



**MIDLANDS
ENGINE**

MODERN AND LOW CARBON UTILITIES

MIDLANDS CLUSTER SNAPSHOT 2023







Modern and Low Carbon Utilities



The Midlands modern and low carbon utilities cluster, involving utilities such as electricity, gas and water, is largely defined by significant business and employee populations in the West Midlands Combined Authority area, Warwickshire and Nottinghamshire. Bolstered by strong graduate retention and a pipeline of 12,000 relevant HE and FE graduates each year, the sector is strong in these key locations.


Although the Midlands saw an increase in market share of investment post-pandemic, it still under performs, with an opportunity to take a bigger share of the forecast \$15.7bn UK FDI Capex in 2025 in renewable energy.

Cluster in context

-  Almost 23,000 jobs; 13% of national and largest region outside of London & SE.
-  65 high growth companies (15% of UK) and 22 £100m+ turnover companies (25% of UK).
-  3% of Midlands university graduates studied relevant subjects to modern and low carbon utilities, including from 4 of top 25 UK universities for Engineering and Technology, and Natural Sciences.
-  Over 19% of Innovate UK funding to modern and low carbon utilities businesses since 2005 has been awarded to those with a Midlands address.
-  Almost 800 businesses; 17% of UK total and 68% growth since 2013.
-  4% of cluster relevant UK Foreign Direct Investment Capex and 7% of cluster relevant UK Domestic Direct Investment Capex 2017-2021.

Business Ecosystem

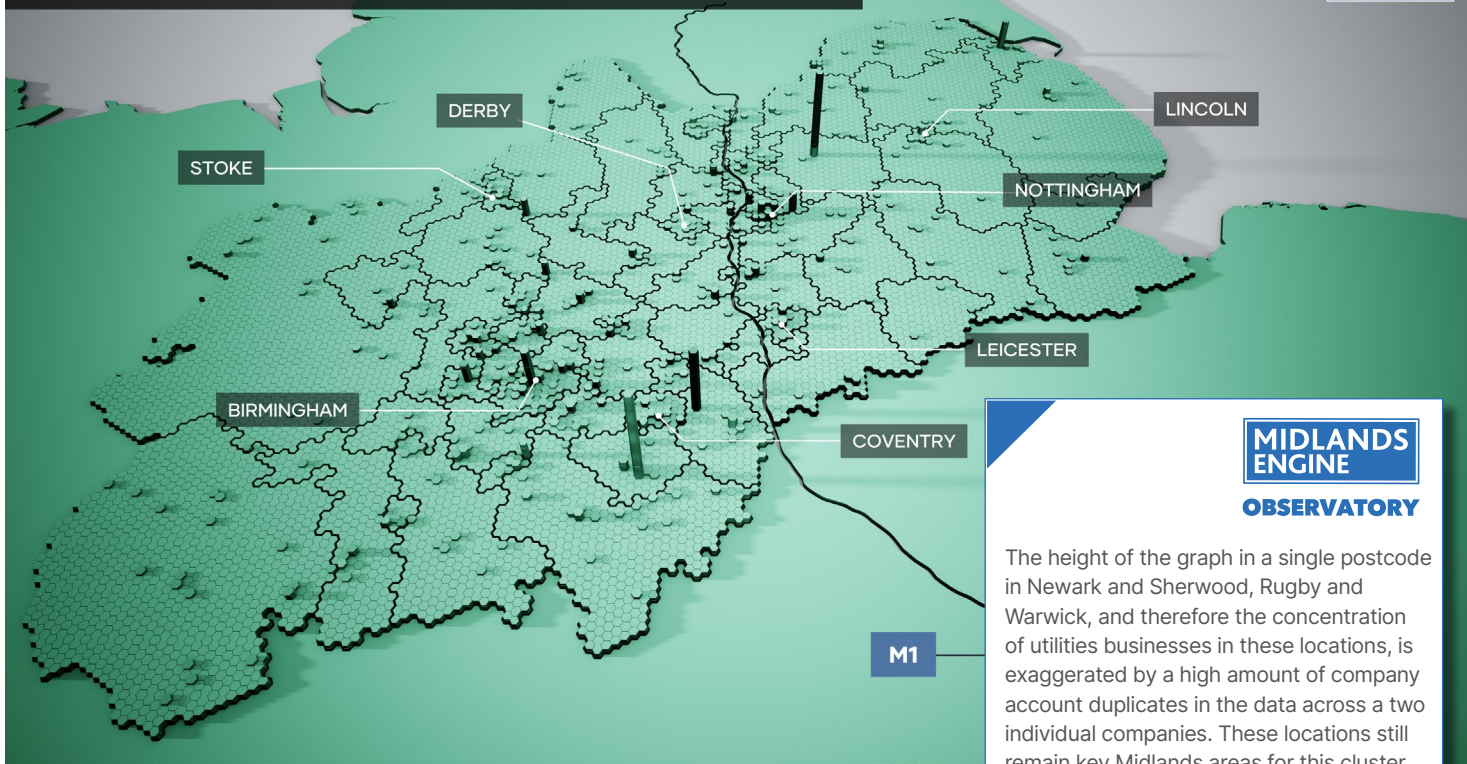
- Total Cluster Business Count:** 774
17% of UK; largest region outside of London and the South East. 68% growth since 2013.¹
- £100m+ Turnover Companies:** 22
25% of all in the UK have a Midlands location.²
- High Growth Companies:** 65
15% of all in the UK have a Midlands location.³
- Incorporations 2017-22:** 204
11% of UK utilities incorporations between 2017 and 2022 have a Midlands location.⁴
- Foreign-owned enterprises:** 12%
96 are known to be foreign-owned; same proportion of foreign-owned than national average.⁵



