

# Meeting the future skills needs of employers in the low carbon sector

## A provider development project in the North West



### Foreword

As part of the Skills and Employer Responsiveness programme, the Learning and Skills Improvement Service (LSIS) funded five projects between December 2010 and March 2011. They were designed to enable providers to identify how to develop their capacity to meet the future skills the employers' workforce will require to adopt new technology and working practices and be globally competitive. Each project focused on a different industry sector or sub-sector. This report examines the learning gained from the project about supporting employers in the low carbon sector.<sup>1</sup>

### Executive summary

The low carbon technology sector is strategically important for economic growth in Cumbria, in relation both to the nuclear new-build programme and to sources of renewable energy.

The timing of the project was ideal: plans were already under way for nuclear new build at Sellafield, there was increased investment in renewables, new qualifications had arrived and Cumbrian providers were working to secure support for renewables training.

The project provided the five organisations involved with a greater understanding of the needs of the sector and how to address them, the sort of support employers require, and the future demand profile of the industry.

Each of them focused on a different key strand and set out a comprehensive range of interventions to maximise the skills opportunities that the low carbon technologies sector has to offer:

- Carlisle College was leading the development of a hub bid to the sector skills council (SSC), Summit Skills, to secure support for the delivery of renewables training in the county of Cumbria; its contribution to the project is likely to be the preparation of a successful submission.

### The project brief

The project brief was to:

- analyse the provider activity currently undertaken in this sector;
- explore ways in which they might work in the future to support sector employers to adopt new technologies and upskill their workforce;
- explain current successes and the strategies used to ensure success;
- explain barriers to supporting sector employers and actions taken to overcome them;
- recommend ways in which providers in the learning and skills sector can build expertise and expand work in the low carbon sector.

<sup>1</sup> This resource was produced for the LSIS Skills and Employer Responsiveness (SER) programme. It was current at April 2011.

## Skills and Employer Responsiveness programme

- Furness College worked on a programme of opportunities to develop links between low carbon technology employers and schools, including face-to-face meetings and events.
- Kendal College tackled the large geographical area of Cumbria and addressed the need for greater networking opportunities between employers in the sector. They also examined employers' perception of training provision, focusing on how Apprenticeship programmes can be developed to meet employer needs.
- Lakes College focused on analysing market demand for renewables courses, including solar thermal hot water systems training, domestic heat pump installer training, and solar photovoltaic (PV) training for domestic installations.
- Nucleus Training Ltd examined how public procurement can be used to stimulate training and employment opportunities in low carbon technologies, using mechanisms such as the local authority planning process, and how to work within the constraints of European law.

They all set out how the skills needs of the sector can be supported through more effective networking, securing funding, developing new provision, better links with schools and tackling the tendering and contracting process.

The research identified common challenges and recommendations for providers working in the sector.

Partnership working and effective networks underpin effective training opportunities at a sub-regional level.

Partnerships between providers are essential to meet the wide, varied and evolving needs of employers and need to be underpinned by formal protocols to ensure effective ways of working.

Partnerships with employers need to be nurtured and developed. A long-term approach is needed to stimulate repeat business and successfully predict emerging and future training needs. Providers also need to make good use of labour market information (LMI) so that they can respond promptly and appropriately to changing market demand.

Effective use of LMI also enables providers to identify new employers to engage. Employer engagement is particularly challenging in this sector because a large proportion of employers are micro-businesses or sole traders. Marketing training effectively to these employers must promote the short-term financial benefits to their business.

Some demand for training in this sector depends on government initiatives and public demand for employers' products and services. This is particularly true in the domestic renewables sub-sector in areas such as solar panelling and domestic heat pumps. Providers need to stimulate demand for training by raising awareness of products and services with all key employer and community stakeholders.

## Introduction

This report draws together the activities, findings, lessons learnt and recommendations from the organisations involved in the project.

