Supporting the development of skills in priority sectors

North East low carbon project report

Background to the project

As part of the Skills and Employer Responsiveness (SER) programme, the Learning and Skills Improvement Service (LSIS) funded projects to support the development of new skills in industry sectors important for economic growth. CfBT Education Trust managed a project in the North East of England from December 2010 to March 2011, which aimed to support the development of skills in the low carbon sector.[1]

Executive summary

Common themes and challenges have emerged from the research, development work and programme delivery carried out by the project partners.

All the partners already have effective working partnerships with employers, manufacturers and other training providers, and are keen to strengthen and develop these links. These relationships as seen as a key success factor by all partners as partnership working allows providers to keep abreast of developments in industry and continue to develop appropriate, tailored training solutions.

Whether building on existing relationships or developing new ones, it is crucial to have an appropriate communication strategy in place. This is especially important as sometimes employer awareness of both the relevance of training and the training offer is low, particularly in smaller business and the many micro businesses in the sector. Providers are successfully using new media, such as social networking and texting, to engage and communicate with these types of businesses, as well as with younger learners on an individual level. Whatever the mode of communication, however, it is essential that providers promote the benefits of training to employers on a commercial basis and use industry-appropriate language, not 'education speak'.

Most of the current and planned provision in this sector in the region is at Level 3, the industry-required level for technicians across the different sub sectors. This applies both to new entrants

The project brief

The project brief was to:

- analyse the provider activity currently undertaken in this sector;
- explore ways in which providers 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.

[1] This resource was produced by CfBT for the LSIS Skills and Employer Responsiveness (SER) programme. It was current at April 2011.

and upskilling existing workers. Provider research indicated the significant implications of training at this level, particularly for entry requirements, qualifications and the supply and demand of qualified staff.

Provider experience indicates that it is important to ensure that entry requirements and entry processes are rigorous so that the right trainees are accepted onto courses and retention, achievement and subsequent employment rates remain high. It is, however, a challenge for both providers and employers as many of the appropriate qualifications are still in development because of the emerging and evolving nature of the sector and the strong expectation from employers that qualifications will be specialist and industry appropriate. In some cases providers are offering highly specialist and customised, non-accredited courses to meet employers' specific needs. This means that employers pay for training on a commercial basis because providers cannot draw down public funding for non-accredited training.

Providers, employers and other stakeholders expressed concern about the balance of supply and demand of qualified staff. This concern is shared by prospective employees considering moving into the sector. As the industries are still developing it is difficult to estimate how many staff will be needed in the future and therefore difficult to control supply and demand of staff, and subsequently of training provision. There is a further related challenge for training providers of the high cost of setting up courses because of the high capital costs associated with industry-standard training equipment. This is a significant investment for training providers when employer demand is uncertain and industry standards and practice are changing continuously.

Project partners

The project had a lead provider and a group of participating providers who worked together and with key stakeholders throughout the project.

The lead provider for the project was Northumberland College. The other project partners were City of Sunderland College, South Tyneside College, Newcastle College, PPL Training and Business Impact UK (BIUK). Each provider developed an individual action plan, focusing on an aspect of the low carbon sector that was a priority for their organisation.

Regular peer exchange groups held throughout the project enabled providers to share their development work, knowledge and experience.

Engaging with stakeholders

Several key stakeholders were consulted during the project as part of the research activity, including employers ranging from sole traders to small- and medium-size enterprises (SMEs) and large national and multinational companies. Providers also worked with awarding bodies, including City & Guilds and NCFE in reviewing and planning industry-appropriate qualifications. Relevant sector skills councils, including Summit Skills, EU Skills and SEMTA, were involved and sector-specific organisations such as the National Skills Academy for Power (NSAP), RenewableUK and the National Energy Renewable Centre (NAREC) supported provider activity.

