RENEWABLE ENERGY IN FIFE
Skills and Supply Chain
Fife aspires to be the centre of excellence for the renewables industry in Scotland, and in particular the offshore wind sector. This document highlights the supply chain capabilities and workforce skills available in Fife that could be utilised by offshore wind companies.

Located on Scotland’s East Coast, the nearest of the region’s port infrastructure is located only 25 nautical miles from the closest of the proposed Wind Arrays in the Firth of Forth. The Ports within Fife are experienced in handling a variety of vessels and cargo and are well placed to play a key role in the development of Scotland’s Offshore Wind industry.
The Offshore Wind Opportunity

The Offshore Wind market within UK waters is predicted to grow to over 5,000 turbines by 2020. Once installed, these turbines will need to be carefully operated and maintained over their 20 year life times.

Facilities located near to wind farms will benefit from reduced time and costs of travelling to and from sites. This presents a range of opportunities for companies based close to wind farm sites to carry out a variety of activities.

Market
There are plans for seven offshore wind farms in the waters around Scotland. Of those seven, three are just off the coast of Fife and they will account for 52% of the total capacity in Scotland, 4,765MW. In order to reach that level of capacity nearly 1,000 5MW turbines will be required.

Supply Chain
Fife is home to a wealth of manufacturing and engineering companies with expertise across the offshore wind supply chain. These include offshore engineering and installation experts Briggs Marine in Burntisland and marine environmental consultants SMRU Ltd in St Andrews.

Rapidly growing world-leading fabricators of subsea jackets Burntisland Fabrications (BiFab) are also based at the Energy Park Fife. BiFab are expanding their facilities at the Energy Park to increase their production capacity to over 100 subsea jackets a year.

World leading companies such as Oceaneering Umbilical Solutions and Rolls Royce are also located within the region.

Skills
Both Carnegie College and Adam Smith College are developing courses to meet the growing demand for workers with skills suitable for the renewable energy industry.

Carnegie College has launched a four-year wind turbine apprenticeship course in partnership with Siemens, REpower and the Weir Group.
A report by Scottish Enterprise and Scottish Renewables predicts that up to 28,000 people could be employed in the Scottish Offshore Wind sector by 2020.

Fife is well placed to supply a significant proportion of this workforce due to its strong manufacturing and engineering industry. Following competition from low cost economies the workforce has been upskilled leaving the region with a plentiful supply of highly qualified workers, many of whom have offshore experience.

However, if the offshore wind sector is to succeed it is vital to have a flow of suitably qualified staff moving into the industry. To address this challenge a public/private partnership has been formed to ensure local organisations can meet the needs of the industry. The partnership which is titled the Fife Renewable Energy Skills Group (FRES) currently comprises representatives from:

Siemens UK
Babcock Marine
Adam Smith College
Carnegie College
Elmwood College
Fife Council
Job Centre Plus
Skills Development Scotland
The Hydrogen Office

The Group has established the following priorities for action:

- To work with stakeholders to identify outstanding information gaps relating to the Renewables Sector and develop a research programme to address knowledge gaps
- To assess the future skills programme and training infrastructure requirements of the Renewables Industry and its associated supply chain and implement a range of tailored solutions
- To incorporate Renewables Sector training and education into the schools curriculum
- To promote the Renewables Sector as a career of choice and provide appropriate intelligence to schools and school careers advisors
- To help develop relationships between employers in the Renewables Sector and Fife schools
- To secure appropriate funding to meet the objectives of the Group
- To develop an awareness raising campaign to promote employment opportunities in this rapidly growing sector
- To provide regular updates on skills developments within the Renewables Sector
Meeting the skills demand

Two of Scotland’s leading colleges involved in renewables are based in Fife. Both these colleges have invested heavily and are gearing up to meet the industry skills demand for the future.

Carnegie College, Dunfermline
Carnegie College recently opened its Whitlock Energy Collaboration Centre in Rosyth. The Whitlock Centre is one of Scotland’s newest education, research and training resources dedicated to supporting the growth of the renewable energy sector and its supply chain.

The Centre in Rosyth is one of the largest and best equipped of its type in Scotland and provides approximately 10,000 square metres of purpose-built training facilities. Key attributes are an interactive demonstration facility for emerging energy technologies in addition to training and education programmes designed specifically for the Renewable Energy sector.

