

## 1. Introduction

The aim of this summary is to share learning from the EVALOC research project about how to design a local residential energy and carbon reduction strategy. The booklet is primarily intended for use by those involved in organising or supporting low carbon communities, but also draws out some implications for government policy. Some caution is needed as the learning does not offer statistically valid results but rather insights from six depth case studies.

EVALOC is a 4 year research project which seeks to assess and explain the changes in energy use in six low carbon communities (LCCs)<sup>1</sup> in the UK (Table 1). The six LCCs all undertook local carbon reduction projects, which typically included both technological improvements to buildings and behavioural interventions with residents. They each received some capital funding from the Department of Energy and Climate Change's (DECC) Low Carbon Communities Challenge (LCCC) initiative which they used for renewable energy or energy efficiency projects.

The following key learning points are drawn from EVALOC's community and household level research, shared learning workshops between the EVALOC communities and the wider energy literature.

## 2. LCC roles, capabilities and relations

EVALOC researched the roles, capabilities and organisational relations of the different organisations involved in the LCCs. Key learning points included:

- **Reducing local energy use and carbon emissions requires LCCs to undertake a wide range of roles at different levels.** We identified a core of 10 interlinked and mutually reinforcing roles that all the LCCs undertook to a greater or lesser extent to reduce local energy use and carbon emissions (Figure 1). We categorized the roles according to whether they were carried out 'downstream' with residents or energy users, 'midstream' with other organisations or 'upstream' with national government and other policy makers (Parag and Janda, 2014).
- **Carrying out these roles effectively requires the active involvement of a range of local authorities, community groups, residents and relevant statutory agencies.** Local authorities, health and other agencies, community groups or residents all have important roles to play in local carbon reduction strategies.
- **Organisations have different strengths and limits:** The EVALOC research highlighted the differing strengths and limits of organisations involved in the LCCs, and hence the difficulty for any one type of actor to carry out all the identified roles on their own.
  - **Community organisations** felt relatively confident

<sup>1</sup> By Low Carbon Community (LCC) we mean the organisations in a locality involved in promoting community-level energy and carbon reduction. This term can cover a single Low Carbon Community Group (LCCG), or a partnership or multi-agency approach involving LCCGs, local authority, other statutory agencies and intermediary support organisations.

	Awel Aman Tame	Sustainable Blacon	Eco Easterside	Hook Norton Low Carbon	Kirklees-Hillhouse	Low Carbon West Oxford
<b>LCC characteristics</b>	Community led	Community led	Partnership	Community led, mainly voluntary	Multi agency	Community led, mainly voluntary
<b>Location</b>	Port Neath & Talbot, South Wales	Cheshire West & Chester, North West England	Middlesbrough, North East England	Cherwell, South East England	Kirklees, Yorkshire & Humber	Oxford, South East England
<b>Geographical type</b>	Rural	Suburban	Suburban	Rural	Urban	Urban
<b>Socio-economic status</b>	Disadvantaged	Disadvantaged	Disadvantaged	Affluent	Disadvantaged, multi ethnic	Middle income <sup>2</sup>

**Table 1.** A summary of the main characteristics of the six case study low carbon communities.

### Downstream roles within communities (to enable residents to reduce energy use and carbon emissions):

- Community engagement & motivation.
- Empowering individuals and groups to take action.
- Changing energy-related behaviours and practices.
- Encouraging the uptake of, or delivering energy efficient improvements and renewables.
- Addressing fuel poverty.
- Generating community, social and economic benefits.

### Midstream roles with other local organisations and communities (to help scale up local energy action):

- Dissemination to other communities.
- Catalysing action by other local organisations.
- Joint working with other organisations.

### Upstream roles with national government (to help ensure a supportive policy environment and address structural constraints):

- Influencing national policy.
- Mobilisation/movement building.

**Cross-cutting roles: Process roles and Learning**

**Figure 1.** Summary of LCC roles.

at empowering residents to take action, helping them change their energy behaviours and developing innovatory approaches to local carbon reduction. Most, although not all, community groups felt less confident about their ability to promote the uptake of home energy improvements (whether energy efficiency improvements such as insulation or renewable energy installations such as solar panels) and address fuel poverty due to difficulties in tendering for installers, accessing government financial incentives and/or lack of volunteer time for outreach work.

