UK Government

Digest of UK Energy Statistics
Annual data for UK, 2025

About this release

Information on energy production, trade, and consumption in the UK for total energy and by specific fuels.

In this release

Data tables

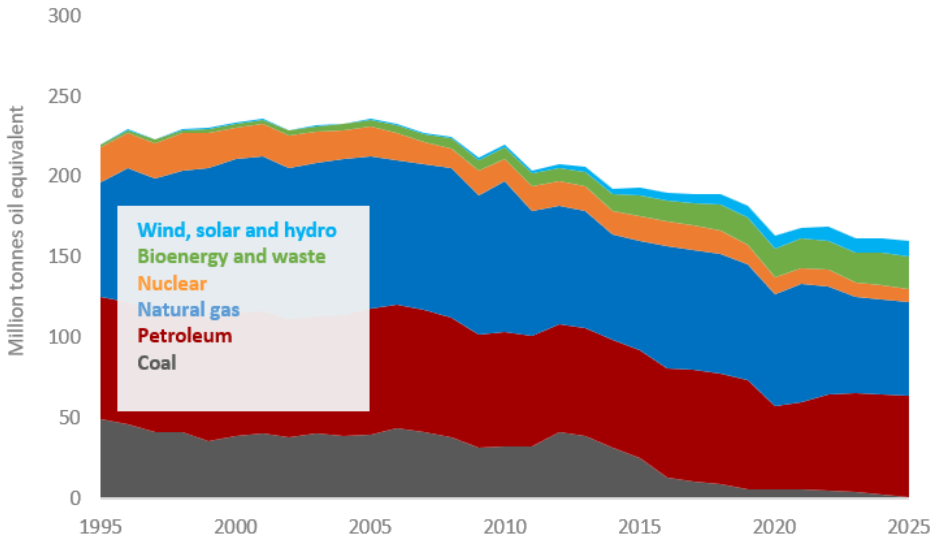
See the full list of tables and annexes for more information. Additional data are available online as part of the DUKES series:

Total energy
Coal and derived gases
Oil and oil products
Gas
Electricity
Renewables
CHP

This publication is based on a snapshot of survey data from energy suppliers. New data are incorporated in line with the revisions policy.

Overall energy demand in 2025 matched the record low of 2024 as the UK once again experienced record temperatures. Household consumption was unchanged on 2024, with transport up 2 per cent. Industrial consumption dropped 7 per cent on 2024 and remains at a record low level as improvements in energy efficiency and shifts from manufacturing towards high value outputs such as pharmaceuticals contribute to reducing energy needs. The UK's demand continues to be dominated by fossil fuels, but coal has dropped to 1 per cent of demand in 2025 from 17 per cent in 2000 as coal fired generation was phased out.

Demand for energy in the UK, 1995 to 2025



The share of UK electricity generation from renewable technologies reached a new record high of 52.1 per cent in 2025, up from 50.5 per cent in 2024. Generation from wind and solar reached record highs. Fossil fuel use increased 4 per cent on 2024 – a share of 32.3 per cent of generation – following a fall in imported electricity. Gas remained the principal form of UK generation at 31.8 per cent, slightly outpacing wind's contribution of 29.5 per cent of generation.

Despite the rise in renewable generation, the share of low carbon generation fell in 2025, dropping to 64.3 per cent from 2024's 64.7 per cent as nuclear generation fell to a record low

UK energy production remained at a record low, down 1 per cent on 2024. Whilst oil production rose slightly, gas declined by 3 per cent to a record 21st century low as output from the UK's mature basin continues to decline. Output from wind, solar and hydro technologies again reached a record high but currently forms under 10 per cent of UK production.

Import dependency in 2025 was stable on 2024, dropping to 43.3 per cent from 43.7 per cent in 2024. Overall trade volumes showed a 2 per cent decrease in imports and 2 per cent fall in exports compared with 2024.

Chapter 1: Energy

Kevin Harris **0747 135 8194** **energy.stats@energysecurity.gov.uk**

Key headlines

Energy production fell by 0.6 per cent to a record low level as production from the UK's mature continental shelf continues to decline. Oil production rose by 2.6 per cent despite many oil fields ceasing production whilst gas production fell by 3.4 per cent to a record low level. Oil and gas production is 75 per cent below the peak recorded in 1999 and 34 per cent below pre-pandemic (2019) levels as output from the UK's mature continental shelf continues to decline. Nuclear output fell by 11 per cent to a record low level as continued outages affected the UK nuclear fleet. Wind, solar and hydro output rose by 7.3 per cent to a record high level due to increased offshore wind and solar capacity.

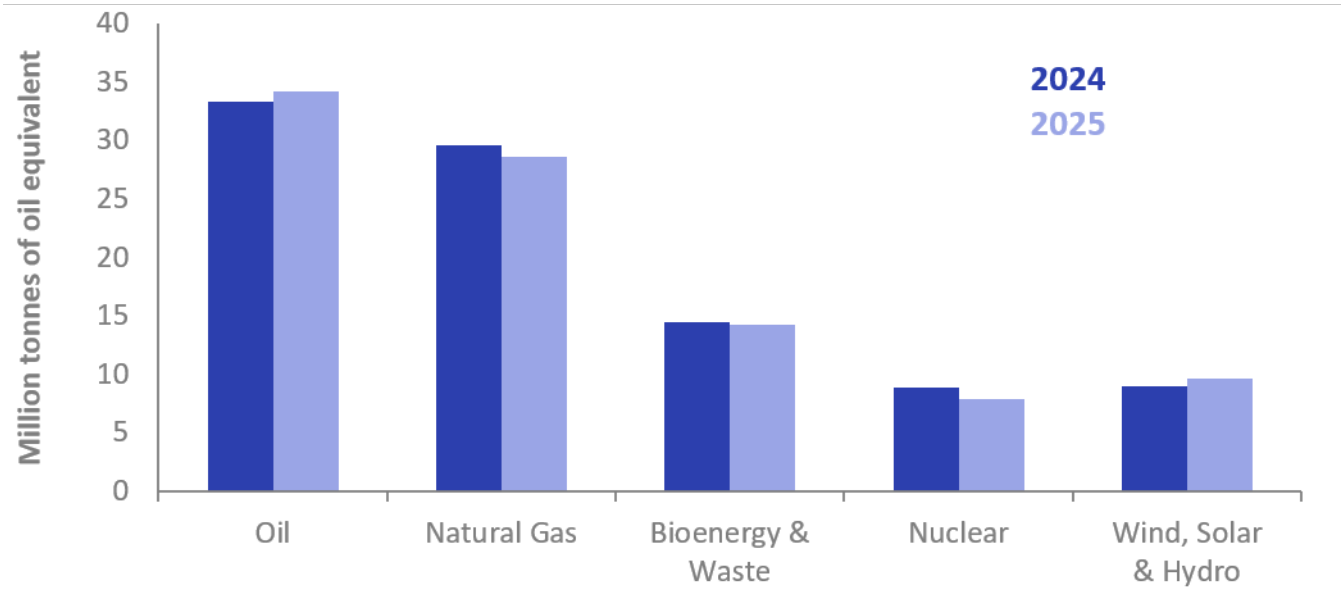
Final energy consumption in 2025 fell by 0.5 per cent on 2024 and remains down 9.3 per cent on 2019. Domestic consumption rose by 0.2 per cent despite 2025 being the warmest year on record, whilst industrial sector consumption fell by 4.9 per cent and remained at record low levels, and service sector consumption fell by 2.9 per cent.

Transport consumption rose by 2.0 per cent compared to last year but remains 2.2 per cent below pre-pandemic (2019) levels. Aviation fuel demand fell by 0.8 per cent, whilst road fuel demand rose by 3.1 per cent on 2024 levels.

Net imports fell by 2.4 per cent. Imports fell by 2.2 per cent and **exports fell by 2.0 per cent to a record 21st century low level.** The UK's net import dependency stood at 43.3 per cent, down from 43.7 per cent in 2024.

The bulk of the UK's energy imports, over 90 per cent, comprise oil and gas and **Norway is the UK's primary supplier of energy imports**. The largest share of oil imports in 2025 arrived from the United States, whilst Norway provides the largest share of gas imports.

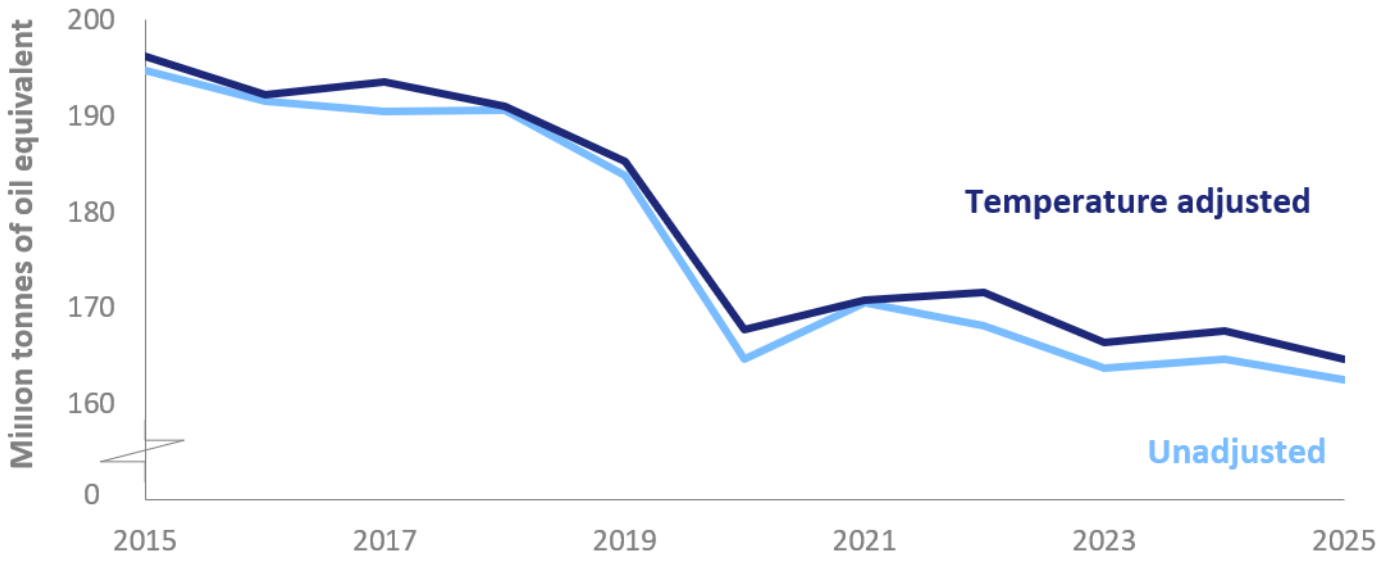
Chart 1.1 Production by fuels, 2024 and 2025 (DUKES Table 1.1)



In 2025 total production was at a record low level of 94.5 million tonnes of oil equivalent, 0.6 per cent lower than in 2024, and 26 per cent lower than pre-pandemic (2019) levels. Production levels for all fuels except coal, oil, wind and solar are down on 2024 levels, with gas output at a record low level for this century. UK production is 68 per cent below the peak recorded in 1999 due to declining output from the UK's mature basin.

In 2025 oil production rose by 2.6 per cent despite many oil fields ceasing production and the continued maturity of many North Sea fields, but with output still down by 41 per cent on pre-pandemic (2019) levels. Natural gas production fell by 3.4 per cent to a record low level as the North Sea basin continues to mature, with output down by 24 per cent on pre-pandemic (2019) levels. Oil and gas production is 75 per cent below the peak recorded in 1999 reflecting the decline in output from the UK's mature continental shelf. Coal output in the UK is now de minimis due to the last large surface mine Ffos-y-Fran closing at the end of November 2023. Nuclear output fell by 11 per cent to a record low level as continued outages affected the UK nuclear fleet. Production of bioenergy and waste fell by 1.1 per cent, whilst wind, solar and hydro output rose by 7.3 per cent to a record high level due to increased offshore wind and solar capacity.

Chart 1.2 Primary energy consumption, 2015 to 2025 (DUKES Tables 1.1 and 1.1.4)



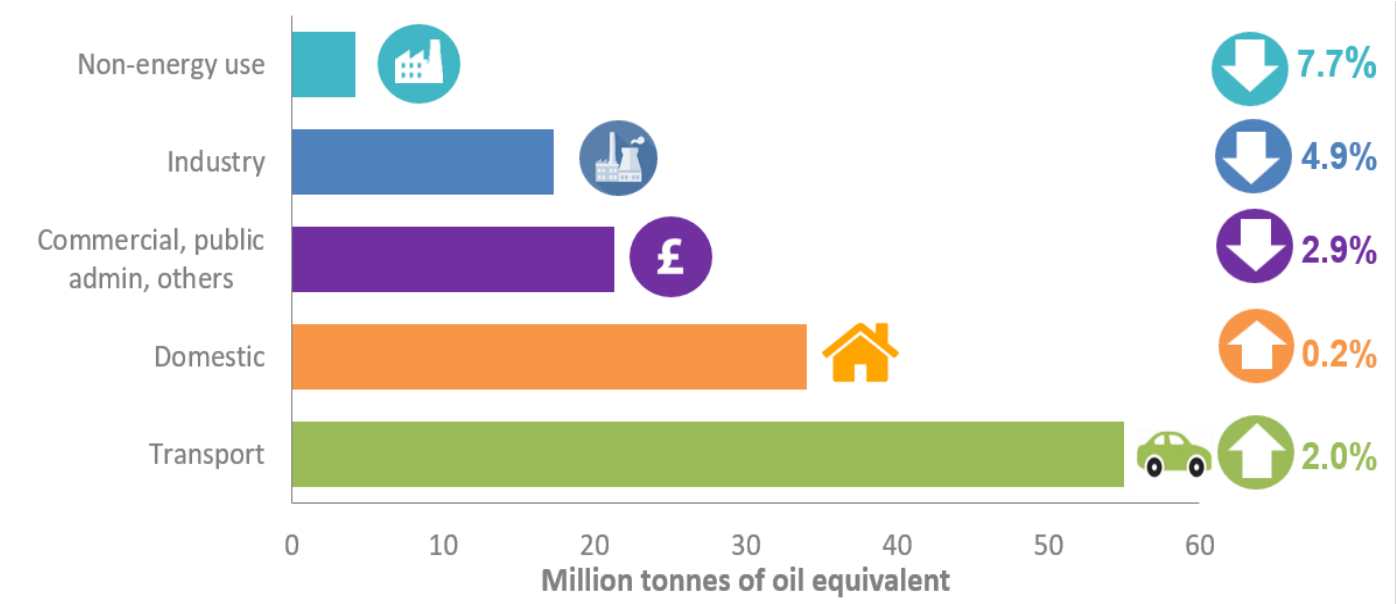
In 2025 total primary energy consumption was at a record low level this century of 162.5 mtoe, 1.3 per cent lower than in 2024, compared to pre-pandemic (2019) levels consumption is down 12 per cent driven by falls in fossil fuel and nuclear consumption.

Primary energy consumption includes use by consumers, fuel used for electricity generation, and other transformation activities. On a seasonally adjusted and annualised rate that removes the impact of temperature on demand, consumption was 164.9 mtoe, 1.8 per cent lower than in 2024.

In 2025 total primary energy consumption levels fell for all fuels except for petroleum, bioenergy & waste and wind, solar and hydro. Consumption of oil rose by 0.9 per cent, within which petrol and diesel rose but aviation fuel sales fell to just below pre-pandemic levels. Consumption of bioenergy & waste rose by 0.4 per cent. Primary electricity consumption fell by 2.9 per cent, within which nuclear and net imports both fell by 11 per cent, whilst wind, solar and hydro rose by 7.4 per cent.

Natural gas consumption fell by 1.5 per cent with increased used by electricity generators to offset the fall in nuclear generation, stable household demand but falls in the industrial and services sectors. Consumption of coal and other solids fell by 53 per cent, and now accounts for less than 1 per cent of UK primary energy demand due to there being no coal fired generation in the UK since the closure of the Ratcliffe-on-Soar power plant at the end of September 2024.

Chart 1.3 Final energy consumption by sector, 2025 (DUKES Table 1.1)

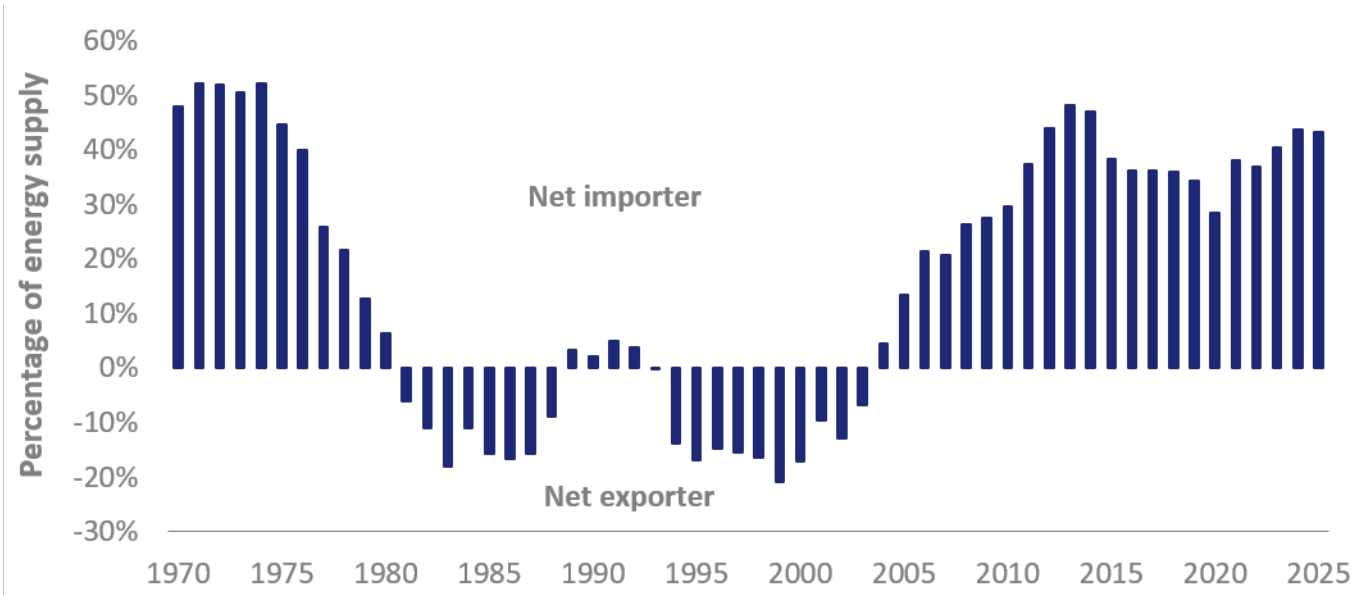


In 2025 total final energy consumption including non-energy use was 131.9 mtoe, 0.5 per cent lower than in 2024, and 9.3 per cent lower than pre-pandemic (2019) levels.

Domestic sector consumption rose by 0.2 per cent, despite average temperatures in 2025 being 0.3 degrees Celsius higher than in 2024; 2025 was also the warmest year on record. Transport sector consumption rose by 2.0 per cent, with road transport consumption rising by 3.1 per cent but air consumption falling by 0.8 per cent. Overall transport demand is 2.2 per cent below pre-pandemic (2019) levels. Industrial sector consumption fell by 4.9 per cent, to the lowest level in at least 50 years. In common with many other European countries, industrial consumption has contracted over time and the UK's industrial energy consumption has fallen by 51 per cent since 2000. Improvements in energy efficiency and a move from traditional manufacturing to higher value processes such as pharmaceuticals have contributed to the fall. Service sector consumption fell by 2.9 per cent with the warmer weather a likely factor in the reduced consumption levels.

Final energy consumption excluding non-energy use fell by 0.3 per cent, whilst on a temperature corrected basis consumption fell by 0.4 per cent. Domestic consumption fell by 1.7 per cent, other services consumption fell by 2.8 per cent and industrial consumption fell by 2.9 per cent, whilst transport consumption rose by 2.4 per cent.

Chart 1.4 Net import dependency, 1970 to 2025 (DUKES Table 1.1.3)



In 2025 net import dependency was 43.3 per cent[1], 0.4 percentage points lower than in 2024.

Imports in 2025 at 135.8 mtoe were 2.2 per cent lower than in 2024, and 24 per cent lower than their peak in 2013. Gas imports rose by 2.3 per cent compared to 2024; pipeline imports fell by 4.6 per cent but Liquefied Natural Gas (LNG) imports rose by 24 per cent. Crude oil imports fell by 9.3 per cent whilst petroleum products imports rose by 3.3 per cent.

Exports in 2025 at 62.8 mtoe were 2.0 per cent lower than 2024 and were at a record 21st century low level. Gas exports rose 12 per cent, with exports to Belgium, the Netherlands and the Republic of Ireland all up compared to 2024 levels. Conversely exports of crude oil fell 2.8 per cent and exports of petroleum products fell 7.4 per cent, due to reduced refinery production.

Net imports at 73.0 mtoe were 2.4 per cent lower than in 2024 and accounted for 43.3 per cent of consumption in 2025, down from 43.7 per cent in 2024.

In 2025 fossil fuel dependency was broadly similar to 2024 at 75.1 per cent. The main fossil fuel sources in the UK are coal, gas and oil. In 2025, the share of primary energy consumption from low carbon sources (mainly nuclear, bioenergy & waste and renewables) stood at a record high 22.0 per cent up from 21.8 per cent in 2024.

[1] Net imports as a proportion of primary supply (including an addition for the energy supplied to marine bunkers).

Chapter 2: Solid Fuels and Derived Gases

Teresa Weimer 0788 917 6270 coalstatistics@energysecurity.gov.uk

Key headlines

Demand for coal fell in 2025, by 56 per cent to 948 thousand tonnes compared to 2024. The fuel mix has shifted towards other sources of fuel, particularly for electricity generation.

Consumption of coal for electricity generation reached zero in 2025. The last UK coal-fired power plant, Ratcliffe-on-Soar, closed on 30 September 2024. Coal use has been phased out as electricity generation now favours gas, nuclear and renewables.

Production of coal remains at historically low levels, at 120 thousand tonnes in 2025. In the last ten years, UK coal production has fallen by 99 per cent. There is currently no large-scale surface mining in the UK and all coal produced was deep mined anthracite.

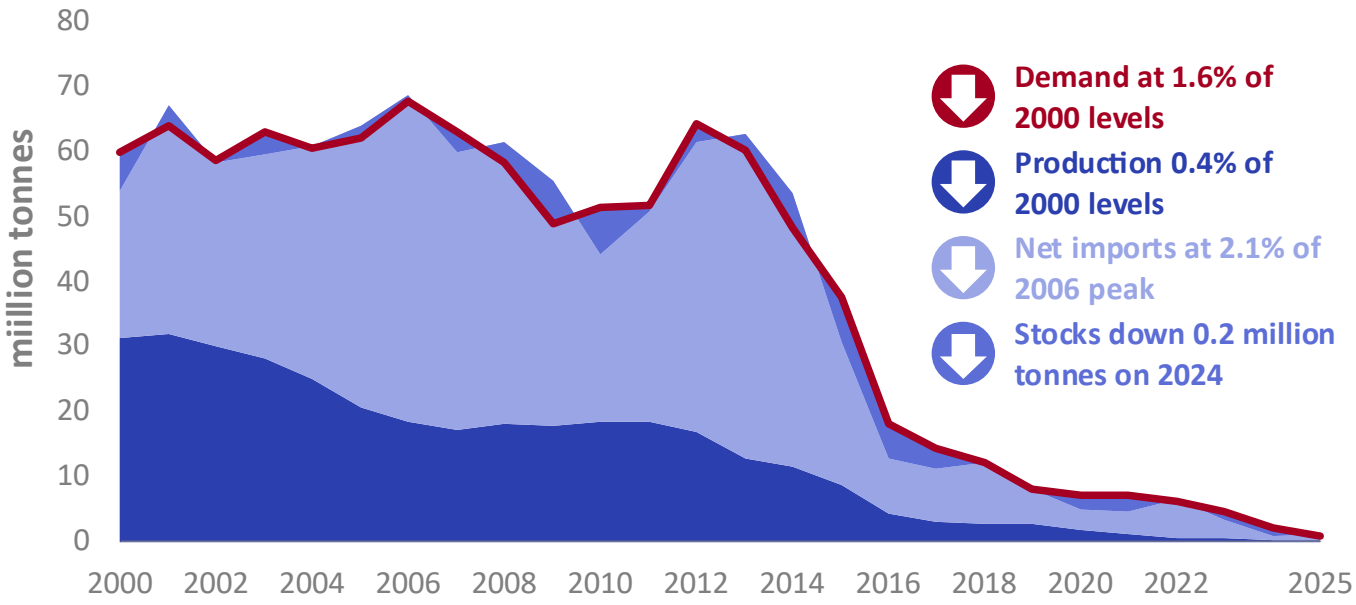
Coal imports fell 6.3 per cent in comparison with 2024 to 1,650 thousand tonnes. In 2025, Colombia was the largest exporter of coal to the UK with a share of 33 per cent of total UK coal imports. This was followed by the European Union with 24 per cent and South Africa with 15 per cent. Coal exports fell by 45 per cent compared to 2024.

In 2025, coal comprised 0.8 per cent of UK energy demand, down from 1.5 per cent in 2024 (DUKES table 1.1.C). Over a longer period, the trend reflects the transition away from coal in the UK's energy mix; coal demand has fallen from a 16 per cent share of UK energy demand in 2000.

The Sankey diagram at the end of this chapter shows flows of coal from production and imports through to consumption. It is a way of visualising the figures that can be found in the commodity balance for coal in DUKES tables 2.1 and 2.2. The diagram illustrates the flow of coal from the point of supply (on the left) to its final use (on the right).

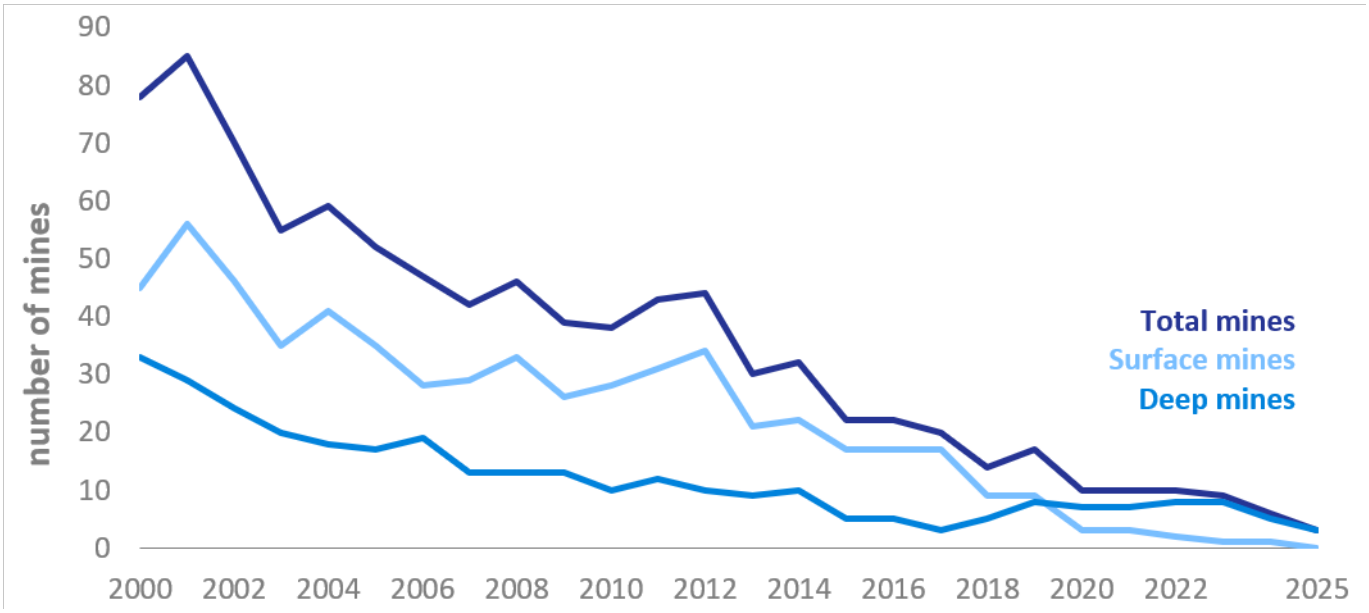
Reduced demand for coal drove a substantial contraction in supply, with UK coal production in 2025 at 0.4 per cent of production in 2000. In 2025, coal production was 120 thousand tonnes, up 12 per cent on 2024, however, remaining at historical low levels (chart 2.1).

Chart 2.1 UK coal supply and demand, 2000 – 2025 (DUKES Table 2.1)



All coal production in 2025 was deep mined and almost exclusively anthracite. This compares to 2015 when deep mined production provided around a third of total coal production, and when the last three large deep mines closed – Hatfield, Thoresby and Kellingley. Eight deep mines remained open (chart 2.2), and three mines reported coal production in 2025. The last large surface mine, Ffos-y-Fran, closed at the end of November 2023. There is currently no large-scale surface mining in the UK.

Chart 2.2 Number of coal mines producing in the UK, 2000 – 2025 (DUKES Table 2.5)



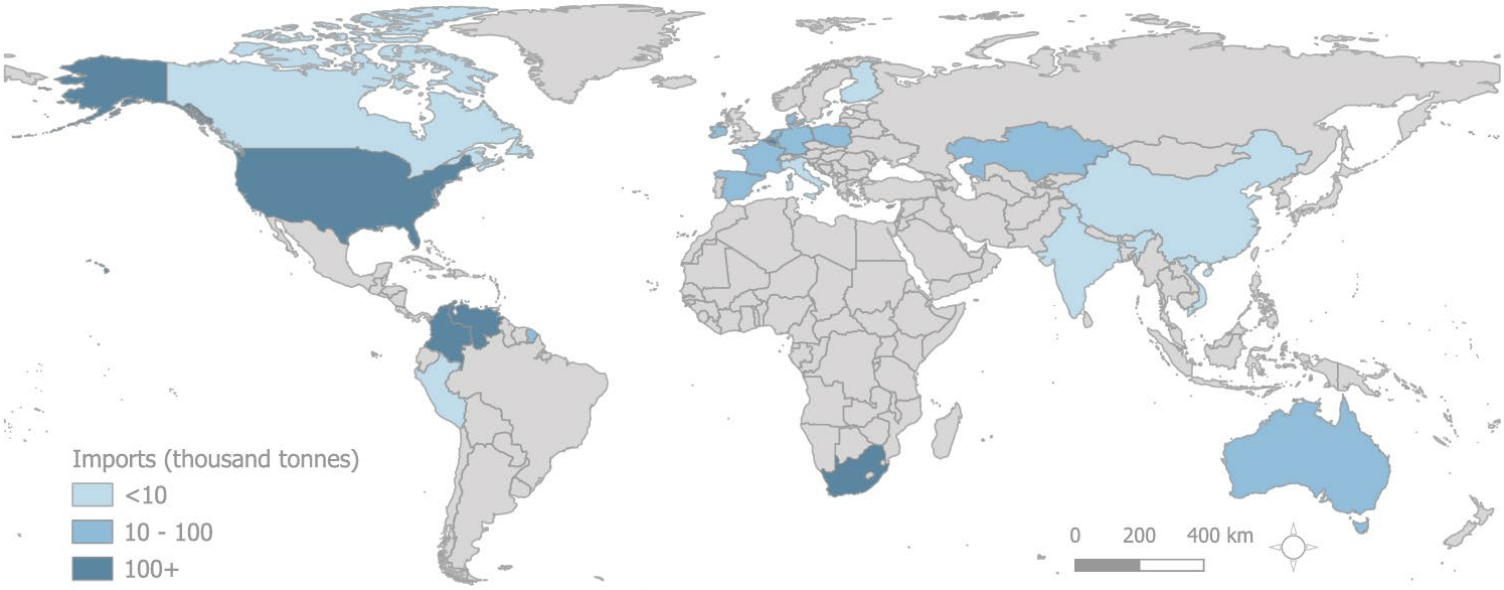
Net imports of coal in 2025 remained at about 2 per cent of net imports at the peak in 2006. This is again a result of the sharp fall in demand for coal. However, in 2025, net imports rose by 56 per cent from 2024 levels to 1,060 thousand tonnes. In 2025, the UK's coal supply was maintained mostly by imports.

