

Derby, Derbyshire, Nottingham, Nottinghamshire (D2N2) LEP

Low Carbon Environmental Goods and Services Market Snapshot

Midlands Energy Hub

December 2020

Disclaimer

kMatrix

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Midlands Energy Hub

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Project Overview

The Low Carbon and Environmental Goods and Services sector study was commissioned by Nottingham City Council on behalf of the Midlands Energy Hub, sponsored by the Department of Business, Energy and Industrial Strategy (BEIS), and its stakeholders across the Midlands including the Local Enterprise Partnerships (LEPs) and Local Authorities.

The study was commissioned in November 2020 and awarded to kMatrix Data Services Ltd and Sustainability West Midlands, with the aim of understanding the current state of the sector, where support is needed to help grow the sector across the Midlands from a Local Authority level to a regional level and the role the sector can play to drive a low-carbon recovery from Covid-19.

The UK has a clear commitment to clean growth, where the economy continues to grow while reducing greenhouse gas emissions. The commitments are set out in the Industrial Strategy and the Clean Growth Strategy. The UK has a strong record of clean growth, cutting carbon emissions by 42% between 1990 and 2015, while experiencing a 67% increase in GDP during the same period, in contrast to the G7 emissions reduction of 3% and GDP increase of 61%¹. This has been achieved through a variety of strategies including improved energy efficiency, increased recycling of waste products and improved automobile engine technology, with the largest contribution in reduction of emissions from the decarbonisation of power. The UK now has the largest installed offshore wind capacity in the world².

Although the UK is arguably a world leader in clean growth, there is an ongoing need for further development across multiple sectors to deliver on the low carbon economy commitments both local and central government are pursuing. LEPs in the Midlands are fully cognizant of the need to support and further develop the green economy, as set out in their Energy Strategies and Local Industrial Strategies.

The study is grounded in evidenced data provided by the kMatrix big data analytical tool, which has been used to inform the nature of the sector across the Midlands region, in a number of sub-sectors. The data has been used alongside desk research, documentation review, stakeholder engagement and collaboration with partners and the awarding authority to produce a series of reports constituting an evidence base of both quantitative and qualitative evidence. This evidence not only informs policy recommendations as an integral part of the study, but also acts as a baseline from which progress can be measured post Covid-19 and into the future.

The study involved the production of a quantitative evidence base led by kMatrix and a qualitative evidence-base led by Sustainability West Midlands with findings from each workstream enriching the evidence of the other. By full collaboration between partners, the project steering group and stakeholders, the evidence base produced by the project delivers a comprehensive overview of the LCEGS market, with detailed information at the LEP and Local Authority levels. The wider relevance to the green recovery and national commitment to net zero by 2050 have been considered throughout the work and are integral to the policy recommendations and growth forecasts made during the study.

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf

² <https://gwec.net/global-figures/global-offshore/>

Local Authorities within the D2N2 LEP

This report includes local authority-level data, to allow deep disaggregation within the LEP area. For clarity of data visualization, the names of many local authorities have been shortened. The formal names and shortened labels of the local authorities within the D2N2 LEP are listed below:

Formal name	Shortened label
Ashfield DC	Ashfield
Bassetlaw DC	Bassetlaw
Broxtowe DC	Broxtowe
Gedling DC	Gedling
Mansfield DC	Mansfield
Newark & Sherwood DC	Newark & Sherwood
Nottingham City Council	Nottingham
Rushcliffe BC	Rushcliffe
Amber Valley DC	Amber Valley
Bolsover DC	Bolsover
Chesterfield DC	Chesterfield
Derbyshire Dales DC	Derbyshire Dales
Erewash BC	Erewash
High Peak BC	High Peak
North East Derbyshire DC	North East Derbyshire
South Derbyshire DC	South Derbyshire
Derby City Council	Derby

Executive Summary

D2N2 LEP's Low Carbon and Environmental Goods and Services (LCEGS) sector was worth £5.3bn to the D2N2 LEP's economy in 2019/20, as indicated by the value of sales in the sector. These sales were generated by over 1,800 businesses that employed 35,000 people in the sector in 2019/20.

Sales and growth

The Low Carbon and Environmental Goods and Services sector in the D2N2 LEP grew year on year since 2017/18. In 2017/18 total sales in the sector were worth £4.8bn and have now reached £5.3bn in 2019/20.

The sector in the D2N2 LEP grew by 4.1% during the financial year 2017/18 to 2018/19 and 4.6% during 2018/19 to 2019/20. This rate of growth is slower than both the MEH average (5.2% and 5.0% respectively) and the UK average for the same period (10.0% and 8.1% respectively), however, the fast rate of growth in London raises the UK average.

Employment

Employment in D2N2 LEP's Low Carbon and Environmental Goods and Services sector in 2019/20 was 34,996, up from 33,938 in 2017/18. Annual growth rate in employment was 0.4% between 2017/18 and 2018/19 and 2.7% between 2018/19 and 2019/20. This rate of growth is slower than both the MEH average (5.7% and 5.0% respectively) and the UK average for the same period (9.4% and 7.3% respectively) however, the fast rate of growth in London raises the UK average.

