Department of Energy & Climate Change

DECC LEAF Evaluation

Undertaken by Databuild Research & Solutions Ltd

January 2014

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1 Executive summary

The Local Energy Assessment Fund (LEAF) was a Department of Energy and Climate Change (DECC) funding competition involving 236 community groups in England and Wales.

The purpose of LEAF was to help prepare communities in England and Wales to take action on energy efficiency and renewable energy and to take advantage of the opportunities offered by policies such as the Green Deal and Renewable Heat Incentive (RHI), as well as Feed-in Tariffs (FITs).

It was recognised that community-led groups require initial strengthening in terms of capacity building (knowledge, skills, membership, organisation and legal status) to enable them to reach the point of actively installing community energy projects at a later stage.

LEAF offered initial seed-funding to:

- **build the capacity** of community-led energy projects in England and Wales;
- **encourage public engagement** and information-sharing on energy efficiency and renewables
- **explore potential** for community-led renewables
- **access advice** from consultants.

LEAF was delivered within a short timescale (December 2011 - 31 March 2012). In spite of the short timetable, more than 600 community-led organisations submitted applications which were assessed on a competitive basis by representatives of the community sector, DECC and the Energy Saving Trust.

As a result of two bidding rounds, 236 community-led organisations shared £9.2m (with an average award of approximately £40,000) to undertake activities such as public engagement exercises, scoping studies, demonstration projects, awareness-raising and behaviour change projects.

Databuild carried out a process evaluation from January 2013 to October 2013, with objectives to:

1. **provide an overview of what LEAF funding was spent on**; and what short and longer term outputs were delivered, by policy/activity type; identify any initial outcomes where appropriate or possible at this stage
2. **identify factors which appear to have supported or hindered success** and draw out commonalities by project or community type
3. **explore the role played by community engagement** in projects
4. Investigate how the funding **prepared communities for the Green Deal or the Renewable Heat Incentive.**

Supporting these over-arching objectives were a set of research questions (section 2.2).

1.1 Approach

The evaluation involved:

- **telephone interviews** with community energy sector stakeholders related to the LEAF project
- **coding to identify themes**, and an analysis of application and monitoring forms submitted by all funding recipients
- **an online survey** (completed by 112 out of 236 LEAF project representatives)
- **40 in-depth interviews**, which were analysed with the survey and monitoring form data to form ten case studies of LEAF projects.

1.2 Funding

The majority (80-90%[1]) of LEAF-funded groups were community-led organisations – i.e. citizen groups or third sector bodies with a 'representative' voice[2]. Approximately one quarter of these groups were organisations such as community interest companies (CICs), cooperatives and social enterprises. Most groups were pre-established and had experience of delivering projects prior to applying to LEAF.

Just under half (47%[3]) of LEAF projects were focussed solely on reducing energy use and/or energy efficiency. A further 41% incorporated renewable energy generation and12% focussed solely on renewables.

All projects undertook multiple activities which linked together as part of a plan to achieve an overarching objective(s) or goal(s) (e.g. reducing energy consumption, increasing generation or both). Across policy areas (energy efficiency, renewables), project activities fell into two broad categories:

1. those scoping ideas or developing specific plans for a large future project or projects (e.g. feasibility studies)
2. those undertaking early steps of and/or actual project delivery (e.g. awareness raising, behaviour change, home surveys etc.).

1.3 Enablers and barriers to project success

Groups reported factors or activities which were felt to help or hinder the success of LEAF projects: these are detailed below. Enablers and barriers to success are reported in approximate order of priority, including:

1. **timescales** – limited timescales were reported by three quarters of projects as the most significant barrier to success
2. **working with partners** – almost all projects worked with partners to deliver outputs and this was reported as being crucial to achieving success
3. **community engagement** – almost all projects undertook some community engagement and was reported to be crucial to achieving success.

These are discussed in more depth below.

[1] Data sourced from monitoring forms. A range is presented since in a minority of cases it was not possible to confirm that the group was truly 'community-led' from the data provided

[2] As defined in DECC's report Community Energy in the UK – a review of the evidence (2013).

[3] Data sourced from monitoring forms.

1.3.1 Timescales

The funds had to be spent within a constrained time period, and timescales were reported to affect successful delivery of approximately three quarters of projects in a mainly negative way, affecting areas such as planning, delivery and working with partners.

A very small minority (2%[4]) reported some positive effects from the timescales, which were to focus the project team to deliver within a timescale, which they otherwise would not have achieved.

There is qualitative evidence (see section 5.1) to show that the timescales appeared to be less of an issue on projects which:

- were led by groups or organisations with more project delivery experience
- had more realistic project goals, designed to be deliverable within the timescales (as determined by both group members and wider stakeholders)
- already had good pre-existing relationships with partners, such as contractors and stakeholders (e.g. local authorities).

Timescale issues were overcome in some cases by bringing in expert support or changing the scope of the project.

1.3.2 Working with partners

The vast majority of project teams (96%[5]) worked with partners to achieve project objectives and this was seen by many as beneficial. Partnerships took the form of:

1. **contracted technical or delivery support**
2. **working with stakeholders** – e.g. local authorities or other community groups/representatives and measure/technology supply chains.

Working with partners was reported to help achieve success by:

- **delivering roles the project teams did not have skills or resource** for (e.g. design of materials, early feasibility studies)
- **providing access to parts of the community** (e.g. piggy-backing on other activities, working with other community representatives and local media)
- **securing buy-in** from important stakeholders (e.g. local authority planning departments and supply chains).

For a minority of projects, contractors and other partners reportedly caused some problems, either **through lack of delivery** or **inaccurate outputs** (e.g. technical data). The success of working with partners appeared to be linked to groups having pre-existing relationships and to their level of expertise in commissioning.

1.3.3 Project design

Having a **good project design** was considered important to success. Respondents felt that key aspects of this were:

- having realistic objectives

[4] Data sourced from the online surveys.
[5] Data sourced from the online surveys.

- ensuring activities were aligned to achieving those objectives
- ensuring the activities could be delivered within the timescales.

Factors which affected project design included:

- **experience of delivery** – where groups had more experience of this, they appeared to report more successful project design
- **project type** – those focussed on energy efficiency appeared to find project design more challenging, in particular where this involved 'intensive' measures[6] (e.g. solid wall insulation). Likely causes of this could be:
  - some of these activities are 'newer' to community projects (e.g. promoting direct uptake of measures like solid wall insulation)
  - the activity focussed on getting the local community to respond or act
  - the activity involved more partners to achieve success – e.g. persuading householders to take action, working with several layers of a supply chain.

1.3.4 Community engagement

Most projects (87%[7]) included some form of community engagement as a means to achieve their objectives and most of them (84%) felt it was essential for achieving success. Reviewing the effectiveness of different engagement approaches showed that:

- the majority of respondents (68%) felt that **face to face contact (e.g. through both events and door-to-door targeting) was more effective** than other methods as it allowed a two-way discussion and enabled tailored advice or guidance to be provided
- **methods felt to be less effective included more generic or 'one-way' activities**, such as leafleting, media and online promotion.

FACTORS SUPPORTING COMMUNITY ENGAGEMENT

Factors which helped achieve effective community engagement were reported to include:

- understanding the audience and then tailoring community engagement around it
- utilising the community groups existing presence and 'representative voice' to good effect
- exploring opportunities to use pre-existing engagement channels
- utilising a range of approaches, with an element of 'face to face' engagement to allow for discussion
- where possible including some form of social aspect to the engagement activities.

OBSTACLES TO ENGAGEMENT AND OVERCOMING THESE

Obstacles to community engagement were reported to include:

- lack of time to prepare for major activities, such as planning engagement strategies (this was overcome in some instances by contracting in support and help)
- events with lower than hoped attendance
- getting wider exposure, for example, in the media
- householders who were not engaged with 'green' issues, or who did not see energy bills as an issue

[6] 'Intensive' measures include those which have a high cost and require significant works to install, such as solid wall insulation.

[7] Data sourced from the online surveys.

- reported issues arising from the weather (in a minority of projects).

1.3.5 Other factors/activities affecting project success

There were some additional factors which respondents reported as affecting success, including:

- group membership and dynamics
- building on existing work
- delays in receiving the funding award for some projects.

Section 7 provides details of factors affecting success of projects which involved specific renewables technologies. Analysis of these projects highlight factors common to all projects (as outlined above) as well as some specific to technologies. These include the issue of fuel supply for biomass and Anaerobic Digestion, or lack of suitable sites for wind and solar PV installations.

1.3.6 Learning

A number of groups reported learning through delivering the projects which they would use in future activities. This included:

- outputs from early scoping feasibility and opportunity studies informing group strategy and activities
- a better understanding of how to develop and deliver community-led engagement activities.

In addition, there was some evidence of sharing learning, for example through the

- publication of project reports
- use of websites as a repository for reporting progress and learning.

Finally, a number of respondents felt that there was less opportunity than they would have liked within the overall LEAF project to more widely share learning from individual projects and they would appreciate more opportunities for this in future.

1.4 Effectiveness of LEAF support

Aspects of the LEAF project reported by respondents to have worked well included customer service from LEAF staff (Energy Saving Trust) and the levels of funding, which were higher than for most other competitions. Fewer respondents cited suggested improvements, but those that did, suggested longer delivery timescales and recommended a higher level of funding (in noted contrast to the majority that felt funding levels were sufficient).

1.5 Outputs delivered during the funding period

Those who achieved **more than planned (around one third of LEAF participants[8]),** reported; for example:

- some reported that contractors delivered more than what was expected of them (adding value)

[8] Data sourced from the monitoring forms.

- community engagement-related factors such as unexpected good publicity and local media coverage, better response to activities (e.g. door-to-door surveys) and getting benefits from piggy- backing on existing events in the area.

Those who achieved **less than planned (around 15% of participants[9])** reported not meeting expectations on deliverables, such as numbers of surveys conducted, and in particular, lower attendance than had been hoped for at events. This was mainly reported to be due to lack of time to prepare or promote the activities and (consequently) attracting less public interest than hoped.

1.5.1 Outputs

Responses to the online survey indicated that:

- on average four events were held per funded project with an average of **140 attendees in total (35 per event)**
- projects were estimated to have interacted with[10] an average of over **1000 members of target audiences per project.**

Some projects collected data from their communities to ascertain interest in future energy efficiency action. Within this:

- an average of 76 households per project (base = 86 projects) had recorded an intention to undertake energy efficiency or renewable installation action.

These figures should be viewed with caution since they are self-reported estimates, for which the researchers have provided an assessment of confidence (shown in more detail in Table 3).

1.6 Outputs and outcomes – since project funding ended[11]

A questionnaire was sent out to 225 LEAF participants, with 50% responding. The findings from this showed that the majority of projects (88%) had continued activities related to LEAF since March 2012. Activities included:

- securing additional funding
- further public engagement
- development plans for future work
- starting new groups or projects
- influencing activities
- undertaking further specific project related activities (e.g. energy assessments, early stage feasibility studies, installations etc).

Just over half (54%) of respondents who continued activities reported accessing further funding since March 2012 to support their activities, **averaging approximately £54,000 per group**. Major sources of alternative funding (up to March 2013) included Big Lottery, local authorities and the Renewable Heat Premium Payments Schemes (RHPP2) fund.

[9] Data sourced from the monitoring forms. .

[10] i.e. the estimated number of households that attended events, received promotional materials, or were engaged more directly face-to-face.

[11] To March 2013

Some groups felt that LEAF had improved their capability to access funding, through enabling them to provide additional evidence in applications (e.g. of opportunities or need[12]), additional evidence of track record (e.g. of delivering projects successfully) and links with partners (e.g. with whom funding could be applied for). Several groups reported not needing funding to continue progress. Some groups were sat within a partnership or wider organisation that could provide funding without the need for the group to seek external sources of funding. In other examples, some groups were progressing with projects by utilising volunteers so no costs were being incurred with this model.

Just over a tenth (12%) of respondents reported undertaking no additional activity since LEAF.

Where barriers to action were reported these included:

- lack of further funding to resource activities
- lack of time/ availability of volunteers/ competing priorities
- next steps being 'big leaps' – e.g. setting up as an organisation, installing large scale technologies.

Some groups also reported wider beneficial effects of LEAF on their group, such as:

- increased skills and capacity
- more success in funding applications
- increased focus on project delivery (following outputs from LEAF, such as early stage feasibility studies).

[12] From utilising the outputs from LEAF projects, which provided evidence of opportunities (e.g. number of solid walled properties, which could have solid wall insulation installed).

2 Introduction and objectives

2.1 Context

The Local Energy Assessment Fund (LEAF) was a Department of Energy and Climate Change (DECC) funding competition, designed to help local communities develop energy projects. The purpose of the fund was to help communities take action and prepare themselves to take advantage of the opportunities offered by policies such as the Green Deal, Feed in Tariff and Renewable Heat Incentive (RHI). The Energy Saving Trust delivered the LEAF application and administration process on behalf of DECC. The types of activities funded covered both energy efficiency and renewable energy projects, including:

- **scoping studies** – e.g. to understand the local potential for energy saving and/or renewables, in the context of potential support from DECC policies (e.g. Green Deal, financial incentives etc.)
- **initial feasibility studies** to highlight which technologies might be appropriate and beneficial (e.g. renewables) and to make some initial estimates of likely energy outputs and income streams
- **early stage feasibility studies for a specific technology** to examine the design, costs, impacts, income in more depth
- **demonstration projects** – demonstrating energy saving technologies and measures in local homes and community buildings
- **awareness raising and behaviour change projects** – to help local people understand the potential of energy saving measures and behaviours.

Following an application stage, 236 community-led organisations were awarded £9.2m of funding (each receiving an average grant of £40,000).

Subsequent to the funding, DECC commissioned a process evaluation of LEAF to understand what was delivered, how it was delivered and to compile learning to help inform future policies and projects. Databuild Research and Solutions Ltd were commissioned to undertake the evaluation between January and October 2013.

2.2 Objectives

The objectives of the evaluation were to:

1. provide an overview of what LEAF funding was spent on; and what short and longer term outputs were delivered, by policy/activity type; identify any initial outcomes where appropriate
2. identify factors which appear to support or hinder success and draw out commonalities by project or community type
3. explore the role played by community engagement in the projects
4. investigate how prepared communities are for the Green Deal or the Renewable Heat Incentive as a result of projects that were intended to support these programmes.

Supporting these objectives, the table below shows the full set of research questions underpinning the evaluation.

Table 1: Research questions explored in the evaluation

What was funded?	
1.	What policy areas e.g. renewable energy, energy efficiency?
2.	Are some groups covering more than one policy area?
3.	What types of community groups were funded? Were they established as a group prior to LEAF funding?
4.	What type of activities (across policy areas)?
5.	How much was spent on specific types of activity?
6.	Was funding from other sources accessed by the groups before March 2013?
Outputs and outcomes achieved during and subsequent to the LEAF projects	
1.	Did the projects achieve what they intended to achieve?
2.	Were there any unintended effects of LEAF activities?
3.	Did the LEAF funded activity lead to further outputs or outcomes that have occurred since March 2012?
4.	Was further funding from other sources accessed since March? How much and where from?
5.	Has LEAF funding had any wider effects e.g. on the focus of the group?
6.	Are communities more prepared for / interested in the Green Deal and RHI following projects intended to support these programmes?
7.	Where data on outputs can be quantified what, if any, evidence is there regarding cost-effectiveness of different activities in achieving these outputs?
What factors were felt to be enablers / barriers to success?	
1.	Which types of activity were perceived by communities to be more or less successful within the time period given for spending the LEAF grant?
2.	Has any learning been utilised or shared? How, with whom and to what effect?
What level of community engagement was achieved?	
1.	What factors (or activities) helped achieve community engagement?
2.	What difference, if any, was engagement reported to make to achievement of outputs?
3.	What obstacles to engagement were there and how were these overcome (if at all)?

3 Evaluation approach

The evaluation was designed to build on data already collected from participating community groups during delivery, which principally included application and monitoring forms. The evaluation comprised:

- **January 2013**: three in-depth telephone interviews with community sector representatives involved in the programme which helped inform the approach
- **February – March 2013**: review, coding to identify comparable themes across the projects, and analysis of 225 funding application forms[13] (submitted in December 2011); which helped establish group type and project details
- **February – March 2013**: review, coding and analysis of 225 monitoring forms, returned on project completion (March 2012) which provided self-reported early feedback on use of funding, project outputs, outcomes, achievements and issues
- **February – March 2013**: an on-line survey completed by 112 participant groups[14] providing insights on:
  - outputs and outcomes achieved during and subsequent to LEAF projects
  - factors which were felt to be enablers / barriers to success, including a range of learning
  - role and levels of community engagement achieved, how these influenced outputs and outcomes, obstacles and how these were overcome
- **April – May 2013**: case study investigation of ten LEAF projects through face to face and telephone interviews, (two to four respondents per project) providing in-depth insights on:
  - project design and delivery
  - successes and challenges
  - activities, outputs and outcomes delivered since LEAF funding
  - learning

Further details on the evaluation approach are reported in the appendix (section 0).

