Department for Energy Security & Net Zero

Crude oil and oil products: Data sources and methodology

Contact: oil.statistics@energysecurity.gov.uk

Introduction

These notes cover all areas of the UK oil supply chain, from offshore production of crude through to demand for petroleum products. Specifically:

- Upstream oil: production of crude oil and Natural Gas Liquids (NGLs).
- Downstream oil: refining of crude oil into petroleum products and the distribution of those products.
- Oil stocks: emergency reserves held by the UK to respond to supply disruptions.
- Trade: imports and exports of crude oil and petroleum products.

For a map of offshore oil and gas infrastructure see the gas methodology note. For a map of UK refineries, major import terminals and petrochemical plants see Annex 1. See Annex 2 for a table of UK refinery nameplate capacities as of July 2025.

Publications

DESNZ produces energy statistics tables on a monthly, quarterly, and annual basis. On a quarterly and annual basis energy balances are also produced. Energy balances reconcile demand for energy with supply of energy, and it is on this basis that statistics are compiled, and the main tables in Energy Trends (ET) and the Digest of UK Energy Statistics (DUKES) are published.

The annual publication contains the highest level of detail and is represents the final data for the year. In this publication petroleum products statistics are disaggregated into approximately 40 categories of demand and published in DUKES Table 3.2.

Please see the oil statistics collection page for the complete range of oil information published by the Department.

Data sources

Petroleum Production Reporting System

The Petroleum Production Reporting System (PPRS) is a monthly administrative data collection census that requires all licensees operating on the UK Continental Shelf to submit monthly details of their hydrocarbon (both oil and gas) production to the Department. PPRS is used to report flows, stocks and of crude oils and NGLs from field level through to final disposal. It is a condition of operation on the UKCS that companies submit monthly returns to government, with 100% coverage and response rate. For further information, including maps, see the NSTA PPRS spatial dashboard.

Downstream Oil Reporting System

Downstream oil information, including information on the transformation of crude oil into petroleum products at refineries, imports and exports of petroleum products, and the delivery of these products into consumption by various users, is collected monthly through the Downstream Oil Reporting System (DORS), with 100% return rate and >95% market coverage. DORS was developed in co-operation with industry and replaced the Fuels Industry UK reporting system in 2005.

In 2014, DESNZ introduced a new reporting form to oil majors. The new form indicated the need for more detailed surveys of large importers within the UK and from January 2015 all major importers were also obliged to complete the more detailed DORS form used by refiners. The DORS survey now offers substantially greater insight (particularly with respect to trade and blending activities).

Data relating to the inland operations of the UK oil industry (i.e., information on the supply, refining and distribution of oil in the UK) are collected from companies. The data format and coverage have been designed to meet most of the needs of both Government and the industry itself. Each member of Fuels Industry UK and several other contributing companies provides returns on its refining activities and deliveries of various products to the internal UK market. This information is supplemented whenever necessary to allow for complete coverage within the statistics, with separate exercises carried out on special topics (for example, supermarket shares).

Secondary collections and other data sources

HMRC data are used to supplement information obtained from PPRS and DORS to cover trade activity by non-reporting companies, and as a quality control mechanism. Trade data from these sources can be found in Energy Trends Table 3.14 and Table 3.15.

Ad-hoc returns. These smaller returns include a survey of supermarket road fuel sales (quarterly), distributors of Liquid Petroleum Gas (LPG) (quarterly), and the Oil Stocking System (OSS) (monthly) return for participants in the UK oil stocking ticket market. These are companies who do not have an oil stocking obligation themselves but hold oil stocks for commercial reasons and sell ‘tickets’ to obligated companies.

The supermarket survey of road fuel sales allows for the calculation of the shares of petrol and road diesel sold through supermarket retailers and is collected and published on a quarterly basis. The LPG return allows the apportionment of sales of propane and butane to end users under final consumption.

Estimates of road fuel use by vehicle type are produced annually by the energy consultancy Ricardo Energy and Environment as part of their work to compile the UK Greenhouse Gas Inventory and reproduced in DUKES.

Electricity Major Power Producers survey (monthly): oil used for electricity generation. More information on this can be found in the Electricity methodology note. From the 2009 chapter of DUKES data in Chapter 3 (Table 3.2 and 3.4) has been aligned with Chapter 5 (Table 5.4). The data on oil used for electricity generation collected from major power producers and autogenerators is judged to be at least as accurate as the data from refiners on deliveries and has the advantage of consistency.

