Department for Energy Security & Net Zero

Energy consumption in the UK (ECUK)

1970 to 2024

About this release

Information on energy consumption in the UK by sector and end use.

In this release

Data tables

Additional data are available online as part of the ECUK 2025 publication:

Consumption

Energy intensity

Primary energy consumption

End uses

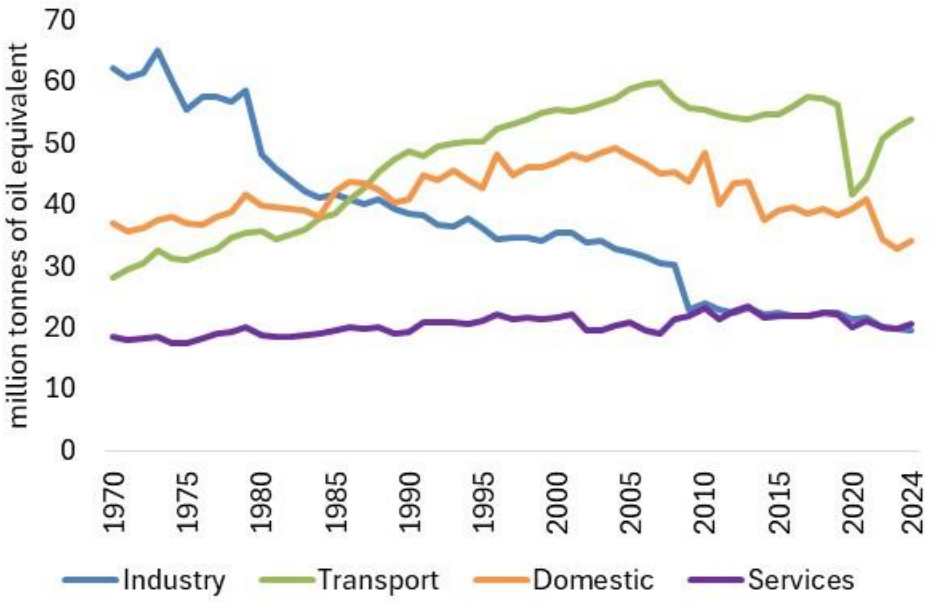
Following two decades of steady increases in consumption throughout the 1980s and 1990s, final energy consumption in the UK has been on a decreasing trend since the turn of the century. Since 1970 final energy consumption in the industrial sector has been decreasing. Over the same time period consumption in the transport sector has been increasing. Domestic sector consumption peaked in the early 2000s and has been decreasing since. Between 2023 and 2024 final energy consumption in the UK **increased by 2.6 per cent to 128.1 million tonnes of oil equivalent** (mtoe).

Energy **consumption in the domestic sector in 2024 increased** compared to the record low seen in 2023, by 3.8 per cent to 34.0 mtoe. This is likely due to slightly cooler temperatures and some easing of the high energy and other prices that depressed consumption levels in 2023. Consumption in the transport sector also increased, by 2.9 per cent to 54.0 mtoe, largely driven by increased consumption for air travel. However, transport consumption remains below the level seen in 2019.

In contrast, **energy consumption in the industry sector decreased to a record low** in 2024. Improvements in energy efficiency and a move away from traditional manufacturing have impacted the long-term trends in industrial consumption.

As with consumption, energy intensity in the domestic sector increased slightly in 2024, going against the longer-term decreasing (improving) trend bought about energy saving measures such as improved insulation and more efficient boilers. Energy intensity in the transport sector also decreased, as the rail and air sectors moved closed towards the intensity levels seen in 2019 prior to the pandemic.

Energy consumption by sector, 1970 to 2024 (Table C1)



Chapter 1: Energy consumption

Final energy consumption

Final energy consumption is the energy used by people and businesses in their day-to-day activities. Core final consumption data are sourced directly from that section of the energy balances as published in The Digest of UK Energy Statistics.

Final energy consumption differs from primary energy consumption, which relates to total fuel used (for example electricity consumption is allocated to the fuel input, such as coal or gas, used to generate the unit of electricity). Primary energy consumption data is presented in Chapter 3. Further details on the definitions and terminology used in this release can be found in Chapter 5: Technical information and the DUKES glossary.

Key headlines

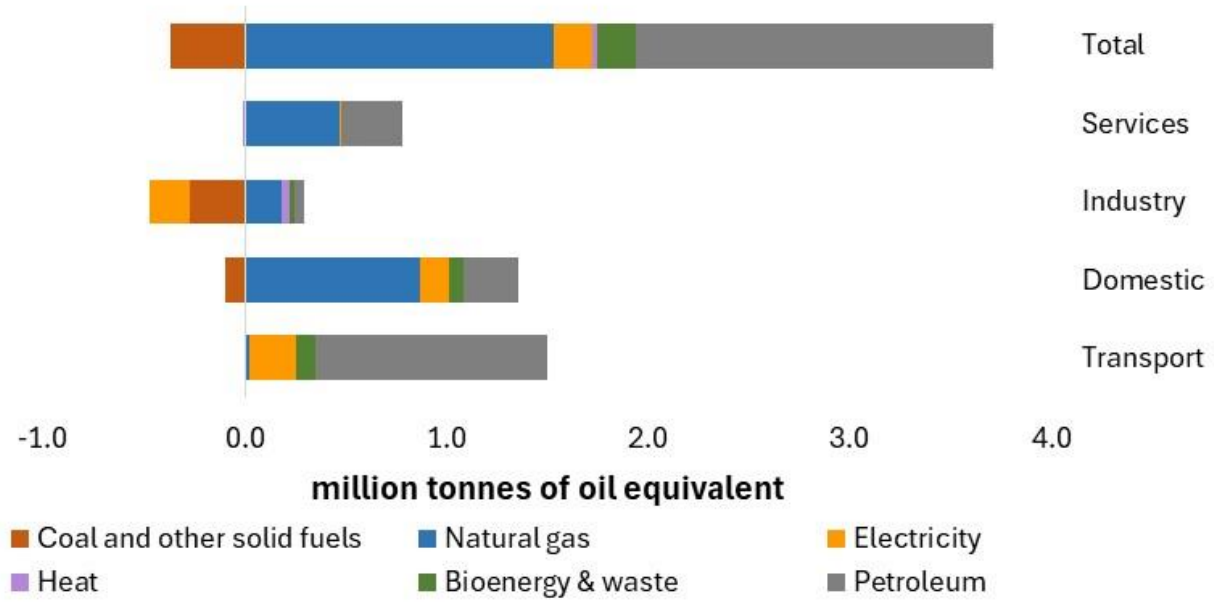
Final energy consumption (excluding non-energy use) in the UK in 2024 was 128.1 mtoe, 2.6 per cent higher than in 2023, but 7.9 per cent lower than pre-pandemic (2019) levels.

Industry was the only sector to see a decrease in final energy consumption in 2024, falling by 1.2 per cent to 19.5 mtoe. Like many other European countries[1], industrial consumption in the UK has contracted over time, due to improvements in energy efficiency and a move from traditional manufacturing to higher value processes.

All other sectors saw an increase in final energy consumption. The domestic sector rose by 3.8 per cent to 34.0 mtoe, with slightly cooler average temperatures in 2024 (compared to 2023) and some easing from the higher energy prices likely contributing to the rise. The services sector also rose by 3.8 per cent to 20.6 mtoe. Final consumption in the transport sector rose 2.9 per cent to 54.0 mtoe. Final consumption for air transport rose by 9.4 per cent to 13.5 mtoe, greater than the pre-pandemic consumption of 13.3 mtoe in 2019. Liquid biofuels, which weren't part of the fuel mix in 2019, made up 2.1% of the air transport consumption in 2024.

Chart 1.1 shows which fuels contributed to the changes in consumption in each sector between 2023 and 2024. This shows the biggest contributors were increased petroleum consumption in the transport sector and increased natural gas consumption in the domestic and services sectors.

