

GREENING SOUTH WEST SKILLS: GREEN SKILLS RESEARCH BRIEF

This is the second of two SLIM research briefs in which we look in more detail at what is meant by 'green jobs and green skills'. This brief covers green skills and highlights how skills will have to adapt to cover the 'greening' of existing industries and processes, adapt approaches to integrate sustainable development requirements, and in some cases develop entirely new skills sets for emerging sectors, including renewable energy technologies.

European perspectives on skills needs for the green economy

With the imminent Copenhagen summit on climate change and recent negotiations on the Lisbon treaty, the European Union is currently focussing its attention on forecasting likely skills needs to be required across member states¹. According to Cedefop: 'Green sectors will require new jobs, but they will also need to redefine many existing job profiles ... Training and guidance services ... should focus on skills related to energy efficiency and renewable energy implementation'.

Specific skills identified for Europe's green economy include: knowledge of sustainable materials, relevant traditional skills, 'carbon footprinting' skills, environmental impact assessment skills, and good understanding of the 'sound' sciences. Generic skills needed include 'softer' skills in leadership, entrepreneurship and risk analysis. The ability to recognise, adapt and transfer skills sets, systems analysis and a holistic approach are also valued. In environment related sectors, the following future skills have been identified: for carbon capture and storage, building and cement technologies, the wind power industry, climate change research and forecasting, agriculture, electricity, rail sector, waste treatment and recovery/recycling.

A December 2008 report² for the EU Environment DG focussed on steps needed to improve linkages between the existing European labour force and environmental factors. Its recommendations included better understanding and forecasting of the skills profile of green jobs. At present there is little information on good practice and impacts of training for green skills, and questions of whether new green jobs themselves drive increased investment in the skills of these workers. The research also showed that, as jobs are created at the local level, it is important to tie green skills to sustainable local economic development strategies.

¹Cedefop. Research paper: future skills needs for the green economy. Luxembourg: Publications Office of the European Union, 2009.

²ECORYS. Environment and labour force skills: overview of the links between the skills profile of the labour force and environmental factors. Final report to EC DG Environment, Dec 2008.

Greening skills in the UK

Low carbon skills feature strongly amongst the renewed Government priorities in their latest Skills Strategy³ (other areas earmarked for increased funding include life sciences, digital media and technology, advanced manufacturing, and engineering construction). The Strategy identifies a particular urgency for action in low carbon and resource efficiency which 'defy sector boundaries entirely, requiring a cross-cutting approach'.

The report notes good practice in initiatives where joint activities on skills for low carbon have already had an impact. These include:

- ◆ *A Sector Skills Accord for renewable energy* – developed by the British Wind Energy Association and lead employers, industry sectors and awarding bodies. It aims to tackle skills gaps at technician level and attract people to the rapidly expanding industry. Development of industry specific National Occupational Standards and qualifications, new apprenticeship frameworks, career pathways and STEM guidance is underway.
- ◆ *Stimulating demand and knowledge networks* – the East Midlands Development Agency has invested £620k in further education colleges to install low carbon equipment (hybrid vehicles, wind turbines, solar heating systems) in a pilot to stimulate practical low carbon courses aimed at Levels 3 and 4. A second *emda* pilot, Energy Connections, supports the growth of low carbon businesses through networking, knowledge exchange and access to FE skills providers. Partners have formed a regional Further Education Energy Skills Task Group, chaired by the Association of Colleges (AoC).
- ◆ *South West Sustainability Group* - in our own region, the AoC has been supporting⁴ FE colleges to share best practice and collaborate on: leadership and management training, 'green' buildings and estates, embedding of sustainable development skills in curriculum. and promotion of sustainability to communities and businesses.
- ◆ *Regional skills demonstrator in marine energy* - BIS is supporting the South West Low Carbon Economic Area for Marine Energy by fast-tracking marine energy skills. An industry forum has teamed with a SWRDA-led skills group to coordinate and stimulate employer demand in tandem with development of a regional marine energy skills plan. Early achievements include rolling out the Low Carbon Future Leaders programme – placing unemployed STEM graduates in industry to stimulate demand – and a SWRDA-led project to address urgent higher-level skills needs in the low carbon area.

The Institute for Public Policy Research (ippr) produced a report on Britain's green future⁵ which noted that green skills already widely exist, but workers will need to be able to transfer their current skills sets into new and emerging industries and roles. The report

³ BIS. Skills for growth: the national skills strategy. November 2009.

⁴ Association of Colleges. The journey to sustainable colleges: South West college case studies. 2009.

