

Lincolnshire UK

The Low Carbon Energy & Industry Investment Opportunity





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Lincolnshire UK: The Low Carbon Investment Opportunity

Lincolnshire is at the forefront of the UK's Green Industrial Revolution, creating profitable opportunities for Low Carbon energy and industrial businesses aligned with ambitious national sustainability goals.

Building on established strengths in energy generation, energy-intensive industries, and port logistics, including within the Humber Energy Estuary, the area is home to the UK's most ambitious Industrial Decarbonisation project, a dynamic Circular Economy cluster, and the country's leading Offshore Renewables hub – each presenting significant growth potential for companies throughout the supply chain.

Low Carbon businesses investing In Lincolnshire can benefit from a highly developed industry ecosystem with the potential to add value while reducing project costs and risk. The area's university and cluster organisations provide access to advanced low carbon research and innovation, in specialisations including sustainable power systems, process manufacturing, Offshore Renewables, and Industry 4.0 technologies. This knowledge and expertise is complemented by a skilled, highly motivated technical workforce that leads the UK in key industry classifications, supported by education providers working with businesses to meet their specific skills needs. Additional benefits include cost-effective sites and properties, potentially with Freeport incentives and large industrial power supplies, and the infrastructure and global connectivity provided by a major port logistics cluster.

That's why Lincolnshire is leading the UK in Low Carbon energy and industry, and why major businesses including SSE Thermal, Equinor, Ørsted, RWE and Altalto are investing here.





Growth opportunities aligned with ambitious UK sustainability goals



UK-leading industry clusters in Low Carbon energy and industrial sectors



Advanced Low Carbon research, innovation and technologies



A skilled energy and industrial workforce that is outstanding in the UK



Cost-effective industrial sites and properties, some with potential Freeport benefits



Excellent connectivity and logistics, for fast access to UK and global markets



Dedicated support for your business investment project

The UK Low Carbon Market Opportunity

The UK presents high-value market opportunities for businesses engaged in low carbon technology development, energy generation and industrial supply chains.



In 2019, the UK became the first major country to legislate for Net Zero carbon emissions by 2050. Priority themes in the government's 10-Point Plan for a Green Industrial Revolution include renewable energy generation, industrial decarbonisation, and low carbon transportation.

Key areas of opportunity include:

Industrial Decarbonisation: The UK's ambitious targets for reduced industrial emissions will require major investments in technologies including clean hydrogen and CCUS (Carbon Capture, Utilisation and Storage), providing a basis for more sustainable growth in energy-intensive industries.

Circular Economy: The UK's Net Zero 2050 strategy is accompanied by further ambitious targets including the elimination of avoidable plastic waste by 2042 and zero avoidable waste by 2050. Regulations incentivising circular economy investments include the landfill tax and the renewable transport fuel obligation.¹

Offshore Renewable Energy: The UK is Europe's largest offshore wind market, with a 60% lifetime target for UK sourcing of content. The UK Government wants offshore wind to power every home in the UK by 2030.²

These ambitious strategies and targets are creating significant UK investment and growth opportunities focused on a small number of hubs for energy generation, energy-intensive industry and offshore wind, in particular Lincolnshire's South Humber Bank.



World-leading Emissions Reduction Targets

**Net Zero
Carbon
2050**

Ambitious Waste Reduction Targets

2042
Zero Avoidable
Plastic Waste

Europe's Biggest Market
Opportunity



Data is for the United
Kingdom. Northern
Ireland is not shown
on the map.

Lincolnshire: the Low Carbon Industrial Investment Opportunity

Lincolnshire and the Humber's world-leading decarbonisation projects will create sustainable growth opportunities for energy, industrial and low carbon technology companies.

The Humber is home to one of the UK's leading industrial clusters, and the country's most carbon intensive. Through large-scale investments in infrastructure and breakthrough green technologies, major collaborative projects including **Zero Carbon Humber** and **Humber Zero** will enable low carbon power generation, and the production and distribution of low carbon hydrogen for use as a sustainable fuel and feedstock. Through the **Viking CCS** project, captured CO₂ will be transported by pipeline for storage in sub-North Sea cavities. Key developments within the strategy include Keadby Hydrogen (SSE Thermal and Equinor) – the world's first at-scale hydrogen power plant, which will deliver zero emissions at the point of combustion. The region's Energy from Waste and larger Biomass plants will also be potential CO₂ sinks once Carbon Capture, Utilisation and Storage (CCUS) is established.

Immingham Green Energy Terminal is being developed by Associated British Ports and Air Products to produce up to 76,000 tonnes of green hydrogen per year from imported renewable energy (ammonia). Facilitating the decarbonisation of UK industry, the terminal will be a multi-user liquid bulk facility with the potential to attract further green energy projects.

For businesses in sectors including power generation, energy-intensive manufacturing (e.g., chemicals, biotechnology and pharmaceuticals), the circular economy (e.g., waste recycling), and the low carbon transport supply chain (e.g., vehicles, batteries, and fuels), Greater Lincolnshire presents a unique opportunity for sustainable, low carbon business growth.





zerocarbonhumber.co.uk

Zero Carbon Humber

Humber Net Zero carbon cluster consortium



humberzero.co.uk

Humber Zero

Collaborative Industrial Decarbonisation project



vikingccs.co.uk

Viking CCS

Carbon Capture & Storage (CCS) project



imminghamget.co.uk

Immingham Green Energy Terminal

Green hydrogen production



ABP

Immingham Green Energy Terminal partner

Air Products

Immingham Green Energy Terminal partner

British Steel

Steel manufacturer (Scunthorpe Steelworks)

Drax

Bioenergy with CCUS and negative emissions

Harbour Energy

North Sea oil & gas producer



Ørsted

Offshore wind development & operations

Phillips 66

Humber Refinery operator

SSE Thermal

Thermal Power Stations operator

Humber H2ub®

Low carbon hydrogen production

VPI Immingham

CCGT power station operator

Lincolnshire: the Circular Economy Investment Opportunity

Lincolnshire presents a unique combination of location advantages for investing Circular Economy businesses.



The area's South Humber Bank is home to a fast-growing cluster of companies producing energy, innovative fuels and products from waste, incentivised by the UK's ambitious carbon and waste reduction legislation and targets.¹ Recent investors including Altalto and Greenergy benefit from the skilled technical workforce, services, and expertise available within one of the UK's major energy and process industry clusters. Location advantages include tri-modal freight connectivity (road, rail and sea), and established Refuse Derived Fuel (RDF) feedstock supply chains, based on Immingham's status as a major port for RDF exports.² Future opportunities potentially exist for energy generators to supply private wire electricity and steam to industrial investors.

As a UK-leading location for food production and manufacturing, the wider Lincolnshire area presents significant opportunities for investing businesses specialising in food waste recycling and the manufacture of recycled food packaging. Leading businesses located in Lincolnshire include Clean Tech (rPET manufacturing), BioteCH4 (anaerobic digestion), CorrBoard Bioenergy (energy and fuel from organic waste), and Omni-Pac (recycled and recyclable food packaging).