Northumberland College

Northumberland College has been developing and delivering bespoke training programmes for the wind power sector since 2006. The programmes started because of the lack of local trained technicians to work on the erection of the wind turbines at Nissan in Sunderland. This approach of developing programmes to meet the need of local employers is key to the success of the College's training. Feedback from early courses led to the development of a Level 2 domestic wind turbine programme and the redevelopment of the Level 3 programme, since the trainees on the pilot programme required more practical work on industrial-type machines.

Sharing national and international developments

In many aspects of the low carbon sector, UK training providers have much to learn from activity in other countries, where developments are more advanced. Northumberland College is involved in three European partnership projects: POWER (Pushing Offshore Wind Energy Regionally), POWER Cluster (a follow-on programme from the original POWER project) and Windskill. The Windskill programme was set up by the German Wind Energy Association and changes annually in light of new developments in the industry. It has been developed in conjunction with major employers who manufacture wind turbines including RePower, Nordex and Vestas, along with established service technicians. The partnership and experience gained from these projects continue to give the College and its regional partners an excellent knowledge base, not only for training technicians but also for higher skills training such as Foundation Degrees and first full degrees.

The College built on existing networks to carry out research for this project, including the RenewableUK skills and education working group, the National Skills Academy for Power (NSAP) and City & Guilds. Throughout the project Northumberland College attended meetings with RenewableUK and City & Guilds, and took part in e-seminars with NSAP. The focus of the development work was on the new wind Apprenticeship programme for employers, and NSAP is keen to ensure that this new programme meets the needs of industry. Concerns from industry include the course content being delivered and assessed by appropriately trained trainers; the course being delivered in an environment with a high safety ethos; and the programme offering strong pastoral support. The Apprenticeship programme is employer led and will initially be delivered by providers, including Northumberland College, situated near both existing and proposed large wind farms.

Key challenges

Although employers value bespoke programmes that meet their particular needs, this means that sometimes programmes are non-accredited. As a result, providers cannot draw down public funding and employers or learners have to fund the training themselves. The programme currently delivered at Northumberland College has a class contact time of more than 27 hours per week and is at Level 3, the level required by employers for industry-ready wind power technicians, so learners are not eligible for any form of government benefit.

Because of the embryonic nature of the industry, some employers are reluctant to accept the training outcomes as the programmes appear to them to be untried, so providers must build employer confidence in any new programme.

There is a further challenge for providers in that industry representatives such as NSAP and City & Guilds are concerned about the balance of supply and demand of qualified staff for the wind power industry. There is a need to upskill existing engineers and NSAP and City & Guilds, working with specific training providers, are investigating the best way to approach this. They

need to ensure that any programme is both timely and appropriate, so that potential employees are fed into the market at the right pace, rather than flooding the market when no appropriate employment is available. The evolving nature of the industry means it is difficult to predict staffing needs accurately, particularly as the new job opportunities depend on the speed of development and construction of the wind farms themselves.

RenewableUK has produced a report (supplied as Appendix 1) which gives an indication of the state of the industry as it stands currently; but their skills and education working group has found some discrepancies in the figures and statements, which suggests they are an underestimate.

Lessons learnt and recommendations

Northumberland College has found that a close and open working relationship with industry and educational providers is essential for success; it enables the collection of necessary training equipment, training materials, documentation and site visits. Providers considering delivering wind-related training need to be aware of the significant infrastructural costs involved. It is important to work in partnership and collaborate with other training organisations to ensure standardised delivery, reduce the individual workload and share resources.

There needs to be an effective and detailed health and safety training programme, where members of the delivery team meticulously record what was delivered, to whom and when. The safety training should be to a higher level than for traditional engineering programmes and include extra units such as first aid and additional personal protective equipment training.

Additional relevant training programmes delivered outside the normal training environment will be essential to ensure a comprehensive wind technician training programme. As new initiatives and equipment are introduced these needs will grow.

A good course entry system is also important, as delivery at Level 3 means that candidates must have secure underpinning knowledge. Without this, drop-out and failure rates will be high and the employability of the candidates significantly reduced. Candidates should also provide a medical certificate to ensure that they are capable of working both off shore and at height.