Autogenerators survey (quarterly): oil used for electricity generation, by industrial sector. More information on this can be found in the Autogenerators methodology note.

International Steel Statistics Bureau (ISSB) (monthly): petroleum products delivered for use by steel works and iron foundries, in coke ovens and blast furnaces. More information can be found in the Coal methodology note.

Environmental Emissions Monitoring System (EEMS) (annual) is a system used by DESNZ to collect information on emissions from offshore installations and associated terminals for oil and gas extraction.

Emissions data from the Emissions Trading Scheme (annual) for major energy users to ensure the consistency of data on fuel used within refineries (refinery gases and petroleum coke) and sectoral usage of gas oil, kerosene, and fuel oil.

Data Quality

Data are in provisional form until the publication of the annual Digest of UK Energy Statistics. As oil and oil products are valuable, the companies involved are subject to high degree of financial regulation and independent auditing to ensure that what is produced, refined, and delivered is accurately reported. As both PPRS and DORS are sourced from company accounts, the high levels of auditing provide good levels of quality assurance.

The Department makes significant efforts to ensure that the data provided are fit for purpose. On the downstream side, reporting companies are subject to a light touch audit by DESNZ Statisticians on an annual basis to assess whether data systems are robust. The PPRS system is used to monitor field production by DESNZ engineers and policy makers, and data from the system forms the backdrop to discussions on field-by-field production. Its use as an ongoing source of information provides good assurance of quality. Whilst data providers and the Department make these efforts to assure data quality, the following two items should be noted:

1. Firstly, the sectoral breakdown for non-road use of gas oil and fuel oil is based on the reporting companies' understanding of the primary business of the companies they deliver to. It is difficult to know with certainty in all cases what the primary business of receiving companies is. Given that some receiving companies sell products on to third parties, it becomes difficult for the refiners to trace through to final delivery. Whilst the consumption of non-transport uses of gas oil and fuel oil is a relatively small proportion of the total final consumption (less than 10 per cent), improvements in 2015 and 2016 by the Department and reporting companies have developed the understanding and reporting of sectoral splits.
2. Secondly, the transfers heading in the commodity balances in the commodity balances reflect the outcome of complex refinery processes.

Transfers can include:

- Reclassification of products within refineries. For instance, butane or naphtha can be added to petrol to improve the octane rating, or aviation turbine fuel could be reclassified as domestic kerosene if its quality deteriorates.
- Differences in product use between refineries. For instance, a company might deliver fuel oil to another company and that company might then report receipt of a feedstock.
- Backflows of products from petrochemical plants that are often very closely integrated with refineries. Volumes of backflows are reported in all publications as production of feedstocks. Deliveries to petrochemical processing plants are shown in annual table 3.2 and3.4 under Other Transformation. Whilst the amount varies, the scale of these backflows is relatively small.
- There is scope for error in the recording these processes because refineries use volumes rather than masses during the conversions and different factors apply for each product when converting from a volume to mass basis. These can differ between refineries and between the aggregated figures used with the Department for mass conversion.
- Transfers can be more common with the heavier fuel oils but do not tend to impact on the product balance. In total, around 2% of the supply balance is composed of transfers.

Statistical Differences

Given the complexity of reporting systems and the number of parties involved, the tables show 'statistical differences' where appropriate. Statistical differences reflect reporting differences between the data systems and allow the Department to spot mismatches between the supply and demand of oil and oil products. Statistical differences can arise from:

- inaccuracies in metering devices.
- measurements taken at different temperatures and pressures.
- timing differences, particularly with shipping movements.
- contamination with water or other products.
- leakage.
- clerical errors between the various parts of the business (refiners, oil traders, marketing departments, accounting departments).

Upstream statistical differences

The statistical differences headings listed in the primary oil commodity balances are differences between the separately observed and reported figures for production from onshore or offshore fields and supply to the UK market that cannot be accounted for by any specific factors. Primarily they result from inaccuracies in the meters at various points along offshore pipelines. These meters vary slightly in their accuracy within accepted tolerances, giving rise to both losses and gains when the volumes of oil flowing are measured. Errors may also occur when non-standard conditions are used to meter the oil flow.

