EU imports of energy products - latest developments

Statistics Explained

Data extracted in December 2024.
Planned article update: 26 June 2025.

Highlights

" EU imports of energy products decreased in 2024 compared with 2023, both in value and quantity. "

" In 2024, the United States was the largest partner for EU imports of liquefied natural gas and petroleum oils. "

" In 2024, Norway was the largest partner for EU imports of natural gas in gaseous state. "

This article provides a picture of trade in energy products between the European Union (EU) and the rest of the world (extra-EU trade). The analysis focuses on yearly data for the period 2020-2024, with a view on Q4 2023 and 2024, thus reflecting the most recent developments. Until the end of 2021, Russia was the main supplier of petroleum oils and natural gas to the EU. After Russia's invasion of Ukraine, the European Union reacted with several packages of sanctions, which directly and indirectly affected the trade of oils and natural gas. A major diversification of suppliers started to emerge progressively in the following periods. The article shows data on trade in value (expressed in millions of euros) and net mass (weight expressed in tonnes). Supplementary information like trade in terajoules of natural gas can be found in Eurostat databases. The energy products considered in this article are petroleum oils (petroleum oils from natural gas condensates and petroleum oils obtained from bituminous minerals, crude), natural gas (liquefied and in gaseous state) and solid fuels (coal, lignite, peat and coke). This article is part of an online publication providing recent statistics on international trade in goods, covering information on the EU's main partners, main products traded, specific characteristics of trade as well as background information.

Overview

The analysis of the latest data shows a decline in Q4 2024 compared with the same quarter of 2023. This continues the trend seen from 2022. In Q4 2024, with respect to the same quarter in 2023, values decreased by 15.3%, while the net mass dropped by 2.5%. Comparing 2024 with 2023, values decreased by 16.2%, while the net mass dropped by 7.1%.

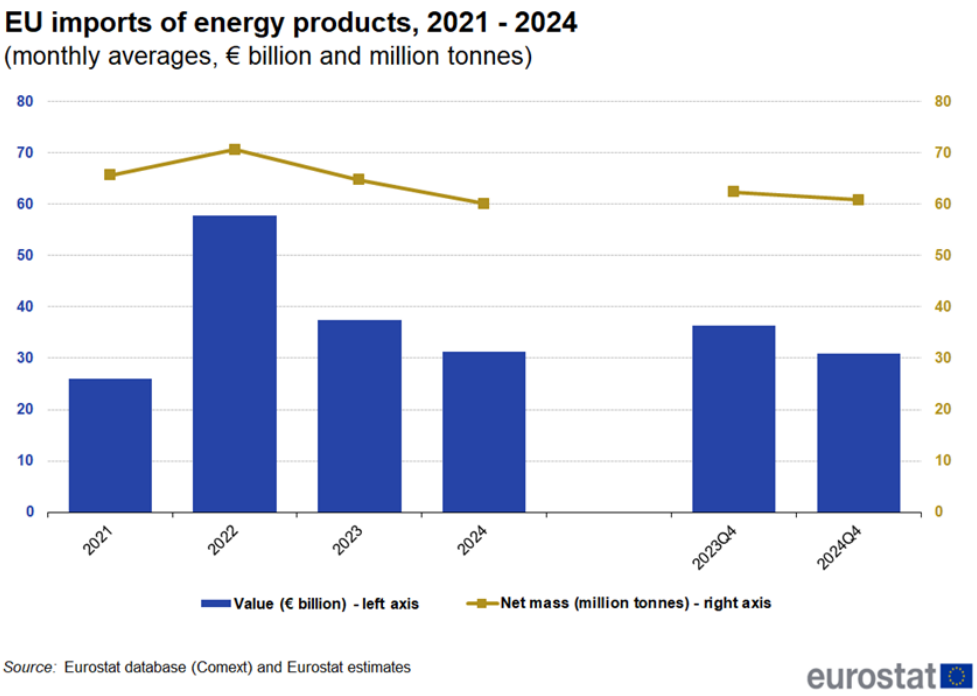

Figure 1: EU imports of energy products, 2021-2024 (monthly averages, € billion and million tonnes) Source: Eurostat database (Comext) and Eurostat estimates

For the energy products analysed in this article, Figure 2 shows their share on total EU imports in the years 2020-2024, as well as in Q4 2023 and 2024. The share of energy products on total EU imports observed significant fluctuations, because of strong volatility in their prices, peaking in 2022 at 22.8% on total EU imports. This was followed by a notable decline in 2023 to 17.8% and again in 2024 to 15.4%. Also, in Q4 2024, there was a decrease of 3.2 percentage points (pp) compared with the same quarter in 2023. The breakdown by products shows that between 2023 and 2024, the shares of liquefied natural gas (-1.0 pp) and natural gas in gaseous state (-0.9 pp) decreased most while the shares of natural gas in gaseous state and coal did not change much.

