

2009 UK Ashden Awards case study Marches Energy Agency (MEA)

Finalist's work: Helping communities take action to reduce their carbon footprint

Organisation: Charity and Company limited by guarantee, established in 1998.
Income £1m (2008-09), 20 employees

Location: Shrewsbury, Shropshire

Summary

Initiatives to reduce CO₂ emissions in the UK tend to be top-down in approach, and to focus on a specific technology or sector. Individual households, businesses and community groups often feel left out, and unsure on how they might contribute.

Since 2005 MEA has been running the Low Carbon Communities (LCC) programme with communities in the West Midlands. LCC works with community groups to encourage them to take action to reduce their energy use and CO₂ emissions, and gives them the support and training they need to achieve these goals.

- LCC has run in six communities so far, with a further four recently joining the programme. More communities will shortly be starting the programme. In addition, a Service Level Agreement with the Nottinghamshire and Derbyshire Local Authority Energy Partnership will bring LCC and other MEA programmes to the East Midlands.
- Focus is on delivering a defined CO₂ reduction in a community over a specific time period, working with homes, community buildings and organisations. Activity is tailored to the community and the community has an LCC project manager as 'key contact' to coordinate all activity for the duration of the project.
- A wider communication/education strand underpins the projects with presentations to community groups; running renewable energy technology fairs; giving school assemblies; holding community events.
- Draws on other MEA programmes like 'Carbon Forum' to create interest in climate change; 'Action Heat' to provide insulation measures; and 'Project Carbon' to provide support to businesses.
- Helps communities get access to funding and technical support.
- 2,000 people have benefitted directly from LCC, and about 20,000 indirectly.
- Over 1,400 technical measures installed in homes, businesses and community buildings so far.
- 9 GWh of energy saved in the last year, resulting in a CO₂ saving of 1,715 tonnes/year CO₂. This is between 1% and 5% annual CO₂ reduction for the overall community.
- Community groups are left equipped and motivated to make further cuts in CO₂ emissions.

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Context

Much of the UK effort to limit climate change by cutting CO₂ emissions is led by government programmes and agencies. Programmes tend to focus on technologies such as insulation or micro-generation, or on sectors such as domestic, education or business. While this approach makes sense from a planning and management point of view, it can leave individuals and communities feeling 'left out' or unclear of the value of taking action on their own initiative. Enabling and empowering households, organisations and communities to play their part will be essential if the UK is to achieve the cuts in CO₂ emissions that it has committed to. This requires not only that individuals are motivated, but also that they have access to information, advice and opportunities that make taking action simple.

MEA is a social enterprise, based in the West Midlands, which is focused on developing and delivering local strategies for tackling the problem of climate change. Its three goals are to reduce demand for energy, to promote low-carbon sources of energy and to decentralise energy supply. One of its main methods for achieving these goals is the Low Carbon Communities (LCC) programme. LCC addresses the limitations of technology- and sector-focused programmes by helping communities as a whole to come together and achieve reductions in CO₂ emissions. The area where MEA is based is rural, with much local employment in small independent businesses and a significant amount of fuel poverty (17% of households). Many small towns and villages in the region are not on the national gas grid, and there are many opportunities for households and businesses to reduce CO₂ emissions and save money at the same time.

How the project works

LCC is one of the five key themes of MEA. The others are:

- **Carbon Forum:** communication, education and inspiration on taking action to cut CO₂ emissions.
- **Project Carbon:** technical advice, support and capital grants for businesses and community organisations.
- **RE:think Energy:** promoting renewable energy.
- **Action Heat:** providing affordable warmth for households and alleviating fuel poverty. During the past year this included insulation measures in over 5,500 homes.

The themes all work together; for example, Carbon Forum may start work in a community to raise awareness on climate change and energy use, through an energy-themed pub quiz or film night. LCC will then follow on to help the community take action to cut their CO₂ emissions. The action the community takes may make use of the other MEA themes to access external advice or grants, and to get technical measures installed. In all cases the focus is on practical action that people can take to deliver measurable CO₂ reductions.

