

Enterprise and Learning Committee

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Energy & Utility Skills' submission to the National Assembly for Wales' Enterprise and Learning Committee's inquiry into the economic contribution of higher education.

Energy & Utility Skills agrees for this information to be made available on the public domain. Any enquires from this submission should be firstly directed to Helen Taylor, Skills Director, Wales who can be contacted either by telephone on 07734281848, or by email on helen.taylor@euskills.co.uk, or by mail to Helen Taylor, c/o 1011 Stratford Road, Shirley, Solihull, B90 4BN.

Introduction to Energy & Utility Skills

Energy & Utility Skills is the Sector Skills Council for the electricity, gas, waste management and water industries. Employer-led, our purpose is to identify employers' skills needs and provide effective solutions to improve business performance across the UK.

The energy and utility sector in Wales is a critical and significant sector and employs around 30,000 people.

The sector in Wales has a strong history of reliability and dependability stretching back some 50 years. Electricity, gas and water in particular have a sound brand name founded on a skilled workforce platform

Our sector faces advancing technology, rapid change, global competition and rising expectations of choice. The skills of our people and their continuing development are crucially important to employers and employees.

The sector has an aging workforce and is faced with a declining number of young people entering the workforce. This relates specifically to suitable candidates for skilled roles which are so important to the continued improvements in productivity sought by the economic regulators. Work is needed to ensure that the sector is perceived as an attractive career choice for young people and those from non-traditional employment pools.

There is good evidence to suggest that those who come to work for the sector stay for significantly longer than the UK average. This suggests that the challenge of getting candidates across the doorstep can be addressed; our sector will be able to meet the upskilling challenge needed by its workforce to meet the challenges ahead.

Additionally, Energy & Utility Skills represents sectors with a higher than average demand for high level, graduate skills, particularly in the STEM subjects, with Water and Electricity having employees with qualifications at level 4/5 at 30% compared to 22% for the whole economy.

There is also significant evidence of skills gaps in the emerging renewable energy industry, particularly in design, maintenance and installation. Also skills gaps exist within the gas industry among technicians, engineers and supervisors/managers.

Within the waste management and utility contracting industries, a clear need exists to up-skill the existing workforce in basic, functional and technical skills

Sector Skills Agreement:

Energy & Utility Skills completed its SSA process in November 2007.

Our five major skills priorities are being developed and delivered in Wales. A few examples from each of these priorities which will deliver both macro and micro change are outlined below:

1. Government Policy

Our employers consider that one of our strategic sector skills solutions is the need to develop a strong, sector-wide influencing position to take to government which supports the strategic skills needs of the sector. This includes:

Support high-level collaboration across the energy sector. In Wales, working with DCELLS and DE&T within the Welsh Assembly and SummitSkills, to assist business growth through new skills and enhanced provision which embraces new technology in the renewable industry, specifically micro-generation technologies.

Providing support to industry and government in the delivery of key initiatives, such as the National Waste Strategy for Wales, in order to highlight the key skills issues that the waste management industry in Wales will face moving forward.

2. Regulation

The electricity, upstream gas and water industries are subject to economic and safety-related regulation. The continued focus on driving efficiency and downsizing has had an adverse impact on medium and longer-term investment in people and skills. Currently, these industries have an ageing workforce and long lead-times to replace these essential people who provide critical services and therefore, potentially significant skills shortages may well present themselves in the next five to 15 years.

3. Competence

Our employers need competent and productive people. In electricity and gas (both upstream and downstream) there is a real need to review all the qualifications that currently exist and renew them with employer involvement.

Across the whole of EU Skills sector footprint, we are attempting to develop a more flexible approach to qualifications that will give our employers a wider range of options in the future. Employer-led, our Sector Qualification Strategy (SQS) is based on National Occupational Standards (NOS), which are benchmarks of competence for specified occupations that employees can be measured against. The SQS will allow skills and knowledge to be recognised and credit matched against those standards. This process has begun in 2008. For more information on the SQS please contact Hal Igarishi at Energy & Utility Skills, hal.igarishi@euskills.co.uk.

In Wales, employers have committed to working in collaboration during 2007/08 and 2008/09, investing 'in-kind' support to renewing the qualification structure and competence frameworks to meet the needs of their 21st century businesses.