Coal imports fell by 6.3 percent to 1,650 thousand tonnes compared to 2024. Steam coal accounted for 67 per cent of total coal imports, anthracite 17 per cent and coking coal 15 per cent. **Steam coal imports were 19 per cent lower at 1,112 thousand tonnes in 2025 compared to 2024.** Colombia was the largest provider of UK's steam coal (42 per cent). This was followed by the European Union (23 per cent) and South Africa (22 per cent). Anthracite imports were 54 per cent up on 2024 at 287 thousand tonnes, with the European Union the largest provider (39 per cent), followed by Colombia (27 percent) and Venezuela (22 per cent). Coking coal imports were up 29 per cent at 251 thousand tonnes compared to 2024. The USA was the largest provider of UK's coking coal imports (68 per cent), followed by Australia (22 per cent) and the European Union (10 per cent). The UK banned Russian coal imports in August 2022.

In 2025 the UK exported 590 thousand tonnes of coal, down 45 percent compared to 2024. Exports were primarily to European Union countries, Iceland and Norway. Exports comprised 490 thousand tonnes of steam coal (83 percent of coal exports), 90 thousand tonnes of anthracite (15 per cent) and 10 thousand tonnes of coking coal (2 per cent). The fall in exports was mainly driven by steam coal exports which were down 43% compared to 2024. The fall in coking coal exports, down by 93 percent compared to 2024, reflects the UK's decrease in demand and stocks of coking coal with the closure of the coke ovens at Port Talbot in 2024. Coking coal exports in 2025 were limited to the Republic of Ireland, compared to 2024 when remaining stocks after the coke oven closure were exported mainly to other European Union countries.

Coal stocks remain at historically low levels in 2025. There has been an overall downward trend since 2014 when demand, and therefore stocks, began to gradually decline as power plants, and in more recent years coke ovens and blast furnaces, shut.

Map 2A showing UK coal imports by country of origin in 2025 (thousand tonnes)



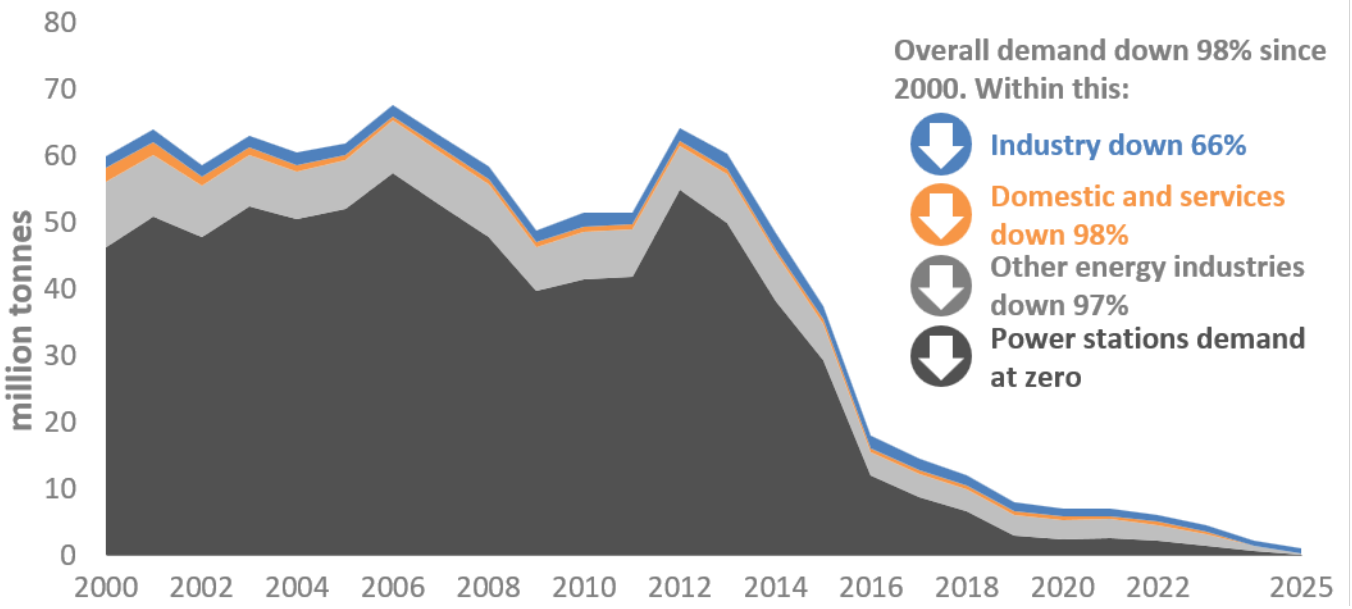
For more detail on coal imports and exports see DUKES Tables 2.7 and 2.8

As of July 2026, the Mining Remediation Authority (formerly the Coal Authority) estimated that in current mining operations there were 67 million tonnes of economically recoverable and minable coal resources (DUKES Table 2.6). All the economically recoverable and minable coal resource in current operations (including those in the planning process) are in underground mines. Overall, Wales had a 93 per cent share of Great Britain's current mines and licenced resources and England a 7 per cent share.

The most recent estimates available for total economically recoverable and minable coal resources in Great Britain were made in 2024, provided by the Mining Remediation Authority. At that point, the Mining Remediation Authority estimated a total of 2,991 million tonnes underground mining coal resource and 823 million tonnes of surface mining coal resource. DUKES Table 2.6 provides details of the resource assessment by England, Scotland and Wales.

Demand for coal fell by 56 per cent to 948 thousand tonnes in 2025, compared to 2024 (chart 2.3). Much of this was driven by coal-fired electricity generation and coke manufacture (for the iron and steel industry) demand reaching zero. The last coal-fired power plant, Ratcliffe-on-Soar, closed on 30 September 2024 and the last coke oven, at Port Talbot, closed on 20 March 2024. Electricity generation now favours gas, nuclear and renewables. Demand for coal in 2025 was therefore mainly comprised of industry, including the iron and steel industry, patent fuel manufacture, and domestic and other consumers. A review of sectoral demand is in progress.

Chart 2.3 Coal Demand, 2000 – 2025 (DUKES Table 2.2)

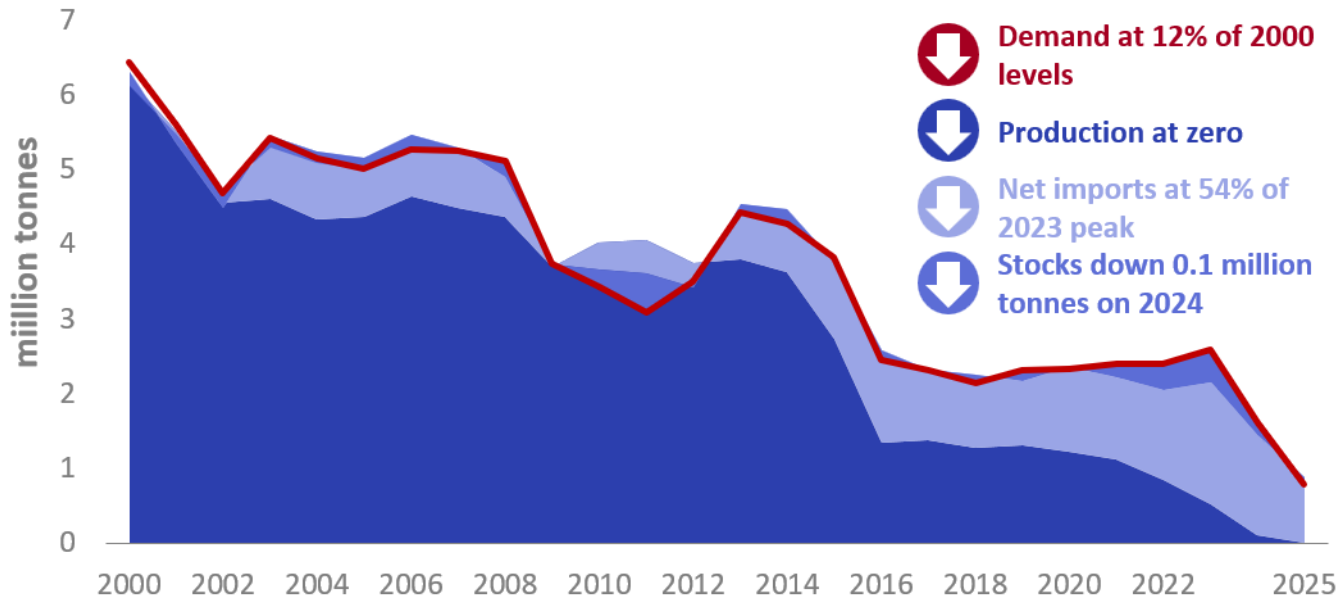


The iron and steel industry remains one of the main users of coal, for blast furnaces and direct consumption. In 2025 it used 207 thousand tonnes of coal, down 65 percent compared to 2024, and equal to 4 per cent of what it used in 2015 (5.3 million tonnes). This was mainly driven by a fall in demand for blast furnaces (down 54 per cent compared to 2024) and demand for coke manufacture reaching zero. In terms of total share, the iron and steel industry comprised 22 per cent of UK's coal demand in 2025.

In addition to coal production and consumption, the UK has significant (but decreasing) supply of and demand for a range of manufactured solid fuels that are used for domestic, industrial and transformation processes. These include coke oven coke, breeze and patent fuels. Production was 149 thousand tonnes, a decrease of 49 per cent compared to 2024 and in 2025 was entirely made up of other manufactured solid fuels (patent fuels).

The manufactured solid fuels coke oven coke and coke breeze are the solid products obtained from the carbonisation of (coking) coal at high temperatures in coke ovens. Both fuels are mainly used in the iron and steel industry – coke oven coke in blast furnaces and coke breeze predominantly in sintering plants. No coke oven coke or coke breeze was produced in the UK in 2025, as Port Talbot closed its coke ovens on 20 March 2024. Demand of coke oven coke and coke breeze by the iron and steel industry is assumed to decline further with the transition from coal-fired blast furnaces to electric arc furnaces. Supply of coke oven coke and breeze for the iron and steel industry was maintained by imports.

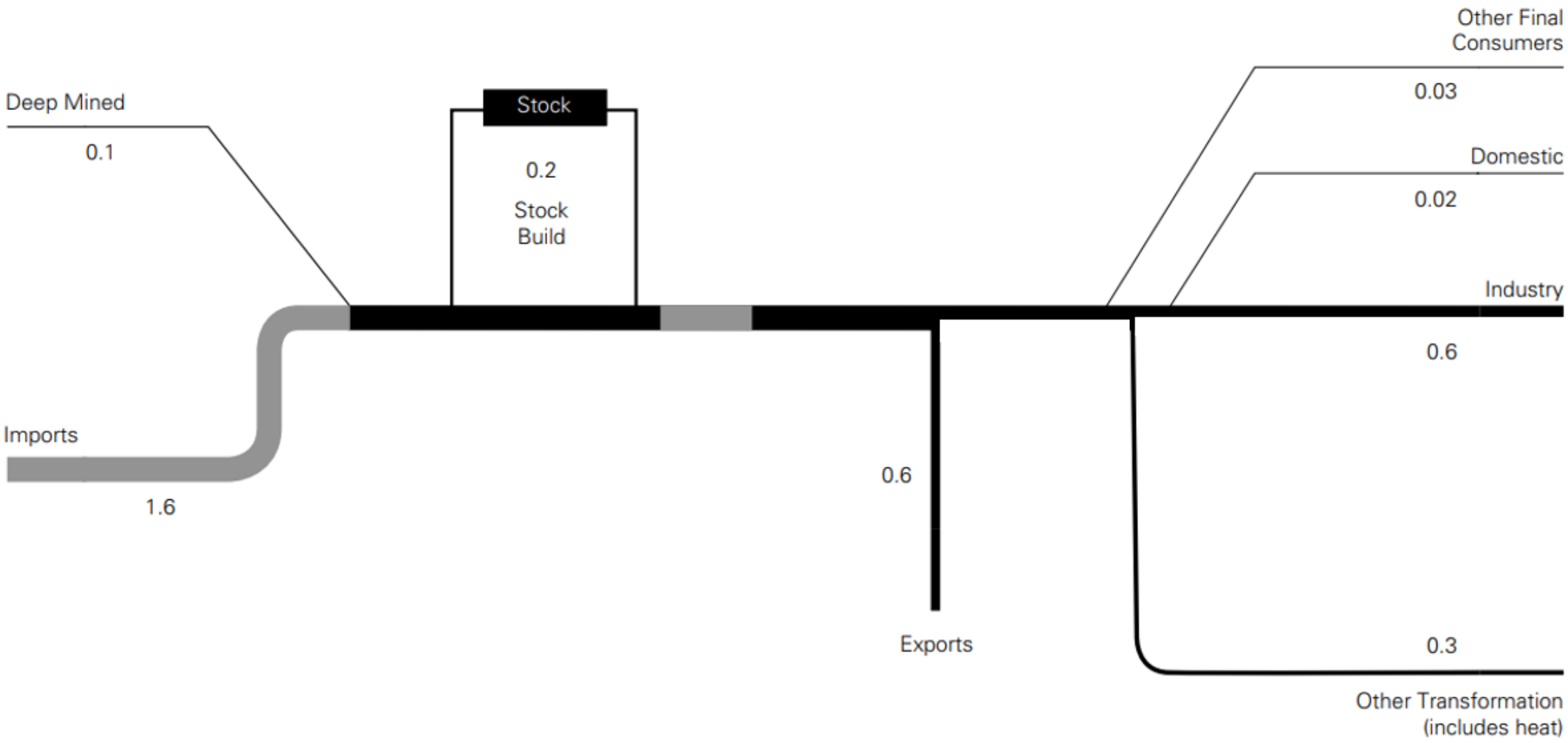
Chart 2.4 Total coke oven coke and coke breeze supply and demand, 2000 – 2025 (DUKES Table 2.3)



Map 2B Location of UK coal production sites and ports as at end 2025

Note: Only ports that imported more than 10 thousand tonnes are shown

Coal Flow Chart 2025 (million tonnes)



Note:

This flow chart is based on the data in Tables 2.1 and 2.2.
The numbers on either side of the flow chart will not match due to losses in transformation.

Chapter 3: Oil and Oil Products

Upstream oil | Anwar Annut | 07391 864 886 | oil.statistics@energysecurity.gov.uk

Downstream oil | Alasdair Campbell | 07511 164 502

Key headlines

In 2025, UK production of primary oils rose by 2.4 per cent to just over 31 million tonnes with a longer term trend of decline from the mature North Sea basin. Net imports of primary oils fell by 18 per cent to 16 million tonnes.

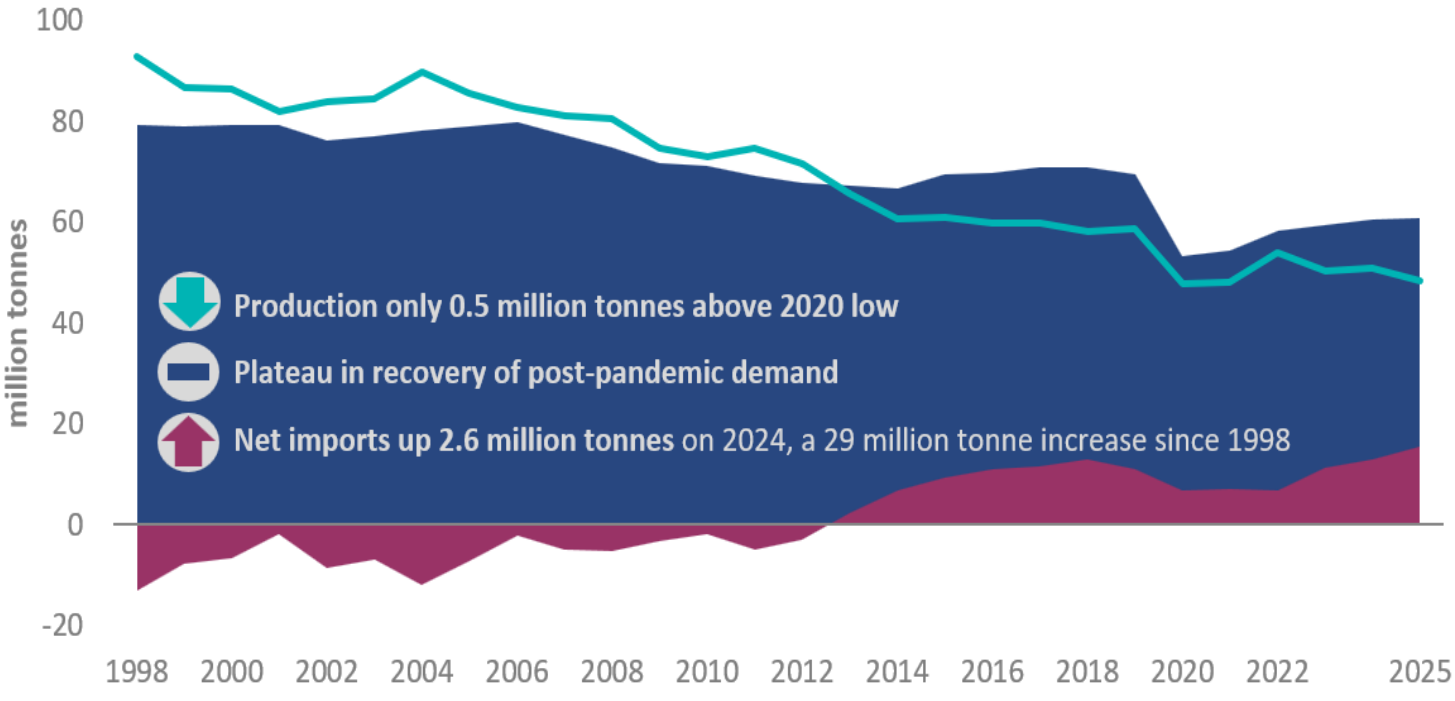
Refinery production remained low at 48 million tonnes, only 0.5 million tonnes higher than the low of pandemic 2020. The UK was a net importer of products by 16 million tonnes in 2025, the highest figure since the UK became a net importer in 2013.

Overall demand for products remained stable compared to 2024. Total jet fuel demand decreased by 0.8 per cent, making 2025 the first year that jet fuel demand did not increase since 2021.

The UK held 11.2 million tonnes of oil stocks and exceeded the 90 days of net imports required by the International Energy Agency (IEA). **UK oil stocks were similar to 2024 with a decrease of 0.5 per cent.**

Total demand for petroleum products remained stable in 2025 compared to 2024 (total demand includes transformation, energy industry use and final consumption). While a 0.2 per cent increase means that 2025 had the highest annual demand since the onset of the COVID-19 pandemic (61 million tonnes), this represents a plateau in post-pandemic demand recovery and levels remain 9.9 per cent lower than pre-pandemic 2019.

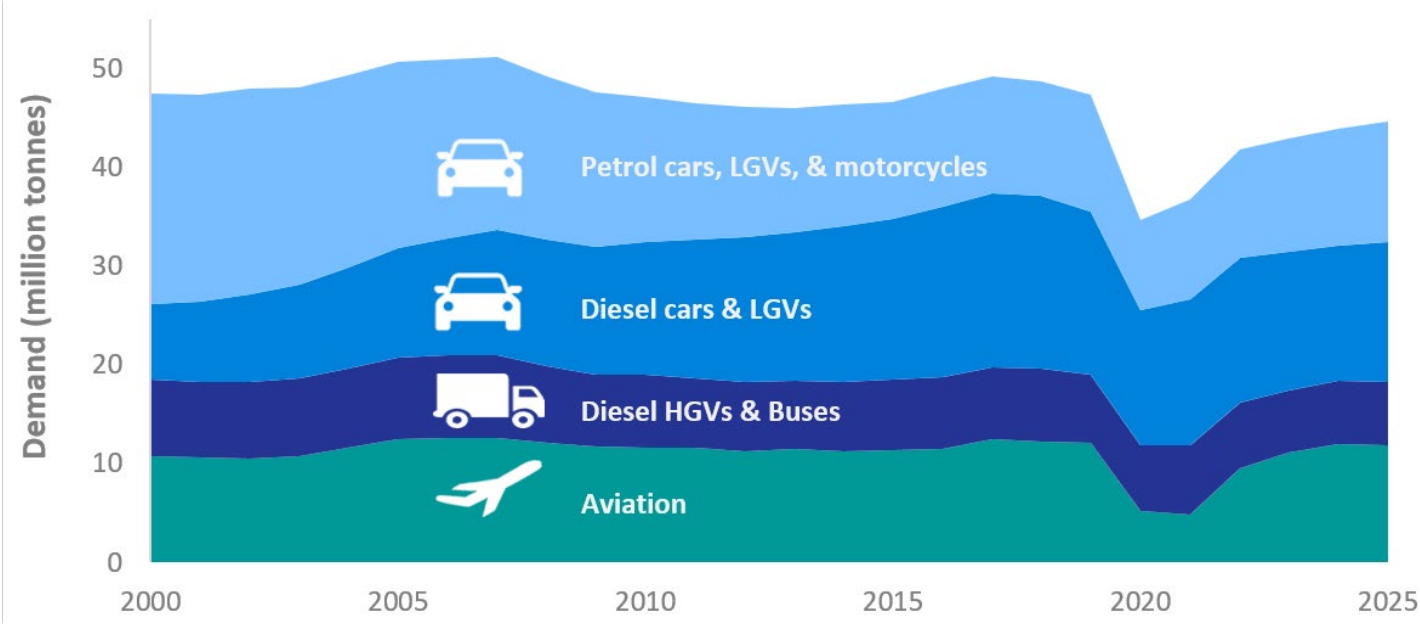
Chart 3.1 Supply and demand for petroleum products, 1998 to 2025 DUKES Table 3.2



Refinery production was down by 4.8 per cent compared to 2024, only 0.5 million tonnes higher than the low of 2020, and 56 per cent of that seen in 2000[1]. This is partly due to the closure of refinery operations at both the Grangemouth and Lindsey oil refineries in 2025. Compared to 2019, production in 2025 was down by 18 per cent. This corresponds with a 9.9 per cent fall in demand and a 40 per cent increase in net imports since 2019.

The UK was a net importer of products in 2025 by 15.5 million tonnes, an increase of a fifth on the previous year and the highest level since the UK became a net importer in 2013. This increase was because a 7.6 per cent decrease in product exports and a 3.6 per cent increase in imports were required to meet stable demand amid reduced production.

Chart 3.2 Annual demand for transport fuels, 2000 to 2025[2] DUKES Table 3.2



Transport demand was up by 1.9 per cent compared to 2024, again accounting for three quarters of total UK product demand. Transport demand had dipped in 2020 by 13 million tonnes compared to 2019 due to travel restrictions that were put in place to curb the spread of COVID-19. It has since seen strong recovery, being up 29 per cent on 2020, but remains 5.8 per cent below pre-pandemic 2019.

Over 45 per cent of transport fuel demand was accounted for by diesel vehicles – cars, goods vehicles and buses. Nonetheless, diesel demand has not shown the post-pandemic recovery that petrol and jet fuel have but rather has continued decreasing steadily since a peak of 25 million tonnes in 2017. From 2000 to 2017, demand from diesel vehicles increased by 63 per cent. From 2017 to 2025, demand fell by almost one fifth. This is partly due to an increase in biodiesel, but also the increasing popularity of electric vehicles, and motorists switching away from diesel due to environmental concerns since the emissions scandal around 2017 to 2018[3].

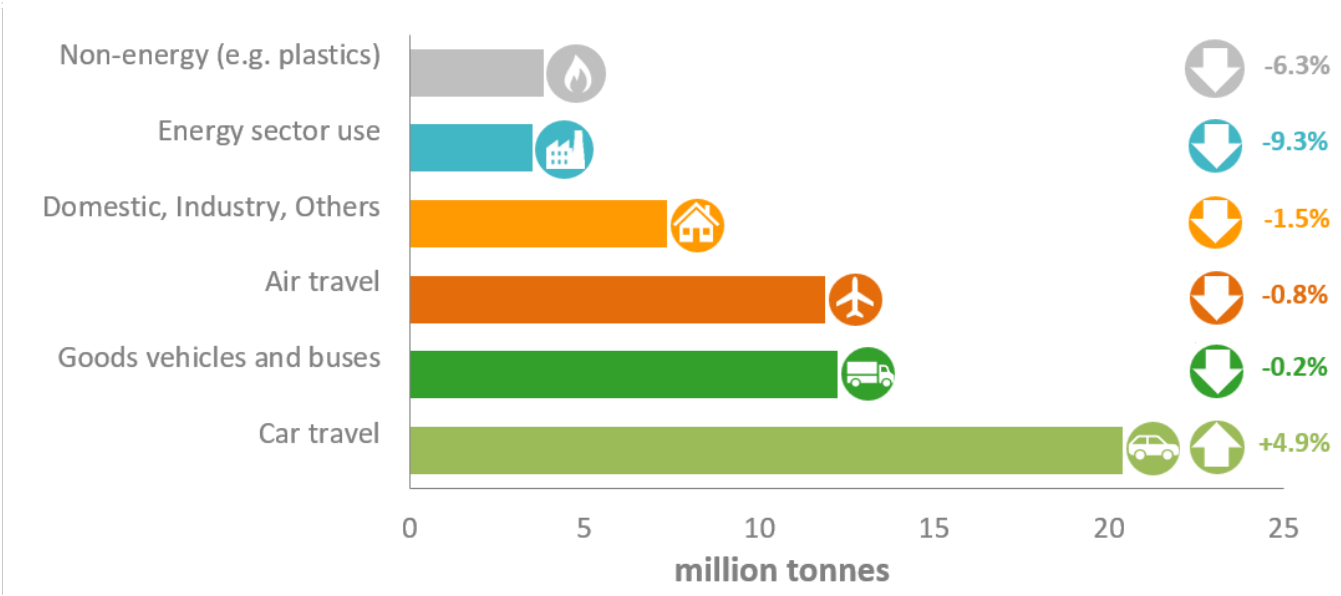
Just over 70 per cent (72 per cent) of transport demand was for road fuels, up by 0.7 percentage points on 2024.

Hydrocarbon jet fuel demand remained within two per cent of pre-pandemic levels in 2019. While down by 0.8 per cent compared to 2024[4], this was a decrease of only just over 90 thousand tonnes. The

[1] See Annex 2 for a map and further detail on UK refinery nameplate capacities in the methodology note
[2] See UK Energy in Brief for detailed breakdown of fuel consumption by vehicle type
[3] For further analysis see Energy Trends special article Road Diesel Demand Drivers (DESNZ, June 2025)
[4] Jet demand was down by 0.8 per cent when Sustainable Aviation Fuel is both included and excluded in the total. See Table 1.1 of DUKES.

COVID-19 pandemic brought restrictions on air travel which caused jet fuel demand to drop by more than half between 2019 and 2020. In 2021 demand dropped again, to its lowest level since 1984, before more than doubling by 2024. While dropping slightly in 2025, it remained within two per cent of pre-pandemic demand in 2019.

Chart 3.3 Oil consumption in the UK, 2025 DUKES Table 3.2



Petroleum product demand remained stable, rising by just 0.2 per cent. Within this, final consumption increased by a marginal 0.8 per cent.

Demand for burning oil – which is primarily used for heating applications – increased by 3.2 per cent in 2025. This was despite temperatures being comparable – even slightly higher – than the year before. In recent years, demand for heating oil (mainly burning oil) has followed price fluctuations more closely than changes in temperature. It is typical for consumers to purchase in bulk when prices are low, as was seen in 2020. Conversely, when the Russian invasion of Ukraine caused prices to rise demand dropped away sharply. Moving forward, price reductions in 2023, 2024 and 2025 meant that demand rose by 8.4, 7.1 and 3.2 per cent in each year respectively.

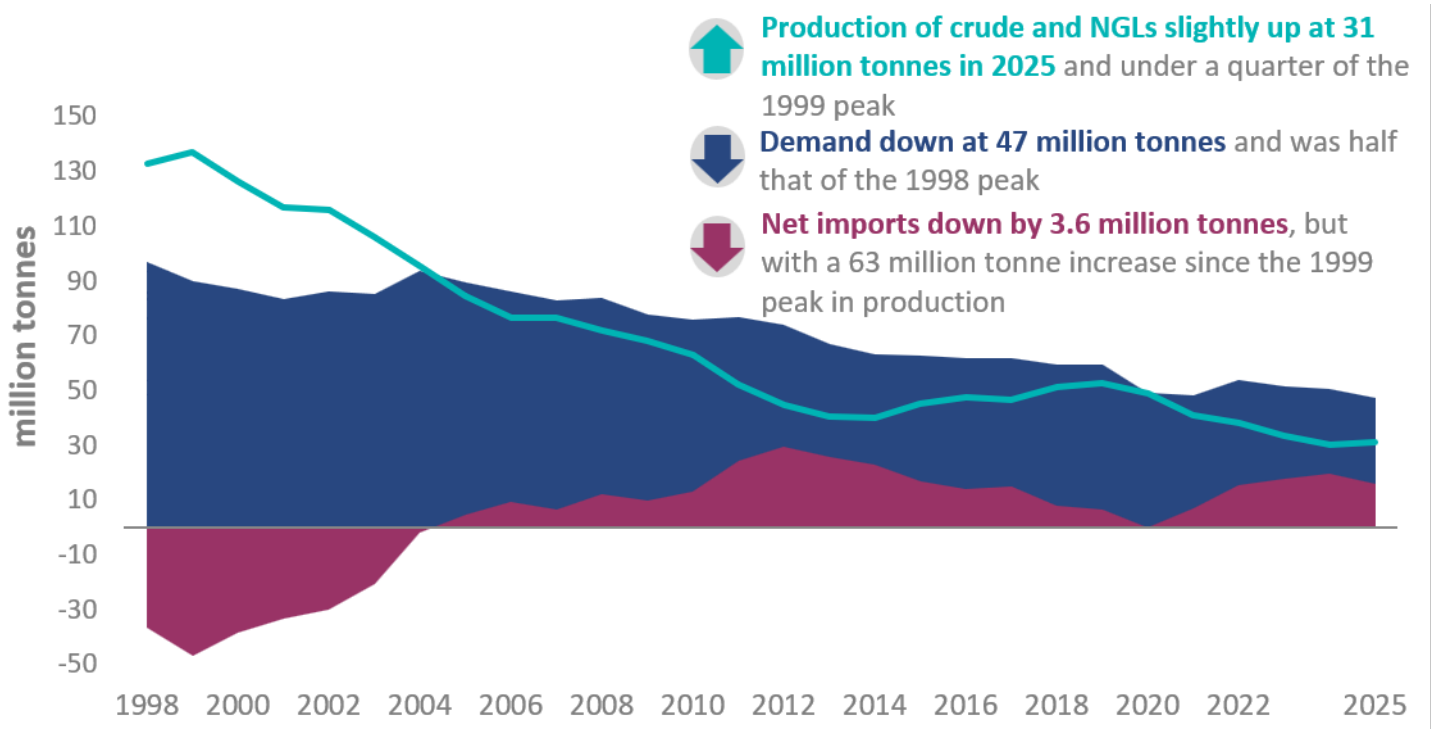
Even though burning oil composes 88 per cent of the domestic sector, overall domestic demand decreased by 1.3 per cent, potentially as consumers seek installation of new heating technologies such as heat pumps. Public administration and agriculture saw decreases of 2.6 and 3.5 per cent, respectively.