Next steps

Northumberland College intends to progress partnership working to develop both curriculum and industrial good practice through a network of providers working in collaboration with industry and research establishments. They are currently in discussion with colleges around the UK and in the Netherlands, Germany and France, as well as existing partners in Canada and the US.

At a higher skills level, they are working with local universities in Newcastle, Durham and Sunderland as well as with established wind-training universities in Sweden, the Netherlands and Germany. Because of the embryonic nature of the industry the College does not expect a full degree programme to be available for some years but there are benefits in partnering other training providers both in the UK and Europe to develop and deliver bespoke industry-led training programmes.

The above partnerships will allow the College to align its training provision with its European partners to provide a flexible workforce that can work anywhere in Europe without the need to retrain in elements such as health and safety.

City of Sunderland College

City of Sunderland College aims to provide a local solution in the North East for employees wishing to undertake upskilling courses to gain nationally recognised qualifications in areas such as solar hot water and solar photovoltaic (PV) installation, air and ground source heat pumps, rainwater harvesting, grey water recycling, renewable energy awareness and other renewable energy technologies.

The College's renewable energy training centre offers courses aimed at plumbers, gas installers and heating engineers as well as the general public. The centre also provides accreditation for installers through the Microgeneration Certification Scheme (MCS), which was established by the government to enable householders to access grants if their chosen installer is a member of the approved MCS. This ensures that the installer is a fully qualified and reputable person.

Courses are offered mostly at Level 3 (technician level) and range from one-day courses to substantial programmes. Where appropriate and available, qualifications are offered.

The College has formed formal partnerships with the following organisations regionally and nationally: PPL Training, a national provider of renewable energy training; Eco-Skies, a national provider of renewable energy training; Eaga, a national installer of renewable energy products; Myson Underfloor Heating, a local manufacturer of renewable energy products; Sundwel Solar Panels, a manufacturer of solar panels; Trianco, a supplier of heat pumps; and Uponor, a supplier of underfloor heating products. These partnerships enable them to offer flexible programmes meeting the needs of industry.

Key drivers for training and development activity

Research by the College identified several key drivers that will affect future training needs and demand including government initiatives to stimulate consumer demand such as feed-in tariffs (FiT, 2010) and the renewable heat incentive (RHI, 2011), the EU directive 2009/28/EC relating to renewable energy installer competence, the MCS, building regulations developments and the emergence of new technologies themselves.

Key challenges

City of Sunderland College identified key challenges for training providers. Training needs for the renewables sector are changing as the industry develops, so a significant proportion of the existing workforce will need to acquire skills to specify, design, install, commission, maintain and repair new products as they come to the marketplace.

Current provision is confused, sporadic and not easily accessible for employers because of low awareness and limited advice and guidance opportunities.

Much current training is also not recognised by employers as meeting industry recognised competence and is not mapped to National Occupational Standards.

Lessons learnt and recommendations

There is a need to be increasingly adaptable to meet the needs of employers and individual learners, including using flexible models of delivery. The College is currently using funding from LSIS to develop interactive teaching and learning resources to support blended learning approaches for use by renewable energy providers nationally.

The College is using new media such as Facebook and text messaging to recruit learners. This approach is cost effective and particularly suitable for younger learners as well as sole traders who rely on mobile phones as their main form of communication. It is envisaged these approaches will replace traditional paper forms of recruitment in the near future.

Strong working relationships with employers and manufacturers are essential to ensure successful setting up and delivery of training. Building good links with local schools is also important to ensure that future learners understand the importance of green energy. Community groups are invaluable in increasing local public understanding of green technologies.

It is vital to have competent and well-trained delivery staff before setting up provision because it is difficult to recruit appropriately qualified and experienced staff into learning and skills where salaries are relatively poor compared with working in industry.

It is important to carry out regular research to ensure that courses offered are current, from the most suitable awarding bodies and continue to meet the evolving needs of learners and employers.

Next steps

The College is working with the awarding body NCFE to write and accredit renewable energy qualifications for school leavers. These new courses will be delivered from September 2011 and there is already interest from school pupils in Year 11.