- **Local authorities and other city wide bodies** were more confident about delivering home energy improvements and addressing fuel poverty. All the organisations felt confident about engaging and motivating people to take action and disseminating learning to other communities and organisations. Many said they were constrained by lack of funding for core delivery roles. These findings suggest it is useful for LCCs to consider how well they are performing the different roles, whether there are any gaps in the roles, and what other local organisations might be well or better placed to carry out certain roles, and whether joint working with other local organisations might be beneficial.
- **Joint working through partnerships and multi-agency approaches helps increase the scale and reach of LCCs' activities by combining the resources and strengths of different organisations.** In Easterside there was a *partnership approach* between a town wide environmental charity, the local authority, other agencies, and local residents which built on relationships that had been built up over the past decade. As one team member said;

*"What made our project work was having a community there that was already well respected and established so you won't have to do a lot of the convincing of residents – the group can pass the message on."*

In Hillhouse in Kirklees, where residents were less active and organised on energy issues, the local authority led a multi-agency approach while simultaneously investing in building the community relationships, networks and capacity to underpin future community action. In both cases joint working enabled the LCCs to increase reach and scale of energy activities and to integrate with other important services and activities.

However, joint working was not possible in some LCCs. The absence of strong legal duties on local authorities and other statutory bodies, difficulties in accessing government financial incentives in middle and higher income areas and financial cuts as a result of austerity measures, meant that local authorities and other agencies did not undertake active 'delivery roles' in all the LCCs. In



**Figure 2.** Focus groups were held in the six case study low carbon communities and discussed their roles as well as perceived strengths and limitations.

Hook Norton, West Oxford and Blacon and AAT community groups found themselves to be the main organisations actively helping residents to reduce energy use and carbon emissions in the area, although in two cases they were in part supported or funded by the local authority. One LCC was actively involved in influence local authority and other agencies to take on a more active delivery role in their area but this has not happened because of financial constraints.

## 2.1 Downstream activities

### 2.1.1 Community engagement

All the EVALOC LCCs succeeded in engaging and motivating significant sections of their community including people who would not have otherwise been able to afford interventions and/or would not have previously considered themselves 'green', although they also all faced challenges in widening engagement. The following communication and engagement methods were found to be helpful:

- **Highlighting both intrinsic messages (relating to the environment, social and economic benefits of action, climate change) and extrinsic messages (relating to personal benefits such as saving money on fuel bills, fuel poverty, warmer homes).** Residents from both advantaged and disadvantaged communities were motivated to get involved with the LCC, or reduce their energy use, for a mix of intrinsic and extrinsic motivations. As a respondent from one of the disadvantaged communities explained: *"Finance, environment and future. Future for the rest..."*.
- **Balancing communications so they inform people about the seriousness of climate change but not scaring them so much that they think there is nothing to be done.** One focus group participant said: *'I think there was a period a few years ago where the message was quite negative, it's too late to do anything about it now we've gone too far, we can't stop it therefore what's the point but I think this work that's happened through the eco-day and through the schools has energised people more to actually oh we can do something, let's do it.'*
- **Ensuring relevant and accessible project:** for example the provision and installation of free home energy improvements greatly facilitates resident engagement (see below).
- **Offering residents a diversity of relevant, accessible and practical ways of taking action linked to an overarching common message.** Eco Easterside used the 'One Planet Living' principles successfully to 'brand' a range of diverse projects. As one focus group participant said: *'The project itself was diversified in all different types of projects, it wasn't just putting panels on roofs or SRC pumps, we looked at*



**Figure 3.** Community event in Easterside; an Eco-Gala Day, 'What on EARTH are we doing?'

*rainwater harvesting, grow your own vegetables' ... but the '[One planet living messages] have become an organisational norm.'*

- **Providing a wide range of engagement channels** to ensure that everyone is reached and therefore has the potential to benefit from projects including via newsletters, leaflets, door knocking, schools, community events, word of mouth, presence at other community hubs, press, photo stunts, flash mobs etc.
- **Door knocking:** particularly when there are significant financial incentives available, as people don't necessarily read leaflets/newsletters or attend group activities (although safety aspects needed to be considered).
- **Well-designed community events** helped strengthen people's motivations, know-how and intentions to reduce energy use and carbon emissions, and enable social learning about energy. Most important learning methods at events included demonstrations (show and tell), and informal opportunities to talk and listen. A Local Authority in one LCC proved just as successful and creative as community groups at putting on community events.
- **The use of arts and creativity** helps engage a wider audience and stimulates deeper emotions e.g. through school plays, arts activities.
- **People spread energy messages through their personal social networks but mainly to people very close to them.** They are also sometimes fearful of judgement and there can be issues and contexts which they do not want to discuss. This indicates the continued need for LCCs to continue using a diverse range of engagement channels and providing structured guidance, training and support to local energy champions.
- **The importance of transparency, accountability and reporting to the community** particularly where there are financial incentives on offer.

