Low Carbon Environmental Goods and Services Sector Study 2024: Short Report for the East Midlands Combined County Authority

Commissioned by the Midlands Net Zero Hub, this report provides 2024 data of the LCEGS sector, updating the 2021 study.

1. Introduction

This document has been prepared to provide an overview summary of the LCEGS sector within the East Midlands Combined County Authority. Reports on the wider picture for the MNZH region and Local Authorities (with example companies), including datasets are available here. Additional detailed data is available from kMatrix; and further recommendations and details on areas of focus are available through the Climate Action Benchmarking study.

Local Authorities with separate reports within the EMCCA are:

- Amber Valley District Council
- Ashfield District Council
- Bassetlaw District Council
- Bolsover District Council
- Broxtowe District Council
- Chesterfield District Council
- Derby City Council
- Derbyshire Dales District Council
- Erewash Borough Council
- Gedling District Council
- High Peak Borough Council
- Mansfield District Council
- Newark & Sherwood District Council
- North East Derbyshire District Council
- Nottingham City Council
- Rushcliffe Borough Council
- South Derbyshire District Council

2. Current Activity Supporting the Growth of the Sector

Activity at the EMCCA level relevant to the wider geographical region:

- Sustainable East Midlands is a business support programme provided by East Midlands Chamber that gathers information and resources to help businesses in the region decarbonise, including networks, expert support, funding and grants.
- The Low Carbon Business Network hosted by Derby University offers fully funded support to accelerate business growth in the low carbon sector, as well as connecting SMEs to larger organisations and supply chains to help decarbonise industry.
- The East Midlands Manufacturing Network is a cluster of manufacturing businesses across the region, allowing businesses to share knowledge and best practice, including ways to decarbonise.
- A prototype STEP fusion powerplant is planned for construction in West Burton, Bassetlaw, with the area acting as a hub for fusion-related engineering and commercial progress, generating thousands of jobs in the industry.
- The EMCCA is home to number of key businesses in the automotive, aerospace and advanced manufacturing industries, which bring great opportunities to decarbonise and grow the LCEGS sector.

3. Recommendations

Recommendations for EMCCA are:

- Further promote the East Midlands Chamber's Sustainable East Midlands campaign as a source of information for all support and grant schemes available to LCEGS businesses in order to address concerns around limited awareness.
- Devise a strategy to build the infrastructure to allow innovation to grow on a region-wide scale, establishing and connecting place-base clusters. This could draw on lessons from successful innovation ecosystems from around the UK.

- Increase awareness of the Low Carbon Business Network hosted by Derby University for both LCEGS SMEs and larger organisations with opportunities to decarbonise.
- Facilitate collaboration between local skill providers, educational institutions, local authorities and LCEGS businesses to ensure training courses and apprenticeships are available that address specific skills gaps identified in the sector. This should include a particular focus on energy efficiency, carbon literacy and low carbon technology engineers.

4. Headline Figures for EMCCA

The headline figures for the EMCCA area are:

- The LCEGS sector in EMCCA was worth £6.0bn in 2023/24 and is forecast to grow to £8.7bn over the next 5 years
- The LCEGS sector accounts for 7.3% of GVA, 3.3% of employment, and sales accounts for 8.0% of GDP in EMCCA
- EMCCA's LCEGS Sales generates 19.8% of the LCEGS Sales in the MNZH region, slightly lower than the 20.5% of total GDP contribution
- EMCCA's LCEGS GVA generated 19.8% of the MNZH's LCEGS GVA, slightly lower than the 20.3% total GVA contribution
- EMCCA's LCEGs employment accounts for 16.8% of MNZH's LCEGS employment, lower than its 21.5% of economically active people in the MNZH
- Net Zero 2030 targets are expected to require between 3,099 and 23,125 FTE employees in addition to those employed now in EMCCA
- Net Zero 2050 targets are expected to require between 52,760 and 125,327 FTE employees in addition to those employed now in EMCCA
- EMCCA's LCEGS sector could generate up to 125,327 jobs between 2023/24 and 2050 *

- Investment in R&D for the LCEGS sector in 2019/20 was very high due to unusual investment in the Nuclear Power sub-sector with over £1.1bn in Private Equity; £1.4bn in Venture Capital Investment; and £1.7bn in Other Investment in that year. Nuclear Power is still the largest sub-sector in terms of investment in the EMCCA, but for this comparison we have used the 2020/21 data, which represents more 'usual' investment. Between 2020/21 and 2023/24, Investment in R&D for the LCEGS sector has grown from £296m to £438m for Private Equity Investment; £534m to £712m for Venture Capital Investment; and £771m to £1,016m for Other Investment.
- Exports in the LCEGS sector for EMCCA have increased from £572m in 2019/20 to £656m in 2023/24.

