SUBMISSION FROM SKILLS DEVELOPMENT SCOTLAND

The renewable sector represents a major opportunity for Scotland. Scotland’s renewable capabilities continue to gain momentum, with a number of significant announcements having been made over the last six months. However, it is clear that sustained and innovative measures will be required to meet future job growth and skill requirements of both indigenous companies and inward investors. Skills Development Scotland (SDS) is working with Partners and Stakeholders to deliver a co-ordinated and agile response to ensure Scotland’s skills and workforce development supply systems are primed to support and capitalise those opportunities.

SDS is an active member of the Scottish Energy Advisory Board and is committed to supporting the diverse needs of the overall energy sector and within that the projected growth of employment within the Renewables Sector. Working with the Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise and the Scottish Environment Protection Agency, SDS supports the Scottish Energy Advisory Board’s ambition to be a world leader in sustainable energy production and use, and to be a prime destination for investment in the low carbon economy.

In order to ensure that the renewable sector’s growth potential is realised, sustained action is required to ensure labour markets respond effectively to changes in the scale and nature of demand. To do this the sector needs to increase its efforts to promote itself and the re-training opportunities available to skilled workers and professionals currently working in other sectors, as well as to new entrants to the labour market.

The Skills Investment Plan for Energy, launched by the First Minister in March 2011, identified the scale of opportunity, the challenges and skills issues, and proposed a series of actions, in the short and longer term, to deliver a response to those skills issues.

There is already a great deal of activity taking place which will support the development of the sector: Scotland’s Universities have circa 8,000 undergraduate entrants each year in related subjects, along with around 3,000 postgraduates; Scotland’s Colleges support 25,000 to 30,000 learners in similar subjects; and Skills Development Scotland (SDS) has recorded around 3,000 starts on engineering and energy-related apprenticeships, each year over the last three years.

There are examples of training providers adapting existing programmes in anticipation of growth in demand for people with skills in renewable energies. Carnegie College, for example, now offers the Wind Turbine Technician Modern Apprenticeship.

In addition, Scottish Government has committed to supporting training for the sector through:

- 2,000 Modern Apprentices (MAs) in Energy/Low Carbon through to 2015 (500 each year); and
An additional 1,000 flexible training opportunities in energy/low carbon in 2012/13.

The Energy Technology Partnership (ETP) is an alliance of independent Scottish Universities, engaged in world class related energy Research, Development and Demonstration (RD&D). It currently supports 42 energy industry doctorates (with 40 future students) and several hundred energy-related PhDs/EngDs.

The College Energy Skills Partnership (ESP) has recently been formed, bringing together colleges in a consortium approach, to deliver technical skills and industrial awareness.

By working in a cohesive and constructive consortium, Scotland’s Colleges can demonstrate not only its responsiveness but also its collective capability and capacity to provide the technical skills required for this emerging industry. It will:

- Provide a flexible and responsive, collective collaboration and dialogue with industry, government and universities on all sub-sectors of the energy industry;
- Build links with agencies such as Renewables UK, Scottish Renewables, OPITO, Scottish Enterprise, Highlands and Islands Enterprise (HIE) and Skills Development Scotland;
- Undertake an audit of skills, resources, capacity and capability across Scotland’s colleges linked to the scale of the opportunities within the energy industry which will inform the geographical clustering of the key subsectors of the energy industry;
- Undertake collective bidding for funding;
- Undertake development of new qualifications and materials as required, enabling transferable skills provision and generation of wider knowledge transfer opportunities to transform the landscape for business growth and employability within the sector by providing a flexible and sustainable workforce for industry;
- Work in partnership across colleges and the industries to facilitate cross sector “short apprentice exchanges” opportunities for apprentices.

As well as ensuring that sufficient numbers of young people are attracted to the increasing numbers of further and higher education courses that are available in Scotland, a key aspect of the solution to the current and future skills shortages lies in re-skilling existing workers.

Scottish Government has recently provided funding to SDS and the Scottish Funding Council (SFC) to pilot a series of “transition training” interventions, including:

- CPD and awareness events in Microgeneration/Environmental Technology Systems;
- Assistance with the establishment of a Skills Academy at Nigg, supporting the first major employment generating project linked to the National Renewables Infrastructure Plan (further details are provided below);
- The establishment of the Renewable Training Network (RTN) in Scotland. RenewableUK has been successful in its bid to UKCES to set up the RTN in England, and SDS is working with RenewableUK, Scottish Renewables, the
National Skills Academy for Power and the Energy Skills Partnership to bring benefits to providers and employers in Scotland. The RTN will:

- Accelerate delivery and increase availability of courses by providing a clear market signal to colleges and providers about the bulk training needs across the sector;
- Establish the content for renewables specific “transition courses”;
- Build up capacity and competence in renewable energy expertise amongst training providers;
- Drive down the cost of specialist renewable energy transition courses through bulk purchasing arrangements;

- Contributions to transitional training and engineering facilities at TRESTA (Steel Engineering in Renfrew in partnership with Anniesland College) and Lochgilphead (Argyll College Leader+ application);
- Pilot courses in High Voltage Power Systems, and Offshore Wind safety and survival courses;
- Support for some 40 PhD studentships through the Universities’ ETP to fund research opportunities in renewable energy;
- Support for the ETP and the ESP to accelerate joint activities. In the main, this will support three areas:
  - establishing themed and geographic groups covering all energy sectors to accelerate the development of individual industry action plans for each group. This will ensure that member colleges can allocate resource to develop these plans ensuring that they are tested with industry and in place in time to respond to emerging demand by the next academic year, 2012-13;
  - establishing the baseline of college and later also university provision to inform the development of a database of provision and a resource matrix; and
  - supporting capability and capacity building across Scotland’s colleges through the establishment of a CPD programme in partnership with the ETP. These CPD courses/events will be open to members of the themed groups. This will support the development of high quality relevant training which is flexible and responsive to both industry and geographic priorities. An evaluation of the programme will be used to inform future CPD activity.

