

# EU imports of energy products - recent developments

Statistics Explained

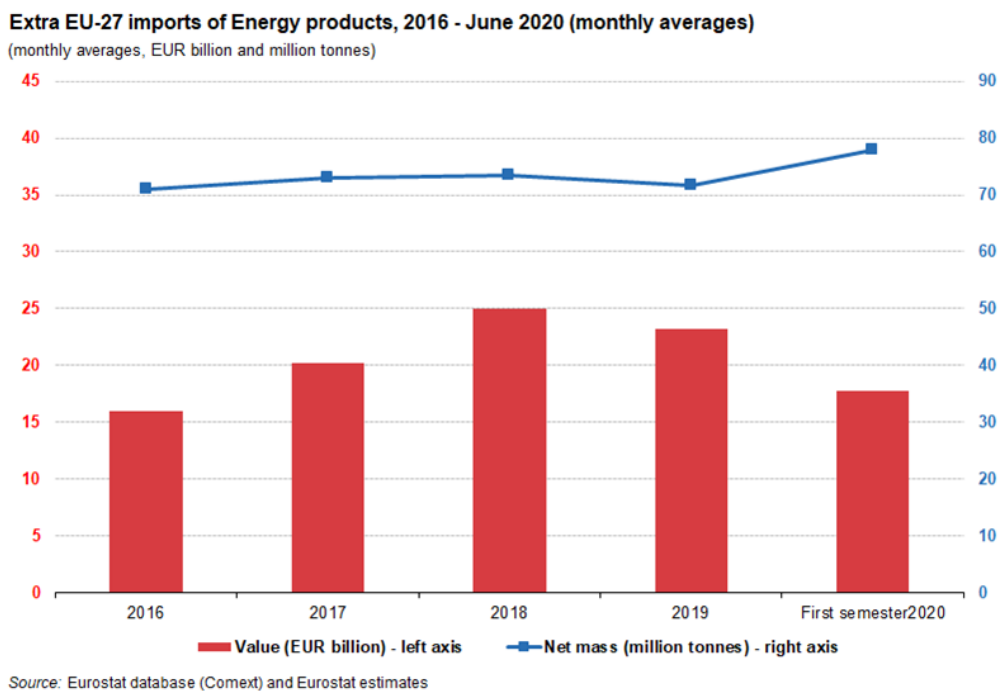
*Data extracted in October 2020.  
Planned article update: May 2021.*

This article provides a picture of trade in energy products between the [European Union \(EU\)](#) and the rest of the world ( [extra EU trade](#) ), and between the Member States ( [intra-EU trade](#) ). Special focus is given to Russia as the main supplier of [petroleum oils](#) and natural gas to the EU. Coal, lignite, peat and coke are the other key energy products considered hereafter.

Annual data from 2016 to June 2020 are included, thus reflecting the most recent developments. Priority was given to trade in value (expressed in millions of euros) and net mass (weight without packaging expressed in tonnes). Supplementary information like trade in terajoules for natural gas can be found in [Eurostat](#) databases.

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



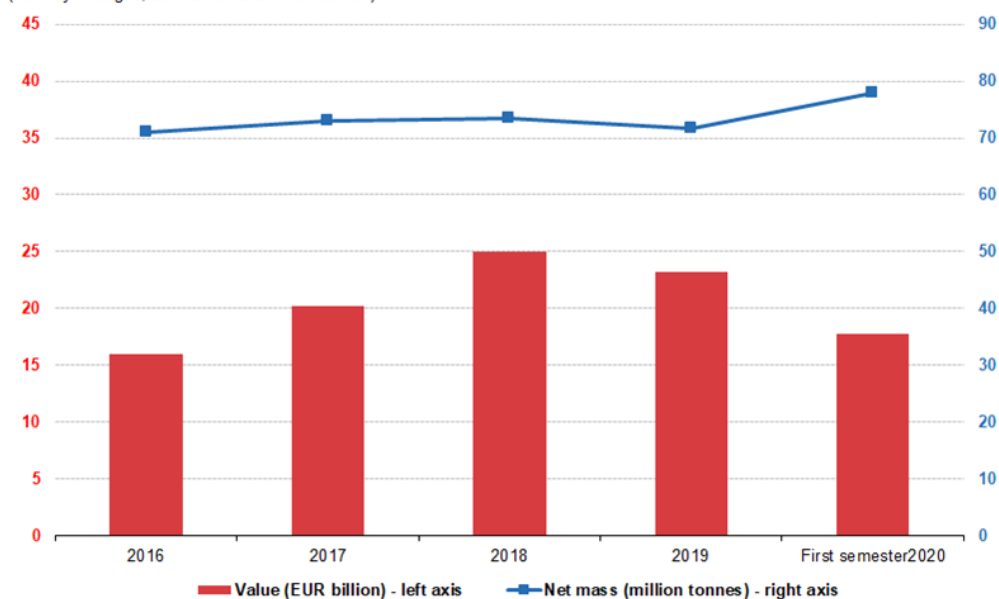
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**Figure 1: Extra EU-27 imports of energy products, monthly averages, 2016 - June 2020**