Modern and low carbon utilities is an emerging cluster of strength within an established environmental technologies sector in the Midlands – covered more broadly and in greater depth in previous studies, such as reports published by kmatrix (commissioned by Midlands Net Zero Hub). The data presented in this project should be interpreted in this wider context and not compared directly to other similar work without caution.

^{1,2,4,5} Data City 2023; ³Data City 2023: 20%+ company growth percentage per year.

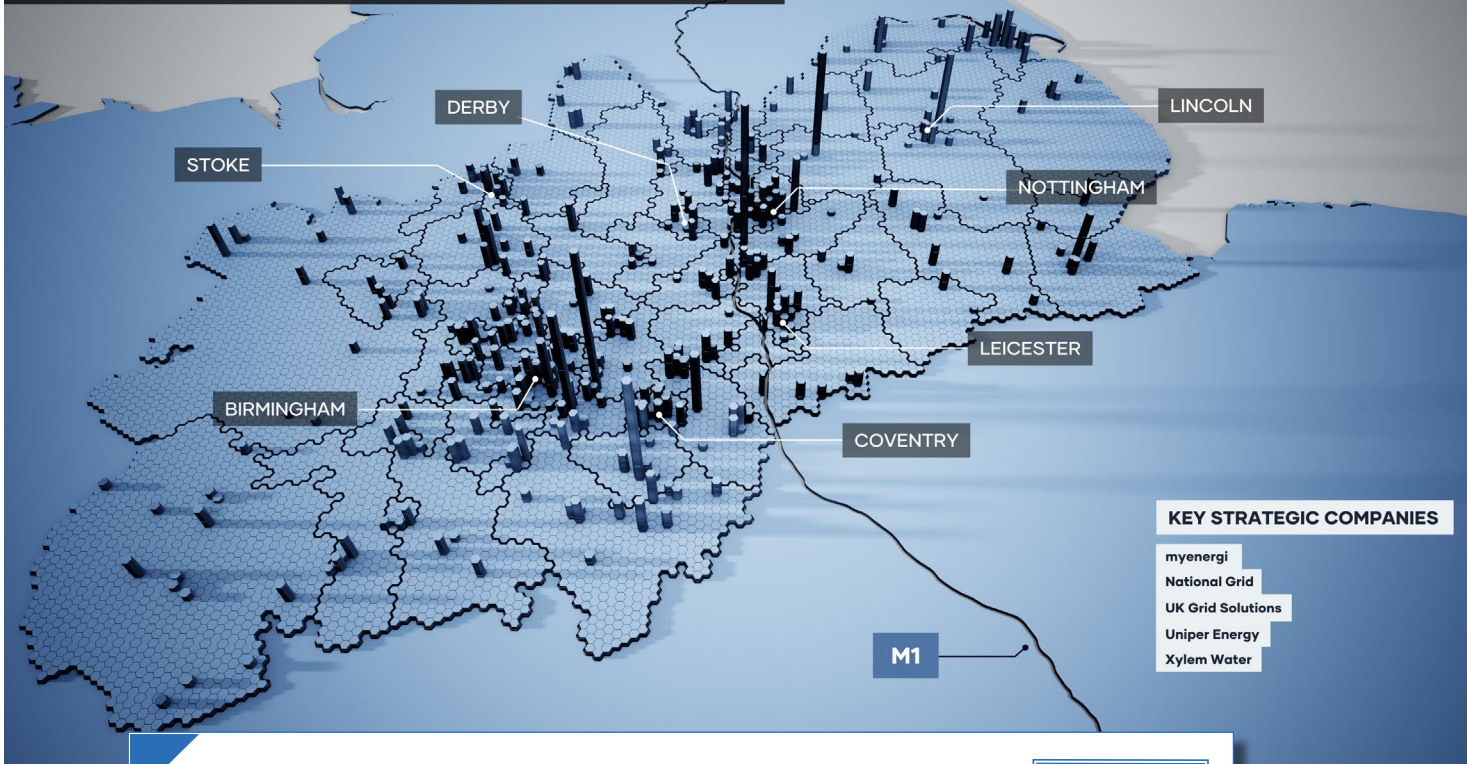
MODERN LOW CARBON UTILITIES - Business Counts