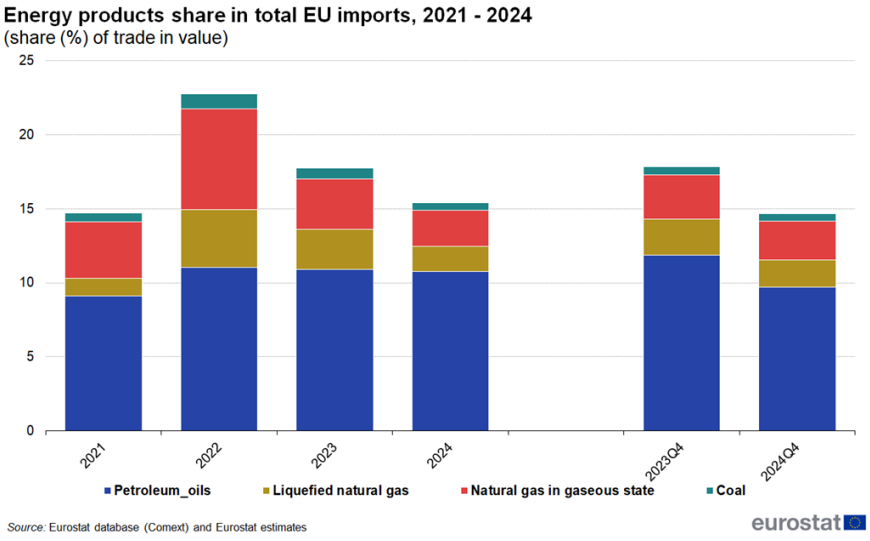

Figure 2: Energy products share in total EU imports, 2021-2024 (share (%) of trade in value) Source: Eurostat database (Comext) and Eurostat estimates

Figure 3 shows the evolution of the volume of imports of energy products since Q1 2021. In Q4 2024 the volume of

liquefied natural gas rose by 23.4% compared with the previous quarter and was 71.6% above Q1 2021. The increased popularity of liquefied natural gas could be explained by certain factors, such as ease of transport, higher efficiency and cleaner use compared with other sources of energy. The volume of petroleum oils (+7.6%) also increased between Q1 2021 and Q4 2024. By
contrast, the volumes of natural gas in gaseous state (-43.0%) and coal (-21.8%) dropped considerably in this period.