MEA likes to deliver LCC in a community where there is already a local group in existence that has an interest in tackling environmental challenges. Sometimes it is the existing group which approaches MEA to run the programme. Once such a group has been engaged and a link-person identified in it, MEA allocates a project manager to work with them to keep them focused on energy, and ensure that their capacity to work on climate change issues is increased. LCC typically works with a community for 24 months, with the aim that by the end of this period the community will have gained sufficient enthusiasm, knowledge, skills and confidence to continue taking further action to reduce CO₂ emissions.

The detail of how LCC is implemented in each community is different, because it is essential that the programme is tailored to local circumstances and the groups involved. A key feature

of all LCC projects is 'portfolio funding' whereby the team will ensure that all resources from any available source are used to support action. This often means that the practical advice given comes with financial support to encourage action. The menu of support activities continues to develop with experience. Activities used include: door-to-door visits one street at a time; working with small groups of households to share experiences; targeting specific sectors e.g. detailed audits of all of the tourism businesses in the community; speaking to existing networks e.g. Chamber of Commerce meetings; running renewable energy technology fairs; carrying out a programme of school based activities; and holding public events. All of this activity is underpinned by a range of common tools including on-line energy monitoring. MEA believes that if LCC is run as a top-down project imposed on a community, it is less effective than if there is an existing group to work with.

Technology and use

LCC is 'technology blind', in that it will support the use of any technology appropriate to a community. LCC team members generally use the following order of preference, based on cost and carbon-effectiveness: not using energy, using it more efficiently, and using renewable energy. However, they also recognise that renewable energy technologies often generate more interest than insulation, so try to achieve a mix.

The most widely used technology in homes has been insulation, including lofts, cavity walls and a small number of solid walls: insulation has also been used for businesses and community buildings. Lighting refits have been used in many commercial and community buildings. Various types of energy efficient lights have been used, some requiring new fittings and others using adaptors to allow existing fittings to be retained. A variety of other technologies have been used for businesses to meet specific needs. For example, a laundrette installed a new boiler and driers; and a manufacturing business installed power-factor correction equipment.

Other technologies used include draughtproofing, heating system upgrades, solar photovoltaics, solar water heating and small wind turbines.

How users pay

LCC helps end-users to get funding which, although available, is often complicated to access. Some of this funding (such as CERT) is secured by MEA and then made available to end-users through different MEA programmes. MEA also helps people to access third party funding, for example the Low Carbon Buildings Programme. In addition to its turnover of £1m in 2008/9, MEA also allocated a further £2 million in funds for work to reduce CO₂ emissions.

In most LCC work, the households and organisations pay part of the cost of the technology being installed, but MEA's ability to use different funding streams means that costs are kept low. Households in fuel poverty get insulation and other relevant measures free of charge, through the MEA Action Heat programme.

Training, support and quality control

Training and support are at the heart of what LCC does. Apart from reducing CO₂ emissions while the programme is active in a community, LCC also aims to leave behind people who are not only motivated to continue the work, but also equipped with the skills they need to do so. Local volunteers are given support and training on applying for grants, carrying out energy audits and other activities appropriate to their circumstances to help them continue to reduce CO₂ emissions after the initial intensive support period has come to an end.

Businesses and those seeking to start businesses are also assisted, by providing grants and resources to help them access training courses in low-carbon technology.

While LCC is active in a community extensive support is given, with MEA staff visiting households, businesses and community organisations to raise awareness, give advice and help people take action. In some areas they initially used door-to-door household visits to carry out detailed energy audits, but finding that this was too costly and time-consuming, they switched to getting groups of around eight households together for workshops and virtual audits. Not only did this make more efficient use of MEA's time, it also allowed people to share ideas and look for ways they could work as a community to reduce CO₂ emissions. The MEA project manager is available on the phone for advice, help and encouragement. Once LCC has completed its active phase in a community, MEA continues to provide support. In addition, households are invited to use a range of tools including the energy monitor software on the MEA website to keep track of their individual and community energy use, and to monitor future changes in CO₂ emissions.

The quality of the sustainable energy measures installed is checked by inspection of a random sample of households, and end-users can contact LCC directly if there are any problems. To date there has been only one significant problem, which occurred with a commercial lighting refurbishment. The fault was identified and rectified by LCC.