Locations across Lincolnshire offer available development sites, including some with Freeport incentives, and local authority planning teams that actively support industrial Circular Economy investment projects.



Image Credit: Altalto, waste-to-fuels investment

ALTAUTO

Altalto

Sustainable fuels from waste
for aviation & transport

BioteCH₄
Adding value

CLEAN TECH
A PLASTIPAK COMPANY

CorrBoard Bioenergy Ltd

Greenergy

OMNI-PAC GROUP

CorrBoard Bioenergy

Energy and biofertiliser
from food waste

Greenergy

Europe's largest biofuels
from waste facility

Omni-Pac

Eco-responsible recycled
and recyclable packaging

Lincolnshire: the Offshore Renewable Energy Investment Opportunity

Lincolnshire is at the heart of the UK's Offshore Renewables sector, presenting growth opportunities for businesses throughout the supply chain.

Being optimally located to service North Sea wind farm zones including Hornsea 2, the world's largest, the Port of Grimsby is well established as the UK's leading Operations and Maintenance (O&M) hub. Businesses located there include Ørsted, Siemens Gamesa, RWE, SSE Renewables and GLID.

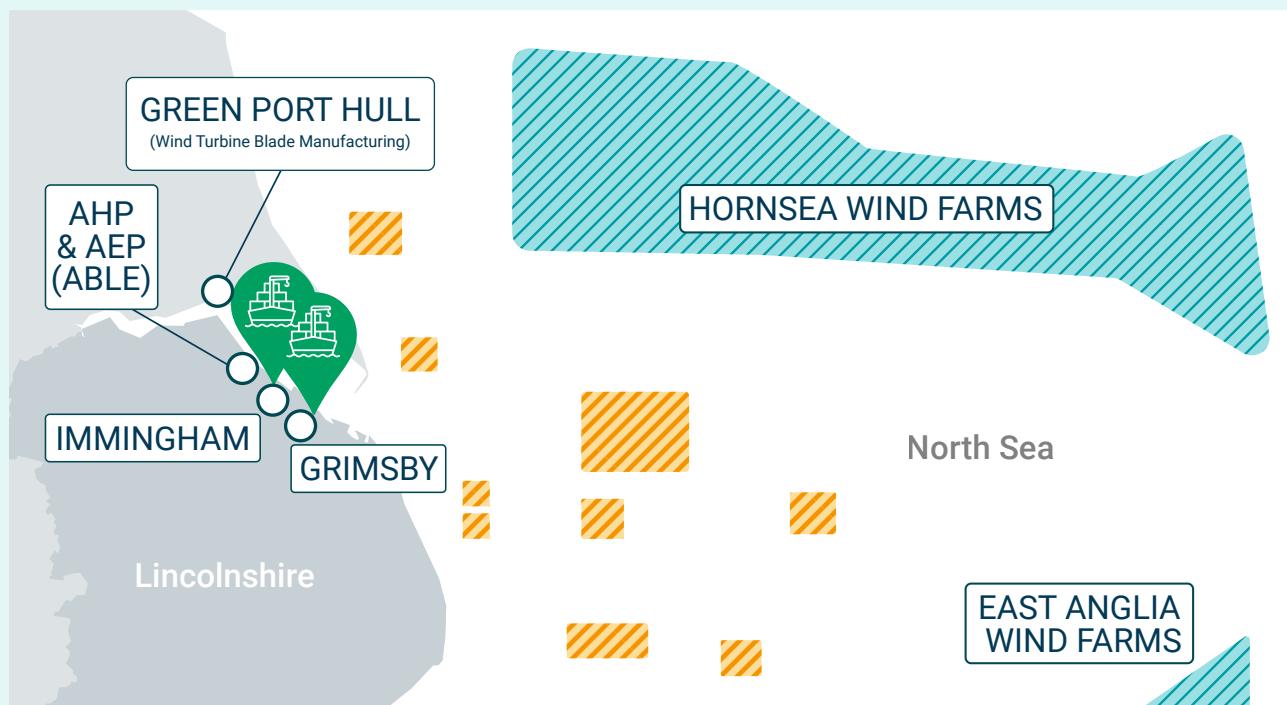
Knowledge assets within the Grimsby cluster include Ørsted's state-of-the-art East Coast Hub, employing 350 people with a focus on raising standards in offshore wind O&M,¹ and the ORE Catapult's O&M Centre of Excellence, delivering innovation and technologies to support the growth of O&M in the UK. The ORE Catapult's 5G PORTAL will accelerate development of a new generation of digital technologies essential for the large-scale expansion of offshore wind farms.²

Also on the South Humber Bank, Able Energy Park (AEP) offers 292 ha of developable land ideal for renewable energy production, storage, and port-related activities.³ The wider Humber Energy Estuary's Offshore Renewables ecosystem includes the UK's only wind turbine blade manufacturing facility (Siemens Gamesa), specialised logistics infrastructure and sector-focused skills providers.

With sustained growth projected and a 60% lifetime target for UK-sourced content,⁴ Offshore Renewable Energy is a key pillar of Lincolnshire's low carbon capability, presenting significant opportunities for expanding businesses across O&M, manufacturing, technology, and logistics supply chains.

Source: (1) Ørsted.co.uk (2) ore.catapult.org.uk (3) ableuk.com (4) gov.uk





Ørsted
Offshore wind development & operations



Siemens Gamesa
Offshore & onshore wind turbine technologies



**Able Humber Port (AHP)
Able Energy Park (AEP)**
Renewable energy sector port facility



RWE
Renewable energy & offshore wind power



SSE Renewables
Offshore wind development & operations



ORE Catapult
The UK's Offshore Renewables O&M Centre of Excellence

UK-Leading Low Carbon & Related Industry Clusters

Lincolnshire is home to the UK's leading Offshore Renewable Energy cluster, one of the country's top-4 chemicals clusters, diverse process industry capacities (including waste recycling), and related industrial sectors including ports, logistics, and offshore oil and gas.

UK Government data for the area show very high industry concentrations in sectors including chemicals and refined petroleum products manufacturing, reflecting an available skilled workforce and highly developed supply chains for investing process industry businesses.

As a new technology sector, Offshore Renewables does not have a dedicated industry classification. However, the data show high industry concentrations in categories including Machinery and Equipment Repair and Installation, and Logistics, highlighting transferable technical skills and supply chain capabilities. Overall, Lincolnshire is one of the UK's industrial heartlands, with high concentrations of manufacturing industry in all local areas.

