Skills Support for the Workforce
Local Response Fund

LRF- Sector Skills GAP Group
Skills Gap Report

Sector: Renewables

Index

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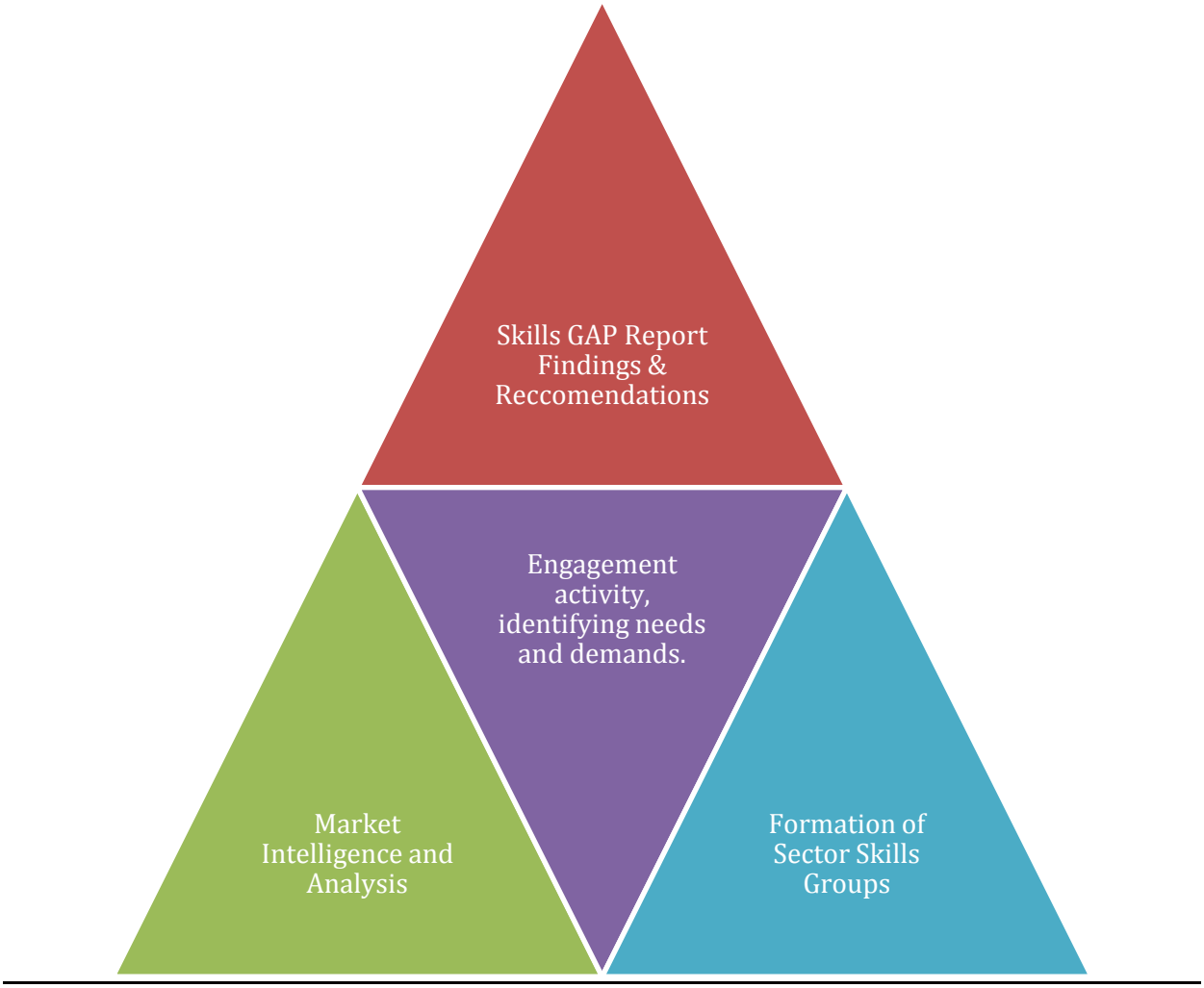
*1 submission is required per sector if you represent multiple sectors.

The Sector Skills GAP Report Model



Background

'In the last 14 years wind energy's contribution to UK energy needs has grown from less than 400MW to over 11,000MW today. In 2013, renewable power provided almost 15 per cent of our electricity needs—over half of this coming from wind energy. This impressive growth means that wind energy is now a significant source of energy close to, and sometimes surpassing, nuclear in its contribution to our day-to-day energy needs. In the last year alone wind capacity grew by almost 15%, meaning that both on and offshore wind energy have enjoyed double digit growth for the last five years. In addition the wind industry continues to create jobs and investment within the UK.' Wind Energy in the UK – State of the Industry Report 2014 (RenewableUK).

