



Annex 2: 2024 UK Greenhouse Gas Emissions, Final Figures by Standard Industrial Classification

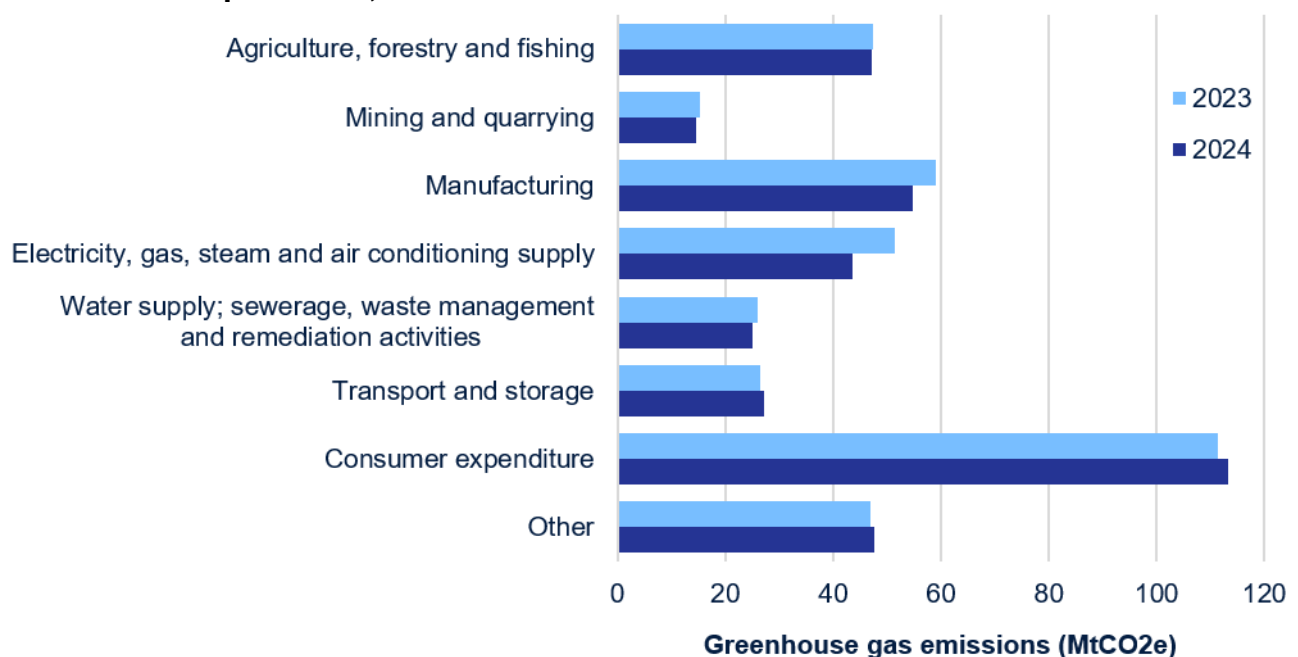
25 June 2026

Accredited Official Statistics

This publication is an extension of the UK territorial greenhouse gas emissions estimates by source for 1990-2024 published in February 2026. It provides the latest estimates of 1990-2024 emissions by Standard Industrial Classification (SIC).

- The manufacturing industry was the largest emitting industry at an estimated 55 million tonnes of carbon dioxide equivalent (MtCO₂e) in 2024, followed by the agriculture, forestry and fishing industry at 47 MtCO₂e, equating to 15% and 13% of all emissions respectively. Electricity, gas, steam and air conditioning supply was the industry with the highest emissions in most years between 1990 and 2022 but fell to having the third highest in 2024 at 44 MtCO₂e (12% of all emissions).
- Despite the overall decrease in emissions in the UK between 2023 and 2024, only 9 industry sections saw a decrease and 11 saw an increase. The electricity, gas, steam and air conditioning supply industry had the largest absolute decrease in emissions with a fall of 8 MtCO₂e (15%), due to higher net electricity imports, greater renewable generation, and the closure of the UK's last coal-fired power station in September 2024. The transport and storage industry had the largest absolute increase of 1 MtCO₂e (3%).
- Consumer expenditure, a category covering emissions associated with households and private travel, contributed 30% of emissions (113 MtCO₂e) in 2024. Emissions from consumer expenditure increased by 2% (2 MtCO₂e) in 2024. Higher gas use in homes driven by an easing of energy cost pressures is likely to have been a factor in this increase.