The College is developing a partnership with Smiles Recycling Plant in Sunderland, where staff have provided talks for students and invited them to visit the recycling plant.

Construction students at the College are starting to study extra courses in renewable energy installation to add value to their main programme and increase their employability.

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South Tyneside College

South Tyneside College specialises in vocational and higher education in technology subjects, especially maritime provision. As part of the project, the training requirements for the offshore wind sector were reviewed, and it was established that existing courses provided a strong base of knowledge and experience for the staff to create new programmes. The project also reviewed the expected upskilling requirements of an existing technician-level workforce (working at Level 3) to work safely and effectively in offshore wind installations. Building on existing delivery skills and facilities, the following programmes were developed.

Training programme	Level	Duration	Upskilling or new trainee
Marine survival, safe transfer procedures (theoretical) and fire fighting	2	2 days	Upskilling
High voltage awareness	3	5 days	Upskilling
Control and instrumentation	4	5–15 days	Upskilling

A further blended learning programme is in development, with a target delivery date of late 2011. This is to respond to the needs of the sector for flexible training models, since trainees are often unable to access college provision because they are based offshore for periods of time.

Training programme	Level	Duration	Upskilling or new trainee
Electrical training for wind farm technicians	4	20 days self-study 3 days practical	Upskilling

Funding was received from One North East to support developing increased capacity in the offshore wind sector. This funding enabled the design and installation of a transfer simulator that would replicate the offshore installations and enhance the training experience. One North East is the Regional Development Agency (RDA) for the region.

The sector body, RenewableUK, has created a new standard for offshore safety courses and the College is making a submission for course approval. This will enhance their training offer.

Key challenges

Specialist training in this sector is resource intensive and requires significant capital investment by the training provider because of the need to design, manufacture and install training facilities that will accurately replicate the actual workplace environment.

Providers have to recoup their large investment in training equipment and this can result in high course fees. Many programmes are highly specialist and bespoke to a particular sub-sector or even employer, so providers cannot draw down public funding to support their delivery and the full costs have to be passed on to the employer or learner.

Lessons learnt and recommendations

Modification or creation of new learning materials depends on close cooperation with employers who are prepared to share their technical information and expertise.

External funding can help to reduce the commercial risk to training organisations and has enabled the creation of facilities that improve the training experience and knowledge transfer process. Without external funding, any facilities used would be a poor replication of actual facilities and offer limited safety improvements. To achieve the knowledge expected, trainees expect to use either actual components or systems that replicate these. Two main elements are needed at this level of upskilling: physical components that replicate offshore installations and system drawings that enable investigations to aid fault detection and repair.

Next steps

- Further increase the facilities available for the offshore transfer safety course.
- Apply for and receive course approval to the RenewableUK standard.
- Prepare and deliver the blended learning programme for wind farm technicians.
- Monitor the training need in the offshore sector by attending national and European offshore energy events.
- Continue to work with the regional providers' network to provide a complementary offer for the benefit of an improved trained regional workforce.

Newcastle College

Newcastle College of Further Education has a well developed and extremely effective employer engagement and partnership focused strategy. The College places industry and employers at the heart of its curriculum and product development. This is crucial when working in a sector such as low carbon where both the industries themselves and training to support industry are in development.

Newcastle College has acquired a key development site on the north bank of the Tyne for the creation of a unique centre dedicated to developing higher-level skills training for the renewable sector. The project comprises a multi-partner, cross-regional collaboration between Newcastle College, major employers, local authorities, sector skills councils and strategic stakeholders in the evolving industry sector. Once complete in September 2011, the centre will provide employer-facing skills training to the renewable energies sector, helping to bridge the national skills gap and providing a hub of expertise for young people developing a career in one of the major priority sectors in the country.

The development of the new centre required that Newcastle College investigate ways of maintaining and further developing excellent employer engagement to ensure that the Centre has maximum impact on the growth of the renewable energy sector in the North East (see Appendix 2).