The development of the UK offshore wind sector is set to grow significantly in the next 10 years. With the development of larger wind farms, further offshore, the opportunity for economic development and job creation will continue. The local region is ideally placed to take advantage of these opportunities, given its proximity to sites currently under construction (Western Most Rough) and the largest round three sites in the development phases (Dogger Band and Hornsea). Hull has already seen significant investment in offshore wind as development partners Associated British Ports and Siemens are investing £310 million in offshore wind turbine production at Hull's Alexandra Dock, directly creating 1,000 new jobs and many more during the construction phase and in the supply chain.

This report seeks to understand what the likely increase in renewable energy related jobs will mean for new training requirements, ultimately providing better access and availability to the relevant training for employed individuals (working in SME's) enhancing their skills and career prospects to reduce the risk of long term unemployment and welfare dependency.

The evidence for the report has been gathered through a number of channels;

- The formation of a Sector Skills Group – a collection of regional SME's, representing training users, providers and those involved and seeking to be involved in the renewable energy and more specifically, the offshore wind sector. The group acts as a primary source of market intelligence to identify training needs, requirements and what is currently available.
- Individual business already working in the offshore wind sector – including SME's and larger businesses. The information gathered from these interviews helps to form the intelligence regarding specific training and qualification requirements.
- Informal discussions with regional, national and international organisations at a range of events, including;
  Supply Chain Event 'UK & Denmark – Partners in Offshore Wind';
  Renewable UK Conference & Exhibition (Manchester November 2014);

EWEA (European Wind Energy Association) - Offshore 2015 (Copenhagen March 2015); THMA Networking events and informal meetings

- Industry reports and analysis from a range of sources, including; RenewableUK, BVG Associates; EWEA; The Department of Business, Innovation and Skills.

Market Intelligence

The significance of the renewables sector and specifically, the offshore wind sector cannot be underestimated within the region. Yorkshire and the Humber alone accounts for nearly 20% of the UK's total energy output (Powering the UK 2013, EY). The region is central to the success of the UK's Energy sector; hosting major facilities in gas, coal and biomass powered energy production. The region is also the location for much of the current development in offshore wind and is an obvious location for the development of carbon capture and storage/utilisation (CCS/CCU). More specifically, the region is the 'UK's Energy Estuary' and provides 25% of the UK's oil refinery requirements, 25% of its coal imports and as the UK gateway to North Sea and Norwegian gas supplies, meets 21% of the UK's demand for gas.

The local region has key business, research and innovation assets to capitalise on the multi-billion pound opportunity that the renewable energy sector provides. It is essential that the energy sector as a whole moves towards de-carbonisation by 2030 if the UK's emissions targets are to be met whilst minimising the costs of doing so. This will require changes to policy frameworks, market structures and business models and also significant research and capital investment (Watson, J., Gross, R., Ketsopoulou, I. and Winskel, M. (2014). UK Energy Strategies under Uncertainty - Synthesis Report (UKERC: London)). In order to meet demand, security and policy goals, there is significant funding available for Energy research. As an example, Energy was second only to Transport in total value of Technology Strategy Board technology grants in 2011/12. There will be significant investment and growth in this sector and the Humber is well positioned to be part of this growth.

It is currently very difficult to estimate the specific size of the renewables (and the offshore wind) sectors in the region. The sectors are undergoing rapid growth and the resulting flux has made it difficult to establish the parameters needed to accurately predict the size of the market. What is possible however is to highlight the investment in the region in the sector (Siemens and ABP investing £310 million in offshore wind turbine production in Hull, directly creating 1,000 new jobs and many more during the construction phase and in the supply chain) and the number of businesses entering the market.

It is possible to quantify the scale of the offshore wind sector within the year 2013/2014; RenewableUK's estimate that onshore and offshore wind within the UK accounted for;

- 11,183 MW installed in the year
- £1.1bn investment in the UK
- 15,000 direct jobs
- 164 manufacturing companies engaged within the supply chain

It is unlikely that a significant proportion of this wealth and job creation directly

benefited the region. What can be predicted with some certainty is the importance of the sector moving forward. In securing a significant manufacturing, operations and service center in the region (the Siemens site) it can be safely assumed that a proportion of the future job and wealth creation will reside in the region.

There are very few historical renewables businesses based in the region, those that have existed for more than five years are small and employed relatively few people. The sector is significant due to its potential and rapid growth. Many local businesses are looking to diversify into the renewables sector and businesses from outside the region are looking to locate here due to the opportunity. As such, it is difficult to robustly define the specific number of businesses based in the region that would be classified solely as a renewables business.

