

In this climate of change and growth, Northern Ireland is leading the way in green energy by offering an exceptional combination of engineering excellence and natural resources in a cost effective location.

Renewables

Northern Ireland's combination of skills availability and sound experience make it the ideal location for companies which want to make the most of the opportunities available in the renewable sector globally.

It has extensive experience in wind and marine energy, with expertise that can easily be transferred to other renewable sectors.

Over 400 foreign companies have chosen to locate in the region. Global organisations such as Caterpillar, DuPont, Bombardier, Montupet and Howden have all invested in Northern Ireland.

Investors are attracted by a loyal, disciplined workforce, highly qualified young people and a manufacturing and engineering tradition dating back to the earliest days of the industrial revolution. Northern Ireland ingenuity has created inventions such as the pneumatic tyre, Ferguson tractor, portable defibrillator and vertical take off jet.

The availability of skilled labour, a highly competitive cost base and commercially orientated universities continue to make the region a prime destination for inward investors.

'Can do' attitude

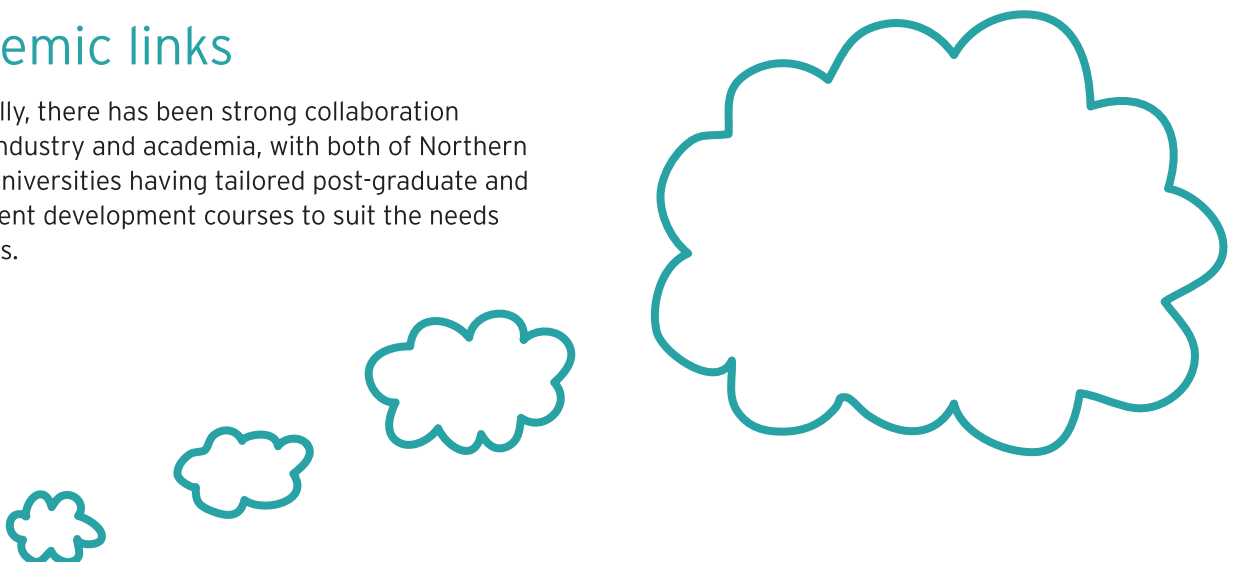
International firms with operations in Northern Ireland frequently cite the exceptional professionalism, problem solving capability and strong work ethic of its people and link this to tangible improvements in operating efficiency and process excellence and to higher levels of customer satisfaction.

Academic links

Traditionally, there has been strong collaboration between industry and academia, with both of Northern Ireland's universities having tailored post-graduate and management development courses to suit the needs of business.



On average 2,000 graduates qualify with degrees in engineering and IT-related degrees every year, ensuring a plentiful supply of young talent for investors.



Renewables sector in Northern Ireland

Why Northern Ireland?

Within Northern Ireland's well established heavy and precision engineering sector, there is extensive experience in areas of renewable energy such as wind and marine, and an abundance of skills that are readily transferable to other renewable energy sectors including biomass.

Wind

Northern Ireland is ideally situated, offering access to the world's fastest growing market for offshore wind. The United Kingdom has 40 per cent of Europe's offshore wind resource; and the support of proactive government policy with plans for 33GW installed capacity by 2020. Northern Ireland has easy access to the proposed wind farm sites in Great Britain, giving opportunities to companies to manufacture or complete near-market assembly of wind turbines and associated sub-sea structures.