### 2.1.2 Home energy improvements

The majority of EVALOC's 88 case study households across the six LCCs achieved reductions in both electricity and gas use,



although there were wide variations in energy use (See box below). The following interventions were found to be helpful in promoting the uptake of home energy improvements and changing personal energy behaviours:

- **The area wide provision of free energy home energy improvements and installation provided a comparatively fast and effective way of increasing uptake** and was particularly important in ensuring that disadvantaged and vulnerable households could access and benefit from the improvements in the form of warmer homes and reduced fuel bills. As one LCC team member said: *'If we [the Council] had not done this project, there was no way the householders would have installed renewable energy or likely energy efficiency measures. Many are unable to access the information and grants that are available to them, and because we took it straight to them it made it much easier for them.'*
- **Conditioning the receipt of free measures on residents' participation in group learning activities helped residents value and understand home energy improvements properly**, as happened in Blacon. Conversely as one team member said in an LCC where this hadn't happen said: *'At the end of the day – we have had fantastic saving money on energy bills. But all the cultural and behavioural change stuff hasn't happened yet. We should have got them to commit to come to a set amount of meetings per year.'*
- **Loan schemes** combined with technical advice helped promote resident's uptake of home energy improvements measures, as in Hook Norton, but low income, vulnerable or elderly people less likely to benefit and the group faces challenges in widening uptake.
- **In-home visits and advice, handholding and discussion** were important to enable residents to acquire and use and maintain home energy improvements. However, few of the community groups had the time or resources to do this properly except for Blacon which used the DECC grant to successfully train up a large number of volunteers.
- **Structured group-based social learning opportunities** through informal and safe settings 'action and learning' groups such as Blacon's energy management programme, or LCWO's Low Carbon Living Programme, were successful in enabling residents to acquire know-how, change their personal energy behaviours, and install home energy improvements. (Link to briefing note on behavioural programmes).
- **'Sense-making' helped build energy literacy** through feedback about energy use, including through Energy Display Monitors, thermal imaging, carbon mapping, self-reporting community evaluations and national databases.
- **The provision of joined up advice and cross referral systems by and between local authorities and other statutory agencies about affordable warmth and related services is important to help reduce fuel poverty.** Whereas these approaches were present in LCCs in disadvantaged areas they were not available in middle and high income areas which made it difficult for LCCs to help the pockets of fuel poor people living in their areas.

## LCC effectiveness on reducing localised domestic energy use and carbon emissions

The majority of EVALOC's 88 case study households across the six LCCs achieved reductions in both electricity and gas use, although there were wide variations in energy use. Moreover, the percentage reductions in average domestic energy use and carbon emissions between 2008 and 2012 in the Lower Super Output Areas for the six communities were generally greater than national average reductions, despite most of the communities having lower baseline (2008) domestic average gas and electricity use than the national average, which can limit the possibility of reducing energy use. The more in depth carbon mapping undertaken by EVALOC in each LCC, based on a mix of actual and estimated data for 200-300 households per community, indicates a similar scale of reductions. Although it is not possible to establish a direct link between LCC activities and the wider local community energy reduction trends, it is likely that LCC activities were contributing in some way to domestic energy reductions in these areas.

Sustainable Blacon and Kirklees showed the most significant reductions in gas and electricity respectively at the wider local area. Blacon had used the DECC funding for demand reduction through behaviour change (group learning and energy display monitors) and physical interventions such as new heating systems, loft and cavity wall insulation (i.e focused on reducing gas use) in a significant number of volunteer households in the local area. However, it had also seen significant large-scale community-wide fabric-related energy improvements since 2008, through Government schemes such as Warm Front, CERT (Carbon Emissions Reduction Target) and ECO (Energy Company Obligation), which target areas of deprivation and relatively 'simple', low-cost fabric measures such as loft and cavity wall insulation, and so such reductions cannot all be attributed to LCC activities. The reduction in average household electricity use in Kirklees-Hillhouse is also significantly greater than the national reduction (12% to 4%), which suggests that the wide-scale focus of Kirklees Council in terms of investing significant funds for localised energy generation (including the LCCC-funded Greening the Gap project) is contributing in some way to reductions in both carbon emissions and grid electricity use. Again, this intervention built on the back of previous area wide energy efficiency interventions in the area during the period 2007-2010 which are likely to have contributed to gas reductions.