Industry demand for all products decreased by 2.2 per cent in 2025. Over the longer-term, industry oil demand has fallen by nearly two-thirds since the year 2000. Improvements in energy efficiency and a move from traditional manufacturing to higher value processes have contributed to the drop. The commercial sector remained stable, with non-energy use decreasing 6.3 per cent, dropping below 4 million tonnes for the first time since records began.

Primary oil production stood at 31 million tonnes in 2025, up by 2.4 per cent on 2024 and in line with declining output from the mature North Sea basin. Offshore oil production began in the UK during the 1970s and peaked in 1999 at 137 million tonnes – current production is just under a quarter of that peak despite new fields temporarily providing a boost from 2015 until 2019. Production has been in decline since 2020, with a sharp drop in 2021 caused by planned extensive maintenance of the Forties Pipeline System, which transports a significant proportion of UK oil to onshore terminals.

Demand for primary oils was down by 5.1 per cent compared to 2024 following the closure of two refineries (Grangemouth and Lindsey) in 2025**.** With production up this led to an 18 per cent decrease in net imports, which stood at 16 million tonnes as imports fell by 9.2 per cent to 44 million tonnes while exports fell by 2.8 per cent to 27 million tonnes.

Chart 3.4 Supply and demand for primary oils, 1998 to 2025 DUKES Table 3.1



Note: Demand excludes transfers and stock changes

Refineries took receipt of 4.7 million tonnes of crude oil produced from the UK Continental Shelf in 2025, up by 17 per cent and accounted for 9.7 per cent of refinery demand in 2025[5]. Historically, UK refineries took receipt of more North Sea crude as a share of total supply but changes in maritime shipping fuel rules since 2020[6], prices on the global market, and more recently the closure of Grangemouth and Lindsey refineries, meant more crude was imported - mainly from the US and Norway.

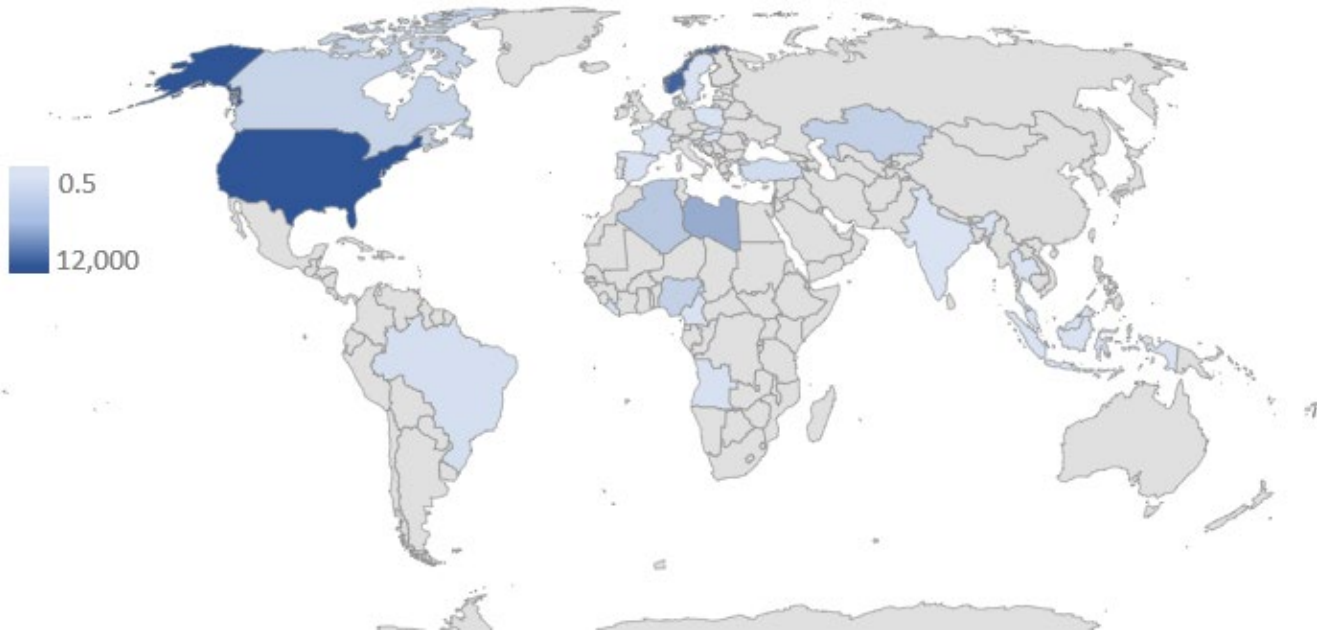
In 2025, as in the previous year, the United States was number one exporter of crude oil ahead of Norway to the UK by just over one million tonnes. Imports from the US accounted for under a third of total crude imports but were down by 26 per cent compared to 2024.

Norway was the second largest source of crude imports at 11 million tonnes, down 21 per cent on 2024, but still accounting for 27 per cent of the UK's imported crude.

The ban on imports of Russian oil introduced on 5th December 2022 forced importers to diversify and seek different crude sources. The UK has not imported any oil from Russia since the ban. Crude sourced from current OPEC countries increased by over a third from 2022 to 2023 following the ban and has remained stable around 8 million tonnes. In 2025, OPEC countries were the source of 21 per cent of UK crude imports. The UK also exports a significant amount of crude oil, mainly to the Netherlands and other European countries, but with crude exports down by 2.5 per cent compared to 2024.

[5] See Energy Trends Table 3.10
[6] International Maritime Organization 2020, cutting sulphur oxide emissions

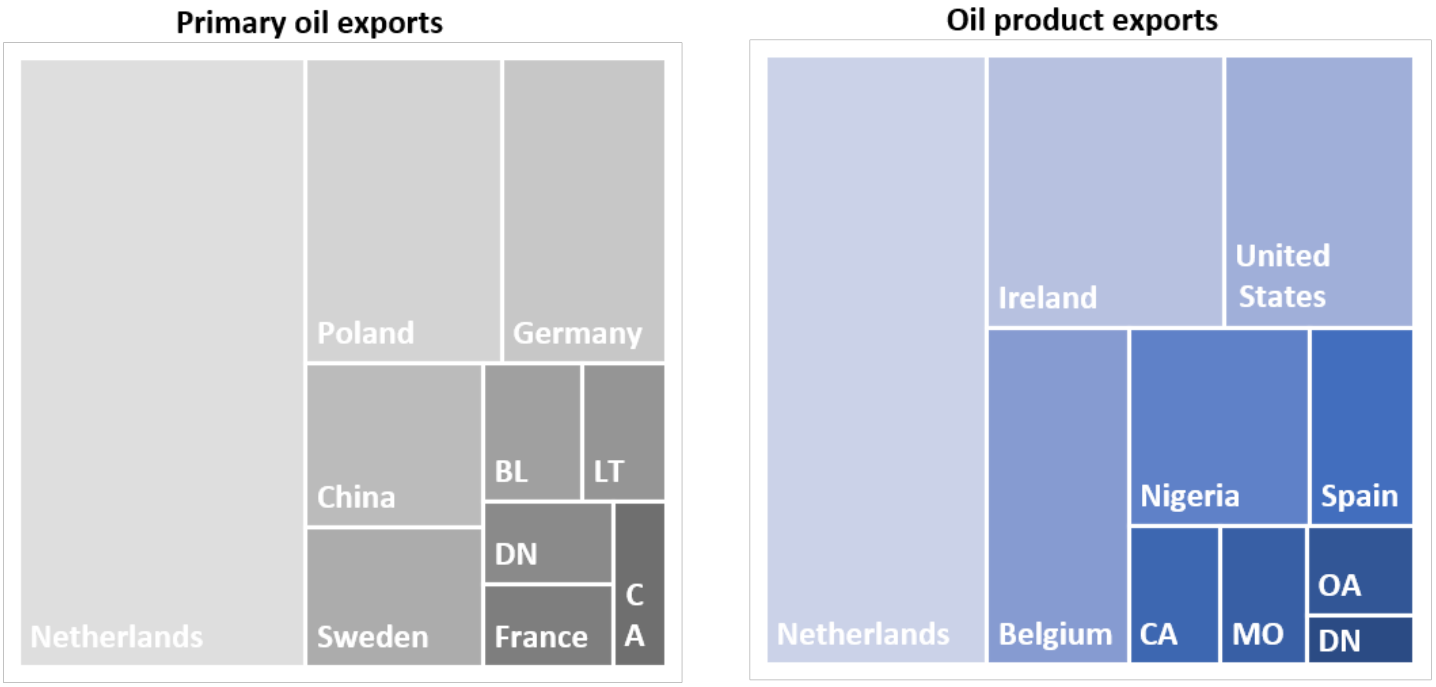
Map 3A Sources of UK crude oil imports 2025 (thousand tonnes) DUKES Table 3.7



UK exports of total primary oils were down by 2.8 per cent in 2025 compared to 2024, with nearly 90 per cent going to the EU and mainly to the refining hubs in the Netherlands where it is processed into road diesel, gas oil, and heating fuels – oil types that the UK relies on imports to meet demand.

Oil product exports decreased by 7.6 per cent in 2025 compared to 2024, with the majority (around 60 per cent) going to the EU. The UK is more than self-sufficient for petrol, so petrol is typically around half the product export total. In 2025 the UK exported 2.7 million tonnes of petrol to the Netherlands, 1.9 million tonnes to the US, and 1.3 million tonnes to Nigeria (together almost 70 per cent of petrol exports). While the UK is reliant on imports to meet demand for jet fuel, exports of 1.4 million tonnes to Ireland in 2025 were 89 per cent of total UK jet fuel exports.

Chart 3.5 Major UK primary oil and oil product export destinations DUKES Table 3.8

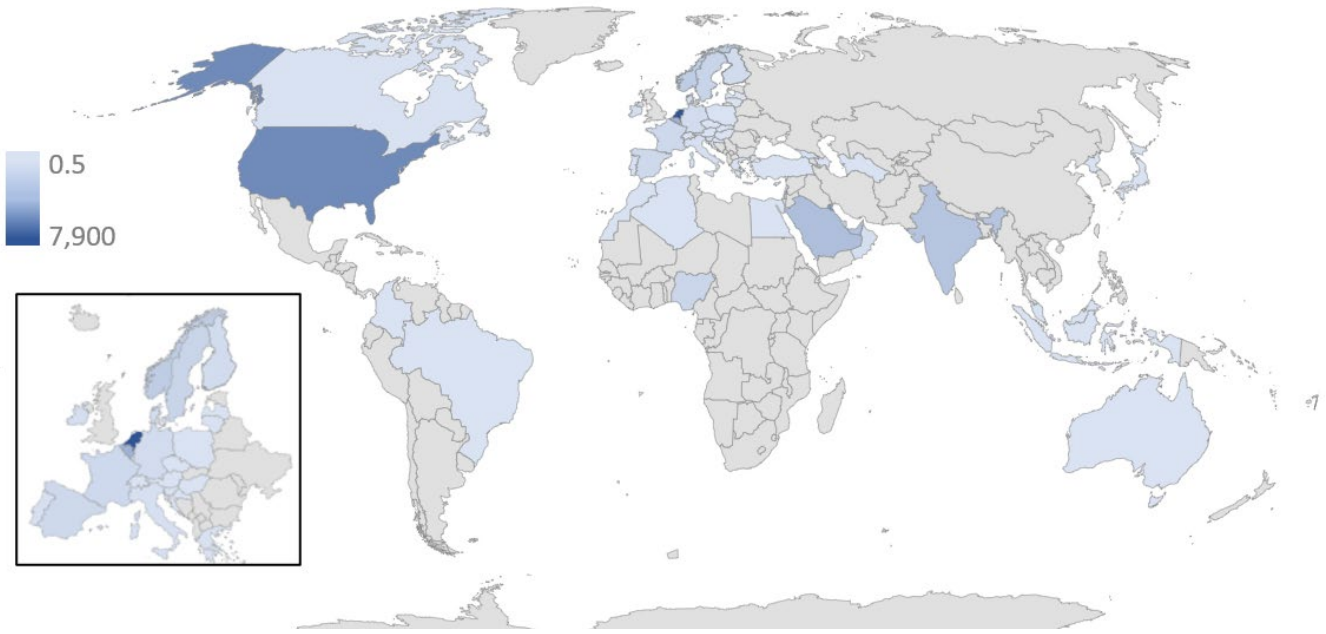


Key

BL Belgium, **CA** Canada, **DN** Denmark, **LT** Lithuania, **MO** Morocco, **OA** Other Africa.

Overall petroleum product imports increased by 3.6 per cent compared to 2024, reflecting the stable demand and continued low refinery production. Just under 40 per cent of product imports were diesel, with the United States (31 per cent), the Netherlands (26 per cent) and Belgium (11 per cent) collectively making up just under 70 per cent of those imports, reflecting a change since the 2022 sanctions given that Russia used to be an important source of diesel for the UK.

Map 3B Sources of UK petroleum product imports 2025 (thousand tonnes) DUKES Table 3.7



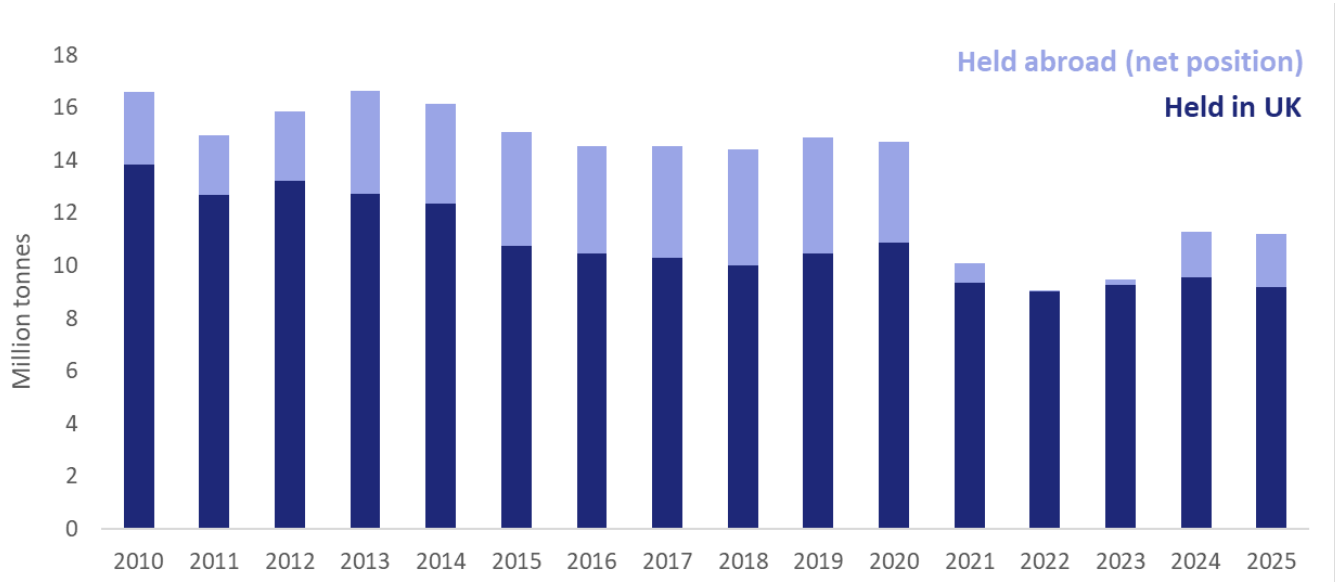
The Netherlands is the UK's closest major oil refining and trading hub, so accounts for most oil trade with the UK. Dutch product imports represented almost a quarter of the total at 7.9 million tonnes, with the next highest source being the United States, accounting for 15 per cent of the total at 4.9 million tonnes. Imports from Kuwait have been increasing since 2022, and in 2025 Kuwait was the third largest source of product imports at 13 per cent (see information on jet fuel below).

Jet fuel made up almost one-third of product imports and decreased by 1.0 per cent in 2025. This was concurrent with a similar decrease in demand. In recent years, Kuwait has become the primary source of imported jet fuel for the UK, accounting for 35 per cent of the total at 3.7 million tonnes. India, Saudi Arabia and the UAE also each supplied more than one million tonnes.

The UK government is required to hold stocks of oil which can be released in the event of severe disruption to global supply. Government meets this obligation (under membership of the International Energy Agency) by directing industry to hold stocks. The UK participated in a co-ordinated release of oil in March 2026 in response to the US-Iran conflict that has caused major supply disruption. For more up to date stock information please see Energy Trends Table 3.11[7].

[7] See Energy Trends Table 3.11

Chart 3.6 UK oil stocks, 2010 to 2025 (DUKES Table 3.5)



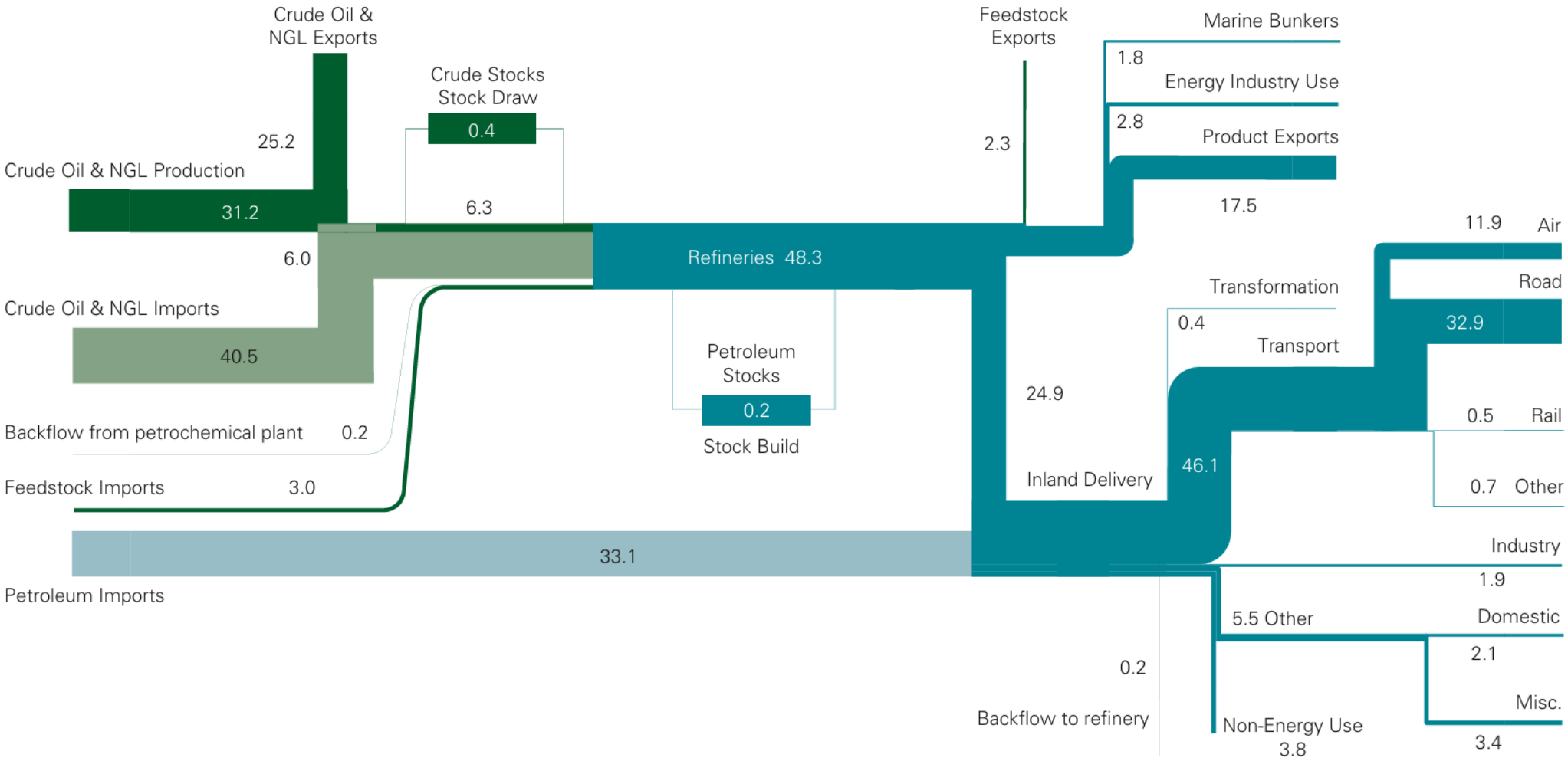
The UK held 11.2 million tonnes of stocks at the end of 2025 (DUKES Table 3.5), more than enough to meet the required 90 days of net imports stipulated by the International Energy Agency. UK oil stocks were similar to 2024, falling by 0.5 per cent on the year before. This was a result of a 6.3 per cent reduction in crude and process oil stocks partly offset by a 5.0 per cent increase in petroleum product stocks. In 2025, the Grangemouth Refinery transitioned to an import terminal and the Prax Lindsey Oil Refinery closed, which contributed to the 23 per cent fall in crude oil held at refineries.

Companies may choose to hold stocks within the UK or abroad via legal agreements with other countries. At the end of 2025 the UK held 9.2 million tonnes (82 per cent) in the UK, with most of that held abroad being in the Netherlands, as well as in Germany and Belgium.

Chart 3.6 shows the drop in stocks in 2021, which followed the end of the EU transition deal (when stocks were held at 60 days of demand) and the UK moved to the IEA stockholding system (requiring 90 days of net imports).

The flow chart shows the movement of primary oils (on the left) into refineries which are then transformed and consumed by various sectors of the UK economy (on the right), in addition to trade. The widths of the bands are proportional to the size of the flow they represent.

Petroleum flow chart 2025 (million tonnes)



Notes:
This flow chart is based on the data in Tables 3.1 and 3.2.
The numbers on either side of the flow chart will not match due to losses in transformation.
Biofuels are not included.

Chapter 4: Natural Gas

Edward John Beazleigh | 07542 501108 | gas.stats@energysecurity.gov.uk

Key headlines

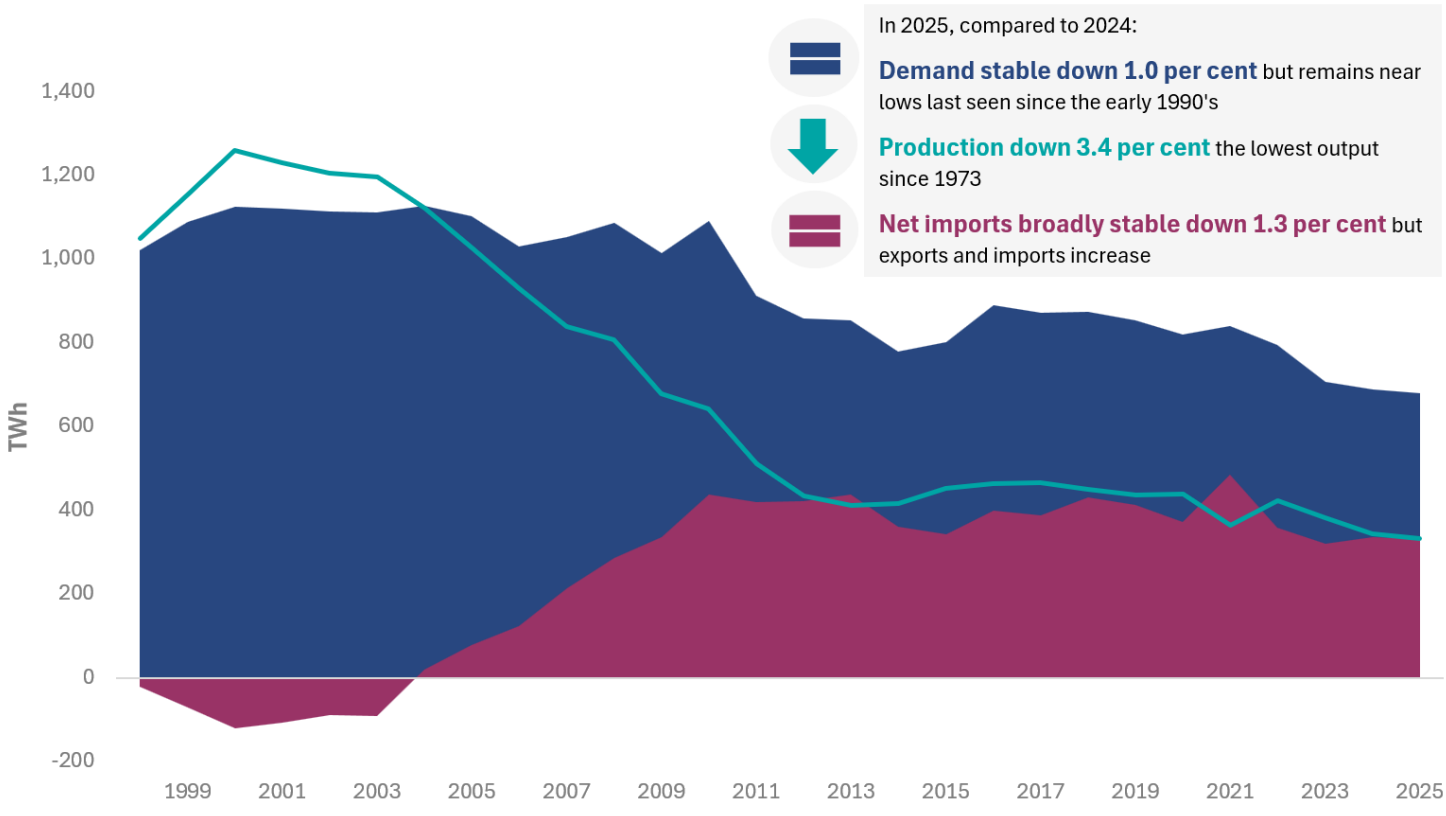
Natural gas production continues to decline, down 3.4 per cent in 2025 compared to 2024. Production remains at the lowest level since 1973 as the natural decline of the mature North Sea basin continues.

Imports and exports increased 2.3 and 12 per cent respectively in 2025 compared to 2024. The increase in imports was driven by higher imports of liquefied natural gas (LNG), particularly from the US which increased by 38 per cent in the same period. Increased exports, largely to continental Europe, were supported by sustained imports and low demand.

Natural gas demand was broadly stable, decreasing by 1.0 per cent in 2025 compared to 2024. Increased demand for electricity generation was offset by falling demand by final consumers particularly the services sectors. Demand for electricity generation increased by 7.0 per cent, household demand was stable whereas industrial and services demand fell by 7.8 and 7.6 per cent respectively.

Note this year's DUKES publication includes updates to demand data from 1998, see below or Methodology changes to Natural Gas Statistics: Digest of UK Energy Statistics 2026 for more information.

Chart 4.1 Supply and demand for natural gas, 1998-2025 (DUKES Table 4.1)

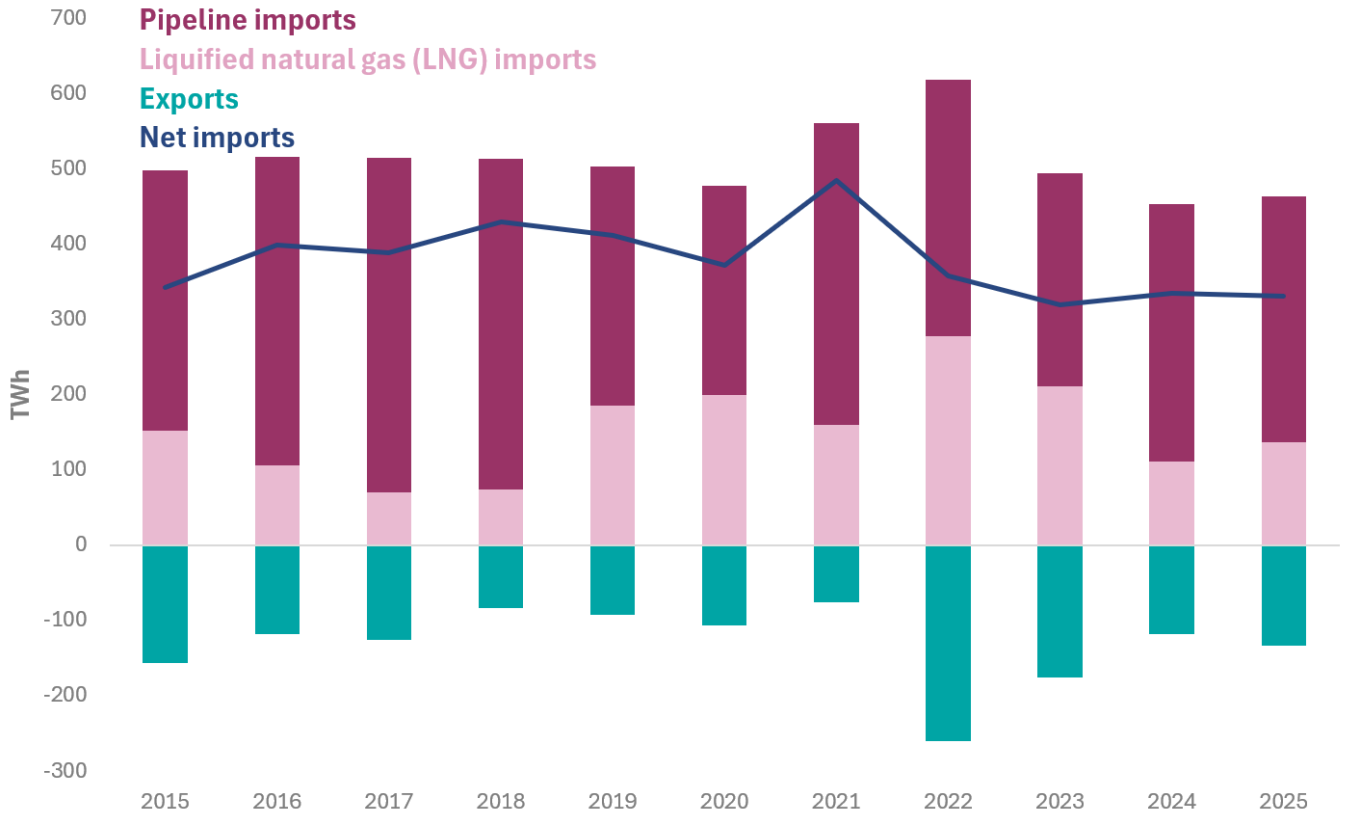


Natural gas demand was largely unchanged in 2025 compared to 2024, decreasing 1.0 per cent; demand remained at lows last seen in 1992 for the third consecutive year. Gas demand fell sharply in 2022, driven by high temperatures, high renewable output, and high energy and other prices following the Russia-Ukraine conflict. Since then, demand has remained relatively low as these factors continue to impact consumption. Natural gas demand accounted for 35 per cent of total energy demand in 2025, similar to 2024 (see Chapter 1 for more information).