Matrix of local provision

The College carried out research and compiled a matrix of learning and skills provision (see following page), showing what training is available in the renewable energy sector in the North East. Providers were contacted using various forms to ascertain the types and level of provision available.

Bishop Auckland College, Darlington College and Tyne Metropolitan College currently have no provision, although when contacted they all said they were in the process of setting it up. Trade courses were provided at Level 2 and Level 3 with different awarding bodies, the British Plumbing Employers Council (BPEC) being the most common. All were advertised at full cost, and not offered to 16–18 year olds. Several private training providers were contacted but were unwilling or unable to provide information. Project partners have not been included in the table as this information appears elsewhere in the report.

Renewables provision in the North East – January 2011

	Solar photovoltaic	Solar thermal	Ground source heat	Water recycling	Renewable energy introduction	Sustainability introduction	Higher education – renewable energy	Other associated provision
Bishop Auckland College								
Darlington College								
Derwentside College	X				X			X
Gateshead College	X	X	X	X	X			X
Hartlepool College		X				X	X	
Middlesbrough College							X	
New College, Durham							X	
Newcastle College		X	X		X	X	X	X
Tyne Metropolitan College								
Redcar and Cleveland College	X				X			

The research was carried out by contacting the providers using a 'secret shopper' approach, which provided an interesting insight into the experience a local employer might have when trying to obtain similar types of information. Some providers could not provide the required information and their customer-facing staff were not aware that the provider had any renewable energy provision. In addition, when searching on websites the search engines struggled to locate the courses. If specialists within the education system find it difficult to get information, what chance do employers and potential students have?

Employer feedback

A range of employers were questioned on their experiences of working with Newcastle College and other training providers and revealed a wide cross-section of experiences.

Employer feedback indicates that where there is tangible benefit to business, an employer is happy to engage with providers but the onus is on the provider to ensure the employer knows what the benefits are. If there is no short-term discernible benefit it is much more difficult – although not necessarily impossible – to justify the associated costs to the business, in terms of time and resource.

Larger employers can release staff more readily, but not always the right member of staff for the task. SMEs often find it difficult to release staff even when they can see the longer term benefits of doing so.

Employers generally felt that, historically, providers would teach what they thought was required rather than what employers actually wanted. They welcomed the idea that they could be involved in specifying what is delivered.

Employers suggested that providers and education in general use too many alien acronyms and terms. Information aimed at employers should use terminology and language that is familiar to industry rather than educational language.

Access to information is not always easy. Websites are generally cluttered and not user-friendly. Links do not always work or lead to old or obsolete information. Not all provision is detailed on providers' websites. Often the information in a prospectus conflicts with that given on the website.

When telephoning providers, employers sometimes found it difficult to contact the relevant person, being passed from one department to another; this happened especially when contacting providers for information on renewable energy courses. Clear lines of communication and points of contact benefit both providers and employers.

Some employers were very impressed with the provision available across the sector and they were positive about carrying on training in the future.

Learning from other College departments

In addition to this research, other industry-facing departments within Newcastle College were consulted to identify their successful strategies for engaging with employers. Many of these approaches are transferable to the low carbon sector.

All the departments agreed that the key to successful employer engagement is building long-term relationships that enable networking within an industry, and so allow more relationships to be built. It is not just about approaching employers when providers 'want something', or when they are trying to sell something. The best employer engagement occurs when contact is maintained over long periods. To encourage this, providers need to show that they are flexible and responsive enough to give employers what they want and give them confidence in the College's ability.

Successful techniques included the following.

- A range of funding is used to pay for guest speakers to come in and talk to students. This allows students to benefit from engagement with employers and allows employers to see first-hand the type of training provided.
- During annual awards evenings, employers are invited to present awards, sponsor awards and also just to attend and see the calibre of students available. It provides an excellent opportunity to network with employers in a relaxed atmosphere.
- The use of work-based projects at various levels gives the opportunity for full-time students to work with employers, and also allows the College to build relationships with employers. Part-time employed students are also encouraged to involve their employers in their studies and to attend any presentations given in College.
- Student competitions provide the opportunity to ask employers to act as judges. Again, this allows staff to engage with the employers involved with this activity.