A major challenge for the sector will be to ensure the opportunities it offers are visible, legible, accessible and affordable to those wishing to move into the sector. In other words, as well as estimating potential demand for (re-)training, the sector may have to work to create demand, and particular attention should be paid to providing access to affordable and profitable training opportunities to complement existing skills.

The current economic situation adds to the level of uncertainty facing the sector but even with modest economic growth and rising unemployment, the renewable energy sector in Scotland faces stiff competition for skilled workers. Demand for workers with similar skills will come from other forms of energy generation, resource extraction and energy transmission, as well as from other sectors requiring skills in planning, design, engineering, construction etc. and from abroad. Recent announcements of job losses (in particular, aerospace, with high-level engineering skills, and the armed forces, with staff accustomed to working in teams, to deadlines, and in tough conditions)
means the sector has an opportunity to attract and top-up the skills of some extremely capable individuals.

In many cases individuals and firms could be expected to make their own investments. Many firms in the sector would in essence be re-training their existing employees as they transfer from one job to another, and there is a history of people taking time out to invest in short courses (such as for divers) or indeed postgraduate study to change career. There are also other public sector initiatives at our disposal to support and enable this, such as through Adult Modern Apprenticeships, Training for Work and PACE. It should also be recognised that many inward investors will bring a percentage of their own existing workforce with them, particularly during the start up phase of investments.

However, there are several risks to investment of sufficient scale occurring in the required timescale:

- It is expected the sector will develop rapidly in a few years time by which time engineering and construction (the sectors with which there is likely to be most competition for labour) are expected to have emerged from recession\(^1\);
- The changing nature of the sector will create uncertainty for people considering re-training which may lead them to favour more established “safer” sectors such as engineering, construction and, in this context, oil and gas.

There will continue to be a growing demand for general science, technology, engineering and maths (STEM) knowledge and skills. This will require continued investment and focus at school level as well as Further Education (FE) and Higher Education (HE) level to ensure an adequate pipeline of skilled individuals.

The Science and Engineering Education Advisory Group (SEEAG) published its report into strengthening the place of science within education and public science engagement on 29th February. The report offers the Scottish Government an ambitious set of recommendations, and Government is now considering a programme of work stemming from the report. Again, however, there is a great deal of work underway with the increased investment in STEM, which is a key part of the Skills Investment Plan for Energy. Last year, Education Scotland launched its STEM Central resource, and produced Guidance on Careers in Energy.

The role that STEM Ambassadors can play in both highlighting STEM careers to school pupils in primary and secondary and supporting teaching staff in delivering the Curriculum for Excellence Science should not be underestimated, and this role should be given more emphasis. The Science, Technology, Engineering and Mathematics Network (STEMNET) is funded by the UK Department for Business Innovation and Skills (BIS) and delivered by four contract holders in Scotland, volunteer STEM ambassadors from STEM industries and STEM courses in College and universities answer pleas for assistance from schools across Scotland.

\(^1\) See, for example, Fraser of Allander Institute, Economic Commentary, Vol 34, No. 1, June 2010
With regard to the skills transfer from oil and gas it is clear that competition for skills and talent are a major priority and concern for the oil and gas sector. Over half of the recent industry responses to a recent OPITO survey identified talent as their primary challenge:

- It is estimated that around 15,000 new people will be required over the next 5 year period solely to deliver new oil and gas project plans that the industry has identified. If industry is unable to secure this talent pool then maximum hydrocarbon recovery could be jeopardised;
- Growth intention will only be realised if the staff required to support this are available in the requisite numbers and have the skills and experience companies require;
- There will be competition for the same skill disciplines from other sectors including nuclear and offshore renewables;
- A fluid energy talent pool therefore needs to be secured for the future which is flexible across the different energy strands;
- There is evidence from employers across the industry supply chain that the current demand for appropriately skilled people is outstripping supply. The implications of this are: vacancies not being filled; inter-company competition increasing with subsequent wage inflation; loss of skills continuity; and projects being delayed or even cancelled;
- The industry has attraction issues – particularly in attracting females. It is seen by the general public as an industry in decline or maturing with a more positive pull from greener industries. There has also been negative publicity from oil spills and other incidents;
- Widening the pool of talent available to the industry will be essential if these issues above are to be addressed.

Given competition for relatively scarce resources, the oil and gas sector, rather than seeing evidence of a transfer to renewables, is working hard to overcome the common perception that the North Sea is a short-life sector and to communicate the message of the long term and diverse opportunities that the oil and gas sector still presents. The sector is currently seeking to increase the supply of people in the industry and thus reduce the pressure on wages. This could be through recruiting people from other industries or occupations, for example from the military.

Skills Development Scotland
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