Production of natural gas continued to fall, remaining at the lowest level since 1973, down 3.4 per cent in 2025 on 2024. This reflects long-term declining output from established North Sea fields. UK gas production started in the 1970s and reached its peak in 2000. Thereafter, production declined overall until 2015, when the development of new fields stabilised output. Production began to fall again from 2019, with a notable decline in 2021 resulting from extensive planned maintenance of the Forties Pipeline System, a key piece of infrastructure serving a substantial proportion of UK oil and gas production. The UK Continental Shelf is a mature production basin, and declines are expected as reserves have been depleted.

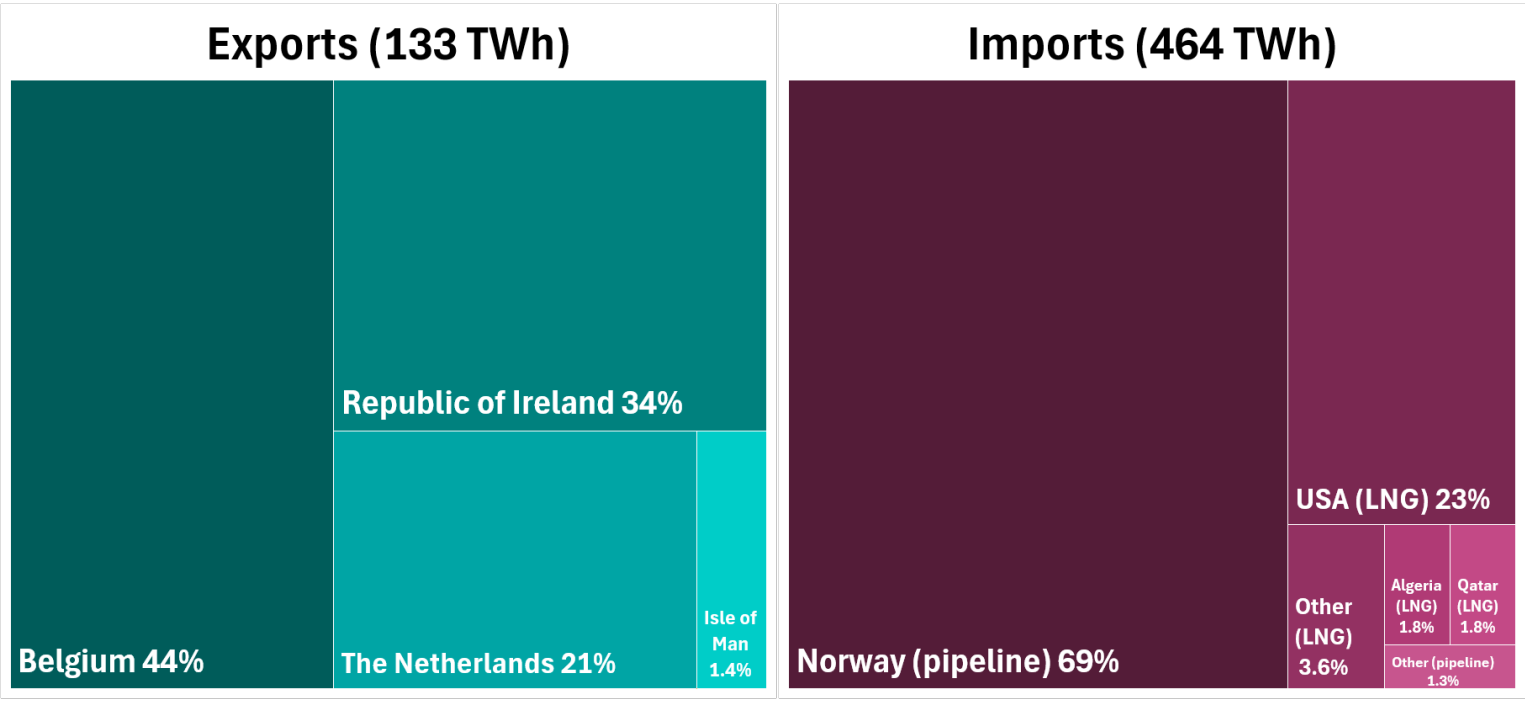
Net imports decreased by 1.3 per cent due to increased exports. The UK has been a net importer of natural gas since 2004.

Chart 4.2 Pipeline and LNG imports and exports of natural gas, 2015-2025 (DUKES Table 4.5)



Imports and exports increased by 2.3 and 12 per cent respectively in 2025 compared to 2024. Imports of liquefied natural gas (LNG) increased, up by 24 per cent, whereas pipeline imports decreased by 4.6 per cent in the same period. Sustained imports alongside low demand supported exports with the increase largely due to exports continental Europe. Exports to Belgium and the Netherlands increased by 24 and 9.5 per cent respectively.

Chart 4.3 Imports and exports of natural gas by country of origin, 2025 (DUKES Table 4.5)



Pipeline imports fell 4.6 per cent in 2025 compared to 2024. This was largely due to a 6.0 per cent decrease in Norwegian pipeline imports over the same period. Despite this, Norway remained the UK's largest import source, accounting for 69 per cent of total imports in 2025, down from 76 per cent in 2024, equivalent to 40 per cent of gross supply. The UK imports substantial amounts of gas from Norway due to proximity and shared infrastructure in the North Sea.

Norway accounted for 98 per cent of pipeline imports as interconnectors with Belgium and the Netherlands were largely used for exports, as has been the case since 2022 following the Russia-Ukraine conflict. Pipeline imports from Belgium and the Netherlands were 4 to 5 times larger in 2025 than 2024 although remain substantially smaller than pre-conflict levels.

Imports of LNG from the US increased 38 per cent in 2025 compared to 2024, accounting for 76 per cent of LNG imports and 13 per cent of gross supply. The US remained the second largest import source accounting for 23 per cent of total imports. Historically, Qatar was the largest import source of LNG to the UK, accounting for nearly 40 per cent of total imports at its peak in 2011. Qatar held this position until 2022, but imports have declined in recent years, with Qatari LNG down a further 4.2 per cent in 2025 on 2024. Qatar was the fourth largest import source in 2025 accounting for 6.0 per cent of LNG imports,1.8 per cent of total imports.

The UK imported LNG from eleven countries in 2025, up from ten in 2024 and down from a record high of thirteen in 2022. Peruvian LNG imports, a new import source in 2017, fell 46 per cent in 2025 compared to 2024. Algerian LNG imports increased 56 per cent in the same period, making them the third largest import source, overtaking Qatar. Imports of LNG from Algeria remain small compared to the US accounting for 6.0 per cent of total LNG imports and 1.8 per cent of total imports in 2025. LNG imports from other sources including Trinidad & Tobago, Angola and Norway decreased compared to 2024, while LNG imports from Egypt fell to zero. LNG imports from Nigeria and Equatorial Guinea increased by 47 and 5.6 per cent respectively. The UK also imported LNG from Brazil and Mexico for the first time.

Exports increased across the board in 2025 compared to 2024; exports to Belgium increased the most of any one country, up 24 per cent. Belgian exports accounted for 44 per cent of total exports, up from 40 per cent in 2024. Exports to the Netherlands, the Republic of Ireland and the Isle of Man also increased in the same period

Methodology changes

The Department has undertaken work to improve its understanding of gas consumption; see Methodology changes to Natural Gas Statistics: Digest of UK Energy Statistics 2026 for more information. In DUKES 2026, we have published the outcomes of this work, including revisions to the time series from 1998 to 2024, alongside new data for 2025. Revisions to total natural gas demand, as well as to the domestic sector, are small. There are larger revisions to the industrial and services sectors, where gas was reallocated between the two. There has been very little change to non-domestic demand overall. The largest revisions are to subsectors, the smaller sub-classifications within industry and services.

Chart 4.4 Natural gas consumption in industrial, services, commercial and public administration sectors, 1998-2025 (DUKES Table 4.1)

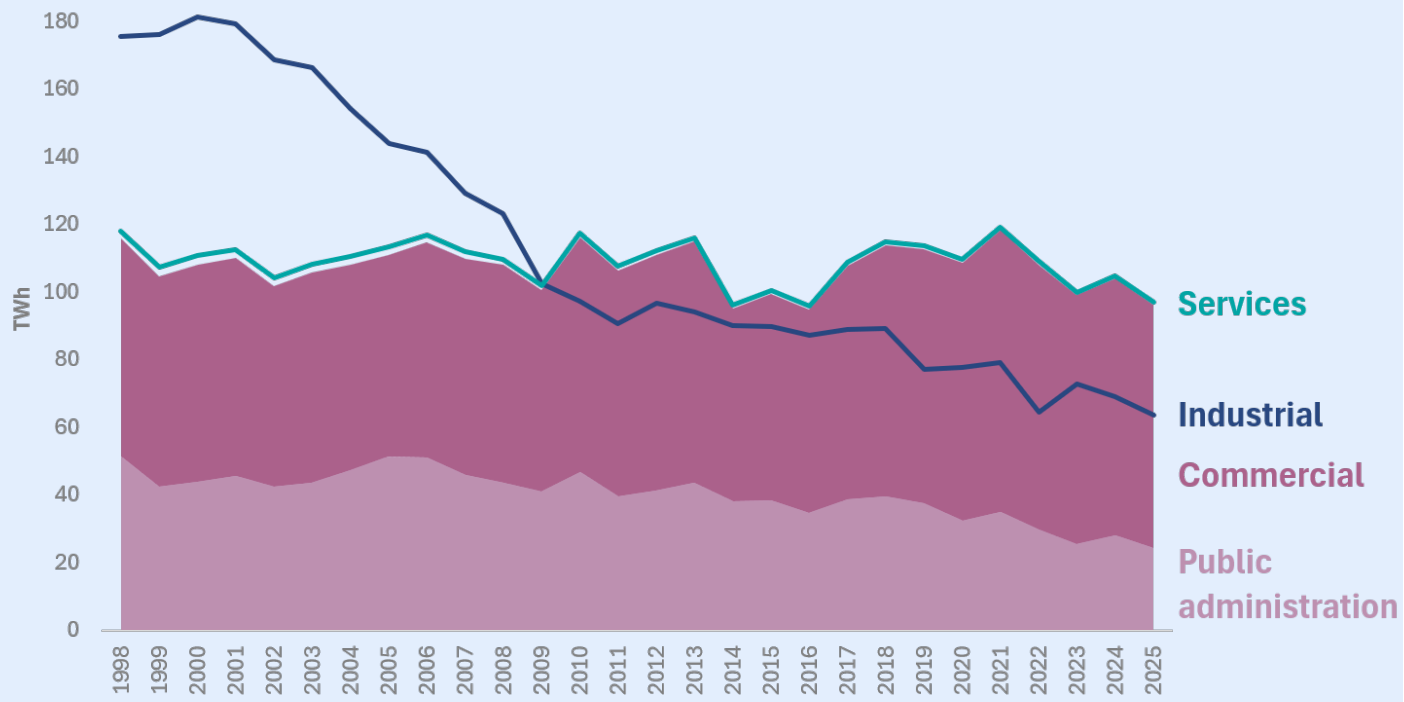
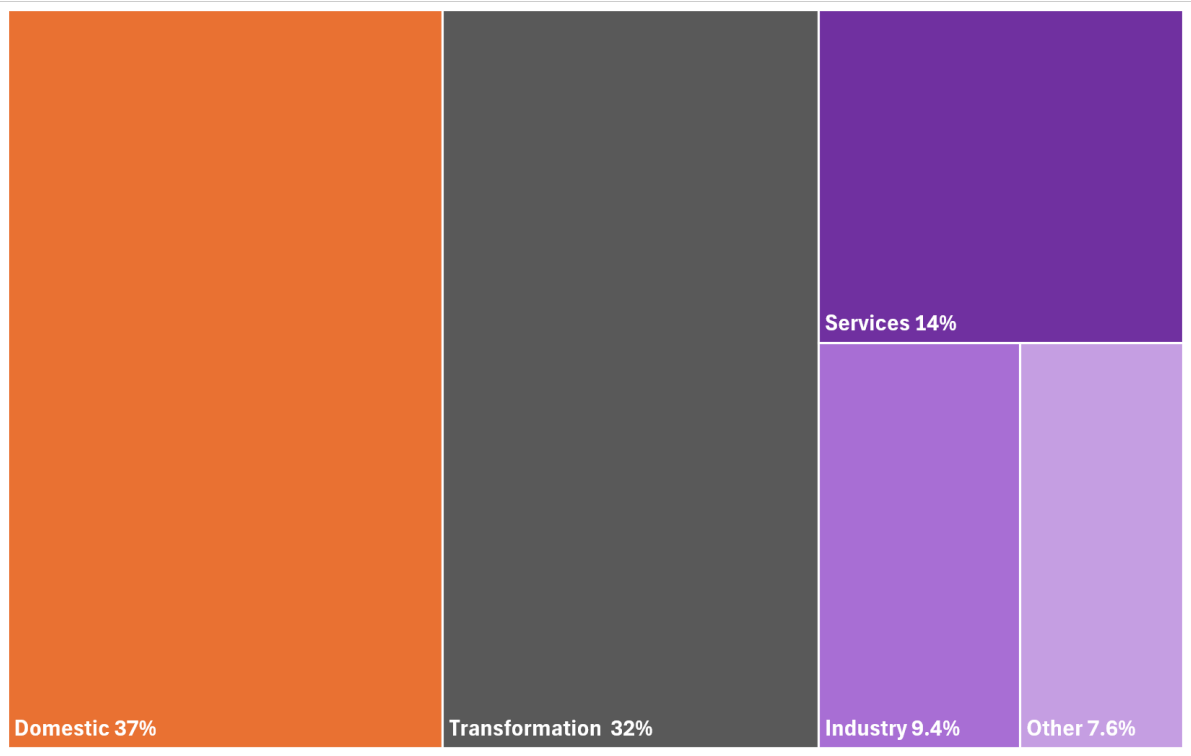


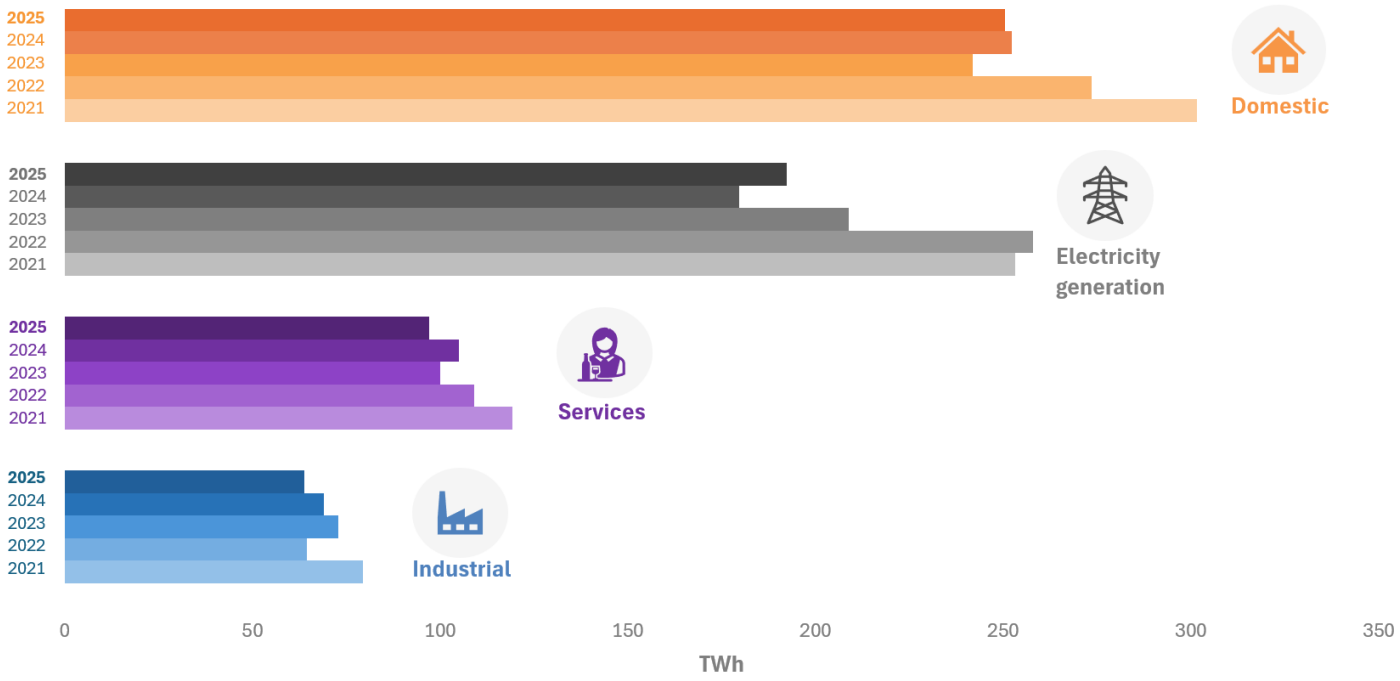
Chart 4.4 shows that, between 1998 and 2025, industrial gas consumption generally declined. The sharpest declines were earlier in the series, with consumption broadly stable between 2010 and 2018. From this point, consumption began declining again, with a steep fall in 2022 due to high prices. Services consumption was much more stable over the same period. However, within the services sector, diverging trends are seen in public administration and commercial consumption, the two main components of services, from the end of the previous decade. Gas consumption in the public administration sector has been declining due to increased electrification, while commercial consumption has generally increased. Broadly speaking, declining industrial demand and increasing commercial demand are consistent with wider structural changes in many European economies, including the UK, and provide useful context for the revisions seen within the industry and services subsectors.

Chart 4.5 Sectoral consumption of natural gas, 2025 (DUKES Table 4.1)



In general, gas is used for transformation, domestic consumption, and by other sectors, including industry and services, each making up around a third of demand over the last decade. This was the case in 2025; domestic demand had the largest share at 37 per cent of demand, gas demand for transformation increased to 32 per cent from a low of 30 per cent in 2024, while demand by final consumers decreased.

Chart 4.6 Sectoral consumption of natural gas, 2021-2025 (DUKES Table 4.1)



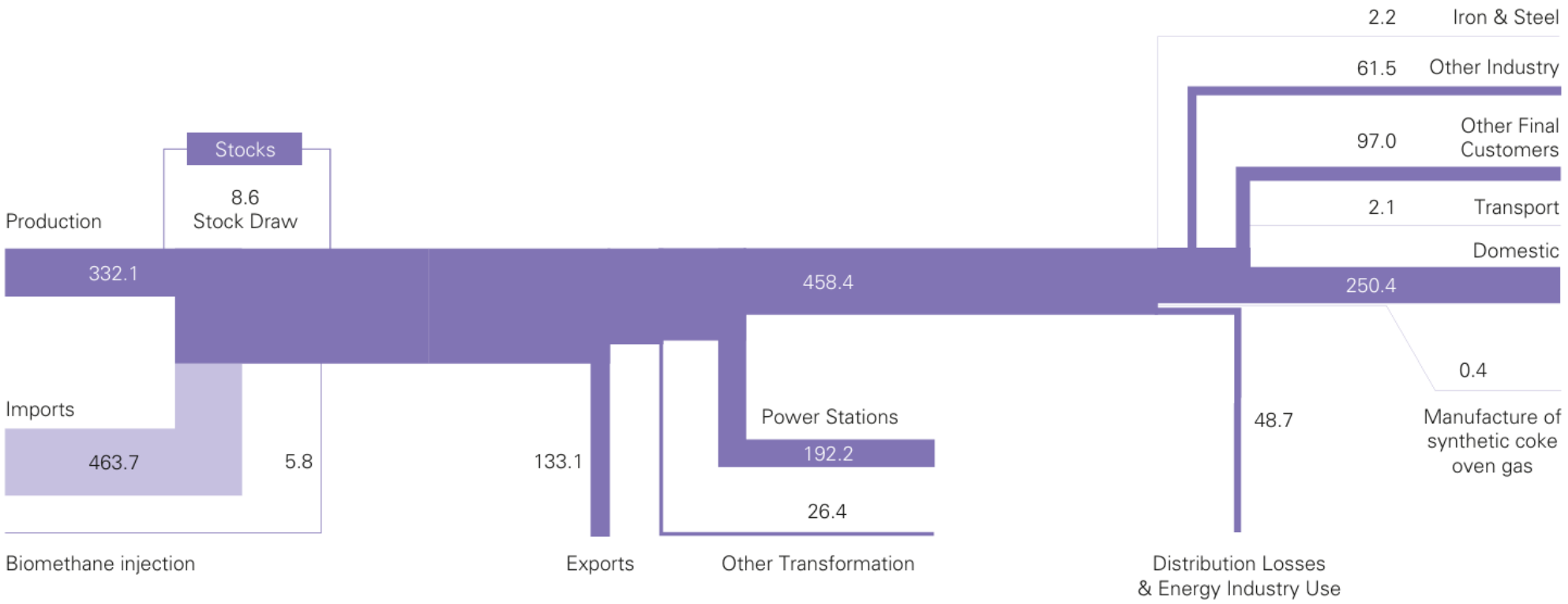
Natural gas demand was unchanged in 2025 compared to 2024, with increased demand for electricity generation offset by a decrease in final consumption. Demand for electricity generation increased by 7.0 per cent in 2025, up from a historic low in 2024, but remained low compared with recent levels. In contrast, demand by the industrial and services sectors fell by 7.8 and 7.6 per cent respectively. Within services demand by public administration and the commercial sector fell by 13 and 5.5 per cent respectively.

Demand for domestic (household) consumption was broadly stable, down by 0.8 per cent in 2025 compared to 2024. Domestic demand remains lower than historic averages, down 15 per cent on the 2017-2021 average, with demand continuing to be affected by warmer temperatures, and high energy and other prices following the Russia-Ukraine conflict from 2022.

Gas demand by the industrial sector fell by 7.8 per cent in 2025 reaching levels last seen in the 1970s. Industrial demand has generally been declining; despite recovering slightly following a sharper drop in 2022 due to high prices, demand remains in line with this overall trend. This decline is also seen in other fuels and across Europe, due to improvements in energy efficiency and the decline of traditional fuel-intensive sectors. The iron and steel sector saw a substantial drop of 41 per cent due to closures in late 2024.

Natural Gas Flow Chart 2025 (TWh)

The flow chart shows the flows of natural gas from production and imports through to consumption. It illustrates the flow of gas from the point at which it becomes available from indigenous production or imports (on the left) to the final use of gas (on the right), as well as that transformed into other forms of energy or exported. The widths of the bands are proportional to the size of the flow they represent.



Chapter 5: Electricity

Vanessa Martin 0776 757 3907 electricitystatistics@energysecurity.gov.uk

Key headlines

Electricity demand was higher in 2025 at 323 TWh, up 1.2 per cent compared to 2024. Demand remained notably below the pre-pandemic levels of 2019.

Domestic consumption increased compared to 2024 (up 2.6 per cent) but remains below pre-pandemic levels. Domestic consumption fell sharply in 2022 and in 2023 but has increased year on year since then. **Commercial consumption also increased by 1.5 per cent while industrial consumption fell by 2.0 per cent in 2025 to 76.7 TWh, the lowest level since 1983.** This is in line with energy efficiency improvements and a move from traditional manufacturing to higher value processes.

Electricity generation increased by 2.6 per cent, as increased demand and high electricity exports increased the need for UK generation. In 2025 imports were slightly higher than in 2024 but exports increased substantially to the second highest value on the published data series, increasing the need for UK-based generation.

Renewable generation increased by 5.9 per cent from 2024, reaching a new record high of 153.0 TWh, driven by record high generation from wind, solar and bioenergy. There was a particularly large percentage increase in solar generation, up by 34 per cent to 20.1 TWh, the highest value on the published data series and more than twice the 2015 value.

Fossil fuel generation increased by 4.1 per cent in 2025 to 94.9 TWh though remained at a historically low level, marking the first full year with no generation from coal. In 2025**,** almost all fossil fuel generation came from gas, as coal generation ceased completely during 2024.

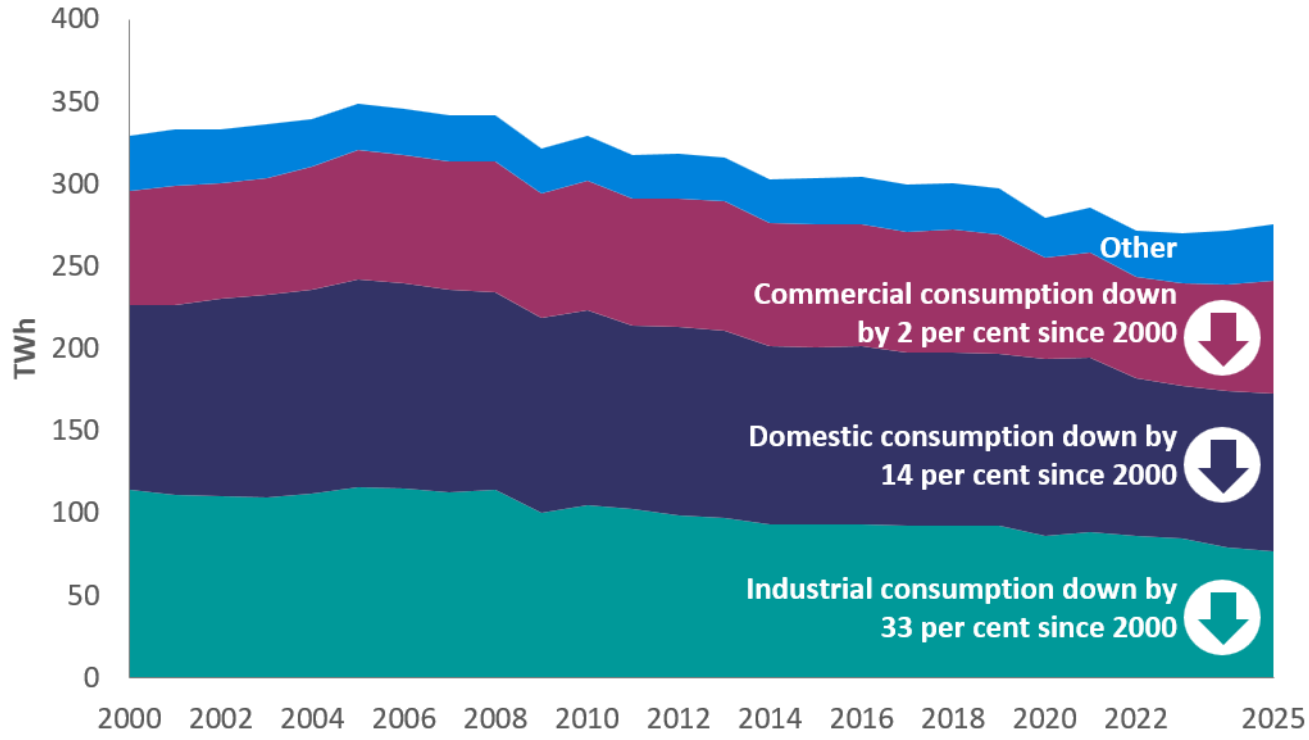
Renewable sources accounted for 52.1 per cent of generation in 2025, exceeding a share of 50 per cent for the second time in the published data series. The share of generation coming from low carbon sources (nuclear plus renewables) fell slightly to 64.3 per cent in 2025, 0.4 percentage points lower than the record high share seen in 2024 as the share from nuclear decreased.

De-rated renewable capacity increased 2.8 per cent to 27.7 GW, driven by increases in offshore wind and solar capacity. Wind capacity increased by 1.5 per cent to 14.1 GW with a 1.5 per cent increase for onshore wind and a 3.2 per cent increase for offshore wind, including Moray West and NNG sites. De-rated solar capacity also saw an increase of 12 per cent to 3.7 GW.

Electricity demand was higher in 2025 at 323.0 TWh, up 1.2 per cent compared to 2024. Average temperatures were similar overall between 2024 and 2025 but cooler in the first quarter of the year. Electricity demand remains notably below pre-pandemic levels of 2019.

Final consumption also rose to 275.5 TWh, a 1.7 per cent increase compared to 2024. ‘Final consumption’ refers to electricity consumption by end users, excluding electricity consumed in the process of generation or by fuel industries and transmission or distribution losses.

Chart 5.1 Electricity consumption by sector, 2000 to 2025 (DUKES Table 5.1)



Domestic consumption rose to 96.2 TWh in 2025, a 2.6 per cent increase compared to 2024 but remains below pre-pandemic levels. Domestic consumption fell sharply in 2022 following high energy prices and warm temperatures and fell again in 2023 but has increased year on year since then. Despite the increases, domestic consumption in 2025 was 7.1 per cent below 2019. Over the longer time series some of the drop can be attributed to improved energy efficiency of lighting and appliances.