Everyone consulted agreed that it is every member of staff's responsibility to engage with employers, and encouragement and time should be given to staff to allow them to achieve this. It is not just the responsibility of management.

Key challenges

The training offer is complex and in some cases difficult for employers to understand. It is important that providers demystify it and make it as accessible as possible for non-specialists. This is the responsibility of all employer-facing communication, including contact with trainers and business development specialists, telephone course information and web-based information.

Lessons learnt and recommendations

Involving employers in the specification and development of learning programmes ensures that programme delivery is relevant and current and can mean that students are exposed to modern industrial equipment. Providers can ensure that they get the most relevant equipment through consultations with employers and employer donations of equipment.

Employers are generally open to the possibility of engaging with students directly: guest speaker appearances for instance offer them the opportunity to motivate and inspire students and student visits to local employers, can enhance the learning experience and help ensure high retention and success rates.

Newcastle College is committed to multi-faceted, long-term relationships with industry. These will ensure that they are able to provide the high quality training required to ensure the future success of local employers in the renewable energy industry.

By engaging with Newcastle College, employers are able to influence curriculum design and delivery to ensure that the service provided by the College meets their individual requirements. The Industrial Education Committee at the College that was formed as part of this project has effectively communicated these benefits to local employers, resulting in the following comments:

"We believe that the success of the offshore wind turbine industry is critically dependent upon the availability of skilled resources and are therefore pleased to partner with Newcastle College."

Graham Pennington OBE, Group Technology Director,
David Brown Gear Systems Limited

"We have built a strong education and industry partnership with Newcastle College which has been involved in ongoing discussions aimed at them providing the key skills and education role within offshore wind and wind power developments. This activity is backed by Shepherds Offshore, North Tyneside and Newcastle City Council and it is of strategic value and importance to the regional economy now, and in the future."

Bruce Shepherd, Managing Director, Shepherds Offshore Group

The excellent links forged with local employers have resulted in a much greater staff awareness of the industry and its specific requirements. This will continue, ensuring a better learning experience for students. Building links with local employers also ensures providers are able to respond to the changing needs of this new industry.

Providers must ensure that employers and potential students are easily able to access the information they require, primarily through the internet and then by telephone. Internet sites

must be intuitive and take users straight to the information they need, or they will move on to the next provider's site. Customer-facing staff must understand where information can be gained and ensure opportunities are not lost at the point of initial enquiries.

Next steps

The experience of searching for information from other providers resulted in the development of an internal project to re-evaluate customer-facing communication processes within the College, to ensure that the organisation can provide information to prospective employers and students easily and efficiently.

A project specifically aimed at SME employer engagement within the renewable energy sector is being proposed to build on the initial work carried out as part of this project.

PPL Training

Since its formation in 2004, PPL Training has built up a strong profile within the construction industry, particularly with renewable technologies. PPL was the pilot centre for NICEIC's photovoltaic course, and has developed extra courses to assist would-be installers, such as a quality management system for the Microgeneration Certification Scheme (MCS). PPL has the largest fleet of renewable technology mobile training units in the UK and the company has been helping colleges to set up their renewable energies training.

PPL Training also provides training for Greenworks, which are the sustainable training centres for Jewson and Graham's, builders' merchants. This relationship gives PPL excellent access to influential stakeholders within the construction sector. It also means PPL is working very closely with manufacturers to ensure they are up to date with innovations and technology.

For this project, PPL carried out research with employers to gain information about the MCS, using a survey that was followed up with phone calls and, in some cases, visits to employers. This comprehensive approach resulted in 92 completed surveys out of 120 distributed. The survey aimed to challenge mindsets, and to explore how businesses felt about the related technologies and the MCS itself. PPL Training used its extensive customer base to target employers, from large companies such as Eaga and Homeserve to sole traders.

Survey findings

Analysis of the survey results showed that most enquiries for MCS were from sole traders or micro-businesses looking to upskill. There were also an increasing number of new companies emerging, with a prevalence of non-trade-specialist management, who see the potential business benefits of this developing sector.