The latest figures show the upward trend of the energy bill from 2016 to 2018 reversing in 2019 (Figure 1). The average monthly value of imports in energy products rose from EUR 16.0 billion per month in 2016 to EUR 25.0 billion per month in 2018 but fell to EUR 17.7 billion in the first half of 2020. The development of the volume of energy products fluctuated less, it was highest in 2020 (77.9 million tonnes) and lowest in 2016 (70.9 million tonnes).

### Extra EU-27 imports of Energy products, 2016 - June 2020 (monthly averages)

(monthly averages, EUR billion and million tonnes)



Source: Eurostat database (Comext) and Eurostat estimates

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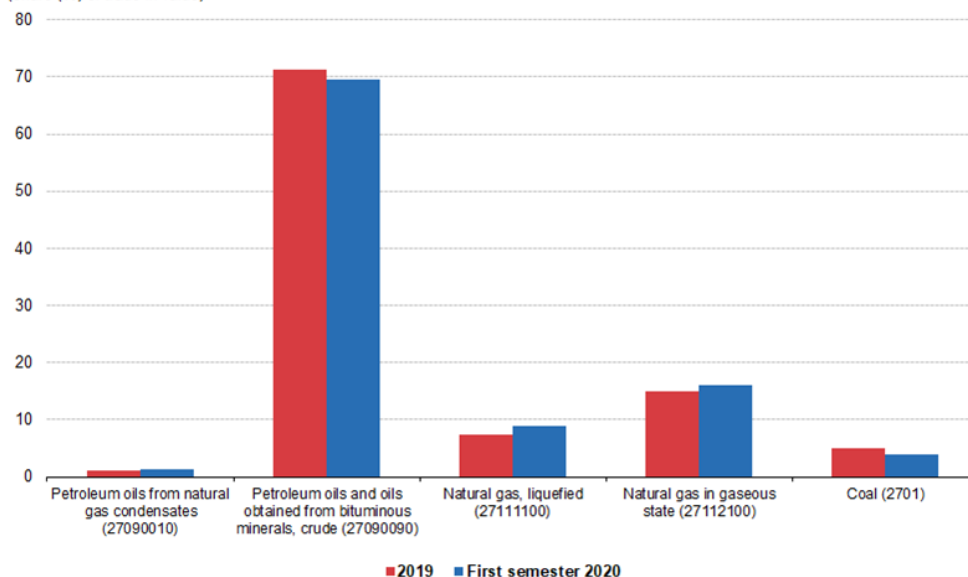
### Extra EU-27 imports of energy products, monthly averages, 2016 - June 2020

#### Main suppliers of natural gas and petroleum oils to the EU

Crude oil is by far the largest imported energy product (69.4 % of total EU energy imports in the first half of 2020) ahead of natural gas in gaseous state (16.0 %), as shown in Figure 2. For crude oil this was 1.8 percentage points less than in 2019. The shares of natural gas in gaseous states and liquefied natural gas increased by 1.6 percentage points (pp) and 1.0 pp respectively. The share of coal decreased by 1.1 pp.