⁵ ippr. The future's green. Oct 2009.

identified four broad types of skills shortages within the green economy: specific skills shortages requiring substantial investment in training and development, skills gaps that could be addressed by ‘topping up’ existing workforce skills, generic skills gaps that apply across the UK economy; and generic ‘green’ skills.

ippr highlighted the role of public sector bodies in ensuring that local action is aligned to facilitate a successful low carbon transition. RDAs can develop Integrated Regional Strategies to be consistent with the Low Carbon Transition Plan for sustainable job creation. Sub regional partnerships should ensure that economic plans are compatible with a low carbon future. Local government can incentivise and support development of technologies using their detailed knowledge of the local context, and through their powers to grant planning permission which can stimulate uptake of low carbon technologies. Local authorities are able to procure low carbon goods and services, work with local employers to identify skills gaps, prioritise energy efficiency standards, and promote low carbon issues within economic regeneration.

Table 5.3. Top-up training for low-carbon jobs

Current job	Core training requirement	Additional low-carbon skill requirement	New low-carbon job
Electrician	Apprenticeship, BTEC or NVQ/SVQ	Working on roofs; installation of solar PV panels	Solar PV fitter
Offshore oil or gas maintenance technician	Apprenticeship, BTEC or NVQ/SVQ	Offshore wind technology	Offshore wind maintenance technician
Aerospace technician	Apprenticeship, BTEC or NVQ/SVQ	Technology-specific knowledge	Wind turbine technician
Architect	Undergraduate degree, masters degree and paid work experience*	Energy efficiency and zero-carbon knowledge	‘Low-carbon’ architect
City trader	Undergraduate degree	Carbon literacy, understanding of carbon trading schemes	Carbon trader
Facilities manager	No specific qualification required	Sustainability and energy management issues	‘Low-carbon’ facilities manager

*These are requirements to become a registered architect with the Architects Registration Board.
 BTEC = Business and Technology Education Council qualification; SVQ = Scottish Vocational Qualification; NVQ = National Vocational Qualification

Source: ippr

The report recommended that: public funding for work-based learning should be targeted at low carbon industries; training subsidies should be made available to re-skill in particular sectors and support short courses to include elements of low carbon practices; SSCs can help employers to articulate their skills needs for the low-carbon transition; and public procurement should mobilise action for low carbon skills.

The incoming strengthened regulatory environment for low carbon was highlighted by Defra⁶ as regards both domestic and industrial environments. Each will be subject to demanding new targets for zero carbon emissions, waste reduction and recycling, energy efficiency and reduction. ‘Carbon budgeting’ – capping emissions over five year periods – and the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) due in April

⁶ Defra. Building a low-carbon economy - Unlocking innovation and skills: response to Commission on Environmental Markets and Economic Performance (CEMEP). 2008.

2010 each require significant commitment from large organisations (such as local authorities and major employers) that tend to be major energy consumers. The Improvement and Development Agency (IDeA)⁷ recommends that local government partners support key sectors, including growth of the environmental technology sectors and renewable energy.

Although smaller organisations such as lower-end energy users are not covered by the CRC, initiatives such as the TUC's Green Workplaces Project⁸ - supported by SWRDA - seek to embed environmental skills in the wider workforce in small businesses. In the South West the project involves establishing a network of union 'green reps' in the region who work with employers to 'green' their workplaces. To achieve this, union representatives are trained (through accredited and other provision) to identify opportunities for greener workplaces, negotiate agreements and establish joint environment committees. Environmental advice to SMEs across sectors is also available via Envirowise, Sustainability South West and RegenSW.

Sector Skills Councils such as Summit Skills – with a cross-cutting footprint across the building engineering sectors - are especially aware of their responsibilities to promote low carbon skills amongst their workforce, affirming: 'Microgeneration and renewable energy technologies skills need to be integrated into the traditional skills of existing building services engineering workers'⁹. They recognise the requirement to incorporate such skills into the relevant National Occupational Standards and also to embed them into progression routes. Professional bodies such as the Royal Institute of British Architects (RIBA)¹⁰ also acknowledge a key role in embedding new skills.

In Cornwall, the Environmental Skills Network (under ReZolve) has been in receipt of Convergence ESF funding since 2008 to develop the skills of its environmental sector workforce members. ESN has been working with Summit Skills, the LSC and awarding bodies to offer a more integrated approach to training across the various technologies, which includes provision of new qualifications at Level 3. In partnership with Cornwall College, the aim will be to join up progression routes to offer training from Level 2 upwards to Level 4+ higher skills; the latter to be available to businesses in 'bite-size' chunks.

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Further copies can be downloaded from http://www.swslim.org.uk/themes/themes_past.asp?theme_ID=27

⁷ IDeA. Local low carbon economy economic drivers. 2009. <http://www.idea.gov.uk>.

⁸ TUC. Green unions at work. 2009. <http://www.greenworkplacessouthwest.org.uk/>

⁹ Summit Skills. Evidence to the House of Commons Environmental Audit Inquiry. Apr 2009.

¹⁰ RIBA. Skills for low carbon buildings: RIBA Climate Change Tools. 2009.