## Organisations taking part in the project

<b>Organisation</b>	<b>Project topic</b>
Carlisle College	Developing a sub-regional infrastructure to support a cohesive training offer to employers
Furness College	Developing partnerships between employers and schools to raise awareness of employment and training opportunities in the low carbon sector
Kendal College	Developing a new and responsive Apprenticeship programme in partnership with engineering employers
Lakes College	Developing and trialling new renewables courses to meet public and employer needs
Nucleus Training Ltd	How public procurement can be used to stimulate training and employment opportunities in low carbon technologies

## Carlisle College

**Project aim: to improve partnership working with the emerging technologies sector (colleges, private training providers and employers) and identify training needs for the future delivery of related qualifications.**

In June 2010 Carlisle College was invited to bid for a new initiative in the emerging technologies sector within building services engineering (BSE).

The initiative would bring together all the Cumbria providers of BSE to develop a new hub academy. The hub academy would be a members-only hub with the College as lead and other providers as hub members. Summit Skills, the sector skills council for the BSE sector, would recognise the hub and charge a membership fee, and direct business and new training opportunities towards the hub. Employers would then have local access to nationally recognised training for the low carbon sector.

Members of the hub would include Carlisle College, GEN II (part of the Nucleus joint venture), Lakes College, System Training and Kendal College.

This project focused on developing strategic partnership working across the county, collaborative working to ensure maximum training opportunities for industry and increased employer engagement within new technologies.

### Project outcomes

The project centred on production of a second stage bid, an action plan outlining collaborative and partnership working and the production of a curriculum outline to enable employers to access relevant training opportunities and to train current staff to install and commission new technologies.

A series of meetings took place with all providers contributing to stage 1 of the hub application. Stage 1 was unsuccessful, but Summit Skills took the decision to support the county in a stage 2 application. This required further extensive collaboration, with evidence of increased partnership working, further employer engagement and Higher Education progression incorporated into the stage 2 application. This development of this application was the focus of Carlisle College's development work on the project.

### Lessons learnt and recommendations

- For partnership working to succeed, clear roles and responsibilities, aims and objectives must be agreed from the outset.
- Agreed protocols for sharing information must be in place early to ensure effective communication between partners.
- Effective communication with local employers and other key stakeholders is vital to both the project and the hub application. This can sometimes be difficult as employers may see this approach as 'just another initiative' from providers.
- Providers need to build confidence through existing networks and employer relationships.
- Marketing the products and services to the right employers will be crucial to the success of the project. This will depend on providers making good use of customer relationship management (CRM) systems.

The desired outcome for the project was successful progression through the stage 2 application, with the following course outlines incorporated into the county-wide offer:

- Installation and commissioning of heat pumps
- Installation and commissioning of solar panels
- Installation and commissioning of waste water recovery systems
- Installation and commissioning of heat recovery systems.

A process of continuous employer engagement along with an effective marketing strategy will be key to the implementation and future success of the project. The organisations involved will work collaboratively using:

- electronic LMI (e-LMI), to identify opportunities;
- existing employer engagement networks to recruit learners;
- shared information between providers to ensure knowledge of county-wide activities;
- partnership working to enable employers to access relevant, local training.

### Project impact

The project activity will have an impact on individuals, employers and training providers. Approximately 2000 current tradespeople throughout the county will require upskilling. All partners will be able to respond quickly and ensure that individuals access relevant training. Employers will be able to access local providers. This is important, because currently 75 per cent of staff requiring training in these emerging technologies go outside the county (statistics sourced from *Summit Skills Environmental Technologies Skills Report 2010*). Providers will be able to use branded Summit Skills literature and logos to advertise the training programmes.

### Next steps

Next steps will include:

- submission of the stage 2 hub application;
- further employer engagement activities such as sector meetings, employer visits and open events, to ensure dissemination of information and funding available;
- further steering group meetings to agree working protocols and effective sharing of relevant information;
- development of a collaborative marketing campaign to advertise the benefits of new technologies;
- dissemination of progress to college principals and chief executives;
- approval of appropriate qualifications to ensure individuals can access relevant training opportunities.

## Furness College

**Project aim: to research and set up coordinated links between employers from the environmental and low carbon sector and local schools, to encourage recognition of career options in these new employment sectors.**

With the environmental technologies sector continuing to grow, and in particular the wind power industry in the Furness area, Furness College was keen to take a long-term proactive approach to working collaboratively with employers within that sector, to identify their skills and training needs now and in the future.

The College was particularly keen to explore ways to improve partnership working between local employers in this sector and local education providers, including schools and Furness College. They aimed to address the long-term development of skills to meet industry needs. It was also important to raise local employers' awareness of existing education providers' strengths in this field.