**Share of each product in extra EU-27 imports in energy, 2019 and first semester 2020**

(share (%) of trade in value)



Source: Eurostat database (Comext) and Eurostat estimates

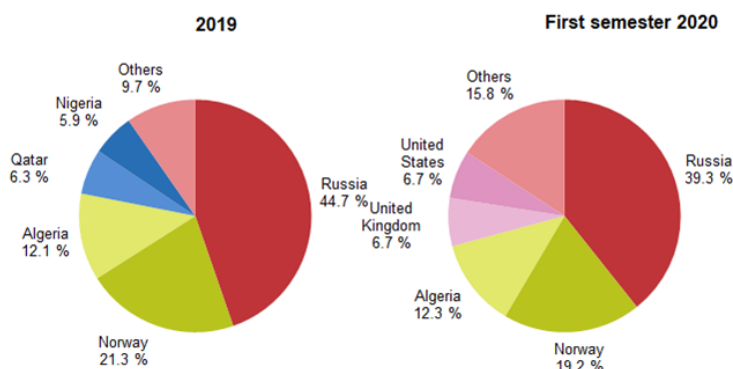


**Figure 2: Share of each product in extra EU-27 imports in energy, 2019 and first semester 2020 (share (%) of trade in value)**

The detailed tables for imports and exports of energy products are available [here](#) . Russia was the largest supplier of natural gas to the EU, both in 2019 and 2020 (Figure 3 and Map 1); the only other partners with a significant share in total extra EU-27 imports were Norway and, at some distance Algeria. The global share of all the other countries exporting natural gas to the EU was 21.9 % in 2019 and 29.2 % in 2020 in terms of trade value.

**Extra EU-27 imports of natural gas from main trading partners, 2019 and first semester 2020**

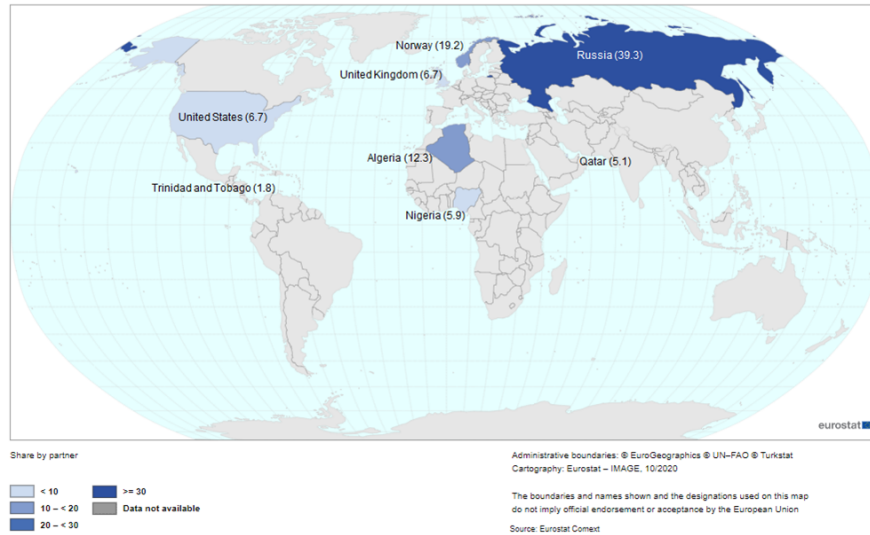
(share (%) of trade in value)



Source: Eurostat database (Comext) and Eurostat estimates

**Figure 3: Extra EU-27 imports of natural gas from main trading partners, 2019 and first semester 2020 (share (%) of trade in value)**

Main extra EU-27 partner for imports of natural gas, first semester 2020  
(shares %)



Map 1: Natural gas, main partners, first semester 2020 (share (%) of trade in value)

As can be seen in Figure 4 and Map 2, Russia was less dominant in petroleum oils than in natural gas but still far ahead of the second largest supplier, the United States. They were followed by Kazakhstan, Nigeria, Norway and Saudi Arabia. The share of the top six increased from 67.6 % in 2019 to 68.4 % in 2020.

