Kivinen, E. and Wilkins, C. (2009), *The diffusion of environmental behaviours; the role of influential individuals in social networks. Report 1: Key findings*, a report to Defra, Brook Lyndhurst and Defra, London.

Fudge, S and M. Peters (2009), 'Motivating Carbon Reduction in the UK: the role of local government as an agent of social change', *Journal of Integrative Environmental Sciences*, **6** (2), 103-120.

Hale, S. (2010), The new politics of climate change: why we are failing and how we will succeed,

Environmental Politics, 19 (2), 255‑275.

Harding, L. and L. Newby (1999), 'Local Agenda 21 – cutting the economic mustard', *EG-Local Environment News*, **5** (7), 2–3.

HMSO (2005) Planning Policy Statement 1: Delivering Sustainable Development. Office of the Deputy
Prime Minister
http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement1

Hooghe, L. and G. Marks (2001), *Multi-Level Governance and European Integration,* Lanham MD, USA: Rowman and Littlefield.

Jackson, T. (2005), *Motivating Sustainable Consumption – a review of evidence on consumer behavior and behavioural change*, London: SDRN.

Jackson, T. (2008), 'The Challenge of Sustainable Lifestyles' Chapter 4 in G. Gardner and T. Prugh (eds), *State of the World 2008 – Innovations for a Sustainable Economy,* Washington DC: Worldwatch Institute.

Jackson, T. (2009), *Prosperity without Growth – economics for a finite planet*, London: Earthscan.

Jackson, T. and L. Michaelis (2003), *Policies for Sustainable Consumption*, London: Sustainable Development Commission.

Jones, E., Leach, M. and Wade, J. (2000), Local policies for DSM: The UK's home energy conservation act. *Energy Policy* **2000**, *28*, 201-211.

Kirklees Council, (2011), *Kirklees Warm Zone Scheme: End of Project Process Evaluation Report,* Kirklees Council Environment Unit and Corporate Research and Consultation Team. Available online: http://www.kirklees.gov.uk/community/environment/energyconservation/warmzone/WZ_Process_Evaluation_Report_FINAL.pdf

Kirklees Council, (2012), *Kirklees Council Corporate Plan 2011/12 – 2013/14,* Kirklees Council. Available online: https://www.kirklees.gov.uk/you-kmc/kmc-policies/KirkleesCouncilCorporatePlan.pdf

Lorenzoni, I.; Pidgeon, N. Public views on climate change: European and USA perspectives. *Clim. Change* **2006**, *77*, 73-75.

Lorenzi, I.; Nicholson-Cole, S.; Whitmarsh, L. (2007), Barriers perceived to engaging with climate change among the UK public and their policy implications. *Global Environ. Change*, **17**, 445-459.

Ludhe-Thompson, N. and Ellis H. (2008), 'Planning: central to delivery on climate change'. In C. Sinn and J. Perry (eds) Housing, the Environment and Our Changing Climate. Chartered Institute of Housing, Coventry

Norton, A. and Leaman, J. (2004), *The Day After Tomorrow: public opinion on climate change*, MORI Social Research Institute, London.

O'Neill, J. and Hulme, M. (2009), An iconic approach for representing climate change. *Global Environ. Change* **2009**, *19*, 402-410.

Peters, M., Fudge, S., and Jackson, T. (2010), *Introduction*, in Peters, M., Fudge, S., and Jackson, T. (eds.), Low Carbon Communities: imaginative approaches to combating climate change locally, Edward Elgar, Cheltenham.

Peters, M. (2010), *Community engagement and social organization: introducing concepts, policy and practical applications*, in Peters, M., Fudge, S., and Jackson, T. (eds.), Low Carbon Communities: imaginative approaches to combating climate change locally, Edward Elgar, Cheltenham.

Platt, R. (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 in partnership with British Gas, London, July 2011.

Roberts, S. (2010), *The role of local authorities in galvanizing action to tackle climate change: a practitioner's perspective*, in Peters, M., Fudge, S., and Jackson, T. (eds.), Low Carbon Communities: imaginative approaches to combating climate change locally, Edward Elgar, Cheltenham, pp. 75-88.

Royal Commission (2000), *Report on Environmental Pollution*, London: The Royal Commission on Environmental Pollution, accessed at www.rcep.org.uk.

Scott, F. *Is localism delivering for climate change?* Green Alliance report, Green Alliance. London. (2011). Available online: http://www.greenalliance.org.uk/uploadedFiles/Publications/reports/Is%20localism%20delivering%20for%20climate%20change%20-%20FINAL.pdf

Spence, A., Poortinga, W., Butler, C. and Pidgeon, N.F. (2011), Perceptions of climate change and willingness to save energy related to flood experience, *Nature Climate Change*, **1**, 46-49.