The project starting point was meeting local employers and key stakeholders to identify their skills needs and analyse existing provision in the education sector. After this it became apparent that although several organisations had similar needs, there was no local forum to enable those companies to network and share their views on training and skills requirements.

### **Furness Environmental Technologies Forum**

The Furness Environmental Technologies Forum was therefore established to provide networking opportunities for members, to help reduce costs for training where there are similar training requirements, and to enable the College to facilitate further partnership working between local schools and employers.

Alongside the development of the forum, the College sent out questionnaires to find out what understanding there was of the new and emerging environmental technologies sectors in the region's primary and secondary schools.

This research helped the provider target potential gaps in the market, as respondents identified skills shortages for short-, medium- and long-term development.

## Lessons learnt and recommendations

- It is important to have a long-term approach. Partnership working with employers and schools takes time to develop and it can be challenging to match employers' and schools' schedules. It is important not to limit the potential long-term impact by being too constrained by short-term project deadlines.
- Employer forums are an effective way of engaging with local employers within the environmental technologies sector. This approach can help to raise employers' awareness of the work being done, they can be consulted to see if this matches their needs and, most importantly, can be involved in the process of the long-term development of skills across all age groups. It is important to listen to employers and be proactive in anticipating their future needs.
- Partnership working with employers such as Vattenfall has been very successful. The final outcome of this partnership working will be shared with other employers through the forum so that similar projects can be developed with others.

This included upskilling in key areas such as:

- specialist offshore training;
- working at heights for the larger wind turbines/high access;
- firefighting;
- basic medical training/first aid;
- NEBOSH general, and gas and oil;
- low/high voltage training;
- sales training for engineers;
- lean manufacturing.

Longer-term training needs included:

- process operators;
- project managers;
- design and development engineers – mechanical, electrical and chemical;
- graduate engineers;
- wind technology Apprentices.

### Next steps

Because of the nature of the project, some of the work will continue beyond the LSIS project.

The College plans to raise its students' awareness of the growing wind power sector and skills employers are looking for, through a series of talks by employers, including one by employers Vattenfall and RE Power in late March.

There will be a wind power workshop for primary school teachers in May. The work developed in partnership with Vattenfall, the company responsible for building the Ormonde offshore wind farm, will be used as an example of effective practice to encourage more schools and employers to develop partnerships.

The College aims to have further discussions around the development of a new wind power Apprenticeship in partnership with local wind power companies in Furness. It is also exploring the possibility of lecturers work-shadowing employees in the sector so that they can see first hand how the industry works and apply the knowledge and skills back in the classroom.

## Kendal College

**Project aim: to improve networking with engineering employers and identify training needs at a local level via the Apprenticeship route.**

### Background

In September 2010, 127 employers from the South Lakes area were invited to the launch of the new engineering department at Kendal College via a letter from the College Principal. The business development and marketing departments worked closely to coordinate the event, and as a result received 94 positive responses via follow-up calls.

On 1 October 2010 the official launch of South Lakes Design Engineering Centre took place with 43 attendees (including 11 organisations that were new to the College). The event was officially opened by the chairman of local employer Gilbert Gilkes & Gordon Ltd.

At the event employers completed a questionnaire in order to establish levels of interest in training and Apprenticeships.

### **Objective: to identify the training needs of local engineering employers**

The College liaised with local employers Furmanite, Gilkes, Lakestone and Kannegiesser to identify the training needs of local engineering employers. Interest was expressed regarding steering group membership and computer aided design (CAD) training. To build on lessons learnt with existing programmes, the College worked with Gilkes to review its current Apprenticeship and wider training model.

### **Objective: to deliver 2D CAD courses to meet an identified local need**

As market research indicated a local skills gap for CAD training, an accredited course was identified through City & Guilds. Using the College's customer relationship management database, 251 local engineering and related companies were invited to two CAD open evenings.

As a result of these events 17 learners enrolled on a pilot CAD course in early 2011. There is also a substantial waiting list for further courses.