The statistical difference for primary oils in the table includes own use in onshore terminals and gas separation plants, losses, platform, and other field stock changes. Another factor is the time lag that can exist between production and loading onto tankers being reported at an offshore field and the arrival of these tankers at onshore refineries and oil terminals. This gap is usually minimal and works such that any effect of this at the start of a month is balanced by a similar counterpart effect at the end of a month. However, there can be instances where the length of this interval is considerable and, if it happens at the end of a year, there can be significant effects on the statistical differences seen for the years involved.

Another technical factor that can contribute to the statistical differences relates to the recording of quantities at the producing field (which is the input for the production data) and at oil terminals and refineries, since they are in effect measuring different types of oil. Terminals and refineries measure a standardised, stabilised crude oil, that is, with its water content and content of NGLs at a standard level and with the amounts being measured at standard conditions. However, at the producing field they are dealing with a "live" crude oil that can have a varying level of water and NGLs within it. While offshore companies report live crude at field, the disposals from oil terminals and offshore loading fields are reported as stabilised crude oil. This effectively assumes that terminal disposals are stabilised crude production figures. These changes were introduced in the 2002 edition of this Digest.

Part of the overall statistical difference may also be due to problems with the correct reporting of individual NGLs at the production site and at terminals and refineries. It is known that there is some mixing of condensate and other NGLs in with what might otherwise be stabilised crude oil before it enters the pipeline. This mixing occurs as it removes the need for separate pipeline systems for transporting the NGLs and it also allows the viscosity of the oil passing down the

pipeline to be varied as necessary. While the quantity figures recorded by terminals are in terms of stabilised crude oil, with the NGL component removed, there may be situations where what is being reported does not comply with this requirement.

Downstream statistical differences

With the downstream sector, the statistical differences can similarly be used to assess the validity and consistency of the data and are generally a small proportion of the totals involved.

Refinery data are collated from details of individual shipments received and made by each refinery and terminal operating company. Each year there are thousands of such shipments, which may be reported separately by two or three different companies involved in the movement. Intensive work is carried out to check these returns, but it is possible that some double counting may occur.

Temperature, pressure, and natural leakage also contribute to the statistical differences. In addition, small discrepancies can occur between the estimated calorific values used at the field and the more accurate values measured at the onshore terminal where data are shown on an energy basis. The statistical differences can also be affected by rounding, clerical errors or unrecorded losses, such as leakage. Other contributory factors are inaccuracies in the reporting of the amounts being disposed of to the various activities listed, including differences between the quantities reported as going to refineries and the actual amounts passing through refineries.

Similarly, the data under the statistical difference headings in Tables 3.2 and 3.4 are the differences between the deliveries of petroleum products to the inland UK market reported by the supplying companies and estimates for such deliveries. These estimates are calculated by taking the output of products reported by refineries and then adjusting it by the relevant factors (such as imports and exports of the products, changes in the levels of stocks etc.).

It may be thought that such differences should not exist as the data underlying both the observed deliveries into the UK market and the individual components of the estimates (i.e., production, imports, exports, stocks) come from the same source (the oil companies). While it is true that each oil company provides data on its own activities in each area, there are separate areas of operation within the companies that report their own part of the overall data:

Sources of data within oil companies

Area covered	Source
Refinery production	Refinery
Imports and exports	Refinery, logistics departments, oil traders
Stocks	Refinery, crude and product terminals, major storage, and distribution sites
Final deliveries	Sales, marketing, and accounts departments

Each individual reporting source will have direct knowledge of its own data. For example, refineries will know what they produce and how much leaves the refinery gate as part of routine monitoring of the refinery operations. Similarly other data such as sales to final consumers or imports and exports will be closely monitored. Companies will ensure that each component set of data reported is as accurate as possible, but their reporting systems may not be integrated, meaning that internal

consistency checks across all reported data cannot be made. Each part of a company may also work to different timings as well, which may further add to the degree of differences seen.

The Department uses statistical differences as a quality assurance tool. Large statistical differences are investigated for data input and other quality issues and referred back to reporting companies where appropriate. The Department has a tolerance of 0.5% for its annual statistical balance.

The main area where there is known to be a problem is with the Transfers heading in the commodity balances. The data reported under this heading have two components. Firstly, there is an allowance for reclassification of products within the refining process. For example, butane can be added to petrol to improve the octane rating, aviation turbine fuel could be reclassified as domestic kerosene if its quality deteriorates, and much of the fuel oil imported into the UK is further refined into other petroleum products. Issues can arise with product flows between different reporting companies, for example when company A delivers fuel oil to company B who report a receipt of a feedstock.