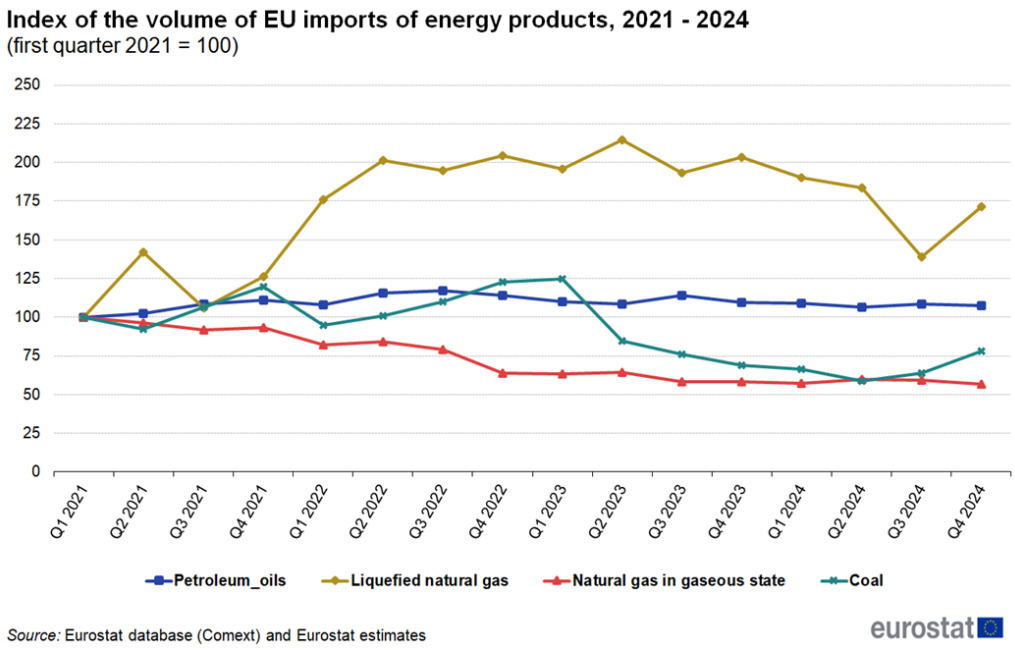

Figure 3: Index of the volume of Extra-EU imports of energy, 2021-2024 (first quarter 2021 = 100) Source: Eurostat database (Comext) and Eurostat estimates

Main suppliers of petroleum oils, natural gas and coal to the EU

Russia's invasion of Ukraine led to significant changes in the share of the main partners because of several sanctions directly and indirectly affecting the imports of energy products.

With regard to petroleum oils, the EU ban on seaborne imports of Russian crude oil entered into force on 5 December 2022, followed by the embargo on refined oil products as of 5 February 2023. The impact of these measures is visible in Figure 4 where Russia is no longer among the 7 main partners in the latest 2 years. In the 2024, the United States (16.1%), Norway (13.5%) and Kazakhstan (11.5%) were the largest partners. The largest increase between 2023 and 2024, was seen in the share of Kazakhstan (+2.1 pp).

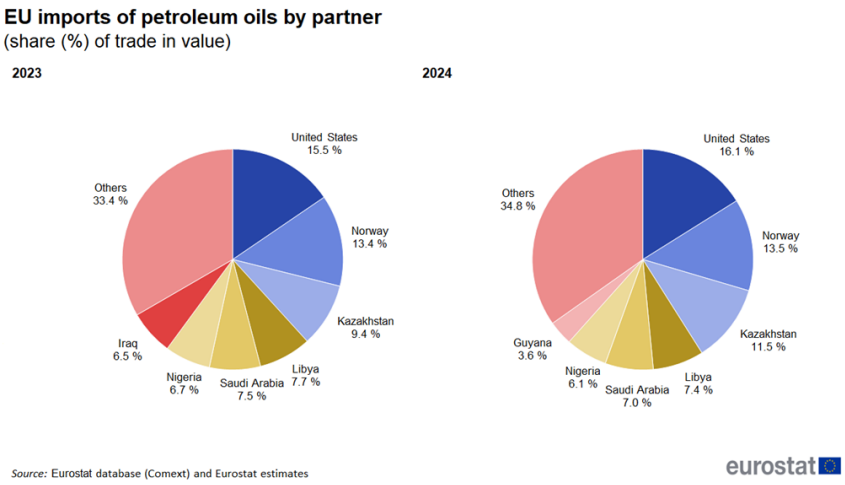

Figure 4: EU imports of petroleum oils by partner (% share of trade in value) Source: Eurostat database (Comext) and Eurostat estimates

Norway was the largest supplier of natural gas in gaseous state to the EU in the 2024 with a share of 45.6% (see Figure 5). It was followed by Algeria (19.3%) and Russia (16.6%). Compared with 2023, the share of Algeria increased by 2.8 pp. By contrast, the share of the United Kingdom decreased by 5.2 pp in this period.

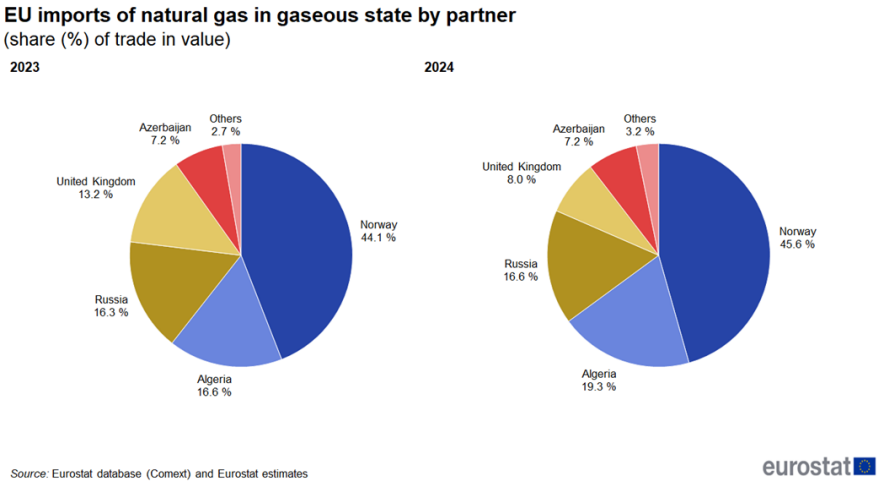

Figure 5: EU imports of natural gas in gaseous state by partner (% share of trade in value) Source: Eurostat database (Comext) and Eurostat estimates