4. Skills Provision

In Wales employers are prepared to invest in new people and to up-skill their existing workforce; however, they identified a significant shortage in training provision and capacity. Historically many employers have been forced to seek provision across the border in England. The need to improve provision is therefore clearly demonstrated across all areas of learning in Wales both within Further and Higher Education provision and within the private training provider sector.

The Welsh Higher Education Institutions have an integral part to play in addressing the changing needs of our industries and in providing flexible learning programmes that meet employers' needs; specifically we are working in collaboration with HEFCW and Higher Education Institutions (HEIs) across Wales. These institutions have committed to addressing the collective needs of the 'Sustainable Energy' aspect within the sector, with a focus on new technologies and in utilising best practice in work-based learning techniques.

5 Sector Recruitment & Attractiveness

Our employer-led research has confirmed it is increasingly difficult for our employers to attract and recruit the correct people into our industries. This problem is exacerbated by an ageing workforce and long lead-times to develop competent individuals. Nationally we have agreed to work with employers, stakeholders and partners to develop and implement a sustainable sector recruitment and attractiveness strategy.

Committee's questions:

the effect that the skills agenda is having on HEIs impact on the labour market and whether they are meeting the needs of businesses;

the drive towards collaboration between HEIs and its impact on their local and regional economies;

the success of HEIs in accessing funding from a range of sources which impacts on the local and regional economies;

the wider contributions of universities to their localities, including community work, cultural contributions and student and graduate mobility and markets to make recommendations arising from our findings

1. The Skills agenda and demand

One of the recommendations coming out of the Leitch Review of Skills [December 2005] highlights the need to improve supply-side improvements in the provision of education and training to UK businesses. Extending the 'Train to Gain' scheme to higher levels and 'improving the engagement between employers and universities' is something the project aims to tackle vigorously. Leitch rightly highlights that the proportion of adults with level 4 and above skills will need to be increased from 29% in 2005 to 40% in 2020 if the UK companies are to remain competitive.

An earlier report by the University Vocational Awards Council [UVAC] on 'Integrating Work-Based Learning into Higher Education [2005] illuminates this demand from Leitch when in notes that businesses are increasingly keen to develop 'graduateness' skills in their aspirant middle managers. The report points to the growing importance of high level skills linked to 'entrepreneurship, problem-solving and the development of intellectual capital,' [p6]. They also highlight the fact that the responsibility for career-management and skills development amongst middle and senior managers is seen to reside with the individual and that 21st century management is demanding a 'wider range of skills.' The report comments on the demand by businesses for people with effective 'problem solving, continuous learning, communication and teamwork skills.' [p7] - basically a demand for effective transferable skills that have a real impact business leadership and management processes. Additionally, the report makes a highly salient point when it describes the characteristics of this demand for high level learning as being -

Context bound - driven by immediate work requirements;

Learner and learning orientated;

Capable of ownership by numbers of people in the workplace;

Consistent with new learning concepts such as learning networks, learning organisation and communities of practice.

In this regard, the most important factor is for HEIs in Wales to be proactive in stimulating the demand amongst employers and their employees for this type of high level work-based learning. It offers lecturers and researchers in HEIs in Wales a real opportunity to shape

the learning environments of Welsh business and to take university education out into Welsh industry - driven by a mutual agenda. Government cannot leave raising the demand for this type of learning solely with employers.

More recently the DIUS consultation 'Higher Education at Work - High Skills, High Value' - although advising on England only, does advocate HEIs working with employers, SSCs and RDAs. There is an indication that funding will be informed in part by SSA agreements brokered within England.

As highlighted in the introduction, Energy & Utility Skills, graduate skills are in demand in the Electricity and Water sectors particularly. In a recently commissioned report for Energy & Utility Skills, early indications estimate that the need for employees recruited into the sector with graduate skills for 2008 -2017 was at 34% based on annual figures of 2300 recruits annually, extrapolating these figures for Wales gives an estimate of around 115 per year.

Most of the graduate need for the sector comes from the STEM subjects, including those within Physical Sciences, Mathematical Sciences and Engineering and Technology.

2. Existing and planned activities with HEIs in Wales

Energy & Utility Skills' has been working with the KEF funded training consortium Welsh Energy Sector Project (WEST). Energy & Utility Skills has worked with the WEST consortium from its inception, along with WAG, HE institutions and also supported a Special Interest Group which specifically looked at microgeneration installation training provision within the FE sector. The Consortium brings industry leaders together with research and educational experts to develop a strategy for introducing energy innovations into businesses and producing teaching resources for training and education. For more information on the WEST project: www.welshenergysectortraining.org.uk. This type of collaborative work supporting SMEs and the renewables and microgeneration industries also contributes to the sustainable agenda within Wales.