*The majority of increase from 2030 targets due to additional 20 years of wider economic growth

5. EMCCA's LCEGS Sector Key Metrics

Key metrics in EMCCA for each financial year from 2019/20 to 2023/24, with growth between years:

EMCCA	2019/20	% growth	2020/21	% growth	2021/22	% growth	2022/23	% growth	2023/24
Sales	£5.28bn	-7.3%	£4.90bn	5.2%	£5.16bn	6.6%	£5.50bn	9.6%	£6.02bn
GVA	£4.19bn	-6.6%	£3.92bn	4.4%	£4.09bn	6.6%	£4.36bn	9.6%	£4.78bn
# FTE Employees	35,266	-6.6%	32,944	7.0%	35,236	10.0%	38,765	12.1%	43,440
# Companies	1,881	-6.9%	1,751	6.0%	1,857	6.8%	1,984	9.5%	2,172

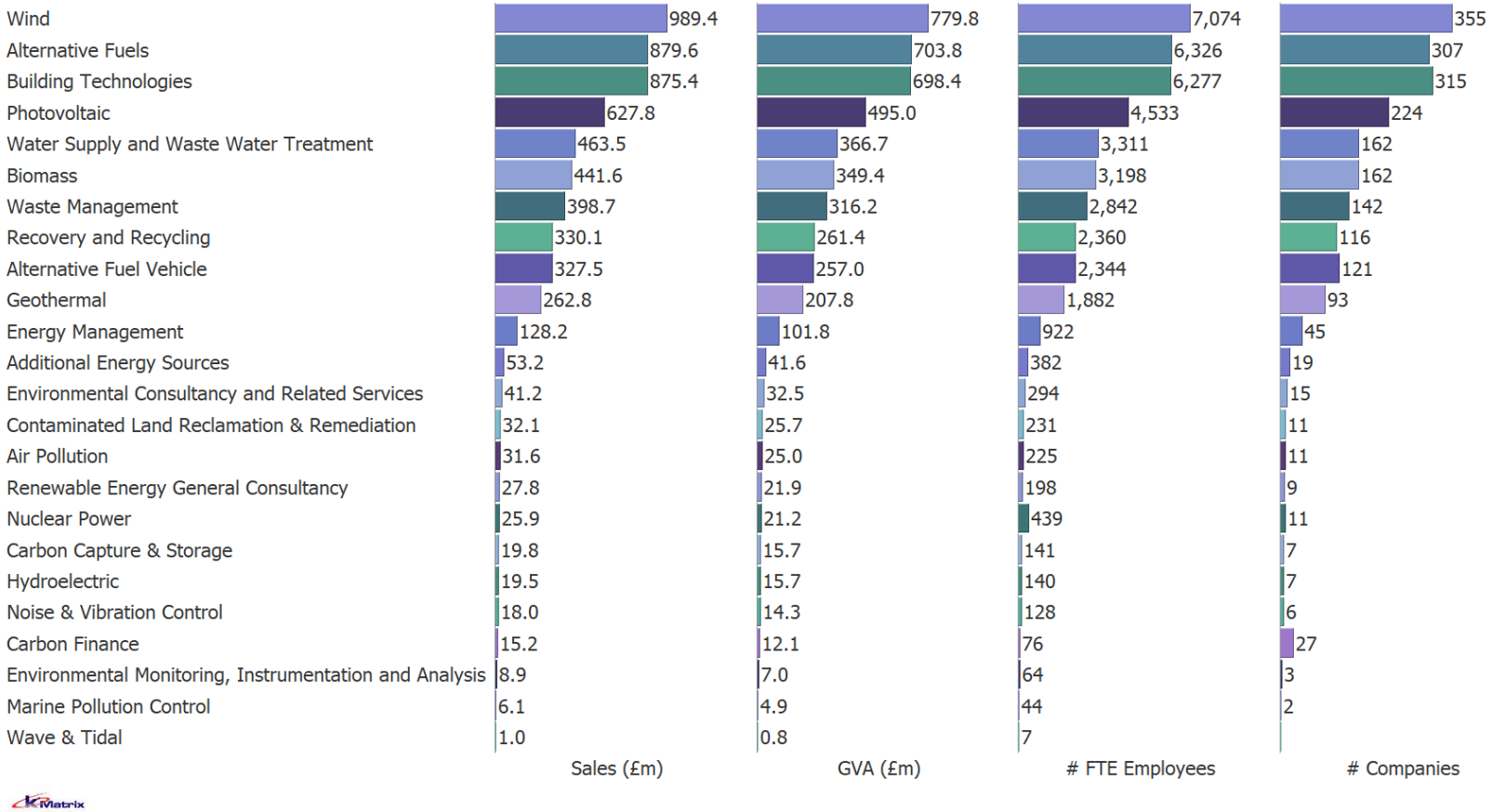
Note: the total numbers for 2019/20 are higher than those reported in 2021 due to an adjustment made in the Nuclear Power sub-sector in two Local Authorities: Derby City Council and Nottingham City Council.