Tajfel, H. (1981). *Human groups and social categories*. Cambridge: Cambridge University Press.

Tajfel, H., Jaspars, J.M.F. and Fraser, C. (1984), *The social dimension in European social psychology*, in Tajfel, H. (ed.), The Social Dimension in European Developments in Social Psychology, Cambridge University Press, Cambridge, pp. 1‑8.

The Cabinet Office, (2010), *Building the Big Society*, The Cabinet Office: London, UK, 18 May 2010. Available online: http://www.cabinetoffice.gov.uk/news/building-big-society (accessed 24/06/11).

Vase, P. and Tindale, S. (2011), *Repowering communities: small-scale solutions for large-scale energy problems*, Oxford, UK: Earthscan.

Wade J., Pearson A., and Flanagan B. (2007) 'Local government energy action in the UK: from service delivery to community leadership'. ECEEE 2007 Summer Study: Saving Energy – Just Do It!

Wharton, A.S. (1992), The social construction of gender and race in organizations: a social identity and group mobilization perspective, *Research in the Sociology of Organizations*, 10, 55–84.

Whitmarsh, L. (2008) Behavioural responses to climate change: Asymmetry of intentions and Impacts. *J. Environ. Psychol.* **2008**, *29*, 13-23.

Appendices

Appendix 1: Visions for the future

All interviewees were asked to describe their personal vision for sustainable energy and the role of local government in delivering this over the next ten years. Presented in the Table below is a selection of responses to this question from across the participating local authorities. It is interesting to note some of the similarities apparent between different councils. Strengthened and more diverse community engagement emerged as a common theme for example, as did the desire to develop a more integrated and strategic approach to sustainable energy, climate change and environmental issues.

Interviewee	Vision for sustainable energy over next 10 years
OCC 1	I'd really love to see all households regardless of their demographic, building-type, occupier status, socio-political, whatever, having access to low carbon lifestyle options. I'd like to see a much more integrated approach to the whole sustainability agenda so really reconciling not only carbon, but water and air quality. We need to get away from the silo approach; we have to be much more integrated and for that everybody needs to up their game on all the issues and understand the basics around things like air quality and what the implications would be. But I think we're probably quite a long way off.
OCC 2	Oxford's got a lot of hard to treats; it makes perfect sense whichever way you look at it to do the cavity wall and the loft insulation and the ?? but how do you go

	beyond that in domestic and non-domestic sectors? So, is Green Deal going to be the mechanism? If not, what? So, yes, going deeper, we definitely think is what we've got to do. What we're all looking at, 80% by 2050, but the infrastructural changes that need to go along with that, whether it's transport and bike lanes and stuff like that to let people make choices, or it's technology that allows people to work from home more and travel less and be more resilient to extreme weather events.
BDC 1	Three strands. One is we avoid the worst case scenarios which is the place shielding line and that means we need to understand how addicted or dependent we are on energy as is, and energy within the district. And the second one is that we get really creative about energy and 'emergy' [embedded energy] systemically and we find some plain English ways of describing that and drawing it and visualizing it - and we have a go at that transparency and openness and reframing. And the third stand is that we are able to start thinking about sustainable energy in a sustainability minded way, ie: it's not just sustainable development, it's not just addressing unsustainability, it's not solely some of the technological solutions. It's a much more holistic and profound way of understanding how we got to where we are now and how we might reshape that with some really interesting thinking and with spreading our bets over the next 20, 30, 40 years.
BDC 2	It's a challenging time for local authorities – that's a kind of given. But the need to be able to look at energy as a business resource is key for local authorities. It's always been there in the background but energy costs aren't going to go down and if we're going to work with communities and deliver what our cities expect of us in terms of care, children's education and so on, how we play our energy card is going to be the key. 10, 15 years, down the road, we'll all understand that energy's a key business risk. It will be managed along with other business risks. The district will need to be more resilient to volatility in the energy market, and energy sourcing will be more local.
RCT 1	Well, as far as I'm concerned, the main objectives for me are reducing energy consumption, if possible keeping the costs down, and also reducing the carbon emissions throughout the authority. Hopefully, somewhere along the line, we would be able to engage with the public and get them involved as well because, as we just said, Rhondda Cynon Taff is spread over quite a large area and it is quite heavily populated. So if we could get the public involved, it would certainly help the whole of the area
RCT 2	For me, I would see local government as a devolved issue. I think the Welsh government would need to have a clearer view of how they expect local government to deliver Welsh government priorities on energy.
WBC 1	Our biggest direct contribution is again going back to ourselves and what we can do about minimizing energy consumption ourselves. And also using that as a demonstration project for others, particularly with other the corporates in the area because, whereas domestic energy usage is probably the greatest energy usage within the borough, incrementally that's lots and lots of small - whereas you can have the bigger changes by addressing some of the major consumers. So, with obviously our CHP, we're trying to get people onto that, promotion of PV on our buildings, rebuilds.