In 2024, Russia's share in EU imports of liquefied natural gas increased by 5.5 pp (see Figure 6) compared with 2023. In 2024, Russia (17.5%) was the EU's second largest supplier of liquefied natural gas behind the United States (45.3%).

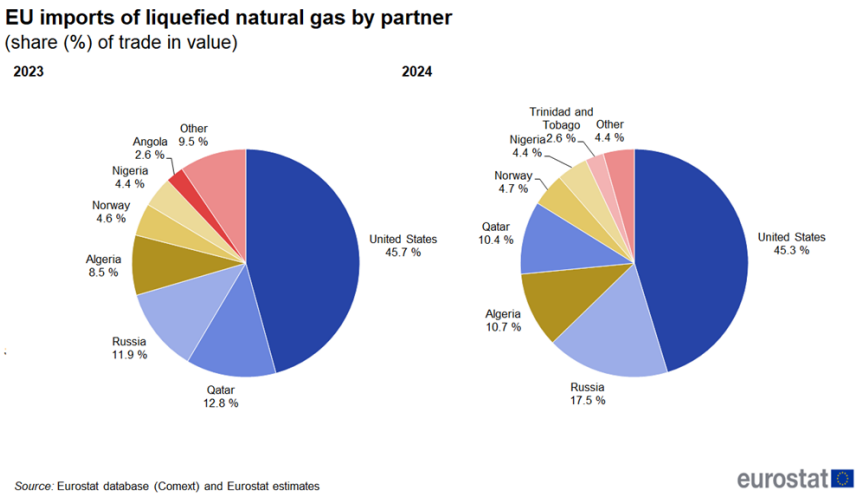

Figure 6: EU imports of liquefied natural gas by partner (% share of trade in value) Source: Eurostat database (Comext) and Eurostat estimates

Russia had been the largest supplier of coal to the EU in Q4 2021 with a share of 47.9%. However, the fifth package of EU sanctions imposed a prohibition to purchase, import or transfer coal and other solid fossil fuels into the EU if they originate in Russia or are exported from Russia. As a consequence Russia's share in EU imports of coal dropped to zero in Q4 2022. In 2024, the 2 main partners were Australia (37.3%) and the United States (32.3%).

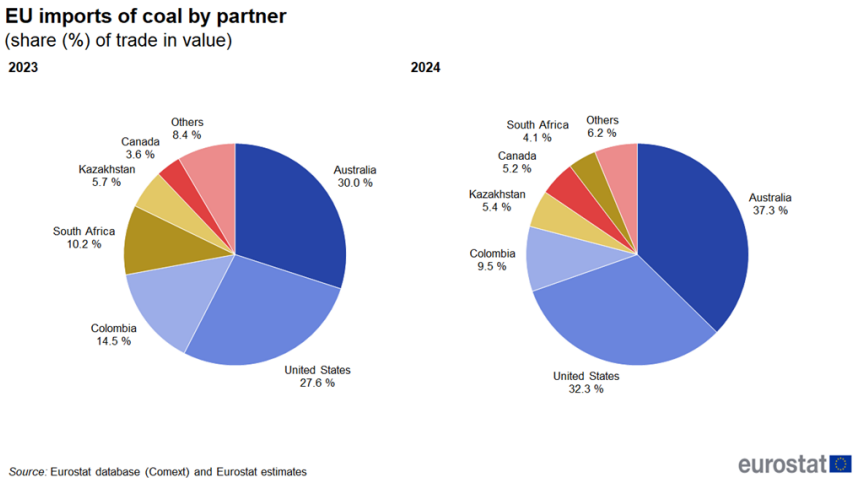

Figure 7: EU imports of coal by partner (% share of trade in value) Source: Eurostat database (Comext) and Eurostat estimates

Trend in extra-EU imports of energy products

Imports of petroleum oils increased between Q1 2021 and Q3 2022 both in value and in volume (see Figure 8). Since then both value and volume decreased. In Q4 2024 compared with Q1 2021, there was an increase of 61% in value but only an 8% increase in volume.