Extra EU-27 imports of petroleum oil from main trading partners, 2019 and first semester 2020  
(share (%) of trade in value)

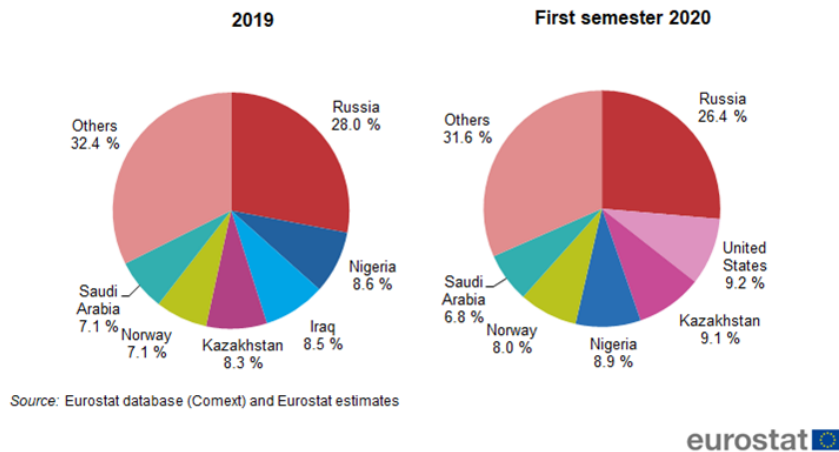
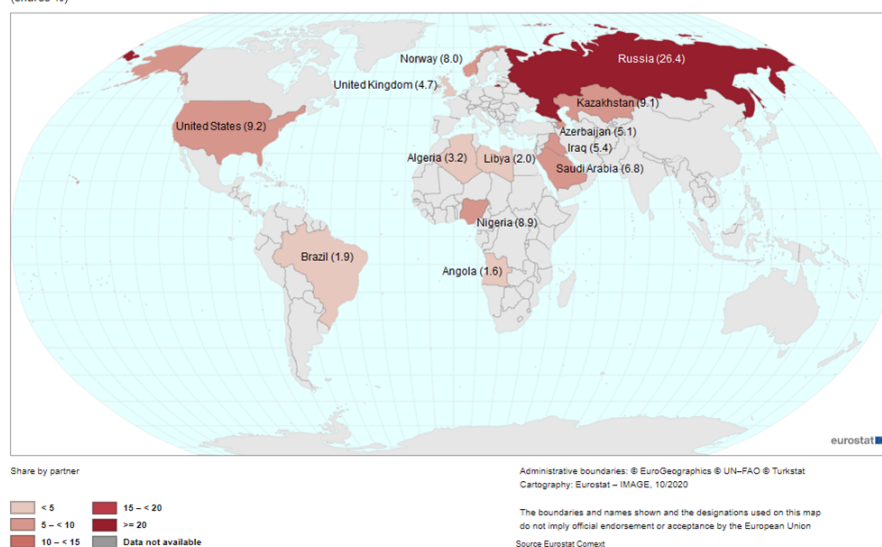


Figure 4: Extra EU-27 imports of petroleum oil from main trading partners, 2019 and first semester 2020 (share (%) of trade in value)

Main extra EU-27 partners for imports of petroleum oils, first semester 2020  
(shares %)



Map 2: Petroleum oil, main partners, first semester 2020 (share (%) of trade in value)

The detailed tables for main import partners of petroleum oils and natural gas are available [here](#).

### Trend in extra EU imports of energy products

The EU imports of natural gas from Russia and the rest of the world, expressed in value and net mass, are shown in Figure 5. In value, both the extra EU-27 total and Russian imports rose between 2016 and 2018 but fell in 2019. When measuring in net mass, between 2016 and 2018 there was an increase in imports from Russia falling slightly in 2019. For other countries there was an increase in every year except 2017.