Benefits

LCC has been implemented in six geographical communities so far: including Whittington and Fisherwick; Cleobury Mortimer; Shropshire floodplains (a collection of villages to the South of Oswestry) and Ellesmere. It has also worked with a community of interest: a number of churches who became involved with Congregations for a Low Carbon Future. Over 1,400 technical measures have been installed, and about 2,000 people have benefitted directly from this work, for example as householders or owners/managers of businesses. MEA estimates that a further 19,000 benefit indirectly, from the marketing and campaigning in the wider community.

Environmental benefits

Energy and carbon savings are estimated for each measure undertaken, using standard estimation procedures (e.g. CERT or EST). The work of LCC to date has resulted in an estimated 9 GWh of energy being saved or produced in the past year, and 24 GWh since the programme started. This is equivalent to an estimated saving of 1,715 tonnes/year CO₂. In addition, some local groups that LCC has worked with have taken other actions to help the environment, including reducing transport emissions and promoting the use of local goods and services. The annual carbon savings are significant for the communities involved – between 1% and 5% of the total emissions from the community. The estimates do not include actions taken by people who might have been motivated by the LCC campaigning, but were not directly involved with the LCC activities.

Social benefits

The immediate benefits to households and organisations are reduced energy bills and more comfortable buildings. More important in the longer term is the new capacity that has been developed in the communities. Because people have gained skills and understanding, they now feel more confident to take action to make further cuts in energy use and CO₂ emissions. The local groups that have been strengthened or formed as a result of the LCC work have the potential to help the community make the adaptations that are needed over the coming years.

Economic and employment benefits

The work of LCC has safeguarded a number of jobs by reducing business's energy bills. For example, in Ellesmere LCC facilitated lighting refits in about half the town's businesses. Local engineers have been able to broaden their range of skills to include solar power and wind turbines, and the insulation contractor that MEA uses has been able to create new jobs as a result of the work generated.

Other businesses have also developed as a result of the raised awareness of energy use. For example, a local IT company has set up a system for remote monitoring of energy use; a joiner has started to make sawdust briquettes; and a farmer has started producing biodiesel from waste oil.

Potential for growth and replication

LCC started as a single project, and developed to become part of a Local Public Service Agreement with Shropshire Council. Further expansion is in progress. Several community groups have approached MEA directly to run LCC programmes for them, and eight more are in progress or about to start. Another upcoming project to address historic buildings and communities is Sechurba, 'Sustainable energy communities in historic urban centres', which MEA hopes to launch in 2009 and link in with LCC. In addition MEA has recently signed an agreement with the Nottinghamshire and Derbyshire Local Authority Energy Partnership to work in the East Midlands. MEA will be employing people locally to run the work in the area from a satellite office. LCC could be replicated in any area of the UK, but it is important to recognise that it does not stand alone – it depends on the other four themes in MEA's work to succeed.

MEA is expanding the use of the software on its website to track energy consumption. This is currently used by people in the areas where LCC has worked and beyond, but has the potential to be used much more widely and to gather useful data on where energy savings could be made in future.

Management, finance and partnerships

MEA was established in 1995 as an EU-funded Energy Agency, and Richard Davies joined as Director in 1999, having previously worked as a chemical engineer. Each of the five themes in MEA operates as a separate business unit, with its own funds, targets and share of core costs, but they are also inter-dependent and work closely together. The whole focus of MEA is achieving action on the ground, and one of its catch phrases is "It's the delivery, stupid!" – it believes that more declarations, reports and rhetoric will not reduce carbon emissions alone. MEA tries to avoid duplicating the work of other organisations, so that it can have the maximum impact.

The organisation takes its own carbon footprint seriously. There is a biomass boiler, solar water heating and solar photovoltaics installed on the MEA office building, which is a renovated Victorian factory that has been brought up to BREEAM Excellent standard. All the staff use the MEA energy monitoring application on the website, and expenses claims for travel also record the CO₂ emitted.

The annual turnover of MEA has grown rapidly, from about £200k in 2003-04 to £1m in 2008-09. MEA receives funds from several sources, including grants, Carbon Emission Reduction Target funds, Local Public Service Agreements and consultancy. It prefers to avoid having a single large funder, so that it can remain independent, flexible and innovative. Key partners include local authorities, Advantage West Midlands, Business Link, and a range of suppliers, installers and consultants.

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This report is based on information provided to the Ashden Awards judges by MEA, and findings from a visit by one of the judging team to see their work.

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