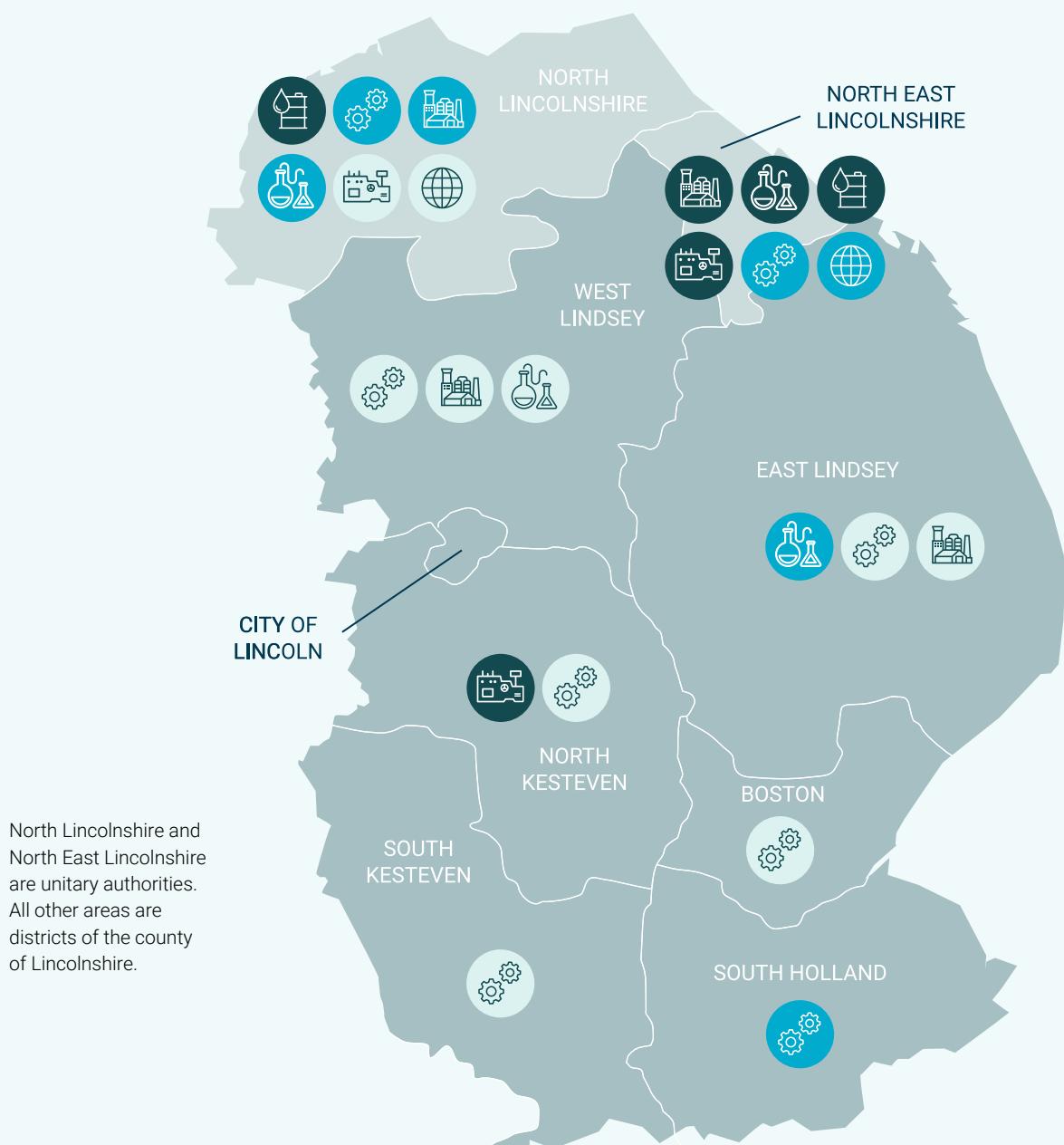
Significant Manufacturing & Industrial Clusters in Lincolnshire (GB Average = 1.0)

Area	Manufacturing (All) ¹	Chemicals ²	Basic Chemicals ³	Refined Petroleum Products ⁴	Machinery/Equipment Repair/Installation ⁵	Logistics & Distribution ⁶
Lincolnshire	1.9	1.6	3.7	9.4	1.5	
Boston	1.7					
East Lindsey	1.3	2.0	5.0			
Lincoln						
North East Lincs.	2.2	5.5	17.4	5.2	3.6	1.8
North Kesteven	1.9				3.9	
North Lincolnshire	3.4	2.0	2.0	58.9	1.3	1.6
South Holland	2.4					
South Kesteven	1.3					
West Lindsey	1.7	1.3	2.0		1.2	

Location Quotients (LQs) are an established industry clustering metric, measuring the ratio of local industry sector workforce numbers to the GB average (represented by 1.0).

LQs (Industry Clustering)

- Very High
- High
- Above GB Avg.