### Lessons learnt and recommendations

- Consult employers to ensure that their training needs and requirements are taken into account when designing and developing curriculum.
- Respond promptly to market demands to maintain interest.
- Seek advice from field expertise such as Cumbria STEM Centre, Cumbria County Council.
- Ensure that a clear marketing campaign with a call to action is established.
- Maintain a network of employer contacts locally and establish a key contact for correspondence.
- Ensure that invitations to events are given with a reasonable notice period. Choose the day and time of events carefully. Market research by the college indicated that Fridays or evenings are most successful.
- Expect last-minute cancellations due to the nature of the engineering trade.
- Liaise with curriculum departments in the College to build on existing effective practice.



**Objective: to establish an employer-responsive model for local engineering training**

Research into possible delivery models for engineering Apprenticeships was conducted with the following organisations:

- Department for Business, Innovation and Skills (BIS);
- National Apprenticeship Service;
- Science, Engineering and Manufacturing Technologies Alliance (SEMTA);
- Cumbria STEM (Science, Technology, Engineering and Mathematics) centre.

As a result of this research, the College produced three possible delivery models for consultation with local employers, followed by an employer consultation event in March. Representatives attended from Tata Steel, Furmanite, Gilbert Gilkes & Gordon Ltd, Lancaster University, Cumbria County Council, Cumbria STEM Centre, the National Apprenticeship Service and Protocol National. Employers fed back and completed questionnaires on the proposed engineering Apprenticeship framework. This enabled the College to confirm an employer-responsive delivery model with college-based delivery in year 1 of the programme, followed by work-based learning with day release to Kendal College in subsequent years. The College will now work closely with local employers to actively recruit apprentices for September 2011.

**Next steps**

The College will conduct a targeted marketed campaign to recruit engineering apprentices for September 2011. This will include hosting an engineering managers' forum in May to promote the new Apprenticeship programme and holding an event in June to attract potential apprentices from local schools and raise the profile of engineering at Kendal College, working alongside Protocol and Cumbria STEM.

The College will finalise curriculum details and awarding body approval for Engineering Apprenticeship qualifications and begin delivery of Engineering Apprenticeships with a minimum cohort of 15 students.

## Lakes College

**Project aim: to review suitability for the local market of the following courses:** solar thermal hot water systems; domestic heat pump installation and solar photovoltaic (PV) training for domestic installations.

These courses were chosen because the terms 'solar' and 'heat pumps' are widely known to employers and to the general public from television programmes such as *Grand Designs*.

The project also aimed to target particular employers to identify the type of training and qualifications that they value in the renewable and low carbon field. This would enable the College to see if proposed courses match employers' and market expectations and requirements.

To promote these courses the intention was to gain sufficient funding to be able to offer them free to local employers.

### Main outcomes

The College secured funding from the European Social Fund (ESF) to offer the three identified courses free, with 12 runs of each course up to July 2012, with a targeted participation of 216 clients in total.

An open evening was held for employers to discuss courses and qualifications. Training rigs were available on the evening for attendees to see. A total of 75 learners signed up to the three courses at the open evening, with further telephone enquiries resulting from the marketing campaign. Bookings were also taken for other full-cost courses.

An effective marketing strategy for the three courses was developed. It was successful because it focused on actions that all staff could buy into and understand. Staff were allocated specific tasks related to their strengths, which resulted in a team approach rather than everything falling to just one person. The strategy was overseen at senior management level to emphasise the importance of the project to the College and to the area. The marketing material was simple, eye-catching and related to the subject matter. Fliers were designed to incorporate the address label, so that recipients didn't even need to open an envelope.

### Feedback from employers

Most of the employers attending the open evening completed the questionnaire. The majority (60 per cent) of attendees were electricians, which suggests greater awareness of renewables among this industry, possibly because the Feed-In Tariff has been active for some time for this

### Lessons learnt and recommendations

- There is a need for renewable and microgeneration courses for industry in Cumbria. Although there are currently few installations of this technology, demand is increasing, and thus so is the need for local expertise.
- Targeted promotional activity has a very positive impact on attendance. Combining written publicity with a follow-up phone call is particularly effective.
- Open events for employers need to be carefully planned and structured, with staff allocated specific responsibilities and enough academic and support staff on hand to handle the number of attendees. A relaxed atmosphere leads to more information being gathered from employers.
- A professional, well-run event will increase confidence in the quality of the courses on offer.
- Setting up events and courses well in advance allows employers to select a date that suits their work commitments

sector. The new Renewable Heat Incentive, which comes into force in June 2011, is likely to lead to a bigger take-up of training from the plumbing industry.