Marine

Queen's University Belfast is recognised globally as a leading pioneer in the research and development of marine energy technologies with over 30 years experience. Marine energy in Northern Ireland has great scope for development as it has the best tidal resources in the UK and the unique sea bed around the north coast offers the potential to harness wave power. In Strangford Lough, near Belfast, the SeaGen project, a collaboration between Marine Current Turbines Ltd and Queen's University, is the world's first large scale commercial tidal stream generator and is four times more powerful than any other tidal stream generator in the world

Composites

For over 20 years Northern Ireland has been at the forefront of the research and development of composite materials which are increasingly being used in the

manufacture of large scale wind projects including wind turbine blades. New materials being developed are reusable and more durable, improving cost efficiency.

Manufacturing and pre-assembly

The legacy of world-class excellence and achievement lives on in a modern manufacturing sector which plays an important role in the Northern Ireland economy, accounting for around 11 per cent of employment.

Northern Ireland has a host of specialist manufacturers with relevance to the renewables and engineering sector. Harland and Wolff, famous for its history of shipping manufacture has a proven track record in the provision of delivery and assembly services to the off-shore wind industry, and in the development of experimental tide and wave power generators. SeaGen was built at Belfast's Harland and Wolff's shipyards.

Harland & Wolff also offers rental space on its vast site with excellent permanent heavy lifting capability.



Improve cost effectiveness

Northern Ireland's operating costs are highly competitive and significantly lower than the rest of the UK and Europe. A wide variety of business facilities are available at highly competitive costs. Salary costs are also lower in Northern Ireland, ranging between 20 and 40 per cent less than the UK and Ireland. Add to this workforce flexibility and skills and Northern Ireland ranks among the most cost competitive locations in Europe.

Access new and high quality labour pools

Finding and holding on to the right people with the right skills is vital to competitive advantage and long term profitability. Northern Ireland has well educated people with students consistently outperforming the achievements of other UK regions in school leaver qualifications.

Northern Ireland's colleges were the first outside the USA to offer training for wind turbine engineers. These specialised courses have produced more than 200 graduates to date. Carbon Zero is a new training initiative for experienced engineers wanting to grow or diversify their skills within the renewables sector.

Northern Ireland offers a strong skill base to support both traditional and emerging sectors. The current talent pipeline provides an experienced, highly educated workforce.

Research and development

Clusters currently active include the Integration of Renewable Energy Sources (including Wind) into Electric Supply Networks, Energy Storage and Marine Prototypes.

A number of highly respected research centres also exist which have been very active in the power and energy systems. Queen's University has completed research projects in:

- Turbine Development
- Tidal Power
- Wind Farm Capacity

University R&D Centres conducting research activities in the renewable energy sector include:

- Environmental Engineering Research Centre (EERC) - main research themes include Coastal Science and Engineering, Contaminated Land Remediation, Water Quality, Power Engineering and Renewable Energy.

- The QUESTOR Centre - international expertise in energy from biomass, environmental monitoring, wastewater treatment and environmental modelling.
- The Centre for Sustainable Technologies - undertakes both fundamental and applied research in the areas of Solar Energy, Biomass and Bioenergy, Clean Power Systems, Advanced Glazing, Heat Pumps, Energy Storage and Energy in Buildings, Advanced Composite Weaving, River Hydraulics and Hydropower.

Outstanding infrastructure

Northern Ireland has a number of ports providing international shipping access.

The Port of Belfast offers deep water not restricted by tides, an excellent permanent heavy-lift capability, a vast hard standing site, skilled workforce and a 24/7 operation for manufacture and assembly. It is also the only deep water port in the UK with over 100 acres of land available with planning permission in place for industrial development.

Northern Ireland offers a resilient digital network, providing high speed voice and data connections throughout the world. The region was the first in Europe to have 100 per cent access to broadband and it will also be among the first to operate and experience high speed next generation services with a 40-gigabyte per second transatlantic and terrestrial telecommunications link directly from Northern Ireland to North America and to Europe. This will provide secure reliable services at prices up to 20 per cent below market rates in London, Dublin, Manchester and Glasgow.

Accessible location

Belfast is a 90 minute drive from Dublin. New York is a six hour direct flight and there are nearly 30 flights each day to London and to many other European business destinations.

With you all the way

From initial enquiry to investment, Invest Northern Ireland will work with you to ensure your business gets off to a great start in Northern Ireland. A comprehensive range of support initiatives will help to ensure your ongoing business success.

For more smart reasons to choose Northern Ireland visit www.investni.com/invest or email invest@investni.com