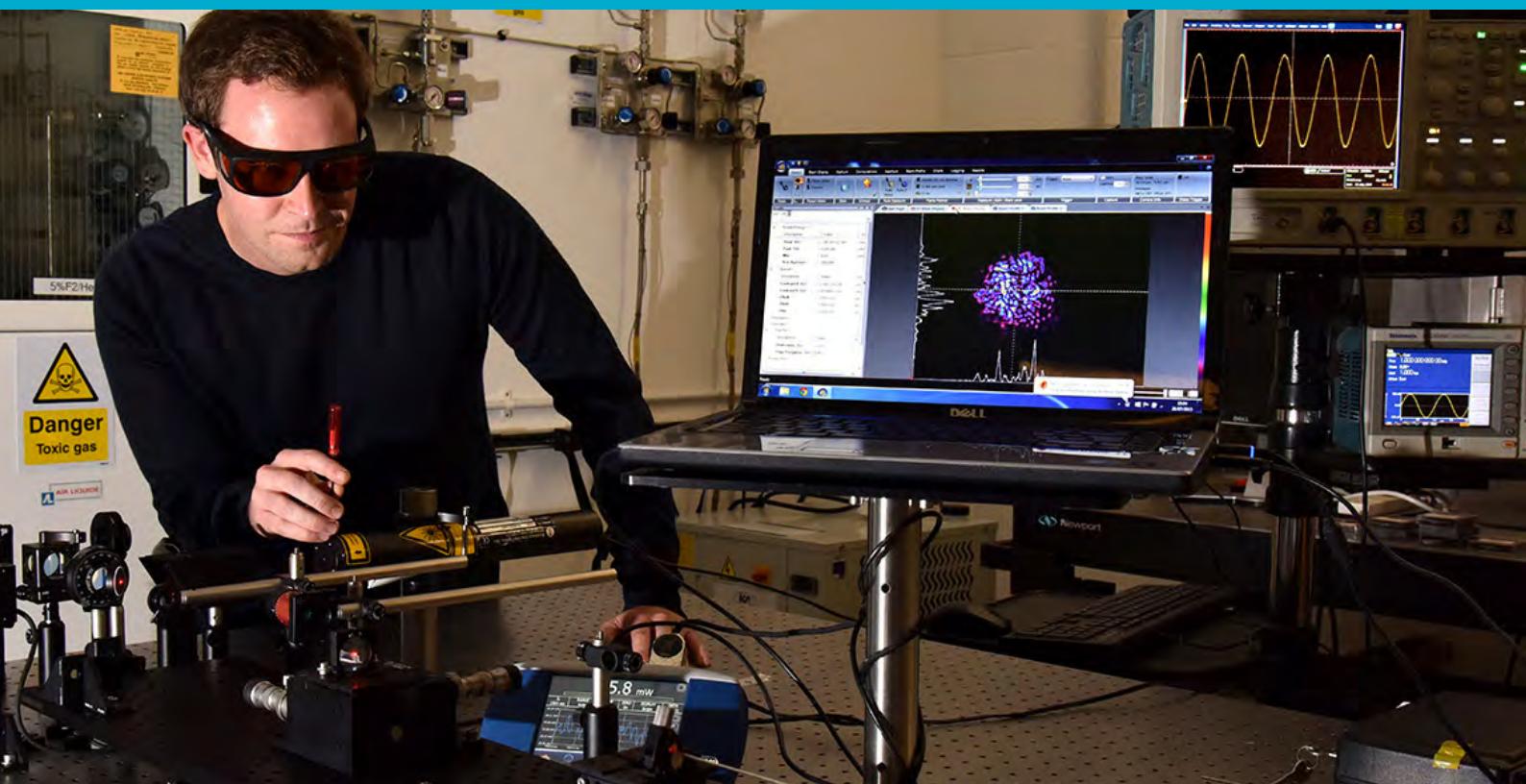


Low Carbon Knowledge, Research & Technologies

Lincolnshire's university and cluster organisations provide investing businesses with access to specialised low carbon research and innovation.

Integrating advanced engineering and digital expertise, the University of Lincoln's research capabilities enable more sustainable energy generation, power systems, manufacturing, industrial processes and supply chains. As a UK leader in Industry 4.0 R&D, the university's dedicated research centres apply AI, machine learning, Big Data analytics, Robotics and Automation, and Internet of Things technologies to industry challenges including improving sustainability, energy efficiency and productivity.

The Humber's low carbon cluster includes research and technology organisations and industry partnerships dedicated to supporting the sector. The Offshore Renewable Energy (ORE) Catapult's O&M Centre of Excellence is a catalyst for collaborative research, innovation, testing and validation, and supply chain development. Aura, led by the University of Hull, is a powerful consortium of companies including Ørsted and Siemens Gamesa, universities, and research providers including ORE Catapult. Both organisations are committed to helping companies and supply chains in the sector to innovate, expand, implement best practice and maintain competitive edge.



Net Zero (Research Strength)

Supporting the transition to a low carbon future including sustainability, renewable energy and the circular economy

Sustainable Energy & Power Research Group (PEG)

Low-carbon, smart and renewable power and energy research; sectors include industrial, commercial, automotive and aerospace

Sustainable Systems (Research Theme)

Themes include biofuel production and generating clean, renewable hydrogen energy

Lincoln Centre for Autonomous Systems (L-CAS)

An internationally renowned centre for cross-disciplinary research in robotics and autonomous systems



UNIVERSITY OF
LINCOLN

lincoln.ac.uk

ORE Catapult O&M Centre of Excellence

Part of the UK's leading Technology and Innovation Centre for the Offshore Renewable Energy sector

CATAPULT
Offshore Renewable Energy

ore.catapult.org.uk

Stabilising the National Grid (Research Theme)

Applying Internet of Things technologies to stabilise industrial energy demand (Demand Side Response)

Aura Collaboration Cluster

UNIVERSITY
OF HULL



aura-innovation.co.uk

Partnership including major companies, universities and technology organisations, focused on driving UK offshore wind sector growth

Workforce, Education & Skills for Low Carbon Sectors

Lincolnshire's energy and industrial cluster locations provide access to large, technically skilled labour forces that are outstanding in the UK.

Transferable Industrial Skills: Focused on the South Humber Bank, Lincolnshire's cluster locations provide businesses with direct access to large labour pools with the transferable skills required for low carbon energy and industrial investment projects. In comparison with key competitor locations in England (local authority areas aligned with North West, Teesside and East Anglia clusters), individual Lincolnshire areas offer the largest number of workers in Manufacturing (all),¹ Refined Petroleum Products Manufacturing,² and Machinery and Equipment Repair and Installation.³

Manufacturing: With 66,000 people working in the sector, Lincolnshire is one of the UK's manufacturing heartlands. As a percentage of all workers, the area's manufacturing labour force is 1.9 X the Great Britain average.¹

Cost Advantages: Lincolnshire combines workforce availability and skills with significant labour costs savings: 10% lower than the Great Britain average.⁴

For businesses investing in Lincolnshire, the area's established, skilled and highly motivated industrial workforce enables recruitment, fast project delivery and productivity.

Sources: (1-4) ONS BRES 2022: (1) SIC-C (2) SIC192 (3) SIC33; (4) ONS ASHE 2023, Gross Avg. Weekly Pay



Lincolnshire's educational institutions are focused on meeting the specialised skills requirements of the area's energy and industrial businesses.

Advanced Industrial Skills and Training Ecosystem

Lincolnshire is home to a highly developed ecosystem of education and training providers aligned with the needs of low carbon energy and industrial businesses. The University of Lincoln and further and higher education colleges are complemented by specialist providers in sectors including offshore energy, marine, chemicals and process manufacturing, ensuring a sustainable skilled workforce for investing businesses.

Higher Education: The University of Lincoln

The University of Lincoln delivers courses and qualifications aligned with research strengths and the needs of industry, including Mechanical, Electrical and Electronics Engineering; Chemistry; Robotics; and Autonomous Systems. The university is recognised for excellence in industry engagement and achieved the best possible 'Gold' award in the UK's national Teaching Excellence Framework in 2023.



enlutc.co.uk



maersktraining.com



hota.org



lincoln.ac.uk



grimsby.ac.uk

Grimsby Institute

Grimsby Institute delivers further and higher education vocational courses in subjects including electrical, electronic, mechanical and general engineering, health & safety, and business and management. The specific skills and qualifications required by the offshore wind sector are delivered through the Institute's Engineering and Renewable Energy Centre.



northlindsey.ac.uk



ucnl.ac.uk

North Lindsey College (NLC) University Campus North Lincolnshire (UCNL)

Further education courses at NLC's Engineering Technology Centre including renewable, electrical and mechanical engineering. Apprenticeships are delivered for leading businesses including Siemens Gamesa.

UCNL offers university-validated degree courses including mechanical, electronic and electrical engineering, encompassing automation, mechatronics, and digital engineering technologies (Industry 4.0).

