

## **Orkney the energy islands**

The Orkney Islands lie across the Pentland Firth from the north-east tip of the mainland of Scotland. The Orkney area covers an area of nearly 975 km<sup>2</sup> comprising about 70 islands of which 17 are inhabited by a population of approximately 20,000.

With 50 years experience in the sector, Orkney is now recognised internationally as having some of the best resources in Europe for the research, development and testing of wind and marine renewable technologies, bio-energy and energy efficiency.

It is estimated that these islands could generate 18,000 GWh of renewable energy annually – more than is needed to meet the Scottish Executive target of 40% of Scotland's power from renewables by 2020.

These abundant physical resources are matched by the intellectual capital, built up over the years since Orkney became a key player in the oil and gas industries with the opening of the Flotta oil terminal in the mid 1970's.

Academic institutions and enterprising local companies continue to encourage the emergence of a broad spectrum of energy expertise that has been applied locally and exported all over the world. Community groups have also been quick to create and explore opportunities in the renewable sector. The small island community of Westray, for example, has aims to go 100% renewable with a combination of technologies including plans for a community run biogas facility.

Orkney is also home to EMEC, the European Marine Energy Centre, which has a global role to play in testing and verifying wave and tidal converters – crucial in turning prototypes into income generating technology.

With world-beating wind, wave and tidal resources, world-class test facilities, local enterprise, academic expertise and international experience in the energy business, Orkney has everything it needs to lead the field in renewables developments.

The past 2 years have seen the establishment of the EMEC tidal test centre and the successful establishment of a masters degree in renewable energy at ICIT. The number of local businesses and organizations actively engaged in both community and commercial scale renewables, including energy efficiency and bio-fuel related work, continues to grow in number (over 80 professionals working in the renewables sector and a further 200+ in wider energy related work – extensive skills base in the sector).

Although Orkney has been grid constrained for a number of years now recent initiatives seem set to create more capacity in the future. A new cable connection across the Pentland Firth is being explored by Scottish and Southern Energy (SSE) and OFGEM have announced that SSE can make use of the Registered Power Zone initiative and the Innovative Funding Initiative to implement a novel network management scheme which will increase the use of the existing grid on a non-firm basis.

It is important that these developments are taken forward sensitively and with public support. The siting, scale, ownership and local benefit from developments are all important concerns. OREF, the Orkney Renewable Energy Forum continues to work in partnership with Orkney Islands Council in leading a wide ranging debate on the islands' renewable energy future endeavoring to ensure that Orkney embraces the enormous potential of renewables with sensitivity and respect for the sustainability of our island community.

