

Statistical bulletin

Low Carbon and Renewable Energy Economy Survey indirect estimates, UK: 2015 to 2022

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

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1 . Main points

- Our updated methods to produce low carbon and renewable energy economy (LCREE) indirect estimates use our [UK input-output analytical tables: industry by industry dataset](#); estimates for 2021 and 2022 are provisional.
- Indirect estimates provide an indication of the effect that direct economic activity has on the wider economy.
- UK indirect LCREE turnover was an estimated £27.8 billion in 2022, and indirect employment was estimated at 182,400 full-time equivalent employees (FTEs).
- The low carbon electricity group within LCREE had the highest indirect turnover (£11.5 billion) in 2022; the energy efficient products group had the largest indirect employment (62,800 FTEs).
- The 2022 UK indirect LCREE turnover and employment estimates are at their highest level since 2015.
- Between 2015 and 2022, UK indirect LCREE turnover increased by an estimated 77.1% (from £15.7 billion to £27.8 billion), while employment increased by an estimated 71.1% (from 106,600 to 182,400 FTEs).

We have updated and improved on the methods used in previous estimates since they were last published. However, more work is needed to address where there may be some remaining double counting, resulting in a bias towards overestimation of the total (direct plus indirect) Low Carbon and Renewable Energy Economy estimates. These estimates will continue to be classed as official statistics in development while these limitations remain.

2 . Data on low carbon and renewable energy economy indirect estimates

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

Dataset | Released 25 November 2024

Annual estimates of low carbon and renewable energy economy (LCREE) direct, indirect, and total turnover and employment in the UK by LCREE sector and group. These are official statistics in development.

3 . Data sources and quality

Data sources

More methodology information on appropriate uses, and how the data were created is available in our [Low Carbon and Renewable Energy Economy \(LCREE\) Survey: Indirect estimates methodology](#).

Quality

We have reviewed and updated the methodology used to produce LCREE indirect estimates. This new method uses our [UK input-output analytical tables: industry by industry dataset](#) in its calculations.

The methodology used to generate UK input-output tables (IOTs) is constantly under review. A major piece of development work was undertaken in 2017 to generate industry-by-industry IOTs for the first time. Indirect and total estimates for 2015 and 2016 are calculated using the 2017 IOT because of a lack of data for these two years.

The latest available version of UK IOTs is our 2020 dataset, first published in May 2024. This lags behind LCREE publication timelines, for which data are available up to the year 2022. Estimates for 2021 and 2022 are therefore provisional and are calculated using the 2020 IOT. These provisional estimates will be updated once IOTs are available for the corresponding year of LCREE data.

The LCREE survey was conducted for the first time in 2015 to collect data for 2014. We changed the sampling methodology and the method used to calculate the number of businesses for sectors in the LCREE since the publication of 2014 data. We do not advise comparing estimates from 2014 with those from later years of the survey. Because of methodological changes implemented in 2015, estimates for 2014 are not presented.

Limitations

We are aware of a limitation in the method resulting in a bias towards overestimation of the total (direct plus indirect) LCREE estimates. This is because LCREE survey data are currently being used to represent direct effect. This is not completely accurate because the survey data contains some intermediate demand. This results in double counting when combining with indirect effects to calculate total effects.

There is an additional limitation to this method when providing indirect LCREE turnover. It is not currently possible to separate turnover collected from sales out from other activity contributing to economic output.

Until these limitations have been addressed, these estimates will continue to be classed as official statistics in development. More information on this can be found in [Section 2: Previous methodology of our Low Carbon and Renewable Energy Economy \(LCREE\) Survey indirect estimates methodology](#).

Official statistics in development

These statistics are labelled as "official statistics in development". Until September 2023, these were called "experimental statistics". Read more about the change in the [guide to official statistics in development](#).

Once the developments are complete, we will review these estimates with the Statistics Head of Profession. We will decide if they are of sufficient quality and value to be published as official statistics, or if further development is needed. Production may be stopped if they are not of sufficient quality or value. Users will be informed of the outcome and any changes.

We value your feedback on these statistics. Contact us at Environment.Accounts@ons.gov.uk.

4 . Related links

[Low Carbon and Renewable Energy Economy \(LCREE\) Survey: Indirect estimates methodology](#)

Dataset | Released 25 November 2024

Provides information on the method used to calculate the indirect estimates produced from the Low Carbon and Renewable Energy Economy (LCREE) Survey.

[Low carbon and renewable energy economy, UK: 2022](#)

Bulletin | Released 8 March 2024

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

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

Dataset | Released 8 March 2024

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 | Released 19 February 2024

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

[UK inputoutput analytical tables: industry by industry](#)

Dataset | Released 3 May 2024

Industry by industry and further analysis tables derived from the annual Supply and Use Tables (SUTs) for 2020.

[Employment multipliers and effects in the UK](#)

Dataset | Released 1 October 2024

Estimates of full-time equivalent (FTE) employment per £m, type 1 FTE employment effects, and type 1 FTE employment multipliers across 105 industries. These are official statistics in development.

5 . Cite this statistical bulletin

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