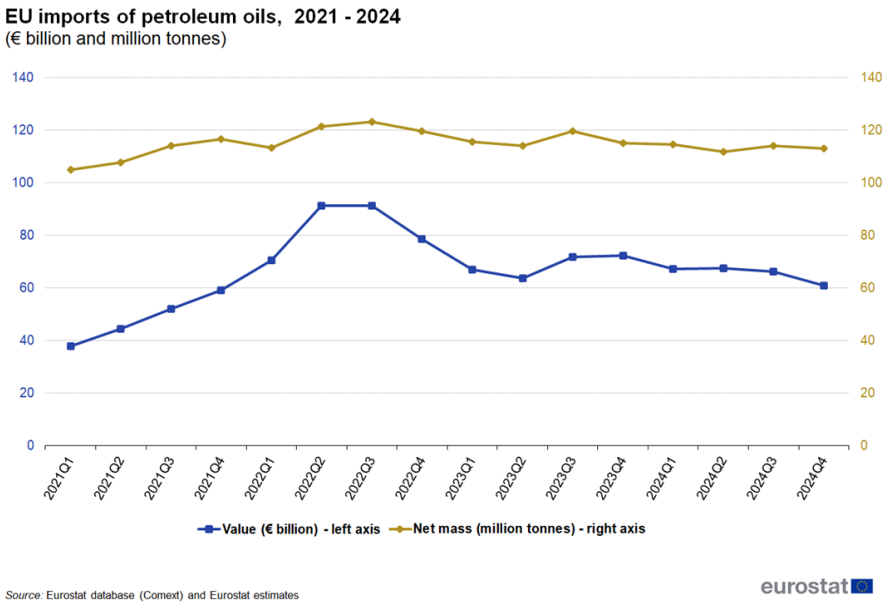

Figure 8: EU imports of petroleum oils, 2021-2024 (million tonnes and € billion) Source: Eurostat database (Comext) and Eurostat estimates

Imports of natural gas in gaseous state increased between Q1 2021 and Q3 2022 in value but decreased in volume (see Figure 9). Since then both value and volume decreased. In Q4 2024 compared with Q1 2021, there was an increase of 50% in value but a decrease of 43% in volume.

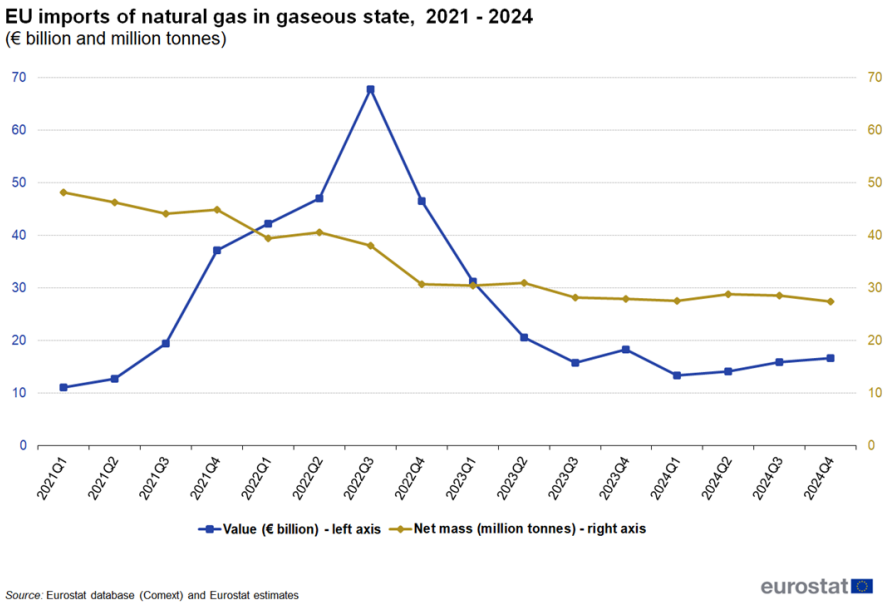

Figure 9: EU imports of natural gas in gaseous state, 2021-2024 (million tonnes and € billion) Source: Eurostat database (Comext) and Eurostat estimates

Imports of liquefied natural gas increased between Q1 2021 and Q3 2022, both in value and in volume (see Figure 10). Since then the value decreased strongly while the volume fell somewhat less. In Q4 2024, there was an increase of 311% in value and a 72% increase in volume compared with Q1 2021.