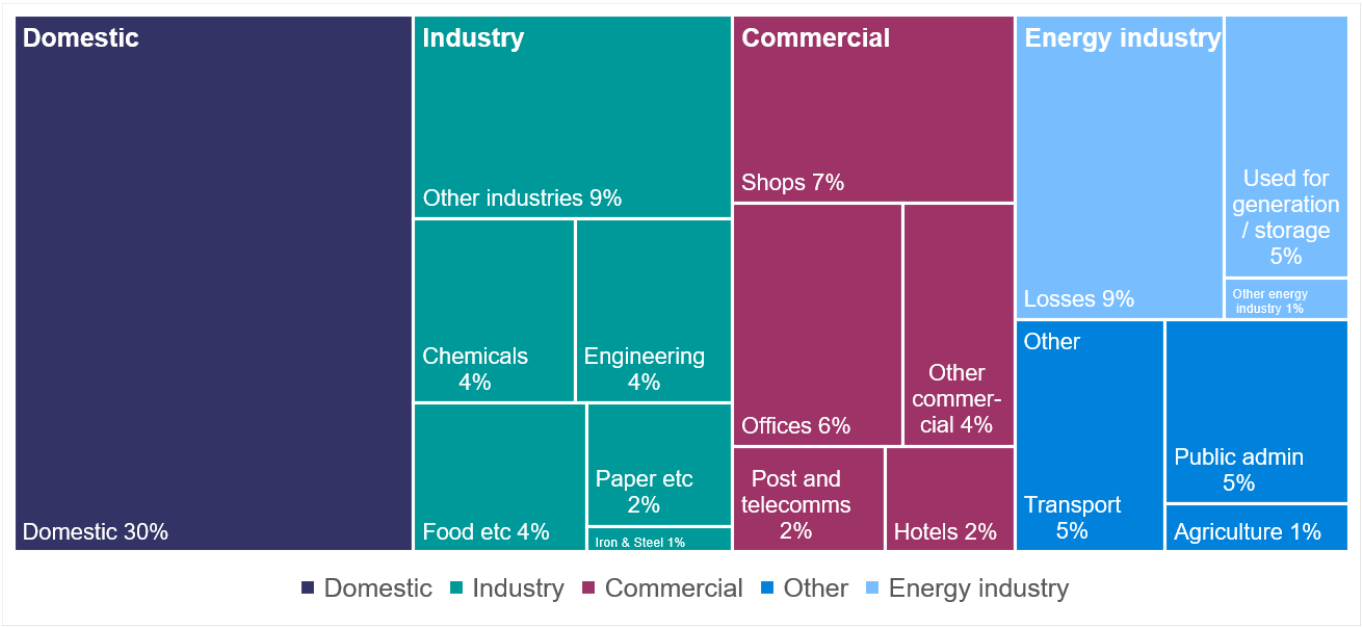
Commercial consumption increased by 1.5 per cent from 2024 to 67.9 TWh in 2024. As with the domestic increase above, this reflects cooler temperatures in the first quarter of 2025, increasing electricity demand for heating.

Whilst data centres are not yet separately identified in our main data collections, DESNZ analysis of electricity meter data indicates that **data centres accounted for an estimated 4.5 TWh of electricity consumed from the grid in Great Britain in 2024**, up from 1.3 TWh in 2020. For more detail see: Data centre electricity consumption in Great Britain, 2020-2024. Data centre electricity consumption is included within the Post and Telecommunications sector in DUKES table 5.2, within the wider Commercial sector.

Industrial consumption fell by 2.0 per cent in 2025 to 76.7 TWh, the lowest level since 1983. This is the fourth consecutive year where industrial consumption has fallen. In common with many other European countries, industrial consumption has contracted over time. Energy efficiency improvements and a move from traditional manufacturing to higher value processes such as pharmaceuticals have contributed to the reduction over the longer-term.

Total electricity demand is larger than electricity consumption. This is because total demand also accounts for electricity consumed in the process of generation or to produce fuel for generation, as well as for electricity lost in transmission or distribution from where it was generated to where it was consumed. The full breakdown of electricity demand is shown below.

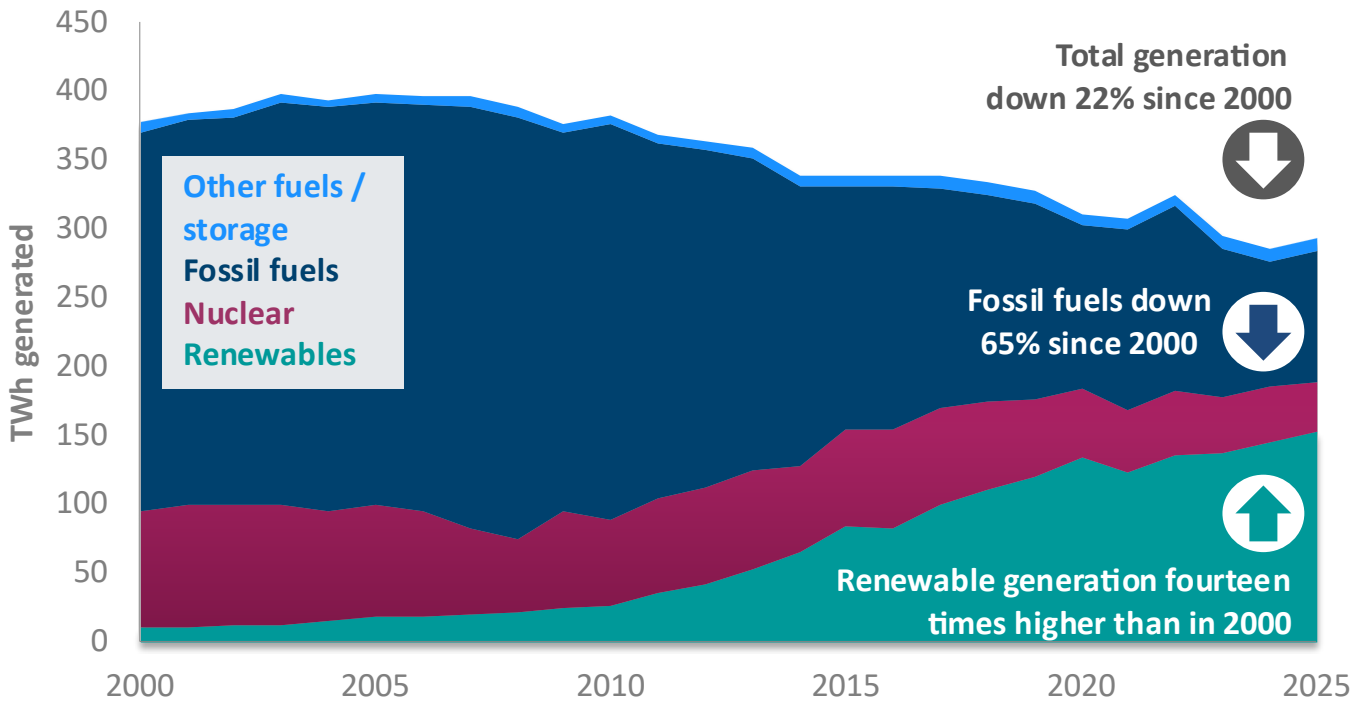
Chart 5.2 Share of total electricity demand split by sector, 2025 (DUKES Table 5.2)



Domestic users accounted for the largest share of total electricity demand (29.8 per cent), a similar share to 2024. Industrial consumption made up 23.7 per cent, which is 0.8 percentage points lower than 2024's share (24.5 per cent), while commercial consumption accounted for 21.0 per cent, 0.1 percentage points higher than in 2024.

Electricity generation increased by 2.6 per cent, as increased demand and high electricity exports increased the need for UK generation. Electricity generation measures what is generated while electricity supply measures what was supplied to consumers, excluding the electricity used in the process of generation or consumed on site by the generator. Total electricity supplied plus imports matches with demand as electricity is supplied until demand is met. Demand for electricity is usually met by UK generation and supplemented with imports from Europe when price differentials are favourable. In 2025 imports were similar to 2024 but exports increased to the second highest value on the published data series, increasing the need for UK-based generation.

Chart 5.3 Electricity generated by fuel, 2000 to 2025 (DUKES Table 5.6)



In line with increased UK demand, electricity generation rose to 293.6 TWh in 2025, up 2.6 per cent compared to 2024. Major Power Producers (MPPs) generated 232.8 TWh, up 1.5 per cent compared to 2024, while generation from autogenerators and other generators had a larger percentage increase, up 7.2 per cent to 60.7 TWh. The share of generation from MPPs decreased by 0.9 percentage points to 79.3 per cent.

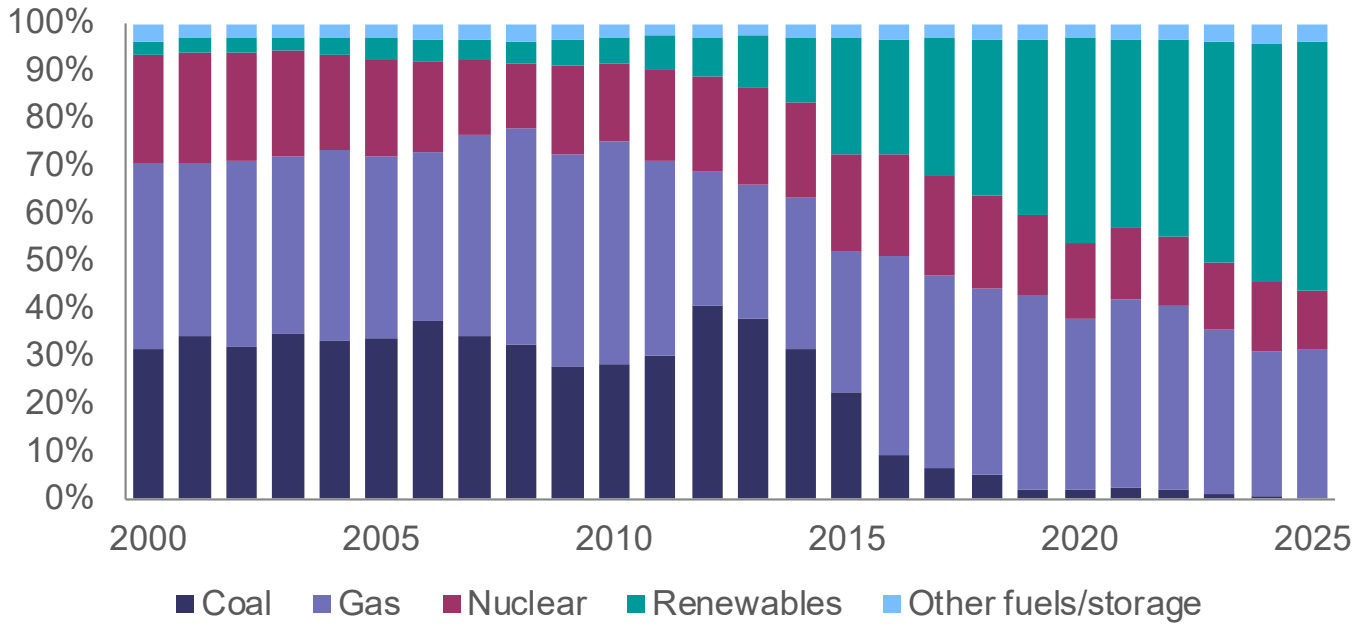
Renewable generation increased by 5.9 per cent from 2024, reaching a new record high of 153.0 TWh, driven by record high generation from wind, solar and bioenergy. Wind generation increased by 3.4 per cent on 2024 levels, to 86.4 TWh. This was driven by higher capacity as average wind speeds were lower than in 2024. Generation from bioenergy rose by 2.2 per cent to 41.0 TWh, as key bioenergy sites were utilised more heavily than in 2024. There was a particularly large percentage increase in solar generation, up by 34.2 per cent to 20.1 TWh, the highest value on the published data series and more than twice the 2015 value. This came as solar capacity increased substantially and the UK also experienced unusually high average daily sun hours. Hydro was the only renewable technology with decreased generation, down by 6.0 per cent to 5.4 TWh.

Fossil fuel generation increased by 4.1 per cent in 2025 to 94.9 TWh though remained at a historically low level, marking the first full year with no generation from coal. Similar levels of fossil fuelled generation were last seen in the mid-1950s when electricity demand was a third of today's requirement and over 95 per cent fuelled by coal and oil-fired generation**.** In 2025**,** almost all fossil fuel generation came from gas, which increased 6.6 per cent to 93.2 TWh. Coal generation ceased in 2024 with the closure of the UK's last coal-fired power plant, Ratcliffe-on-Soar in September 2024, meaning that 2025 was the first year on the published data series with no generation from coal. Oil generation fell by 2.5 per cent to 1.7 TWh.

Nuclear generation fell by 12 per cent in 2025, down to 35.9 TWh, the lowest level since the 1980s. This was due to outages at the remaining nuclear power stations which included outages for refuelling as well as planned and unplanned maintenance.

As well as absolute generation, it is also useful to consider the overall shares of generation, which are less affected by changes in demand. This allows trends in different fuels to be examined, including the share of electricity generated from low carbon sources.

Chart 5.4 Shares of electricity generation by fuel, 2010 to 2025 (DUKES Table 5.6)



Renewable sources accounted for 52.1 per cent of generation in 2025, exceeding a share of 50 per cent for the second time in the published data series. The share of generation from renewables increased by 1.6 percentage points compared to 2024 levels. While most renewable technologies had a similar share as in 2024, the share for solar increased by 1.6 percentage points to 6.9 per cent of total generation, driving the

increase in renewable share. Wind generation continued to account for more than a quarter of total generation with a 29.5 per cent share in 2025.

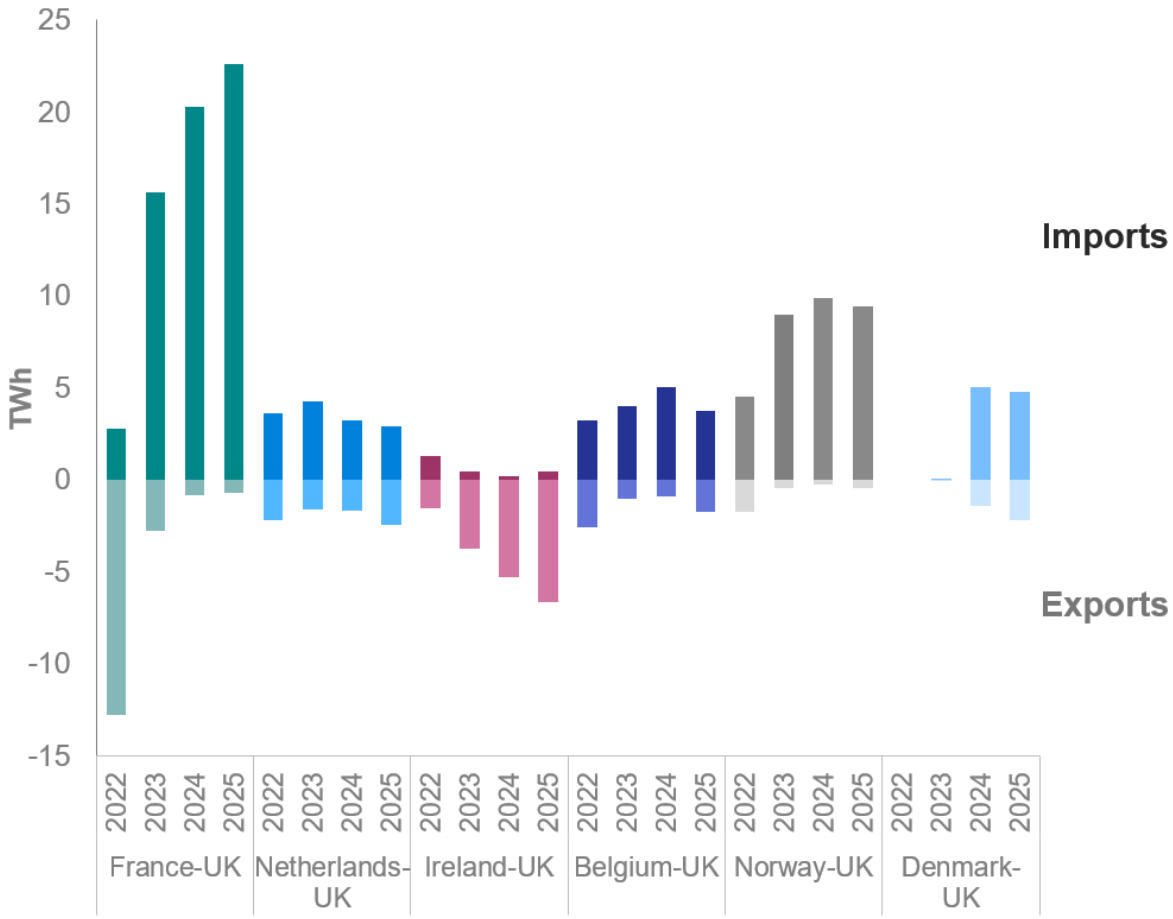
The share of generation from fossil fuels increased 0.4 percentage points to 32.3 per cent, just above 2024's record low. Despite the increase, fossil fuels represented less than a third of total generation for the second year in a row. Almost all of this was gas generation which had a 31.8 per cent share of generation.

Nuclear generation accounted for 12.2 per cent of generation in 2025, down 2.0 percentage points from 2024. This came as outages restricted generation at the UK's remaining nuclear plants. The share of generation coming from low carbon sources (nuclear plus renewables) fell slightly to 64.3 per cent in 2025, 0.4 percentage points lower than the record high share seen in 2024.

The total fuel used for electricity generation decreased by 1.0 per cent in 2025 to 46.9 million tonnes of oil equivalent (Mtoe). This was despite a 2.6 per cent increase in UK generation over the same time period because of the growth in non-thermal renewables which do not incur conversion losses[1]. Fuel used for electricity has fallen 25 per cent since 2015. Trends in fuel used broadly mirror those in electricity generation, with a decrease in fossil fuel use, and increases in fuel used for bioenergy and assumed fuel used by wind and solar generators. Gas continues to dominate the UK generation mix, with 16.5 Mtoe used in 2025, with coal use ceasing completely in 2025.

[1] For wind, hydro and solar, in line with international reporting standards, primary production of energy is defined as extraction of energy products in a useable form from natural sources, such as mined coal or electricity generated by a wind turbine (and not, e.g. the wind that blows across the UK). Under the IEA's conventions, for hydro, wind and tidal the primary output is simply the gross electricity generated. Solar PV is treated similarly as a measure of simple gross output rather than the solar radiation input into the panels. For nuclear, the heat content of the steam leaving the reactor for the turbine is used as the primary energy form. Therefore, for wind, tidal, hydro and solar, the fuel used is assumed the same as the electricity generated, unlike thermal generation where conversion losses are incurred. Therefore, for example, if one unit of electricity produced from coal is switched to wind, the fuel used will show a fall from around three units (as coal's thermal efficiency is around one-third) to one unit.

Chart 5.5 Electricity imports and exports by country, 2022 to 2025 (DUKES Table 5.13)



Net imports fell by 11 per cent from 2024 to 29.7 TWh, the second highest value within the published time series. This came as total imports increased to the highest value on the published data series, up 0.4 per cent to 43.9 TWh, but this was offset by a 38 per cent increase in exports to 14.2 TWh. 2025 saw second greatest level of electricity exports, only beaten by 2022 when exports were unusually high due to widespread outages in the French nuclear fleet.

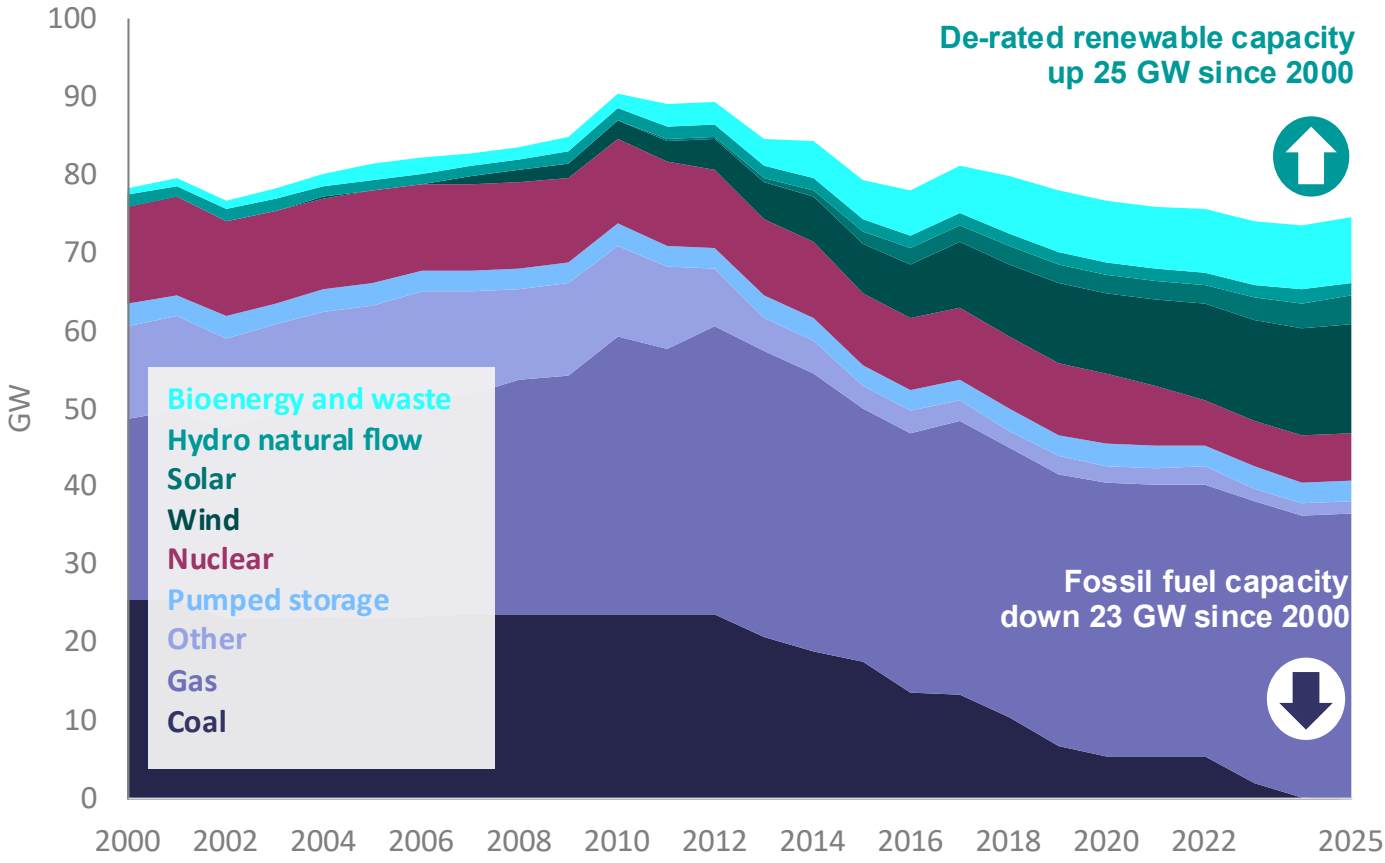
The UK was a net importer from all interconnected countries except the Republic of Ireland, which is connected to the UK through land connections from Northern Ireland and a subsea interconnector cable from Wales. The France-UK interconnectors accounted for 21.9 TWh of net imports, followed by Norway-UK with net imports of 9.0 TWh. The Denmark-UK interconnector completed its second full year of operation with net imports of 2.5 TWh, while Belgium-UK had net imports of 2.0. Imports and net imports from France were at record levels in 2025, with imports from Norway remaining high but slightly below 2024.

More electricity was exported to the Republic of Ireland than was imported from there to the UK, leading to net exports from the UK. The Ireland-Wales interconnector saw net exports of 4.5 TWh, and the Northern Ireland-Ireland interconnector contributed 1.6 TWh of net exports to the total.

UK electricity is generated from a range of technologies and fuels are used at different times in response to demand and changes in weather. Monitoring capacity along with load factors (the proportion of potential generation that is realised in the year) can highlight how the capacity is being used to monitor the security of electricity supply.

In this section, wind, small scale hydro and solar PV capacity is de-rated to account for intermittency, to enable direct comparison with conventional fuels which are less dependent on the weather. Total installed capacity figures (not de-rated) are available in DUKES Table 5.12.

Chart 5.6 De-rated capacity of UK electricity generation assets by fuel, 2000 to 2025 (DUKES Table 5.7)



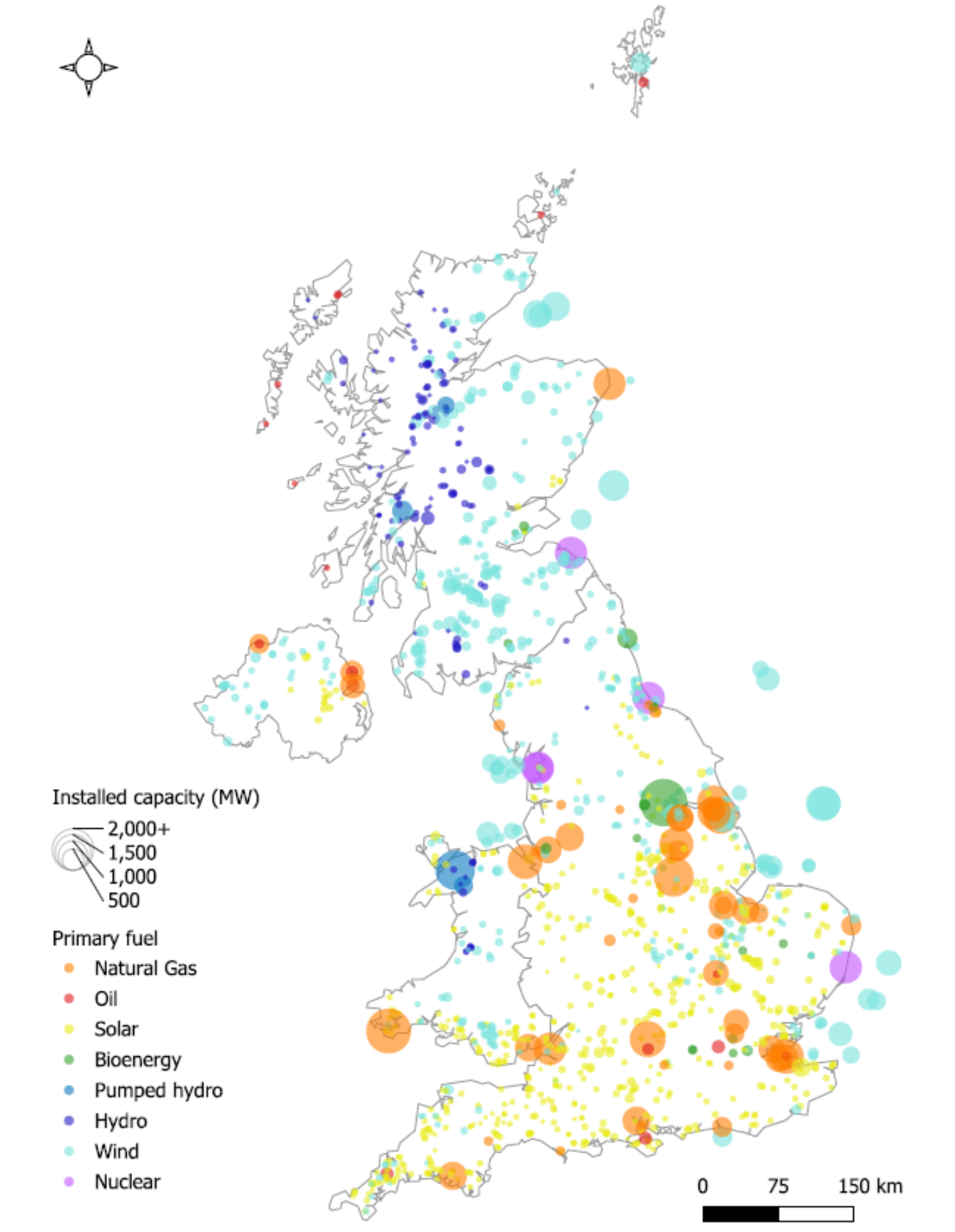
Total de-rated generation capacity increased to 74.5 GW in 2025, up 1.3 per cent compared to 2024. This is the first year that de-rated capacity has increased since 2017. There were no substantial changes in fossil fuel capacity or nuclear capacity, so the increases were predominantly in renewable technologies.

De-rated renewable capacity increased 2.8 per cent to 27.7 GW, driven by increases in offshore wind and solar capacity. Wind capacity increased by 1.5 per cent to 14.1 GW with a 1.5 per cent increase for onshore wind and a 3.2 per cent increase for offshore wind, including Moray West and NNG sites. De-rated solar capacity also saw an increase of 11.6 per cent to 3.7 GW.

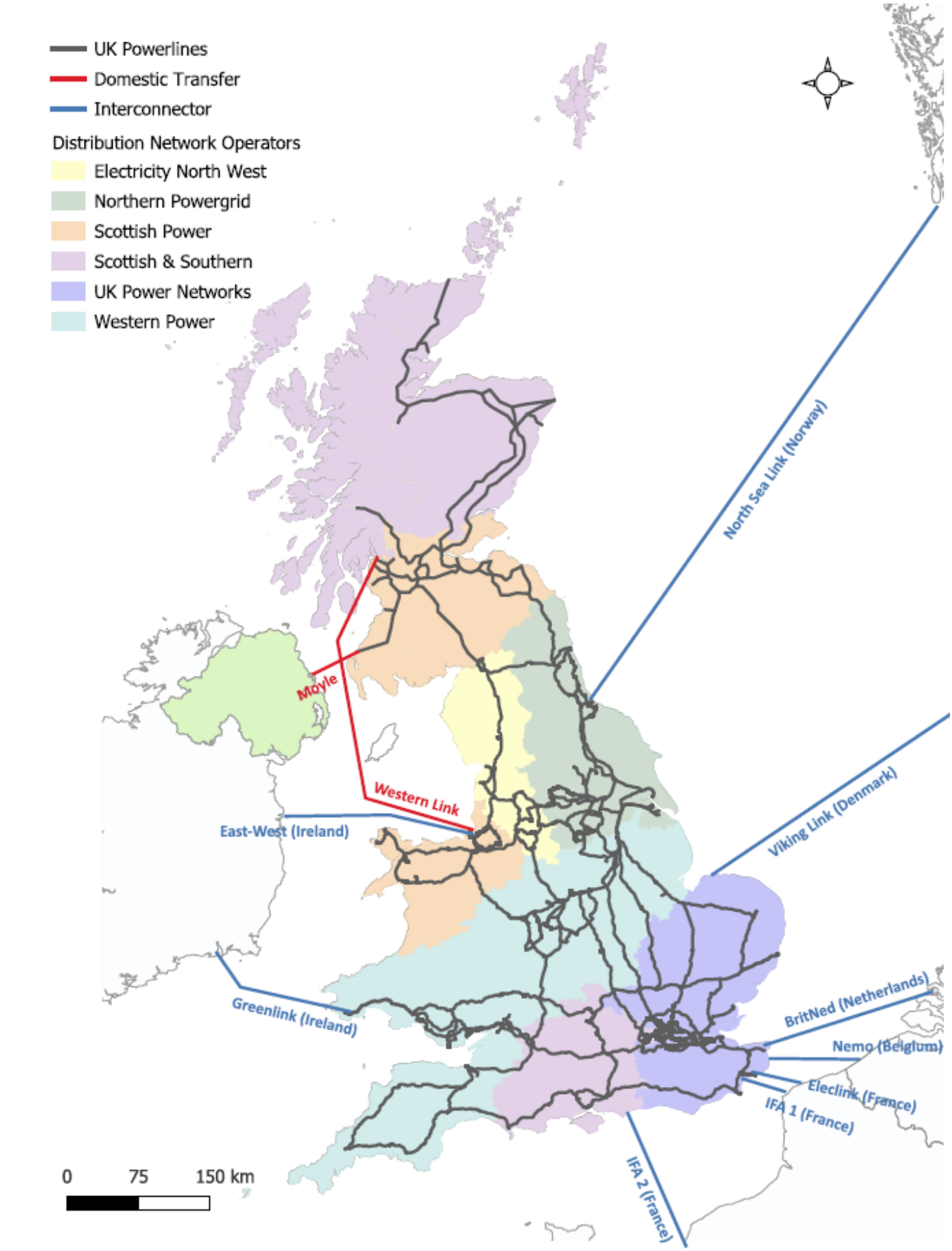
Peak demand in winter increased to 51.5 GW, up by 8.8 per cent compared to the equivalent figure in 2024. As Major Power Producer (MPP) capacity was similar across 2024 and 2025, the peak represented 83 per cent of MPP capacity, 6 percentage points higher than 2024.