Again, what has to be considered is the near potential of the sector and the significance it will bring over the next 20 years. As well as the 1,000 jobs at the Siemens site, Able predicts that it's Marine Energy Park predicts at Immingham will employ over 4,000 staff when completed. Smaller individual companies are regularly committing to the region as well, more recently the South Korean energy business CS Wind announced it will build its European headquarters in the Humber, creating 200 jobs.

So far, at least 15 regional companies have been directly engaged with the process of this study. This number will increase as the project continues up to its completion in July 2015.

SME Skills GAP Groups

An initial meeting / workshop was held on the 12th February. At the meeting, 17 people from 15 organisations attended, including;

Frank Butterfield	Best Service (Europe) Limited
Mark Parkes	Boston Energy
Nikki Hale	CATCH
Paul Mason	CATCH
Lorraine Alexander	DWP/JCP
Andy Fairburn	Electrical Contractors' Association
Fred Mead	Grow Offshore (MAS)
Iain Elliott	HETA
Shaun Lyons	HFR Solutions
Charlotte Meyerhoff	HOTA
Cheryl Sedgwick	Hull Engineering Training Centre
Ian Wilkinson	Precision 2000 Drilling Limited
Nick Allen	Rix Shipping
Vickie Prince	Seahorse Marine
Gary McMullen	Tower Construction
Dave Green	Wood side Safety Training
Graham Flowers	Woodside Safety Training

Most of these organisations are SME's and are a good representation of the size and type of regional organisations that are either already in the renewables sector or looking to break into the sector. It is difficult to assess exactly how many regional companies are classified as renewables or offshore wind. There are no official classifications specifically for renewables or offshore wind additionally, the developing nature of the renewables and offshore wind sectors mean that the exact numbers are continually growing.

The exact size of the local renewables and offshore wind market is also currently very difficult to calculate due to its novel and developing nature.

Additional meeting are being organised for throughout the project (April and June); these meetings will continue to develop the theme of training requirements as well as being open to new entrants to the regional renewables and offshore wind sectors. These upcoming meetings will concentrate on specific training requirements and aim to link SME's with the available regional training that is relevant to their needs.

Meeting 4th March - Centrica Offshore Wind Operation Base, Grimsby

Katherine York – Wind O&M Manager
Kevin Prentice – Training Manager

Vicky Walton – Technical Skills Manager

They have 80 technicians with 66 on-site with training provided by an array of local (CATCH, HFR, HOTA), national and international companies including the Danish Wind Power Academy. Discussed skills gaps and future demands

Findings

The discussions mainly centered around the current needs of businesses operating in the offshore wind sector and those training providers who were running courses to fulfil these needs.

The general points raised were in line with the wider issues in the market, specifically;

- The industry is still new and therefore in a state of flux; companies are still developing and understanding their training requirements.
- There is no one set of industry standards for H&S and training. Currently companies work to different standards (GWO, RenewableUK etc.) as well as individual turbine manufacturers having their own standards.
- It can be difficult to find one training provider who can offer the full set of required courses for engineers (leading to costly travel etc.)
- There is a lack of clear communication and understanding for companies entering the renewables (and specifically the offshore wind) sector regarding what specific courses and certifications are required and where these requirements can be delivered.

Specific points relevant to the region included;

- Often the required training is only offered in North East/Newcastle/Teesside and usually full and difficult to get into. If this could be undertaken within the region it would save time and money. There is also a need to do it in one place and encompass the whole of the training required
- Many of the inward investing organisations such as Siemens, Centrica, and DONG etc. will also want to train locally.

- Some local providers (CATCH) have started to deliver Siemens/Centrica offshore wind training program. This is generally 1 day course and can also be attended by private individuals.
- It was discussed at various intervals during the meeting that a Maritime College based in this area is necessary to enable total training for this industry.

It was highlighted that many courses are being demanded by individuals but numbers on courses vary and can impact on the future sustainability of delivering specific courses.

Skills GAP Report Findings/ Recommendations

Health and Safety / Specific Offshore Access Training;

In order for engineers to work offshore, there are a set of specific training and certifications required. Unfortunately, these differ from company to company as the industry is not yet mature enough to have developed an industry wide standard. The common training and certification requirements are;

- First aid
- Safe working at height (including hub rescue)
- Sea survival
- Confined space

Other requirements, which vary from company to company also include;

- IOSH for renewables
- Radio, yacht master, navigation etc. (for marine controllers)

All of these training requirements relate to the requirement for risk reduction and the importance placed on high health and safety standards.

Currently there is also some disconnect regionally over the availability of all the course to be delivered in the same location and on regular basis. If a company requires 10 or more staff to receive all the training at the same time, it may be possible to source the training. However, if a company only needs one or two staff training they may have to wait until a course or set of courses come available or travel out of the region to find courses.