Extra EU-27 imports of natural gas, 2016 - first semester 2020  
(EUR billion and million tonnes)

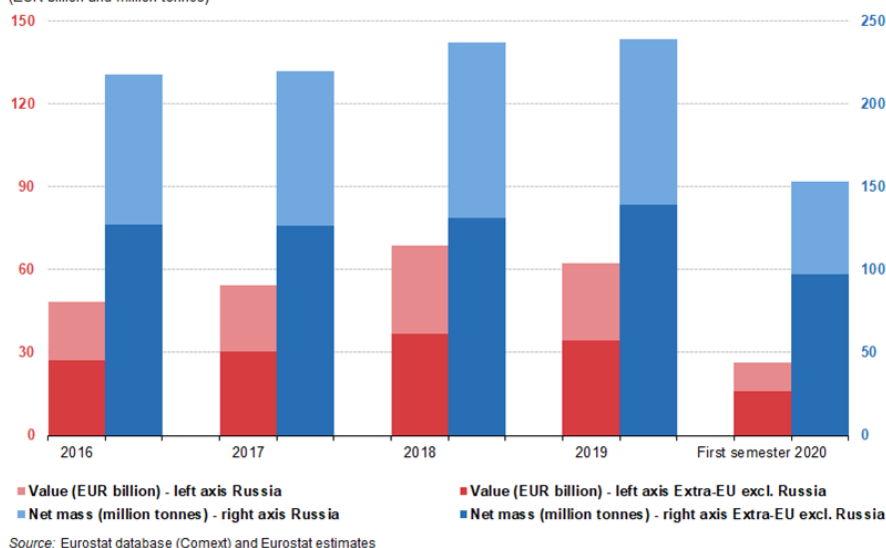


Figure 5: Extra EU-27 imports of natural gas, 2016 - first semester 2020 (EUR billion and million tonnes)

For petroleum oils, the trend of total extra EU-27 imports in value is largely similar to the trend observed for natural gas (see Figure 6). Although both the increase between 2016 and 2018 and the decrease in 2019 were more pronounced. In net mass imports from Russia decreased in each of the years between 2016 and 2019 while imports from other countries increased.

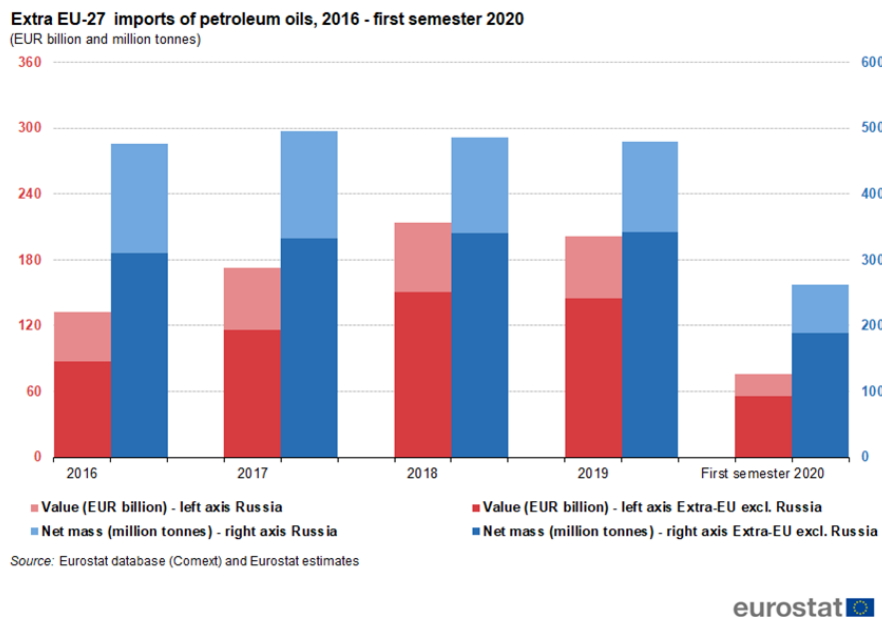


Figure 6: Extra EU-27 imports of petroleum oils, 2016 - first semester 2020 (EUR billion and million tonnes)

### Share of energy products in total EU imports

Figure 7 shows the share in total EU imports of the key energy products considered in this article. This share was 12.0 % in 2016, rising to 15.7 % in 2018 before dropping to 12.6 % in 2020. The lion's share of imports of energy products comes from petroleum oils whose share is almost three times as much as for natural gas and more than seventeen times as much as for solid fuels in 2020.