3.1 Limitations

The following were limitations on this evaluation:

- **impacts:** this is a process evaluation and does not seek to quantify impacts (e.g. energy, carbon or monetary) or additionality (what would have happened without LEAF funding).
- **LEAF population:** the findings are not necessarily generalisable to the community energy sector as a whole: LEAF projects tended to be pre-established with some experience of delivering projects.
- **non-response bias:** the survey response rate was 50%, and analysis of monitoring forms showed minor differences between responders and non-responders. This is shown in Table 5. On this basis the report specifies where evidence is reliant on the online survey only.

[13] All groups applying for funding had to submit forms which set out the background of the group and the intended project they would undertake with the funding (including component deliverables). 225 forms were received from the Energy Saving Trust, who administered the scheme.

[14] 50% of the 225 groups included in the evaluation.

4 What was funded?

This section of the report covers what was funded under the programme, including:

- types of community groups
- policy areas and types of activities
- spending on different policy areas/ activities.

4.1 What types of community groups were funded?[15]

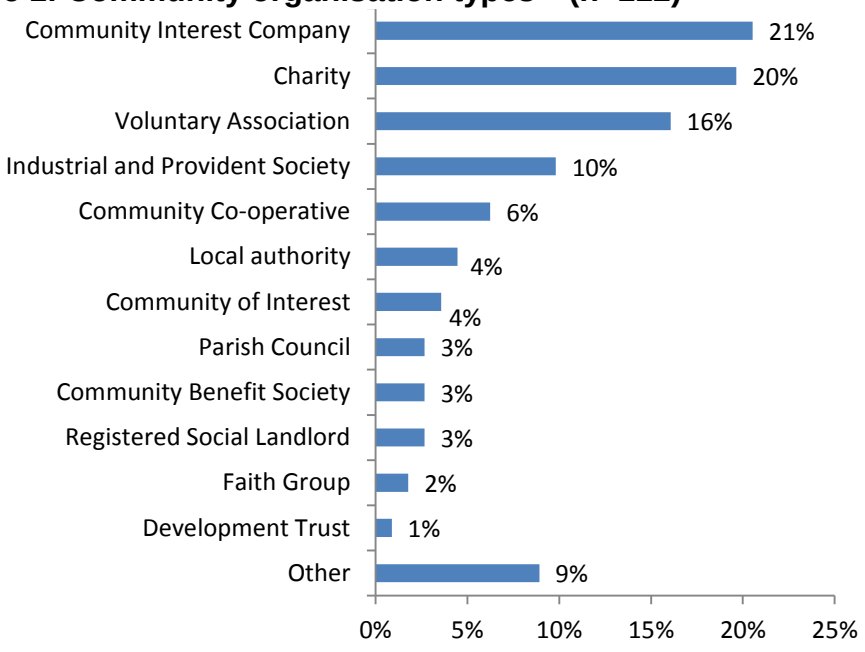
The majority (80-90%) of LEAF-funded groups were community-led organisations – i.e. citizen groups or third sector bodies with a 'representative' voice. The remaining organisations included local authorities, parish councils and Registered Social Landlords (RSLs) who tended to apply on behalf of community groups.

Approximately one quarter of the community-led groups/bodies had evolved into professional organisations such as community interest companies (CICs), cooperatives and social enterprises. Other findings included:

- most groups were fully formed and had experience of delivering projects prior to LEAF
- one tenth of groups formed new partnerships or developed new projects in response to the funding call, which were almost always partnerships of existing organisations
- projects were geographically dispersed across England and Wales only.

Figure 1 shows the breakdown of community group organisation types, self-identified through the online survey.

Figure 1: Community organisation types[16] (n=112)[17]



[15] Regarding the 80-90% range presented in the text box, a range is presented as in a minority of cases it was not possible to confirm the group was truly 'community-led' from the data provided.

[16] [from the prompted single choice survey question '*which of the following best describes your community group?*' (n=112)]

[17] Industrial and provident societies are as described by HMRC.

Experience: Almost all project teams (98%) reported having had experience in delivering energy project activities prior to LEAF. One tenth of respondents said that they had formed a new partnership or group in order to bid for and secure LEAF funding; these mostly involved existing groups coming together to apply.

Group membership: More than half of community groups responding to the on-line survey had over twenty active members and almost a quarter had over fifty.

Target areas: 70% of successful applications focussed their activities on a population of more than 5000.

Geography: As shown in Figure 2[18], LEAF projects were geographically dispersed across England and Wales, with 46% based in urban areas and 54% in rural[19].

Figure 2: LEAF Projects Map

4.2 Policy areas and activities

4.2.1 Funded areas

Just under half (47%) of the projects were focussed solely on reducing energy use and/or energy efficiency. A further 41% incorporated renewable energy generation as well and 12% focussed solely on renewables.

Groups provided reasons for their choice of focus in their application and monitoring forms. These included:

- saving and/ or generating energy
- awareness raising – as a precursor to undertaking energy efficiency or renewable energy activity in the community
- fuel poverty – where this was a local priority and therefore tailored messages and activities to reduce energy costs.

4.2.2 What types of activities were funded (across policy areas)

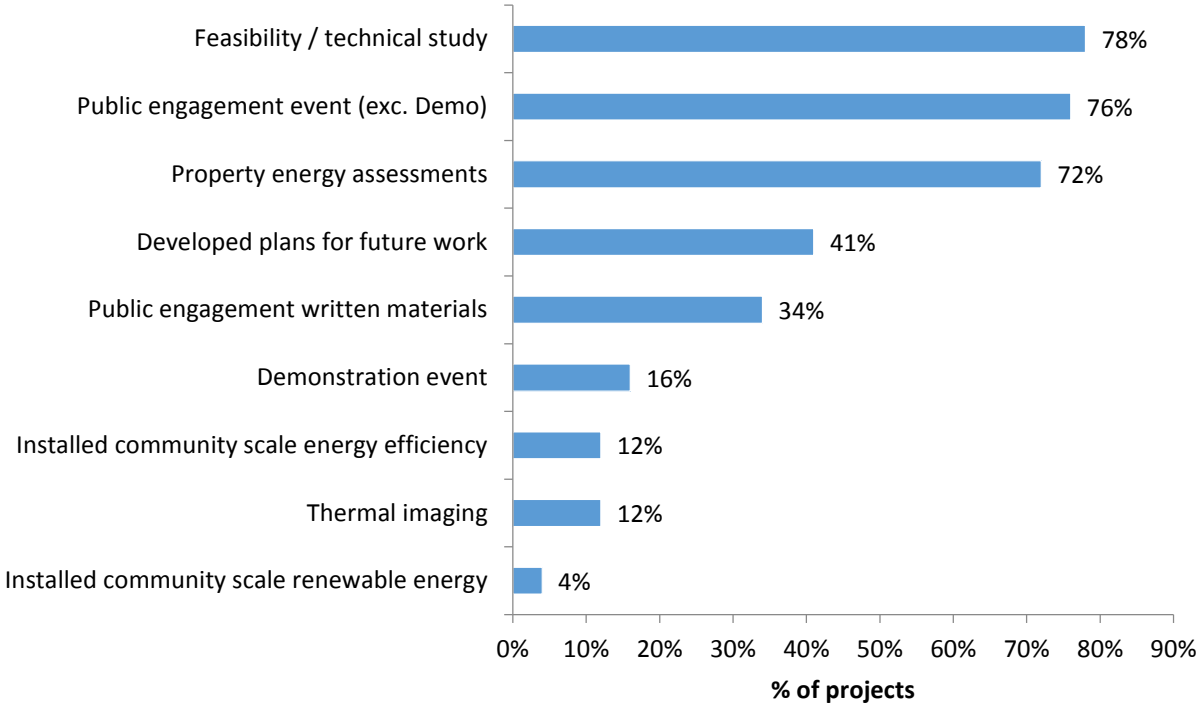
All projects undertook multiple activities that linked together as part of a plan to achieve an overarching objective or goal (e.g. reducing energy consumption, increasing generation or both). Across policy areas, project activities fell into two broad categories:

1. **those scoping ideas or developing specific plans for a large future project or projects** (e.g. feasibility studies)
2. **those undertaking early steps of and/or actual project delivery** (e.g. awareness raising, behaviour change, home surveys etc.).

[18] Based on 225 projects, which provided monitoring forms with post code information.

[19] This classification was applied subjectively (as part of the application and monitoring form coding) based on the subject community's population density and remoteness from key services. Guidance informing the splits, was based on the Office of National Statistics guidance for urban/rural.

Figure 3: Proportion of funded projects delivering different types of project output [from coding of the monitoring forms; multiple codes per project (actual number=225)]



Within each of these two broad categories, activities included:

Early stage feasibility studies and development of plans for future work:

- feasibility studies (conducted by 78% of projects[20]), included two broad types:
  - scoping studies – for example to better understand the appropriateness/ applicability of different technologies or measures either on specific types of homes or community building(s)
  - testing/exploring an idea in further depth – i.e. where a project was already planned, but needed a specific feasibility study – for example to develop a strategy for actual installation and/or making the business case
- development of plans for future work (conducted by 41% of projects) - this included installing energy efficiency measures in additional homes and conducting future awareness raising campaigns.

Energy projects, including:

- public engagement
  - events (held by 76% of projects), which included displays of working technologies in community buildings and 'open homes' events. Those with a specific energy efficiency focus tended to concentrate on encouraging uptake of measures in the community. This was also the case for renewables, but the latter also included securing local 'buy in' to mitigate for potential opposition from the community, for example where a community installation (e.g. wind turbine) was planned in the area

[20] Based on application and monitoring form coding (n=225).

  - written materials (34% of projects) – such as leaflets to encourage attendance at events or take up of measures
  - an additional 16% of projects also included demonstration events, e.g. low-energy lighting in situ and open days for residents to learn more about renewable technologies
- domestic energy assessments (72%), which focussed on energy efficiency measures and were intended to both demonstrate potential and act as a catalyst for action. Some of these activities also included thermal imaging (12%[21])
- actual installations of technologies or measures, such as community scale energy efficiency or renewable:
  - energy efficiency measures at a community scale were installed by 12% of groups. These measures included insulation and lighting upgrades in schools, meeting centres and other community buildings
  - 4% of groups had used LEAF funds for a community scale renewable energy measures. Examples included biomass installations and the purchase of an anaerobic digester
- thermal imaging - 12% of groups undertook thermal imaging as part of their LEAF funded project. This was used both as an awareness raising tool as well as to assess measures that would be needed to better insulate buildings.

4.3 How much was spent on specific types of activity?

The table below shows the total funding awarded by LEAF, split by activity area[22].

Table 2: Total funding by policy area (weighted sample number=224[23])

Primary focus of LEAF-funded project	Total funding awarded (n=224)	Average funding per project[24]
Renewables	£818,000	£29,000
Energy efficiency	£3,894,000	£38,000
Energy efficiency and renewables	£4,151,000	£39,500
Total	£8,863,000	£39,500

Funding for renewables activities was lower than for energy efficiency and projects which covered both. This is likely because these projects tended to focus on a small number of community-scale renewables installations (e.g. feasibility studies) and therefore were narrower in terms of scope and activities.

[21] Either as part of the assessments or as a separate activity.
[22] Assessed when reviewing monitoring forms.
[23] One incomplete form meant some data was not captured.
[24] Rounded to the nearest £500.

5 What factors were felt to be enablers/ barriers to success?

The evaluation sought feedback on factors or activities that were felt to be enablers or barriers to success during delivery of LEAF projects. This section analyses across policy areas. By triangulating data and insights from the monitoring forms, surveys and case studies, a series of overall factors that appeared to link to success have been identified. These factors are presented below in approximate order of priority and include:

1. **timescales** – limited timescales were reported by three quarters of projects as the most significant barrier to success
2. **working with partners** – almost all projects worked with partners to deliver outputs and was reported as being crucial to achieving success
3. **community engagement** – almost all projects undertook some community engagement and was reported to be crucial to achieving success.
4. other reported factors included:
    - **community group membership and dynamics**, reported as crucial to success
    - **building on existing work**, reported as important in achieving success in the timescales available
    - **delays in funding award being received by the groups**, which restricted progress for some projects.

Each sub-section describes how a factor affected projects, along with a discussion of the evidence supporting the findings.

5.1 Timescales

Timescales affected successful delivery of over three quarters of projects and the effect was perceived to be mainly negative, affecting areas such as planning and delivery. A small minority reported some positive effects, which were to focus the project team to deliver in a timescale they otherwise would not have done.

Timescales appeared to be less of an issue for projects which:

- were led by groups or organisations with more project delivery experience
- had more realistic project goals, designed to be deliverable within the timescales
- had good pre-existing relationships with partners, such as contractors and stakeholders (e.g. local authorities).

Where timescale issues were overcome, this was achieved by bringing in expert support or changing the scope of the project.

Timescales were spontaneously reported to have affected successful delivery by 76% of respondents and of these 98% of these reported the effect to be negative[25], the impact related to:

[25] Reported within the monitoring forms.

- scope and depth of **project planning** - this appeared to affect projects more where activities needed development (e.g. devising effective community engagement approaches) as opposed to those which were more specific (e.g. a feasibility study):

  "It would have been good to take more time to plan the communications campaign and to develop the right messages to stimulate interest in the energy surveys"

- **activities deployed**, in particular:
  - **those which required 'lead in' or 'build up' time to gain traction** - for example, some events were poorly attended, reportedly due to lack of time for publicity:

    "We were not able to publicise events and activities as much in advance as we would have liked; this would probably have encouraged more people to attend"

  - **those which were resource intensive** – for example door-to-door targeting:

    "There was less time for door-knocking and raising awareness in the community than we hoped for"

  - **those which required a number of steps** – such as where encouraging take up of measures in the local community (requiring a 'customer journey'). One project reported that they:

    "Ran community engagement events in tandem with the research and surveys. It was not ideal and if we were doing it again, we would have had a series of community engagement events before and after the research."

Twenty four per cent of survey respondents did not report being affected by the timescales and a few reported some **positive effects**, such as **providing a catalyst for action**. For example, the East End Community Development Alliance project (see case study 0), reported that winning LEAF funding for their project, with tight timescales was a "*brilliant learning experience for the team"* as it pushed them to be decisive and act quickly, which they had not had to do before.

"There wasn't any time for putting things off until the following week – we had to make decisions and run with them"

No obvious trends were found in the extent to which timescales affected projects across policy areas or project types. However, analysis across groups showed that timescales tended to affect projects less where they had:

- significant experience of delivering projects
- realistic goals
- good relationships with members and partners.

Often these factors went hand in hand for projects led by more experienced groups. The case studies provide some examples of this.

Finally, where timescales issues were cited as an issue, but overcome, this was usually done through:

- securing more internal or external resources to the project - some groups noted this as a learning for the future:

"*We would pass more work onto – and partner more with – professionals like Domestic Energy Assessors*[26]"

- changing the project scope through project amendment forms (see section 6.1.1).

5.2 Working with partners

Most projects (96%) worked with external partners to achieve project objectives. This was seen by many as beneficial. This took the form of:

- contracted technical/delivery support; and
- work with stakeholders – e.g. local authorities (LAs)s or other community groups/representatives and measure/technology supply chains.

It was reported that working with partners helped achieve success by **delivering roles the project teams did not have skills or resource** for (e.g. design of materials, feasibility studies), **providing access to parts of the community** (e.g. piggy-backing on other activities, working with other community representatives and local media), **securing buy-in from important stakeholders** (e.g. Local Authority planning departments and supply chains).

For a minority of projects, contractors and other partners caused some problems, either **through lack of delivery** or **inaccurate outputs** (e.g. technical data). Respondents also reported that working in partnership took time to organise and make work effectively, so was limited by the timescales available.

Most project teams (96%) worked with partners to deliver projects. This took the form of contracted technical and delivery support from professional organisations and also working with local authorities, other community groups/ representatives and measure/ technology supply chains. The ability to contract support was cited by several respondents as an opportunity provided by LEAF, when compared to other funding opportunities, which tended to have non-capital spend restrictions.

External partners were generally seen as having a positive influence on project performance. 72% of monitoring form responses cited activity conducted by partner organisations as being 'beneficial' (6% stated that external partners caused challenges). Specifically concerning contractors, 68% cited their involvement as being key to success (9% of groups cited challenges arising from working with them).

Working with partners helped successful delivery by:

- **contracting delivery roles where groups did not have the resource or expertise themselves** – this included a range of activities, such as conducting energy audits, feasibility studies, legal and advisory support (e.g. for planning applications). This helped projects progress in a number of ways, such as helping to understand the feasibility and costs of different options (technical support) and/or ensuring projects were effectively managed and delivered (project management support):
  - the evidence showed that several groups who did not obtain project

Case study excerpt: The Reepham Green Team project (case study 8.3) achieved installations of solid wall insulation on two community buildings, a feasibility study for bio-liquids, an area-wide renewables study and established a community fuel hub to supply biomass. The team had been set up in 2004 and had gained significant experience through previous projects such as the Low Carbon Communities Challenge.

management support wished they had done so – one group reported struggling with workload:

"[We had] only 3 or 4 people conducting the core of the work, spending over 40 hours per week each in addition to other jobs" [27]

- furthermore, those that had successfully bought in expertise felt this was a learning to share with others – one group suggested that:

  "*Community groups should not be afraid of buying in consultancy support to assist with activities*"[28]

  They felt that some groups may be more inclined to try to design and manage activities themselves due to costs, as well being nervous about identifying or selecting good quality contractors.