Chart 1.1 Change in consumption by sector and fuel, 2023 to 2024 (Table C1)



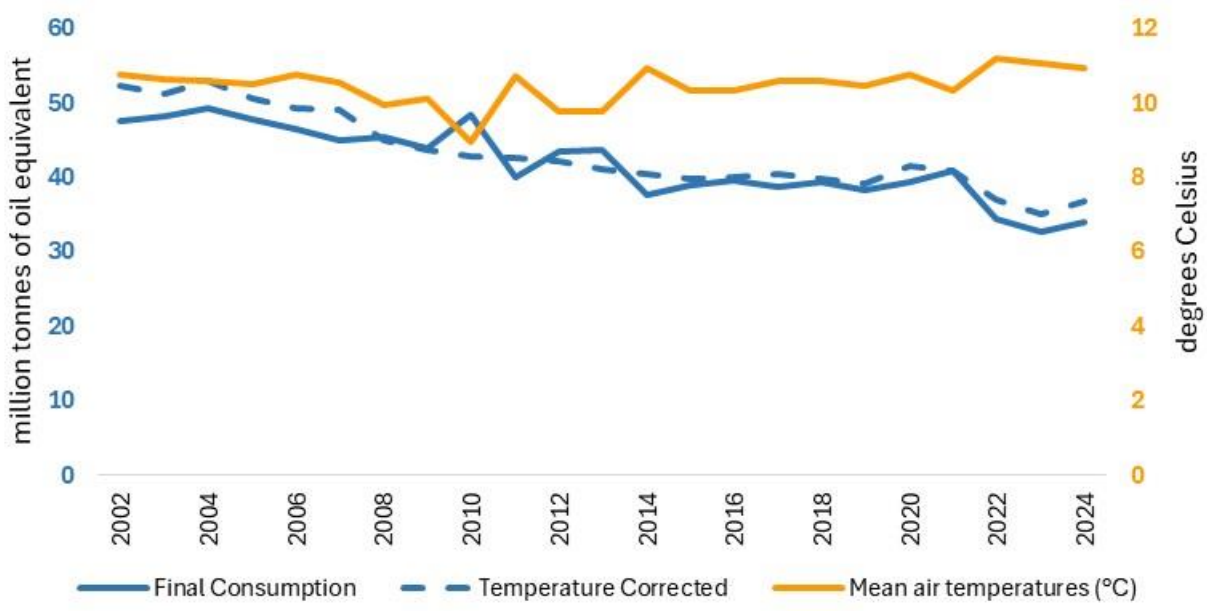
[1] IEA Energy End-use and Efficiency Indicators

Domestic

Energy consumption in the domestic sector has been on a long-term decreasing trend since the early 2000s, partly due to improvements in energy efficiency and more recently the impact of warmer temperatures and higher energy and other prices. Between 2023 and 2024 domestic consumption increased by 3.8 per cent to 34.0 mtoe, having been heavily impacted by temperature and prices in the preceding two years. The main fuel contributing to the year-on-year increase was natural gas, which increased by 4.1 per cent to 21.8 mtoe.

On a temperature corrected basis, domestic consumption in 2024 was 36.7 mtoe, 5.0 per cent higher than the temperature corrected consumption for 2023. This is a larger increase than the unadjusted figures, which suggests some easing of the high energy and other prices that depressed consumption levels in 2023.

Chart 1.2 Domestic consumption, temperature-corrected domestic consumption and average annual temperatures, 2002 to 2024 (Table C5)



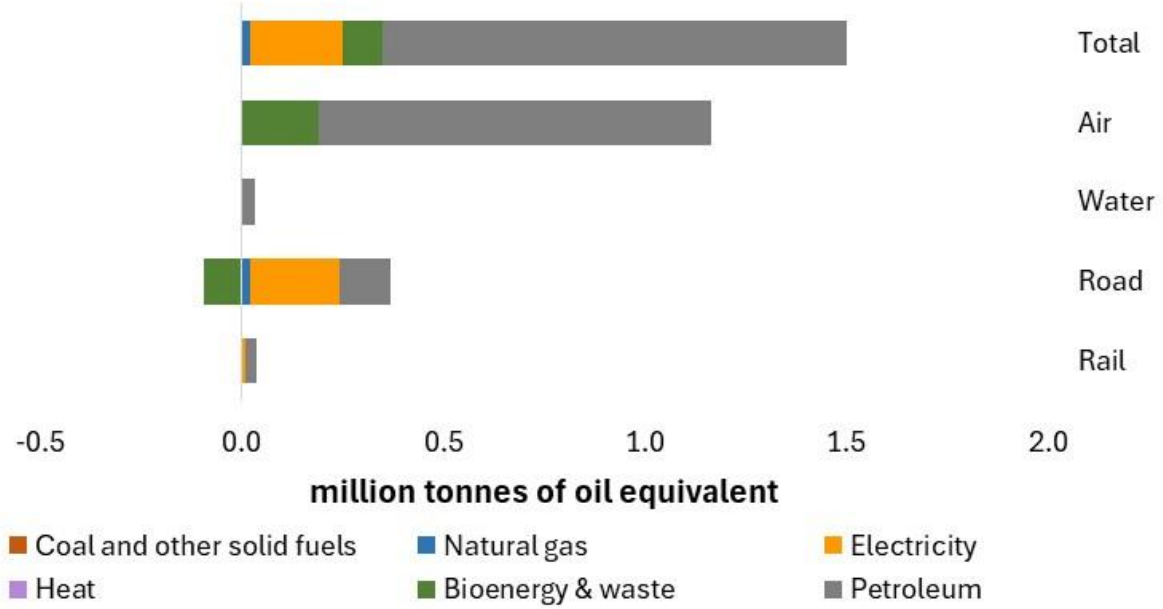
Transport

Between 1970 and 2008 energy consumption in the transport sector was on a steadily increasing trend as road and air traffic volume increased.[2] Consumption was negatively impacted in 2008 as a result of the financial crisis, and then again in 2020 during the COVID-19 pandemic. Between 2023 and 2024 transport energy consumption increased by 2.9 per cent to 54.0 mtoe, the fourth consecutive year there has been an increase in consumption in this sector. However, the 2024 consumption was still lower than the 56.3 mtoe consumed in the transport sector in 2019 prior to the pandemic.

Chart 1.3 shows the change in consumption by travel mode from 2023 to 2024. This shows that almost all fuels and travel modes increased in consumption, and that the overall change in consumption was primarily driven by air travel, for which final energy consumption (petroleum and bioenergy & waste combined) was higher in 2024 than it was in 2019. Road bioenergy & waste was the only fuel and transport mode to see a decrease in consumption, likely due to a reduction in commuting miles and the retiring of older diesel cars.

The transport sector has been the biggest component of final energy consumption in the UK each year since 1988. In 2024 the sector accounted for 42.0 per cent of the total energy consumption. When considering transport modes, road transport is the biggest contributor to transport energy consumption at 71.7 per cent, followed by air at 25.0 per cent. Rail and water transport contribute approximately 1.8 per cent and 1.5 per cent of transport energy consumption respectively.

Chart 1.3 Change in consumption in transport by travel mode, 2023 to 2024 (Table C1)



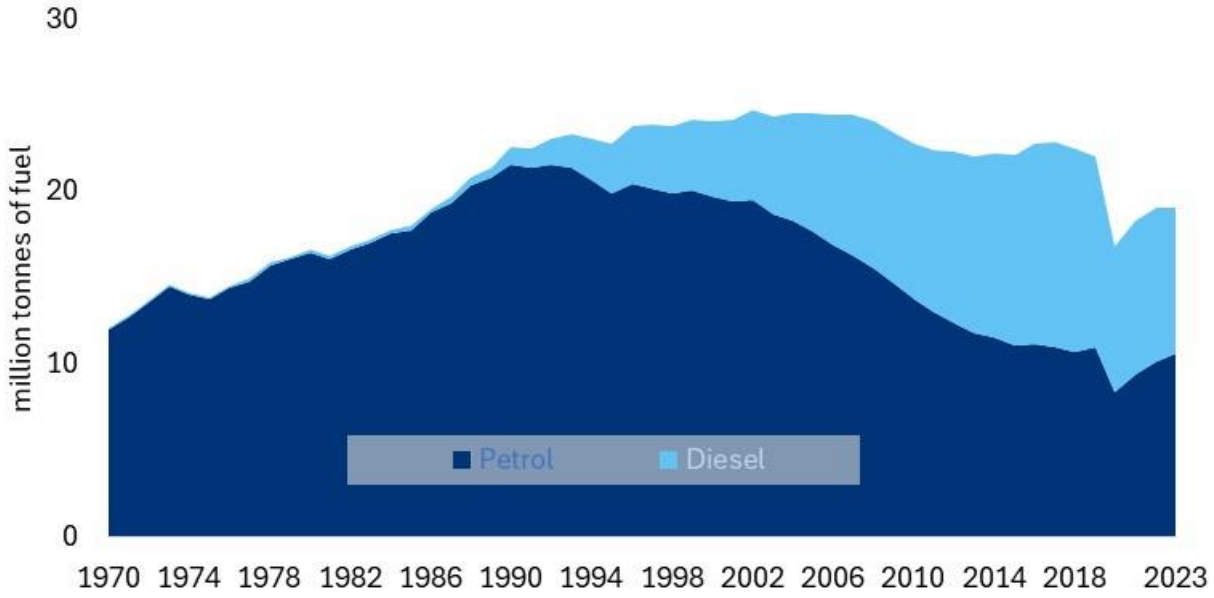
The vast majority of consumption in the transport sector is from petroleum fuel (92.4 per cent). Electricity consumption remains a small component of the overall transport energy consumption at 1.2 mtoe out of 54.0 mtoe. However electricity consumption in the transport sector has been rising. The share of electricity in transport consumption in 2024 was 2.2 per cent, up from 0.7 per cent in 2014, with the increase largely due to the increase in electricity consumption in road transport (see Electric vehicles within DUKES/ECUK data breakout box for further information). Electric car sales continue to grow, with data from the Department for Transport showing 549,905 plug-in electric cars being registered for the first time in 2024 compared to 455,259 in 2023 (a 21 per cent increase)[3].