Figure 1: Territorial UK greenhouse gas emissions for the highest emitting industries and consumer expenditure, 2023-2024



Source: Table 8.1, Final UK greenhouse gas emissions statistics 1990-2024 Excel data tables

Introduction

The [Standard Industrial Classification \(SIC, 2007\)](#) is used to classify businesses and activities to the relevant industries and includes a hierarchy of codes to represent subsections of various industries. Using this system allows for reporting of emissions against their relevant industry rather than their source sector, as is seen in the [estimates by Territorial Emissions Statistics \(TES\) sector](#). Emissions from a particular industry can vary over time due to several factors, including expansions and contractions in that industry as well as changes in practices. In these statistics we present emissions estimates for 20 SIC industry 'sections', and for 129 industry 'groups' that the sections can be divided into.

In the data tables accompanying this report, tables 8.1 to 8.8 present emissions by SIC, for all gases combined and individually, whilst Table 8.9 shows total emissions by SIC and TES sector. Not all emissions in the UK are related to SIC identifiable industries. Therefore, two other categories of emissions are shown alongside the SIC sections, one for consumer expenditure which covers emissions associated with households and private travel, and one for emissions and sinks from land use, land use change and forestry (LULUCF). This ensures that total emissions are consistent with the data published in February 2026 by source sector.

Million tonnes of carbon dioxide equivalent (MtCO₂e) are used within this report to provide consistency and comparability with the main report that this annex accompanies. However, emissions are presented in thousand tonnes of carbon dioxide equivalent (ktCO₂e) in the accompanying data tables so that smaller totals can more easily be distinguished from zeros.

Note that as part of this release, 1990-2023 greenhouse gas emissions estimates have been revised since the previous publication of emissions by SIC in June 2025 to incorporate methodological improvements and new data. Therefore, the estimates presented here supersede the previous ones. The revisions described in the statistical release that this is an annex to also apply to these estimates, and amongst the data used to allocate emissions to SIC groups there was a notable methodological update this year to the Energy Consumption in the UK (ECUK) data and applied back to 2021. The new method uses data from the Emissions Trading Scheme (ETS), and Climate Change Agreements (CCA) and represents an improvement in quality for most industrial sectors. Those sectors with least coverage in the ETS and CCA data, and therefore highest uncertainty in the resulting estimates, are mechanical/electrical engineering and textiles and leather. There are more details here: [Update to estimates of industrial consumption within ECUK](#).