- **providing access to the wider community** – for example:
  - piggy-backing on existing activities (e.g. events), where it was not possible or effective to organise new activities
  - working with other community representatives - e.g. schools, faith groups, third sector organisations and local media to spread messages and demonstrate action.

- **securing support and buy in from stakeholders, such as local authorities**, who:
  - directly supported projects through providing guidance and help from existing resources (e.g. property and/or household data to help target activities)
  - indirectly supported projects – for example, where the support of a contracted professional helped to enable buy-in from local planning departments:

    "The level of detail in the report from the consultants was fantastic and would have taken us many months to gather in so much detail. Their experience and expertise was essential and their report has been instrumental in gaining credibility key stakeholders in particular, who have taken us and our approach very seriously."

Where partners **hindered success**, this was mainly due to **inaccuracy of outputs or lack of delivery/support**. This was reported for a few of the following:

- **contractors** – for example, one group had encountered a situation where the factors used by an external organisation to calculate potential home energy savings were later established as incorrect
- **local authorities** – where promised support was not forthcoming, due to lack of resources.

No obvious trends were found in the success (or lack of) partnership working across policy areas or project types. However, qualitative evidence indicated that success appeared to be linked to projects:

- **experience of commissioning experts (for contractor delivery)** – for example, where contractor performance had not been effective[29], some of these groups acknowledged that they had not managed the contractor effectively and had perhaps not been clear enough in their original specifications. As described above, there were

[27] Note that all comments are from community project leads, unless otherwise specified.
[28] Reepham Green Team, case study 8.3.
[29] 12% of respondents in monitoring forms.

also issues with contractor supply due to the time of year (late in the financial year being a busy time for contractors).
- **pre-existing relationships** – e.g. with contractors and stakeholders such as local authorities, usually developed through previous work.

Finally, several respondents reported a desire or need to work with partners and/or volunteers to deliver effectively but were limited by the timescales. Findings included:
- volunteer capacity – many projects relied on volunteer support to deliver key activities and found availability of their time limited:
  "*You are relying on the good-will and energy of people who are not being paid and who have a range of other competing commitments"*
- contracting expertise and support – some groups reported finding it hard to identify expertise to help them design and deliver their projects. In some cases, they knew who they wanted support from, but they had capacity issues, as it was a busy time of year
- developing relationships with schemes[30], installers, builders and trades-people to provide solutions
- working with local authorities:
  "*We had hoped to have a deeper engagement with the council, but this wasn't possible in the timescales presented."*

5.3 Project design

Having a good project design was considered important to success. Respondents felt that key aspects of project design were:
- having realistic objectives
- ensuring activities are aligned to achieving those objectives
- ensuring the activities could be delivered within the timescales.

Factors which affected project design include:
- experience of delivery – where groups had more experience, they appeared to report more successful project design
- project type – those delivering projects tackling energy efficiency appeared to find project design more challenging, in particular where this involved intensive measures (e.g. solid wall insulation).

Respondents who felt they had delivered successfully often felt this was rooted in the original design, for example:
"*We had a realistic approach to what could be achieved in such constrained time limits – and what would need to eliminated or changed to be accommodated in a shorter period."* (Project manager).

Factors which appeared to affect project design included:
- **experience of delivery** – those with a more proven track record reported knowing more about what is deliverable in the timescales. Therefore they designed projects and activities to fit. Those who struggled reported a lack of knowledge or experience of the time and resource requirements for activities, which in some circumstances led to issues:

[30] Such as ECO funded energy efficiency measure schemes.

"We would be mindful in future that most things will take twice as long as you anticipate!"

- **project type** – those delivering projects tackling energy efficiency appeared to find project design more challenging, in particular where this involved intensive (or high cost and time consuming) measures[31], such as solid wall insulation. Possible causes of this, suggested by the authors, are that:
  - these activities are 'newer' to community projects - renewable energy projects were twice as likely (54% compared to 27%) to have already started before LEAF became available. They were potentially more likely to have gone through some 'teething problems' and to have properly already understood how and where the funding would help
  - energy efficiency projects usually involved seeking input and participation from the a wider number of stakeholders, which took more time and effort than other activities
  - these activities can involve more partners to achieve success - e.g. working with different parts of the supply chain to ensure there is a mechanism in place to provide solutions once demand has been created.

- **the application process** – a few respondents reported that project-related issues were due to a degree of 'over-promising', since LEAF was a competitive fund and may have incentivised this.

5.4 Community engagement

Most projects undertook some form of community engagement as a means to achieve their objectives. Most felt it was essential in achieving success. Review of the effectiveness of different engagement approaches, showed that:

- the majority of projects felt that face to face contact (e.g. through both events and door-to-door targeting) was more effective than other methods as it allowed a two-way discussion to take place and tailored advice or guidance provided
- less effective methods included more generic or 'one-way' activities, such as leafleting, media and online promotion.

Factors, which helped achieve community engagement included understanding the target audience, utilising community group's existing presence and 'representative voice', pre-existing engagement channels, a range of approaches (including face to face interaction) and including integrating social aspects in activities.

Obstacles to engagement included lack of time to prepare major activities (e.g. events), difficulties getting media exposure, targeting householders not engaged with 'green' issues and in a few instances, unusually warm weather resulting in lower attendance.

Most (87%) projects included some form of community engagement as part of the project[32] and respondents to the online survey showed that 84% felt community engagement to be crucial to project success.

[31] Intensive' measures include those which have a high cost and require significant works to install, such as solid wall insulation.

[32] From review of monitoring forms.

5.4.1 Effectiveness of community engagement methods

The majority of respondents felt that:

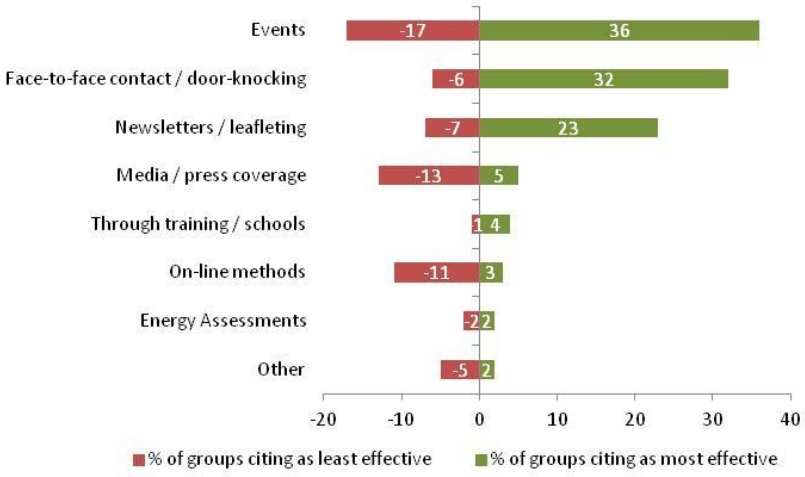
- **face to face contact (e.g. through both events and door-to-door targeting) was more effective than other methods** as it allowed a two-way discussion to be had and tailored advice or guidance to be provided. Within this:
  - **events** – were felt to be an effective means of providing tailored advice, whilst being less intrusive than other activities and often more cost effective than door knocking. However, events did not work for all groups (17% reported them as being least effective). In these circumstances, they suffered from poor attendance (often due to lack of publicity and/or preparation time), or an audience not in the right target group (e.g. when piggy-backing on other activities)
  - **face to face contact/ door knocking** – was felt to be very effective at targeting those in the right audience and engaging those who may be harder to target otherwise. A minority, however, felt this to be less effective (6%) and these activities were reported as being resource intensive, hard to deliver (e.g. requiring committed volunteers[33], affected by weather) and in some circumstances, intrusive.

Finally, both types of activity were reported to be less effective without some form of follow up – e.g. to provide more specific advice or refer a householder to a measure

- **Less effective methods included leafleting, media and online promotion**. On their own, these methods were reported to have had a limited response. Reasons for this were thought to be due to activities being:
  - **generic** – when the nature of the issue requires a tailored discussion.
  - **easy to ignore** (e.g. direct mailing, local newspaper articles)

  There was, however, some evidence to show that these activities were more effective when undertaken as part of a wider communications strategy (e.g. to inform householders of activities, prior to door knocking).

Figure 4 illustrates the on-line survey respondent views on the most and least effective engagement methods deployed on their projects (weighted sample number = 112)



[33] Where they were used for door-to-door engagement.

5.4.2 Factors (or activities) supporting community engagement

Factors which helped achieve effective community engagement were reported through the monitoring forms and survey, with in-depth insights provided through the case studies. These factors included:

- understanding the audience – and then tailoring community engagement around it.
- utilising the community groups existing presence and 'representative voice' to good effect.
- exploring opportunities to use pre-existing engagement channels
- utilising a range of approaches, with an element of 'face to face' engagement to allow for discussion.
- including some form of social aspect in the engagement activities, if possible.

Factors which groups felt supported community engagement included:

1. **Understanding the audience – and then tailoring community engagement around it**

   When community engagement activities were reported as successful, the teams developing and delivering them felt these were supported by a good understanding of the audience being targeted. In some cases, project teams looked to access data or conduct local research to better understand their audience, but most often this was achieved through the pre-existing knowledge of the project team, who usually lived locally and had been active in local area and therefore felt they had an excellent understanding of it. In addition, many had existing relationships within the local community. These were then used to develop approaches which were believed to secure an effective response.

2. **Utilising the community groups existing presence and 'representative voice' to good effect.** The case study provide good examples of this which are summarised below.

Case study excerpt: Transition Wilmslow (Case study 8.1) utilised a '*peer to peer*' community engagement approach by training 40 local residents to provide advice in the local community. The group reported that they felt that residents were 'fed up' with being targeted by commercial energy measures. They therefore developed a "*friendly, neighbourly approach*" which helped 73 out of 100 householders pledge to take action to reduce their energy use. Another element of this approach, which was considered to add value was the group's ability to tailor advice to their specific home and situation, as many of groups had had assessments done on their own homes and lived in the same area or similar properties so they had a clear understanding of the issues faced. The group used a 'mock up' to show local residents what solid wall insulation would look like and how it would perform to encourage take up, shown below.

3. **Exploring opportunities to use pre-existing engagement channels**

   Given the limited timescales, opportunities to work through existing engagement channels were explored by several groups to get to their target audience quickly and increase reach. These include working with other community groups, third sector organisations and other community hubs, such as schools and places of worship.

   For example, WREN (Case study 8.2) used its existing engagement channels (energy shop, website and other materials) to promote the project:

   "WREN's idea of an energy shop is brilliant; it provides a long-term permanent presence in the town, which is a far better investment than any community engagement event that will only last the one day"

   Some groups which didn't do a lot of this reflected that it would have been good to do so retrospectively:

   "We should have worked more closely with a wide range of community organisations - schools, clubs - to widen the number of householders who knew of the opportunity"

4. **Utilising a range of approaches with an element of 'face to face' engagement to allow for discussion**. Several groups reported that using a 'multi-channelled' approach was key to their success. Although resource intensive, those undertaking face to face activities usually perceived these as being effective.

Case study excerpt: Ynni Llyn (Case Study 8.2) - All project stakeholders agreed that the engagement methods used to encourage participation in their community survey had been suitably varied and this was key to overall success. Activities included events, direct mailing, door-to-door, visits to community groups and entry to a raffle. Ensuring participation required a lot of time, so students from a local university were recruited to do the door to door visits, explaining the survey forms and collecting them.

5. **Including some form of social aspect to the engagement activities**, if possible. Some project teams discovered that introducing a social element to their engagement activities had a positive effect on engagement.

Case Study Excerpt: Reepham Green Team (Case study 8.3) - The project set up a community fuel sub-group, working to organise the processing and delivery of wood logs to local residents to heat their homes. The processing of logs has become a social activity, with 'Chop and Chat' days scheduled:

"Building social opportunities into projects is important, we hope the Chop and Chat day will lead to the group sharing ideas and starting their own projects."

5.4.3 Obstacles to engagement

Obstacles to community engagement were also reported, which included:

1. lack of time to prepare for major activities, such as:
    - planning engagement strategies – overcome in some instances by contracting in help
    - events, with lower than hoped attendance
2. getting wider exposure – e.g. in the media
3. householders who were not engaged with 'green' issues, or did not see energy bills as an issue.

A few projects reported issues arising from the weather.

Obstacles to community engagement were also reported in the monitoring forms and interviews, and included:

1. **Lack of time to prepare for activities**- this covered two main issues:
    - planning engagement strategies: this included how project teams designed approaches to engage with the local community to inform them of planned installations (e.g. a wind turbine installation) in such a way as to provide the information needed clearly and to helpfully explain issues which had the potential to cause concern (e.g. noise) :

      "*It takes a lot of time to find out who is sympathetic and the formats that they want to see information in. If the funding had been available over a year we could have made much more meaningful links with local people"*

      Some project teams overcame these issues successfully by contracting experts for support

- events, with lower than hoped attendance: some project teams overcame this by piggy-backing on existing activities:

  "We achieved less than we could have in terms of engaging the wider community. This is due to the short timescales required by the project and the need to give self-organised community groups enough time to fully engage and take part in events"

2. **Getting exposure, such as in the media**. Several groups reported issues with getting exposure through local media, such as newspapers and radio. For example, Transition Wilmslow reported that getting access to '*high profile'* media required contacts that they did not have.

3. **Householders who are not engaged with 'green' issues**, or see energy bills as an issue:

   "I tried to do a survey with one of my neighbours, but they weren't interested, they weren't interested in saving energy and they told me that they do not need to save any money. How do you try to persuade people like this?" (Local resident and community group volunteer).

   One way which some groups overcame this was to focus on economic rationale (fuel bills). In some cases, however, some householders also did not see their bills as being high enough to warrant taking any action.

4. **A few respondents reported issues arising from the weather**, such as lower than hoped attendance at events and lower levels of interest in insulation measures (both reported this being due to unseasonably warm weather during March 2012).

5.5 Other factors/activities affecting project success

In addition to the factors set out above, a number of additional factors were felt to contribute to success, including:

1. **Group membership and dynamics** – this included:
   - having a clear vision and leadership within the membership:

     "*The community group had an ambitious, coherent vision and business plan at the outset and have taken a top-down approach to implementing it*"

   - committed members with shared objectives and regular meetings:

     "Don't take no for an answer: be patient, dedicated, don't get frustrated by setbacks. You can buy in expertise and knowledge, you just need commitment and shared objectives"

   - group structure and strategies to keep groups dynamic:

     "I liken the effectiveness of community groups to sports teams in terms of size; I don't think more than 10 or 11 people should be involved at any one time as it begins to lose focus and becomes inefficient to manage"

"*There is some continual turnover in the group, which ensures fresh ideas and enthusiasm"*

- volunteer capacity – several groups reported recruiting additional volunteers from universities and other sources during the projects to ensure they had the resources to undertake activities.

2. **Building on existing work** – an additional factor cited by several groups was building on existing projects, as opposed to developing new ones. This helped to achieve success and also ensured projects aligned with existing goals and objectives

3. **Delays in funding awarded** – a few respondents cited issues with timing of receipt of funds, or lack of clarity on whether or not they were successful in gaining funding which resulted in delays in project delivery.

5.6 Sharing Learning

A number of groups stated that they had learned a lot themselves through the projects, which they would use for future projects, for example:

"We learned a great deal about developing and delivering volunteer-led community energy events. This learning will help us to effectively deliver future events and behaviour change activities."

Some groups also stated that they had gained valuable learning to share with others, for example:

"The feasibility study that we have produced is the ideal vehicle for sharing this learning"

A number of respondents noted that there were limited opportunities within the overall project to share learning from individual projects, for example:

"We would have liked the opportunity to network and share our learning and the learning from other similar projects. The way the website and the [follow-up LEAF] event [in London] were set up did not facilitate this, which was a missed opportunity"

Finally, there were a few instances where respondents highlighted that they had attempted to, or succeeded in, sharing learning. In these cases, this was most often achieved through dissemination of project reports and/or events held with a community group audience.

6 Outputs and outcomes achieved during and subsequent to LEAF projects

6.1 Outputs and outcomes – delivered during the funding period

6.1.1 Project achievements

All LEAF participants were asked whether they had achieved what they hoped to, with just over one third feeling they had achieved more, just over half feeling that they had achieved roughly what they had planned and the remainder (one tenth) feeling they achieved less.

Those who achieved **more than planned,** reported:

- funding going further and achieving more outputs than anticipated than expected.
- examples of community engagement-related factors including unexpected publicity, better response than expected to activities (e.g. door-to
- -door surveys) and getting benefits from piggy-backing on existing events in the area.

There was some limited qualitative evidence to indicate that this may have been due to the fact that projects were 'led by the community'.

Those who achieved less than planned, reported not meeting expectations on:

- numbers of surveys conducted
- numbers of attendees at events
- householders signed up to schemes or home assessments.

This was mainly reported due to lack of time to prepare and (consequently) less public interest than hoped.