Secondly, and in addition to these inter-product transfers, the data also include an allowance to cover the receipt of backflows of products from petrochemical plants that are often very closely integrated with refineries. A deduction for these backflows thus needs to be included under the Transfers heading so that calculated estimates reflect net output and are thus more comparable with the basis of the observed deliveries data.

There is scope for error in the recording of these two components of transfers. With inter-product transfers, the data are recorded within the refinery during the refining and blending processes where the usual units used to record the changes are volumes rather than masses. Different factors apply for each product when converting from a volume to mass basis, as shown by the conversion factors given in Annex A of this Digest. Thus, a balanced transfer in volume terms may not be equivalent when converted to a mass basis. This is thought to be the main source of error within the individual product balances.

Adjustments

The data supplied by oil companies are the primary source of data, but individual company returns are adjusted in certain circumstances. Circumstances include:

- **Missing data.** Where a company has had trouble with data supply, estimates are used. These estimates will be based on previous data and general market trends and revisions will be published as soon as practicable, usually for the following month.
- **Erroneous data.** Where a company's return is clearly erroneous and there is insufficient time to resolve, estimates are used. These will be based on previous data and general market trends and revisions will be published as soon as practicable, usually for the following month.
- **Use of HMRC data**. The vast bulk of data is from the PPRS and DORS returns. However, petrol, white diesel and gas oil deliveries are adjusted in line with revenue data from HMRC. HMRC data reports volumes released for consumption.

Wherever possible, estimates are based on established statistical methodologies to deliver average values. Adjustments are carried out with consideration of the current economic and

energy climate, and past trends of the individual time-series. When considering the past time-series, it may also be necessary to redistribute consumption from one category to another.

Revisions

Revisions can occur through either re-submitted data from companies, or through clerical errors within the Department. Where these occur data are revised as soon as possible, usually for the following month's publication.

Substantial revisions were made in 2019 to sector estimates of demand, and to some industrial sectors in 2023 (specifically Vehicles, Food and Beverages, and Construction). These revisions follow an extensive programme of improvement that is ongoing. This work has been delayed by the UK-wide lockdown during the Covid-19 pandemic. For further information on the revisions made in 2019 please see Energy Trends special article, Change to method of estimating sector demand for oil products.

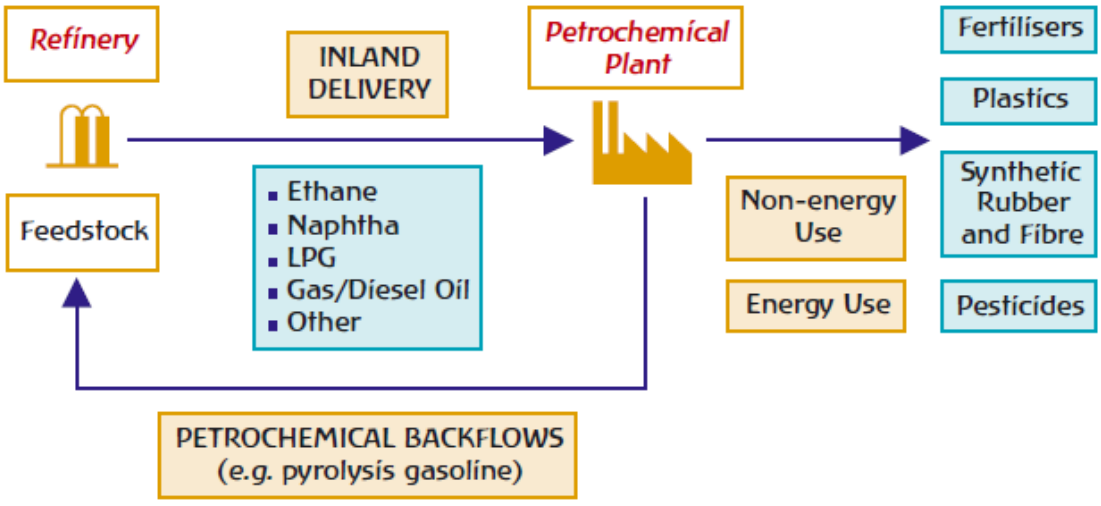
Main classes of supply

The supply of crude oil, NGLs, and petroleum products is derived from:

- **Production.** This can relate to oil or products from the United Kingdom's Continental Shelf (UKCS) or the petroleum products from UK refineries. Production of feedstocks at petrochemical plants that are delivered to refineries as backflows are included in feedstock production figures.
- **Imports.** Imports of oil or oil products from within or outside of the EU increase the supply of oil and oil products within the UK and show as a positive number in the commodity balances.
- **Exports.** Exports of oil or oil products to the EU or elsewhere decrease the total supply and are shown with a negative number.
  Imports and exports can differ in some cases from the import and export figures provided by HMRC that are given in Annex G on DESNZ's energy statistics website. Such differences arise from timing differences between actual and declared movements but also result from the Customs figures including re-exports. These are products that may have originally entered the UK as imports from another country and been stored in the UK prior to being exported back out of the UK, as opposed to having been produced in the UK.
- **Marine bunkers**. UK supply is reduced through deliveries to marine bunkers, which are shown in the balances as a negative number. This covers deliveries to ocean going and coastal vessels under international bunker contracts while deliveries to fishing, coastal and inland vessels are excluded.
  As part of DESNZ's audit programme, UK refinery contacts reviewed the provision of fuel to marine bunkers in 2009. Whilst several companies have reviewed their methodology there are still issues with determining the destination of fuels when these are supplied to third parties that are not part of DESNZ's monitoring programme. This issue impacts on both the volumes delivered directly to marine vessels, and whether those vessels are engaged in domestic or international navigation. Whilst DESNZ will continue to work closely with reporting companies to improve the estimation of marine fuel use. We have aligned energy demand for shipping in line with the estimates of marine fuel use in the UK's National Atmospheric Emissions Inventory (NAEI). The NAEI figures use DESNZ's estimate of

marine fuels and derive the split between international and domestic use based on an activity-based study of the UK's marine fuel use.

- **Other Sources**. Upstream oil operations generate a significant amount of Natural Gas Liquids (Ethane, Propane, Butane and Condensate). As these are finished products they are shown as a negative in the upstream balance (under transfers) and a positive in the downstream balance.
- **Stock change.** The total amount of supply will also be moderated by changes in the stock held by refineries, though stock changes represent relatively small amounts in the context of the UK supply. Positive numbers indicate a stock fall (increasing the amount of supply available as stock is drawn down) and negative numbers indicate that product is being withdrawn from supply into storage.
- **Backflows from the petrochemical sector.** DESNZ and industry have also worked to better understand product flows between refineries and petrochemical plants. Whilst most petroleum products are used for energy purposes, substantial volumes are delivered to the petrochemical industry as a feedstock for the manufacturing of plastics, synthetic fibres, and other products. These products are used, but they are not combusted. The refining and petrochemical industries are often closely related as shown below. Refineries deliver product to a petrochemical plant to produce a range of products, but these plants also return some petroleum products back to refineries for further processing.



Since the 2015 edition of this Digest DESNZ has separately identified deliveries of backflows from petrochemical plants under both the upstream side of the balance (in Table 3.1 they are included as part of the 'feedstocks' column) and the downstream part of the balance (in DUKES Table 3.2 the volumes are shown on the 'other' row in the transformation section).

Main classes of demand

These are reported sales inland as opposed to being estimates of actual consumption or use. Inland deliveries will not necessarily be consumed in the UK (e.g., aviation fuels for international flights). Demand is divided between:

- **Transformation**. The use of oil products for electricity or heat generation. The primary demand here is for electricity generators. This includes petroleum products used to generate electricity at oil refineries.
- **Energy Industry Use.** Product used to operate petroleum refineries. Typically, these are petroleum coke, natural gas, fuel oil and a small amount of gas oil.
- **Final consumption.** Further subdivided into industry use, transport use, and other use.

Transformation and energy industry use

Under transformation, oil is used in the generation of electricity, in heat generation, patent fuel manufacture, and as deliveries to the petrochemical sector. In all cases oil is used to generate energy in a different form.

Under energy industry use, oil is used by refineries themselves, and offshore in the process of extracting oil and gas from the UK Continental Shelf.

Data is reported in DUKES Table 3.2-3.4, and Energy Trends Table 3.2 and Table 3.4.

Final consumers

Within the main classes of final consumption, various breakdowns are available. These are more detailed in the annual tables (DUKES 3.2 - 3.4) than the monthly and quarterly tables (Energy Trends 3.2, 3.4, and 3.13).