2024 greenhouse gas emissions by SIC

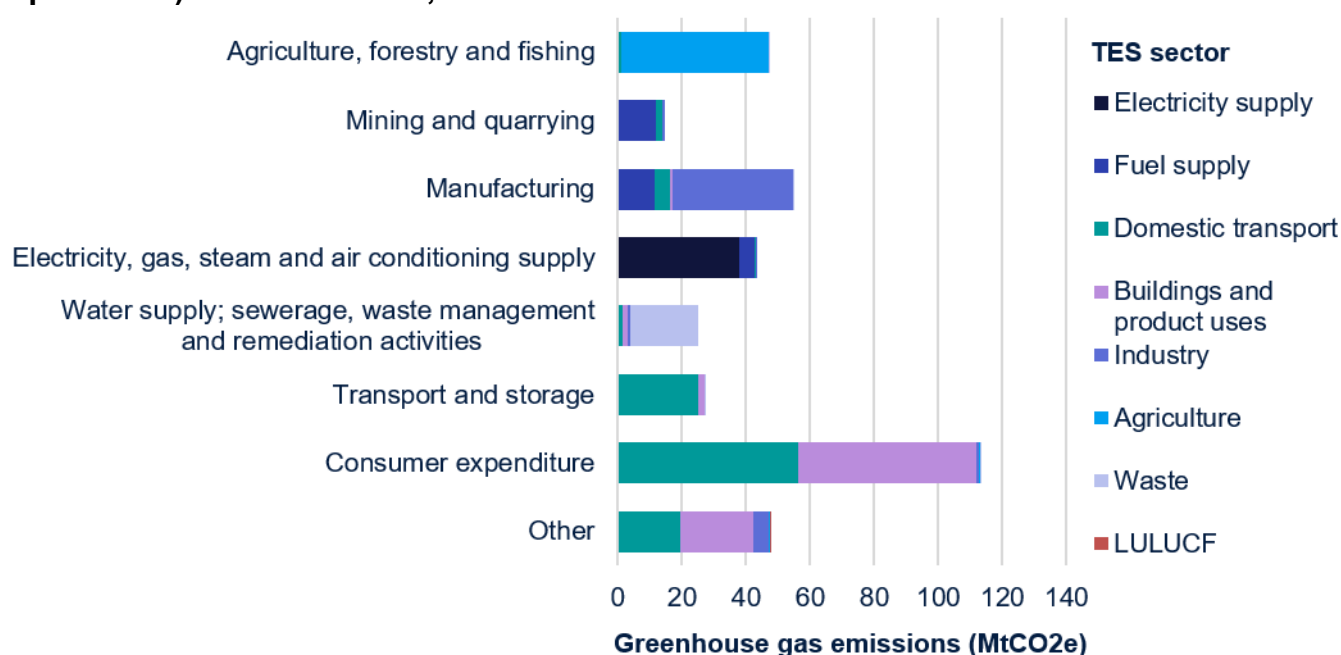
In 2024, total UK net territorial emissions were estimated to be 373 MtCO₂e. Of these emissions, 15% (55 MtCO₂e) were from the manufacturing industry. This was the largest of any industry and has been in every year since 2019 other than 2022. The agriculture, forestry and fishing industry contributed 13% (47 MtCO₂e) and the electricity, gas, steam and air conditioning supply industry 12% (44 MtCO₂e).

Between 2023 and 2024, total emissions fell by 3% (11 MtCO₂e). Most of this decrease is the result of reduced emissions from the electricity, gas, steam and air conditioning supply industry, which fell by 15% (8 MtCO₂e). This decrease is largely due to a mixture of higher net electricity imports, greater renewable generation, and the closure of the UK's last coal-fired power station in September 2024. There was also a 7% (4 MtCO₂e) decrease in emissions from the manufacturing industry. The main factor in this was a 30% (3 MtCO₂e) decrease in emissions from the manufacture of basic iron and steel, largely due to blast furnace closures.

Eleven of the twenty industry sections saw an increase in emissions between 2023 and 2024. The largest absolute increases were from the transport and storage industry, where they increased by 1 MtCO₂e (3%), the construction industry, which increased by 0.3 MtCO₂e (3%), and the human health and social work activities industry, which increased by 0.3 MtCO₂e (5%). The largest proportional increases were in emissions from the education industry at 9% (0.2 MtCO₂e) and the arts, entertainment and recreation industry at 6% (0.1 MtCO₂e).

Consumer expenditure, a category covering emissions associated with households and private travel, contributed 30% of emissions (113 MtCO₂e) in 2024. Overall, 50% (56 MtCO₂e) of consumer expenditure emissions were related to private travel. Between 2023 and 2024, emissions from consumer expenditure increased by 2% (2 MtCO₂e). Higher gas use in homes driven by an easing of energy cost pressures is likely to have been a factor in this increase.