For those which achieved more than planned, this occurred across a range of activities, including higher than expected take-up of home assessments or surveys, gaining more volunteers within the group (e.g. to become energy ambassadors) and achieving high attendance (or particularly good levels of engagement) during events:
"People stayed at the event for a long time, were really paying attention, and [they] were not the usual 'green' suspects."

A variety of reasons were given for this, including:

- funding went further than expected, allowing for additional activities to be conducted
- achieving more than expected from outputs, for example:
  - outputs of feasibility studies or assessment of measure schemes revealing additional options available, or higher than anticipated eligibility[34]
  - getting 'added value' from contractors – for example, "*measure targeting tools*[35]" developed as outputs from area-wide energy saving opportunity assessments

[34] e.g. for energy efficiency measure uptake, funded by support schemes (e.g. NEST in Wales).
[35] Measure targeting tools are those which help to assess the likelihood of properties in a local area having energy efficiency measures installed or not (and therefore helping to inform which properties to target).

- community engagement related factors, including:
  - achieving unexpected coverage - for example, one project mentioned getting on BBC news and a headline in their local paper
  - obtaining a better than expected response to activities - for example through having *"local recognisable faces at the door"* on one projects door-knocking activities
  - some also noted achieving additional benefits (e.g. increased awareness) from publicising their projects at existing local events or activities.

Those who achieved less than planned tended to report lower numbers than expected on:

- survey respondents
- numbers of attendees at events
- householders signed up to schemes or home assessments.

The main reasons for this cited included:

- lack of time to prepare and promote activities, such as events[36]:

  "*Although we managed to achieve a lot, by the time people had heard about the project it was over and this meant it was hard to attract large numbers to two of our events"*

- level of public engagement with the projects[37], such as lack of householder interest:

  "We were surprised to find that some people who won energy efficiency audits and surveys in our prize draw turned them down - we could not convince them that they might learn something new about their homes that would allow them to improve their efficiency"

- other less frequently noted reasons included:
  - **weather**: good weather prevented some activities taking place (e.g. thermal imaging) and it was also was a factor cited for low attendance at some events
  - **commissioned reports** advising against a course of action – e.g. feasibility studies not recommending undertaking technology installations
  - **issues with outputs from home energy assessment surveys**, such as lack of detail to recommend appropriate actions.

[36] Reported by 76% of those who achieved less.

[37] Reported by 48% of those who delivered less.

6.1.2 Outputs

Responses to the online survey indicated that:

- on average four events were held per funded project, with an average of **140 attendees in total (35 attendees per event)**
- projects were estimated to interact with an average of over **1000 members of target audiences per project.**

Some projects collected data from their communities to ascertain interest in future energy efficiency action. Within this, an average of 76 households per project (base = 86 projects) had recorded an intention to undertake energy efficiency or renewable installation action.
A breakdown of outputs reported by groups is presented in Table 3. These figures should be viewed with caution as they are self-reported estimates, with differing levels of confidence.

Attribution to LEAF: 48% of online survey respondents claimed they would not have undertaken the project without LEAF funding, with the remainder claiming that they either would have achieved less, or it would have taken them longer to do so.

Table 3: LEAF outputs summary (online survey responses number=112)

Output	Number of on-line survey respondents able to estimate (out of 112)	Range – minimum and maximum	Average (excluding outliers and rounded to the nearest whole number)	Level of confidence
Events held	99	Min = 1 Max = 20	4 events per project	High – would expect most groups to know how many events were held during the project.
Estimated event attendees across the whole LEAF project	98	Min = 5 Max = 4,000 (outlier) 38	139	Medium – where groups held few events or these had low attendances, they are likely to have made a more accurate estimate and vice versa.
Estimated number of people in contact with wider engagement methods	81	Min = 12 Max = 51,754 (outlier)	1,175	Medium – groups will have been better able to quantify particular methods where interaction may have been recorded (e.g. door-to-door surveying), but projections for materials such as leaflets were normally based upon the number of leaflets printed/distributed.
Households reporting intention to take some form of installation	61	Min = 1 Max = 3,500 (outlier)	105	Low – groups were generally less confident in answering this.
Households reporting intention to further investigate Green Deal	24	Min = 1 Max = 1,100 (outlier)	41	Low – groups were generally less confident in answering this. Whilst a small number may have collated 'pledges to sign up' at events or through door-knocking, for most the estimate appears speculative.

[38] Second highest 1,380.

6.1.3 Attribution of activity to LEAF

Nearly half (48%) of the online survey respondents stated that they would not have undertaken their project without LEAF. The remaining respondents stated that they would not have progressed as much activity (35%), or not reached the stage of delivering the new project as quickly (17%) if they had not undertaken the LEAF-funded project.

6.2 Effectiveness of LEAF support

Participating groups were asked for feedback on the LEAF programme design and delivery through the monitoring forms and online survey.

Key aspects of LEAF support, which worked well included:

- good customer service from LEAF staff managing the fund
- the level of funding was higher than for other similar funding opportunities.

The main aspects which it was felt could be improved included:

- longer timescales, for application, project design and delivery
- the level of funding, which some felt could have been higher per project
- providing more opportunities for disseminating key learning from projects.

6.2.1 What worked well

There were two key areas where respondents felt LEAF had worked well. These included:

- **customer service** - most groups (58%[39]) felt that the LEAF representatives had provided good customer service, particular aspects of this included being professional and helpful throughout the process
- **funding** - some groups (33%) also indicated that LEAF funding had been particularly helpful because a larger amount was available per applicant than from most other funding opportunities.

Other aspects of LEAF, which were also reported to have worked well included:

- quick decision-making on funding allocations, once the fund was up and running
- a clear and transparent bidding process for applicants
- providing technical knowledge to community groups through funded activities (e.g. feasibility studies).

6.2.2 How LEAF could be improved

There were three key areas where respondents provided suggestions for how LEAF could be improved. These included:

- **timescales** – just over half of the groups (56% of respondents[40]) felt that the whole process needed to be longer, either for application planning and completion, project delivery or both. Many groups felt that the timescales were compounded by the LEAF programme team being slow to notify applicants of their success and approve them to start the project work

[39] Data sourced from the online survey.
[40] Data sourced from the online survey.

- **funding** - larger potential allocations per group, i.e. over the £50,000 funding cap (suggested by 18% of groups)
- **disseminating learning** - a more formalised process for disseminating group learning and networking was suggested by both groups and wider stakeholders (suggested by 6% of respondents and through stakeholder interviews).

Other ideas / recommendations suggested by respondents included:

- **creating a central repository of tools and templates** to support project activities e.g. carbon calculation
- **a less rigid approach to what under-spend can be used on**.

6.3 Outputs and outcomes – since project funding ended[41]

6.3.1 Further outputs or outcomes since March 2012

The majority of projects (88%) had continued activities related to LEAF since March 2012. Activities included securing additional funding, further public engagement, development plans for future work, starting new groups or projects, influencing activities and undertaking further specific project related activities (e.g. energy assessments, feasibility studies etc.). The majority of these activities appeared to be aligned with original LEAF project objectives.

Most (88%) of the online survey respondents reported carrying out additional sustainable energy activities or projects that led either directly or indirectly from the LEAF project. The types of activities undertaken are shown in Figure 5. Of these, a large proportion appeared to be closely aligned with LEAF project objectives, e.g. further events / communication efforts replicating those conducted through LEAF. Examples include:

- undertaking further community engagement activities such as events, including 'open homes' demonstration events, promoting business opportunities arising from new policies (e.g. Green Deal) with the supply chain and further awareness raising activities progressing from the feasibility studies to installing measures:

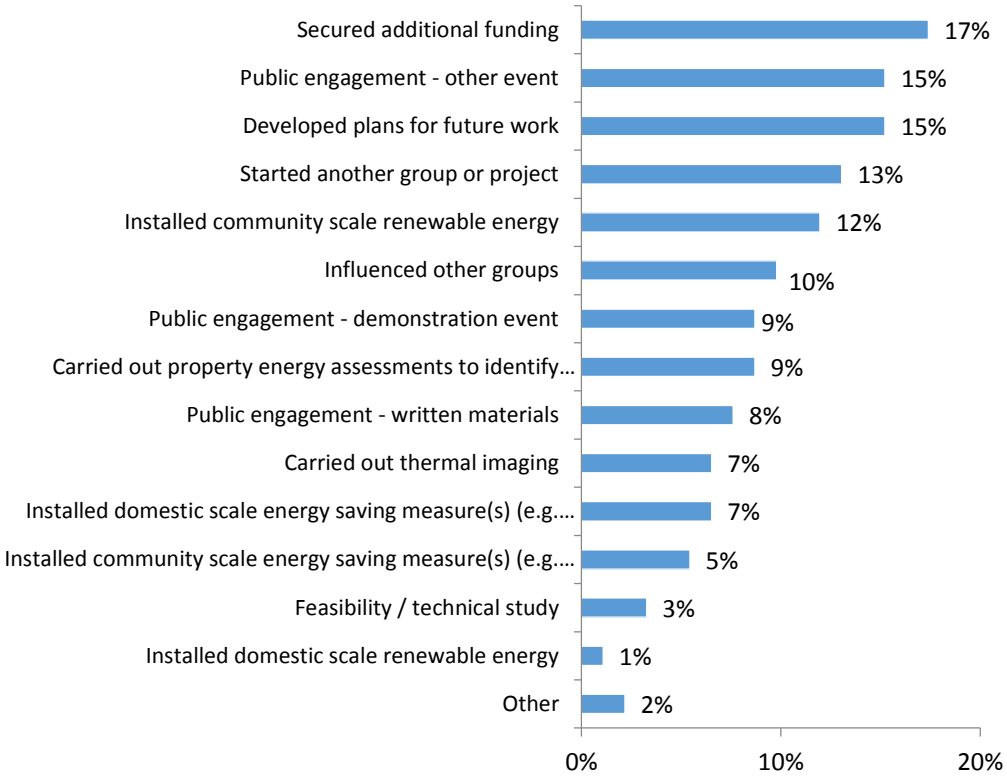
  "We installed (solar) PV at the secondary school (35kW) using a community share issue. Also installed (solar) PV at two other sites in the district (total of 29kW)"

- community groups using the information and findings gained from LEAF-funded surveys and studies to promote actions:

  "We followed up on identified viable and feasible micro hydro site to see if it was possible to develop them as community projects"

[41] To March 2013

Figure 5: Outputs and outcomes delivered since March 2012 (weighted sample Number=112)



The case studies (section 8) provide more detailed account of follow on activities for a few projects, including some examples of achievements since LEAF.

Responses to the online survey suggested that 23% of projects would, reportedly, not have undertaken any further activities without having been involved with LEAF. 33% would have undertaken some but not all activities. A further 20% of projects would have happened, but would have been more difficult and/or less successful and 16% would have undertaken the activities, but less quickly.

6.3.2 Further funding from other sources accessed since March 2012

Nearly half of respondents to the online survey (45%) reported accessing further funding since March 2012 to support their activities, averaging over £50,000 per group. Major sources of additional funding included Big Lottery, local authorities and the RHPP2 fund.

Respondents also reported through the survey that LEAF had helped groups improve their chances of accessing funding through:

- providing additional evidence (e.g. of opportunities or need)
- providing additional evidence of successful track record of project delivery
- development of links with partners, with whom funding could be applied for.

However, several groups also reported not needing funding to continue activities in the short term.

Table 4: Additional funding accessed by policy area

Primary focus of LEAF-funded project	No. Projects	Average additional funding per project (£)
Renewables	5	£80,300
Energy Efficiency	19	£48,993
Both	26	£49,804
Total	50	£52,545

Funding sources: the main sources of funding included Big Lottery, local authorities and the Renewable Heat Premium Payments (RHPP2) fund.

How funding was accessed: Respondents also reported that LEAF was perceived to have improved groups ability to access funding through:

- **providing additional evidence** - for example of opportunities or needs, such as from the outputs of a feasibility study
- **track record** – since LEAF provided evidence of groups being able to deliver successfully
- **links with partners** – such as community support organisations and/or local authorities with whom funding could be applied for (or applications made to).

Several groups had not accessed further funding as they felt they did not require it to carry on activities in the short term. Several were planning to bid for further funding once they had reached the point of establishing a final project idea e.g. what measures to install.

6.3.3 Wider effects on groups

Groups reported that LEAF had wider effects on the groups themselves, which included:

- increased skills and capacity
- increased confidence to undertake projects and activities
- applications for more funding – as a result of being successful in receiving LEAF funding
- increased focus on delivery of projects – including, taking steps to act based on

Groups reported that LEAF:[42]

1. **Increased skills and capacity:** Respondents reported developing skills in delivering projects (e.g. awareness raising), finding partners for undertaking projects:

   "We would have carried on our work but LEAF gave us a real boost in raising awareness, giving us skills and making contacts"

   Some respondents also reported that the experience increased their confidence to take on additional activities in future:

   "*When you've done something that had worked, you're more willing to do something bigger and more stretching"*

2. **Enabled groups to apply for more funding**: those who felt their project had been successful were likely to look for further funding to do more or new activities.

[42] Reported through monitoring forms and some of the case studies, although effect on group focus was not asked on directly.

"We applied for and have been managing a Renewable Heat Premium Payment 2 project"

3. **Helped groups to focus more on delivering projects** as opposed to feasibility studies/ options assessment. Several respondents reported taking steps towards, or fully undertaking projects to deliver on actions recommended as part of LEAF outputs.

   "[We are] installing a large biomass boiler in a community housing association."

6.3.4 Preparedness for Green Deal and RHI

Twenty online survey respondents gave an estimate of the number of households who indicated their intention to find out more about Green Deal. Across those twenty groups the total was just over 2,000 households (the median value was 28 households).

Some groups also reported:

- working more closely with local communities on the Green Deal and Renewable Heat Incentive:

  "We are retrofitting 17 homes to 80% reductions/2050 standards as part of a DECC funded, Green Deal delivery pilot"

  "LEAF project has definitely spearheaded the community to work collaboratively and to think about their energy future - initially this is looking at buying group for oil etc. (off gas-grid community) but wants to look at RHI, Green Deal etc."

- encountering issues with some policies, which decreased interest (e.g. delays in start of domestic RHI and Green Deal uncertainty):

  "The fact that the Green Deal was still under discussion and we couldn't be clear in our information about it didn't help matters."

6.3.5 Barriers to moving forward

12% of projects responding to the survey reported undertaking no additional activity since LEAF. Where barriers to action were reported, these included:

- lack of further funding to resource activities
- lack of time/ availability of volunteers/ competing priorities
- next steps being 'big leaps' – e.g. setting up as an organisation, installing large scale technologies
- policy mechanisms not providing the support or certainty required to move forward
- results of feasibility studies recommending against desired courses of action.

Twelve per cent of respondents to the online survey of projects reported undertaking no additional activity since LEAF. Where barriers to action were reported[43], these included:

1. **lack of further funding** to resource activities:

[43] Across all respondents.

"Lack of funding to run the Green Deal; we intended to set up a social enterprise to manage the Green Deal works, employing local traders and builders etc to do the physical measures to the homes."

Case study excerpt: Greater Manchester Centre for Voluntary Organisation (GMCVO case study 8.6) reported that in order to progress key elements of their project, they required further funding for technical studies to be carried out on each of their Trailblazer community projects. For example, before a decision could be made on the installation of a wind turbine, further advice is required. Unfortunately, the costs of a study are prohibitive within their own resources, particularly when there is a risk that the results of the study may suggest it is not feasible to pursue. They are continually looking for further funding to support this extra work, but have not found any to date.

Two other respondents stated that they had applied for funding but been unsuccessful due to lack of time to complete a proposal and inability to raise match funding requirements.

2. **Lack of time and/or availability of volunteers** – in some projects, project leaders had either moved on or were unable to participate further, which resulted in a cessation of activities:

   "A local 'CycleWay' project – is competing with LEAF-related activity for my time"

3. **Next steps being 'big leaps'** – one project investigated the feasibility of establishing a district heat network, which would be a major undertaking. This would take many years to take forward, and would be more appropriate to be taken forward by other organisations with the necessary capacity and skills.

4. **Policy mechanisms** – examples were provided where respondents felt that policy mechanisms did not provide the right level of support or certainty required to move forward. For example:
   - one group reported that lack of certainty over the RHI (e.g. through delays in the launch of the domestic scheme) reduced confidence in taking forward ambitious schemes which relied on it
   - another group reported that the scope of the RHI did not currently cover the technologies they wished to install (Reepham Green Team)

5. **Feasibility studies** – where these did not provide a cost effective or feasible course to proceed.

Case study excerpt: Transition Wilmslow (case study 8). Unfortunately, the study that explored the feasibility for renewable heat from a bio-digester found that it is not cost effective. Therefore it will not be taken any further. However, the group has taken forward a number of other activities. One of the 'spin offs' from the LEAF project is 'Green Doors', where known members of the community have undertaken changes to their home. Transition Wilmslow hold an open day for local residents to visit the property to see what changes have been made and to talk to the owners about what difference it has made.

7 Renewables analysis

7.1 Introduction and objectives

This section provides additional analysis of LEAF projects which included renewables technologies. It focuses on:

- enablers and barriers specific to projects focussed on particular renewables technologies
- renewables related activities which have been undertaken since LEAF finished, and what has helped or hindered progress since LEAF.