As expected, most of the organisations who attended were microbusinesses that see the potential in the renewable sector for generating greater income and work. Of these organisations, a large majority were already aware of microgeneration technologies and 100 per cent of respondents believe that there is a market for microgeneration technologies in their industry. Just over half (54 per cent) of respondents had heard of MCS, whilst 78 per cent of respondents had never installed microgeneration technologies before. This is a significant finding, as potential installers will need to gain MCS status to allow the customer to access the tariffs. Better awareness of MCS is required within the industry.

A majority (63 per cent) of respondents preferred fully accredited courses but overall these early results showed a market for this technology and a willingness by installers to move into this type of work. What is required is general awareness-raising of MCS and the standards set, as well as accredited courses that register an individual as a safe installer.

### Next steps

The first solar photovoltaic training course for domestic installations ran in March 2011. The next phase is to seek feedback from the learners taking the course to judge the content and appropriateness.

Lakes College aims to establish a range of accredited renewable and microgeneration courses: either further Level 3 courses incorporating maintenance as well as installation, or Foundation Degrees or full degrees in low carbon technology or sustainable construction.

Feedback received at the open evening suggested that the average householder does not have enough information on how microgeneration and renewable technologies can be installed in their homes and the benefits these systems can offer, including Feed-in-Tariffs and the Renewable Heat Incentive. The next phase of courses on offer will therefore include programmes aimed at householders to improve their understanding and knowledge of these technologies.

## Nucleus Training Ltd

**Project aim: to develop mechanisms for public procurement of low carbon contracts to stimulate training opportunities.**

The starting point for the project was the recognition that demand for training in low carbon technologies needs to be stimulated by procuring organisations (primarily in the public sector), to ensure that the sector has access to sufficient appropriately-skilled people and to enable providers to develop provision to meet industry demand.

Public procurement and planning conditions were considered the most appropriate mechanisms for the public sector to use to stimulate demand, because they enable the procurer to impose extra requirements (such as training) on developers. At the same time, it is recommended that providers lobby local authorities and other client-side organisations to use these mechanisms more effectively, as it is apparent that many public procurers make only limited use of them, or believe that legislation prevents them from doing so.

With that in mind, the project focused on what can be achieved within *Official Journal of the European Union* (OJEU) conditions, which many assume restrict opportunities to the use of a locally based supply chain. It also examined how local authority (Section 106) planning agreements can be used to make training provision a condition of planning consent. In both cases, far more can be achieved than is commonly understood, with case law to support it.

### The toolkit

A toolkit of guidance for using public procurement to stimulate demand for training in low carbon technologies was developed and providers can use it to encourage procurers to write training into contracts. The toolkit comprises a series of presentations, based on information sourced from experts in European and UK planning law, the Audit Commission, the Office of Government Commerce, and some local authorities, NHS Trusts and housing associations that are prepared to share effective and ineffective practice.

### Lessons learnt and recommendations

- Public procurement law regulates the purchasing by public sector bodies and certain utility sector bodies of contracts for goods, works or services. The law is designed to open up the EU's public procurement market to competition, prevent 'buy national' policies and promote the free movement of goods and services.
- In relation to public sector procurement, the conventional wisdom has been that **recruitment and training requirements** could not be included in the procurement process. However, there have been significant changes to these barriers, and the principles of sustainable development – **linking social, economic and environmental goals** – can be consistent with achieving value for money and meeting EU rules in procurement. The key opportunities for considering issues lie at the earliest stages of the procurement cycle.
- In England and Wales, a local planning authority can enter into a legally binding agreement or planning obligation with a landowner in association with the granting of planning permission. These agreements are a way of delivering or addressing matters that are necessary to make a development acceptable in planning terms. They are increasingly able to be used to support the provision of services and infrastructure, such as highways, recreational facilities, education, health and affordable housing.

### **Effective practice example: Newcastle City Council**

#### **POLICY EE4: Securing training and employment opportunities**

Developments should contribute towards training and employment opportunities, to ensure local residents are able to capitalise upon the benefits generated by investment in the Plan area. Developments will be expected to enter into partnership arrangements via Section 106 Agreements with local agencies, including Newcastle Futures, to develop local skills and match them with the requirements of local employers.