If the full complement of training were to be delivered regionally and on a more responsive and flexible basis, this may allow regional organisations to win business and respond quickly to new business requirements. This would require training providers to deliver training on a more flexible basis or work in collaboration with other regional training providers.

Every individual going offshore requires the relevant certifications. Within the region it is estimated that there are currently 30 to 40 companies who are marketing themselves to deliver products and services offshore (this does not include national and international organisations with sub-offices based in the region. Each of the regional organisations would have on average between 10 to 20 staff who will go offshore and therefore need the full training. This equates to around 500 individuals regionally requiring training. This number could be increased if the national and international organisations also trained their local

staff regionally.

General Renewables Training

The second area of training highlighted relates to a more general knowledge based requirement. As the renewable sector develops and grows, more organisations either set up specifically within the sector or diversify into the sector. There are relatively few people with in-depth knowledge about the sector and the number of likely future jobs in the sector will require basic training about renewables and renewable technologies. This is potentially a bigger area than the offshore access training as more people will be involved in the wider renewable sector.

After discussions with some of the larger employers in the sector (specifically the offshore wind operators), it is evident that they do sometimes require new staff to undertake basic / background knowledge based training such as; introduction to renewables and introduction to wind turbine maintenance. Currently these type of courses are only really covered by the Danish Windpower Academy.

Delivery of these generic / introductory courses would allow new staff to get up to speed on sector specific knowledge quicker and allow their employers to gain a competitive advantage.

Any company looking at developing an offering for the renewables sector could require this generic training. This could result in upwards of 1,000 individuals regionally requiring training. This number could be increased if the national and international organisations also trained their local staff regionally.

The training needs of the sector as a whole are still very much in their development stages. Much rhetoric is given to the specific requirements for offshore access as this is an area that has developed some clarity due to its high requirement for health and safety standards. But even these requirements differ according to which project lead or turbine manufacturer is running the project.

The SSW project whilst helping to identify and clarify the training requirements within the regional renewables sector has not yet fully satisfied the overall need. What the SSW project has done and will continue to do is help SME's understand what type of training is required, where training is available and help to define and promote additional training requirements.

Legacy

A network of regional SME's concerned with the development of training for the renewable sector, specifically Offshore Access for Offshore Wind has been developed and will continue to evolve over the coming months.

The three tops successes that the project has achieved (within the time frame of the work – December 2014 – April 2015) includes;

- The formation of a regional network to assess, understand and promote the training requirements of the renewable sector, specifically Offshore Access for Offshore Wind.
- The ongoing developing a skills matrix of those requirements for staff in the renewables / offshore wind sector. This will also help to provide evidence to LEP, future ESIF programs and the future National Offshore Wind Training Academy.
- Engaging with national and international organisations based in the region (turbine manufacturers and offshore wind developers and operators) to understand their training requirements and how they currently train their staff regionally and nationally.

The work done at the first meeting of the network has led to additional outputs;

- The ongoing development of a matrix of the courses currently provided by training organisations in the region.
- Understanding the future requirements of the developing sector to help the continuation of this work beyond the specific SSW programme and inform any new ESIF rounds that will come through LEP.
- Planning future communication activities to both attract SME's to the training and allow them to understand what they need and what is available in the Humber.

Due to the developing nature of the renewables sector and more specifically the significant regional offshore wind sector, and the short term nature of this project, it has not been possible to calculate the business impact of the project. As the work started by the project continues to develop, real business impacts will undoubtedly happen and these will recorded and communicated.

Similarly, the project has not led to the development of new qualifications or curriculum so far. However, it is hoped that work over the coming months will help to coordinate and consolidate the different training provisions available in the region. This consolidation will allow regional organisations have a better understanding of and better access to the required training. It will also help to provide more flexible and responsive access to training so regional organisations can get staff trained in smaller numbers and without waiting months for a specific course to be delivered.

Through our involvement in the project; investigating the sector and working closely with regional and national organisations, a number of recommendations for future work have become obvious;

- Improving regional links with RenewableUK, GWO and other offshore wind sector organisations to help to define and understand the developing health and safety standards in the sector. This would allow regional training providers to develop and deliver the right courses and regional organisations to ensure their staff have the relevant certifications.
- Improving coordination between regional training providers to promote the different courses available regionally and build a flexible suite of training at a regional level negating the need to travel out of the region to get training at specific times.
- Improve the availability for clear and evidenced information for new regional organisations entering the sector so they are able to make informed decisions over their training requirements.
- The development of basic and background knowledge based training such as; introduction to renewables and introduction to wind turbine maintenance (currently provided by the Danish Windpower Academy).

Sector Lead signature

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Name David Wells

Position THMA Renewables Associate

Date 16th April

Hull College Acceptance Signature

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Name _____

Position _____

Date _____