Consumption data with detailed breakdowns by vehicle type and fuel is only available up to 2023 (Table C8).[4] Cars were the largest consumer of road transport fuel, with 19.1 million tonnes of fuel (petrol and diesel

[2] Department for Transport – Road traffic estimates, Department for Transport / Civil Aviation Authority – Aviation statistics
[3] See Department for Transport – Vehicle licensing statistics data tables – Table VEH1153b
[4] Demand by vehicle type based on modelling by Ricardo Energy & Environment using data from the National Atmospheric Emissions Inventory

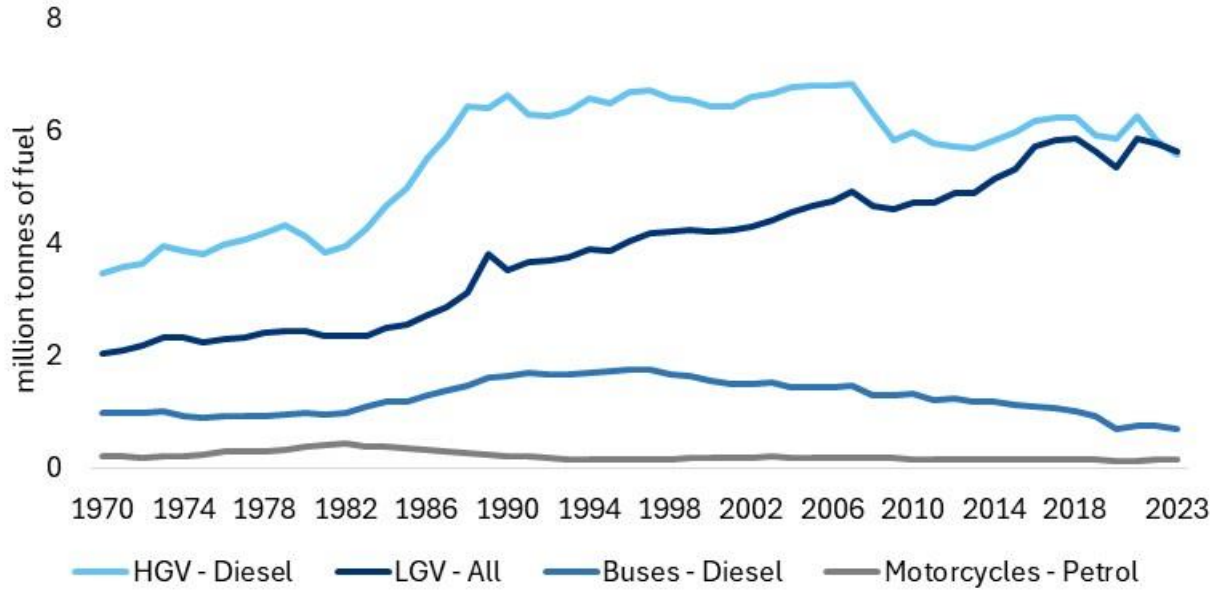
combined) consumed in 2023 (56 per cent of the total). Overall fuel use in cars was broadly static between 2022 and 2023, however this masks an increase in petrol consumption by around half a million tonnes (5 per cent) and a similar decrease in diesel consumption.[5,6] Biofuels contributed 8.4 per cent of the overall road fuel use in 2023, up approximately 1.0 percentage points from 2022.[7]

Chart 1.4 Petrol and diesel consumption for cars, 1970 to 2023 (Table C8)



There has been a long-term trend of increasing fuel consumption in light goods vehicles (LGVs), which now consume a similar amount of fuel to HGVs. However between 2022 and 2023 both vehicle types saw a fall in consumption, HGVs by 0.3 million tonnes (4.6 per cent) and LGVs by 0.1 million tonnes (2.5 per cent). Diesel consumption in buses fell by 5.5 per cent from 2022 to 2023, whereas fuel use in motorcycles increased by 3.0 per cent. Consumption for other road vehicles (excluding cars) is shown in Chart 1.5.

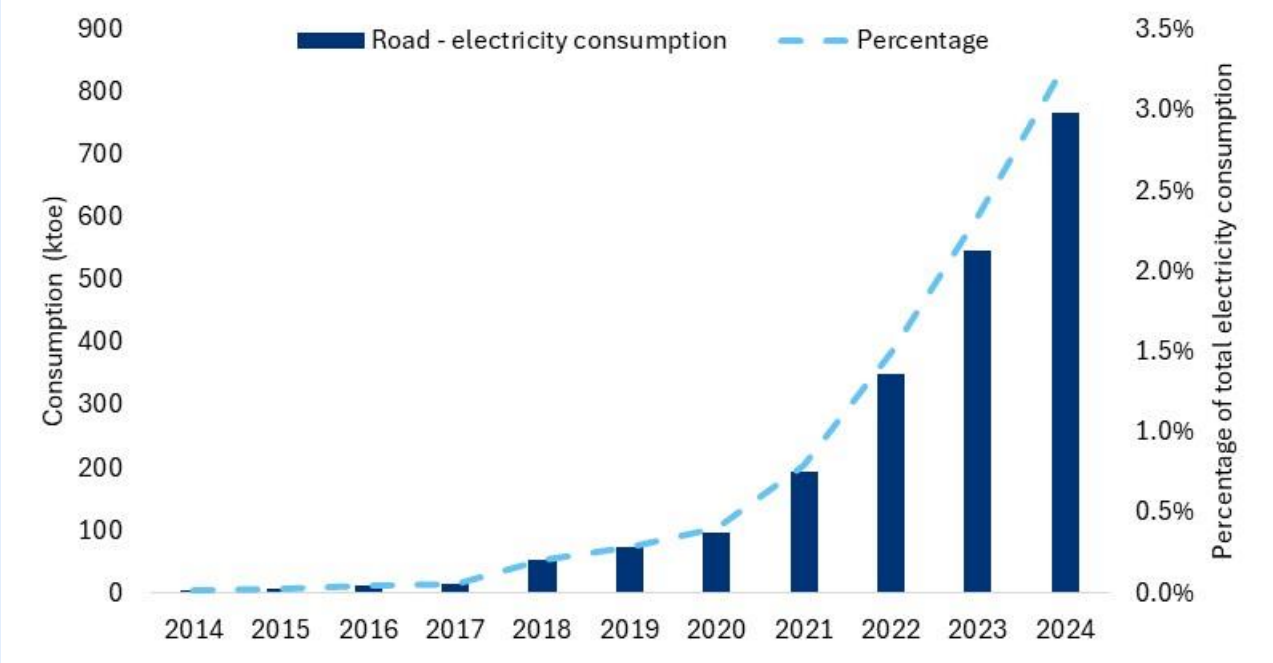
Chart 1.5 Consumption by other types of vehicles (excluding electricity), 1970 to 2023 (Table C8)



[5] These estimates do not account for electricity consumption in road transport
[6] A detailed discussion of trends in diesel consumption can be found in Energy Trends: June 2025, special feature articles
[7] Biofuels data is not allocated to vehicle type in this data

Electric vehicles within DUKES/ECUK data

Electricity consumed by electric vehicles (EVs) is included within the DUKES transport sector regardless of where charging takes place (see Electricity Statistics: Technical information and methodologies section 3.7.1 for further information). In the domestic sector for example, EVs charging is likely to split between home and public charging stations. Whereas previously the fuel for a petrol-powered car would have been almost exclusively sourced from a public petrol station. As the install base for EVs grows, there will be a growing impact on the electricity demand from domestic households.



During the production of DUKES the road electricity consumption (which consists of domestic and commercial vehicles) is deducted from the electricity consumption in the domestic and commercial sectors to prevent double-counting. Therefore the domestic consumption figures presented in this chapter do not include the electricity used for charging EVs, and the associated trends over time are not impacted by the growth in EV ownership. Similarly, electric vehicle charging is not one of the domestic end use categories in the data discussed in Chapter 4 or presented in the ECUK end uses tables.