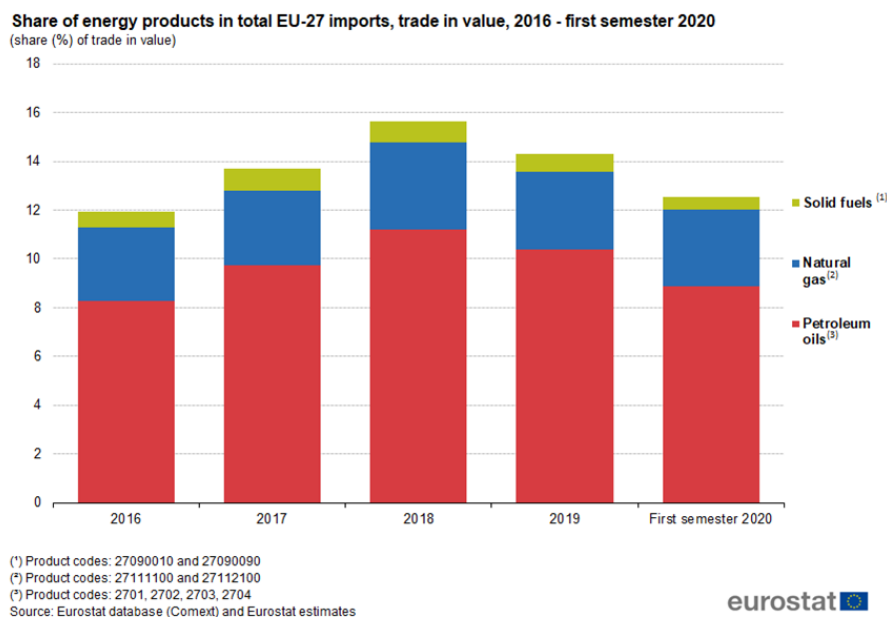
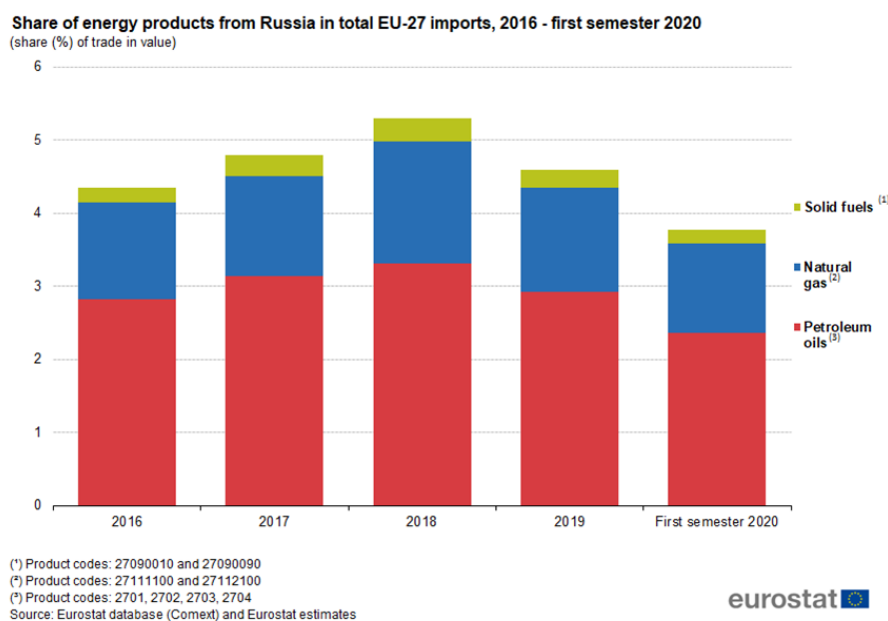


