



YORKSHIRE FORWARD

YORKSHIRE AND HUMBER — A LOW CARBON ECONOMY LEADER

Imagine a region that has made the Low Carbon Economy a working reality. One that has brought together groundbreaking businesses, dedicated public agencies and world class expertise. One that has turned problems into profits; obstacles into opportunities. That is Yorkshire and Humber's vision.

The Challenge is the Opportunity



The Region's
Development Agency

A TRANSFORMATION HAS BEGUN

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Assets for Change

Yorkshire and Humber's economy is evolving. The region became a heartland of heavy industry, coal mining and energy generation in the Industrial Revolution. Our economy is now far more diverse and strengths include advanced manufacturing, environmental technologies and financial services. Yorkshire and Humber's geography, its legacy of industry and energy production, and its forward looking outlook will put it at the forefront of a new, low carbon revolution.

Across the region there is huge scope to expand clean and renewable energy generation and to help businesses use energy efficiently. There are major opportunities to exploit growing markets in environmental technologies. And a concentration of coal fired power stations and industrial plants close to redundant North Sea energy infrastructure provide an ideal location to pioneer carbon capture and storage.

Though progress has been made, Yorkshire and Humber is still a very energy intensive region.

Our power stations provide 18% of the nation's electricity capacity. To achieve the UK's target of an 80% cut in emissions, our contribution will be crucial.

Assets that will enable the region to respond include a concentration of advanced manufacturing and engineering companies and research, energy and environmental remediation expertise. Our geography – with its land, ports and energy resources inland and offshore - further supports low carbon development.

These strengths have led to the national designation of two 'Low Carbon Economic Areas' in Yorkshire and Humber. These reflect internationally significant assets and cover Carbon Capture and Storage and Civil Nuclear*. The region is also moving forward in other low carbon areas where it has key strengths and opportunities - including offshore wind, biorenewables and low carbon finance.

* with the North West of England

YORKSHIRE AND HUMBER'S JOURNEY

A Track Record of Achievement

Yorkshire and Humber has established itself as a leader on climate change. It was the first English region to set a target to cut greenhouse gas emissions and its actions have been guided by groundbreaking research. Words and understanding have been backed by investment and action. Examples include:

CO₂ Sense

Yorkshire Forward established CO₂ Sense, a dedicated company to help businesses reduce their carbon footprint, improve resource efficiency and exploit new low carbon markets. CO₂ Sense drives key strands of action itself and works with partners such as Business Link Yorkshire, the Carbon Trust and Manufacturing Advisory Service to deliver other support. This approach helps businesses of all sizes to generate bottom line returns from low carbon opportunities, including the top 100 businesses in the region. Innovative projects include a joint venture with Dalkia to build and run a 60,000 tonne wood pellet mill, opening up major markets to use biomass as a power source.

The Centre for Low Carbon Futures

Leeds, Sheffield, Hull and York universities have collaborated with Yorkshire Forward in a £50m partnership to create this world-class research centre. Integrating research across disciplines including engineering, environmental science and economics, it will build and communicate the knowledge needed to optimise carbon efficiency and adapt to climate change.

Flagship Sustainable Buildings

Yorkshire Forward promotes the attainment of exacting environmental standards in the buildings it invests in. A growing portfolio of developments demonstrate what vision and good design can achieve. These include business centres, offices and public buildings. In 2006, the 'Ecodepot' in York became the biggest straw built building in Europe, using local materials to achieve outstanding water and energy efficiency. When assessed, the Innovate Green Office in Leeds gained the highest BREEAM rating ever achieved. The Carnegie Cricket Pavilion in Headingley will demonstrate low carbon building

methods and showcase renewable technologies such as ground source heat pumps, solar panels and water recycling.

Local Low Carbon Futures

Local authorities are showing what can be done at community level to help businesses, create jobs and reduce carbon emissions. Councils in Barnsley and Sheffield have made great progress in implementing biomass schemes, helping to develop the biomass fuel market in a former coal mining heartland. Kirklees Council have developed one of the UK's largest solar powered housing schemes. Wind turbines are now installed on council offices and a groundbreaking scheme has enabled all households to install loft and cavity wall insulation free of charge. With DECC, Yorkshire Forward supports Community Energy Solutions to offer affordable energy solutions to communities without mains gas supplies, including through renewable energy options such as heat pumps and biomass boilers.



Civic Centre 3, Huddersfield. Kirklees Council www.kirklees.gov.uk



SunCities; new build homes at Primrose Hill. Yorkshire Metropolitan Housing

TO A LOW CARBON ECONOMY

Future Developments and Opportunities



Yorkshire and Humber has the potential to become a world leader in the Low Carbon Economy. Regional leaders from Yorkshire Forward, local government and business back this vision. With its partners, Yorkshire Forward is bringing together national and local interests, public and private sectors, and environmental and economic imperatives. Immense opportunities are on the horizon. Securing them will deliver new jobs, sustainable growth and environmental benefits across the region.