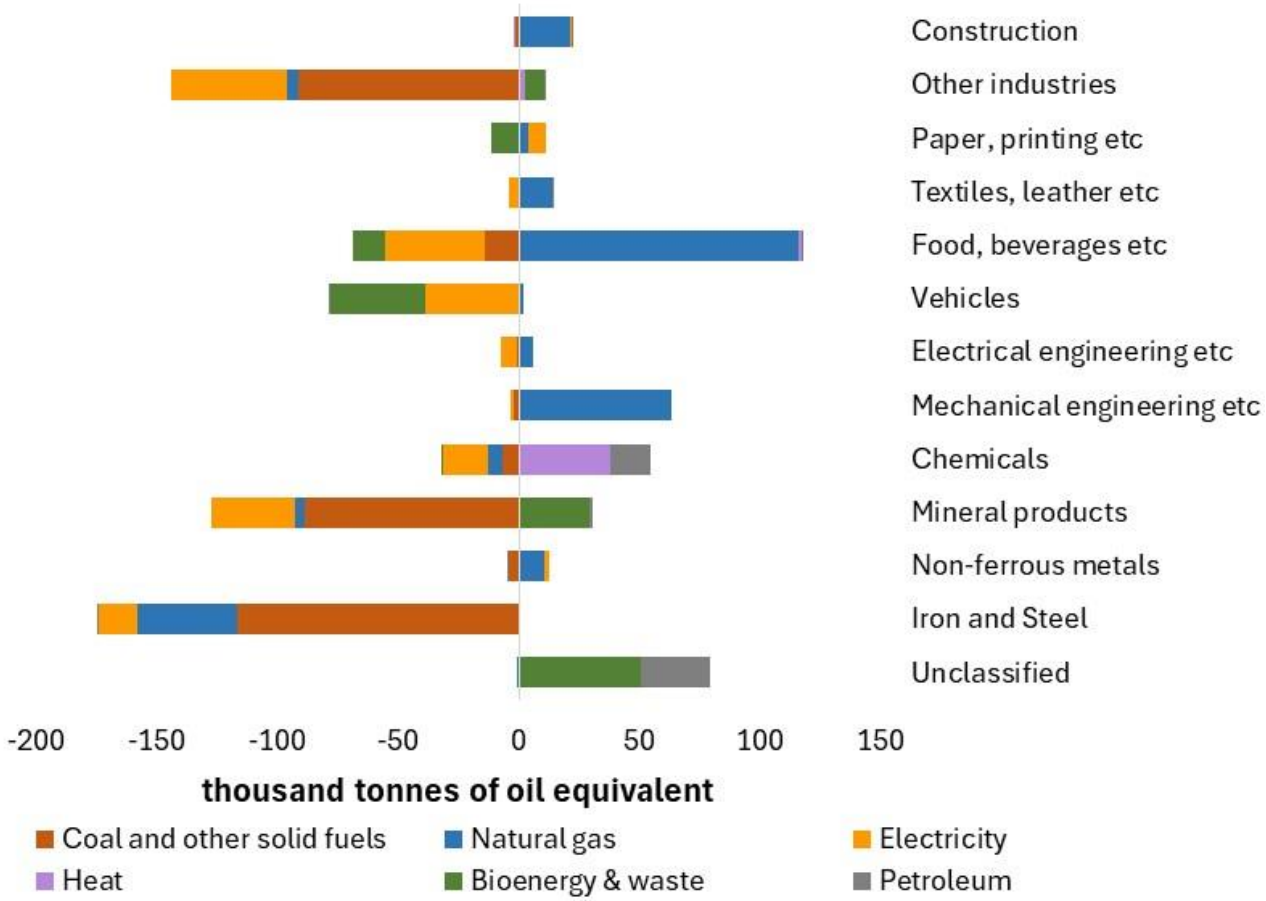
Going forwards, as the EV install base continues to rise, it will be important to accurately track and understand how electric vehicle charging is impacting electricity demand in the domestic and other sectors. We would welcome comments and feedback from users on how electric vehicle consumption data is presented to help inform the future development of ECUK.

Industry

Energy consumption in the industry sector decreased steadily from 1970 to 2008, falling from 62 mtoe to just under half that. Between 2008 and 2009 the financial crisis led to a sharp fall in energy consumption of around 25% to 23 mtoe. Since then the decreasing trend has continued but at a slower rate, to approximately 20 mtoe in recent years. Energy consumption decreased by 0.2 mtoe (1.2 per cent) between 2023 and 2024 to 19.5 mtoe, the lowest industrial consumption for over 50 years. The long-term decrease in industrial energy consumption has been seen across many European countries, and has been contributed to by improvements in energy efficiency and a move from traditional manufacturing to higher value processes such as pharmaceuticals. The overall decrease in industrial energy consumption between 2023 and 2024 was driven by decreases in coal and other solid fuels (0.3 mtoe, 30.9 per cent) and electricity consumption (0.2 mtoe, 2.7 per cent). These decreases were partly offset by increases in consumption in the other fuels.

Chart 1.6 shows the change in consumption by fuel and sub-sector between 2023 and 2024. This demonstrates that the reduction in coal use was primarily in the iron and steel, mineral products and other industries sub-sectors. The decrease in electricity was largest in the other industries and food and beverages sub-sectors, the latter of which showed a large increase in natural gas consumption between 2023 and 2024.

Chart 1.6 Change in industrial consumption sub-sectors, 2023 to 2024 (Table C2)



2-digit SIC code level consumption

ECUK data tables C3.1 and C3.2 show industrial consumption disaggregated to the level of Standard Industrial Classification (SIC) divisions (2-digit SIC codes). The figures are calculated using a reference table, calculated from data collected for administrative purposes, that apportions DUKES sector level consumption to 2-digit SIC codes. For example, the mineral products industry sub-sector consumption given in DUKES is split into SIC division 08 (other mining and quarrying) and SIC division 23 (manufacture of other non-metallic mineral products).

For ECUK 2025 a new reference table has been introduced, calculated from up-to-date data, that supersedes that published in previous versions of ECUK. This new reference table is used to estimate 2-digit industrial consumption for each year from 2021 onwards, with the reference table used in prior versions of ECUK used for 2020 and earlier. Both reference tables are presented in full in the ECUK consumption data tables and are referred to as reference table A (2020 and earlier) and reference table B (2021 onwards).

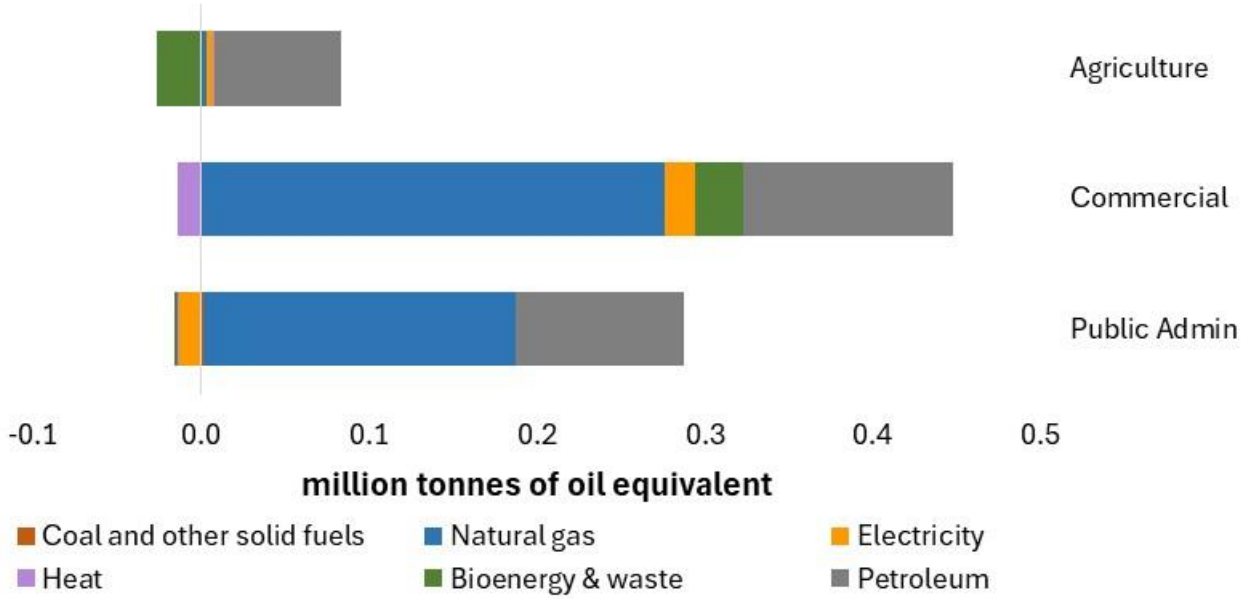
In addition to the data quality improvements that come from using up-to-date data, the primary benefits of implementing the updated reference table are the ability to apportion bioenergy and waste consumption into 2-digit SIC codes and improving consistency with the wider DUKES publication by including additional SIC codes in other industries (both of which were unavailable in the previous version of the reference table).

Further information on these changes can be found in the Energy Trends: June 2025, special feature articles.