- **Complementary community activities can encourage and enable residents to change the wider lifestyles** that contribute to carbon emissions, for example in relation to transport, food, waste and lifestyle.

### 2.1.3 Renewable energy projects

The research showed that community renewable projects on local schools, community centres or other community buildings can:

- **Help raise residents' awareness** of low carbon technologies – surveys in two of the communities showed that residents felt more positively about renewable energy and the possibility of tackling climate change due to the LCCs' community renewable projects as well as feeling more motivated to get involved in local energy projects;
- **Reduce community's carbon emissions**, and;
- **Generate an income for further environmental projects in the community**, although the relatively small size of installations meant that the net income (after maintenance, insurance etc.) was not sufficient in most communities to sustain staff and/or invest in further projects (for example, the Low Carbon Hub has estimated that a £1million investment in renewable energy is required to generate a net income of £30,000, just about enough to employ a part-time worker (around £20,000) and provide a small investment for projects).

## 2.2 Midstream activities

The following midstream activities were found to be important in replicating, scaling up and mainstreaming local energy action:

- **Joint, partnership or multi-agency working can increase the scale, reach and pace of activities**, as noted above. Lessons from the EVALOC shared learning workshops suggests that effective community-council partnerships requires, among other things:
  - Community groups with a track record in energy interventions and/or willingness to engage in new initiatives and/or multi-agency approaches and long term investment in community development;
  - Local and district councils motivated to act on climate change and prepared to take risks in exploring new partnership approaches,
  - Time to build trust and relationships
  - Mutual understanding and respect between partners e.g. community groups seen as equal partners with adequate funding rather than cheap delivery agents;
  - Clear value added from joint working, clarity about roles and responsibilities, and accountability

to people not at the table.

- **Dissemination activities such as networking, shared learning workshops, peer mentoring and demonstration projects are important to help other communities share, adapt and replicate successful low carbon innovations and practices.** One LCC (LCWO) catalysed and supported the establishment of a number of other LCCs in the city. Research in Oxfordshire highlights the important role of intermediary organisations in facilitating these kinds of activities and the important role they play in helping replicate community energy action and spread innovations (Parag et al, 2013).
- **Catalysing action by other local organisations through dialogue, influencing or modelling practical solutions can help improve or strengthen local energy services and infrastructure.** One LCC (LCWO) catalysed the establishment of a county wide social enterprise to support other communities, businesses and schools to generate renewable energy informed by its experience. Having demonstrable impacts backed by its own monitoring data helped increase the LCCs' influence.

## 2.3 Upstream activities

Learning about the need for upstream activity included:

- **All the LCCs' activities were constrained by a range of upstream influences which were beyond their capacity to influence on their own.**
- **A strong, supportive and consistent policy environment is needed to support local carbon reduction and help address structural constraints.** The EVALOC LCCs highlighted the need for the following policy measures: strong public leadership by and messages from government about the importance of action on climate change; consistency of financial measures such as FiT; easy-to-access capital grants for energy efficiency improvements for low income and vulnerable groups; low-cost loans for the able-to-pay; revenue funding for the core delivery roles of local actors; and a properly-resourced statutory duty on local authorities to reduce carbon emissions and address fuel poverty.
- **LCCs need to engage in collective action to influence government policy.** LCCs have considerable amounts of 'soft power' which they can use to influence government policy derived from legitimacy from acting on climate change and fuel poverty, their practical knowledge and their growing numbers. In practice, lack of time and resource meant that few of the LCCs were able to spend much effort on 'upstream' roles to influence government policy even though they were aware of its strong influence on their activities and despite their valuable intelligence about what policies work and don't work on the ground. There is, however, considerable scope for this role to be developed in the future if it were resourced adequately.

There is also much good practice to learn from in other sectors including that effective influencing requires a mix of persuasion (evidence, dialogue, demonstration projects) and pressure (through movement building, mobilisation, public campaigns and protest).