- **Agriculture.** Deliveries of fuel oil and gas oil/diesel for use in agricultural power units, dryers, and heaters. Burning oil for farm use.
- **Iron and steel.** Deliveries of petroleum products to steel works and iron foundries. This is based on information from the Iron and Steel Statistics Bureau.
- **Other industries**. The industries covered correspond to the industrial groups shown in Table 1E of DUKES excluding Iron and Steel of Chapter 1.
- **National navigation.** Fuel oil and gas/diesel oil delivered, other than under international bunker contracts, for fishing vessels, UK oil and gas exploration and production, coastal and inland shipping and for use in ports and harbours.
- **Railways.** Deliveries of gas/diesel oil to railways are based on estimates produced by AEA Energy and Environment as part of their work to compile the UK Greenhouse Gas Inventory (year-2 basis). A year-1 estimate is produced based on passenger number and freight volumes from the Office of Rail Regulation (ORR). See Energy Trends article in the June 2011 edition.
- **Air transport**. Total inland deliveries of aviation turbine fuel and aviation spirit. The figures cover deliveries of aviation fuels in the United Kingdom to international and other airlines, British and foreign Governments (including armed services) and for private flying.
- **Road transport.** Deliveries of petrol and white diesel fuel for use in road vehicles of all kinds.
- **Domestic.** Fuel oil and gas oil delivered for central heating of private houses and other dwellings and deliveries of kerosene (burning oil) and liquefied petroleum gases for domestic purposes.
- **Public services**. Deliveries to national and local Government premises (including educational, medical and welfare establishments and British and foreign armed forces) of fuel oil and gas oil for central heating and of kerosene (burning oil).

- **Miscellaneous.** Deliveries of fuel oil and gas oil for central heating in premises other than those classified as domestic or public.

Oil definitions – energy use

Around 90% of oil and oil products are used for energy. DUKES reports on each of these categories listed below. Quarterly and monthly tables are presented at a higher level of aggregation.

- **Refinery fuel**. Petroleum products used as fuel at refineries. Typically, these are petroleum coke, natural gas, fuel oil and small amount of gas oil.
- **Ethane**. A naturally gaseous straight-chain hydrocarbon (C_2H_6) in natural gas and refinery gas streams. Primarily used, or intended to be used, as a chemical feedstock.
- **Propane**. Hydrocarbon containing three carbon atoms(C_3H_8), gaseous at normal temperature but generally stored and transported under pressure as a liquid. Used mainly for industrial purposes, but also as transport LPG, and some domestic heating and cooking.
- **Butane**. Hydrocarbon containing four carbon atoms(C_4H_{10}), otherwise as for propane. Additionally, used as a constituent of petrol to increase vapour pressure and as a chemical feedstock.
- **Naphtha** (Light distillate feedstock). Petroleum distillate boiling predominantly below 200°C.
- **Aviation spirit**. All light hydrocarbon oils intended for use in aviation piston-engine power units, including bench testing of aircraft engines.
- **Petrol**. Blended light petroleum components used as fuel for spark-ignition internal-combustion engines other than aircraft engines:
  - (i) Premium unleaded grade. all finished petrol, with an octane number (research method) not less than 95.
  - (ii) Lead Replacement petrol / Super premium unleaded grade. finished petrol, with an octane number (research method) not less than 97.
- **Aviation turbine fuel** (ATF). All other turbine fuel intended for use in aviation gas-turbine power units and including bench testing of aircraft engines.
- **Burning oil** (kerosene or “paraffin”). Refined petroleum fuel, intermediate in volatility between petrol and gas oil, used primarily for heating. White spirit and kerosene used for lubricant blends are excluded.
- **Gas/diesel oil**. Petroleum fuel having a distillation range immediately between kerosene and light-lubricating oil:
  - (i) **White diesel.** Typically for use in vehicles subject to Vehicle Excise Duty but also used in the commercial and industry sectors since the duty status change to red diesel (gas oil) in April 2022. White diesel is shown as a separate column in Table 3.2. An article discussing this, and changes to the monthly and quarterly tables, can be found in March 2011’s edition of Energy Trends.
  - (ii) **Red diesel (gas oil)**. Used as a burner fuel in heating installations, for industrial gas turbines and as for white diesel but in vehicles not subject to Vehicle Excise Duty (e.g., Agriculture vehicles, fishing vessels, construction equipment).
  - *(iii)* **Marine diesel oil**. heavier type of gas oil suitable for heavy industrial and marine compression-ignition engines.