### **Expected impacts for employers and providers**

- Employers and providers should recognise that the OJEU process does not prevent procurers from requiring suppliers to meet targets for the delivery of local training, as long as it is set out from the outset as an integral requirement of the contract;
- Developments in low carbon technologies should contribute towards training and employment opportunities, to ensure local residents are able to capitalise on the benefits generated by investment in their locality. To achieve that, local authorities can require developers to enter into partnership arrangements via Section 106 Agreements with local agencies and providers, to develop local skills and match them with the requirements of local employers.
- At the same time, as local authorities have a responsibility for the economic well-being of their residents and employers alike, it is in their interests to encourage developers seeking planning consent to use a locally based supply chain, ie the firms that are best placed to create sustainable employment and training opportunities for local people.
- The above factors contribute to greater employer commitment to training in low carbon technologies.

Current effective practice indicates that the following are reasonable expectations of how public procurement can stimulate demand for training provision in low carbon technologies.

- Make training provision a key criterion for all new contracts.
- Make contracts accessible to local small- to medium-sized enterprises (SMEs) and social enterprises.
- Establish and monitor targets for the proportion of locally based SMEs and social enterprises employed, as well as the number of local people, in the delivery of low carbon technologies.
- Set new private-sector standards for incorporating training and employment conditions into procurement contracts.

### **What procurement can achieve**

The following is a series of responses to frequently asked questions and assumptions regarding what can be achieved through public procurement:

## Skills and Employer Responsiveness programme

- Does the OJEU process leave providers' hands tied? – Not if you ensure training is set out as integral to the contract from the outset.
- Can social impacts, such as training conditions, be added to contract objectives later on? – Possible, but far more difficult.
- Can Section 106 deliver training opportunities without client leadership? – Almost impossible; the active participation of the client is critical.
- Subcontracting is seen as a valuable source of business by local employers, isn't it? – Yes, but lengthy payment terms have made SMEs wary of subcontracting.
- People will take up employment opportunities, won't they? – Yes, but it is necessary to benchmark the gap between the existing skills base and the skills needs of employers to ensure provision prepares local people for the opportunities that arise.

### Summary of extra points to be considered

- Ensure that training requirements are identified as part of the project from the outset.
- Divide the contract into smaller contracts and consider what key performance indicators to use to provide the greatest incentive for local employers to tender.
- Main contractors and developers do not employ people most in need of employment and training, so they are the wrong organisations to target to provide work-based learning opportunities.
- Supply chain management and collaborative tendering offer additional mechanisms to support the process.
- Section 106 funding must be spent within five years, or the developer can demand its return.

### Next steps

Nucleus plans to make the toolkit available for providers to use with public procurers through master classes and seminars to ensure the legacy of the project. There are also plans to develop case studies and effective practice examples to support the approach.

## Overall recommendations

Some common themes emerged from the research carried out by the five participant organisations. These recommendations represent effective practice generally in employer-facing work but are particularly important in sectors or sub sectors that are in the early stages of development with many uncertainties and outside influences.

- Effective partnership working is vital to the development of cost-effective, industry-relevant training. Partnerships between providers need clear roles and responsibilities and formally agreed ways of working to be effective. Provider partnerships are particularly important in this sector where there are many highly specialist training needs and capital costs for industry-standard training equipment are high.
- Providers involved in this project recommend taking a partnership approach to working with employers, including building up relationships over extended periods of time to develop opportunities for consulting employers on their needs. It is important to maintain existing relationships both to keep abreast of industry developments and to identify new business opportunities as developments occur within the sector.
- The effective use of LMI is important for extending the reach of the existing training offer and promoting new training programmes. There is a significant amount of LMI available freely that can contribute to a targeted approach to marketing.
- It is essential that communication with employers uses approaches that suit them, including promoting the business benefits of training. Regular employers' forums are a time and cost-effective way of bringing together particular groups of employers with a value added opportunity for employers to network, alongside updates on training opportunities and vital consultation on training needs.
- Public procurement processes can be used to stimulate demand for training and secure employer commitment to offering their staff opportunities to upskill. It is important to ensure that training requirements are built into the project from the outset and form a contractual part of the key performance indicators and any project milestones.