Pushing Offshore Wind Energy Regions

Harmonisation of Training for the Offshore Wind Energy Industry

Workshop 26. April 2007, Bremen

Ian Fisher

Northumberland College.

The aim of my presentation today is:

To show the aims of the Northumberland Renewable Energy Group (NREG)

To show the link Northumberland College plays within the group

To show the progress we have made towards meeting the aims of the group with specific reference to wind power.

To show where we are with the development of a British Learning platform for Wind with ABC awards.

To show our thoughts on the Foundation Degree sylabi.

The Aims of The Northumberland Renewable Energy Group (NREG)

To enable the development of businesses and initiatives in Northumberland so that the installation of renewable energy and energy efficiency measures contributes to significant growth in employment and the economy of the county.

Accelerate the development of renewable energy and energy efficiency measures in Northumberland to help meet the proposed regional target for renewable electricity generation by 2010.

Develop Renewable Energy and Energy Efficiency Measures by supporting renewable companies, modifying planning and development control to promote renewable energy and energy efficiency measures and securing renewable resource supplies.

The Aims of The Northumberland Renewable Energy Group (NREG) (2)

Raise public awareness by encouraging debate within Northumberland's community and highlighting other county and regional strategies for regeneration of rural and urban areas (for example, the Regional Renewable Energy Strategy and Awareness Raising Project).

Build a sustainable market by attracting inward investment, diversifying the county's economy and creating new employment opportunities.

Achieve "exemplar" status for the county in renewable technologies, thus building upon the success of securing NaREC at Blyth.

Extract taken from the final draft of the Northumberland Sustainable Communities Strategy

Using our energy wisely

We will accelerate the take up of micro generation from renewable sources in community, voluntary and public sector buildings as well as business locations. (The development of our level 2 programmes)

We will continue to identify and introduce innovative ways to reduce our consumption of unsustainable fuel resources.

Through New and Renewable Energy Centre at Blyth and the University of Newcastle's Cockle Park Farm near Morpeth, we will continue to lead research, development and application within the renewables sector.

We will provide vocational training courses for the installation, service and maintenance of renewable energy technology at Northumberland College at Kirkley Hall. (The development of our level 2/3 VRQ programmes).

We will develop a support framework for sensitively located renewable energy generation activity.

Northumberland College joined NREG in late 2004 and worked with TNEI and Narec in the development of the first wind programme.

The development of this programme was initiated by TNEI, and was financed through Northumberland College and ultimately by the Learning Skills Council.

The programme was piloted in November 2005 at Kirkley Hall, Ponteland, Northumberland. The programme closed in January 2006 with a “Meet the Developers” event where the candidates could discuss opportunities with the various organisations in attendance.

The first programme had four modules namely:

Erection Techniques.

Electrical Connections

Maintenance

Health & Safety.

After the event we consulted closely with the candidates and developers to see how we could improve the programme so that the working programme would meet the demands of the industry and be more rewarding to the students.

The overall response was that more practical activities would have been advantageous and given the candidates a better appreciation of the work involved in the maintenance of the larger turbines.

The feedback received led to the development of our level 2 VRQ programme which was validated in July 2006 and is aimed as an entry level for candidates wishing to embark on a career in renewable energies.

This programme was closely monitored by the Utility Skills and ABC during the development before going in front of the QCA.

As the industry is rapidly moving forward we have asked that the programme is monitored and updated annually to meet the changes.

Aims

This qualification aims to:

develop knowledge and skills related to the development of alternative sustainable, renewable energy in 2 pathways, one concentrating on biomass fuels and the other harnessing wind power;

aid the development of a career structure in this new area of employment by providing a nationally recognised qualification;

raise awareness of the whole sustainability agenda in relation to energy,
develop a working knowledge of the technology used in the production of energy from biomass fuels and wind power;

develop a responsible and informed approach to health and safety issues;

develop knowledge of supply chain management in the sustainable energy industries;

develop an understanding of the importance of establishing and maintaining productive working relationships internally and externally.

The programme consists of 6 modules:

3 Mandatory Units

Unit 1 Safe Working Practices in the Renewables Industry (30glh).

Unit 2 Sustainability and the Renewables Industry (30glh).

Unit 3 Contribute to Positive Working Relationship in the Renewables Industry (30glh)

Option B Wind Power

Unit 7 Fuel Supply Technology – Wind Fuel (30glh)

Unit 8 Converting Wind to energy and power (60glh)

Unit 9 Maintenance of Wind Fuel Systems (30glh)

In June 2006 we visited Bremen to discuss Wind training and to look at the facilities required to successfully deliver appropriate programmes.

This visit ultimately led to the initial development of our level three programme in September 2006. This programme was initially designed to match the level 2 provision but has since changed considerably to meet a new delivery pattern. This new programme is currently being scrutinised by ABC and the Energy & Utility Skills and hopefully will be ready for delivery in September 2007.

The major difference with this programme is that it has been tailored to allow four modes of delivery:

CRPD

Day Release

Full Time

Flexible Personal Learning Programs

The Level Three Programme.

The four modes of delivery lead to three distinct qualifications namely:

CPD Certificates for a minimum of two modules

Awards for a group of eight modules

Diplomas for more than eight modules.

This is to allow total flexibility in the delivery of the modules and attendance patterns for candidates.

Programme Content.

Passport to Safety.

Health And Safety (Turbine Specific).

Sea Survival.

Working at Height.

First Aid at Work.

Team Building.

Supply Chain Management. (Level 3 -4)

Environmental Awareness.

Mechanical Engineering 1.

Mechanical Engineering 2.

Electrical Engineering.

Data Transfer and Control Techniques. (Level 3 – 4).

Blade Technology.

Lifting Hooking and Strapping Techniques.

The level two programme we have developed appears, to cover the requirements set out in ES 3003: Issue Draft 1 27/03/2007.

REQUIREMENTS FOR CONTRACTORS UNDERTAKING THE SUPPLY, DESIGN, INSTALLATION, SET TO WORK COMMISSIONING AND HANDOVER OF MICRO AND SMALL WIND TURBINE SYSTEMS

The development of the new level three programmes have been developed in light of new draft guidelines shown in ***Annex 3 Draft Occupational and Functional Maps – Offshore wind, wave and tidal*** produced by the Energy and Utility Skills Council. This document has also allowed us to revisit the proposals for the Foundation Degree.

The document is the:

OCCUPATIONAL AND FUNCTIONAL MAP FOR THE RENEWABLE ENERGY SECTOR FOR ENERGY & UTILITY SKILLS.

And matches the requirements of the level descriptors produced by the QCA.

The Proposed Foundation Degree.

As we are continuously developing the level 3 programme the foundation degree is also changing to allow relevant progression and entry into Higher Education at level 5/6, at one of our partner universities.

The actual syllabus will be finalised once we have entered into a partnering agreement but we are presently considering the following modules:

Project Management

Risk Assessment

E Procurement

Planning Control

Environmental Analysis

Material Testing

Teambuilding

Contract Law

Health and Safety

Production Control

The Way Forward.

NREG and Northumberland College are keen to progress the programmes and above all to achieve a common learning platform which will allow potential Wind Technicians to gain employment within the European Union.

Having been involved in the development of the wind programme from its inception we are aware of the challenges ahead and the financial implications of developing the programmes.

We welcome constructive comments and suggestions, and would welcome the opportunity to join the POWER team.

Thank You.

Any Questions.