Services

Consumption in the services sector increased by 0.8 mtoe (3.8 per cent) between 2023 and 2024. All three services sub-sectors saw an increase in consumption, which was largely due to increased natural gas consumption within the commercial and public administration sub-sectors, and increases in petroleum consumption in all sub-sectors. These changes are likely contributed to by easing of energy price pressures, which had impacted final consumption in the preceding years.

Chart 1.7 Changes in services consumption, 2023 to 2024 (Table C4)



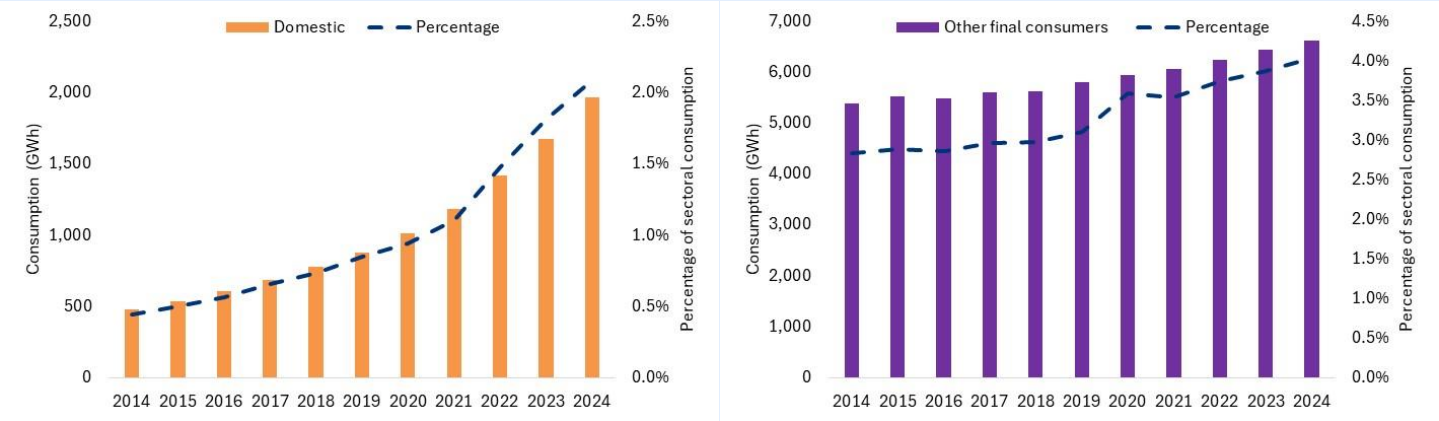
Heat pump electricity consumption

The heat pump install base has been growing and these low carbon technologies mean heating energy demand is likely to transition from being dominated by natural gas (i.e. gas boilers) to being proportionally more provided by electricity (the UK's stock of heat pumps are electrically driven rather than gas). Widely deployed heat pumps in the UK include air to water and ground to water heat pumps, connected to radiators or underfloor heating, and reversible air to air heat pumps (capable of providing both heating and cooling). Currently, the electricity consumed to drive heat pumps is implicitly included within the electricity consumption data in DUKES. However, as DUKES is derived from top-down data collections from electricity suppliers, end uses such as the electricity used to drive heat pumps are unavailable and need to be estimated.

Chapter 6 of DUKES uses an internationally recognised methodology[8] to estimate the ambient heat generated by heat pumps. The same methodology can be applied to estimate the electricity consumed by heat pumps. The charts below show the estimates of heat pump electricity consumption by sector, with the right-hand axis showing consumption as a proportion of total electricity consumption for that sector (the data are shown in full in Annex 1). In the domestic sector the electricity consumption for heat pumps has been rising steadily. In 2024 domestic heat pump electricity consumption was 169 ktoe, over four times that of a decade earlier in 2014. This was 2.1 per cent of the total domestic electricity demand in 2024.

For other final consumers (services and industrial) the rise has been more gradual. These sectors are dominated by reversible air to air heat pumps which have historically been present in the UK, and as a more mature market the year-on-year growth is less dramatic. In 2024 there was 569 ktoe of electricity consumed, 23 per cent higher than the 2014 value and 4.0 per cent of the total electricity demand.

Heat pump electricity consumption in the domestic sector and other final consumers, 2014 to 2024[9]



We will continue to monitor both ambient heat as reported in DUKES Chapter 6, and electricity consumed by heat pumps as more gas boilers are replaced by heat pumps. As part of this development work we would welcome any feedback on the data presented here and any suggestions for future work.

[8] UN Energy Statistics Compilers Manual, DESNZ Renewables methodology note
[9] Note – these charts use different scales

Chapter 2: Energy intensity

What is energy intensity?

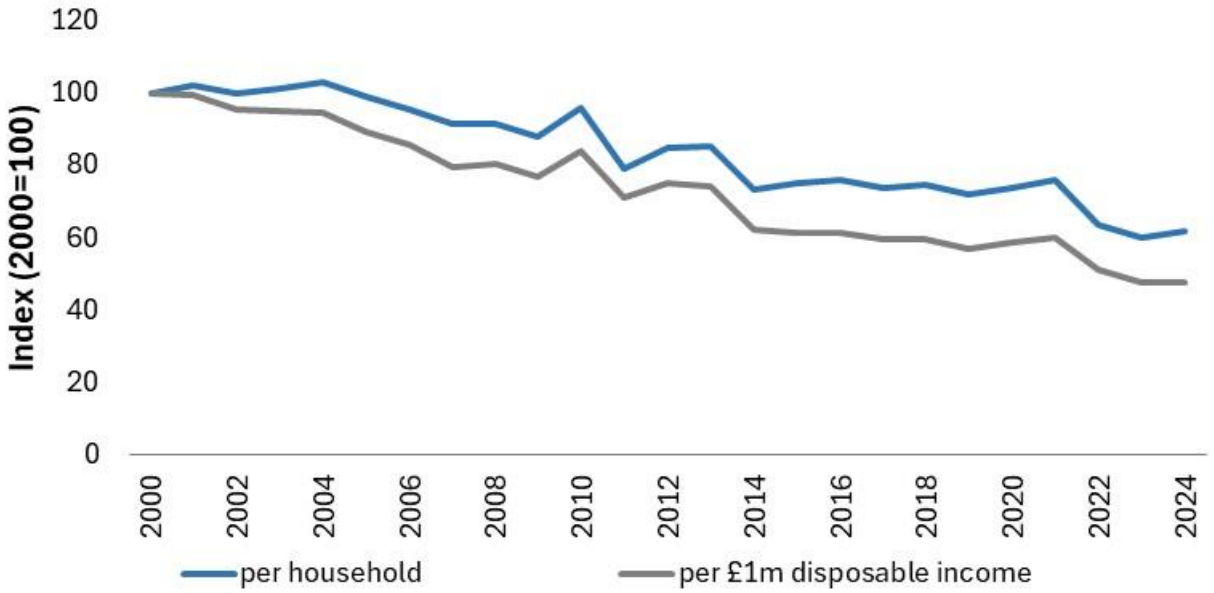
Energy Intensity is the amount of energy per unit of output. It includes (but is not limited to) energy efficiency changes. Units of output vary depending on the sector and sub-sector and relate to economic activity such as number of passengers and distance travelled for the transport sector, whilst changes in the Office for National Statistics Index of Production data are used to estimate trends in the output for the industrial sector. For the domestic sector intensity is calculated using population and household data, and will be impacted by the efficiencies of boilers, appliances and lighting.

The ECUK methodology document provides further information on the output factors used for each sub-sector. Further details on the definitions and terminology used in this release can be found in Chapter 5: Technical information and the DUKES glossary.

Domestic

The long-term trend since 2000 has been a reduction in the domestic energy intensity, which can be attributed to improved insulation and more efficient boilers, lighting and consumer appliances. A small increase in domestic energy intensity was seen in 2020 and 2021 as a result of lockdowns and increased home working during the COVID-19 pandemic. In 2022 and 2023 domestic energy intensity decreased, which reflected warmer weather and higher energy prices. In 2024 consumption per household increased by 2.9 per cent, as consumption increased more sharply than the number of households. This increase was likely contributed by easing of energy and other price pressures and slightly cooler average temperatures. Chart 2.1 shows the long-term trend in consumption per household, alongside a similar metric of consumption per £1m of disposable income. Both of which demonstrate the long-term reducing trend.