Companies

The number of companies in D2N2 LEP's Low Carbon and Environmental Goods and Services sector in 2019/20 was 1,876, up from 1,778 in 2017/18. Annual growth rate in the number of companies was 1.6% between 2017/18 and 2018/19 and 3.9% between 2018/19 and 2019/20. This rate of growth is slower than both the MEH average (3.6% and 5.0% respectively) and the UK average for the same period (9.3% and 10.3% respectively) however, the fast rate of growth in London raises the UK average.

D2N2 LEP's sub-sectors

In 2019/20 D2N2 LEP's Low Carbon and Environmental Goods and Services sector was made up by the following proportions: Renewable Energy 40%, Low Carbon 38% and Environmental 22%.

D2N2 LEP's sub-sector strengths

The five largest sub-sectors in the Low Carbon and Environmental Goods and Services sector by sales account for 64% of the D2N2 LEP's total sales and are made up of:

- Wind (£874m) – this includes control systems development and manufacture, drive train development, manufacture and systems integration, consulting houses and companies providing power firming systems and services, maintenance services and grid integration services
- Building Technologies (£776m) - this includes head office functions, building systems design and consultancy and building systems providers and installers
- Alternative Fuels (£770m) – this includes R&D functions, alternative fuel providers, designers and consultancy, process implementation, sales and accounting and application development specialists
- Photovoltaic (£551m) - this includes head office functions, systems developers, providers and installers
- Water & Waste Water Treatment (£411m) - development and implementation by utilities along with supply, consultancy and implementation by independent consulting engineers

The next six largest sub-sectors by sales account for a further 32% of D2N2 LEP's total sales and are made up of:

- Biomass (£388m) - this includes systems development, supply, implementation and R&D
- Waste Management (£348m) - this includes process development and new process implementation and consulting, public and private operations management and supply and installation of operational equipment
- Recovery and Recycling (£291m) – this includes waste collection, glass stock processing and paper feedstock processing
- Alternative Fuel Vehicle (£290m) - include selling agencies, alternative fuel development companies and consulting and applications development for vehicle conversion specialists
- Geothermal (£232m) - this includes branch office functions, design, international consultancy, lateral geothermal systems providers and installers at the domestic and small commercial level and vertical control systems developers and suppliers
- Energy Management (£113m) – this includes registered gas engineers, measurement and control systems and fitting and maintenance

Sub-sector growth

D2N2 LEP's five largest sub-sectors by sales have all enjoyed high levels of growth in sales, number of employees and number of companies between 2017/18 and 2019/20:

- Wind – sales have grown from £804m to £874m (8.7%), number of employees by 3.1% and number of companies by 5.8%
- Building Technologies – sales have grown from £713m to £776m (8.9%), number of employees by 3.1% and number of companies by 5.3%
- Alternative Fuels – sales have grown from £707m to £770m (8.9% increase), number of employees by 3.1% and number of companies by 5.1%
- Photovoltaic – sales have grown from £505m to £551m (9.0% increase), number of employees by 3.4% and number of companies by 6.6%
- Water & Waste Water Treatment – sales have grown from £378m to £411m (8.7% increase), number of employees by 3.2% and number of companies also by 5.9%

Sub-sectors which saw stronger growth than the UK average between 2017/18 and 2019/20 include:

- Alternative Fuel Vehicle with 8.9% (MEH 11.4%, UK 5.7%)
- Hydro with 8.9% (MEH 11.0%, UK 1.8%)
- Energy Management with 11.4% (MEH 11.4%, UK 5.7%)
- Contaminated Land Reclamation and Remediation with 8.8% (MEH 11.4%, UK 1.0%)
- Air Pollution with 8.7% (MEH 11.4%, UK 5.8%)

Investment in R&D

Investment in R&D within D2N2 LEP grew in all three categories of investment between 2017/18 and 2019/20:

- Private Equity Investment in R&D grew 11.1% from £236m in 2017/18 to £262m in 2019/20
- Venture capital Investment in R&D grew 6.8% from £484m in 2017/18 to £517m in 2019/20
- Other Investment in R&D grew 7.3% from £721m in 2017/18 to £774m in 2019/20

Scalability of sub-sectors

Scalability of the sub-sectors within the D2N2 LEP is variable and when combined with GVA, strengths include:

- Alternative Fuels with high GVA and high Scalability (stronger position than the MEH average)
- Wind with high GVA and high Scalability (stronger position than the MEH average)

- Renewable Energy General Consultancy with high Scalability but small GVA
- Waste Management with good Scalability and good GVA (stronger position than the MEH average)
- Energy Management with reasonable GVA and good Scalability (stronger position than the MEH average)

D2N2 LEP's Exports

The value of exports in D2N2 LEP's Low Carbon and Environmental Goods and Services sector in 2019/20 was £557m, an increase from £507m in 2017/18. This accounted for 19% of the MEH's LCEGS exports in 2019/20 and is higher than D2N2 LEP's 18% share of the overall MEH LCEGS market.

D2N2 LEP's LCEGS exports grew by 4.8% and 4.9% over the last three years which compared with MEH growth of 4.5% and 6.2% and UK growth of approximately 8.7% and 9.5% respectively.

D2N2 LEP's top Export sub-sectors which saw large export market and strong growth include:

- Wind - £91m
- Alternative Fuels - £87m
- Waste Management - £36m
- Geothermal - £25m
- Photovoltaic - £60m
- Water & Waste Water Treatment – £43m