All metrics have recovered from the pandemic in 2020 and saw growth across the reporting period from 2021/22 to 2023/24.

6. EMCCA's Sub-sectors Key Metrics

All twenty-four sub-sectors of the LCEGS sector have activity in EMCCA, with the 2023/24 values for Sales, GVA, FTE Employees and number of companies in figure 1.

Figure 1: Sales, GVA, FTE Employees and number of companies in EMCCA in 2023/24 by sub-sector



The largest 11 sub-sectors account for 95% of sales, 95% of GVA, 95% of employment and 94% of companies in the LCEGS sector. These 11 sub-sectors are Wind; Alternative Fuels; Building Technologies; Photovoltaic; Water Supply & Waste Water Treatment; Biomass; Waste Management; Recovery & Recycling; Alternative Fuel Vehicle; Geothermal and Energy Management.

7. EMCCA's Sub-sector Growth Compared with the UK

Sub-sectors that saw similar or stronger growth in sales than the UK average between 2021/22 and 2023/24 for EMCCA include:

Sub-sector	EMCCA Sales 2023/24	EMCCA Growth 2021/22 to 2023/34	UK Growth 2021/22 to 2023/34
Air Pollution	£31.6m	17%	7%
Contaminated Land Reclamation & Remediation	£32.1m	17%	9%
Environmental Consultancy and Related Services	£41.2m	17%	11%
Recovery and Recycling	£330.1m	16%	11%
Waste Management	£398.7m	18%	8%
Water Supply and Waste Water Treatment	£463.5m	16%	5%
Additional Energy Sources	£53.2m	16%	10%
Alternative Fuel Vehicle	£327.5m	15%	12%
Alternative Fuels	£879.6m	18%	14%
Building Technologies	£875.4m	16%	16%
Energy Management	£128.2m	17%	10%

Only sub-sectors contributing more than 1% of the total Sales in EMCCA have been included in this table.

Of the 11 sub-sectors that saw similar or stronger growth than the UK, Recovery & Recycling; Waste Management; Water Supply & Waste Water Treatment; Alternative Fuel Vehicle; Alternative Fuels; Building Technologies; and Energy Management are also large sub-sectors and should be considered a strength of EMCCA.

Nuclear Power should also be considered important due to the new STEP fusion powerplant being constructed in Bassetlaw and associated job creation both through the construction phase and beyond (the powerplant is expected to be operational by 2040).