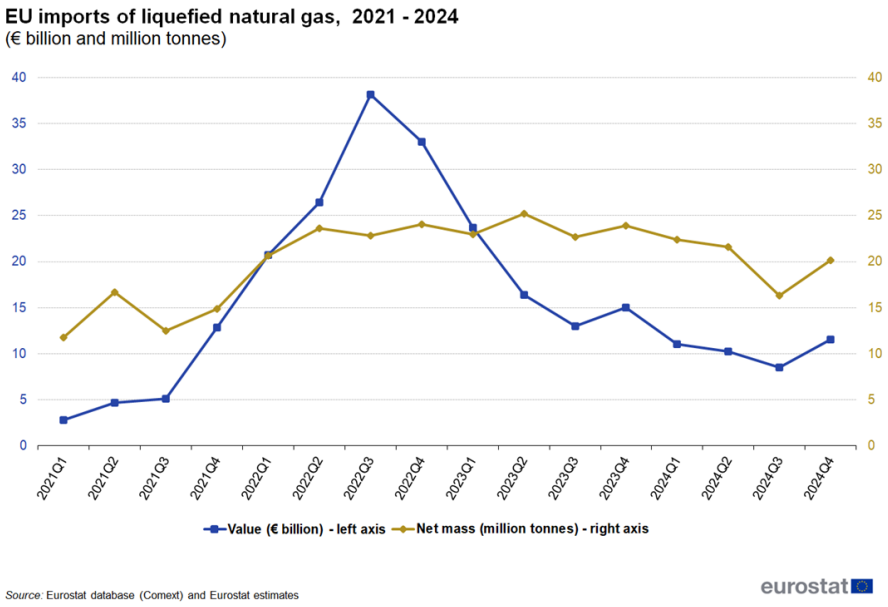

Figure 10: EU imports of liquefied natural gas, 2021-2024 (million tonnes and € billion) Source: Eurostat database (Comext) and Eurostat estimates

Imports of coal, measured in value increased between Q1 2021 and Q3 2022 while volume fluctuated strongly (see Figure 11). Since then the value decreased strongly while the volume began falling some-
what later. In Q4 2024 compared with Q1 2021, there was an increase of 72% in value but a 22% decrease in volume.

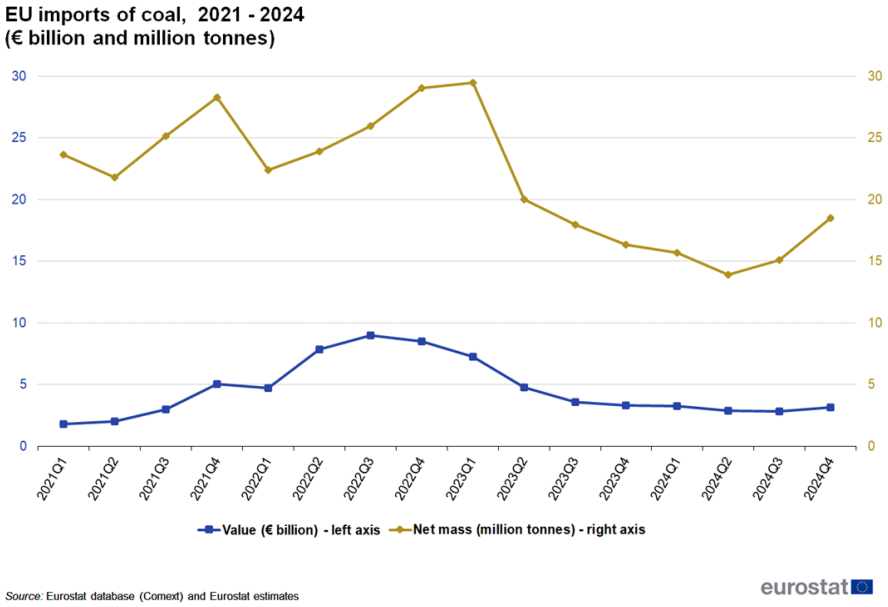

Figure 11: EU imports of coal, 2021-2024 (million tonnes and € billion) Source: Eurostat database (Comext) and Eurostat estimates

Source data for tables and graphs

The excel file attached to this article contains all figures and tables shown in the article as well as some additional detailed tables.