CATCH

CATCH is an industry led partnership delivering skills and qualifications for the process, energy, engineering and renewables sectors. The organisation's

£12 million facility enables industry-authentic training without the risks of live operational environments. CATCH works with multiple, leading training providers to deliver the best solutions for partner businesses. Ambitious plans include a new, £60 million National Net Zero Training Centre.



catchuk.org

HETA (Humber Engineering Training Association)

HETA's customised training solutions for businesses include upskilling existing workers and recruiting and training apprentices entering the labour market. The association's fully managed Advanced Apprenticeship Scheme serves sectors including energy, chemicals and process manufacturing, providing skilled technicians qualified to industry competent standards.



heta.co.uk

Lincolnshire

Manufacturing Workforce¹

66,000

X 1.9

Manufacturing Workers

vs. GB Average
(% of Total Workforce)

Labour Costs (Average)²

- 10%

vs. GB Average

Workforce Comparison: UK Energy & Industrial Clusters

Lincolnshire Areas vs. Key UK Competitor Locations³

North Lincolnshire

No.1

No. of
Manufacturing
Workers¹

No.1

No. of Refined
Petroleum Products
Manufacturing
Workers⁴

North East Lincolnshire

No.1

No of Machinery &
Equipment Repair
& Installation
Workers⁵

Lincolnshire Areas

Manufacturing Workforce (% of Total) vs. Great Britain Average¹

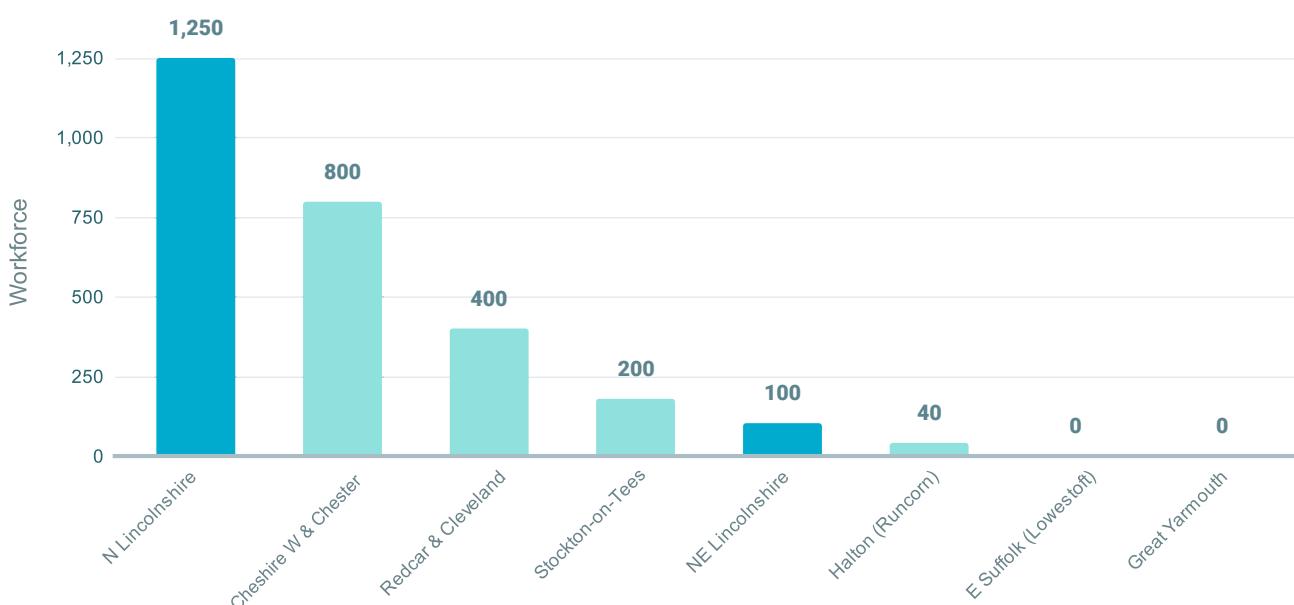


Comparisons of Major Energy & Industrial Cluster Locations in England (Local Authority Areas)¹

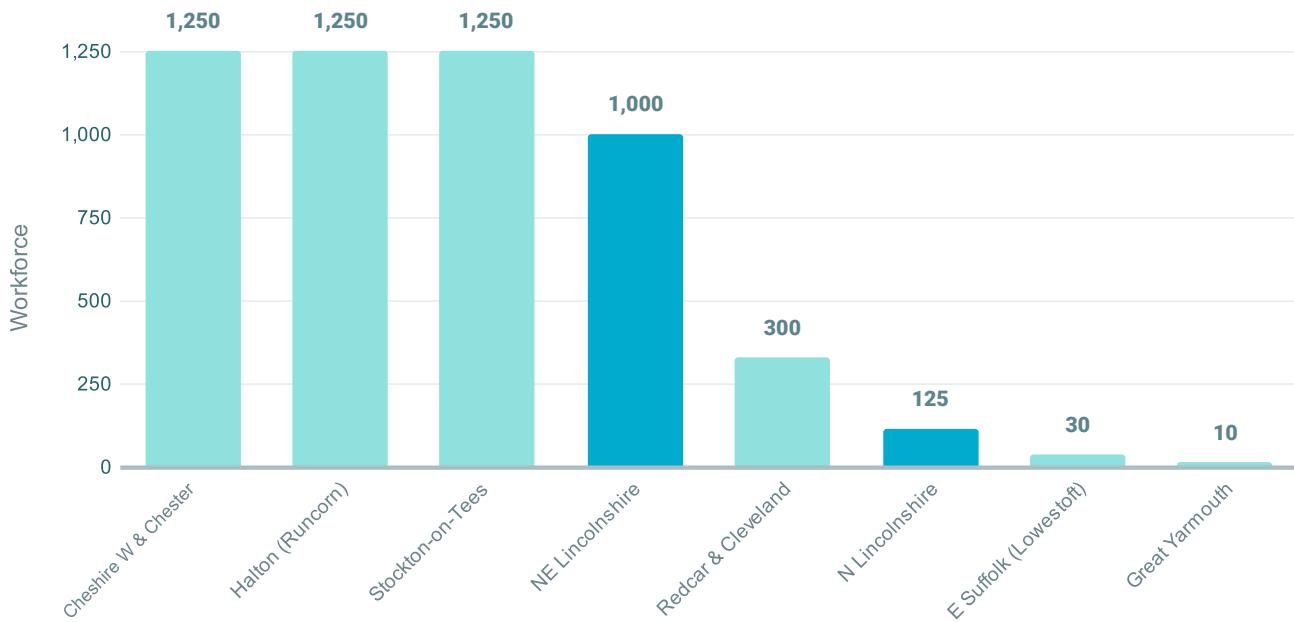
Manufacturing Workforce (Numbers)²



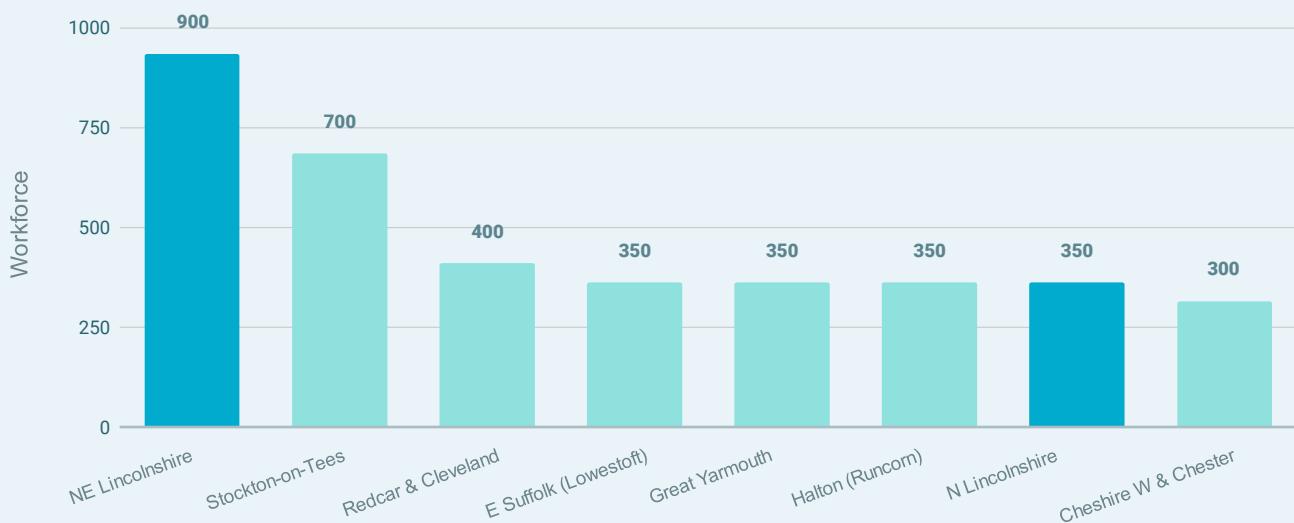
Refined Petroleum Products Manufacturing Workforce (Numbers)³