Figure 2: Territorial UK greenhouse gas emissions by industry (including consumer expenditure) and TES sector, 2024



Source: Table 8.9, Final UK greenhouse gas emissions statistics 1990-2024 Excel data tables

Figure 2 shows which TES sectors the emissions in each industry fall into. The emissions from some TES sectors, such as agriculture, electricity supply, and waste, fall entirely or almost entirely within one industry, whilst emissions from others, such as domestic transport and buildings and product uses, are spread across a large range of industries.

When emissions are considered on a TES sector basis, the largest sector is domestic transport, which was responsible for 30% of emissions in 2024. Around half (51%) of domestic transport emissions were from households ("consumer expenditure"), predominantly from

private use of cars. The largest industry for domestic transport emissions is the transport and storage industry, which was responsible for 23% of domestic transport emissions, with the remaining 26% of domestic transport emissions split across other industries.

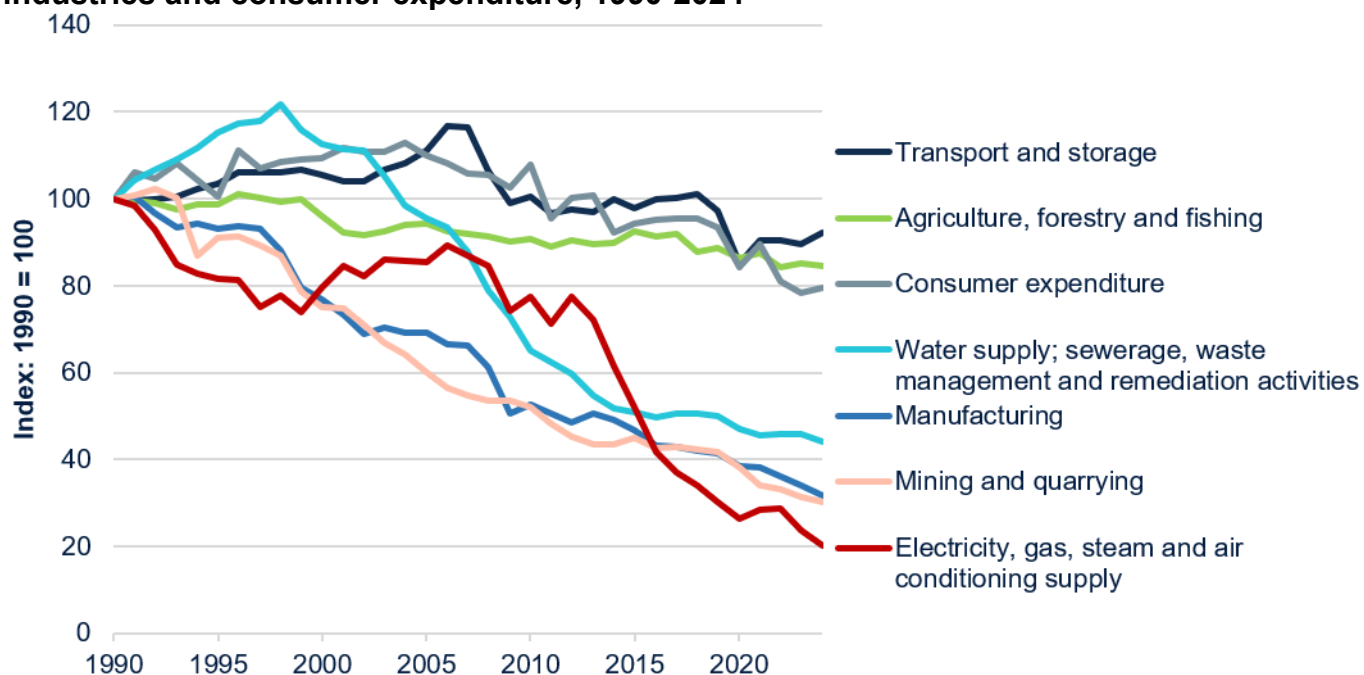
1990-2024 greenhouse gas emissions by SIC

Between 1990 and 2024, total emissions fell by 53% (417 MtCO₂e). The largest contributors to this reduction have been from the electricity, gas, steam and air conditioning supply industry and the manufacturing industry.