Chart 2.1 Indexed change in energy intensity per household and on disposable income basis, 2000 to 2024 (Table I3)



Transport

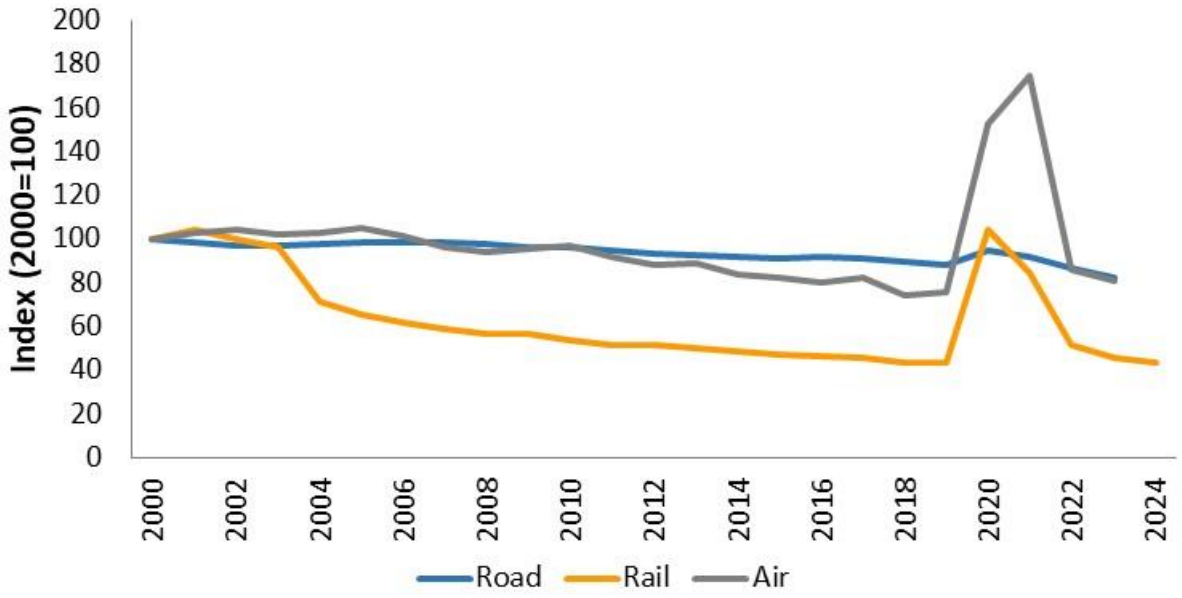
For road and air transport the latest traffic data is for the year 2023. In 2023 there were an estimated 719 billion road passenger kilometres travelled in Great Britain.[10] This was up from 672 billion kilometres in 2022, but still 2.9 per cent lower than the 741 billion road passenger kilometres travelled in 2019. Energy consumption per billion passenger kilometres decreased by 5.0 per cent from 2022 to 2023 to 34.3 ktoe. For the second consecutive year the road passenger energy intensity is lower than the pre-pandemic figure (36.8 ktoe per billion passenger kilometres). The is likely due to a combination of changing fuel mix in the sector and the phasing out of older less efficient vehicles. Overall the energy intensity of road transport was less affected by the pandemic than rail or air transport (Chart 2.2).

The impact of lockdowns and travel restrictions during the pandemic caused air passenger travel to fall from 385 billion passenger kilometres in 2019 to 67 billion passenger kilometres in 2021. Since 2021 air travel has been increasing, with a rise of 23 per cent between 2022 and 2023 leading to a total of 333 billion passenger kilometres travelled.[11] Energy intensity for air travel decreased (improved) by 5.9 per cent to 37.1 ktoe per billion passenger kilometres in 2023.[12] This was still slightly higher than energy intensity of 34.7 ktoe per billion passenger kilometres seen in 2019, suggesting that in 2023 planes were still flying at a slightly lower level of occupation than they did prior to the COVID-19 pandemic.

For rail travel data including 2024 is available. Rail passenger travel increased by 3.8 per cent to 63.8 billion passenger kilometres in 2024. Consequently, the energy intensity for rail travel decreased to 15.3 ktoe per billion passenger kilometres. This was almost identical to the energy intensity of 15.4 ktoe per billion passenger kilometres seen in 2019 prior to the pandemic. However energy consumption in the sector and passenger kilometres are both still approximately 8 per cent lower than 2019 levels.

Chart 2.2 shows the energy intensity for road, rail and air transport indexed to the year 2000. This demonstrates the large impact of the COVID-19 pandemic on energy intensity, particularly in the rail and air sectors, and subsequent return to near pre-pandemic levels.

Chart 2.2 Change in energy intensity for passenger transport, 2000 to 2023 (2024 for rail) (Table I2)



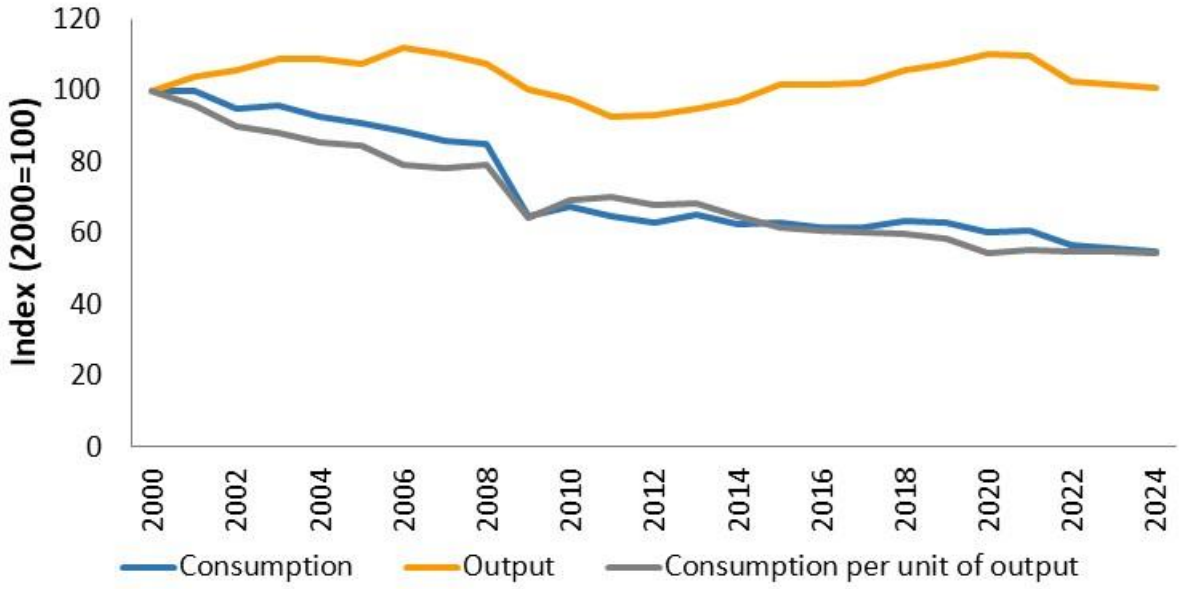
[10] Department for Transport TSGB0101
[11] Department for Transport AVI0201
[12] The passenger kilometre measure used for this intensity calculation is for UK airlines worldwide rather than for aircraft taking off from UK airports as is used for energy consumption (Main outputs for UK airlines by type of service)

Industry

Since 1970 industrial output[13] has been maintained or increased, while overall energy consumption levels have decreased. The has led to a long-term falling trend in industrial energy intensity. This can be attributed to changes in the kinds of products being manufactured as well as increased process efficiency.

Between 2019 and 2020 the industry energy intensity fell from 213 to 199 ktoe per unit of output, and has remained at a similar level in the following years. The energy intensity values over the last five years are the lowest across the time series since 1970 (suggesting a sustained improvement in energy efficiency). Between 2023 and 2024 energy consumption in the industry sector and the total output both decreased by just over one percent. Consequently, the industrial energy intensity was broadly static between 2023 and 2024.