- Tables and figures energy

Data sources

EU data is taken from Eurostat's COMEXT database. COMEXT is the reference database for international trade in goods. It provides access not only to both recent and historical data from the EU Member States but also to statistics of a significant number of non-EU countries. International trade aggregated and detailed statistics disseminated via the Eurostat website are compiled from COMEXT data according to a monthly process.

Data are collected by the competent national authorities of the EU Member States and compiled according to a harmonised methodology established by EU regulations before transmission to Eurostat. For extra-EU trade, the statistical information is mainly provided by the traders on the basis of customs declarations.

EU data are compiled according to EU guidelines and may, therefore, differ from national data published by the EU Member States. Statistics on extra-EU trade are calculated as the sum of trade of each of the 27 EU Member States with countries outside the EU. In other words, the EU is considered as a single trading entity and trade flows are measured into and out of the area, but not within it.

Trade in energy products is more susceptible of being confidential. In the context of this article, Eurostat has carried out some estimation in order to provide more accurate information while not disclosing confidential figures. Note that those estimated data cannot be retrieved from Eurostat databases or found in other publications. When going through the figures, it should also be kept in mind that confidentiality treatments may impact the data consistency. In particular, total values may slightly diverge from the sum of their subcomponents.

The United Kingdom is considered as an extra-EU partner country of the EU for the whole period covered by this article. However, the United Kingdom was still part of the internal market until the end of the transitory period (31 December 2020), meaning that data on trade with the United Kingdom are still based on statistical concepts applicable to trade between the EU Member States. Consequently, while imports from any other extra-EU trade partner are grouped by country of origin, the United Kingdom data reflect the country of consignment. In practice this means that the goods imported by the EU from the United Kingdom were physically transported from the United Kingdom but part of these goods could have been of other origin than the United Kingdom. For this reason, data on trade with the United Kingdom are not fully comparable with data on trade with other extra-EU trade partners.

Energy products

This article analyses the EU imports of the following subset of energy products, as classified according to the Combined Nomenclature (CN), of either 4 or 8 digits. Chapter 27 of the Combined Nomenclature (mineral fuels, mineral oils) contains more products than the ones considered in this article. The CN codes analysed are grouped as follows:

Petroleum oils

- 27090010: Petroleum oils from natural gas condensates
- 27090090: Petroleum oils and oils obtained from bituminous minerals, crude

Natural gas

- 27111100: Natural gas, liquefied
- 27112100: Natural gas in gaseous state

Solid fuels

- 2701: Coal
- 2702: Lignite
- 2703: Peat
- 2704: Coke

Note that Eurostat publishes additional energy statistics in the Energy Dedicated Section . With regards to imports and exports of energy products, there are methodological reasons for differences between figures from energy statistics and figures presented in this article originating from international trade in goods statistics (ITGS):

- **Different data sources** : The sources for ITGS are the Intrastat declarations for intra-EU trade and the customs declarations for extra-EU trade. Additional data sources like data from national grid operators can also be used for natural gas and electricity. The sources for energy statistics are special statistical surveys, administrative data and estimations.
- **Different concept applicable to the partner country** : In ITGS, the partner country is the country of consignment for intra-EU imports and the country of origin for extra-EU imports. In energy statistics, the partner country is the country of origin for both intra- and extra-EU imports.
- **Different breakdowns** : Imports and exports are available in quantities and values broken down by partner in ITGS while only the quantities without partner breakdown are available in energy statistics.
- **Different estimation techniques** : In ITGS, the value is collected or estimated (estimation based on collected invoice value or, for natural gas and electricity, on additional data sources) while in energy statistics the value is not collected but estimated using quantities and retail prices.

Units of measure

- **Trade values** correspond to the statistical value. For imports, this is the amount in national currency which would be invoiced in case of purchase at the national border of the reporting country. It is called a CIF value (cost, insurance, freight) for imports.
- **Quantities** correspond to the net mass, expressed in tonnes.
- **Supplementary information** like trade in terajoules for natural gas can be found in Eurostat databases.

Data limitations

- **Missing EU data** — This article is mostly based on collected data (confidential and non-confidential). Missing data is estimated by the compilers of statistical information in the EU Member States.
- **Confidentiality** — Because of confidentiality, total values may differ from the sum of individual components.
- **Trade and consumption** — This article focuses on imports and exports of energy products and does not consider EU domestic energy production. Part of the energy products consumed in the EU is produced in the EU.

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