Basic Chemicals Manufacturing Workforce (Numbers)⁴



Machinery & Equipment Repair & Installation Workforce (Numbers)⁵



Industrial Sites & Property Solutions

Lincolnshire offers a range of high-quality, cost-effective sites and property solutions for investing low carbon energy and industrial businesses, including:

- Fully serviced, consented industrial sites, ready for immediate development with freehold or leasehold tenancies
- Sites with large industrial power supplies, potentially from renewable sources
- On-port and port-adjacent sites, some potentially with Freeport tax, customs or planning benefits
- Fast access to key UK industrial and logistics hubs, ports and airport
- Significant cost savings versus key competitor UK energy and industrial hubs



Property Cost Savings

- 30%

vs. Gt. Yarmouth/Lowestoft

- 15%

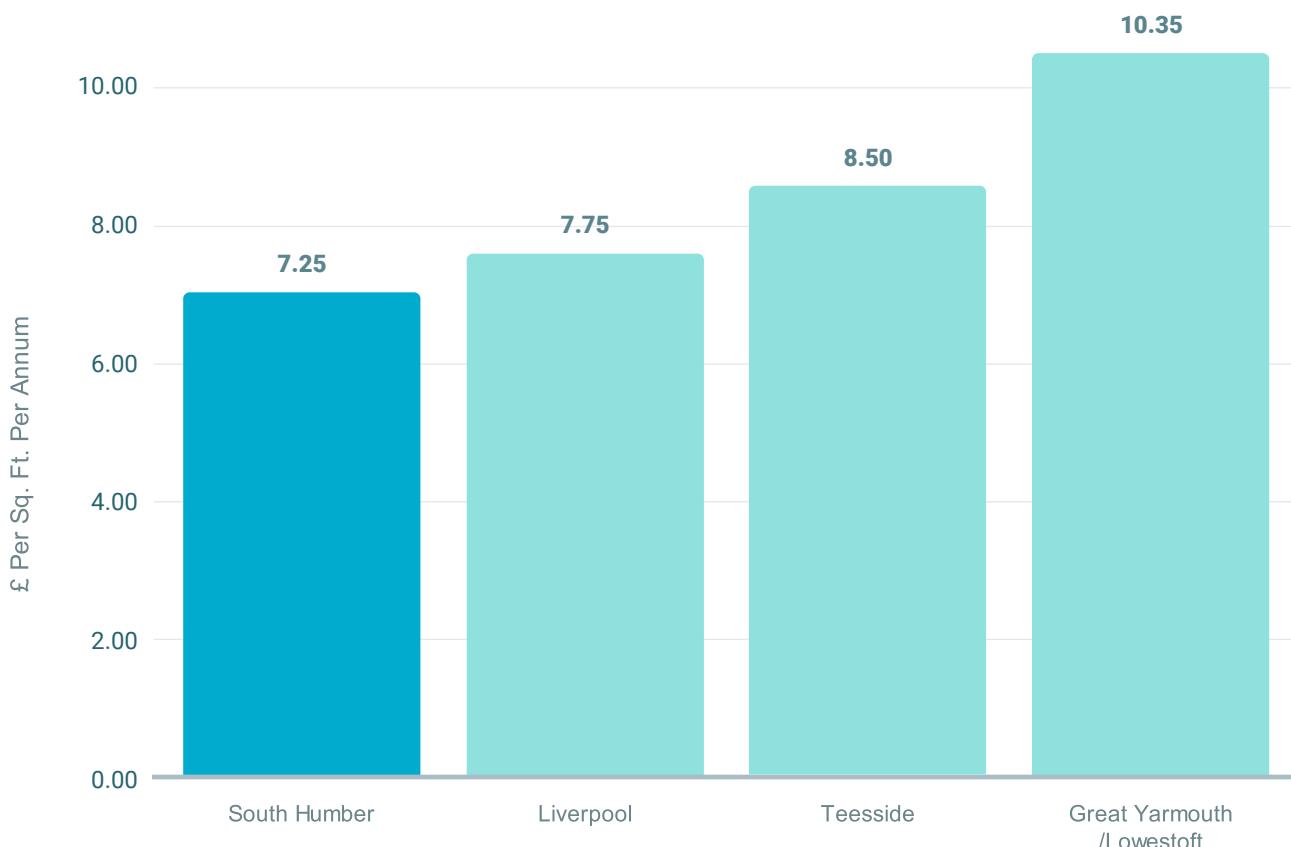
vs. Teesside

- 0.6%

vs. Liverpool

Industrial Property Rents: £ Per Sq. Ft. Per Annum

Comparison of Key Energy & Industrial Cluster Locations in England³



Humber Freeport Sites & Benefits

Humber Freeport is a global gateway for international trade and investment. For eligible investing businesses, Freeport sites have the potential to deliver valuable tax and customs benefits.