MIDLANDS ENGINE OBSERVATORY

The height of the graph in a single postcode in Newark and Sherwood, Rugby and Warwick, and therefore the concentration of utilities businesses in these locations, is exaggerated by a high amount of company account duplicates in the data across a two individual companies. These locations still remain key Midlands areas for this cluster, but its relative strength is considerably exaggerated in this visualisation.

MODERN LOW CARBON UTILITIES - Turnover



KEY STRATEGIC COMPANIES

- myenergi
- National Grid
- UK Grid Solutions
- Uniper Energy
- Xylem Water



The height of spikes in single postcodes within Newark and Sherwood, Solihull, Rushcliffe and Birmingham are likely to be exaggerated by a single large company, which is unlikely to generate the level of employee or turnover accounted for just in this location. So while these locations have "real" modern and low carbon utilities activity due to this company, the level of turnover allocated is exaggerated (because of the trading address split methodology).

Modern and Low Carbon Utilities



Innovation Ecosystem



Accelerator Engagement:¹

6

Relevant Cluster Organisations:

Energy and Utilities Alliance; Energy UK

Relevant high performing HEI research:

Universities of Birmingham; Keele; Leicester; Loughborough; Nottingham; Warwick

6 Midlands universities with high research ranking in relevant subjects.²

Significant Innovation Hubs:

Energy Research Accelerator

High Growth Company Grants:³

1

Innovate UK funding:

£75m since 2005

19% of Innovate UK funding to utilities had a Midlands location.⁴



¹Beauhurst, 2022: High growth companies utilised accelerators ²REF 2021 GPA >3.0 in any of Geography and environmental studies; Chemistry; Physics

³Beauhurst, 2022 ⁴Data City 2023.



Modern and Low Carbon Utilities



Talent Ecosystem



Estimated Employees: **22,754**
 13% of national: largest region in UK outside of London & SE.¹

University Graduates: **4,260**
 3% of Midlands university graduates studied relevant subjects to utilities.⁵

Earnings: **Average salary £34,530**
 National average £36,613 (5.7% lower in Midlands).²

Graduate Retention: change over 3 years **100%**
 Overall exact balance, suggesting full retention.
 – WM performs better than EM. For water WM has the best positive balance of all regions.⁶

Further Education Leavers: **8,670**
 More FE leavers (including higher level) in relevant subjects than all other regions outside London.³