- **Fuel oil**. Heavy petroleum residue blends used in atomising burners and for heavy-duty marine engines (marine bunkers, etc.) with heavier grades requiring pre-heating before combustion. Excludes fuel oil for grease making, lubricating oil and oil sold for road making.
- **Biofuels in transport.** The quantity of biofuels blended into petrol and white diesel are shown in Table 3.4 of DUKES. Total consumption of biofuels and road fuels are shown in Energy Trends Table 3.5, based on the volume of fuel for which excise duty has been paid to HM Revenue and Customs (HMRC). Whilst petrol has remained flat in recent years there has been an increase in consumption of bio diesel as the Renewable Fuel Transport Obligation increases the minimum threshold over time. Further details on biofuel consumption can be found in Chapter 6 of DUKES and Energy Trends. Biofuels are also included in the overall energy balances in Chapter 1.

Oil definitions – non energy use

Oil is used for several non-energy uses and, excepting crude oils, comprise around 10% of the UK's demand for petroleum products. DUKES reports on each of these categories listed below. Quarterly and monthly tables are presented at a higher level of aggregation.

- **Crude and process oils**. These are all feedstocks, other than distillation benzene, for refining at refinery plants. Gasoline feedstock is any process oil whether clean or dirty which is used as a refinery feedstock for the manufacture of gasoline or naphtha. Other refinery feedstock is any process oil used for the manufacture of any other petroleum products.
- **Feedstock for petroleum chemical plants**. All petroleum products intended for use in the manufacture of petroleum chemicals. This includes middle distillate feedstock of which there are several grades depending on viscosity. The boiling point ranges between 200°C and 400°C.
- **White spirit and specific boiling point (SBP) spirits**. These are refined distillate intermediates with a distillation in the naphtha / kerosene range. White spirit has a boiling range of about 150°C to 200°C and is used as a paint or commercial solvent. SBP spirit is also known as Industrial spirit and has a wider boiling range that varies up to 200°C dependent upon its eventual use. It has a variety of uses that vary from use in seed extraction, rubber solvents and perfume.
- **Lubricating oils (and grease).** Refined heavy distillates obtained from the vacuum distillation of petroleum residues. Includes liquid and solid hydrocarbons sold by the lubricating oil trade, either alone or blended with fixed oils, metallic soaps and other organic and/or inorganic bodies.
- **Bitumen**. The residue left after the production of lubricating oil distillates and vacuum gas oil for upgrading plant feedstock. Used mainly for road making and building construction purposes. Includes other petroleum products such as creosote and tar mixed with bitumen for these purposes and fuel oil sold specifically for road making.
- **Petroleum wax**. Includes paraffin wax, which is a white crystalline hydrocarbon material of low oil content normally obtained during the refining of lubricating oil distillate, paraffin scale, slack wax, microcrystalline wax, and wax emulsions. Used for candle manufacture, polishes, food containers, wrappings etc.

- **Petroleum coke**. Carbonaceous material derived from hydrocarbon oils, uses for which include metallurgical electrode manufacture. Quantities of imports of this product are used as a fuel.
- **Miscellaneous products**. Includes aromatic extracts, defoaming solvents and other minor miscellaneous products.

UK register of emergency oil reserves

DORS data is used to capture information on market activity to assist the Department with the business of calculating the UK international oil stockholding obligation, in setting company level directions to meet this obligation, and in reporting the UK register of stocks to the International Energy Agency (IEA). The UK attracts an international commitment to hold reserves of oil to mitigate the impacts of a supply disruption on markets through membership of the IEA. Please see the Department's website on oil stocking for further information. Data on oil stocks is published monthly in Energy Trends 3.11 and annually in DUKES Table 3.7. See also special feature articles in Energy Trends for analysis of locations of stocks held.

Users of the data

DESNZ itself is one of the main users of the oil and oil product statistics as these figures are included monthly, quarterly (Energy Tables) and annual (DUKES) statistics to help provide the complete energy picture.

In addition, the figures are also used when DESNZ makes projections of energy demand, fuel mix and resulting CO2 emissions. Outside of DESNZ the statistics are used by other government departments (e.g., Department for Transport, Office of National Statistics and Her Majesty's Revenue and Customs), by HM Treasury (for example to feed into budget advice), the oil industry, academics, and other external organisations.

There is also an international interest in these statistics as we are required to submit monthly and annual oil information to the IEA, which includes the register of UK emergency reserves of oil.

