



## Key Facts and Overview

- The environmental sector employs over 22,000 people and contributes approximately £1.2 billion to the regional economy.
- This is a high growth industry. Employment rates have increased by 3.8% in the last four years with a 33.4% increase in turnover during the same period.
- Around 1.6% of the region's annual electricity supply comes from renewables - approximately 25MW.
- Key investments include a £60m investment by SembCorp in a 30MW biomass power plant and the construction of the largest biodiesel plant in Europe (£38m Biofuels Corporation).
- The UK's first offshore wind farm was developed by Amec Wind and Shell Renewables at Blyth in Northumberland. A Round 1 offshore site will shortly be under development at Teesmouth and permission granted for Europe's largest brownfield urban wind farm at the Corus site in Tees Valley.
- Key companies such as **E-Connect, PB Power, n power renewables, Amec Wind, TNEI, Marine Projects International and Arup** are all operating at different levels in renewable energy sectors in the region.

## Industry Support Organisations

- **NaREC** (New and Renewable Energy Centre), creates and enables world-class new and renewable energy provision. **Facilities:** **Photovoltaic Technology Centre:** solar cell process line and characterisation is unique in UK. **Clothier Laboratories** is home to the UK's only commercial high voltage testing laboratory. **EnergyLINK Laboratory** addresses security, performance and interaction issues with connecting new equipment to existing energy systems. **Blade Testing Facility:** located on the quayside of a deep water port situated to handle blades up to 70 metres (and beyond). **Wave and Tidal Dock Facility** emulates a tidal race and provides a controlled environment and intermediate testing capability at typically 1/10th scale.
- **Renew Tees Valley** promotes the Tees Valley as a UK centre for renewable energy and waste management technologies through inward investment, the creation of new businesses and helping existing local businesses to develop or diversify into new markets in renewable energy and recycling.
- **Northern Offshore Federation: Renewables Club** represents 50 member companies that have also diversified into renewables and sustainable re-employing knowledge, expertise and facilities.
- **The Environmental Industries Federation (EIF)** are managing the development of the region's biomass activity.
- **Photovoltaic-NE** is an industry led network of companies active in the photovoltaic sector.

## Research

| Area                          | University Expertise  |
|-------------------------------|---|
| Biomass                       | Combined heat and power, GIS mapping regional renewable sources.  |
| Photovoltaics                 | Northumbria University's first building integrated photovoltaic installation and international expertise in R&D in photovoltaic cell and system development. Durham's international reputation in PV materials and devices. |
| Wind                          | Aerodynamic modelling of turbines, development of motor technology, drives, and power electronic control systems for grid connection.   |
| Wave/Tidal                    | Wave Energy Conversion and power transmission for offshore renewables.  |
| Power/Electrical Transmission | Research and design of power electronics/electric arrangements/network integration.   |



## Finance

There are many sources of finance and venture capital available to companies in the region. Unique in North East England is **Nstar** set up by One NorthEast. It focuses on high risk venture capital, and it partners with the commercial venture capital community to invest in new technology spun out of universities or created within the small to medium sized enterprise market. Nstar can create tailored supply chains for large corporations through this process. Nstar has total funding of £60m (\$108m) split into Proof of Concept Fund and Co-investment Funding.

## Market Access

The Model below demonstrates how all of the expertise and support organisations place North East England in a unique position to support companies in the commercialisation of research and getting new products to market. At the centre of the process is the Investment & Aftercare Team that will sit with you to understand your own individual requirements and come back with a tailored investment solution to include some or all of the elements below. From here in the UK or offices in North America, China, Japan, Korea, Australia, Norway and Germany, the team will help you get your products and services into the market.



## Case Study - SembCorp Utilities UK

SembCorp Utilities UK employs around 600 people and is a subsidiary of SembCorp Industries who employ 11,000 worldwide. The company is an industrial utilities and services business supplying steam and electricity to chemical manufacturing companies at the Wilton International site in the Tees Valley. Traditionally SembCorp has generated its utility products from a flexible mix of fossil fuels including coal, fuel oil and gas. Since August 2004 the company has added a new renewable fuel source of tallow to burn on an existing boiler to gain experience in renewables markets. Long-term plans are to spend £60 million on building a new 30 MW boiler specifically to burn wood. The new power station will require around 300,000 tonnes of wood per year and will comprise specially grown energy crops, wood from conventional forestry, sawmill chips and recycled timber. SembCorp has been working with farmers groups since the end of 2003 to encourage them to grow the coppice element. The new power plant has been designed to meet all the UK and European emissions targets by applying Best Available Technology (BAT).

## Contact details

To discuss the service further, or to receive an initial response to an investment proposal, please make contact by phone, fax, e-mail or post today.

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