Chart 2.3 Indexed change in industrial consumption, output and intensity, 2000 to 2024 (Table I4)

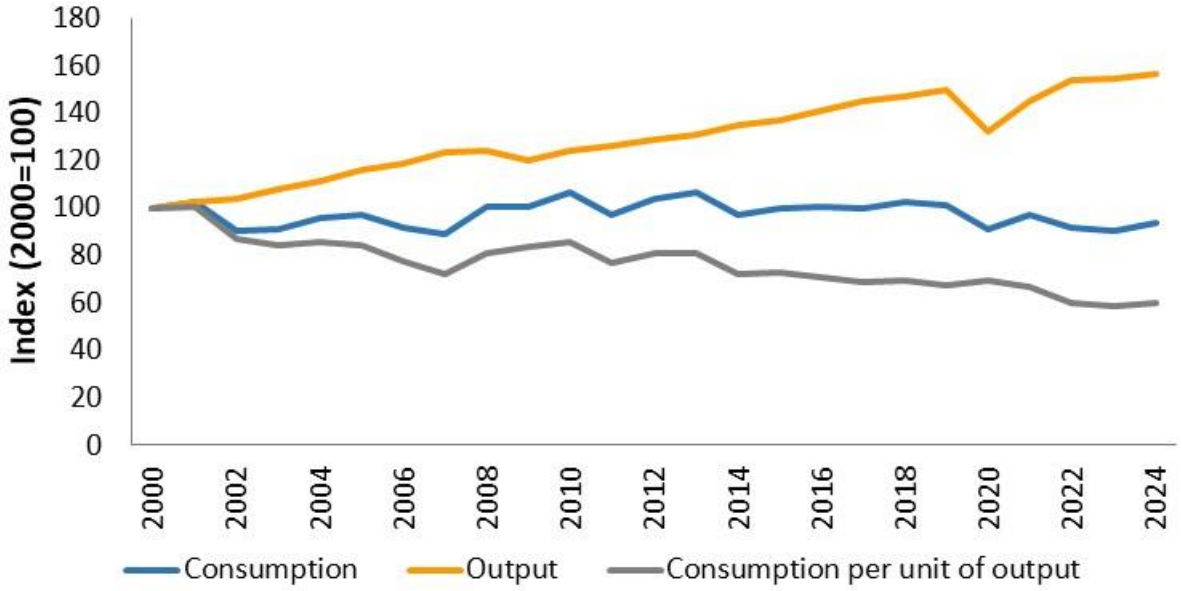


[13] Industrial output is measured using ONS index of production and gross value added data

Services

Economic activity[14] in the services sector (excl. agriculture) has been on a long-term increasing trend. Output in 2020 and 2021 was impacted by the COVID-19 pandemic but since then the increasing trend has continued. Between 2023 and 2024 energy consumption increased by 3.8 per cent, leading to a rise in energy intensity from 183 to 188 ktoe per unit of output. However, this is still much lower than the historical intensity values for the services sector, with the three lowest energy intensities seen in the sector recorded between 2022 and 2024. As with other sectors, the rise in energy intensity from 2023 to 2024 can likely be attributed to the impact of easing energy prices and slightly cooler temperatures.

Chart 2.4 Indexed change in services consumption (excluding agriculture), output and intensity, 2000 to 2024 (Table I5)



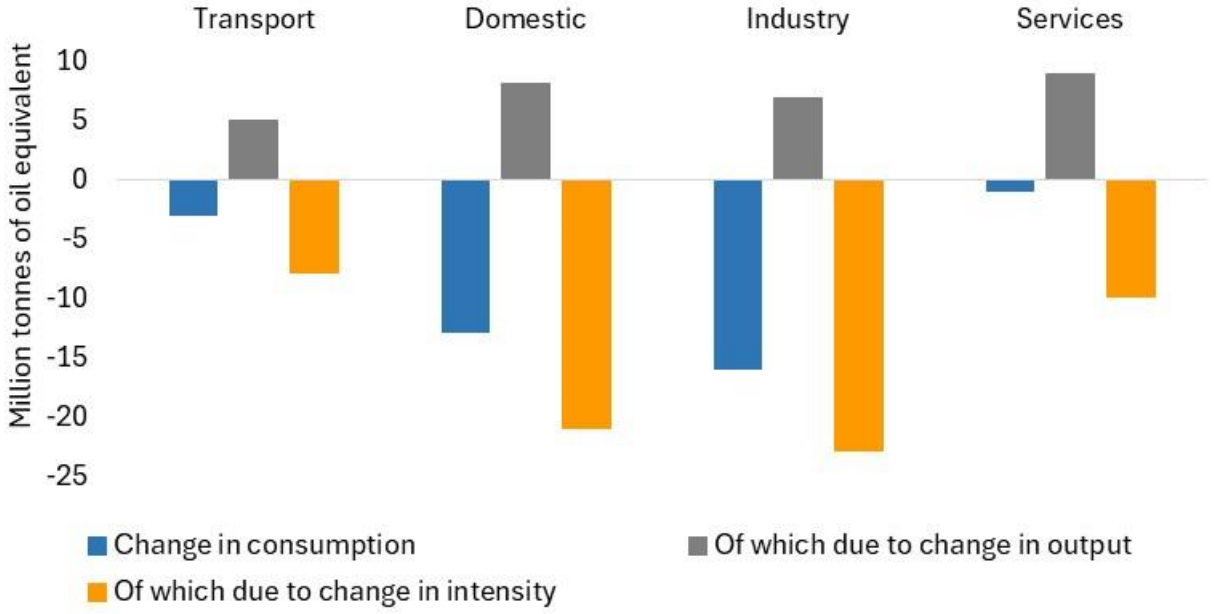
[14] Services output is measured using ONS gross value added data

Output and intensity factors

Chart 2.5 shows the contributions of changes in output and changes in intensity to changes in energy consumption between 2000 and 2024 (2023 for transport). The output effect is the change in consumption which would have occurred had all other factors remained constant. The remaining difference is then the intensity effect.

Decreased energy intensity has more than offset all the increased consumption that would have been seen due to economic growth in services and industry. Similarly, in the domestic sector energy consumption has decreased despite increasing numbers of households. In the transport sector the overall output (distance travelled) in 2023 was higher than it was in 2000, however improvements in energy intensity, primarily in the road – passenger and air sectors, have offset the increased consumption we would have expected from the greater distances travelled.

Chart 2.5 Output and intensity effects by sector, 2000 to 2024 (2023 for transport) (Table I6)



Chapter 3: Primary energy consumption

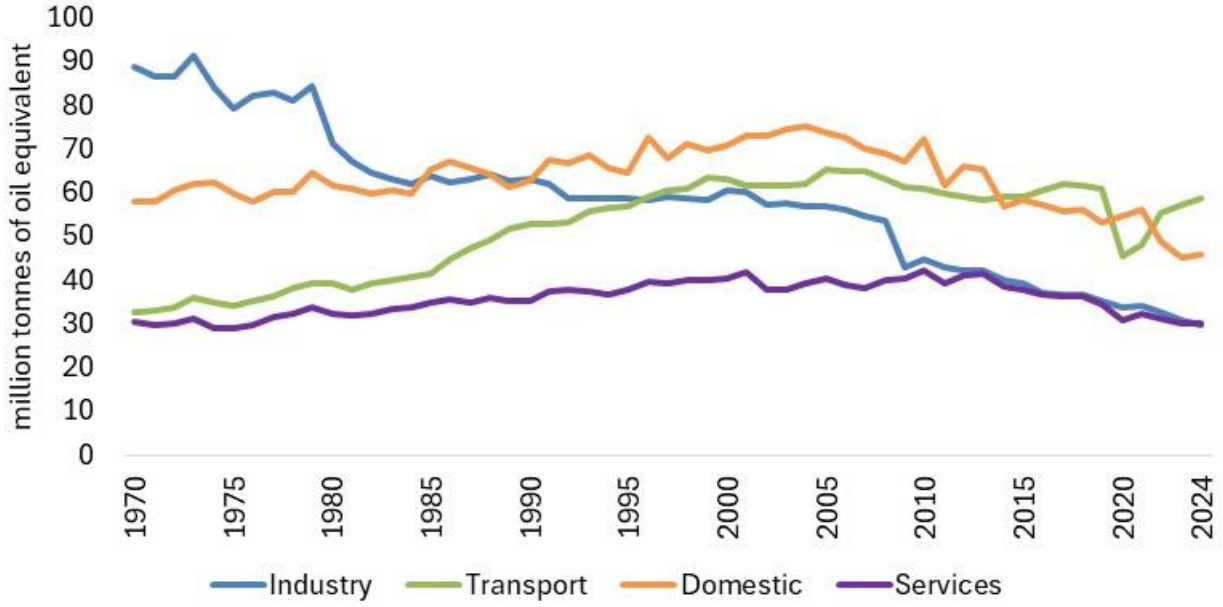
What is primary energy consumption?

Primary energy consumption is the amount of fuel used prior to any loss of energy through conversion or transformation. The primary energy equivalent includes the losses incurred during the transformation process.

Primary consumption data are calculated by taking the final consumption fuel mix and apportioning to the fuel input required to produce the final unit of consumption. Most of the conversion losses are in generating electricity from combustible fuels so those sectors with a high proportion of electricity consumption have a relatively large absolute primary equivalent value. Further details on the definitions and terminology used in this release can be found in Chapter 5: Technical information and the DUKES glossary.

Primary energy consumption is made up of the fuel used prior to any conversion or transformation plus the direct usage of each fuel. As such the relationship between sectors closely mirrors that of final consumption, but with some notable differences. In particular, for much of the 1990s and 2000s the domestic sector was the largest component of primary consumption, in contrast to final consumption for which the transport sector was the largest component. This reflects the greater usage of electricity within the domestic sector.