7.2 Findings Overview

Of the 225 groups completing monitoring forms, 122 had conducted a project that was concerned with renewable technologies in some way (the rest being energy-efficiency only). Of these, the breakdown by renewable type and output is shown in Table 5. Projects concerned with more than one type of technology have been coded into multiple categories.

Table 5: Projects by technology type

Technology type	No. projects with this renewable type	10-99kw	100kw-499kw	>=500kw	Power output not recorded
General (technology not specified)	18				
Solar Photovoltaic	60	12	9	11	28
Wind power	44	7	7	19	33
Biomass	36	2	5	5	24
Hydropower	28	7	7	2	12
Anaerobic digestion	20	0	6	5	9
Heat Pumps	13	3	1	1	8
Heat Networks	5	0	0	0	5
CHP	4	1	0	0	3
Other (both solar thermal)	2	0	0	1	1

On review of the projects, the following typology emerged:

1. projects which were scoping ideas or developing plans for a renewables project (e.g. scoping studies)
2. projects which were developing more detailed plans and business cases for specific technologies but not site specific (e.g. feasibility studies)

For analysis purposes, the projects have been split into two groups[44]:

1. **projects scoping plans for renewables (projects exploring more than two renewables technologies[45])[46].** These projects usually included scoping studies with a focus on determining which renewables technology(s) would be available, viable or appropriate

2. **projects developing technology specific plans (projects reported a focus on one or two technologies**)[47] Examples of these projects include investigating types of renewable heat technology for a particular building, or exploring the detailed feasibility/ business case/ strategy for a technology in detail (e.g. anaerobic digestion).

The analysis below focuses on evidence relating specifically to the projects (or elements of projects) concerning renewables technologies[48]. Each section provides:

- a summary of the types of activities undertaken
- enablers and barriers affecting these types of projects during delivery (i.e. to March 2012)
- activities undertaken post-LEAF funding and factors affecting further progress.

Section 1.5 also includes sub-sections with detailed analysis of projects by technology type.

7.3 Reported project activities including more than two renewables technologies

This group includes two sub-groups:

- projects which included multiple (more than two) technologies or;
- projects focussed on renewables, but did not describe particular technologies.

7.3.1 Activities

Amongst the 47 projects within this group, activities relating to renewables included[49]:

- renewables scoping studies, including:
  - domestic scale area-wide renewables potential studies
  - community building studies

[44] The rationale for choosing to analyse by this typology (i.e. one-two technologies and more than two as separate groups), emerged from review of each project's activities.

[45] This group includes those that focussed upon renewable energy generally but did not mention specific technologies.

[46] n = 47 (39%).

[47] n = 75 (62%).

[48] For further details on overall successes and barriers of LEAF projects, please refer to section 5 of the main report.

[49] Activities gathered from a qualitative assessment of project deliverables reported within application and monitoring forms.

- energy assessments and/or audits, usually focussed both on energy efficiency and renewables, including:
  - area-wide strategies or plans
  - domestic scale audits (e.g. area wide stock assessments, home energy surveys)
  - community scale audits (e.g. community building)
- community engagement activities, including
  - awareness raising/ educational activities on energy efficiency and renewables
  - events – e.g. energy surgeries, demonstration activities
- training – e.g. of community energy champions
- supply chain support, including networking events
- some renewables technology specific studies (although tending to be smaller scale than reported in section 7.4[50]).

7.3.2 Enablers and barriers

Factors which were reported by participants to aid success, included:

- good quality project outputs (e.g. early feasibility studies, databases) – which allowed groups to make better informed decisions about future activities, engage the community and progress their interest and activities in renewable:
  "The renewable energy feasibility work allowed us to engage with the council who have been very supportive and we are now working closely with them to investigate some of the potential projects in more detail"

- technical expertise provided by contractors (e.g. advice and guidance)
- partnership-working between multiple stakeholders (e.g. local authorities, local businesses, other community groups)
- the work of community group members (e.g. community 'champions' engaging with local residents):
  "We were able to engage the community in our work and enabled them to have a basic understanding of a complex process and proposal."

Barriers were similar to those reported in the main report, including short timescales and project design. However, it appeared that feasibility studies were less likely to suffer from timescale issues than activities such as area-wide energy audits, possibly because they were distinct activities delivered by contractors, within a specified timescale.

"Time constraints prevented significant progression of opportunities beyond the early stage feasibility study which with more time could have been achieved, but will hopefully form next steps."

Other barriers included:

[50] For example, a specific study on a community building(s) undertaken within a larger project such as an area-wide strategy.

- practical issues with undertaking studies (e.g. gathering billing data for studies on buildings)
- project-specific issues thrown up by the studies themselves (e.g. land-ownership issues, other activities preventing next steps).

7.3.3 Actions subsequent to LEAF

Further actions post-LEAF included applications for funding measures (e.g. RHPP2), identifying sites for potential renewables applications (building on LEAF project outputs), further community engagement activities and, in a few instances, actual installations of renewables technologies. Slightly fewer projects have moved on to installations compared to projects which focussed on only one or two technologies (4%, compared to 11%[51]).

Barriers to further action included:

- lack of funding to make further progress (e.g. to fund further detailed feasibility studies)
- keeping group momentum, sometimes in the face of opposition from the local community on some technologies:
  "Maintaining community interest and dealing with some scepticism, as well as keeping momentum in the group going forward"

  "We lost our first site due to opposition from local residents"

- gaining support from other stakeholders (e.g. local authorities)
- technical issues found through feasibility studies, which highlighted either the unsuitability of specific technologies, or that energy efficiency measures would be more effective:
  "Internal building issues that come before the integration of renewables - though we are very much tuned in to working on efficiency."

7.4 Projects which focus on one or two technologies

75 projects focussed on one or two specific technologies. Table 6 shows the breakdown of projects by technology type.

Table 6: Projects by technology type

Technology	Number of projects
Solar Photovoltaic	36
Wind power	21
Hydropower	16
Biomass	14
Anaerobic Digestion	10
Heat networks	5
Heat pumps	3

[51] Note this difference is not statistically significant, due to small sample sizes.

Combined Heat and Power	2
Other (solar thermal)	2

The analysis for these projects is broken down into specific renewables technologies in the sections below.

Limitations: it is worth noting that the issues set out in the following sections are only indicative: they are issues raised in relation to a small number of specific projects and therefore must be viewed in this context.

Finally, there was very limited useful evidence to enable reporting on heat pumps, solar thermal projects and combined heat and power (CHP), so it has not been possible to include these.

7.4.1 Solar Photovoltaics (solar PV)

Activities with a specific focus on solar photovoltaics (PV), included renewables feasibility studies[52], development of community-owned solar PV schemes, installation assessments and building energy assessments, which included solar PV as a possible measure.

ENABLERS AND BARRIERS

Factors reported by participants which aided success, included:

- **early stage feasibility studies or business case outputs** providing increased awareness and confidence to take action, including on community-owned schemes. In some cases, this included review of existing schemes (in other areas) which could be replicated:

  "The group has gained substantial knowledge and experience of the process of pursuing community- based renewable energy generation through a public share offer, providing a strong foundation for project replication"

- **developing an improved understanding of the opportunities provided by solar PV**, including support available, such as through Feed-in-Tariffs, through undertaking the project. This, for example, enabled better informed decisions to be made on future project activities
- **demonstration of the application of the technology**, which has encouraged local residents to install their own systems:
  "There was a real lack of awareness of what renewable technologies were. Local people have an increased understanding on the benefits of renewable technologies. [They] were genuinely interested in finding out more and were eager to understand how they could save money"

- **actual installation**, leading to further interest and sign up to increase scale.

Reported barriers included:

[52] Focussed specifically on PV and/or one electricity generating technology.

- **uncertainty over tariff levels affecting action taken**, reported by several respondents. In a few cases this was overcome through gaining further understanding about the FIT through the project (e.g. through receiving advice): *"The main problem was the uncertainty over FIT which made project and financial planning extremely difficult and created doubt in the minds of investors about the viability of the project. We were initially hindered by our own inexperience but rapidly found the necessary support to overcome this"*

- **lack of suitability of sites identified**:

  "Finding sufficient sites which fitted our criteria for there being a strong business case for community- led investment was challenging"

- **lack of sufficient detail in assessments** to progress installations.

ACTIONS SUBSEQUENT TO LEAF

Further actions post LEAF funding included actions leading further towards installations, or actual installations themselves, enabled by the experience gained and outputs from the LEAF activities:

"The success of the [community] share offer, the subsequent installation and the related publicity encouraged new players to approach us to suggest potential sites for future solar PV development."

Barriers to further action included:

- one project reported that the project had ground to a halt, due to issues with developing community-owned energy cooperatives:

  "The proposed community-owned renewable energy co-operatives have unfortunately stalled, for complex reasons mostly to do with local politics"

- issues raised by building owners with regards to the installation of technologies on the building:

  "We have come very close to agreeing to go ahead with community-funded renewable energy projects, but to date three projects have had to be abandoned just prior to contracts being signed. Primary causes appear to be caution on the part of building owners"

- lack of resources to fund further projects.

7.4.2 Wind power

Activities with a specific focus on wind power included renewables feasibility studies[53], development of community-owned models and community engagement to explore views on progressing community-scale projects.

ENABLERS AND BARRIERS

Factors reported by participants which aided success, included:

- support from technical contractors
- the outputs of early stage feasibility studies allowing further progress to be made, including wind modelling to inform the suitability of prospective sites.

Reported barriers included:

- lack of engagement from the local community:

  "We had difficulty in attracting lots of people to public meetings"

- local community opposition (including landowners) reported by a number of respondents:

  "Development of community-owned wind energy projects is heavily dogged in the county by 'prevailing socio counter-narratives'… that is, many people are opposed to onshore wind in this county"

- groups themselves needing further reassurance before going ahead:

  "*We have decided to hold back on a planning application for a wind turbine until we have discussed the study in more depth both with key stakeholders and the community. Work in progress"*

- applying for planning permission/ being able to meet with the local council in the timescales.

ACTIONS SUBSEQUENT TO LEAF

Further actions post LEAF funding included further progress towards wind installations, such as gaining planning permission and funding:

"We have now submitted a planning application for a community-owned wind turbine. We have been offered a one million pound loan by a national energy supplier and technical support to take project forward, if we get planning permission."

Barriers to further action included:

[53] Largely community-scale.

- issues with obtaining planning permissions and issues with local stakeholders such as landowners:
  "[…(Landowner)] are holding us up on planning application. Simply cannot get response from them"

- lack of finance:
  one project which reported issues with setting up a community-owned co-operative to progress their project (similar to that noted for solar PV in the section above). There was, however, no detail on the specific causes.

7.4.3 Hydropower

Hydropower-related activities mainly focussed on development of early stage feasibility studies and business cases for specific applications. A detailed example of this is provided in the Shrewsbury Transition Town case study (section 7.7 of the main report).

ENABLERS AND BARRIERS

Factors reported by participants which aided success, included:

- the support provided by contractors to undertake technical feasibility studies, answering issues raised by interested stakeholders:

  "The expertise available to us with the LEAF funding has been particularly helpful and has enabled the report to answer many of the initial questions regarding the potential for development"
- legal support, for example to assist setting up legal agreements with landowners
- the project allowing the group to engage with a wide range of stakeholders to enable progress.

Reported barriers included:

- the time available, which hindered groups ability to conduct required community engagement and to do more site specific studies:

  "The short time available in which to develop a relationship with each of the communities involved"

  "With a little more time we could have arranged for early stage feasibility studies at some potential Hydro opportunity sites"

- planning process, such as difficulties engaging with Local Planning Authorities (either due to lack of experience with this type of activity and/or resource constraints within the planning department)
- technical issues thrown up from site-specific studies, such as water flow data
  "Flow data for hydro studies presented a problem due to abstraction issues in [……]. This may pose difficulties when discussing further details with Environment Agency."

ACTIONS SUBSEQUENT TO LEAF

Further actions have focussed on working towards installation of schemes, including undertaking further community engagement, securing the required permits (e.g. from the Environment Agency), working through legal issues, getting planning permission and raising finance. According to the data collected by the evaluators, three respondents reported having started construction activities:

"The LEAF funding was essential for the subsequent steps of gaining Environment Agency approval for a fish pass and the abstraction licence."

Barriers to further action included:

- legal issues, such as drafting and agreement of leases and access agreements
  "delays in negotiations over the access agreement and lease as well as in the legal drafting by solicitors"
- issues with seeking permissions from the Environment Agency
- opposition from the local angling community (and/or landowners)
  "negative advice given to a farmer by [……] about the deal offered on their land finance by the community. We have tried to address this by a variety of channels."

7.4.4 Biomass

Activities included community renewable heating feasibility studies and development of fuel supply sources. A detailed example of a biomass project is provided in the Reepham Green Team case study.

ENABLERS AND BARRIERS

Factors reported by participants which aided success, included expert support provided to the projects to assist with early stage feasibility studies and link-up with potential fuel suppliers.

"The engineer showed a wide knowledge of the market, and of installation issues and a willingness to spend time visiting and talking through our ideas and questions, attending a key meeting mid-project will enabled us to re-focus as required. We had the support of the county co-ordinator [Forestry department], who was able to provide independent advice, and provide the links to the foresters."

Reported barriers included:

- applicability of sites to site installations:
  "Lack of convenient sites for a boiler house, as a result of a shortage of development land and a high level of rent / high purchase price for industrial properties that were available"

- fuel supply issues – including the need to set up wood fuel Community Interest Companies (CIC):
  "We wanted to be able to support local forestry and were disappointed that the report found that it would be more expensive to do so"

"Timing for delivery. Whilst [……] CIC has been established and the items purchased as part of project delivery, the promotion and development of the wood fuel club is a long term initiative which will grow over time"

- a variety of other issues with community building owners and local stakeholders. Examples cited included church planning regulations and procurement processes.

ACTIONS SUBSEQUENT TO LEAF

Further actions mainly included further development work towards installation including an example where installation has been reached.

Barriers to further action included:

- finding that schemes were not viable after further investigation (e.g. due to technical issues):
  "We were very disappointed to find the CHP district heating scheme did not stack up financially"

- issues with decision-making within the group to further progress:
  "I was struck by how long it takes for cooperatives to make decisions compared to small businesses."

7.4.5 Anaerobic digestion

Activities with a specific focus on anaerobic digestion (AD) included early stage feasibility studies either as a specific focus of their project, or as a significant part of a wider strategy, as a result of a known local opportunity such as a local resource.

ENABLERS AND BARRIERS

Factors which were reported by participants to aid success, included outputs of the early stage feasibility studies allowing further progress.

"At the moment, the biggest success is the feasibility study itself, which is a comprehensive review of the options for connecting a community-scale, 500kW AD plant with a nearby factory and the electricity and gas grids."

Reported barriers included:

- community opposition to proposed installations:
  "[the] community [is] not convinced by arguments for district heating system linked to proposed 500kw AD based on farm in middle of village – the community is not engaged well in this thinking"

- issues with gaining access to feedstock, due to contractual barriers with food suppliers:
  "The key learning point from our LEAF project concerned the difficulty of access to food waste as a feedstock for AD as a result of contractual barriers."

ACTIONS SUBSEQUENT TO LEAF

Further actions included taking next steps towards (and including) installation, including obtaining funding:

"Thanks to the LEAF funding we have been able to procure an anaerobic digester and associated systems, and then to use this success to secure further funding"

Barriers to further action included resource and capacity constraints experienced by the groups and lack of support from other stakeholders in progressing next steps.

7.4.6 Heat Networks

Activities included development of community renewables heating early stage feasibility studies, with a focus on heat networks.

ENABLERS AND BARRIERS

Factors reported by participants which aided success, included:

- support from technical contractors to undertake early stage feasibility studies
- internal community group dynamics, for example using a consultative approach with the local community to assist progress
- having good relationships with the community, to allow discussions to be held with stakeholders that would be integral to a scheme (e.g. through schools).

Reported barriers included, lack of knowledge and expertise about the technology:

"Overall, a lack of knowledge in the UK of district heating systems and connecting them to an AD plant meant that we had to break a lot of new ground and there was minimal knowledge of best practice we could draw upon"

ACTIONS SUBSEQUENT TO LEAF

Although some further progress has been reported, no respondents have reported getting significantly closer towards installation.

Barriers to further action included:

- next steps requiring actions which were felt to be beyond the community group's current level of expertise and capacity:
  "The committee is too small and committee members do not want to be involved in running the enterprise as they do not feel they have the right skills and level of commitment to dedicate to such a long-term project"

- issues with the Renewable Heat Incentive affecting progress:
  "A further factor that has slowed things down is the delay in the launch in the RHI, as without the RHI the district heating scheme is less feasible."

8 Appendix: Case Studies

8.1 Transition Wilmslow, Cheshire

8.1.1 Background

Transition Wilmslow was set up in 2009 to increase the sustainability of Wilmslow. Wilmslow has the highest energy consumption per household in the North West, partly thought to be due to behaviour and partly due to the age of some of the housing stock, which ranges from Edwardian mansions and cottages to post-war housing estates.