Major Power Producers' power plants were more intensively deployed than they were last year, with a load factor of 36.2 per cent (DUKES Table 5.10)**.** Load factors indicate the proportion of the time the plant is producing electricity and increased by 1.4 percentage points compared to 2024, in line with higher generation by Major Power Producers. Load factors vary by technology, with nuclear stations the highest at 64.0 per cent and the lowest being pumped storage hydro at 7.4 per cent. Full load factors for renewable generation are given in DUKES Table 6.3.

Map of Major Power Producers in the UK (operational May 2026)



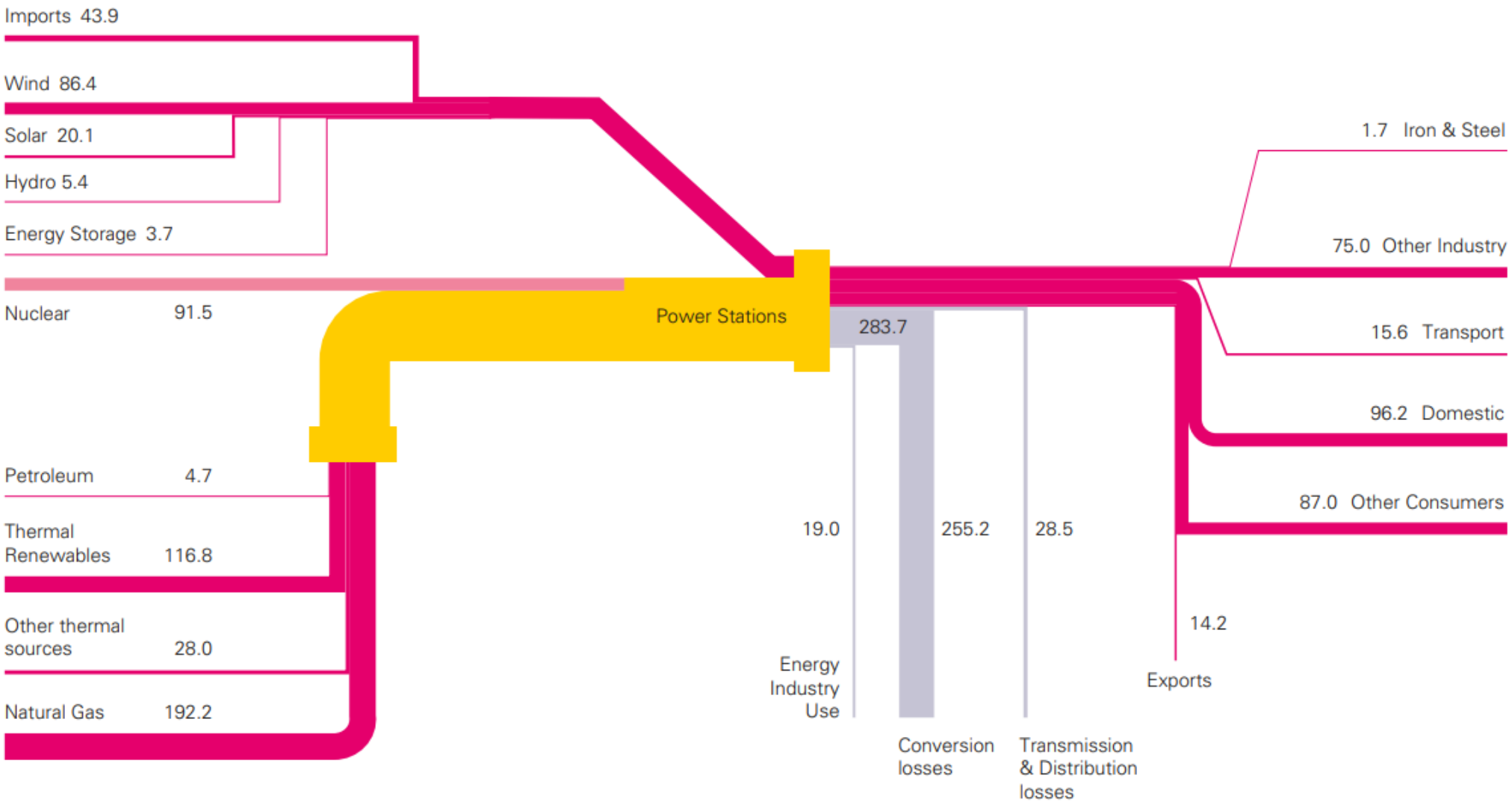
UK Distribution Network Operating Areas and GB Power Lines Map



Trade connections are representations of the route, not the actual locations of cables.

Data sources: National Grid Transmission Network (www.nationalgrid.com/uk); DESNZ Distribution Network Operator Data; DESNZ Country Boundary Data.

Electricity Flow Chart 2025 (TWh)



Notes on flow chart

This flow chart is based on the data in Tables 5.1 (for imports, exports, use, losses and consumption) and 5.6 (fuel used).
1. Hydro includes generation from pumped storage while electricity used in pumping is included under Energy Industry Use.
2. Conversion, Transmission and Distribution Losses are calculated as fuel used (Table 5.6) minus generation (Table 5.6) plus losses (Table 5.1).

Chapter 6: Renewable sources of energy

Will Spry **07825 194608** **renewablesstatistics@energysecurity.gov.uk**

Key headlines

Renewable generation in 2025 reached a new record of 153.0 TWh. Generation was up by 5.9 per cent on 2024, driven by new capacity and more favourable weather conditions for solar PV. This record output was driven by record levels of generation from offshore wind, solar PV and bioenergy.

The share of renewable electricity generation in 2025 was 52.1 per cent, a new record and up by 1.6 percentage points on 2024, which was the first year that renewables had accounted for over half of total generation.

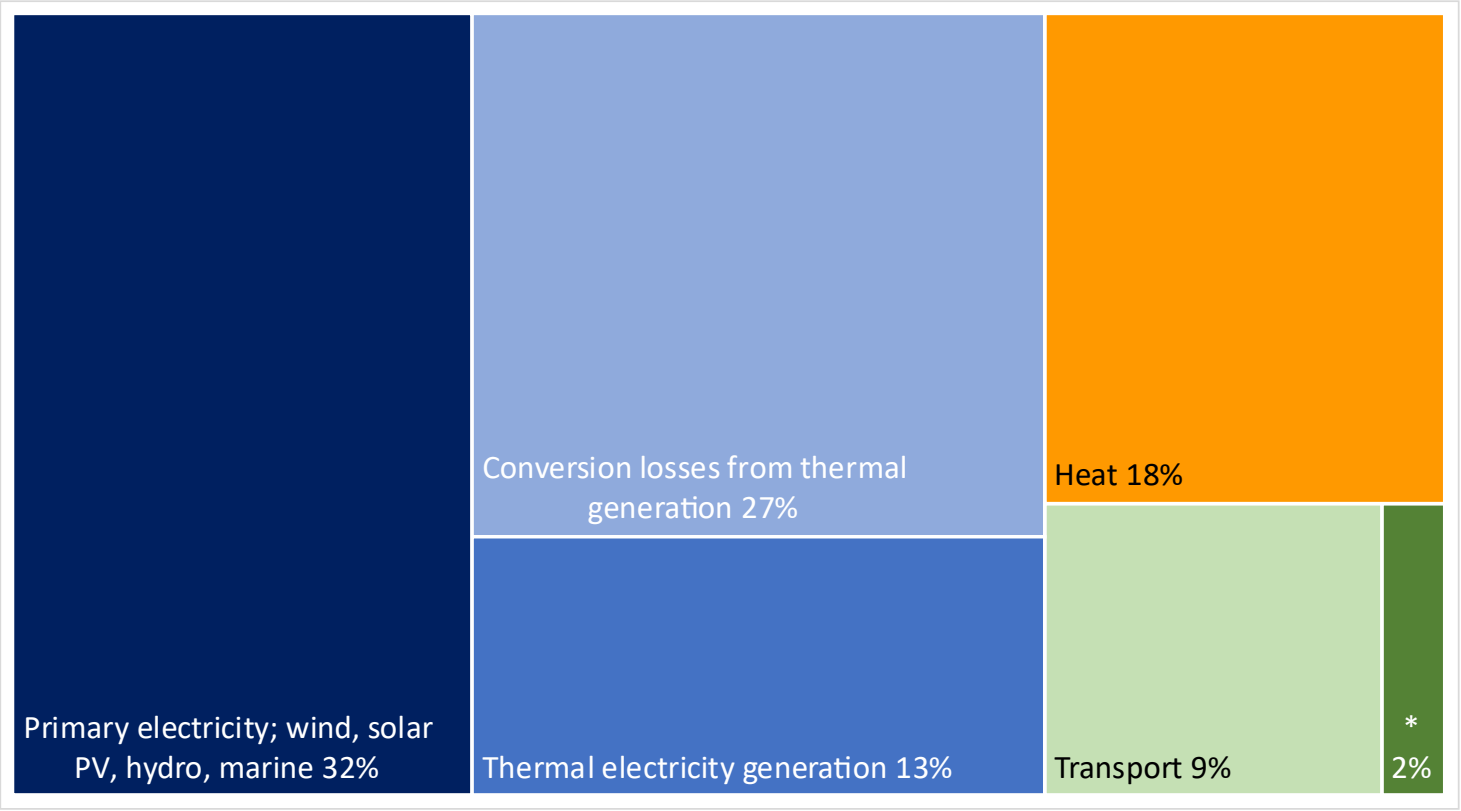
Renewable capacity increased by 5.3 per cent (3.3 GW). This included new capacity at Dogger Bank offshore wind farm and Cleve Hill, the largest solar farm in the UK.

Renewable heat increased by 1.5 per cent with higher heat from heat pumps and wood combustion being offset slightly by decreases in landfill gas and renewable waste. Although heating degree days in 2025 were similar to 2024, higher levels of the stock of heat pumps and domestic wood appliances drove the increase.

As a share of gross final consumption, overall renewables accounted for 16.8 per cent, an increase of 0.4 percentage points on 2024, and the result of an increase in renewables consumption coupled with a fall in total consumption. The largest contribution was from renewable electricity generation.

Renewable fuels include primary energy such as wind, solar, and hydro, and thermal fuels (solid biomass, biogases, and liquids). Thermal fuels are combusted to produce energy and in the case of electricity generation, some is lost during this conversion process. Around 72 per cent of renewable fuels are used for electricity generation, a third of which is lost in the conversion process. Heat accounts for 18 per cent with transport and grid injected biogas accounting for 8.8 per cent and 1.6 per cent. Chart 6.1 below shows the demand for all renewable fuels including losses from the conversion process.

Chart 6.1 Renewable fuel[1] demand, 2025 (DUKES Table 6.4)



* Grid biogas

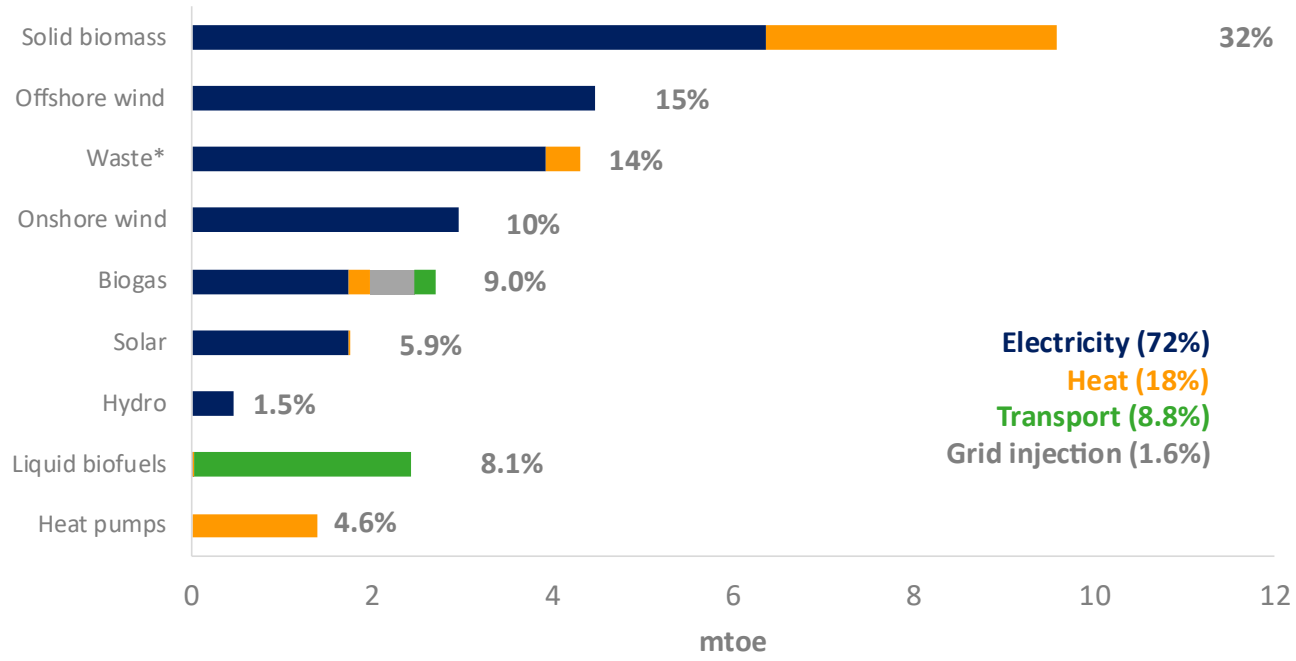
The chart replicates data included in Table 6.4; where this differs to Table 6.2 is the latter includes electricity generation only, i.e. primary generation and thermal generation after losses. The amount of conversion losses depends on the efficiencies of fuels which for renewables varies between around 35 to 40 per cent, with the remainder being lost in conversion. This compares with an efficiency of around 48 per cent for natural gas and around 34 per cent for coal and oil generation.

Some renewable fuels are more versatile than others such as biogases; historically demand had been dominated by electricity generation, but it is now increasingly used for heat generation, injection into the National Grid, and most recently small amounts are consumed within the transport sector. Conversely, primary energy sources such as wind and hydro are consumed solely by the electricity sector and although solar is primarily used in generation, small amounts of solar thermal are used for space and water heating.

Chart 6.2 shows how the individual fuels and technologies are consumed across the end uses (note: thermal fuels include losses incurred during conversion).

[1] Including non-biodegradable waste

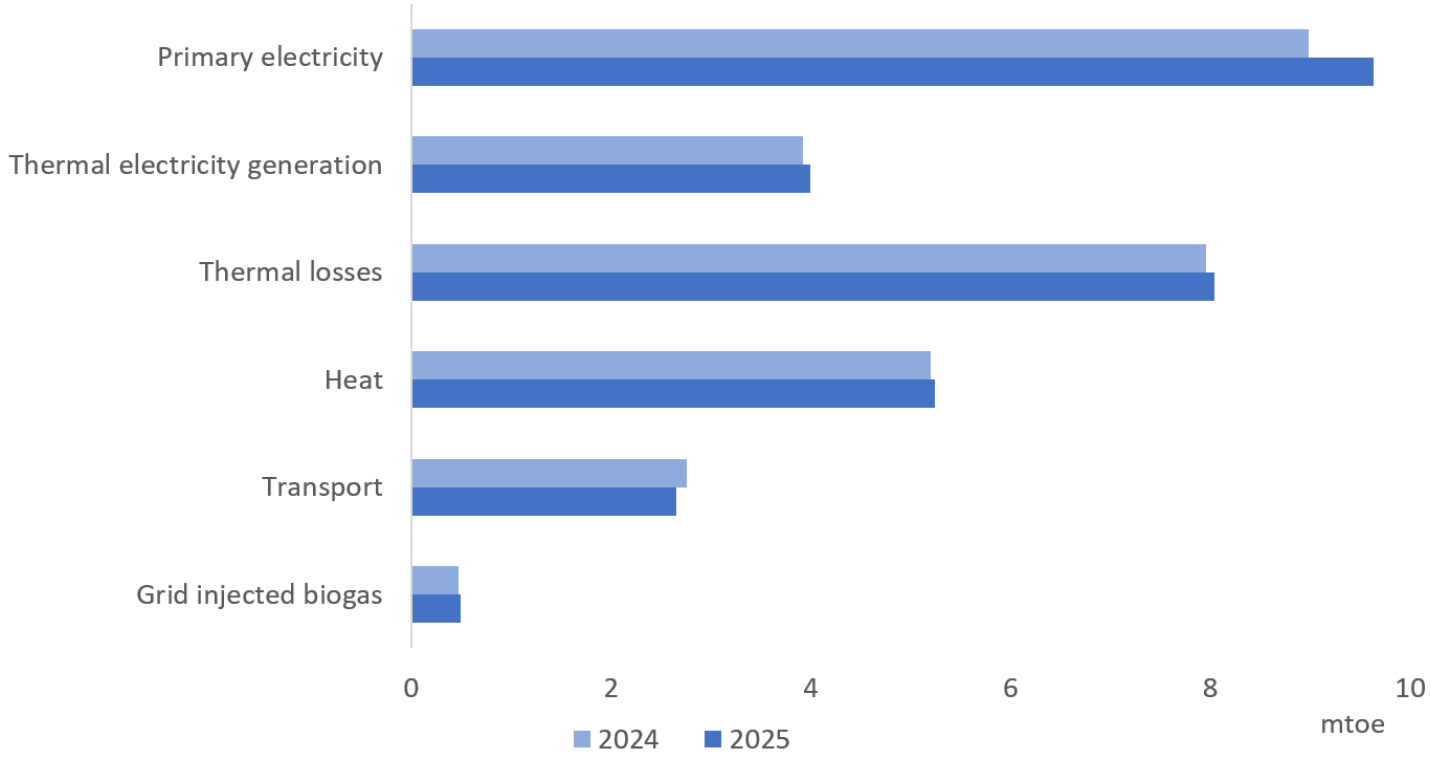
Chart 6.2 Use of renewable fuels, 2025 (DUKES Table 6.4)



Between 2024 and 2025, overall renewable fuel demand increased by 2.5 per cent (including non-biodegradable waste). The increase was driven by greater use of renewables for electricity generation. This included a large rise in use of solar for electricity generation. This was a result of new capacity and average sun hours rising sharply compared to 2024. Use of plant biomass for electricity generation also increased as generation continues to recover following reduced output at two major sites in 2022 and 2023.

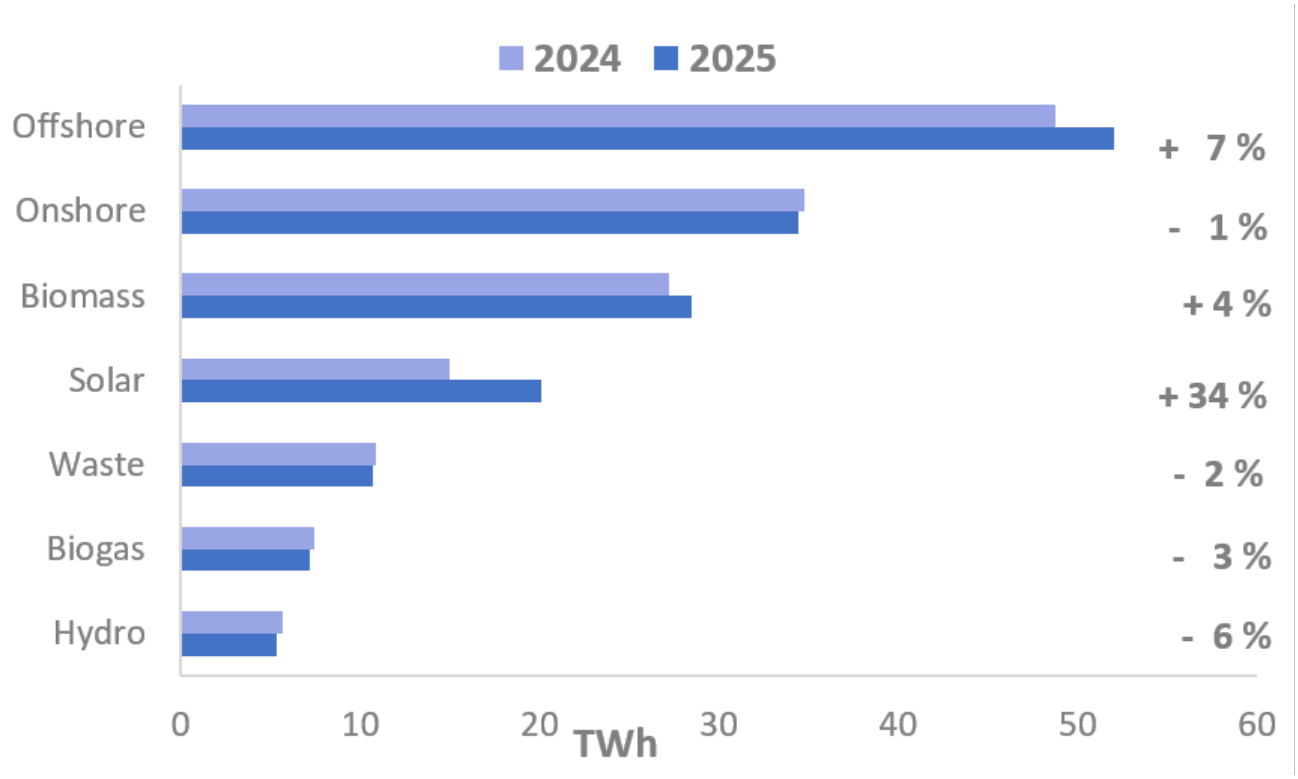
There was a smaller increase for renewable heat generation which was the result of increased use of domestic wood and heat pumps, in line with long term trends. This was partly offset by a fall in renewable fuel used in transport.

Chart 6.3 Change in renewable fuel demand 2024 to 2025 (DUKES Table 6.4)



At 153.0 TWh, overall renewable generation exceeded the current record, set in 2024, by 5.9 per cent. The increase was driven by record generation for solar PV, plant biomass and offshore wind.

Chart 6.4 Electricity generation by fuel, 2024-2025 (DUKES Table 6.2)



Offshore wind generation in 2025 was up by 6.6 per cent on 2024 to a new record of 52.0 TWh, despite reduced wind speed. This represents a large increase in recent years; it is roughly triple the volume seen ten years ago in 2015. The previous record was set in 2023. Average wind speeds were slightly higher in 2024, but offshore wind generation was hampered that year by planned maintenance, unplanned outages and curtailment (including a fault with a subsea export cable). Over the course of the year, capacity increased by 3.2 per cent, this has included additional capacity at Dogger Bank (England) and NNG (Scotland). Dogger Bank is due to expand further in 2026.

Conversely, generation from **onshore wind dipped by 1.1 per cent** to 34.4 TWh. This was due to lower average wind speeds in 2025. Despite this, generation was not far behind the record of 35.1 TWh set in 2022.

Solar PV generation reached a record 20.1 TWh in 2025, 34 per cent higher than the previous year. Higher generation was driven by both record sunshine levels and continued expansion of solar capacity. Average sunshine hours were the highest since our records began in 2001, following the lowest levels on record in 2024. Capacity growth was also strong, with a record number of solar installations completed during the year, including the 373 MW Cleve Hill development, the UK's largest solar farm.

Hydro generation decreased by 6.0 per cent in 2025 to 5.4 TWh. This is in line with a drop in average rainfall of around 6 per cent. In addition, there was very little new capacity, hydro is an established technology and there has been little new capacity in recent years.

Bioenergy was up by 2.2 per cent on last year. The largest component of bioenergy is plant biomass which was up by 4.8 per cent to a new record of 27.8 TWh. Generation has increased from the relatively low levels seen in 2022 and 2023, which were driven by reduced output at two major biomass plants. While generation from plant biomass increased, this was partly offset by lower generation from landfill gas, sewage gas and anaerobic digestion. The decline in landfill gas generation reflects the continuing reduction in gas yields from landfill sites.

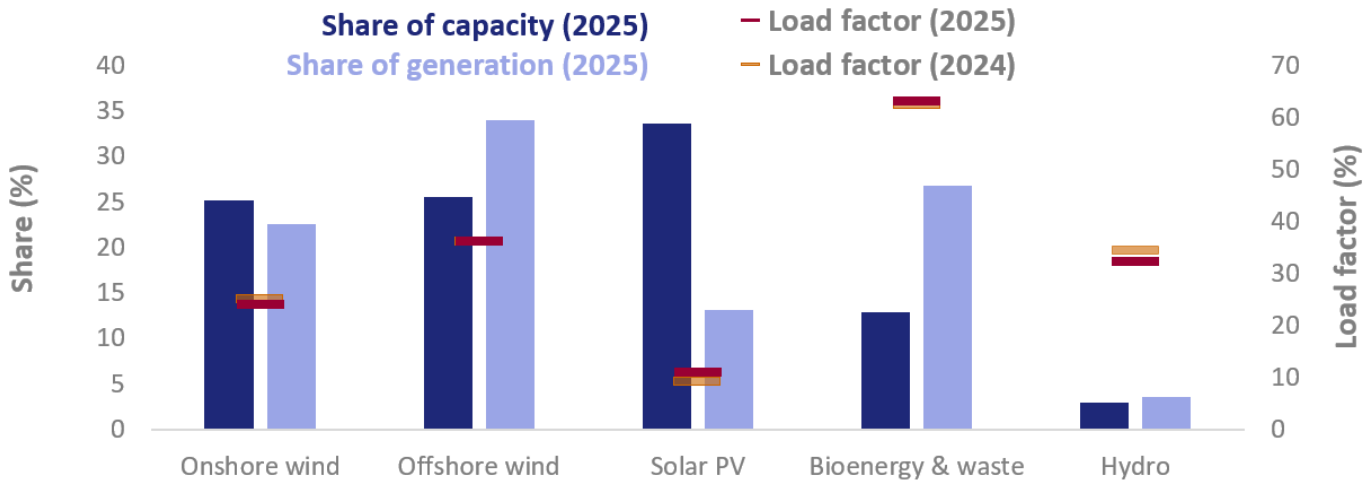
Offshore wind continues to be the leading renewable technology in 2025 for generation, accounting for 60 per cent of all wind generation and 34 per cent of all renewable generation in 2025. Offshore first outstripped onshore generation in 2019, even though offshore wind capacity overtook onshore wind capacity for the first time in 2025. The discrepancy between capacity and generation can be explained by a

combination of stronger and more consistent coastal wind speeds, and offshore turbines tend to be newer and larger than onshore, often yielding a higher load factor.

Plant biomass accounts for around 18 per cent of renewable generation, around the same level as 2024. Despite a large increase in generation in 2025, solar PV accounts for around 13 per cent of renewable generation.

Technologies with a high share of capacity do not necessarily have the highest share of generation because **generation is dependent on the load factor**. Load factors are the ratio of how much electricity was generated as a proportion of the total generating capacity**.** Within renewables, load factors can be heavily influenced by weather conditions: such as wind speeds, sun hours and, to a lesser extent, rainfall. Chart 6.5 compares the key technologies' share of capacity and generation for 2025.

Chart 6.5 Relative share of capacity and generation and load factors 2025 (DUKES Table 6.3)



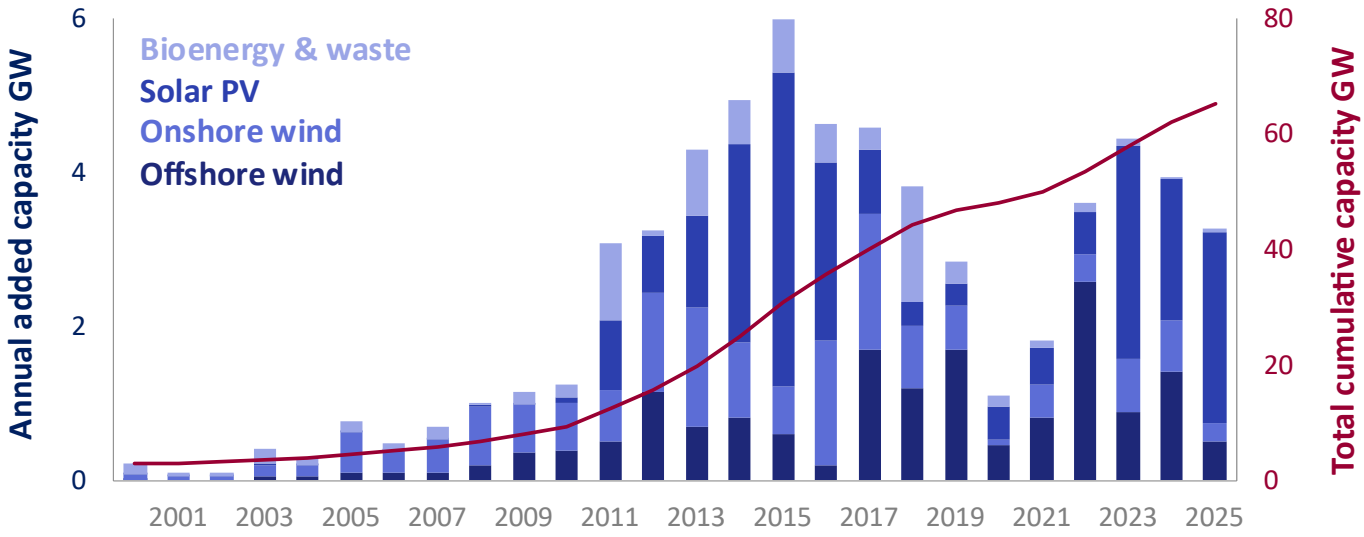
Solar tends to have a lower load factor than other technologies, as shown in Chart 6.5 where a large volume of solar capacity contributes a relatively small amount of generation. In 2025, the load factor for solar PV increased from 9.2 per cent to 11.1 per cent. This was a result of the longer average sun hours, 2025 being the sunniest year in our time series (which started in 2001). However, the load factor for solar remained lower than other renewable technologies.

The load factor for bioenergy was up slightly from 62 per cent in 2024 to 63 per cent.

