

Statistical bulletin

Low carbon and renewable energy economy survey, research and development estimates, UK: 2020 to 2024

Research and development estimates of the UK's low carbon and renewable energy economy. These are official statistics in development.

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1 . Main points

- Low carbon and renewable energy economy (LCREE) research and development (R&D) estimates measure UK business' expenditure on R&D, which support low carbon and renewable energy innovation and related activities.
- Total UK in-house R&D expenditure, which measures research and development undertaken within businesses, was estimated at £1.5 billion in 2024, in current prices; this was an increase of £0.6 billion (58.1%) since 2020, our earliest available data.
- Total UK purchased R&D expenditure, which measures payments made by businesses for research and development carried out by other organisations, was estimated at £0.8 billion in 2024, in current prices; this was an increase of £0.4 billion (137.7%) since 2020.
- The low emission vehicles and infrastructure group made the largest contribution to both measures of research and development in 2024; this accounted for £0.5 billion (31.0%) of total UK in-house R&D, and for £0.4 billion (59.0%) of total UK purchased R&D, in 2024.
- LCREE R&D estimates are labelled as [official statistics in development](#), as we continue to refine their collection, validation and quality assurance processes; these estimates are considered sufficiently robust to provide insight into research and development activity within the UK's low carbon and renewable energy economy, but are subject to greater uncertainty than other LCREE estimates.
- Estimates for 2020 to 2022 are final, while estimates for 2023 and 2024 are subject to revision. More information on how these estimates are produced is available in our [LCREE Survey quality and methodology information \(QMI\)](#).

These estimates are labelled as [official statistics in development](#), reflecting our ongoing work to refine their collection, validation and quality assurance processes. Sampling, imputation, weighting, and revisions follow the methodological principles set out in our [LCREE Survey QMI](#).

2 . Data on low carbon and renewable energy economy survey, research and development estimates

[Low carbon and renewable energy economy survey, research and development estimates](#)

Dataset | Released 26 August 2026

Includes annual estimates of low carbon and renewable energy economy research and development expenditure in the UK and constituent countries, from 2020 to 2024, covering both in-house and purchased expenditure. These are official statistics in development.

3 . Data sources and quality

Data sources

Our low carbon and renewable energy economy (LCREE) survey collects data, annually, from businesses across 17 UK sectors on turnover, imports, exports, employment, and capital asset acquisitions and disposals. It also collects information on research and development activity (R&D) within these sectors, covering both in-house and purchased R&D.

For more information on the sectors covered by the survey, see our [Low carbon sector codes and descriptions document \(DOC. 26KB\)](#).

The research and development expenditure questions were introduced to the LCREE Survey from the 2020 reporting period onwards, to meet user demand for information on innovation and investment within the low carbon and renewable energy economy. The survey collects information on both in-house and purchased R&D, providing a more complete picture of research and development investment across the sectors.

Quality

More information on strengths, limitations, appropriate uses, and how the data were produced is available in our [LCREE Survey quality and methodology information \(QMI\)](#).

Information relating specifically to research and development is available under the subsection "Research and development", in Section 7 of our [LCREE Survey QMI](#).

Limitations

Activity in LCREE sectors span a range of industries. While some LCREE sectors have increased in size, others remain small, and for many businesses LCREE activity is secondary rather than primary. Therefore, estimates are subject to volatility. More information is available in Section 4 of our [LCREE survey QMI](#).

Research and development estimates are subject to additional limitations compared with other LCREE variables. This reflects the introduction of new questions on in-house and purchased R&D activity, and the ongoing refinement of associated collection and validation processes. While the estimates are considered sufficiently robust for analysis of broad patterns and trends, they are subject to a higher degree of uncertainty than other LCREE estimates. Users should take this into account when interpreting results.

In-house R&D measures research and development carried out within a business, while purchased R&D measures research and development commissioned from external organisations. These measures are published separately rather than combined into a single total, as presenting a total could make it more difficult to distinguish between where research and development is performed and how it is funded.

Publishing the measures as a combined total could potentially increase the risk of double-counting where the same R&D activity is reported by both the organisation undertaking the work and the organisation funding it. This approach is consistent with established research and development statistical practice, including the Business Enterprise Research and Development (BERD) statistics.

Official statistics in development

These statistics are labelled as official statistics in development, reflecting our ongoing work to refine their data collection, validation and quality assurance processes. Read more about official statistics in development, and what this means for users, in our [guide to official statistics in development](#).

Further information on the development of these estimates and the reasons for their current designation is available in our [Environmental economy business surveys development plan, UK article](#).

4 . Related links

[Low carbon and renewable energy economy, UK: 2024](#)

Bulletin | Released 25 February 2026

Estimates of the size of the UK's low carbon and renewable energy economy, including turnover and employment.

[Low carbon and renewable energy economy survey indirect estimates, UK: 2015 to 2024](#)

Bulletin | Released 25 February 2026

Indirect and total estimates of turnover and employment in the low carbon and renewable energy economy. These are official statistics in development.

[Low carbon and renewable energy economy estimates](#)

Dataset | Released 25 February 2026

Annual estimates of low carbon and renewable energy economy activity in the UK and constituent countries: turnover, employment, exports, imports, acquisitions, disposals and number of businesses.

[Low Carbon and Renewable Energy Economy \(LCREE\) Survey QMI](#)

Methodology | Last revised 26 August 2026

Quality and methodology information for the Low Carbon and Renewable Energy Economy (LCREE) Survey, detailing methods used, data it provides, and strengths and limitations.

[Environmental economy business surveys development plan, UK](#)

Methodology | Released 26 August 2026

Overview of plans for the development of statistics collected by our environmental economy business surveys, including a timeline for this development.

5 . Cite this statistical bulletin

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