The group's aim is to create a more sustainable community by decreasing reliance on fossil fuels through working together to reduce energy use and carbon emissions, and exploring the potential for renewable energy.

As a relatively new community group, activities had previously principally been focussed on community engagement including a local market stall as well as film nights to raise awareness of energy and climate change issues. The group had also worked with the local press to raise their profile and had initiated discussions with Cheshire East Council to discuss partnership working.

The group wished to use LEAF funding to develop their activities into larger scale energy efficiency and renewable energy projects.

Key project aims: The project aimed to extend their existing activities by raising awareness, helping local residents identify opportunities for reducing energy use and encouraging action, such as installation of energy efficiency measures.

To achieve this aim, the project sought to deliver:

- recruiting and training 25 local community volunteers to act as 'ambassadors' for Transition Wilmslow to work with the community to help deliver their aims
- through the ambassadors, undertake a total of 100 residential property assessments to show residents where heat loss is greatest (e.g. through use of thermal imaging) and identify opportunities to reduce it
- conduct energy audits on 11 community buildings (churches and village halls), to highlight energy efficiency opportunities and encourage action
- commission an early stage feasibility study to investigate whether a bio-digester would be able to generate power for community buildings (local school and leisure centre)
- disseminate learning from these activities to encourage wider take up of energy efficient measures.

8.1.2 What was achieved

The group's lead reported the project as an overall success, exceeding expectations in some areas, as it:

- exceeded their target of 25, with 40 ambassadors recruited to the project, including four from the High School's Green Group. This was achieved by engaging the community through the press, their network of contacts and website
- delivered the 100 household assessments, through the ambassadors, and achieved 73 householder 'pledges' to reduce their CO2 emissions by 10% through actions recommended to them
- delivered other engagement activities, such as through the market stall
- completed the community building energy audits and bio-digester feasibility[54]
- disseminated learning effectively, achieved through innovative activities, such as holding a 'Question Time' style public debate, and exhibition of thermal imaging photos.

8.1.3 What factors made the project successful

Using local residents to engage other local residents – Transition Wilmslow reported that they had found that residents were tired of being targeted by commercial companies about their energy (e.g. switching suppliers, energy efficiency measure offers etc.) which they did not necessarily trust. As a result, the project lead believed residents were more likely to take on board information and advice from other members of the local community. It was this factor which they felt contributed to a high level (73%) of pledges to take action.

Leading by example - The group members reported having had surveys done on their own properties and when talking to the wider community shared learning 'tips' for other residents to take on board. Transition Wilmslow talked about it as being "*all on a journey together*."

> *"Doing with the community is important rather than doing to – it is important for a community group to be part of the intervention."* (Local resident and community group volunteer)

Figure 6 The group used a mock-up to show local residents what solid wall insulation would look like and how it would perform to encourage take-up.

Using 'props' to demonstrate measures clearly – The group used 'props' (Figure 6) to demonstrate what some measures looked like and how they improved energy efficiency to help explain them clearly and answer questions or concerns from residents.

Face to face engagement – The group found that face to face engagement was more successful than other types of communication, such as leaflets, since advice and opinions can be tailored to the interests of the individual.

Learning new tips to engage residents – to engage with residents on the market stall, the group learned to ask open questions to people passing by, to help encourage a conversation to start, rather than those that would get just a 'yes' or 'no' response.

[54] One more energy audit (x12) was completed than originally planned.

Incorporating a full time project manager into the project design - The project lead felt that the project would not have stayed within the timescales without a full-time, paid project manager.

8.1.4 Challenges

Engaging with residents not interested in energy issues – the group found that a significant proportion of residents were not 'engaged' with "*the green agenda*" and/or were not sufficiently interested by potential financial savings[55]. The group did not find ways to overcome this within the project but felt that alternative messages would be useful to develop to communicate with these types of householders.

> *"I tried to do a survey with one of my neighbours, but they weren't interested in saving energy and they told me that they do not need to save any money. How do you try to persuade people like this?"* (Local resident and community group volunteer)

Quality of reports (affected by timescale pressures[56] and commissioning experience): The project leader felt that some of the community building energy audit reports could have been improved. In order to deliver the work in the timescale (12x reports), two organisations shared the work and had to deliver a significant amount of work in a short timescale. This resulted in some information gaps in reports and inconsistencies between those produced by different organisations. It was felt that on future projects the group would be:

- more specific in the brief when procuring external expertise.
- more involved throughout any activity and put monitoring and checks in place, providing resources for this accordingly.

Raising awareness: The group reported challenges in raising awareness about the project, citing challenges with gaining permissions to put up notices in public places[57] and gaining exposure from some forms of media (e.g. radio).

8.1.5 Moving forward

Transition Wilmslow's mailing list has nearly trebled since the LEAF project, providing the group with confidence that they are making good progress against their longer term aims. Subsequently, the group have been exploring further, more ambitious projects to undertake than previously.

Activities undertaken subsequent to LEAF include:

- **monitoring actions taken** - in September 2012 the project leader again surveyed the 100 residents that had a survey and found that 23 had taken up measures such as loft insulation, and, in a few cases solid wall insulation.
- **further energy efficiency projects** - one of the 'spin offs' from the LEAF project is 'Green Doors', where known members of the community have undertaken changes to their home. Transition Wilmslow hold an open day for local residents to visit the property to see what changes have been made and to talk to the owners about what differences it has made.

[55] Both messages were used interchangeably when engaging the community to reflect differences in interest from local residents.
[56] warmer weather during the time of the surveys made it hard to complete thermal image camera work in time
[57] For example, due to local restrictions.

The group's lead noted some barriers to further progress, which included

- **results of the early stage feasibility study** - the bio-digester early stage feasibility study was found to not be cost effective and therefore the project will not be taken any further.
- **funding and resources** - the group relies on volunteers and without funding and resources, this puts limits on the level of activity that the group can take forward.

8.2 Wadebridge Renewable Energy Network, Cornwall

8.2.1 Background

The Wadebridge Renewable Energy Network (WREN) covers the North Cornwall town of Wadebridge and the surrounding parishes of St Breock and Egloshayle. Wadebridge has a varied housing stock including hard-to-treat stone and pre-fabricated concrete houses. The surrounding area is rural and not connected to the mains gas grid.

WREN was set up as a social enterprise[58] in 2011 to facilitate the establishment of the area as a renewable energy powered community. WREN works to raise income from renewable generation for local projects, to help cut energy use, fuel bills, and to bring wider economic benefits such as jobs. The organisation has undertaken several high profile projects in the past and consists of 10 directors and over 1000 members in the community.

LEAF provided an opportunity to fund initiatives to help WREN achieve some of the group's longer term aims more quickly.

Key project aims: One of WREN's main aims is to implement a town-wide community energy initiative to generate over 30% of the town's electricity from community renewable energy by 2015 (>17,000MWh/yr). Actions to deliver the plan include both demand reduction activities (energy saving) and increasing the proportion of demand generated by community renewables.

LEAF provided an opportunity to help implement key elements of the initiative, focussing on four main activities:

- an area-wide domestic building stock profiling assessment to provide baseline data and establish the range of measures for each main type of property. From this, to develop delivery models and partnerships to take forward energy saving measures (e.g. insulation).
- a community involvement programme to raise awareness and understanding of the measures identified in the housing stock assessment
- identification and engagement of the top ten heat users in the community, assessing cost effective heat technologies and delivery models and partnerships
- an early stage feasibility study and initial development work for a large scale community wind project.

8.2.2 What was achieved

WREN reported that all four deliverables were completed and felt the project was an overall success. Key aspects of their achievements included:

- a domestic profiling assessment demonstrated the types of measures that are, and are not worth pursuing in improving energy performance. WREN used the survey findings to develop a model that provides an estimate of the town's

[58] A not for profit co-operative.

domestic energy consumption, costs and carbon emissions, which can inform future actions.

- as a result of undertaking early stage feasibility studies for commercial heating and process heat, WREN feel they now have a comprehensive understanding of the issues associated with this sector and can use it to encourage future change[59].

- the community involvement programme directly engaged over 350 local residents and included a town hall event, workshops and drop-in days at the energy shop.
  the wind feasibility study identified potential sites for a large scale (10MW capacity).

8.2.3 What factors made the project successful

Quality of project design and leadership – One of the community members felt that WREN were successful because they had an ambitious, coherent vision and business plan at the outset and have taken a 'top-down' approach to implementing it.

Winning support – It was felt that success had also been achieved through securing buy-in from stakeholders (e.g. the local authority) at an early stage. Doing this was felt to help ensure stakeholders feel that they are part of the vision and had a role in making it happen. They subsequently worked together on activities such as community engagement.

Having a strategic focus on economic development – WREN report a clear focus on explaining how renewable technologies and other measures lead to positive outcomes for the economy – by saving money and creating jobs. This was felt to be key to their success, in particular with engaging the community. They reported this to be of greater interest, particularly due to the economic downturn.

Expertise within WREN - WREN reported that existing skills within the network were a critical success factor[60]. The skills allow the group to understand what is possible, and allows for a vision with realistic objectives to be set. Technical expertise was felt to be critical to ensuring that funding is spent in the most appropriate ways, avoiding money being wasted on projects with unrealistic aims and objectives.

Having an effective communications strategy – The group stated that communications were important to deliver the project and their longer term goals, at a local and national level. This was delivered through expertise within the group and included:

- using social media and public relations activity to communicate their vision to secure buy in from stakeholders and the wider community
- using their communications expertise to secure interest from national policymakers and the press. This national interest was felt to have delivered benefits to the group, for example helping to make the case for additional activities[61]. It also helped other community groups looking to replicate their business model.

Commissioning expertise – The group felt that choosing a suitable, good quality consultant was critical to the success of the project to undertake activities that they would not be able to do in-house.

[59] For example, WREN planned to use the study to show companies the benefits of biomass as a replacement for oil or LPG.
[60] One of the directors is part of another co-operative and brings a wealth of experience and technical knowledge of renewable technologies.
[61] The group reported that one of the benefits of the communications activities was being considered for additional projects, such as smart grids.

8.2.4 Challenges

Project management - WREN did not budget for a project manager undertaken through LEAF. Therefore the administration and organisation of the project fell to various WREN directors on a voluntary basis, often difficult in addition to other responsibilities.

> *"Before embarking on projects, community groups should always seek advice from at least three experts to understand the options available and to avoid choosing a consultant with their own agenda."*

Contingency planning and risk management – The project faced some delivery issues due to unforeseen problems[62]. The group felt this highlighted the need for business planning, including identifying risks and contingency plans.

Finding suitable sites for community renewables – The group reported finding it challenging to locate sites for the wind turbine project.

> *"I would advise other community groups to produce a holistic business plan at the outset which explores all of the various opportunities, and then to prioritise ones where more urgent action is required to avoid missing the best opportunities and to work with the geography constraints of the local area and related planning issues."*

8.2.5 Moving forward

Since LEAF, WREN has been involved in the following activities:

- using the domestic energy model to inform strategies for taking action to reduce energy use
- rolling out renewable heat technologies in domestic properties
- exploring an initiative to explore what is needed when an area is producing too much renewable energy for the existing grid to handle[63].
- taking forward plans to further develop the wind turbine project with the local authority and land owners.
- seeking funding to work on building partnerships with suppliers of renewable energy technologies, so that when opportunities arise invitations to tender can be sent to partnership organisations.

In 2013, WREN also won an Ashden award for creating an energy-smart town: www.ashden.org

[62] For example, illness and weather related issues, which affected delivery of project outputs and attendance at events.

[63] In conjunction with Cornwall Council.

8.3 Ynni Llyn, Wales

8.3.1 Background

The Ynni Llyn community project was set up in the three wards at the western end of the 30 mile long Llyn Peninsula in the North West of Wales, an isolated rural community of some 1200 households surrounded on three sides by the Irish Sea. The Aberdaron ward, at its point, ranks as one of the most affected areas for fuel poverty on the Welsh Index of Multiple Deprivation. Fuel poverty in the area is exacerbated by being off the mains gas grid, poor housing, a high cost of living, lack of public transport and services and long travelling distances.

Ynni Llyn aims

- increase energy efficiency of households and businesses by educating and advising on energy saving measures, bringing more people out of fuel poverty
- increase opportunities for local traders and tradesmen by promoting local supply chain and skills for goods and services needed for energy generation schemes
- develop a transferable model for energy self-sufficient communities
- reduce Ynni Llyn's carbon footprint, both through reduction of energy use and renewable provision.

LEAF project aims and objectives: The purpose of the Ynni Llyn project was to reduce the community's energy costs in the long term through increasing energy efficiency and exploring the feasibility of generating energy, working towards energy self-sufficiency.

The group intended to achieve the project aims by carrying out the following activities:

- undertake a detailed community-wide (households and businesses) energy-use audit to identify opportunities for energy saving/ generation
- provide follow up energy advice and referrals to energy efficiency schemes (e.g. the Wales NEST scheme).
- undertake a renewable energy generation early stage feasibility study and business plan development
- set up a legal structure (e.g. a community interest company) to take forward the business plan.

8.3.2 What was achieved

The project leader felt the project was an overall success, with the first three activities fully delivered. The group made progress towards setting up a legal structure, but this was more of a challenge than predicted, in the time available. The following achievements were noted:

- the community survey achieved a 12% response rate (153 responses) through a mailshot and door-to-door knocking campaign. The group used this, with the support of a statistics specialist, to extrapolate the findings for the wider community[64].
- the renewable early stage feasibility study highlighted a number of options, specifically recommending an initial focus on solar PV, then moving on to wind and tidal, which they can now explore, in further detail.

[64] The report is accessible online via this link.

- The Ynni Llyn team have been invited to discuss the audit and early stage feasibility study findings with a number of stakeholders, including the Local Authority to explore ways in which they can make further progress.

8.3.3 What factors made the project successful

Having a realistic, achievable project design – the project leader felt that the project had clear and achievable deliverables, which helped to ensure success within the timescales available.

Use of different approaches to engage the community - all project stakeholders felt that the engagement methods used (events, direct mailing, door-to-door, visits to community groups, and entry to a raffle) encouraged participation in the community survey and had been suitably varied and sufficiently intensive to engage a representative proportion of the community.

Resources - ensuring participation required a lot of time and so a local gap year student was recruited to do the door-to-door, explaining the survey form and collecting them.

Expert support - use of consultants was felt to be important and effective. One consultancy were running an associated project in the region so already held, and could contribute, a significant amount of information and local knowledge and apply that to the advice they supplied to Ynni Llyn.

Group membership – the group also suggested qualities that make for successful community energy groups. Commitment and shared objectives were considered of primary importance.

> *"Don't take no for an answer, be patient, dedicated, don't get frustrated by setbacks. You can buy in expertise and knowledge, you just need commitment and shared objectives."* (Community Group member)

8.3.4 Challenges

Project design – one stakeholder commented that whilst the first three objectives of the project were sensible, the fourth (setting up an organisation) may have been over-ambitious within LEAF timescales.

> *"We maybe should have been more circumspect about pledging to set up a company; though it sounded reasonable there is a lot of detail to resolve."* (Community Group member)

In addition, producing a complete and viable business plan for renewables proved to be a challenge, as further business case development was found to be required.

Funding - From experience of working with groups more widely, one stakeholder commented on the need for community energy groups to have substantial upfront money (e.g. a reinvesting loan system) and minimal changes to funding and rules, on which energy project business cases are predicated.

8.3.5 Moving forward

Dissemination of findings and learning - Following the LEAF project, the group conducted a conference and published details of the project in the local paper.

Further investigation into renewable sources of energy - The potential for a tidal wave source off the peninsula has been identified and Ynni Llyn have liaised with Bangor University, who are going to conduct detailed mapping of the area. In addition, local people are being engaged to collect data on local marine life that will be essential for informing decisions around planning permission for any installation. The group intend to take that to a tidal energy developer to interest them in their potential for off-shore energy.

Securing further resource - The group have also secured a consultant to look at ways of funding a full-time officer, for a year. The group leader envisaged that the officer could focus on the time-consuming work of developing the business plan, drawing in NEST[65] and could be involved in promoting behaviour change as well.

[65] Nest was a scheme promoted in the Bridgend pilot and is the Welsh Government's fuel poverty scheme. It aims to help reduce the number of households in fuel poverty and make Welsh homes warmer and more fuel-efficient places to live.

8.4 Reepham Green Team, Norfolk

8.4.1 Background

The Reepham Green Team[66] was set up in 2004 as an informal social network in the market town of Reepham, Norfolk. The group aims to develop and deliver a wide range of projects to tackle environmental issues of concern to the local community. One of the first projects the group embarked on was a community carbon audit of homes and residents in Reepham, which showed Reepham's average CO_2 emissions to be 48% above the national average. The three main contributing factors were:

1. Reepham is not connected to the gas grid, and so reliant on oil and other 'carbon intensive[67]' forms of heating
2. the housing stock is old and found to be very poorly insulated
3. high reliance on cars for personal transport due to lack of public transport facilities.

These issues are of primary importance to the Green Team[68], but the group do not report to have a long term set agenda. Their activities tend to be dependent on the people involved in the group at any one time.

The group had previously undertaken projects funded through the Low Carbon Communities Challenge fund[69] and it was through these activities, the group became aware of and applied for LEAF.