Able Humber Port (AHP): Tax Site

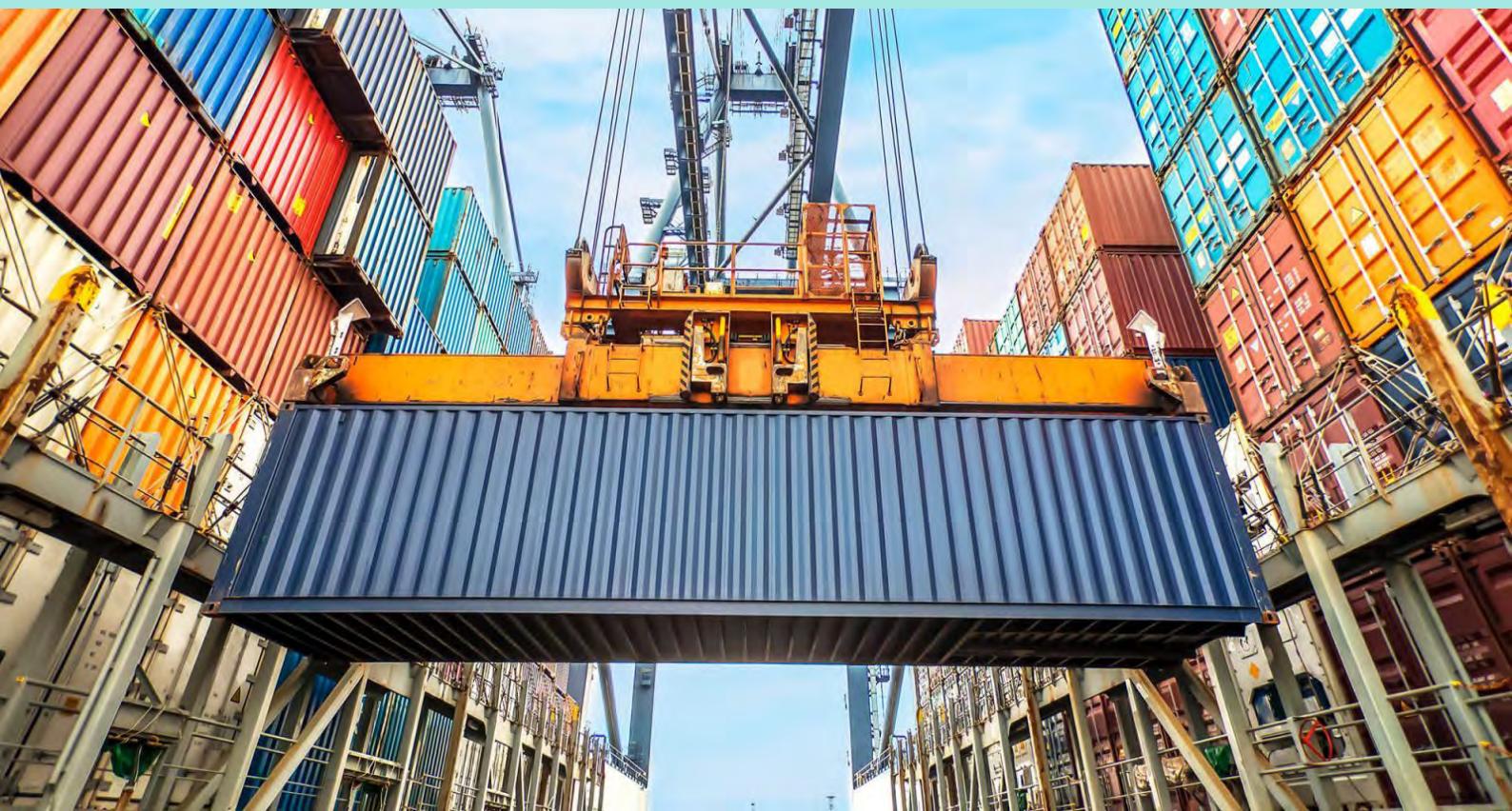
Serving the expanding marine renewable energy sector, AHP is potentially Europe's largest new port development, with a site area of 783 acres. The adjacent Able Energy Park (AEP) offers an additional 598 net operational acres of hinterland development to support a wide variety of portcentric logistics functions.¹

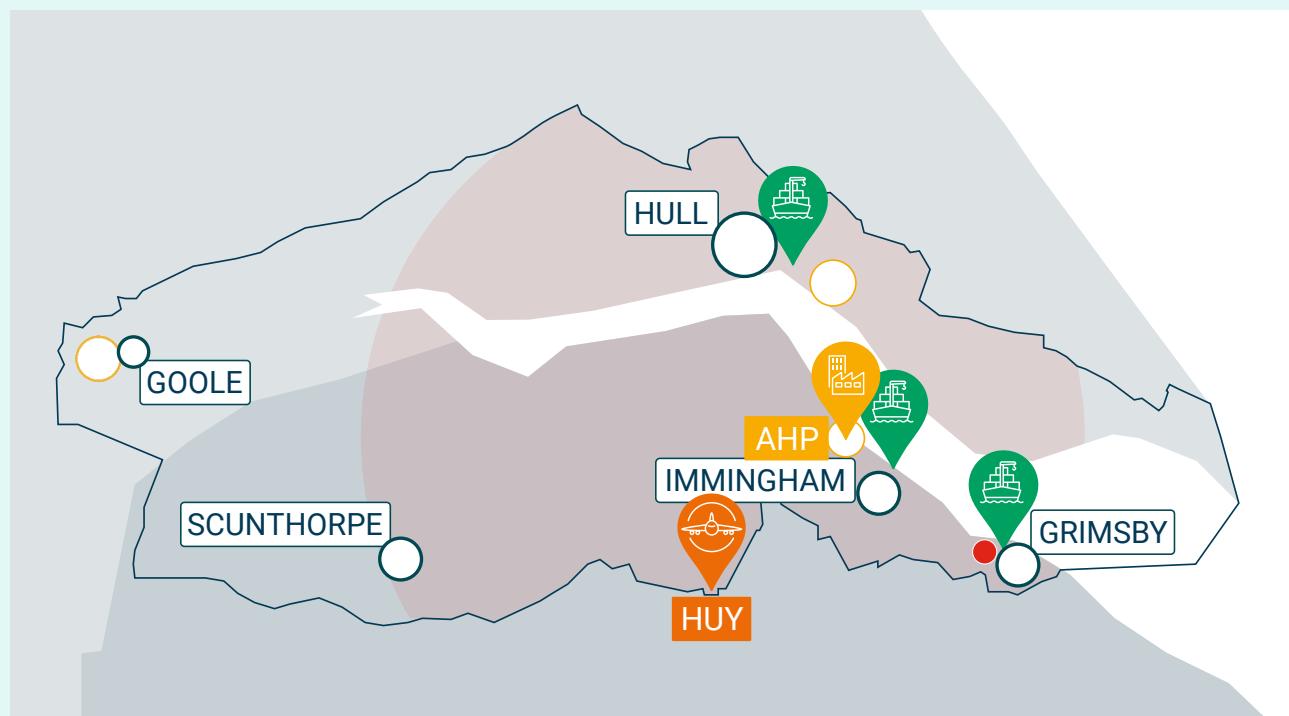
Eligible investing businesses at tax sites will potentially benefit from stamp duty land tax relief, enhanced capital allowances, relief from employer's National Insurance contributions and relief from business rates.²

Customs Sites

The Freeport also includes a customs site at Grimsby, potentially offering a range of tariff benefits.²

Sources: (1) ableuk.com (2) humberfreeport.org





Ports & Logistics Infrastructure

Focused on the South Humber ports, Lincolnshire delivers highly developed, specialised ports and logistics services to businesses in low carbon energy and industrial sectors.