Carnegie College has been at the centre of the development of the UK’s first Wind Turbine Technician Modern Apprenticeship and is working with some of the UK’s leading companies, including Scottish and Southern Energy, Siemens UK, Babcock, BiFab and REpower UK in the development and delivery of bespoke training solutions for the Renewables industry.
Adam Smith College, Glenrothes
Adam Smith College is the largest provider of skills to the Fife economy with 5,000 full-time and over 25,000 part-time students. The College is heavily involved in the demanding job of preparing the current and future workforce for the renewable energy sector.

The development of the new £17.5 million Future Skills Centre in Glenrothes is central to the creation of the facilities that will underpin the College’s low carbon economy strategy. Renewables and low carbon technologies are at the heart of the facility which offers 5,100 square metres of learning space with a capacity for 1,900 students per year and 95 staff.

The Future Skills Centre has 31 specialist work shops with a further three purpose-built laboratories for science and 12 general classrooms complimented by £1.5 million investment in new equipment.

The Hydrogen Office, Methil
The Hydrogen Office, which forms part of Fife’s flagship Energy Park, is expected to become one of Europe’s leading locations for innovation and development of renewable technologies.

The project was set up to support the accelerated development of the renewable, hydrogen, fuel cell and energy storage industries in Scotland. This will be achieved by inspiring people; promoting opportunities in Scotland; improving access to
and understanding of the technology; facilitating research and development and enhancing educational facilities.

The Hydrogen Office energy system includes a 750kW wind turbine, 30kw electrolyser, 10kW hydrogen fuel cell and a geothermal source heat pump. The electricity generated from the turbine directly provides for the needs of the Hydrogen Office and surplus electricity is used to generate hydrogen through the process of electrolysis. This highly innovative, low carbon energy facility demonstrates how energy storage technologies such as hydrogen can enable Scotland to harness its vast renewable energy resources with greater ambition, scope and reliance by bringing into play opportunities not currently open to intermittent renewable energy sources.

The building also offers high spec, energy efficient office space to encourage the development or renewable energy technologies.
Supply Chain

A number of companies in Fife have experience of the Offshore Wind industry. Burntisland Fabrications Ltd (Bifab) has been supplying sub-structures for the renewable energy market since they completed two jackets for the Beatrice Talisman project. They have completed several projects including six sub-sea jackets for the Alpha Ventus wind farm off the German coast and 30 sub-sea jackets for the Ormonde field in the Irish Sea.

Fife also has a number of companies who have developed extensive expertise following years of experience in other markets including Oil & Gas and Defence. These companies are now seeking to apply their know-how to the Offshore Wind industry.

Companies in Fife

**BiFab** are world leaders in the fabrication of sub-structures for Offshore Wind turbines. They completed a number of projects including 30 sub-structures for the Ormonde offshore wind farm.

**Briggs Marine** are applying their Oil & Gas experience to the renewable energy sector. They can provide a number of services including the repair of submarine cables and the supply of vessels.

**Oceaneering Umbilical Solutions** is a world leader in the design and manufacture of subsea control umbilicals for offshore applications. They are now supplying cables to the renewable energy market.
Supply Chain directory

Fife has developed a Renewables Supply Chain directory which can be found at www.investiniferenewables.co.uk. The directory gives the Offshore Wind industry access to local companies with the relevant skills and experience of the industry.

This web based tool has been specifically designed to help technology developers, contractors and buyers easily identify and assess potential suppliers and their capabilities in Fife.

The directory also brings together companies who have extensive expertise that has been developed following years of experience in several markets including Oil & Gas and Defence and who are now seeking to apply their expertise to the Offshore Wind industry.

Rolls Royce has a facility in Dalgety Bay which is experienced in marine engineering. They use their expertise to supply O&M services in the form of maintenance technicians, refurbishment and repair.

Gray Fabrication are a steel fabrication and heavy rolling company who supplied transition piece components for Greater Gabbard and pile stopper pins for Ormonde.

Babcock Marine operates the former Royal Naval dock in Rosyth and has a large workforce with extensive marine engineering expertise.

SMRU Ltd is a marine mammal consultancy closely associated with the University of St Andrews. They help their clients meet regulatory requirements by assessing the impact of their devices on sea mammals.
The Invest in Fife team offer a free and confidential bespoke service. Whatever your requirement, we have the skills and experience to make your move to Fife as easy as possible.

We can help you with:

- Property Selection
- Land for Business Development
- Detailed local information such as demographics, local workforce, public transportation
- Familiarisation Trips
- Advice on Financial Assistance
- Set up discussion with other Fife Council departments i.e. Planning, Transportation
- Provide contacts within external organisations
- Help with local engagement

Invest in Fife has a proven track record of helping potential investors make their projects happen. We have also assisted a number of Fife-based companies with their local expansion plans.

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Renewables