Emissions from the electricity, gas, steam and air conditioning supply industry fell by 80% (174 MtCO₂e), mainly due to the switch from the use of coal in electricity production to other lower emitting fuels such as natural gas and more recently renewable sources. Meanwhile, emissions from the manufacturing industry fell by 68% (118 MtCO₂e). Within the manufacturing industry, the most significant reductions in emissions are from the manufacture of petrochemicals, which fell by 92% (39 MtCO₂e), and the manufacture of basic iron and steel, which fell by 75% (18 MtCO₂e).

In addition, there was a 70% (34 MtCO₂e) fall in emissions from the mining and quarrying industry, largely due to reductions from mining of coal and lignite. Emissions from the water supply; sewerage, waste management and remediation activities industry fell by 56% (32 MtCO₂e). This was due to a combination of factors, including improvements in the standards of landfilling, changes to the types of waste going to landfill (such as reducing the amount of biodegradable waste), and an increase in the amount of landfill gas being used for energy.

Five of the twenty industries saw an increase in emissions between 1990 and 2024. The real estate activities industry saw the largest percentage growth in emissions over this period, increasing by 46% (0.3 MtCO₂e), followed by the construction industry increasing by 27% (2.2 MtCO₂e) and the accommodation and food services industry increasing by 27% (0.8 MtCO₂e). Meanwhile, the administrative and support service activities industry increased by 11% (0.3 MtCO₂e), and the wholesale and retail trade; repair of motor vehicles and motorcycles industry by 3% (0.3 MtCO₂e).

Figure 3: Index of territorial UK greenhouse gas emissions for the highest emitting industries and consumer expenditure, 1990-2024

Source: Table 8.1, Final UK greenhouse gas emissions statistics 1990-2024 Excel data tables

Note: This figure illustrates historic emissions trends for six highest emitting industries and the consumer expenditure category. Together, these categories accounted for 87% of total UK emissions in 2024.

Between 1990 and 2024, emissions directly related to consumer expenditure fell by 20% (29 MtCO₂e). Consumer expenditure emissions related to private travel increased by 9% (5 MtCO₂e) between 1990 and 2019 but saw a significant reduction in 2020 due to COVID-19 pandemic restrictions. They have since risen but remain below pre-pandemic levels, with emissions in 2024 15% (10 MtCO₂e) lower than in 2019 and 7% (4 MtCO₂e) lower than in 1990. Note that private travel primarily covers private road transport and does not include international aviation or other international travel since they are not within scope of UK territorial emissions estimates.

Non-travel consumer expenditure emissions fluctuate year to year as primarily covers the use of fuels for heating homes which can vary depending on the weather. Nonetheless, non-travel consumer expenditure emissions have seen a gradual fall over time and between 1990 and 2024 fell by 30% (24 MtCO₂e). In recent years, warm weather as well as high energy and other costs are likely to be key drivers of reduced consumer energy use, although in 2024 these emissions increased by 4% (2 MtCO₂e), likely driven by an easing of energy cost pressures.