Carbon Capture and Storage (CCS)

Yorkshire and Humber is ideally placed to develop a large scale CCS network, as the region has a cluster of major CO₂ emitters close to the depleting gas fields of the North Sea. Yorkshire Forward has brought together companies with the drive, expertise and capacities needed to make CCS a reality. Such a network could be designed to transport and store 60mt of CO₂ a year by 2030 (~10% of total UK emissions) and will support tens of thousands of jobs. The designation of Yorkshire and Humber as the nation's Low Carbon Economic Area on CCS reflects its leading edge capabilities. It is backed by European investment in what could be the world's first commercial scale CCS plant at Hatfield in South

Yorkshire, and investment from DECC, the Technology Strategy Board and the Northern Way in a pioneering pilot CCS scheme at Ferrybridge Power Station. That expertise will open up potentially huge economic and export opportunities as CCS is developed worldwide.

A Global Centre for Offshore Wind Energy

Development sites near the Humber estuary offer the perfect base to produce offshore wind turbines and allow their transit by sea. Skilled labour and suppliers of parts and materials are within easy reach, whilst the Humber Ports (the busiest in England), provide a gateway to the market opportunities and wind resource of the North Sea.

The Nuclear Energy Supply Chain

Yorkshire and Humber (with the North West) has been designated as a Low Carbon Economic Area for civil nuclear energy. It already has a cluster of companies able to make the high integrity nuclear grade products that the industry demands. A new Nuclear Advanced Manufacturing Research Centre with partners including Sheffield University in South Yorkshire will provide a focal point for the civil nuclear manufacturing industry in the UK, whilst future developments include Rolls-Royce's planned civil nuclear factory. Government

support will further allow Sheffield Forgemasters to make specialised nuclear components. Alongside Yorkshire Forward's support for the Nuclear Industry Association' supply chain initiative, the Advanced Manufacturing Research Centre and the National Metals Technology Centre, these developments will stimulate further investment, jobs, and business opportunities across the nuclear supply chain.

Cleaner Power Generation and Biorenewables

Clean and renewable energy is instrumental to reducing carbon emissions and it is a rapidly growing area of the economy. The region already produces more biomass energy than any other in England. With the development of a pioneering 'biorefinery' in York it will be placed to exploit new markets for products that are based on plant matter not finite petrochemical resources. Leading businesses are planning investment in biofuel production in the region, and coal fired power stations such as Drax, the largest in England, are exploring co-firing with biomass and expanding local supplies of biomass to support that. Further opportunities lie in other renewables including wind, solar and marine, as well as in clean coal technologies and the development of smart grids and metering.

THE NEXT CHAPTER

Local Government Opportunities and Low Carbon Infrastructure

Local government areas across Yorkshire and Humber have exciting low carbon ambitions. In the Dearne Valley, once at the centre of the Yorkshire Coalfield, Doncaster, Barnsley and Rotherham councils are leading a new Eco-Vision to transform the area. With sustainable businesses, jobs and homes, food and climate adaptation, it aims to have a better quality of life and environment, and the lowest carbon footprint of any comparable place in the UK within 10 years. The Leeds City Region is a pilot area for a new Low Carbon Framework and has ambitious plans for new 'Urban Eco*Settlements' and retrofitting existing stock.

And More Besides...

Action in other areas will support those highlighted as part of the region's wide and integrated approach. Investment in infrastructure and skills will provide

the foundation for the region's low carbon transition. That includes training people in the skills required in new low carbon industries, ensuring the right understanding, attitudes and financial systems are in place, and tailoring transport systems, buildings, planning and land management to support low carbon goals. Adapting to a changing climate is also essential at the same time as we strive to reduce emissions. All of these areas of work offer business opportunities that can deliver for people, the environment and the economy, and secure the region's long term future.

The Next Chapter

Opportunities to become a genuine world leader in large, expanding and long term markets do not arise often. Even less so in fields where the region has natural and distinctive advantages. Yorkshire and Humber has the people, businesses and agencies; the skills, ideas and the determination to seize these

opportunities. Doing so will turn inherited problems into new prospects and open up huge economic, employment and export potential in the process. We realise that the transition to a truly sustainable low carbon economy will take time. But we are convinced that the implementation of several initiatives of national and international significance will deliver a critical mass of leadership, action and innovation.

Partners within the region have the drive and commitment to make the vision of a sustainable Low Carbon Economy our working reality. Whether your interest is commercial, social or environmental, make sure you are part of it.



OVER THE NEXT TEN YEARS WE WILL MOVE FROM A REGION WITH A STRONG TRACK RECORD AND GREAT AMBITIONS TO ONE AT THE FOREFRONT OF DEMONSTRATING THE LOW CARBON ECONOMY IN ACTION

Biomass co-firing project. Drax Power Ltd www.draxgroup.plc.uk



CONTACT US

If you want more information on how we can help you succeed in one of the UK's most cost effective and innovative regions, contact our investment team on +44 (0)113 3946000, or email us at businessdevelopment@yorkshire-forward.com or go online at www.investinyorkshire.com

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