LEAF project aims and objectives: The project aimed to undertake work to help increase uptake of energy efficiency and renewable energy generation in the community.

To deliver their aim, the group sought to undertake the following activities:

- install external wall insulation and a heat recovery system as a demonstration project on the canteen at the local school and install internal wall insulation at the Town Hall. This would provide examples for local residents to refer to, when considering improving the comfort and energy efficiency of their homes
- undertake a study to explore the feasibility of developing the UK's first community-wide bio-fuel for heating project using sustainably produced bio liquids.
- undertake an area wide renewable energy study to identify which community scale renewable energy solutions would be most cost effective
- establish a community fuel club that purchases, processes and supplies local sustainably produced biomass (logs and woodchip). The fuel club would initially supply the (small) existing market for biomass but aimed to increase local confidence in the availability of supply to encourage further uptake of biomass.

[66] www.reephamchallenge.org

[67] Fuel sources which have higher than average CO_2 emissions per KWh of output.

[68] Voluntary group.

[69] A previous DECC fund available to community groups.

8.4.2 What was achieved?

The group felt the project had been an overall success as the insulation on the school and town hall buildings were installed, the two feasibility studies were carried out successfully and the community fuel hub was established.

Results of the early stage feasibility studies - the biggest success, according to the project lead, was the outcome of the bioliquid feasibility study, which has shown that the use of sustainably produced bio liquids could be a feasible and cost effective solution to heat homes in the Reepham community. The second feasibility study to identify which community scale renewable energy solutions would be most cost effective revealed that other considered options would require significant investment in terms of civil engineering to install such systems and technologies.

Community fuel group 'Chop and Chat' days - The group reported that ensuring there was a 'social' element to the fuel group, called 'chop and chat' days, was likely to be helpful in ensuring the group is successful and continues in the long term.

Improved thermal performance of community buildings - the thermal performance of the primary school canteen and the town hall was reported to have been significantly improved, making the buildings more comfortable to use.

Figure 7 Reepham primary school canteen after the external insulation had been installed

"*The school canteen is brick, very cold and damp and suffered from condensation from the steam and cold temperatures. There was also a lot of mould, and to comply with environmental health regulations, it had to be painted every year. The building has significantly improved, it is warmer and the mould has gone. We also think we are saving money on our energy bills." (Community member)*

8.4.3 What factors made the project successful

Informal group structure and meetings - The project lead believed that a key factor to their success is that the group is informal, does not have a set agenda, and no meeting minutes are taken.

The group meetings are held at someone's home. They are an opportunity to meet socially and discuss whatever seems relevant at the time. This group structure encourages people to get involved and volunteer their time, without which it would be much more difficult to bring about change.

People involved in the group were reported to usually fall into one of three categories:

- those passionate about a particular topic, technology or issue and therefore want to get involved in a specific project

- those with specific skills to bring, for example marketing, public relations, or graphic design.
- those that want to volunteer their time and can help with activities such as helping out at an event or delivering leaflets.

The mix of people involved in the group and their fluidity was felt to allow flexibility, which allowed individuals to get involved in the projects that they are most passionate about. Furthermore, group turnover ensured that there are always fresh ideas brought in.

> *"I liken the effectiveness of community groups to sports teams in terms of size; I don't think more than 10 or 11 people should be involved at any one time as it begins to lose focus and becomes inefficient to manage."*

Use of existing organisations – the group reported working with existing organisations such as schools, the Rotary Club, and the town council to deliver projects. This was felt to deliver benefits, as their memberships and reputation were already established and had structures in place to take action where necessary.

Pulling in expertise when required – the group leader felt that using external help or expertise was important and felt this might be an area where other groups with less experience of this may not be as willing or confident to do this. The group felt that the feasibility studies delivered excellent quality outputs within the resources and timescales available.

> "*The advice from impartial people was extremely valuable; you can't get honest advice about the best products to use from manufacturers and suppliers. Getting the right advice enabled us to get the correct insulation thickness for optimal performance. I wouldn't have known what to purchase without their advice."* (Community member).

Build in social opportunities - Building in social opportunities to delivery activities was felt to be key to getting local residents engaged, and once established provide a catalyst for further projects and action to be taken.

> *"Building social opportunities into projects is important, we hope the Chop and Chat day will lead to the group sharing ideas and starting their own projects."* (Community lead)

8.4.4 Challenges

Monitoring and dissemination - whilst the group feel that the thermal performance of the town hall and the school canteen has been significantly improved and is a success in itself, it is unclear whether the aspiration for these two high profile buildings to encourage local residents to take up insulation for their own homes has been realised. In future, the group felt they would focus more on this, such as building in monitoring and dissemination activities.

8.4.5 Moving forward

As a result of the early stage feasibility study, the Green Team have been looking for partners and funding to become the first community to pilot bio-liquids as a fuel to heat homes and for bio liquids to be included through RHI.

8.5 Transition Town Shrewsbury

8.5.1 Background

Figure 1: Shrewsbury weir – the site being used for the 'Shrewsbury Hydro' scheme.

Transition Town Shrewsbury was set up in 2009 under the Transition Town movement to tackle the challenge of climate change at a community level. The group operates under a chairperson and an overall coordinator, and has a number of sub-groups. The energy sub-group are involved in the 'Shrewsbury Hydro' project funded by LEAF. Before the LEAF funding was announced, the group as a whole had not embarked on any project of this scale.

LEAF project aims and objectives: The purpose of the project was to gain the information necessary to allow a hydro scheme to proceed on the River Severn alongside Shrewsbury weir, to increase local energy generation.

The group intended to achieve the project aims by carrying out the following activities:

- undertaking a detailed study of the land alongside the weir and establish the cost of civil engineering work required for two different types of turbine that could potentially be used.
- obtaining detailed drawings and costs from potential turbine manufacturers, to be incorporated into civil engineering costs, providing a total cost for installing the scheme
- researching legal documentation relating to the weir including fish passes
- running local exhibitions in Shrewsbury to demonstrate the scheme to the community.

8.5.2 What was achieved

The project confirmed that a hydro scheme at the location in question was viable and successfully assessed turbine options proposed for the scheme. Detailed generating designs have also been drawn up, which has allowed the location of the hydro scheme to be finalised.

The team also felt that steps to involve the local community were successful, and support for the scheme was demonstrated through well attended exhibitions, including the 2012 Shrewsbury River Festival.

Access to legal advice and representation helped to solve issues that arose during the project and improved the credibility of the project as a whole.

More broadly the team feel that Transition Town Shrewsbury, and the projects that it is involved with, is now more visible in Shrewsbury as a result of the Shrewsbury Hydro project, and has more of a presence within the local community.

Figure 2: Visualization of the Archimedes screw turbine at the Shrewsbury weir site

Figure 3: Visualization of the underground water turbine at the Shrewsbury weir site

8.5.3 What factors made the project successful

Community engagement - The publicity surrounding the project and the exhibitions that have been held were reported as a key factor contributing to the successful engagement of the public. The local radio station and newspaper were both felt to be helpful in promoting the exhibitions, as they were able to reach out to a large number of people across the town. The use of a project display, model and images of the proposed work also helped to raise interest in the work and were thought to allay residents' potential concerns.

Figure 4: Project display used at public engagement events and exhibitions

> "*One picture is worth a thousand words. The model on display and the visualizations which accompanied it brought the project to life."* (Community leader).

Bringing in expertise - the use of LEAF funding for legal support was felt to have sped up resolving land ownership issues. In addition, strong relationships with local contractors and civil engineers was felt to have enabled the feasibility of the scheme to be fully tested, and allowed the effectiveness of different types of turbine to be assessed.

Group membership - the presence of one key person within the group who had the time and experience necessary to be able to project manage and oversee the entire process was felt to have made the whole thing run more smoothly.

8.5.4 Challenges

Contractor delivery - There were some instances of reworking being required by one of the project contractors (when information from one contractor became available to another as the project went along).

> "*In an ideal world we would have had a better critical path analysis but this did not prevent the outcomes being achieved.*"

Working with local partners - The project was also thought to have been slowed down by a re-structuring of the local authority and on-going discussions regarding the ownership of land at the side of the weir that was earmarked for the hydro scheme.

8.5.5 Moving forward

Since LEAF, the project was reported to have continued to progress, with work centred around the aim to have the hydro scheme approved before a change in feed-in tariffs occurs in 2014.

The group were also undertaking further projects subsequent to LEAF including resource efficiency projects and Shrewsbury Green Doors – a project displaying and celebrating homes in Shrewsbury that have been made 'Fit for the Future' by the installation of energy efficiency measures and renewable technologies.

The Shrewsbury Hydro scheme was thought to have increased people's awareness of Transition Town Shrewsbury and the work that the group does and projects like the ones listed above, whilst not directly influenced by LEAF, have benefitted from this greater presence.

8.6 Town and Country Housing Group – Sherwood Community Energy Hub, South East England

8.6.1 Background

The Town and Country Housing Group (TCHG) are a housing association providing almost 9,000 affordable homes in Kent, Sussex, Surrey and South London. The Sherwood Community Energy Hub project funded by LEAF was focussed on Sherwood – a residential estate in Tunbridge Wells with a population of 6,700, in which the majority of homes are owned by TCHG. The estate already had a successful community centre, and the community was already involved in making environmental improvements through its local organisations.

LEAF project aims and objectives: The purpose of the LEAF project was to better understand the carbon emissions of TCHG's housing stock in Sherwood and the most cost-effective steps TCHG could take to make improvements and prepare for using The Green Deal.

To deliver their aim, the group sought to undertake the following activities:

- using a 'Carbon Reduction Options for Housing Managers'[12] (CROHM) assessment tool to facilitate better strategic planning by clearly demonstrating the projected outcomes of carbon reduction measures and at what price so that money can be better allocated
- educating the local public on potential energy saving measures in advance of the roll out of the Green Deal
- gaining an increased understanding of the effectiveness of currently available domestic Voltage Optimisation[13] (VO) technology, and of the current perception of tenants and domestic electricians towards it. In addition, understand whether domestic VO could viably be installed within the Green Deal.

8.6.2 What was achieved?

The project was felt to be an overall success, as it delivered a report using a tool which helped model the impacts of different steps that could be taken to improve carbon emissions in their housing stock in Sherwood.

The hotline set up to deal with expressions of interest in the voltage optimisation units was inundated within a day of a letter drop to over 800 properties. Overall 40 units were installed in randomly selected households, with achieved savings of up to 4600kg CO_2 reported. The engagement work also was reported to have provided the group with a good database of interested residents that can be engaged in future work.

Figure 1: A voltage optimisation unit used during the project

8.6.3 What factors made the project successful?

Expert Partners - Partnering expert contractors as well as the suppliers and installers of voltage optimisation units was felt to be integral to the project's success.

The workshops brought together key members of the project team and affiliated consultants to plan the implementation strategy for the project, which allowed the specialist consultants to improve their knowledge of the community and the tasks involved.

> "*It certainly galvanised people to have the workshops, and helped to manage them. You need that external management of the situation."*

The consultants working on the housing stock data were also felt to have added significant value to the project by getting the data into a state where it could be analysed effectively in a short timescale.

Community Engagement - the group felt that the enthusiasm of the residents in having energy audits and installation of voltage optimisation units, as well as the delivery team helped to make the project a success.

> "*This points to the fact that many are struggling with their energy bills and are keen to reduce them or allow access to more warmth for the same money."*

8.6.4 Challenges

Funding - there were extra costs surrounding the installation of the voltage optimisation units that the team were not aware of until installation started. This resulted in slightly fewer units being installed than originally planned.

> "*Had the manufacturers' assumptions been absolutely correct we would have been able to get more units in without factoring in other costs." (*Project consultant)

Technical challenges – Several of the chosen households for VO units turned out to be unsuitable for installation . This meant that other suitable properties had to be identified and the installations rearranged within a tight timescale. This meant that the monitoring data from the voltage optimisation units will be less accurate than planned due to a smaller sample size than expected.

8.6.5 Moving forward

The LEAF funding was enabled TCHG to acquire data to assess the potential to use The Green Deal across their housing stock. There has also been further modelling work carried out on the advantages of using voltage optimisation across the stock.
Further plans building on the LEAF project are to:

- hold another workshop with all stakeholders to discuss outcomes and aspirations for future work and the group's involvement in the Green Deal.
- use the assessment tool to demonstrate to residents the impacts of potential measures, to encourage take-up of other installations and improvements.

- continue the work with the voltage optimisation units to improve the accuracy of feedback.

8.7 Greater Manchester Centre for Voluntary Organisation (GMCVO)

8.7.1 Background

Figure 8 Moss Brook growers are keen to explore the feasibility of a 50kW wind turbine

Greater Manchester Centre for Voluntary Organisation (GMCVO) is a voluntary sector support organisation working in the city region of Greater Manchester. GMCVO's Community Hubs team runs a project called Generating Success[70], which aims to support community and voluntary sector organisations to install and run community renewable energy projects.

The project is delivered in partnership with two delivery organisations and part-financed by the European Agricultural Fund for Rural Development: Europe Investing in Rural Areas. Defra is the managing authority for the Rural Carbon Challenge fund. LEAF funded the early stage feasibility work with two community hubs to lever in funding for Generating Success (19 month project).

Key project aims and activities: The overall aims of the project were to:

- carry out feasibility work with two community energy projects to release Rural Carbon Challenge Funding to support the development and cost of installing renewable technologies on four community projects.
- support community organisations to act as trailblazers to inspire the development of community renewable energy and efficiency projects in Greater Manchester.
- test the market for setting up an enterprise to support the development of community energy projects in Greater Manchester.

To deliver these aims, the project sought to:

- test the feasibility for the development of a community venue, with solar PV, composting toilet and rain water harvesting and planning application preparation (Affetside Millennium Green Trust)
- explore the feasibility of meeting energy needs considering energy assessment, supply and onsite energy storage options. This led to a 3 phased project to firstly install grid connection, then install 20kW solar PVs then test the viability of a wind turbine (Moss Brook Growers)
- research to inform the development of a Community Energy Enterprise, including assessment of company structures and potential income sources
- a stakeholder engagement event to present research findings and seek feedback.

[70] http://www.gmcvo.org.uk/generating-success

8.7.2 What was achieved

GMCVO felt that the project was successful as each of the projects are now significantly further progressed towards installations and Defra funding was secured:

- Affetside Millennium Green Trust are now in a position to consult with residents and stakeholders and have a greater understanding of project costs and are seeking match funding.
- Moss Brook Growers are progressing with grid connection and solar PV installation and are investigating a large scale, income generating wind turbine.
- The stakeholder event was undertaken in mid-March to present results of the work to the local community and stakeholders.
- The research and event recommended the development of a social enterprise to act as a vehicle to support other (grassroots) organisations to develop further community renewables which is now being explored further.

8.7.3 What factors made the project successful

Buying in the right support - the Community Hubs team and representatives from the community projects all suggested that choosing the 'right' consultancy to carry out the feasibility work was fundamental to delivering the projects effectively and on time. This meant finding consultants who are engaged in the voluntary sector, passionate about social causes and willing to be flexible in their delivery.

8.7.4 Challenges

Timescales – some aspects of the work needed to be delivered very quickly, which was overcome by the consultant moving around other commitments[71] to deliver outputs.

Stakeholder engagement - the stakeholder event did not attract as many people as hoped, which was felt to mainly be due to the timing (mid-March), when other groups were busy[72]. This was overcome to some degree by engaging with interested parties on the telephone instead.

8.7.5 Moving forward

Funding - Further funding is now being sought to carry out more technical studies before planned installations can go ahead.

Technical feasibility study outcome risks - Further advice is needed on the installation of the wind turbine at Moss Brook Growers. The project lead has identified that there is a risk that the results of the further study (for which funding is required) could suggest it is not feasible to pursue.

[71] E.g. Annual leave.
[72] E.g. with other LEAF projects.

8.8 East End Community Development Alliance, Newcastle

8.8.1 Background

The East End Community Development Alliance is a community development organisation based in the east end of Newcastle. They act as an umbrella organisation for over 100 community and voluntary sector organisations.

Prior to LEAF the Alliance had been in discussions with Northern Community Power, a community interest company working on renewable energy, fuel poverty and community development, about an energy project in the area. When the funding was announced they joined forces to implement some of their ideas and assess their resources, knowledge and understanding of energy efficiency issues of local residents as a starting point for developing community solutions.

Figure 1: An energy monitor distributed to residents

The Alliance and NCP teams were interested in working with poorer urban neighbourhoods for the project. Whilst fuel poverty is a significant problem in the area, communities in urban areas have been slow to recognise the potential of community scale renewable and of community ownership as a source of income to help address this.

The team had conducted strategy development work and some projects, however this was the first major community engagement project that the team had conducted together.

LEAF project aims and objectives: The main aim of the project was to provide a range of local community groups with skills and knowledge to enable them to tackle fuel poverty.

To deliver their aim, the group sought to undertake the following activities:

- assessing the renewable potential of the area to seek solutions to increase equity and reduce fuel poverty through renewable energy
- raising awareness in the local community, and promote the potential of renewable as a source of community income
- promoting the importance of behavioural change and energy efficiency to the success of renewable projects
- providing energy awareness training to eight volunteers to enable them to become community energy 'champions' and deliver energy monitors to residents for on-going data collection as part of an awareness raising exercise in vulnerable neighbourhoods.