Only 33 per cent of businesses surveyed were not installing renewable technologies. When asked if this was due to lack of interest from consumers, 70 per cent said that they were not taking up training as current consumer demand did not warrant the expenditure.

A total of 34 companies that returned surveys knew nothing about the qualifications required to fit the relevant technologies. Just over half (58 per cent) of respondents said their main source of information was colleges and private training providers. Other sources were sector skills councils, awarding bodies such as the BP Educational Service or City & Guilds and trade shows. Once the National Skills Academies are fully up and running, and so long as the hubs make provision for specialist sales advisers, PPL believes that more enquirers will use this resource for information. The general feeling from customers was that the present course entry requirements were more than satisfactory as they allowed new entrants without prior knowledge to enter the industry, but still ensured a good standard generally.

Prerequisites for the future

The City & Guilds 2399 suite of qualifications is said to be the benchmark that MCS will insist on and although other awarding bodies are offering similar outcomes, the prerequisites will be the same. Thus an electrician who wanted to install photovoltaic (PV) panels would need a full NVQ Level 3 in electrics, 17th Edition and the 2391 Inspection and Testing qualification. By comparison, someone wishing to install PV now would only need Part P full scope and 17th Edition. Just over three-quarters (77 per cent) of the client group were unaware of the new qualification and over half of the group said it would affect their business. The Managing Director of P & N Electrical Services, Paul Seddon, said:

“In this industry you need to be able to adapt very quickly to the needs of your customers. Losing the ability to upskill relatively quickly could be very costly.”

Joining a Microgeneration Certification Scheme

Just under half of respondents were already members of an MCS scheme. Companies recognise that only way to benefit from FiTs (Feed in Tariffs) and Renewable Heat Incentives (RHI) is to join such a scheme. Nearly all (94 per cent) of the remaining group will at some point register. The survey showed that it was the sole traders and a majority of micro businesses who were not registered. When asked the main reasons for not registering, respondents replied that administration was the biggest hurdle.

Since the introduction of the FiTs in April 2010, sales have increased dramatically and nearly everyone surveyed said that they had contributed to sales and had helped to establish the photovoltaic market, with a further 58 per cent saying that they thought the RHI would have the same impact on heat-based technologies. They were also keen to reiterate that consumer awareness and demand is the only way to drive sales. When asked about the future of microgeneration, 92 per cent of those surveyed believed that success would only come through government incentives such as the RHI.

Key challenges

There is currently a challenge linked to supply and demand for PV training, with domestic consumers not getting the message about sustainable energies, the environmental benefits and the tariff schemes. As more consumers engage with these technologies, demand for fitting, and therefore training for fitters, will increase.

Gathering information about levels of awareness is time consuming and requires a robust customer relationship management database to use as a baseline. Although PPL felt it was important to visit some companies, this was the most time-consuming aspect of the research, because of making appointments and spending time getting to each of them. In the same space of time the provider could have completed far more surveys over the telephone.

Lessons learnt and recommendations

The success of this research project was due in part to the specialised team of course advisers who handle technical enquiries. This small team has a vast knowledge of the industry and there is a constant professional development requirement to ensure they are up to date with all the latest detail on developments such as FiTs and RHI.

Consumer awareness about the current opportunities in domestic renewable energies needs to be raised to stimulate demand.

Next steps

PPL plans to continue to carry out in-depth research to establish customer knowledge and identify training opportunities.

Business Impact UK (BIUK)

BIUK offers a range of training courses through the Renewable Energy Academy, which is run in partnership with the Cleaner Air Solutions Group – one of Europe's largest and most experienced renewable technology companies. The Academy is also supported by other employers including Sharps, Mitsubishi Electric and Romag. Courses range from one day to five days and are accredited where appropriate qualifications are available.

