Midland Energy Hub Regional Report

Low Carbon Environmental Goods and Services Market Snapshot

Midlands Energy Hub
2017/18 to 2019/20

December 2020

Disclaimer

kMatrix

This information is provided to help the client identify opportunities in current and future Low Carbon Environmental Goods and Services (LCEGS) markets.

It does not constitute advice to the client as to what they should do, when, where or with whom.

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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 world[2].

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.

[1] https://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 MEH Region

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 MEH Region are listed below:

Formal name	Shortened label
Amber Valley DC	Amber Valley
Ashfield DC	Ashfield
Bassetlaw DC	Bassetlaw
Birmingham City C	Birmingham
Blaby DC	Blaby
Bolsover DC	Bolsover
Boston BC	Boston
Bromsgrove DC	Bromsgrove
Broxtowe DC	Broxtowe
Cannock Chase DC	Cannock Chase
Charnwood BC	Charnwood
Chesterfield DC	Chesterfield
City of Wolverhampton Council	Wolverhampton
Coventry City Council	Coventry
Derby City Council	Derby
Derbyshire Dales DC	Derbyshire Dales
Dudley MBC	Dudley
East Lindsey DC	East Lindsey
East Staffordshire BC	East Staffordshire
Erewash BC	Erewash
Gedling DC	Gedling
Harborough DC	Harborough
Herefordshire County C	Herefordshire
High Peak BC	High Peak
Hinckley & Bosworth BC	Hinckley & Bosworth
Leicester City C	Leicester
Lichfield DC	Lichfield
Lincoln City C	Lincoln
Malvern Hills DC	Malvern Hills
Mansfield DC	Mansfield
Melton BC	Melton
Newark & Sherwood DC	Newark & Sherwood
Newcastle-under-Lyme DC	Newcastle-under-Lyme
North East Derbyshire DC	North East Derbyshire
North East Lincolnshire C	North East Lincs

North Kesteven DC	North Kesteven
North Lincolnshire C	North Lincs
North Warwickshire BC	North Warwickshire
North West Leicestershire DC	North West Leicestershire
Nottingham City Council	Nottingham
Nuneaton & Bedworth BC	Nuneaton & Bedworth
Oadby & Wigston DC	Oadby & Wigston
Redditch BC	Redditch
Rugby BC	Rugby
Rushcliffe BC	Rushcliffe
Rutland CC	Rutland
Sandwell MBC	Sandwell
Shropshire C	Shropshire
Solihull BC	Solihull
South Derbyshire DC	South Derbyshire
South Holland DC	South Holland
South Kesteven DC	South Kesteven
South Staffordshire C	South Staffordshire
Stafford BC	Stafford
Staffordshire Moorlands DC	Staffordshire Moorlands
Stoke-on-Trent City C	Stoke-on-Trent
Stratford-on-Avon DC	Stratford-on-Avon
Tamworth BC	Tamworth
Telford & Wrekin C	Telford & Wrekin
Walsall MBC	Walsall
Warwick DC	Warwick
West Lindsey DC	West Lindsey
Worcester City C	Worcester
Wychavon DC	Wychavon
Wyre Forest DC	Wyre Forest

Executive Summary

MEH's Low Carbon and Environmental Goods and Services (LCEGS) sector was worth £26.6bn to the MEH's economy in 2019/20, as indicated by the value of sales in the sector. These sales were generated by over 10,500 businesses that employed over 195,000 people in the sector in 2019/20.

Sales and growth

The Low Carbon and Environmental Goods and Services sector in the MEH's region grew year on year since 2017/18. In 2017/18 total sales in the sector were worth £23.8bn have now reached £26.6bn in 2019/20.