8.8.2 What was achieved?

The group felt the project was an overall success, having delivered a baseline assessment of the potential for community renewables projects in the area, held seven community engagement 'drop in' events attended by around 200 residents. The group also trained 4

volunteers and distributed 30 energy monitors to households in vulnerable neighbourhoods.

Particular aspects of the project, which were felt to be significant achievements included:

- through the community engagement, the team found that there is a desire in people to know more about energy efficiency and community renewable projects, and the things that they and the community can do to make savings.
- the building of relationships with local community groups and residents, local authority officers and other activists, and an understanding of current activity and potential.
- the project lead felt that the fact that the work had to be completed within such a tight time scale was a good learning opportunity for the team, as it pushed them to be decisive and act quickly. Despite there being a few delays along the way, the majority of the planned work was completed within the assigned timescale.

> "*There wasn't any time for putting things off until the following week – we had to make decisions and run with them"* (Project lead).

8.8.3 What factors made the project successful?

The team's knowledge - the existing knowledge of the Alliance staff was felt to have been essential. In particular, the mix of experience and knowledge[73] within the project team worked well, including use of a wealth of different networks and contacts that the Alliance and NCP were able to draw upon. Most important was the insight gained through forging relationships with the community, other activists and council officers.

External partners - good relationships with the local authority following an earlier energy project were felt to also be an important factor. There was an ongoing dialogue with the local council, who showed a keen interest in the project and provided resources such as GIS maps. In return, the team were able to disseminate information regarding the council's energy initiatives at the drop in events.

Volunteer action - the project lead also felt that the quality of the energy awareness training was very high, and the willingness of the volunteers to get involved and engage in the subject was an important factor.

> "*Everything depends on volunteers – we wouldn't be able to run without time and commitment from them"* (Project lead).

8.8.4 Challenges

Access to data - whilst the team received useful information from the local authority to feed into their report, one 'targeting' challenge the group encountered was that they were unable to access data on the local council's 'Warmzone'[74] initiative, despite persistently attempting to gain access. It was reported that the data would have enabled the group to

[73] Reported to span specialities such as energy research, community development, work with vulnerable communities, engineering and accountancy.

[74] Newcastle Warm Zone was set up in 2000 to bring real benefits to householders who need help because they live in cold damp homes or find it hard to keep their home affordably warm. The Zone worked with Warm Zones CIC, Newcastle City Council, Your Homes Newcastle and Scottish Power.

identify particularly hard-to-reach households in lower income areas of the city, however due to data protection issues surrounding the disclosure of the information and a lack of staff time within Warmzone to follow up the request this was not available.

Timescales - due to confusion at the beginning of the implementation stage of the project[75] the first two events were arranged somewhat hastily with little time to promote effectively, resulting in low attendance. To rectify this, plans were amended and funds were redistributed to different elements of the project to enable an additional event, taking the form of the 'family fun day'. Also, whilst the aim was to train 8 volunteers and distribute a lot more monitors, the tight timescale and late release of money hindered the process.

8.8.5 Moving forward

Since the completion of the LEAF project the East End Community Alliance has unfortunately had to close, as a result of reductions in local authority funding. The individual members of the group are still active in a variety of ways across the community, with one remaining involved in the project through Northern Community Power.

The LEAF project has led to ongoing relationships with other community groups in the area and further work involving an energy audit of a community building, and an assessment of renewable potential. It has also directly led to interest from North Tyneside Council to see if the East End project can be replicated, or a new version designed, with groups across the borough. However, funding will be the main issue to address before this work can progress.

[75] Regarding the timing of finding out whether or not the LEAF bid had been successful and of the slow release of the upfront funding, despite the small window for delivery.

8.9 Transition Exeter

8.9.1 Background

Transition Exeter is a community group seeking to take local action in response to the global challenges of climate change and peak oil. There are active economics, energy, food, and transport working groups. Prior to LEAF, the group had organised many educational events, and initiated a community-owned real food store and a community agriculture project.

When the LEAF funding was announced, the group decided to apply to run an energy efficiency project in three wards in Exeter. These were chosen to reflect different aspects of housing in Exeter and specific challenges regarding improving energy efficiency. Newtown has a variety of housing types and mixed tenure; St David's has a mix of Victorian housing, more modern social housing and a high percentage of student accommodation; and Exwick is a housing estate on the outskirts of the city with high levels of rented homes. Large areas of Exwick are not connected to gas.

Figure 1: Image used to promote the 'Energy: Save it Yourself' workshops

LEAF project aims and objectives: The aims of the project were based on a desire to engage and inform homeowners of ways to improve the efficiency of their properties and reduce fuel bills.

To achieve their aim, the group proposed to carry out the following activities:

1. Running a door-to-door energy efficiency survey in three wards.
2. Holding 'Energy: Save it Yourself' workshops in each ward to provide advice and information on energy efficiency, including hands-on displays.
3. Organising a 'Green Homes' event for people to see the energy efficiency measures that home owners had installed.
4. Providing the Exeter Community Centre with funding for energy efficiency measures suitable for community buildings.
5. Writing a report and making recommendations based on the survey, the workshops and the Green Homes events that outlined local needs and potential carbon savings in the area,

8.9.2 What was achieved?

The group reported the project a success, in many ways. They had directly engaged over 300 members of the community through the door step surveys, workshops and Green Homes events (with a further 5000 engaged through wider promotional leafleting). LED motion sensitive lighting has also been installed in Exeter Community Centre, along with signage promoting the energy saving measures that have been installed.

The key success of the project was due to the door-step surveys and the information obtained from them. The positive feedback from the workshops focussed on the practical,

'one-to-one' advice they received on affordable solutions and the two Green Homes events were found positive, because many attendees were inspired by the energy efficiency measures they saw.

Following the workshops, participants were contacted and it was reported that most households had taken or proposed to take some steps to save energy. The most common changes were behavioural (turning lights off, thermostats down etc), using low energy bulbs, and loft insulation.

Through the project the group also identified a team of existing volunteers from within Transition Exeter, as well as new student volunteers from Exeter University. The volunteers were highly committed and interested in the project. They learnt skills in householder engagement and interviewing, which they then used whilst conducting the doorstep surveys.

8.9.3 What factors made the project successful?

Support from external partners - The team worked with other community groups in each of the three wards, providing additional support and links to existing community group members and contacts. This helped to improve the effectiveness of activities by utilising the group's existing networks.

Internal resources - The knowledge and expertise that Transition Exeter and the project team had gained from delivering earlier projects, and working within the group, was felt to be a key factor in helping to get the project off the ground. One team member, an existing member of Transition Exeter, was an energy efficiency advisor, which meant he was able to provide samples and materials to run demonstrations of different technologies, give advice and information to residents and also provided an opportunity for them to discuss queries and concerns.

Volunteer capacity - Twenty volunteers from Transition Exeter and the local university took part in several events, including the leafleting campaign and doorstep surveys, and were motivated and enthusiastic. The group lead felt the project would not have been as successful without them.

8.9.4 Challenges

Timescales - Whilst a significant amount of community engagement was carried out and feedback from residents was positive, the team felt that they could have benefitted from more time for in depth engagement with the local community.

> "*Experience shows that community based intervention takes time. We didn't have enough time to make good links with a wide range of community groups in each ward. A lot of time was spent working out the best ways to get information out to people.*" (Project manager)

Lack of publicity - Whilst the use of volunteers helped to engage the public, the group struggled in getting press coverage to promote it. They felt that this resulted in the publicity (excluding the leaflet drop) being seen mainly by those who were already involved in or aware of Transition Exeter in some way, rather than by a new audience.

> "*It takes a lot of time to find out who is interested and the formats that they want to see information in. If the funding had been available over a year we could have made much more meaningful links with local people"* (Project manager)

Installing measures - Whilst some renovation work was successfully carried out on the community centre through LEAF funding, a number of desired energy efficiency measures were not installed due to insufficient funds.

8.9.5 Moving forward

The report produced at the end of the project highlighted a number of recommendations for further work. Transition Exeter hopes to develop ongoing energy efficiency projects with existing community organisations in the hope of maximising uptake and commitment. Also to work with the rented sector to improve uptake of energy efficiency measures and to publicise these to prospective tenants, and to work more with the Local Authority and Green Deal providers. As a result of LEAF, the group have greater ambitions for the future.

> "*When you've done something that had worked, you're more willing to do something bigger and more stretching"* (Project Manager).

Funding restrictions - Unfortunately, as there have been limited sources of funding since the end of the LEAF project the group have not been able to implement action to develop these recommendations. However, it remains a longer term aim of the team.

9 Appendix: Detailed evaluation methodology

9.1 Introduction

This methodology annex provides a detailed summary of the precise approach taken to each stage of the process evaluation. It covers the following stages:

- Stage A: coding of the monitoring and application forms
- Stage B: the on-line survey
- Stage C: the case studies

9.2 Stage A: review and coding of the monitoring forms

9.2.1 Mapping the data from the forms to inform the Stage B survey

The first step taken in integrating the monitoring and application form data was a mapping exercise to map the application form and monitoring form variables to the core research questions to identify any aspects of the forms that could be excluded from the data collation and analysis and to identify key data gaps to inform the stage B survey.
Overall, the forms contained rich data on:

- the activities funded by LEAF
- the extent to which initial project expectations (around both deliverables and timescales) were met
- learnings from the LEAF projects
- initial outcomes from the projects
- factors affecting the success of the projects.

The following research areas did not appear to be adequately answered through the data in the monitoring and application forms:

- the precise ways in which LEAF supported the community group activities
- attribution of outputs and outcomes to the LEAF funding and support
- the role of community engagement in the project
- the extent to which the project has prepared the community / community group for Green Deal and the RHI

9.2.2 Coding the responses on the forms to enable analysis

Most questions on the forms were answered in an open end; it was agreed to be useful to code the open ended responses to enable quantitative analysis. A code frame was developed for each variable (based upon the responses and awareness of coding frames used for similar questions in previous research). It was found that a number of the monitoring form questions *seemed* to be asking for similar types of data and responses were effectively being duplicated. Even if some of these seemingly similar questions were not intended to obtain similar data, respondents appeared to have interpreted them in this way.

The approach therefore aimed to produce a dataset that, rather than directly mirroring all the variables from the monitoring forms, amalgamated some of the monitoring form question responses to create variables that several monitoring form questions fed into the coding of.

9.3 Stage B: on-line survey

9.3.1 Surveying method

In line with the specification set out for the process evaluation, the survey of participants was conducted on-line. This brought the following benefits:

1. a lower cost per interview
2. enabled respondents to respond in their own time and at their convenience, and allowed them to 'pause' the interview to check information if needed.
3. enabled different individuals with different responsibilities to contribute to answering the questions.

The on-line survey was set up and managed using Voxco CAWI software, which enabled data to be extracted straight from the survey software.

9.3.2 Sample

The survey was sent to all LEAF participant community groups except four that opted out of any further contact through their response to question 6 in the monitoring form.
It was anticipated that the lead contact identified on the monitoring form would be the most appropriate person to complete the survey. However, it was anticipated that the lead contact alone may not be best-placed to answer all the survey questions; therefore respondents were encouraged to save survey progress and allow others to complete it or source the information before continuing.

9.3.3 Risks and mitigations

To maximise the response rates on the survey:

- the email encouraging groups to access the survey link was sent by the LEAF board and contained their endorsement.
- once the survey had 'gone live', reminders were circulated at least once a week to encourage responses from those yet to respond.
- where respondents had started but not completed the survey, data extracts could identify this and calls were made to these groups to encourage them to complete the survey.
- a function on the CAWI software showed each respondent how far they had got through the survey (as a percentage). This aimed to help respondents see that they were progressing through the survey and keep them engaged / willing to continue.
- the survey was kept on-line for six weeks to give groups ample opportunity to respond (i.e. account for key individuals being away / unwell / busy).

The following steps were taken to managing data quality from the on-line survey:

- minimising the number of questions and length of the survey to minimise survey fatigue and so low quality answers.
- the first 10 completed interviews were treated as a pilot of the survey to highlight any potential ambiguities in questions or completion instructions that were not clear.
- data checks and analysis were conducted to ensure questions were being answered as intended, and to explore consistency of responses.

A general risk of the survey was that – in light of the funding awarded - respondents may have felt under pressure to exaggerate their achievements and downplay any issues. This was managed by:

1. reassuring respondents – through initial engagement activity and in the survey – that their responses would be treated as confidential *if they wished them to be*[76].
2. reassuring respondents that the research focus is upon understanding what has gone well, or been challenging, to help inform future policy making within Government. These questions were not intended to serve as an audit of their project and would not be used to claim back funding on under-achieved objectives.
3. comparing survey responses to those on the monitoring forms to check for outliers or strange answers.

9.3.4 Survey script

A test version of the survey can be accessed through the following link:
https://research.data-build.co.uk/survey/intweb.dll/project/databuild/DECC_LEAF_Online

9.3.5 Limitations

As described in section 3.1, the online survey approach was subject to risk of response bias. We therefore undertook an analysis of groups responding to the survey vs. those who did not, using information gathered through the monitoring forms, shown in Table 7. This showed only minor differences.

Table 7: Differences in monitoring form information between responders to the online survey and the LEAF population.

Monitoring form question	Groups completing the on-line survey			LEAF population		
	Renewables projects	Non-renewables projects	All	Renewables projects	Non-renewables projects	
Project completed 'broadly on schedule'	73%	57%		67%	55%	
Felt they had 'scaled back' on some project objectives	9%	19%		13%	20%	
Project felt to have achieved 'less than hoped'	9%	12%		13%	11%	

9.4 Stage C: case studies

Case studies were proposed to further illustrate and explain the findings from the Stage A analysis and Stage B surveys. It was agreed that ten case studies would be produced. This could not provide exhaustive coverage of every combination of the criteria above, but enabled coverage of a range of experiences and representation of different group profiles.

9.4.1 Data sources

Data collected in Stages A and B was integral to informing:

[76] In line with the MRS Code of Conduct.

- the themes explored in the case studies;
- the short-listing and selection of groups appropriate to comprise illustrative case studies;
- some of the content of the case studies e.g. what activity was delivered, overviews of successes and challenges, overviews of what happened after LEAF etc.

9.4.2 Respondents

For each project case study, 2 – 4 key individuals associated with the project were interviewed. This provided a range of perspectives on the project (rather than simply those of core group members). Interviewees always included the named project lead, but could include one or more of the following:

- other key members of the community group e.g. those in prominent positions in the group and / or those tasked with delivering particular activities (e.g. outreach volunteers, those running an event exhibition).
- external advisors / energy professionals that worked with the group e.g. specialist consultants (conducting technical or marketing work) through to local authority representatives.

The first interview on each case study project was always conducted with the project lead. This individual was then asked to provide contact details of other key stakeholders – internal or external - involved in the project. Whilst the lead contact's steer on the most appropriate stakeholders was taken to some extent, they were also prompted for contact details for key roles if these were not initially offered.

In deciding the numbers of case study respondents approached for each project, the following factors were considered:

- what depth and type of insight the contact would be able to provide on the project?
- whether they could offer a perspective on the project that added to / differed from that provided by the lead contact[77].

9.4.3 Interviewing method

Five lead contact interviews were conducted by phone, five face-to-face. Projects visited tended to be those with a physical outcome (e.g. retrofitted property, new renewable energy installation) to see and those where the lead contact was available to host an interview.

Face-to-face interviewing enabled observation of the project (and / or its effects) in action, sharing of any public engagement materials, provided the potential for on-the-day perspectives from multiple group representatives and enabled pictures to be taken to enhance the case studies.

9.4.4 Criteria for case study short-listing

Prior to approaching the community groups applicable for each case study theme, a shortlist of groups was drawn up. This was developed from the Stage B survey sample to provide both coverage of different research themes and different project profiles. The case

[77] Assessment and reporting of differing views took into account respondent proximity to the project.

studies were also shortlisted to produce studies representing a range of geographic areas, community group types and activity types.

Although each combination of these profile variables could not be covered within ten case studies, the variables provided a basis for selection.

Recruitment and selection of the projects taken forward to a case study was an iterative process, as particular profile quotas were filled as recruitment progressed. Whilst at the outset any group willing to participate was included, recruitment and selection then became steered by which profiles were not represented / were under-represented.

9.4.5 Topic areas to cover

The case study interviews principal aim was to explore how and why outcomes were achieved.

Key question areas
• Group background / profile. • Respondent background. • How the LEAF project came about. • Recap activities conducted and outcomes achieved. • Assessment of project success against expectations. • *If successful,* reasons for that. Any hurdles encountered and why these did not become critical. • *If not successful,* reasons for that. Any successes and how they arose. • Effects of LEAF funding/project on the capacity and capability of the group. • Factors that have helped/hindered the group post-LEAF • Future ambitions and projects.

Interviews generally lasted between 45 and 90 minutes, often varying depending upon the respondent (lead contact discussions tended to last longer).

Department of Energy & Climate Change
3 Whitehall Place
London SW1A 2AW
www.decc.gov.uk

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