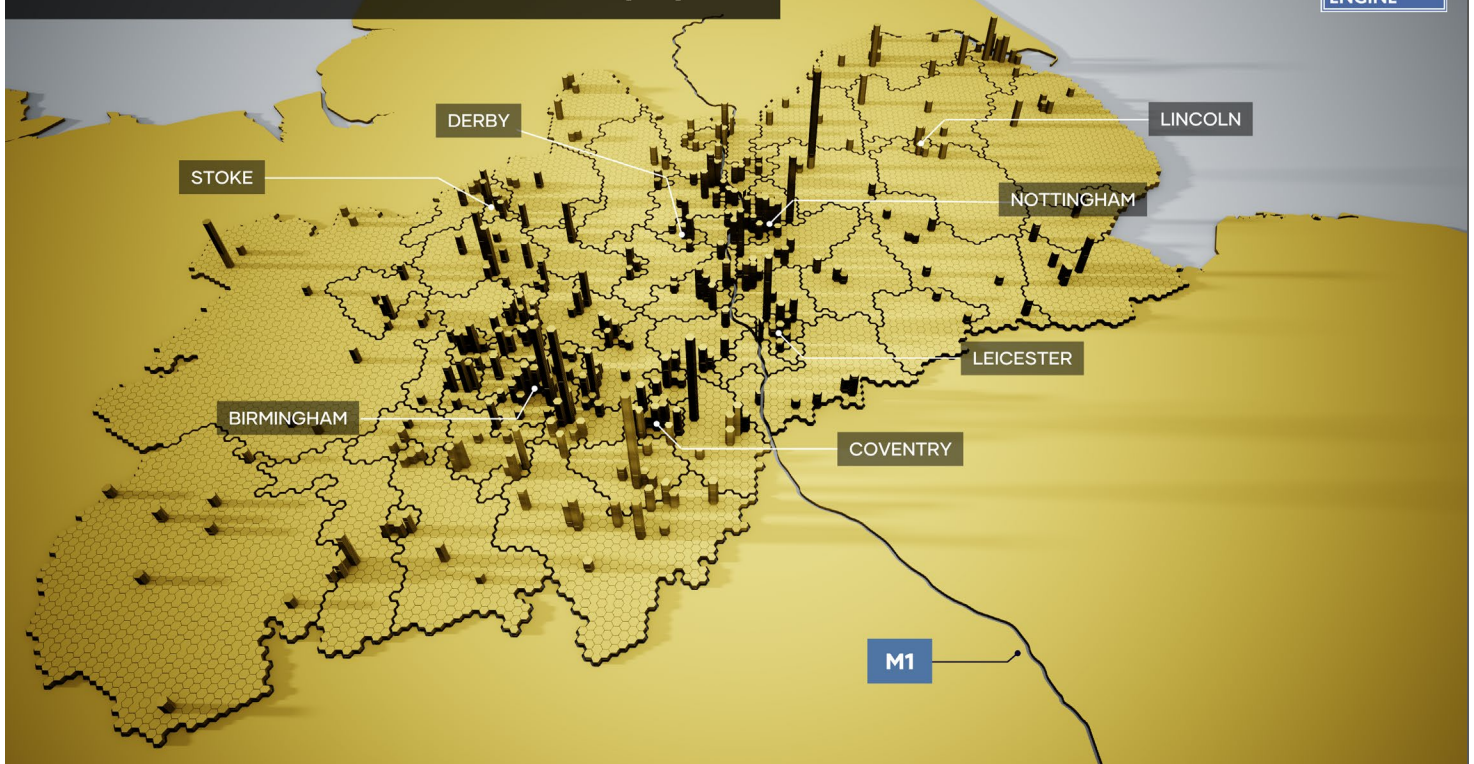
Relevant HEI High-Ranking Department:
Universities of Nottingham; Birmingham; Warwick; and Loughborough
 4 universities high ranked: international presence and expertise.⁴

¹Data City, 2023, ²ONS ASHE, 2021, ³QS 'Engineering and Technology' & 'Natural Sciences' world subject ranking 2022 - institutions appearing in the UK top 25 ⁴Graduates from relevant subjects 2021 (HESA) ⁵Graduates from relevant subjects 2021 (HESA) ⁶305/305 first degree graduates 'Electricity, gas steam and air conditioning supply; Water Supply' in 3 years of graduating in 2019. (DfE Graduate Outcomes by Industry).



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MODERN LOW CARBON UTILITIES - Employees



Modern and Low Carbon Utilities



Investment Ecosystem



Investment/Venture Capital Firms:
Funds HQ'd in Midlands Engine area
 313 Funds have offices in region.¹