The load factor for onshore wind was down slightly in 2025 due to lower average wind speeds from 25.0 per cent to 24.1 per cent. The load factor for offshore wind was at broadly the same level, at 36.4 per cent.

Chart 6.6 shows the historic growth in capacity; new capacity has recovered after the stark slowdown during 2020 and 2021 (some projects may have been delayed in 2020 due to COVID-19 restrictions). 3.3 GW of capacity was added during 2025, an increase of 5.3 per cent since 2024. Three quarters of the new capacity was solar PV. New capacity peaked in 2015 when 6.0 GW was installed, 4.1 GW of which was in solar PV.

Chart 6.6 Annual added capacity 2000 to 2025 (DUKES Table 6.2)



Prior to the launch of the Feed-in Tariff (FiT) in 2010, solar PV represented just 1.0 per cent of renewable generation capacity, but by the end of 2025, its share had increased to 33.6 per cent, with the majority (58 per cent) being installed between 2011 and 2017. Following the closure of The Renewable Obligation to new entrants in 2016, growth began to slow in 2017 further exacerbated by the closure of FiT in April 2019. Growth has improved in the last three years with 2.5 GW of capacity being added in 2025, the third highest volume on record and the highest since 2015. The capacity added in 2025 was comprised of 269,000 new installations, the highest on record for any calendar year[2]. Most of these were small-scale installations on domestic and other rooftops. The new capacity also included Cleve Hill (373 MW) the largest solar farm in the UK and 20 other sites each with a capacity over 25 MW.

New capacity in onshore wind peaked in 2017 when 1.8 GW was added. Growth then slowed to a low of just 76 MW added in 2020, before picking up again to a recent high of 0.7 GW in 2024 but just 0.2 GW of new capacity in 2025. Offshore wind has seen much higher levels of new capacity in recent years with 69 per cent of total capacity being installed over the last ten years. This has included several large sites supported by Contracts for Difference (CfD) such as Hornsea 1 and 2, Triton Knoll, Moray East and Seagreen. In 2025, 0.5 GW of offshore wind capacity was added, mainly from additional capacity at Dogger Bank which is due to expand further in 2026. The amount added is below the record 2.6 GW installed during 2022. Wind now represents around 51 per cent of installed renewable capacity (see wind map at the end of this chapter showing location by capacity).

[2] For more information see the solar deployment tables at: https://www.gov.uk/government/statistics/energy-trends-section-6-renewables

Chart 6.7 Trends in generation by technology 2000 to 2025 (DUKES Table 6.2)

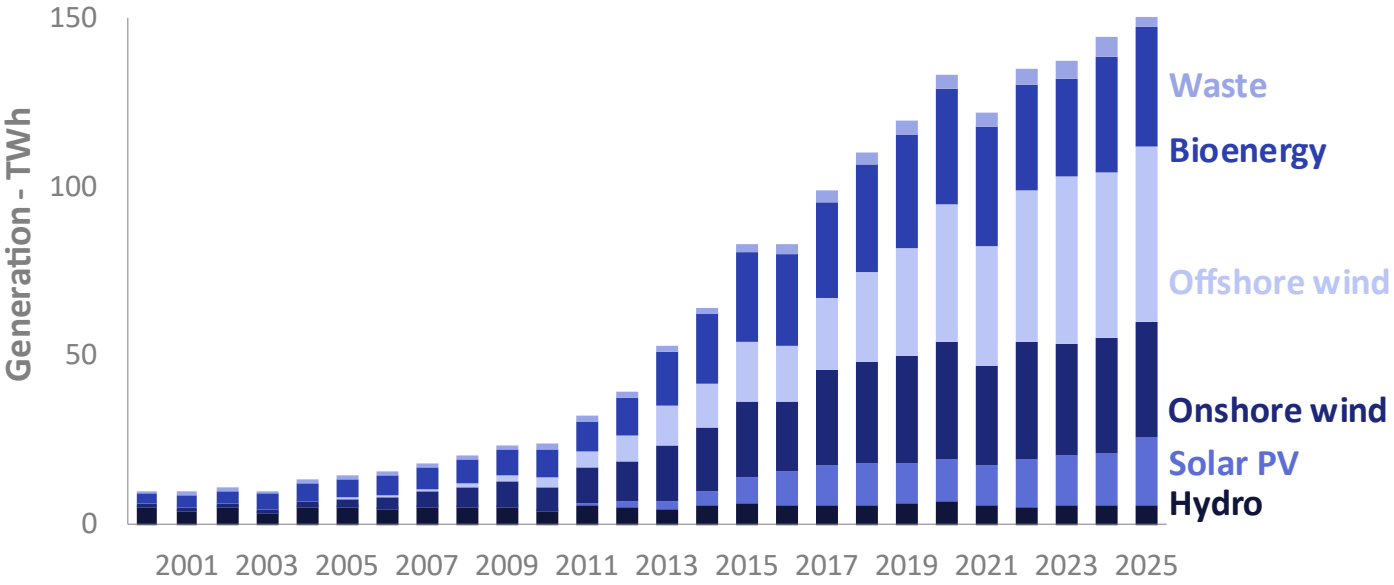
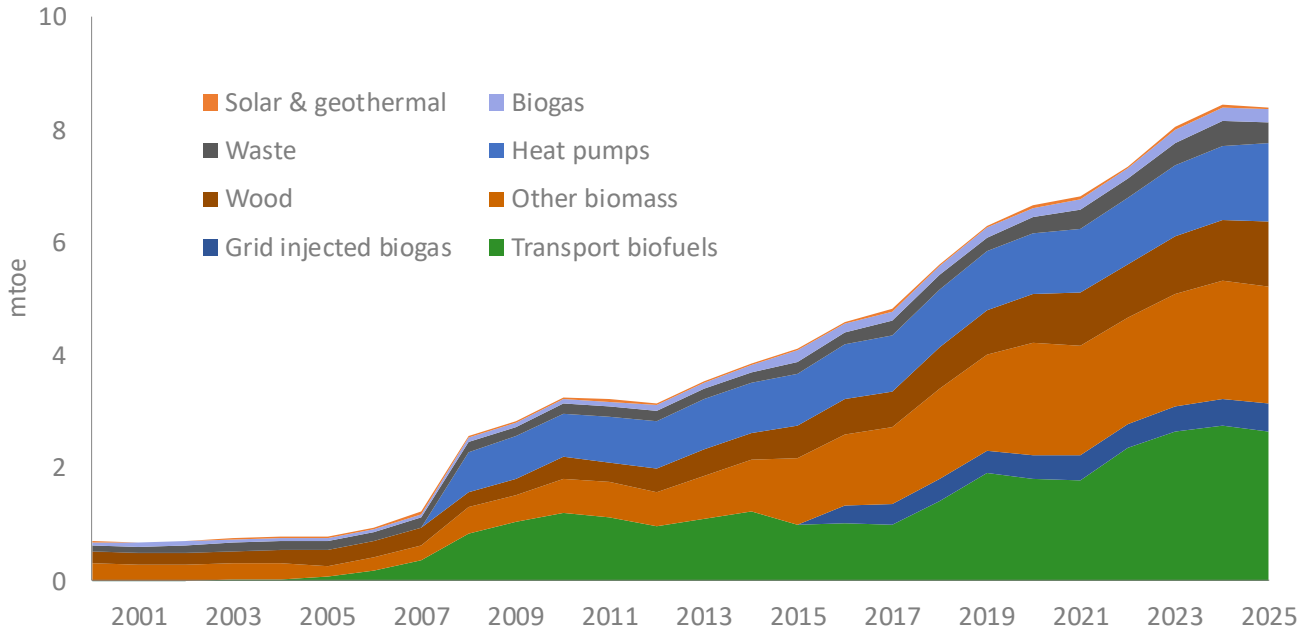


Chart 6.7 shows the overall upward trend in renewable generation and evolving fuel mix since 2000. The underlying trend is driven by increasing cumulative capacity, resulting in a record year for generation in 2025. Year-on-year fluctuations in generation due to weather effects can be observed in the chart, such as the drop in generation between 2020 (an unusually favourable year for wind speeds and rainfall) and 2021.

Hydro generation has been the most stable over the timeframe reflecting the maturity of the technology in the UK. With limited new capacity, generation tends to fluctuate in line with rainfall. In contrast, solar PV generation has increased rapidly since 2011 reflecting the surge in new capacity. As a result, solar PV's share of renewable generation increased from just 0.1 per cent in 2010 to 10.8 per cent in 2023, this slipped to 10.4 in 2024 when sun hours were very low but surged again in 2025 to 13.2 per cent due to new capacity and better weather conditions. Bioenergy increased rapidly between 2012 and 2016, with generation doubling in that period. This was a result of several large power stations converted from coal to plant biomass (mainly wood pellets). The rate of growth has been slower since then. At 27.8 TWh, plant biomass generation set a record in 2025. Outages dampened generation in 2022 and 2023 but recovered in 2024. Generation from landfill gas peaked at 5.3 TWh in 2011 but has fallen in each year since then as extraction rates have declined at landfill sites. This fall has been offset by increases in generation from anaerobic digestion so that in total, generation from biogases has remained stable since 2015.

Whilst electricity generation represents the largest share (72 per cent) of renewable fuel demand, heat also accounts for a sizable proportion (18 per cent), followed by transport biofuels (8.8 per cent) and biogas injected into the gas grid (1.6 per cent).

Chart 6.8 Other renewable fuel uses[3]; heat, transport, and grid injected biogas (DUKES Table 6.4)



Renewable heat demand[3] is largely met by solid biomass, accounting for 61 per cent of fuel for heat in 2025, with the next largest share being heat pumps (26 per cent). The remainder is largely made up of wastes and biogases (7.4 per cent and 4.4 per cent respectively), with primary sources (such as active solar heating and geothermal) accounting for around 0.7 per cent. Renewable heat demand[3] increased in 2025 by 0.9 per cent; although average heating degree days were similar, an increase in heat pump installations and domestic wood stoves boosted renewable heat[4].

Renewables used in transport are liquid and gaseous biofuels, supplied either as additives or as a replacement ("drop-in") for fossil fuels. Biogasoline and biodiesel dominate the fuel mix, together representing 80 per cent of renewable transport demand (down from 82 per cent in 2024). Since 2018, small but rapidly increasing amounts of new biofuels became available in the UK. In 2025, 9.1 per cent of renewable transport fuels were biogases, compared to less than 1 per cent in 2018, while bio-LPGs (bio propane and bio butane) accounted for 0.6 per cent, though supply is particularly volatile. Bio-jet fuel accounts for 11 per cent of all transport renewables (up from just 3.2 per cent in 2023) but only 2.1 per cent of total aviation demand.

Demand for transport biofuels fell by 3.8 per cent to 2,647 ktoe; although biogasoline grew by 9.0 per cent, biodiesel fell by 17 per cent. This is likely due to the fact that biogasolines are cheaper to procure than biodiesels, as well as price increases in HVO due to trade measures and increased demand.

Indigenous production of bioliquids decreased by 20 per cent in 2025, with two major plants closing down during the year. Not all liquid biofuels are consumed in transport; use in autogeneration and non-mobile road machinery account for around 1.1 per cent of total consumption.

To place renewable energy in context, DUKES Table 6.5 provides a measure for the share of renewables across the various energy flows, as well as estimates for the renewable proportion of **Gross Final**

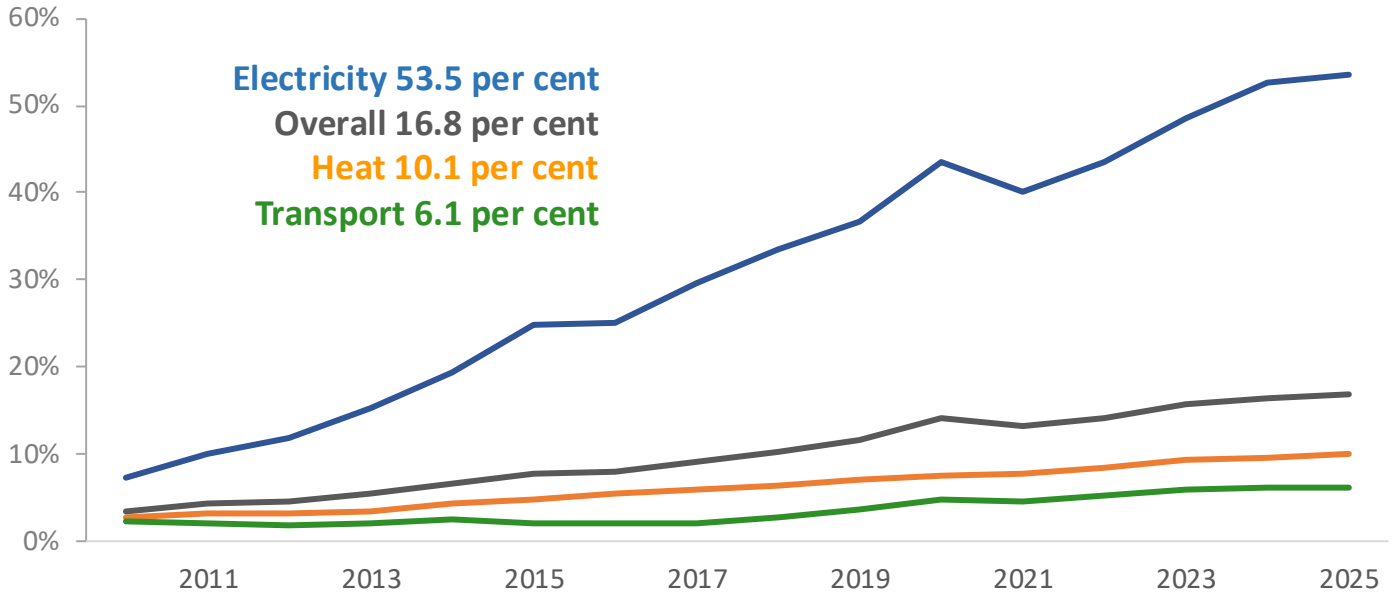
[3] Including non-biodegradable waste

[4] DUKES 2024 included preliminary results of a new domestic wood survey undertaken by The Department for Environment, Food and Rural Affairs (Defra). Since then, Defra has published its final report available via the following link;
Evaluation of the Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020 and Monitoring of domestic burning practices in the UK - AQ1043
These final results have had no discernible impact on the baseline compared to 2024; any variations are down to weather effects and the stock of appliances. On this basis, no longer term revision has been undertaken.

Consumption (i.e. before losses) for electricity and heat. The renewable share of transport fuels is on an actual basis as presented in the final consumption by sector chart (Chart 6.9).

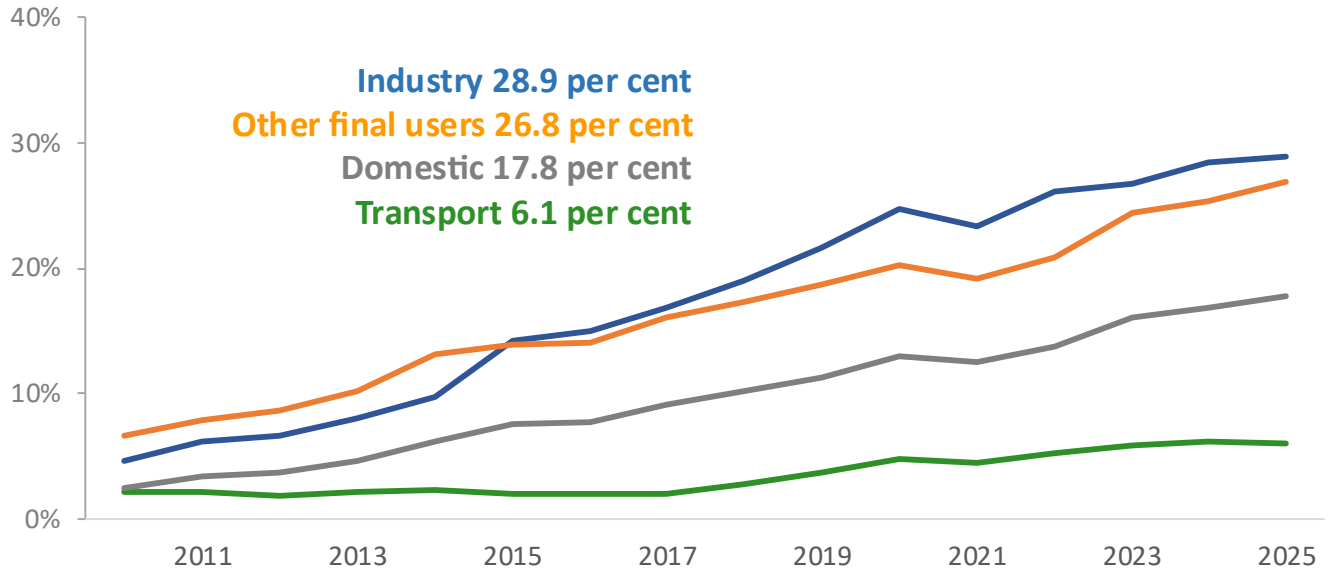
The proportion of electricity from renewables differs to that for generation and supply in that it excludes generation ultimately consumed in transport which is allocated to the transport measure. The underlying trend is however similar in that weather impacts are visible particularly between 2020 and 2021. Weather influences can also be seen between 2015 and 2016; despite this being a period of strong renewable capacity growth, generation was flat for the year with lower wind speeds, sun hours and rainfall. The heat measure is based on renewable fuels allocated to heat in Table 6.4; although some electricity will be consumed for heating purposes, this is allocated to electricity. Although over time, renewable fuels used in transport and heat have increased, both remain modest when compared with renewable electricity.

Chart 6.9 Renewable energy as a proportion of total gross final consumption (DUKES Table 6.5a)



The renewable proportion of fuels consumed by sectors, regardless of end use, varies depending not only on the proportion of thermal fossil fuels and bioenergy, but also on the share of electricity consumption which has seen its renewable proportion dramatically increase over the time period. Chart 6.10 below shows the changing proportion of renewables for each consuming sector.

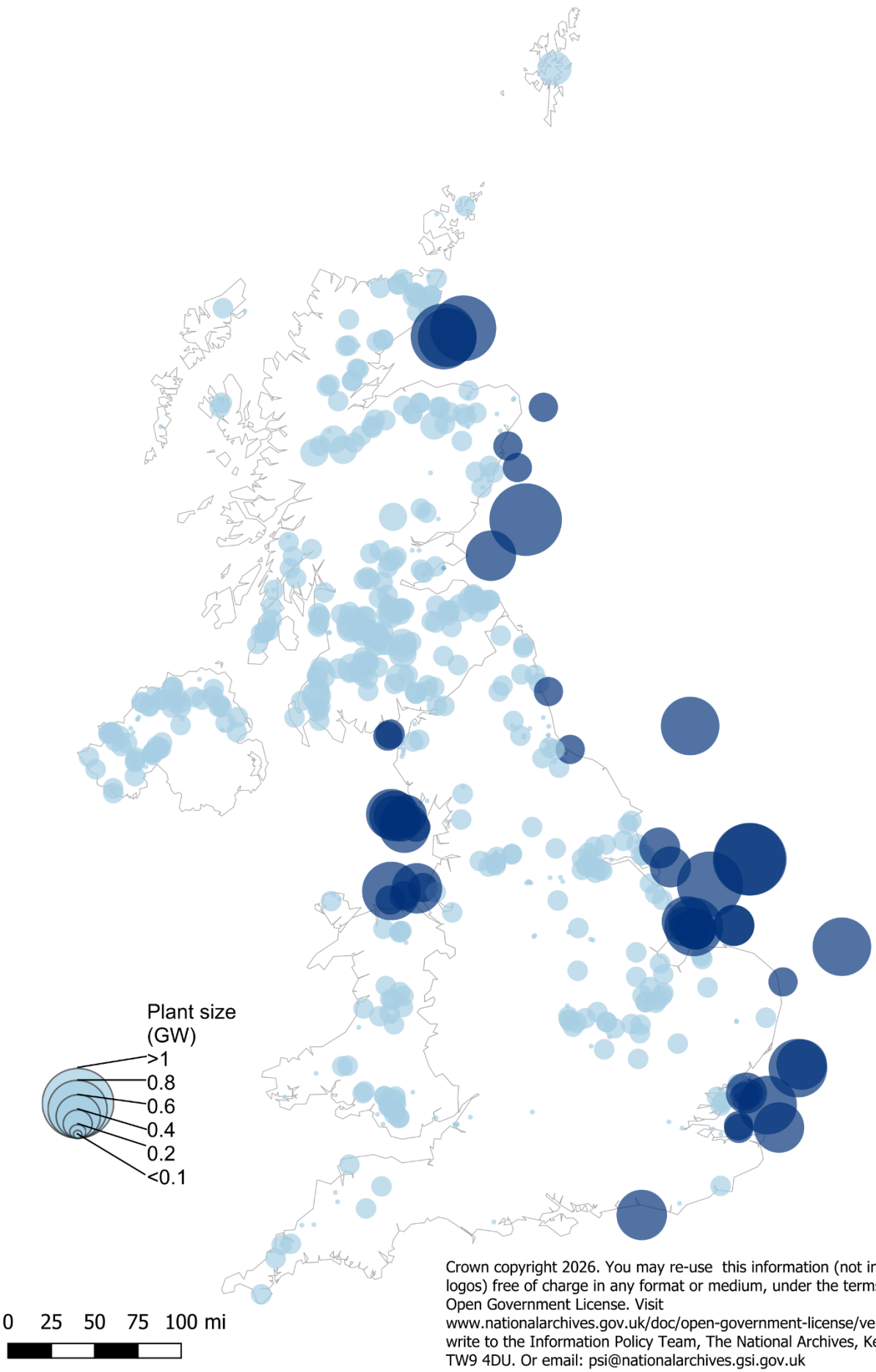
Chart 6.10 Renewables' share of final energy consumption by sector (DUKES Table 6.5b)



All sectors show an increase in their share of renewable consumption, in line with an increase in renewable electricity supply. Prior to 2015, the proportion of renewables consumed by industry aligned with that for other final consumers, though remained slightly lower. This historic trend was driven by the shift from the high-grade heat requirements of heavy industry to lighter, less energy intensive industries. In 2015, industry's share of renewables exceeded other users' share for the first time. Although the fuel switching within sectors over this period is subtle, it has largely been driven by a relatively higher increase in the share of bioenergy and electricity consumption in industry combined with a fall in the share of natural gas, compared to an increase for other sectors. In 2025, industry continued its upward trend of its renewable share; by 0.5 percentage points. Other users showed the largest increase (1.4 percentage points), followed by domestic (0.9 percentage points). The transport sector showed a slight decrease of 0.1 percentage points.

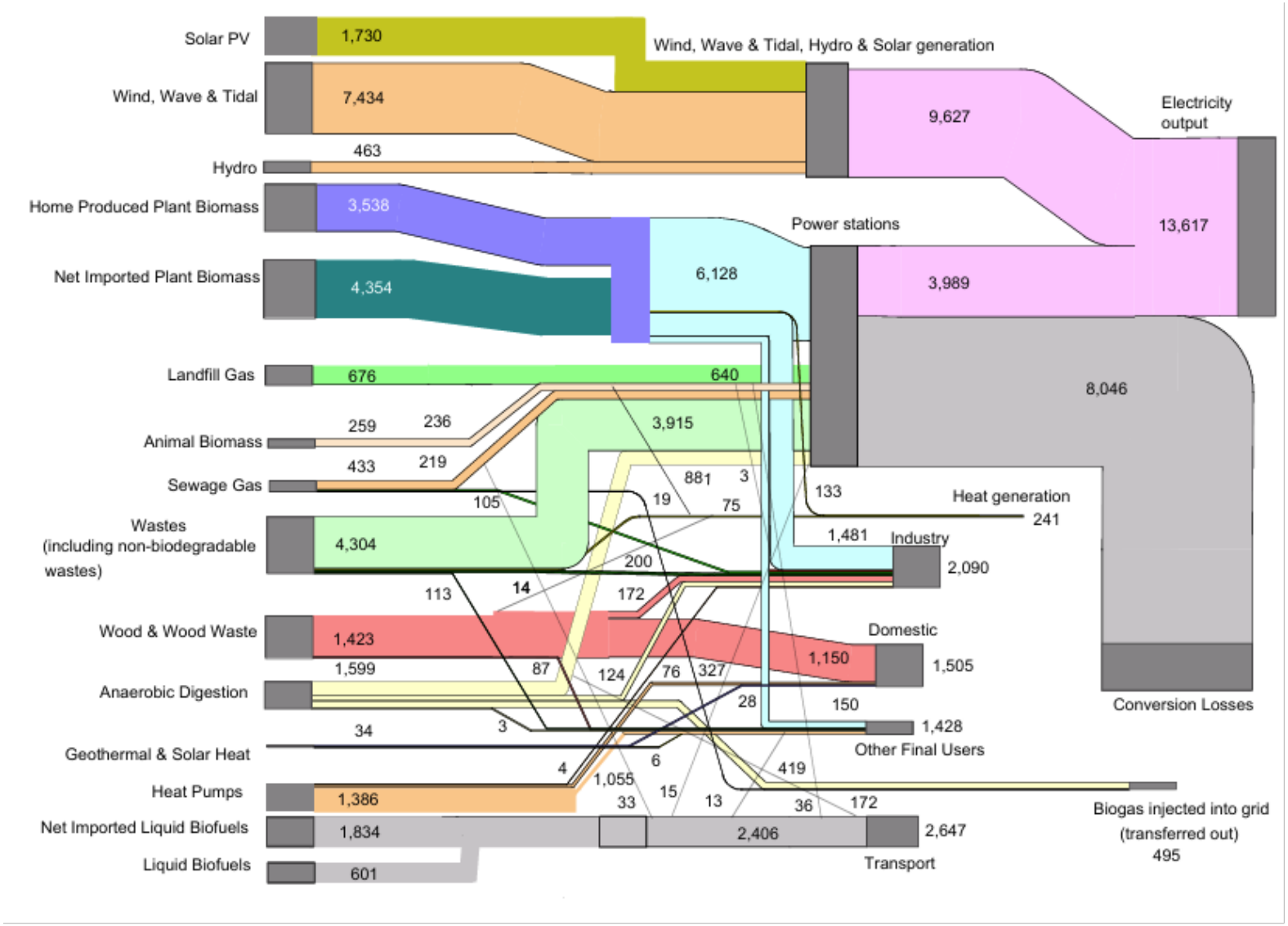
The map below shows UK wind farms that were operational at the end of 2025 with a capacity 5 MW or more; there are around 9,000 sites below this threshold and other sites are excluded due to a lack of precise location data. The locations are representative and not exact.

Map of UK wind capacity, end 2025 (5 MW and over)



Renewable energy flow chart 2025 (DUKES Tables 6.1 and 6.2)

The renewable energy flow chart overleaf summarises the flows of renewables including production, net imports through to final outputs by sector. It also shows the conversion losses associated with thermal renewable generation. The data are sourced from the commodity balance Table 6.1, and Table 6.2 for electricity outputs.



Chapter 7: Combined Heat and Power (CHP)

Rob Einchcomb **0774 206 7242** energy.stats@energysecurity.gov.uk

Key headlines

As of 2025, renewable fuels accounted for 19 per cent of total CHP fuel input, a record high and up from 3 per cent in 2007. (DUKES Table 7.1).

CHP qualifying electricity output represented 7.0 per cent of total electricity generation, a 0.3 percentage drop on 2024 due to CHP generation falling and total generation increasing. (DUKES Table 7.9).

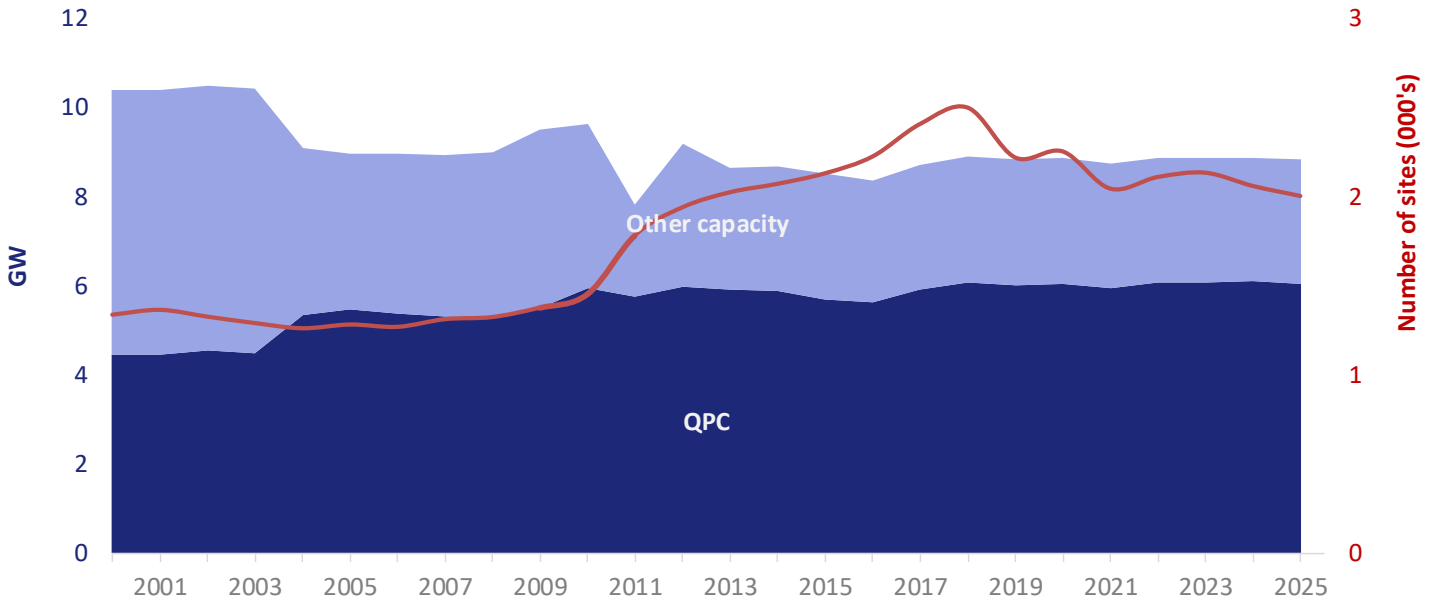
Gas continues to be the main fuel consumed in CHP plants (around two thirds of fuel input), representing 8.2 per cent of gas demand. (DUKES Table 7.9).

CHP (or cogeneration) is the simultaneous generation of electricity and heat resulting in improved efficiencies when compared to meeting electricity and heat demands separately. The data for this section is primarily collected in support of the CHP Quality Assurance programme (CHPQA) but is supplemented with other sources to provide as comprehensive a picture as possible for UK CHP statistics.

From 2026, the source of the CHPQA data changed. It has not been possible for the team to fully quality assure and validate this new data in time for DUKES. Therefore, data from 2024 has been rolled over to estimate output for the majority of CHP schemes in 2025. Other sources, such as our own survey of Major Power Producers, have been used to provide data for sites where possible. This means that data for 2025 shows little change from 2024 and is highly provisional, while 2023 and 2024 show only minor revisions compared to last year's DUKES. The Department will undertake further work to review these data, the statistics published here remain subject to revisions in future publications.