3. Energy & Utility Skills in Wales is currently developing its strategy in Wales taking into account findings from our SSA work - specifically skills provision. Energy & Utility Skills recognises the importance of HEIs in the delivery of higher level skills to our sector, and so has been working with HEFCW and partner HEIs to develop a project for collaboration on workforce development in Wales, through work based learning. In doing so it should extend HEIs Third Mission activity with Welsh businesses and organisations by supporting them in their training development and organisational capacity building. The project will focus on improving the economic performance and competitiveness of companies in Wales. Maximising the knowledge economy of Wales by building sustainable HEI and business partnerships that grow the 'learning organisation' is a concept that is central to the project. This project is in two phases

Phase 1 of this project will help employers recognise the challenge and encourage them to rise to the challenge of employee development and training. The project will seek to grow the notion of the 'intelligent consumer' and help build learning journeys for workers and their businesses that will grow both their individual capacity and effectiveness and that of their organisation

Phase 2 Create an All-Wales Centre for Workforce Development in order to improve business competitiveness and innovation

4. With reference to the Graham Review of Part-Time Higher Education in Wales [June 2006]. The Graham Review rightly highlights the importance of part-time higher education in Wales and the 'constant requirement to improve and modernise the skills of the workforce.'[p8]. We would argue, like Graham, that the majority of that training demand will be for flexible work-based learning as the drive for economic expansion and full employment will remain the key government priority. Additionally, we would predict that individual re-training and organisational development will be increasingly important and that higher level learning linked to management and professional skills will be in heavy demand. This is reflected in the HEFCW 'Reaching Higher' target Widening Access.

5. The demand for collaboration - between HEIs and between HEIs and business

The Welsh Assembly Government's HE and Economic Development Task and Finish Group report entitled 'Knowledge Economy Nexus: the role of higher education in Wales' [March 2004] offers some salient points, noting that -

i] -'the innovation performance of an economy depends not only on how the individual institutions (e.g. SMEs, multi-nationals, universities, government departments and agencies, etc) perform in isolation but also on how they interact with each other as elements of a collective system of knowledge creation and use, and on their interplay with social institutions';

and that

ii] - 'university knowledge combined with commercial market-place acumen can lead to stronger universities and increased added-value in companies, both of which create prosperity for their operations and communities' [ref points 1.6 and 4.1 of the report].

Energy & Utility Skills strongly aligns with this commentary and believes that it can work with HEIs to build Workforce Development provision in Wales to offer sustainability in order to encourage 'buy-in' from Welsh business. This work will be taken forward in the project currently highlighted in the SSA, which will be submitted for funding support through 'The Energy Project; of DCELLS, as per the SSA brokered agreement with WAG. This project would complement the work of the WEST Consortia, which has demonstrated effective collaboration of HEIs with HEIs and also allowed progression by developing FE links for the project.

6. Additionally, Energy & Utility Skills are in discussions with DEFRA, DIUS and other SSCs regarding the establishment of an NSA for the environmental industries to meet Gordon Brown's request. Much of the existing and planned work already begun in Wales with the WEST KEF project would be complementary to this.

Energy & Utility Skills is currently developing Consortia with Foundation Degree Forward, to take forward Foundation Degrees with our sector. This is alongside development of an MSc Consortia for the Power and Water sector with Cranfield and the OU. Energy & Utility Skills would like to see Welsh HEIs and Fes in this collaboration, following the model of Cardiff University with one of the Power Consortia.

Going forward - recommendations

7. An increase in effectiveness and quality of the communication between HEIs and industry will benefit Wales as HEIs can better support industries in Wales, particularly emerging industries, within the sustainable agenda, by widening access to higher level skills to businesses in Wales. Energy & Utility Skills believes that these high level skills are best delivered through a part time work based learning model for the sector that it represents.

8. As mentioned earlier in this report, one of the challenges facing our sector - along with all of the engineering and manufacturing sectors - is the challenge of recruiting graduates with engineering skills. SSCs and HEIs must work with all partners through careers and schools to support any measure that are taken to encourage the uptake of STEM subjects firstly in school, and latterly through FE and HEI. Employers within our sector are currently working with schools to promote STEM in schools.