8. EMCCA Skills Forecast to Net Zero 2030 and 2050

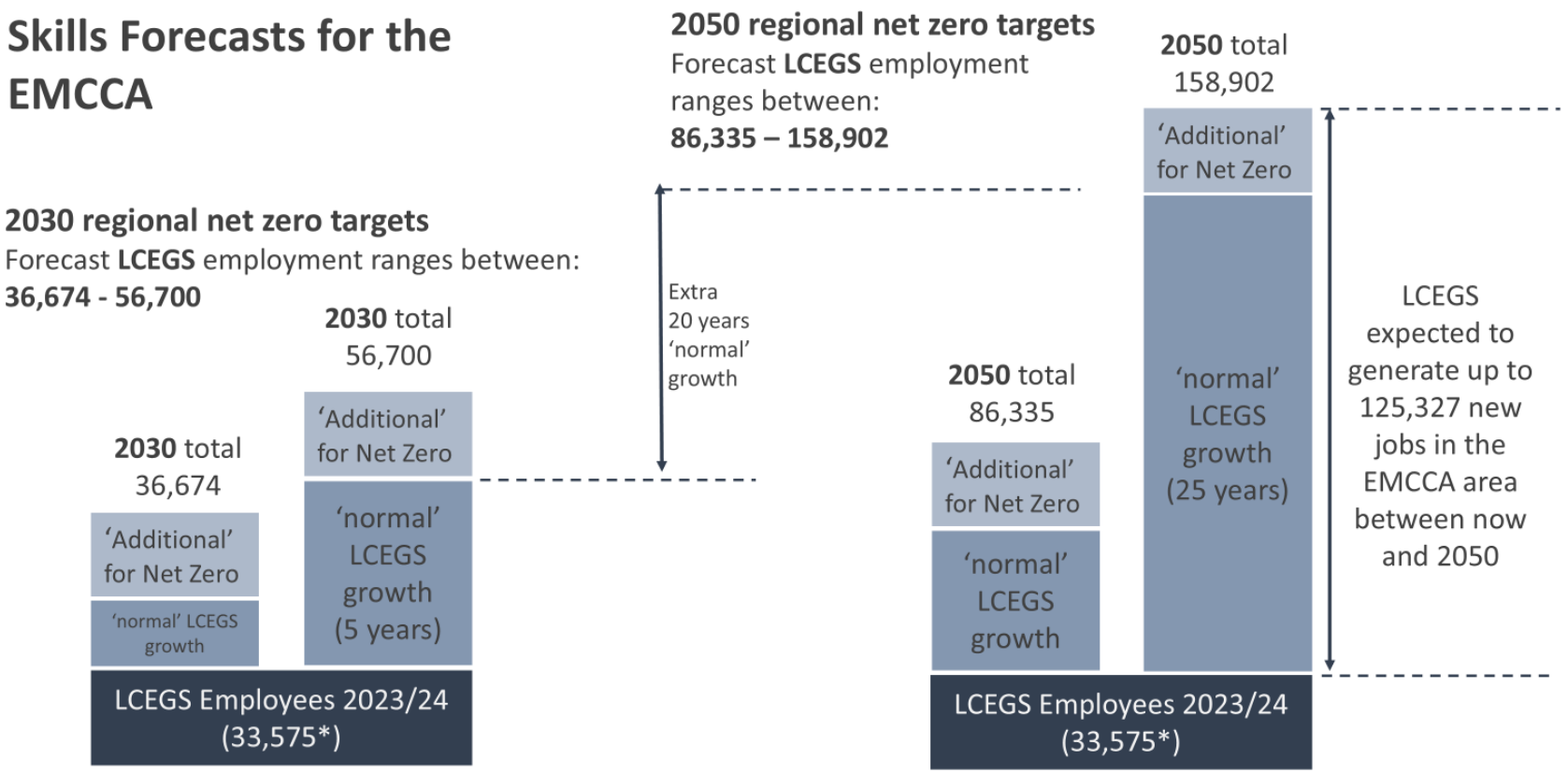
This section provides highlights of the skills analysis. Skills forecast tables are available from the Midlands Net Zero Hub.

The LCEGS sector is expected to generate up to 125,327 jobs in EMCCA between 2023/24 and 2050. The majority of growth is determined by usual growth in the sector as the LCEGS sector services the wider economy, forecasts are therefore provided as a range, determined by the potential growth of the sector before the requirement to reach net zero targets is overlaid. Regional net zero targets place an additional skills requirement for the sector above usual growth. They are influenced by changes in practice, new technologies and technology compression.