BIUK carried out research into the different audiences for training in the sectors, recognising that it is important to understand different customer needs. They suggest there are five different target audiences for training courses:

- individual entrepreneurs seeing a business opportunity and wanting the training required to set up their own business;
- businesses already operating in, for example, electrical or heating services, that wish to acquire new skills to support diversification (much of their business may focus on retro-fitting and modernisation of the existing building stock);
- businesses already operating in the construction sector that wish to add in-house skills enabling them to build new energy technologies into new construction projects;
- young people entering a trade for the first time and wishing to add some aspects of new energy technology to widen their career prospects (this would normally be obtained as an integrated part of a college course);
- people working in advisory and inspection roles who need to understand the new energy technologies and how they are installed.

Renewable energy does not fit neatly into a single industry sector or government department remit. There are many initiatives and it is not absolutely clear how they relate to one another.

Key challenges

Newly emerging and fast-growing industry sectors share common challenges. These include: a lack of skilled recruits; slow adaptation of the training system, including a lag in the development of occupational standards and qualifications; a training 'free for all', with time needed to standardise and accredit new qualifications; and employers, particularly manufacturers, dominating the training. This means training is highly product specific and often not fully transferable to other settings or employers.

Many companies are still waiting for the market to develop before investing in training. The latest government decision to review FiTs has made the market more uncertain.

There is now an adequate supply of training in most areas – quality and consistency are the main concerns. Quality assurance continues to be an issue; employers need to know what they are buying and to be assured that it is of the best possible standard.

Demand and supply need to be matched so that unnecessary training provision is avoided at a regional level.

Most training is at full cost to companies. Government-funded provision at Level 3 would have a significant impact on uptake.

Lessons learnt and recommendations

Research has shown that there is currently no standard product or price; for example some prices include certification and/or VAT. This can be confusing for employers.

There is a wide variety of training environments – in college, in a workshop or at a tailor-made facility. This is important to meet the varying needs of different employers.

There is no one place where employers can go to find information quickly and simply about available courses in their area.

The onus is on the employer to define their training needs; there is either no or very superficial training needs analysis, covering generic skills or appropriate combinations of courses.

Providers need effective marketing strategies and a clear offer so that employers can make an informed choice.

A collaborative source of information would be helpful. Growing the market also means providing potential customers with the independent information and advice that they need to make informed choices.

Awareness raising and training are needed at points all along the value chain from component suppliers, through manufacture and installation, to the customer.

Next steps

BIUK plans to develop a simple description of available provision for employers, including how it can move their business and staff along the learning and skills pathway, in particular the relationship between training at different levels and the certification needed to register on the Competent Persons Scheme and the MCS.

They also plan to develop a complementary diagnostic of organisational and skills needs, targeted specifically at low carbon employers, which can help them to make timely and cost-effective investments in training.

Overall recommendations

There were significant commonalities between the findings and subsequent recommendations of all the project partners.

There is a need for a more proactive and timely approach by awarding bodies, sector skills councils and trade associations to ensuring that standardised generic training programmes are not only agreed but also flexible enough to be adjusted in the light of new developments and innovations. These training programmes should also be flexible enough to allow new entrants, experienced operatives and candidates with transferable skills to take part.

It would be beneficial to develop a partnership framework where organisations, by region, can showcase the technologies and related training available through a ‘one stop shop’ where employers, learners and consumers can obtain unbiased advice for a given technology, along with contact details of reputable well-qualified tradesmen and training providers.

Training programmes need to continue to adapt to meet the evolving requirements of the sector.

Providers need to develop strong commercial and training partnerships with each other and with other stakeholders to best meet the needs of employers and learners. This is important for curriculum development, for accessing industry-standard equipment and for keeping abreast of regional, national and international developments in industry and training.

Employers are not interested in ‘acronyms or silly education words’. They want to know the benefits of the training to their company, particularly relation to specific financial or productivity gains.

Flexibility is a key factor in the training offer. Providers need to continue to develop more innovative and responsive delivery models, including a blended learning offer, to meet the wide-ranging needs of the sector.

Further information is included in the appendices:

Appendix 1. *Working for a Green Britain*, RenewableUK, February 2011

Appendix 2. Newcastle College case study