Accompanying tables

The following tables are available in Excel format on the [UK territorial greenhouse gas emissions statistics](#) collection page on GOV.UK:

Table 8.1	Territorial greenhouse gas emissions by SIC section and group, UK 1990-2024
Table 8.2	Territorial emissions of carbon dioxide (CO ₂) by SIC section and group, UK 1990-2024
Table 8.3	Territorial emissions of methane (CH ₄) by SIC section and group, UK 1990-2024
Table 8.4	Territorial emissions of nitrous oxide (N ₂ O) by SIC section and group, UK 1990-2024
Table 8.5	Territorial emissions of hydrofluorocarbons (HFCs) by SIC section and group, UK 1990-2024
Table 8.6	Territorial emissions of perfluorocarbons (PFCs) by SIC section and group, UK 1990-2024
Table 8.7	Territorial emissions of sulphur hexafluoride (SF ₆) by SIC section and group, UK 1990-2024
Table 8.8	Territorial emissions of nitrogen trifluoride (NF ₃) by SIC section and group, UK 1990-2024
Table 8.9	Territorial greenhouse gas emissions by SIC section, group, and TES sector, UK 1990-2024

Technical information

Emission estimates are based on the National Atmospheric Emissions Inventory (NAEI) and are primarily calculated from a combination of activity data and emission factors. The methodology is outlined and explained in the statistical release that this annex accompanies.

Allocations to industries are based on the [UK Standard Industrial Classification of Economic Activities 2007 \(SIC 2007\)](#). A mapping procedure is required to make a link between the source categories in the NAEI and the SIC industries. The definitions are such that many of the NAEI sources can be mapped directly to an industry through many-to-one relationships, where one or more NAEI sources are judged as being contained within a single industry. In other cases NAEI sources can be linked to several industries through one-to-many relationships, and here the “activity” and consequent emissions from that source must be split between each of the relevant industries either directly according to their proportionate level of activity, or indirectly.

These statistics are consistent with the estimates of emissions by SIC published by the Office for National Statistics (ONS) in the UK Environmental Accounts, except the ONS estimates are presented on a “residence” basis whereas these statistics are on a “territorial” basis. The “territorial” basis presents emissions within UK borders, whilst the “residence” basis includes direct emissions by UK residents and UK-registered business, whether they happen in the UK or overseas.

An explanation of the different measures of greenhouse gas emissions in the UK can be found in an article about [‘Measuring UK greenhouse gas emissions’](#) published by ONS. [Bridging tables](#) are available from the ONS that clearly explain the differences between the UK Environmental Accounts, used to fulfil UK United Nations System of Environmental-Economic Accounting (SEEA) reporting requirements for Eurostat, and the estimates that are published by DESNZ and used to fulfil UK international United Nations Framework Convention on Climate Change (UNFCCC) reporting requirements.

Estimates of emissions have an inherent uncertainty due to uncertainty in the underlying data used for the inventory and due to uncertainty in the applicability, completeness, and application of that data. Estimates of the uncertainty in the emissions estimates by gas and by source sector are shown in tables 4.1 and 4.2 in the main set of Excel tables. There are further uncertainties in estimates by SIC due to the allocation of the emissions estimates to industries, which in some cases has needed to be modelled using other datasets.

Further technical information can be found in the ONS [Environmental Accounts quality and methodology report](#).

Further information

Future updates to these statistics

In February 2027, DESNZ will publish final 1990-2025 UK territorial greenhouse gas emissions estimates by source sector. A summary of any planned methodology changes will be published in advance of that in January 2027.

In March 2027, DESNZ will publish a breakdown of 1990-2025 UK territorial greenhouse gas emissions with energy supply emissions on an end-user basis to supplement the source sector breakdown.

In March 2027, DESNZ will also publish provisional estimates of UK territorial greenhouse gas emissions for 2026. This will coincide with the publication of Energy Trends, which will include estimates of 2026 UK energy consumption.

In June 2027, DESNZ will publish estimates of 1990-2025 UK territorial greenhouse gas emissions by SIC to supplement the source sector breakdown.

Contact

- Email: GreenhouseGas.Statistics@energysecurity.gov.uk
- Media enquiries: 020 7215 1000
- Public enquiries: 020 7215 8285



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This publication is available from: <https://www.gov.uk/government/collections/uk-territorial-greenhouse-gas-emissions-statistics>.

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