Chart 3.1 Primary energy consumption by sector, 1970 to 2024 (Table P2)



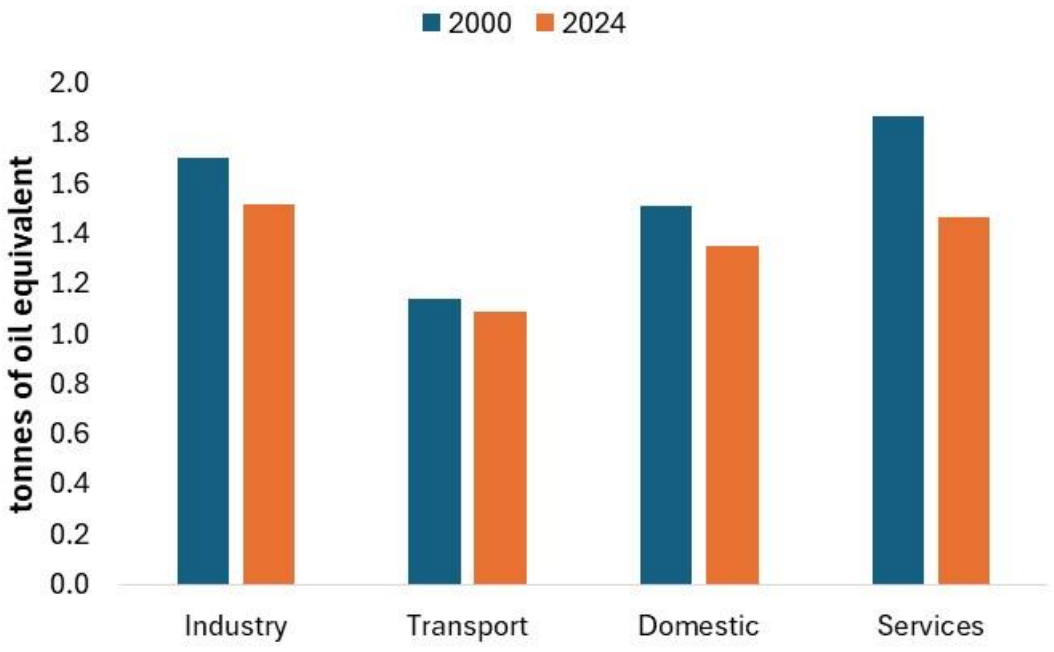
Primary energy consumption increased by 0.4 per cent from 2023 to 204 to 164.4 mtoe. The transport sector had the largest increase in primary energy consumption from 2023 to 2024, increasing by 2.3 per cent to 58.7 mtoe. Industry was the only sector with a decrease in primary consumption, decreasing by 4.5 per cent from 2023 to 2024.

The relationship between primary energy and final energy consumption can be understood through conversion factors. Conversion factors are a measure of the efficiency of transformation calculated as the ratio of primary energy and final energy consumption. These factors represent how many tonnes of oil equivalent are required to produce one tonne of oil equivalent final consumption. A reduction in conversion factors implies greater efficiency in delivery of final energy.

Chart 3.2 shows a comparison of changes in conversion factors across the sectors between 2000 and 2024, which shows the services sector saw the largest reduction in conversion factor, decreasing by 22 per cent (0.4 toe) over this time period. All sectors show a reduction in conversion factors indicating conversion efficiency improvements but also the effects of fuel switching away from fossil fuels, increasing the proportion of primary

electricity generation, particularly renewables such as wind and solar, which are treated as having no conversion losses.[15] The transport sector has a lower conversion factor compared to the other sectors, which is due to the relatively low usage of electricity in this sector (and therefore less impact of conversion losses from electricity generation). However, the transport sector typically has lower end use efficiency due to the losses involved in internal combustion engine powered vehicles. End use efficiency was described in more detail in the Energy Trends: March 2025, special feature articles.

Chart 3.2 Conversion factors by sector, 2000 to 2024 (Table P3)



[15] See Methodology notes for the energy balance

Chapter 4: Additional tables

End uses

The end uses tables show how energy is being used, for example for space or water heating. Understanding what energy is eventually used for is useful in assessing consumer behaviours which in turn contributes to developing policies and establishing future strategies. Estimating end uses is difficult and some sectors are more challenging than others due to data availability. Most estimates are modelled and use assumptions.

Final consumption data are sourced from Consumption Table C1 and proportions are applied to estimate end uses. For the domestic sector (Table U3) the assumptions are updated each year using data collected for the English Housing Survey. For the industry sector, end use splits are based on estimates last updated in 2014. The splits for the services sector are sourced from the Building Energy Efficiency Survey (BEES) which was undertaken in 2015. For further information see the ECUK methodology note.

Electrical products

The Electrical Products tables have been discontinued as of this edition of ECUK.

As part of a regular review process, a thorough assessment was carried out to evaluate whether the outputs from these tables continue to meet user needs and uphold the standards set out in the Code of Practice for Statistics.

This review identified several concerns relating to the underlying models used to generate the data.

The Electrical Products tables were based on modelled estimates of energy consumption and appliance stock for a range of domestic and non-domestic electrical appliances. These models were originally developed for specific policy purposes, and some were not owned by DESNZ. With the exception of a small number of specific product groups (e.g. lighting) most models have not been updated for many years. As a result, the outputs do not adequately reflect ongoing changes in appliance efficiency, ownership trends, or technological development.

Due to the age of the models there is limited availability of the detailed assumptions used in their creation, and DESNZ does not have access to documentation for any models it does not own. While the models were fit for their original purpose, they are no longer considered appropriate for use as the source for annual updating of the data within the Electrical Products tables. Continued publication of the figures in their current format risks misleading users as to the quality and accuracy of the data. As a result, the Electrical Products section has been withdrawn from ECUK.

Chapter 5: Technical information

Definitions

DUKES glossary	This covers definitions commonly used in energy statistics reporting. The majority of terms used in this publication are covered in the DUKES glossary
Energy Intensity	The amount of energy required to produce one unit of output. A reduction in energy intensity could imply an improvement in energy efficiency.
Energy Ratio	Temperature corrected total inland consumption of primary energy per 1 million Gross Domestic Product (GDP) at market prices; it is a measure of how much energy is consumed per unit of economic activity (in this case 1m GDP).
Final Consumption	Energy consumed by final users after transformation.
Tonne Kilometres	The measure of how much freight has been moved using weight and distance.
Passenger Kilometres	This measure is based on how far each passenger travels; i.e. it is dependent not only on how many passengers, but also how far each one has travelled.
Primary Energy Equivalents	Final consumption plus energy in the transformation sector and losses incurred during conversion and transformation.
Temperature Corrected Consumption	Energy consumption adjusted for changes due to fluctuations in the weather, to allow underlying trends to be identified. DESNZ and the ONS have published methodology notes on temperature adjustments.
Tonne of oil equivalent	A common unit of energy measurement which enables different fuels to be directly compared and aggregated. One tonne of oil equivalent is set equal to 41.868 Giga Joules (GJ) or 11,630 kilo Watt hours (kWh). Quantities in this report are generally quoted in thousand or million tonnes of oil equivalent (ktoe, mtoe).

Chapter 6: Further information

Accredited official statistics

These statistics are accredited official statistics. Accredited official statistics are called National Statistics in the Statistics and Registration Service Act 2007.

These accredited official statistics were independently reviewed by the Office for Statistics Regulation (OSR) in June 2014. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics.

Our statistical practice is regulated by the Office for Statistics Regulation.

OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

You are welcome to contact us by emailing energy.stats@energysecurity.gov.uk with any comments about how we meet these standards.

Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Pre-release

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the DESNZ statement of compliance with the Pre-Release Access to Official Statistics Order 2008.

User engagement

Users are encouraged to provide comments and feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed.

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Annex 1: Heat pumps

Electricity consumed (GWh) by heat pumps in the domestic sector and by other final consumers (industry, commercial, public sector), 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Domestic	**481**	**536**	**610**	**688**	**776**	**880**	**1,009**	**1,180**	**1,416**	**1,675**	**1,967**
Ground to water heat pumps	105	111	121	133	143	155	171	196	223	246	268
Air to water and exhaust air heat pumps	375	425	489	556	633	725	837	984	1,192	1,429	1,699
Other final consumers	**5,390**	**5,514**	**5,475**	**5,604**	**5,617**	**5,793**	**5,947**	**6,068**	**6,246**	**6,437**	**6,613**
Ground to water heat pumps	65	74	85	101	121	170	212	220	225	228	230
Air to water and exhaust air heat pumps	24	32	46	52	58	67	76	88	114	144	175
Reversible air to air heat pumps	5,301	5,408	5,344	5,451	5,439	5,556	5,658	5,760	5,907	6,065	6,208
Total electricity consumption	**5,871**	**6,050**	**6,085**	**6,292**	**6,392**	**6,673**	**6,956**	**7,248**	**7,661**	**8,112**	**8,580**

This publication is available from: https://www.gov.uk/government/collections/energy-consumption-in-the-uk

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