Key points from the skills analysis:

- EMCCA has increased the number of people working in the sector and reduced the overall skills gap from 6.1% to 6.0% since 2019/20.
- The economic challenges of the last four years have resulted in less time to achieve targets, and despite the increase in total employment in the sector, the forecast number of employees required to reach net zero targets are higher than forecasts made in 2020.
- The 2021 report forecast a need for a 6% increase in 2019/20 employment numbers in LCEGS to reach net zero 2030 targets, this is now reduced to 3% increase in 2023/24 employment numbers, although strong economic growth could increase this need to 59% to reach net zero targets.
- To reach net zero targets by 2030, EMCCA is expected to require between 36,674 and 56,700 employees, i.e., between 3,099 and 23,125 employees in addition to those employed now, representing an increase of between 3% and 59% in employment compared with 2023/24.

- To reach net zero targets by 2050, EMCCA is expected to require between 86,335 and 158,902 employees, i.e., between 52,760 and 125,327 employees in addition to those employed now, representing an increase of between 143% and 347% in employment compared with 2023/24.



*Lower value than sector total due to some employees in Micro and SMEs being difficult to allocate to SOC codes. LCEGS sector = high proportion of Micro and SMEs.

9. EMCCA Sector Strengths

Sub-sectors with strong historic growth which are strengths of EMCCA are:

Sub-sector	Sales 2023/24	Forecast Sales 2028/29	CO_2 Reduction Potential	Sector Scalability	Current Training Provision	Potential Upskilling of Workforce	Skills Shortage
Alternative Fuels	£879.6m	£1.3bn	Medium	Medium	Medium	Medium	High: **10.5%** (MNZH: 13.2%)
Building Technologies	£875.4m	£1.3bn	Medium	Medium	Medium	Medium	Low: **3.7%** (MNZH: 4.4%)
Water Supply & Waste Water Treatment	£463.5m	£667m	Medium	High	Medium	Medium	Low: **3.1%** (MNZH: 3.6%)
Waste Management	£398.7m	£559m	Medium	Low	Medium	Medium	Low: **4.1%** (MNZH: 5.1%)
Recovery & Recycling	£330.1m	£476m	High	High	Medium	Medium	High: **11.5%** (MNZH: 14.2%)
Alternative Fuel Vehicles	£327.5m	£465m	Medium	Medium	High	Medium	High: **11.7%** (MNZH: 14.2%)
Energy Management	£128.2m	£187m	Medium	Medium	Medium	Low	High: **11.9%** (MNZH: 15.5%)

10. MNZH Regional summary

Headline figures for the MNZH area are:

- The LCEGS sector in MNZH Region was worth £31.0bn in 2023/24 and is forecast to grow to £46.6bn over the next 5 years
- The LCEGS sector accounts for 7.4% of GVA, 4.2% of employment, and sales accounts for 8.3% of GDP in MNZH Region
- MNZH Region's LCEGS Sales generates 11.9% of the LCEGS Sales in the UK, slightly lower than the 12.4% of total GDP contribution
- MNZH Region's LCEGs employment accounts for 15.5% of the UK's LCEGS employment, lower than its 16.8% of economically active people in the UK
- Net Zero 2030 targets are expected to require between 30,192 and 146,162 FTE employees in addition to those employed now in the MNZH region
- Net Zero 2050 targets are expected to require between 263,907 and 727,184 FTE employees in addition to those employed now in the MNZH region
- The MNZH region's LCEGS sector could generate up to 727,184 jobs between 2023/24 and 2050*
- Between 2019/20 and 2023/24, Investment in R&D for the LCEGS sector has varied, but is now similar, shrinking slightly from £2.2bn to £2.1bn for Private Equity Investment; being £3.6bn for Venture Capital Investment for both years; and increasing slightly from £4.9bn to £5.2bn for Other Investment.
- Exports in the LCEGS sector for MNZH Region have increased from £2.8bn in 2019/20 to £3.2bn in 2023/24.

*The majority of increase from 2030 targets due to additional 20 years of wider economic growth.