200

FDI Jobs 2017-2021:
 8% of UK total.⁶

651 jobs

FDI into High Growth Companies:
 5 of 25 investments in High Growth Companies.²

20%

DDI Jobs 2017-2021:
 16% of UK total.⁷

915 jobs

FDI Capex 2017-21:
 4% of UK total.³

\$2.67bn

FDI Projects 2017-2021:
 3% of UK total.⁸

4 projects

DDI Capex 2017-21:
 7% of UK total.⁴

\$710.25m

DDI projects 2017-2021:
 18% of UK total.⁹

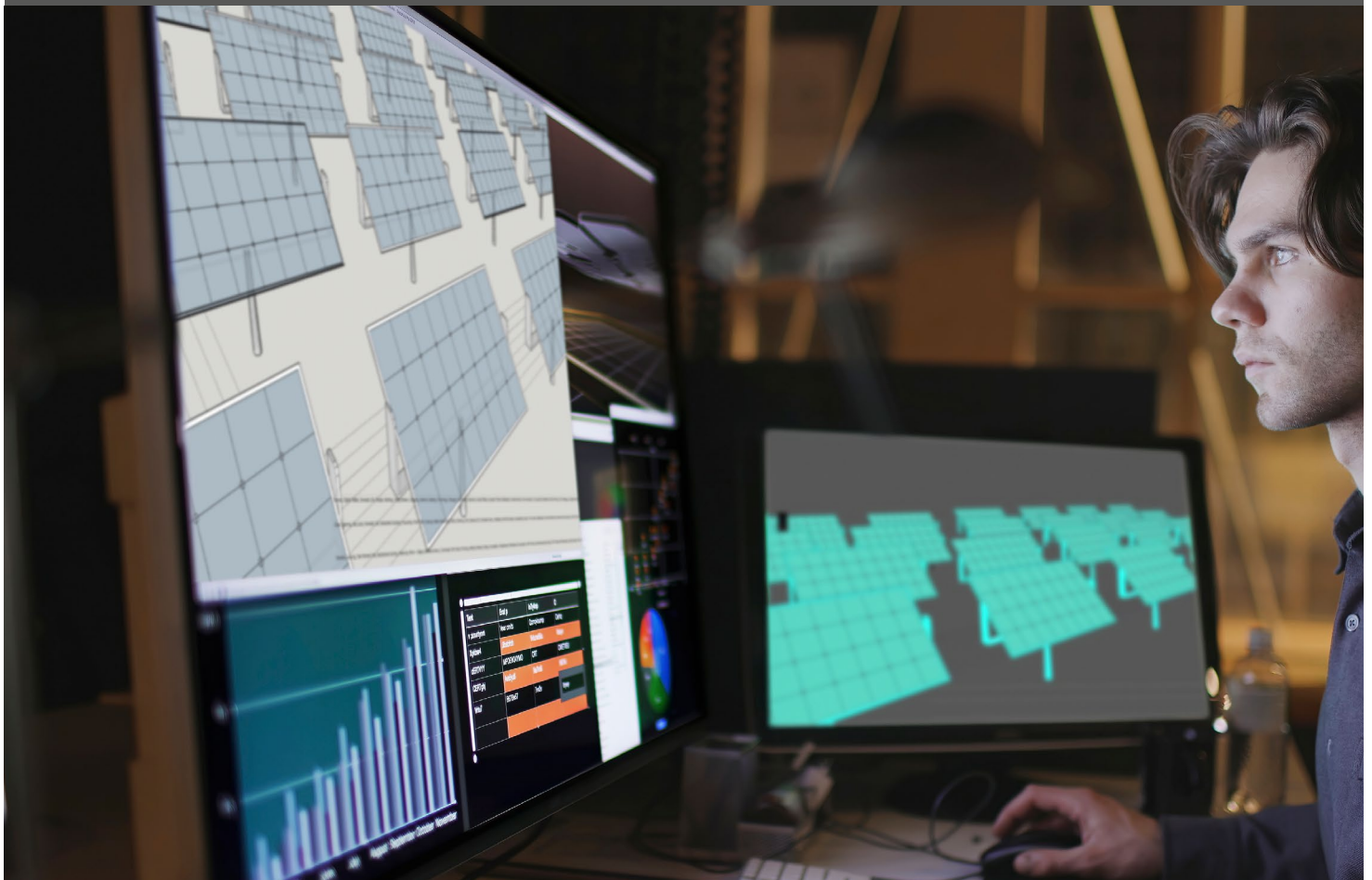
15 projects

Fundraising Volumes:

Mean av. £499k fundraising investment

£10.4m in 25 investments (inc. £325k across 15 seed investments; £10.1m across 4 venture investments).⁵

¹Beauhurst 2022, ²Beauhurst 2022, ³Wavteq 2022, ⁴Wavteq 2022, ⁵Beauhurst 2022, ⁶Wavteq 2022, ⁷Wavteq 2022, ⁸Wavteq 2022, ⁹Wavteq 2022.





COMMENTARY

- The Midlands saw a large spike in DDI marketshare in this cluster post-Covid-19.
- Wavteq forecast a UK FDI Capex of \$15.71bn in this sector (renewable energy) in 2025.
- The top countries for foreign ownership of businesses in this cluster are the USA, Germany, Switzerland and Finland.



This data has been compiled from multiple sources, using classifications based on clusters as proposed by Midlands Engine Partners. Where necessary wider sector data has been used as a 'best proxy'. Unless otherwise stated, all data is contemporary as of May 2023, and is an aggregation of all known counts/data within the Midlands Engine's 65 Local Authorities. Unless otherwise stated, business, employee and turnover figures have been calculated via DataCity based on trading addresses within the Midlands Engine.