The CHPQA programme assesses and certifies schemes eligible for various incentives; not all output from a scheme is eligible, but where it is, it is referred to as 'good quality' or qualifying. Chart 7.1 shows the qualifying and other (non-qualifying) electrical capacity compared to the number of schemes.

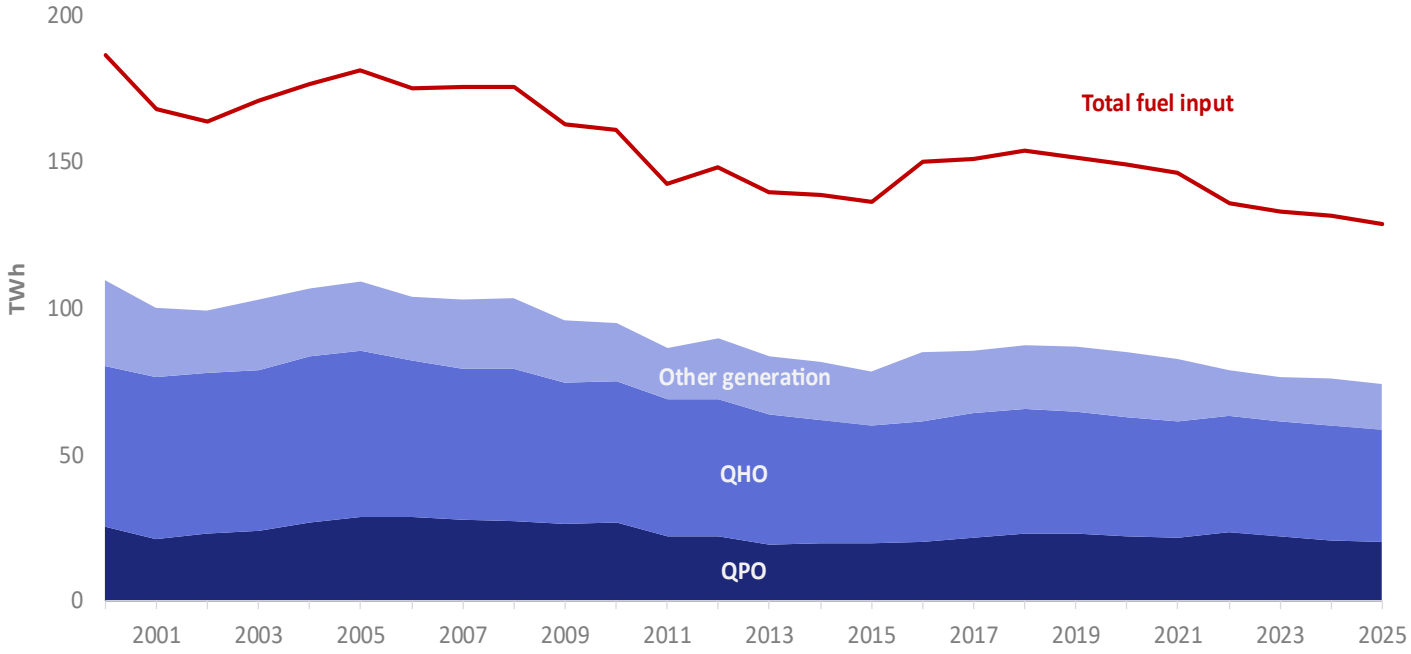
Chart 7.1 Comparison of total and qualifying electrical capacity from 2000 (DUKES Table 7.1.A)



Since 2000, the number of sites remained steady until 2011 and 2012 when an additional data source was identified, and extra schemes were included in the database. The number of schemes then peaked in 2018, before falling by 494 units to 2025. This coincides with a decision taken by DESNZ to remove all schemes for which no new information had been obtained for at least nine years. Most of these schemes were small scale (non CHPQA schemes) and whilst their removal is apparent in the time series for the number of schemes, the impact on capacity is barely discernible. Since 2000, total electrical capacity has fallen by 15 per cent but qualifying capacity has increased by 36 per cent, resulting in its share increasing from 43 per cent in 2000 to 69 per cent in 2025.

In 2025, 79 per cent of CHP outputs were deemed to be qualifying, around two thirds of which was heat. Chart 7.2 shows CHP outputs, qualifying and non-qualifying, compared to total fuel input.

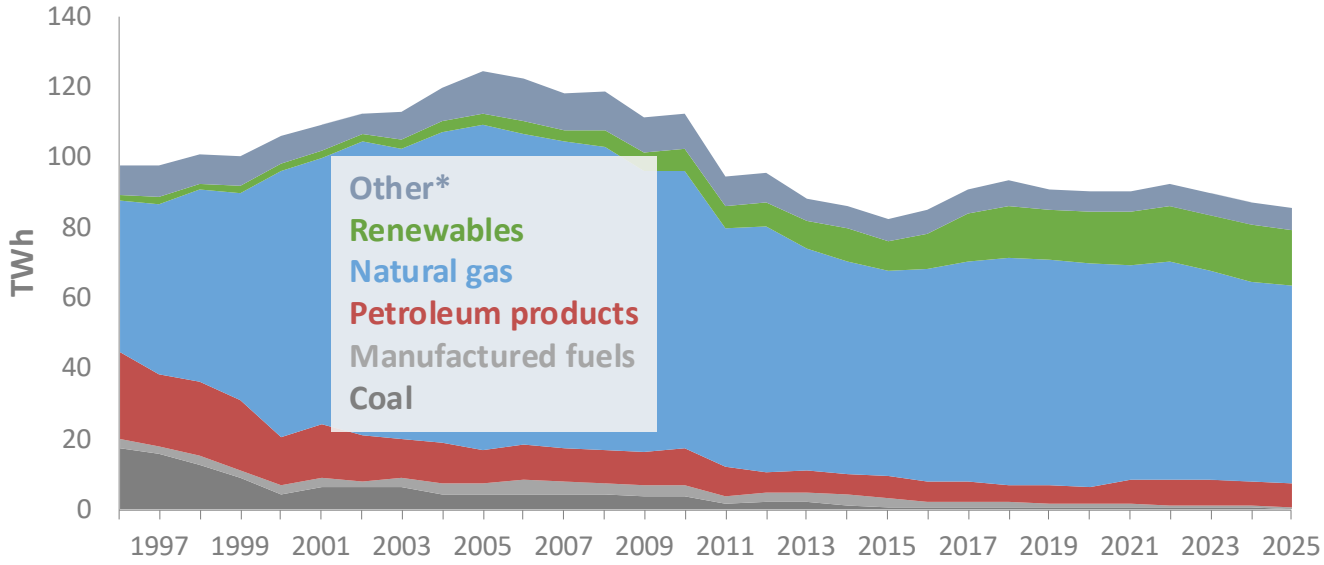
Chart 7.2 Comparison of total fuel and CHP outputs from 2000 (DUKES Table 7.1.A)



Although not a perfect relationship, CHP outputs tend to be driven by the underlying difference between the price of gas and electricity, the spark gap; the larger the gap, the cheaper gas is relative to electricity which makes cogeneration more economically viable. This partly explains the decline from 2006 to 2015 and the subsequent turnaround following a widening of the spark gap in 2013.

Natural gas remains the main fuel consumed by CHP schemes representing 65 per cent of the total in 2025, although its share has fallen slightly over the most recent years. The use of coal and petroleum products continues to fall, with no coal used in CHP for the first time in 2025, while renewables' share now stands at a record high of 19 per cent of fuel used by CHP schemes. Chart 7.3 shows this long-term trend.

Chart 7.3 Trends in fuel demand for CHP[1] 1996 to 2025 (DUKES Table 7.1.B)



In 1996, the share of natural gas was just 44 per cent but by 2005, it had reached a maximum of 74 per cent. Although its share then stabilised at around 70 per cent, it has fallen by around 5 percentage points since 2019. Conversely, coal and manufactured fuels' share represented 20 per cent in 1996 but has plummeted to below 1 per cent in 2025, with coal falling to zero. Use of renewables was stable at around a 3 per cent share until 2007 when growth gained momentum, reaching a record high of 19 per cent in 2025.

CHP is deployed across a variety of sectors including power generation, refineries, industry, public administration, and commercial (DUKES Table 7.4). Ten years ago, in 2015, around three quarters of CHP sites were non-industrial (public administration, commercial, agriculture, and miscellaneous). This share has now fallen to 62 per cent in 2025, with 'other industries' (mostly waste management) share increasing. However, industrial CHPs are larger in terms of capacity, with refineries alone accounting for the largest share of electrical capacity, 35 per cent, but just 0.5 per cent of the number of sites. In contrast, the commercial sector has 21 per cent of the sites but accounts for just 3 per cent of the capacity.

The concentration and size of CHP schemes also varies across the UK, with the differences often mirroring the needs of the area's most developed economic sectors. Chart 7.4 shows Yorkshire and Humberside has the highest CHP capacity including the UK's largest scheme resulting in the highest average capacity per site (Table 7.8.A) across the regions (10.8 MW, markedly higher than the next highest at 3.7 MW for the South East). The South West has the lowest average capacity per site (1.0 MW), and the region with the highest number of schemes is London (average capacity per site at 1.1 MW).

[1] Fuel demand for heat and qualifying electricity output

Chart 7.4 Number of schemes and capacity by region in 2025 (DUKES Table 7.8)

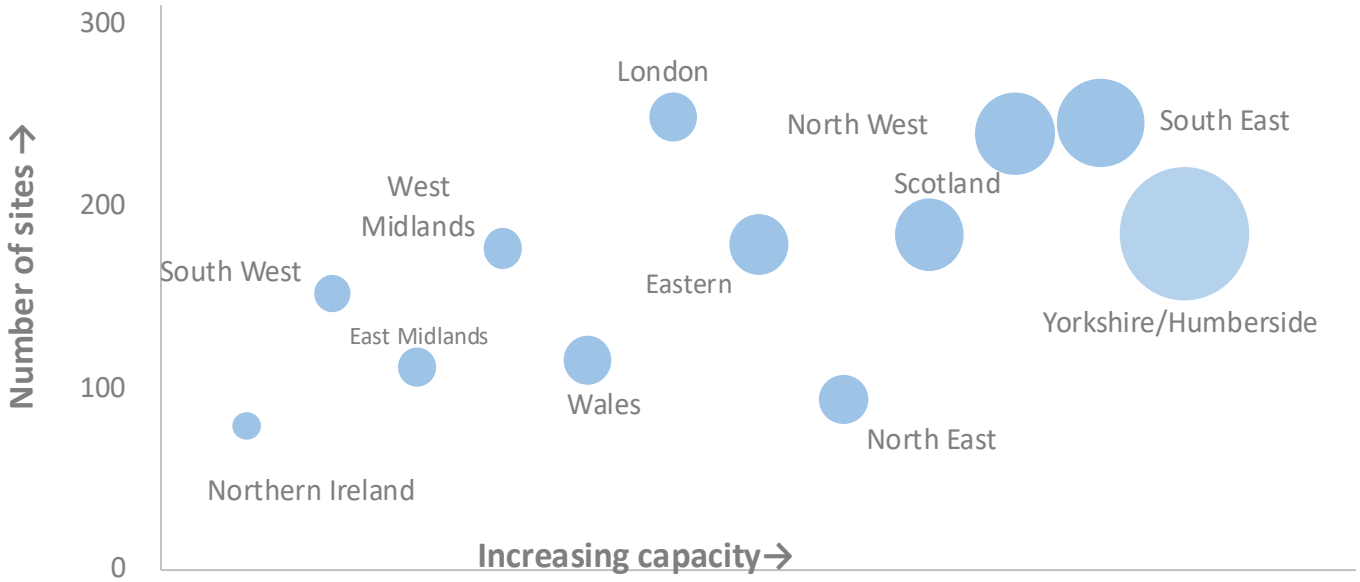


Table 7.8.E shows the distribution of capacity across the different sectors and regions with London accounting for almost half of all capacity in the electricity, gas, steam and air conditioning supply sector which includes district and community heating schemes. The chemicals sector which, along with oil refineries, is suitable for CHP, is concentrated in northern England, with the North East, the North West and Yorkshire and Humberside accounting for over 80 per cent of CHP capacity in those sectors.

More than a third of all capacity in the food and drink sector is in the Eastern region reflecting the large heat demands associated with sugar manufacture. The concentration of large horticultural sites (i.e. greenhouses) in South East England helps to explain the deployment of over 40 per cent of all agricultural capacity in this region. The distribution of capacity serving public administration, mostly hospitals and education, tends to align with population density.

In 2025, 28 per cent of qualifying outputs (heat and electricity) were exported with the remaining 72 per cent being used on site (DUKES Table 7.7). Less than half of qualifying electricity is exported (36 per cent) with the majority being split between power suppliers (i.e. exported to the grid) and sold under contract. Other generation, however, is mostly exported (79 per cent) with over half of this exported to power suppliers. Heat is mostly consumed within the CHP scheme but of the heat which is exported, the majority is sold under contract (this heat is reported under the 'heat sold' column in DUKES Table 1.1).

Data tables in this release

Chapter 1 Energy

1.1 Aggregate energy balance
1.2 Value balance of traded energy
1.3 Sales of electricity and gas by sector

Total energy long term trends

1.1.1 Inland consumption of primary fuels and equivalents for energy use
1.1.2 Availability and consumption of primary fuels and equivalents (energy supplied basis)
1.1.3 Comparison of net imports of fuel with total consumption of primary fuels and equivalents
1.1.4 Primary energy consumption, gross domestic product, and the energy ratio
1.1.5 Energy consumption by final user (energy supplied basis)
1.1.6 Expenditure on energy by final user
1.1.7 Mean air temperatures (averages)
1.1.8 Mean air temperatures (deviations)
1.1.9 Mean heating degree days

Chapter 2 Solid fuels and derived gases

2.1 Coal: Commodity balances
2.2 Supply and consumption of coal
2.3 Supply and consumption of coke oven coke, coke breeze, and other manufactured solid fuels
2.4 Supply and consumption of coke oven gas, blast furnace gas, benzole, and tars
2.5 Deep mines and surface mines in production, December 2025
2.6 Identified GB coal resource assessment, June 2026
2.7 Imports of coal
2.8 Exports of coal

Solid fuels long term trends

2.1.1 Coal production and stocks
2.1.2 Inland consumption of solid fuels

Chapter 3 Petroleum

3.1 Primary oil: Commodity balances
3.2 Petroleum products: Commodity balances
3.3 Supply and disposal of petroleum
3.4 Additional information on inland deliveries of selected products
3.5 Stocks of crude oil and petroleum products at end of year
3.6 Additional information on inland deliveries for non-energy uses
3.7 Imports of crude oil and petroleum products by country of origin
3.8 Exports of crude oil and petroleum products by country of destination

Oil long term trends

3.1.1 Crude oil and petroleum products: production, imports, and exports
3.1.2 Inland deliveries of petroleum

Chapter 4 Natural gas

4.1 Natural gas: Commodity balances
4.2 Supply and consumption of colliery methane
4.3 UK natural gas losses
4.4 Natural gas stock and storage sites
4.5 Natural gas imports and exports and import and export facilities
4.6 Liquefied Natural Gas imports by terminal

Gas long term trends

Chapter 5 Electricity

Electricity long term trends

Chapter 6 Renewable sources of energy

Chapter 7 Combined heat and power

Symbols used in data tables

[x] is used to indicate data not available.

Individual entries in the tables are rounded independently and this can result in totals, which are different from the sum of their constituent items. Some of the data shown in this Digest may contain previously unpublished revisions.

Annexes and annex tables

Full annex documents and tables can be found by visiting the DUKES collection page.

Annex A: Energy and commodity balances, conversion factors, calorific values and density of fuels

A.1 Estimated average gross calorific values of fuels, 1970, 1980, 1990 and 1996 to 2025
A.2 Estimated average net calorific values of fuels, 1970, 1980, 1990 and 1996 to 2025
A.3 Estimated average density of fuels 2002 to 2025

Annex B: Glossary and acronyms

Annex C: Further sources of UK energy publications

Annex D: Major events in the energy industry

Annex E: Energy and the environment

E.1 Gas flared and vented by oil and gas fields and terminals

Annex F: Oil and gas resources

F.1 Crude oil and Natural Gas Liquids production
F.2 Gas production
F.3 Natural Gas Liquids net production
F.4 Disposals of crude oil

Annex G: Foreign Trade

G.1 Volume of imports and exports of fuels
G.2 Value of imports and exports of fuels

Annex H: Flow charts

Annex I: Energy balance net calorific values

I.1 Aggregate energy balance: net calorific values, 2004 to 2025

Annex J: Heat reconciliation

J.1 Heat sold reallocation, 1999 to 2025

Additional information

This section outlines the key principles when presenting energy statistics to help you understand the balance data tables. More information can be found in Annex A: Energy and commodity balances, conversion factors, calorific values and density of fuels. Annex B contains a glossary, which provides definitions of technical terms used. Annexes A and B can be accessed from the main DUKES page.

Balance principles

Balances are divided into two types, each of which performs a different function:

1. Commodity balance - a balance for each energy type that uses specific measurement units usually associated with that commodity. It shows the flow of the commodity from its sources of supply through to its final use. Commodity balances are presented in the individual fuel chapters of this publication.
2. Energy balance - presents the commodity balances in a common unit and places them alongside one another in a manner that shows the dependence of the supply of one commodity on another. The energy balance format is used in Chapter 1.

Both types show the flow of the type of energy from its supply through to its final use. The following sections give an overview of the supply and demand flows shown in each type of balance.

Supply to the energy balances

Production
This covers indigenous production and generation or manufacture of energy using other energy sources as fuel (for example, heating water using gas to produce steam turbine electricity).

Other sources
This covers sources that do not represent “new” supply. These may be recycled products, recovered fuels (slurry or waste coal), electricity from pumped storage plants, or transfers of ethane, propane, and butane from gas stabilisation plants at North Sea terminals.

Imports and exports
These figures relate to energy moving into or out of the UK. Exported commodities are produced in the UK and imported commodities are for use within the UK. The figures thus exclude commodities that move into and out of HM Revenue and Customs bonded areas.

Marine bunkers
These are deliveries of fuels (usually fuel oil or gas oil) to ships of any flag for consumption during their voyage to other countries.

Stock changes
Additions to and withdrawals from stocks held by producers and transformation industries correspond to withdrawals from (- sign) and additions to supply (+ sign), respectively.

Transfers
A movement of a fuel out of one type is shown with a negative sign, to indicate that it has been withdrawn from supply. The movement into the other fuel is shown as a positive. The transfers row would ideally sum to zero, but differences in calorific values can result in non-zero values. There are several reasons why quantities may be transferred from one commodity balance to another:

- a commodity may no longer meet the original specification and be reclassified.
- the name of the commodity may change through a change in use.
- to show quantities returned to supply from consumers. These may be by-products rather than fuels.

The total supply available for national use is obtained by summing these flows in the balance.

Statistical differences

Any excess or shortfall in supply compared to demand is shown as a statistical difference. A negative figure indicates that demand exceeds supply. These arise because data has been gathered from a variety of independent sources and reflect differences in timing, in definition of activity or commodity. Differences also arise in the measurement of the flow of the commodity. A non-zero statistical difference is normal and, within reason, is preferable to a statistical difference of zero, which would suggest that a data provider has adjusted a figure to balance the account.

Demand in the energy balances

The demand section is divided into demand for transformation, for use in the energy industries, and a section covering uses by final consumers.

Transformation
This covers processes and activities that transform the original primary (and sometimes secondary) commodity into another type. Most transformation corresponds to an industry whose main business is to manufacture a particular type of energy such as electricity generators. Some activities produce another commodity as a by-product. All are included in the energy balances.

Electricity generation
Quantities of fuels burned for the generation of electricity. The activity is divided into two parts, covering the major power producers (for whom the main business is the generation of electricity) and autogenerators (who produce electricity as a by-product of another process). Where a generator uses combined heat and power plant, the figures include only the part of the fuel use corresponding to the electricity generated.

Heat generation
Quantities of fuel burned to generate heat that is sold under contract to a third party. This includes heat that is generated and sold by combined heat and power plants and by community heating schemes (also called district heating).

Petroleum refineries
Crude oil, natural gas liquids and other oils needed by refineries for the manufacture of finished oil products.

Coke manufacture and blast furnaces
Quantities of coal for coke ovens and all fuels used within blast furnaces. The consumption of fuels for heating coke ovens and the blast air for blast furnaces are shown under Energy industry use.

Patent fuel manufacture
Coals and other solid fuels used for the manufacture of solid patent fuels.

Other
Any minor transformation activities not specified elsewhere.

Energy industry use
Consumption by both extraction and transformation industries to support the transformation process (but not for transformation itself). Typical examples are the consumption of electricity in power plants, or the use of extracted gases on oil and gas platforms.

Losses
Intrinsic losses that occur during the transmission and distribution of electricity and gas (including manufactured gases). Other metering and accounting differences for gas and electricity are within the statistical difference, as are undeclared losses in other commodities.

Final consumption
This covers consumption of commodities for energy and non-energy uses. The energy disappears from the account after use. Final consumption for energy purposes is divided into use by sector of economic activity. The classification of consumers according to their main business follows, as far as practicable, Standard Industrial Classification codes (SIC 2007). The section on Sector breakdowns below shows the breakdown of final consumers used, and how this corresponds to SIC codes 2007.

Sector breakdowns

Categories for final consumption are defined by Standard Industrial Classification codes 2007:

Category of user	SIC 2007
Fuel producers	05-07, 09, 19, 24.46, 35
Iron and steel	24 (excluding 24.4, 24.53 and 24.54)
Other industry	08, 10-18, 20-23, 24(excluding 24.46) 25-32, 41-43
Transport	49-51 (part*)
Agriculture	01-03
Commercial	33, 36-39, 45-47, 49-51 (part*), 52-53, 55-56, 58-66, 68-75, 77-82, 90-96, 99
Public administration	84-88
Miscellaneous	No longer used
Domestic	Not covered by SIC, defined as deliveries to residential properties

* Note – transport sector includes only energy used for motion/traction purposes. Other energy used by transport companies is classified to the commercial sector.

The qualifications to, and constraints on, use of the classification are described in the energy balance methodology note.

Technical information

Methodology

More detailed notes on the methodology used to compile the figures and data sources are available on the collection pages for each fuel. The figures have not been adjusted for temperature or seasonal factors except where noted. Percentage changes relate to the corresponding period a year ago. They are calculated from unrounded figures. They are shown as (+) or (-) when very large. Figures relate to the United Kingdom unless otherwise indicated. Further information is available from the North Sea Transition Authority at https://www.nstauthority.co.uk/.

Standard conversion factors

This Digest uses the tonne of oil equivalent (toe) as the common unit of energy for comparing and aggregating fuels. The following table gives factors for converting between this unit and alternative units of energy found in this and other publications (see Chapter 1, Technical notes and definitions and Annex A).

To	ktoe	TJ	GWh	million therms	To	toe	GJ	kWh	therms
From	Multiply by				From	Multiply by			
Ktoe	1	41.868	11.63	0.39683	toe	1	41.868	11,630	396.83
TJ	0.023885	1	0.27778	0.0094778	GJ	0.023885	1	277.78	9.4778
GWh	0.085985	3.6	1	0.034121	kWh	0.000085985	0.0036	1	0.034121
million therms	2.52	105.51	29.307	1	therms	0.00252	0.10551	29.307	1

ktoe = thousand tonne of oil equivalent toe = tonne of oil equivalent

A selection of estimated average gross calorific values for 2025 (see also Annex A)

Fuel category	GJ per tonne	Fuel category	GJ per tonne
Coal		Renewable sources	
All consumers (weighted average)	26.9	Domestic wood	16.3
Power stations (including imports; weighted average)	26.5	Industrial wood	20.3
		Municipal solid waste	10.1
Iron and steel	30.4		
Other industries (weighted average)	26.7	Petroleum	
Imported coal (weighted average)	28.4	Crude oil (weighted average)	45.7
Exported coal (weighted average)	28.0	Petroleum products (weighted average)	46.3
Coke	29.8	Petrol	47.0
Coke breeze	29.8	Gas/diesel oil	45.3
Other manufactured solid fuel	29.6	Road diesel	45.8
		Fuel oil	43.3
Gases (MJ per cubic metre)			
Natural gas (produced)	40.3		
Landfill gas	21-25		
Sewage gas	21-25		

Geographical coverage

The geographical coverage of the statistics is the United Kingdom. However, within UK trade statistics, shipments to the Channel Islands and the Isle of Man from the United Kingdom are not classed as exports. Supplies of solid fuel and petroleum to these islands, from the UK, are therefore included as part of United Kingdom inland consumption or deliveries.

Revisions policy

Figures for the latest periods are provisional and are liable to subsequent revision. The DESNZ statistical revisions policy sets out the revisions policy for these statistics, which has been developed in accordance with the UK Statistics Authority Code of Practice for Statistics. DESNZ's statements of compliance with the Code are available online, as well as the UK Statistics Authority reports on their regular assessments of energy statistics. The authority's recommendations have been incorporated into this publication and other DESNZ energy statistical publications and outputs.

DUKES tables contain revisions to some of the previously published figures. A table showing the size of revisions to key aggregates is shown below. Statistics on energy in this Digest are classified as National Statistics. This means that they are produced to high professional standards as set out in the UK Statistics Authority's Code of Practice for Official Statistics. The Code of Practice requires that all the public bodies that produce official statistics "Publish a revisions policy for those outputs that are subject to scheduled revisions, and provide a statement explaining the nature and extent of revisions at the same time that they are released". The following statement outlines the policy on revisions for energy statistics.

It is intended that any revisions should be made to previous years' data only at the time of the publication of the Digest. In exceptional circumstances previous years' data can be amended between Digest publication dates, but this will only take place when quarterly Energy Trends is published. The reasons for substantial revisions will be explained in the 'Cover sheet' worksheet of the table concerned.

Valid reasons for revisions of Digest data include:

- Revised and validated data received from a data supplier.
- The figure in the Digest was wrong because of a typographical or similar error.
- In addition, when provisional annual data are published in Energy Trends in March, growth rates are liable to be distorted if the prior year's data are constrained, when revisions are known to be required. In these circumstances the prior year's data will be amended for all affected tables in Energy Trends and all affected Digest tables will be clearly annotated to show that the data has been updated in Energy Trends.

All validated amendments from data suppliers will be updated when received and published in the next statistical release.

All errors will be amended as soon as identified and published in the next statistical release.

Data in energy and commodity balances format will be revised on a quarterly basis, to coincide with the publication of Energy Trends.

This year, the revisions window for DUKES has been opened back to 1998 for gas, 2017 for electricity, 2018 for renewables and from 2023 for all other fuels. Details of the methodology changes applied to the gas and electricity balances, as well as to DUKES sector definitions are explained in a series of Energy Trends articles published in June 2026.

Revisions since DUKES 2025 for 2022 to 2024 data

Thousand tonnes of oil equivalent	2022	2023	2024	Percentage revisions to 2024 data
Production	-149	-88	269	0.3%
Primary supply	-149	-109	259	0.2%
Primary demand	976	337	281	0.2%
Transformation	-12	210	18	-0.1%
Energy industry use	49	150	329	3.7%
Final consumption	914	394	-28	0.0%
Industry	-2069	-913	-1307	-6.7%
Transport	-70	-51	-78	-0.1%
Domestic	1179	-124	-65	-0.2%
Other users	1874	1482	1422	6.9%
Non energy use	0	0	0	0.0%

Background to the Digest

This issue of the Digest of United Kingdom Energy Statistics (DUKES) continues a series which commenced with the Ministry of Fuel and Power Statistical Digest for the years 1948 and 1949, published in 1950. The Ministry of Fuel and Power Statistical Digest was previously published as a Command Paper, the first being that for the years 1938 to 1943, published in July 1944 (Cmd. 6538).

The current publication consists of seven chapters and four annexes. The first chapter deals with overall energy. The other chapters cover the specific fuels, renewable sources of energy and combined heat and power. The annexes cover conversion factors and calorific values, a glossary of terms, further sources of information and major events in the energy industries.

Where necessary, data have been converted or adjusted to provide consistent series. However, in some cases changes in methods of data collection have affected the continuity of the series. The presence of remaining discontinuities is indicated in the chapter text or in footnotes to the tables.

Chapters 6 and 7 summarise the results of surveys conducted by Ricardo Energy & Environment on behalf of DESNZ, which complement work undertaken by DESNZ. These chapters estimate the contribution made by renewable energy sources to energy and combined heat and power (CHP) production and consumption in the United Kingdom.

Acknowledgements

Acknowledgement is made to the main coal producing companies, the electricity companies, the oil companies, the gas pipeline operators, the gas suppliers, National Grid, the Institute of Petroleum, the Coal Authority, the United Kingdom International Steel Statistics Bureau, WSP (formerly Ricardo Energy & Environment), the Department for Environment, Food and Rural Affairs, the Department for Transport, OFGEM, Building Research Establishment, HM Revenue and Customs, the Office for National Statistics, and other contributors to the enquiries used in producing this publication.

Accredited official statistics and user engagement

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.

Enquiries about statistics in this publication should be made to the contact named at the start of the relevant chapter. Brief extracts from this publication may be reproduced provided that the source is fully acknowledged. General enquiries about the publication, and proposals for reproduction of larger extracts, should be addressed to DESNZ.

The Department for Energy Security & Net Zero reserves the right to revise or discontinue the text or any table contained in this Digest without prior notice.

Related statistics

The Department for Energy Security & Net Zero make available other publications related to energy supply and demand that may be of interest. A full list of these and other related energy publications can be found in DUKES Annex C: Further sources of UK energy publications.

Energy Trends
More frequent monthly and quarterly data are available for total energy, solid fuels and derived gases, petroleum, gas, electricity, and renewables:
https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about/statistics

Energy prices
Monthly and quarterly prices by consumption sector and international comparisons of prices paid:
https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about/statistics

Energy Flow Chart
Annual publication illustrating the flow of primary fuels from home production and imports to their eventual final uses. They are shown in their original state and after being converted by secondary fuel producers:
www.gov.uk/government/collections/energy-flow-charts.

UK Energy in Brief
Annual publication summarising the latest statistics on energy production, consumption, and prices in the United Kingdom. The figures are taken from this Digest of UK Energy Statistics:
www.gov.uk/government/collections/uk-energy-in-brief

Sub-National Energy Consumption
Annual publication supporting local and regional decision making to deliver national energy policy objectives:
https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about/statistics

UK Greenhouse Gas Emissions
Show progress against the UK's goals, both international and domestic, for reducing greenhouse gas emissions:
https://www.gov.uk/government/collections/uk-territorial-greenhouse-gas-emissions-national-statistics

This publication is available from: https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

If you need a version of this document in a more accessible format, please email:
energy.statistics@energysecurity.gov.uk

Please tell us what format you need. It will help us if you say what assistive technology you use.