Key capabilities include:

- The UK's largest port by tonnage, with 46m tonnes per annum handled at Immingham¹
- Deep sea port (Immingham): river and in-dock deep-water facilities and large-vessel handling capabilities up to 366m length¹
- Multiple cargo types handled, including Lo-Lo (container), Ro-Ro, liquid and dry bulk, and general¹
- Frequent sea freight services to regional and global markets, including Northern European and Scandinavian offshore renewables industry hubs¹
- 80% of North Sea power zones and 60% of the European market (2020) accessible within 12 hours' steaming time of Immingham and Grimsby²
- Specialised Offshore Renewables Logistics: serving North Sea wind farms from the Port of Grimsby O&M hub and Humberside Airport (air transport helicopter base)³
- Ports with W12 gauge rail access, enabling 'high cube' containers²
- Established infrastructure and supply chains for low carbon energy generation and process industries

Sources: (1) ABP (2) Greater Lincolnshire LEP (3) Humberside Airport





ABP
Operators: ports of
Grimsby & Immingham



DFDS
UK-European sea freight
logistics



MMS Offshore Renewable Services
Offshore Wind O&M
workboat operator



DB Cargo UK
Rail freight logistics
& supply chain services



CHC Helicopter
North Sea wind farm
helicopter services



Exolum
Bulk Liquid &
Gas Storage

Fast UK & Global Market Access

Lincolnshire provides low carbon energy and industrial businesses with fast, multimodal access to UK and international markets.





By Road

Lincolnshire's central Great Britain location (north-south) means that key UK energy and industrial centres, including Teesside, Great Yarmouth and Liverpool, are accessible within 3 hours' HGV drive time.¹

More than 75% of the UK's population and all of England's major industrial centres can be reached within 4 hours' HGV drive time – less than one driver shift.¹



By Sea

The South Humber ports provide businesses with direct sea freight access to international markets.

Services include regular Lo-Lo (container) and Ro-Ro services to Northern Europe, Scandinavia and the Baltic, and frequent deep-sea feeder operations to Rotterdam.^{2,3}

Felixstowe, the UK's busiest container port, is accessible in less than 3 ½ hours' HGV drive time.¹



By Air

Airports accessible within 2 hours' drive time⁴ include East Midlands (EMA), the UK's no.2 air cargo hub⁵, Birmingham and Leeds-Bradford (LBA).

Within Lincolnshire, Humberside Airport (HUY) offers frequent 'hub-feeder' services to Amsterdam Schiphol (AMS) and onward connections to 800 global destinations with KLM and SkyTeam partners.⁶

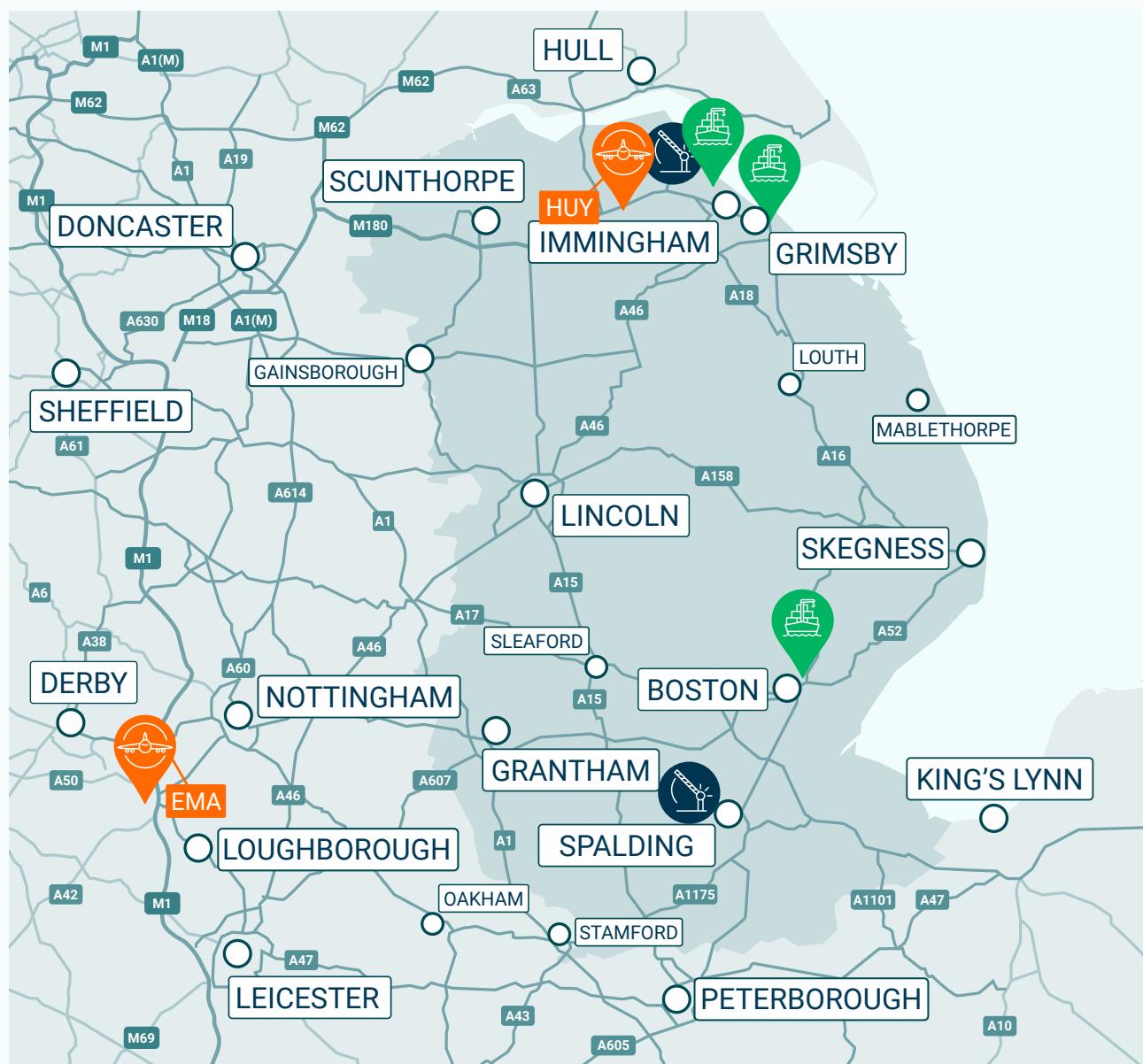


By Rail

The Lincolnshire ports of Immingham, Grimsby and Boston are all freight rail connected. For business travellers, the area also offers fast connectivity to UK destinations including London, which is accessible from Lincoln in less than 2 hours.⁷

Rail system upgrades are currently in progress to further improve passenger and freight capacity and service speeds.

Greater Lincolnshire's Location & Connectivity



Lincolnshire



Ports



Airports



Border
Control Post

UK Market Access



HGV Drive Times (from Lincoln)

Lincolnshire

3 Hour HGV Drive Time

4.5 Hour HGV Drive Time
(1 Driver Shift)

Support for Your Low Carbon Business Investment

Contact us to find out how we can support your business relocation or expansion project.

Support for Investors from the Lincolnshire Partnership

Working together, Invest Lincolnshire and our partner organisations, including local authorities, education providers and businesses, provide dedicated support to ensure a 'soft landing' for companies investing in Lincolnshire.

Our services to business include:

- Support in finding the right site or property
- Planning application support and guidance
- Location, economic and market intelligence
- Access to workforce recruitment, education and training solutions
- Access to sector specialists
- Access to sector-specific support programmes
- Access to local supply chains and business networks
- Access to funding for business investment

Contact Us

The Inward Investment Team
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Image Credit: Phillips 66



North Lincolnshire Council



served by One Team



SOUTH KESTEVEN DISTRICT COUNCIL