### 3. Overall strategy design

Our research found the following elements to be helpful when designing a change strategy:

- **A positive and credible vision:** The literature on low carbon transitions highlights how a credible and shared vision can provide direction can help motivate, engage, direct and manage the expectations of stakeholders (Kemp et al, 1998; Seyfang et al, 2012). Climate change communication experts suggest a vision should consist of (Futerra team, undated);

- A vision of what is possible;
- The effects of not taking action;
- An action plan.

Ideally a vision needs to be designed with the active involvement of relevant stakeholders. Not all the EVALOC LCCs had a clear shared vision, although all had clear aims and objectives, developed with stakeholders, suggesting that a vision may not be an essential factor for achieving change. However, it was helpful, for example Eco Easterside's vision was informed by One Planet Living principles which helped provide an over-arching rationale and narrative shared by all partners and which guided communication messages.

- **A plausible change strategy:** Research suggests the need for change strategies to be informed by a sound contextual analysis and understanding of what needs to change and how change might be achieved (Grin et al, 2011; Smith, 2012; Foxon et al, 2010; Gaventa, 2008; Kingdon, 2003). The evaluation literature suggests that it can be helpful to present an intervention's or project's aims, objectives and activities in the form of a 'change pathway' or impact chain. (Pawson et al, 2004). A change pathway describes how your project **activities** contribute to your desired **outcomes** (objectives) which in turn contribute to final **impacts** (aims). Laying out a change strategy in this way can be helpful for planning and can help reveal both the interactions between planned activities, outcomes and impacts and the assumptions that underpin how people think change might be achieved. Nevertheless, in practice change does not necessarily happen in a linear way so it is also helpful to be aware that a change pathway may have multiple outcomes and impacts as well as interactions and feedback loops between its constituent parts. (Mayne et al, 2014). The transitions

literature highlights the importance of experimentation and learning in trying to scale up new low carbon innovations (Kemp et al, 1998). It is therefore important to ensure that a change strategy is flexible enough to be revised in the light of new intelligence.

- **A mix of mutually reinforcing change interventions at downstream, midstream and upstream level** aimed at catalysing the enabling influences/actors on energy use and overcoming the constraining factors/actors (Mayne et al, 2012). Changing energy behaviours and reducing energy use is not just about providing the right information to people as once thought, but also about addressing the multiple technical, economic social, and cultural influences on energy use at individual, group and structural level. These influences may be habitual behaviours, social norms, cultural practices, group rules and standards, local services, technologies and infrastructures. Change also involves influencing the actions of other actors including residents and other community actors at downstream level, other local organisations and communities at downstream level and government and other national actors at upstream level.
- **Resident participation in the design and/or delivery of interventions** helps strengthen understanding, motivation and capacity to reduce energy use and emissions (see below). Community participation may require initial investment in building trust and relationships and addressing barriers to participation such as lack of time, language difficulties, or a sense of not belonging.
- **Sustainable group processes:** LCCs need require predictable sources of core finance, as well as human and technical resources. LCCs relying solely on volunteers struggled to increase the reach and scale of their activities after initial successes and one ended up folding.
- **Learning processes:** Both the academic and evaluation literature highlights the importance of learning processes (Kemp et al, 1998) so that the assumptions underpinning the change strategy can be tested and strategy informed and adapted (Mayne et al, 2014). Learning can be achieved through self-monitoring, action research, external evaluations or other ways. One LCC, implemented their own monitoring and learning processes from the start and was able to use this intelligence and data to catalyse action and joint working with a range of other local organisations. The research found that a collaborative action research approaches helped increase the quality of research and contributed to LCCs learning (Gupta et al, 2014).

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## Further information

### Influences on energy use

The research literature highlights the multiple technical, economic, social and cultural influences on individuals' energy behaviours and use that LCCs need to address to enable residents to voluntarily reduce their energy use and carbon emissions. (See EVALOC literature review for a summary: Mayne et al, 2010). Changes to energy use are therefore likely to require simultaneous and mutually reinforcing changes to a range of interconnected influences and actors at individual, group and structural level. These may include:

- **Individual influences:** related to what goes on within individuals - knowledge and patterns of thinking; values, beliefs and attitudes and intentions; personal agency i.e. a person's belief that they can take meaningful action; perceptions of social norms; routines & behaviour; access to low carbon technologies (influenced by income, resources)
- **Group influences:** related to what goes on between people and within households, groups, social networks, communities and institutions - such as power dynamics; organisational resources and capabilities; group standards and rules.
- **External/structural influences:** factors beyond the immediate control of individuals – such as the availability and cost of low carbon technologies, fabric measures, infrastructures, and goods and services; socio-economic structures (tenure, class, gender, race etc; cultural beliefs; power relations; and the public policy framework and incentive framework.