Department for
Energy Security
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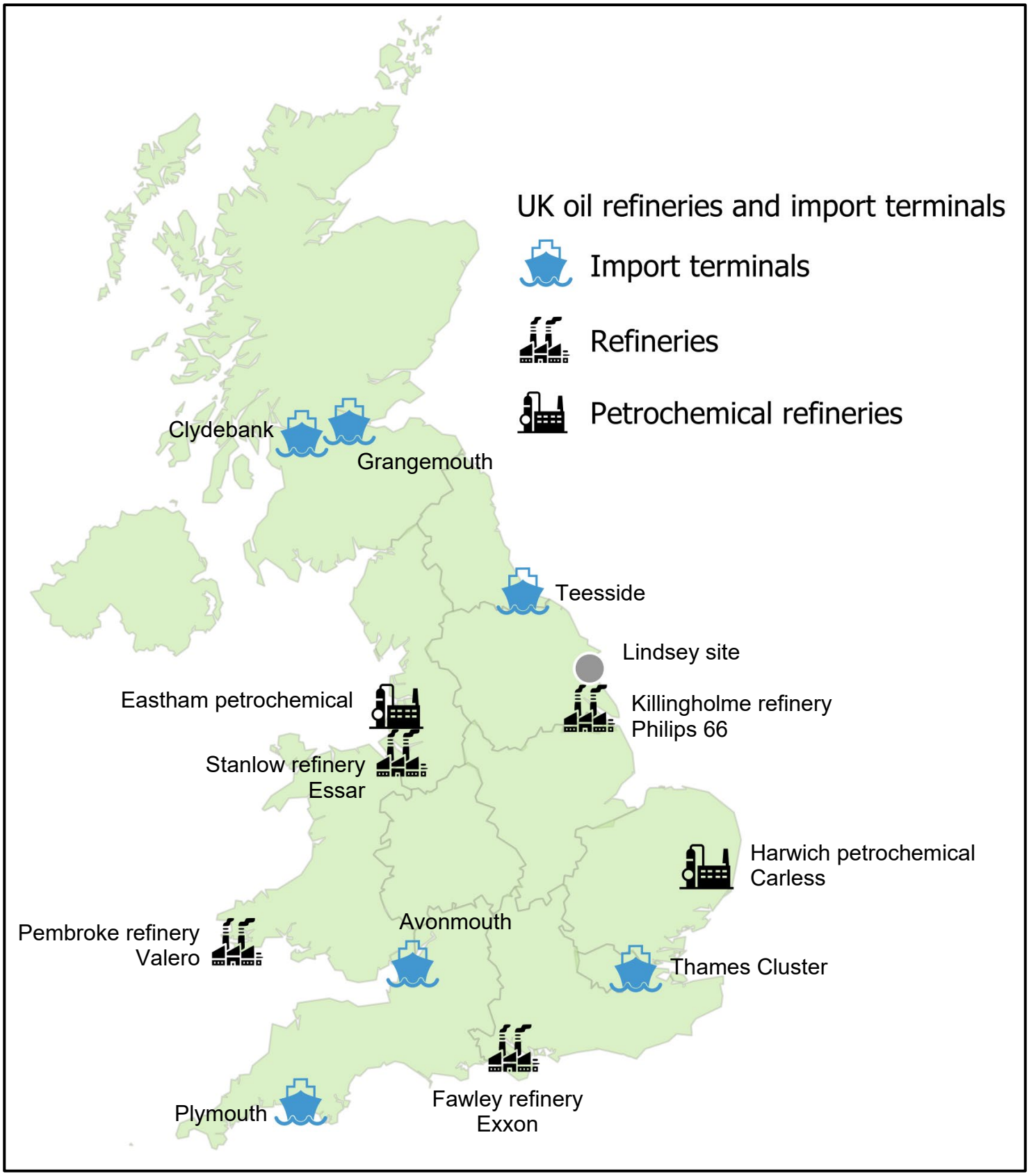
Annex 1: Map of UK refineries, major import terminals, and petrochemical plants



Annex 2: Table of refinery nameplate capacities as of July 2025

Million tonnes per annum

Refinery	Atmospheric Distillation	Reforming	Cracking and Conversion
Fawley Exxon	13.3	4.4	5.0
Stanlow Essar	10.2	1.6	4.0
Pembroke Valero	10.8	2.1	6.3
Killingholme Phillips 66	11.9	2.6	10.7
Petrochemical refineries			
Harwich Petrochem Carless	< 1.0	-	-
Eastham Refinery	1.2	-	-
Total	**48.4**	**10.7**	**26.0**