Appendix 2: Interview guide used during the empirical phase of the research study with representatives of local authorities

Interview Questionnaire Schedule WP1
UNLOC (UNderstanding Local and Community Governance in Energy)

Date:
Name of interviewer:
Name of Respondent:
Name and address of respondent organisation:
Type of organisation:
Interviewer notes:

Introduction
First of all thank you very much for agreeing to participate in this interview.
It forms a valuable part of our recently established research project that aims to develop a robust understanding of local government decision making around energy at local and community levels ('UNLOC').
Key issues include the various processes and mechanisms through which policy is designed and delivered. This covers local and national and international aspects. And within 'energy' we are including all the objectives that people might have in mind when making energy decisions, including for example climate change, energy security, fuel poverty and job creation.
This interview focuses on three key areas of energy governance with respect to local authorities:

1. The evolution and future of the role of local government in energy decision making in the context of the evolving national policy frameworks;

2. The relationship between energy policy/decisions and governance in other areas such as housing, planning, transport, environment , economy, jobs, finance, social exclusion and community cohesion;

3. Processes of change and transition and how external forces and actors have shaped the paths taken by local authorities on energy issues.

All information discussed during this interview will be used solely for the purposes of this research project and we will ensure any reports use your comments in a way that is unattributable.
Before we start, are you happy for the interview to be recorded?

Question 1:

What responsibilities do you think your authority has in relation to energy in the local area, and how has it changed over the last 10-15 years?

Question 2:

Does decision-making around energy at the local level complement other local authority responsibilities in the area or are there conflicts of objectives? *e.g. with respect to*

Implications of land use planning for energy supply and demand
Energy efficiency in housing (social and wider)
Transport policy

Question 3:

What particular energy initiatives have you developed in your area?

- How did they come about (e.g. top-down vs bottom-up);
- Are they primarily about installing technology? Or changing behavioural? Or both?
- How have they been financed?
- Who have been the main people involved in implementation?
- How are these initiatives/activities funded?
- Are they politically contentious within the Council?

(PROMPT: follow up with specific initiatives that we are interested in if not mentioned)

Question 4:

What is your organization's current vision for energy in the local area? How do your activities help to deliver this particular vision?

Question 5:

What particular relationships/networks with other organizations have you been involved in developing around energy? Why were these relationships established, and how useful have they been in developing your own agenda around energy?

- *Community groups/organizations;*
- *Local businesses*

- *Energy service companies;*
- *Community interest companies*
- *Financing mechanisms*
- *Other delivery mechanisms*

Question 6:
What would you say are the main barriers and challenges for developing effective energy policies and delivery at the local level?

- *Powers/duties?*
- *Resources?*
- *Political Leadership?*
- *Public support?*

[Sub-question, if not covered: 'if money becomes available what enables/prevents you from tapping into it?']

Question 7:
What kind of relationship do you have with the general public with respect to energy initiatives?

- *Did such a relationship develop around a particular issue/s?*
- *Has it changed over time?*
- *How many people are involved?*
- *What are the main barriers to public engagement around energy issues in the area?*

Question 8:
What is your personal vision for sustainable energy and the role of local government over the next ten years?

Additional question areas if required/not covered

Question:
Do you see potential to scale-up or replicate particular examples of your energy activities in other LA areas?

- *Is this possible and/or desirable?*
- *If not, are there any instances of best practice which could be adopted in other local areas?*

Question:
Have you attempted (/are you attempting) to expand your current activities in order to reach other people/organizations that are not yet interested/involved in the sustainability debate?

- *If so how?*
- *If not, is this something you would like to do?*

- *What scope/opportunity is there for this?*

Question:
What kinds of financial mechanisms and institutions are needed to achieve community level energy objectives and scale-up community-based energy initiatives?

Question:
Thinking about the role of local authorities in relation to the changes in emphasis on climate change, fuel poverty and energy security goals at national level, what are your views on:

- *The changes in emphasis on local authorities to deliver in these areas;*
- *The current practicalities for delivering on these goals;*
- *The possibilities and challenges for innovative forms of governance and decision-making to emerge at the local level.*
- *Recent and planned funding changes*
- *New political priorities such as the Big Society*