Within households the key influences on domestic energy use that need to be considered include:

- The physical environment (inside and outside),
- The technical context (the controls, services and systems),
- The occupants (behaviours, motivations, capability, perceptions of social norms, comfort etc.),
- The interactions and relationships between these factors.

As actors' actions are shaped by social structures but structures are also shaped by human action (Giddens, 1984) the 'influences' on energy use may be either be causal variables or outcomes; there may be interactions and feedback loops between the different types of influences and between different levels of influence (e.g. Geels and Schot, 2007); and the influences might vary in strength or direction of influence (i.e. enabling or constraining change) depending on the type of influence or the context.



## Issues to consider in the design of a local energy and carbon reduction strategy:

Elements of strategy	Summary checklist of issues to consider in strategy design
<b>Roles &amp; responsibilities</b>	
	<ul style="list-style-type: none"> <li>- Active involvement of local authority, residents, and other relevant statutory agencies</li> <li>- The allocation of organisational roles reflects legal duties, responsibilities for carbon emissions, and capabilities</li> </ul>
<b>Overall strategy design</b>	
Strategy design	<ul style="list-style-type: none"> <li>- A positive and credible vision</li> <li>- A plausible change pathway with clear aims and objectives</li> <li>- An appropriate mix of activities at down, mid and upstream level</li> </ul>
Group processes	<ul style="list-style-type: none"> <li>- Clear roles, responsibility, communications and internal processes</li> <li>- Transparency, accountability and reporting</li> <li>- Ensuring fair participation and distribution of benefits and costs</li> </ul>
Learning	<ul style="list-style-type: none"> <li>- Monitoring and periodic evaluation to inform strategy</li> </ul>
<b>Downstream activities</b>	
Community engagement strategy	- A sound understanding of the demographic and organisational make up of the community
	- Residents offered a range of relevant and accessible ways of taking action
	- Relevant and balanced communication messages which activate a mix of extrinsic and intrinsic motivations.
	- A range of engagement channels to engage different social networks and organisations including door knocking to ensure wide reach
	- Measures to address constraints on participation
	- Communication of outcomes and impacts to residents and stakeholders
	- Transparency and accountability to stakeholders
Domestic carbon and energy reduction strategy	<ul style="list-style-type: none"> <li>- Economic and technical resources and ongoing support to enable the uptake of energy efficiency and renewable measures.</li> <li>- Careful, expert in-home advice and discussion</li> <li>- 'Sense-making' to build energy literacy through feedback about energy use, including EDMs, thermal imaging, carbon mapping, self-reporting, community evaluations and national databases.</li> <li>- Group-based social learning opportunities in informal and safe settings such as community events or 'action and learning' groups.</li> <li>- Complementary community activities to encourage and enable residents to change their wider practices relating to renewable energy, transport, food, and waste.</li> </ul>
<b>Midstream activities</b>	
Disseminating learning and innovations to other communities	Networking, shared learning, peer mentoring
Catalysing action by other actors to strengthen local energy services and infrastructure	Dialogue, influencing, demonstrable solutions, proven track record,
Scaling up energy action and innovations	Collaborative or joint working with clear valued added between organisations
<b>Upstream activities</b>	
Influencing/shaping national policy	A mix of persuasion (demonstrable solutions, dialogue, evidence) and pressure (public mobilisation, public campaigning, media, protest)

Sources: EVALOC research project; wider energy literature (see EVALOC literature review for a summary: Mayne and Darby).





**For further information please contact:**

**Professor Rajat Gupta**  
**Low Carbon Building Group**  
**Oxford Brookes University**  
**Headington Campus, Gipsy Lane**  
**Oxford OX3 0BP**

**Phone: (+44) 1865 484049**  
**Fax: (+44) 1865 483928**  
**E-mail: [rgupta@brookes.ac.uk](mailto:rgupta@brookes.ac.uk)**

**[www.evaloc.org.uk](http://www.evaloc.org.uk)**

The **EVALOC** project seeks to assess, explain and communicate the changes in energy use due to community activities within six selected case study projects under the Department of Energy and Climate Change's (DECC) Low Carbon Communities Challenge (LCCC) initiative, a government-supported initiative to transform the way communities use and produce energy, and build new ways of supporting more sustainable living.



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