The sector in the MEH region grew by 5.2% during the financial year 2017/18 to 2018/19 and 5.9% during 2018/19 to 2019/20. This rate of growth is slower than 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 MEH's Low Carbon and Environmental Goods and Services sector in 2019/20 was 195,641, up from 176,264 in 2017/18. Annual growth rate in employment was 5.7% between 2017/18 and 2018/19 and 5.0% between 2018/19 and 2019/20. This rate of growth is slower than 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 MEH's Low Carbon and Environmental Goods and Services sector in 2019/20 was 10,559, up from 9,531 in 2017/18. Annual growth rate in the number of companies was 3.6% between 2017/18 and 2018/19 and 6.9% between 2018/19 and 2019/20. This rate of growth is slower than 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.

MEH's sub-sectors

In 2019/20 MEH's Low Carbon and Environmental Goods and Services sector was made up by the following proportions: Renewable Energy 39%, Low Carbon 39% and Environmental 22%.

MEH'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 MEH's total sales and are made up of:

- Wind (£4.4bn) – 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 (£4.0bn) - this includes head office functions, building systems design and consultancy and building systems providers and installers
- Alternative Fuels (£3.8bn) – this includes R&D functions, alternative fuel providers, designers and consultancy, process implementation, sales and accounting and application development specialists
- Photovoltaic (£2.8bn) - this includes head office functions, systems developers, providers and installers
- Water & Waste Water Treatment (£2.0bn) - 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 31% of MEH's total sales and are made up of:

- Biomass (£1.9bn) - this includes systems development, supply, implementation and R&D
- Waste Management (£1.8bn) - this includes process development and new process implementation and consulting, public and private operations management and supply and installation of operational equipment
- Alternative Fuel Vehicle (£1.5bn) - include selling agencies, alternative fuel development companies and consulting and applications development for vehicle conversion specialists
- Recovery and Recycling (£1.5bn) – this includes waste collection, glass stock processing and paper feedstock processing
- Geothermal (£1.2bn) - 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 (£0.6bn) – this includes registered gas engineers, measurement and control systems and fitting and maintenance

Sub-sector growth

MEH'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 £3.9bn to £4.4bn (11.3%), number of employees by 11.0% and number of companies by 11.1%
- Building Technologies – sales have grown from £3.6bn to £4.0bn (15.5%), number of employees by 11.2% and number of companies by 10.7%
- Alternative Fuels – sales have grown from £3.4bn to £3.8bn (11.4% increase), number of employees by 10.9% and number of companies by 10.8%
- Photovoltaic – sales have grown from £2.5bn to £2.8bn (11.3% increase), number of employees by 11.0% and number of companies by 10.7%
- Water & Waste Water Treatment – sales have grown from £1.8bn to £2.0bn (11.3% increase), number of employees by 11.0% and number of companies also by 9.9%

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

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

Investment in R&D

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

- Private Equity Investment in R&D grew 12.3% from £1.2bn in 2017/18 to £1.3bn in 2019/20
- Venture capital Investment in R&D grew 11.9% from £2.1bn in 2017/18 to £2.7bn in 2019/20
- Other Investment in R&D grew 12.1% from £3.5bn in 2017/18 to £3.9bn in 2019/20

Scalability of sub-sectors

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

- Alternative Fuels with high GVA and high Scalability
- Renewable Energy General Consultancy with high Scalability but small GVA
- Environmental Monitoring with high Scalability but small GVA
- Water & Waste Water Treatment with good GVA and medium Scalability

- Building Technologies with very good GVA and medium Scalability

MEH’s Exports

The value of exports in MEH’s Low Carbon and Environmental Goods and Services sector in 2019/20 was £2.8bn, an increase from £2.5bn in 2017/18. This accounted for 18% of the UK’s LCEGS exports in 2019/20 and is higher than MEH's 14% share of the overall UK LCEGS market.

MEH’s LCEGS exports grew by 4.5% and 6.2% over the last three years which was slower than the UK average.

MEH’s top Export sub-sectors which saw large export market and strong growth include:

- Wind - £463m
- Energy Management - £58m
- Geothermal - £124m
- Building Technologies - £418m
- Biomass – £200m
- Waste Management - £184m