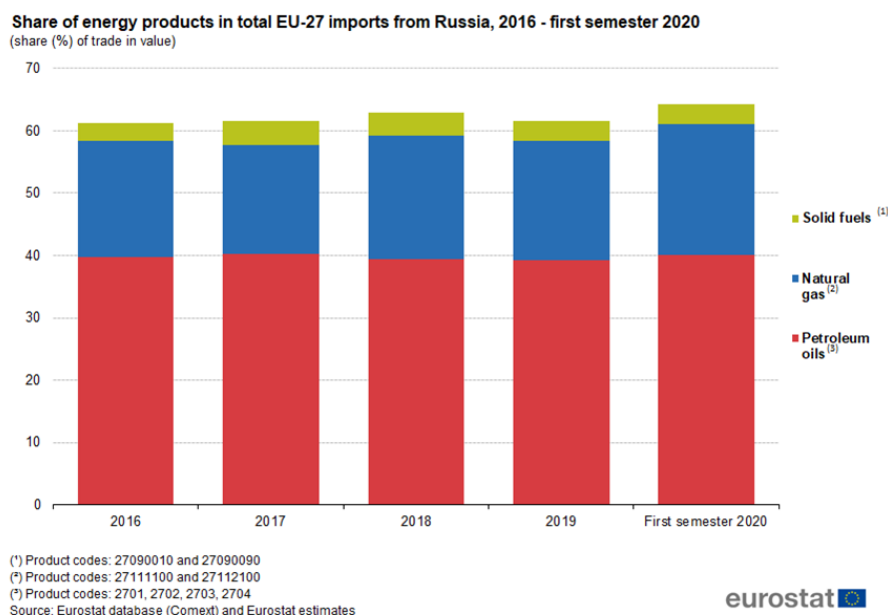
Figure 7: Share of energy products in total EU-27 imports, trade in value, 2016 - first semester 2020

When considering only the EU imports from Russia, the share of the key energy products was 3.8 % in 2020 (Figure 8), which was slightly lower than in 2016 (4.4 %). It had been as high as 5.3% in 2018.



**Figure 8: Share of energy products from Russia in total EU-27 imports, 2016 - first semester 2020 (share (%) of trade in value)**

Energy imports to the EU from Russia as a share of total imports to the EU from Russia increased by 3.2 percentage points from 61.4 % in 2016 to 64.6 % in 2020 (see Figure 9). In this period the share for petroleum oils was stable while the shares for natural gas and solid fuels increased.



**Figure 9: Share of energy products in total EU-27 imports from Russia, 2016 - first semester 2020 (share (%) of trade in value)**

The detailed tables for extra EU-27 and Russian shares of energy imports in total imports are available [here](#) .



## Member States' trade in petroleum oils and natural gas

Table 1 shows the share of each Member State in extra EU-27 imports of petroleum oils and natural gas. Note that only interval information is provided in order to avoid revealing confidential figures. The redistribution of imports among the Member States after import into the EU, as measured by intra-EU trade, is not considered. Six Member States: Germany, Spain, France, Italy, the Netherlands and Poland have shares of more than 5 % in total extra EU-27 imports for both petroleum oils and natural gas in the first half of 2020. Four of those, Germany, Italy, the Netherlands and Poland have shares of more than 5 % in total imports from Russia for both products. For France this share is more than 5 % only for natural gas while Finland's share for Russia in total extra EU-27 imports is above 5% for petroleum oils.

**Share of extra EU-27 imports of petroleum oils and natural gas by Member State, first semester 2020**  
(share (%) of trade in value)

Country	Share (%) in total Extra-EU-27 imports		Share (%) in Extra-EU-27 imports from Russia	
	Petroleum oils	Natural gas	Petroleum oils	Natural gas
Belgium	0-5	0-5	0-5	0-5
Bulgaria	0-5	0-5	0-5	0-5
Czechia	0-5	0-5	0-5	0-5
Denmark	0-5	0-5	0-5	0-5
Germany	10-20	10-20	> 20	> 20
Estonia	0-5	0-5	0-5	0-5
Ireland	0-5	0-5	0-5	0-5
Greece	0-5	0-5	0-5	0-5
Spain	10-20	10-20	0-5	0-5
France	5-10	10-20	0-5	5-10
Croatia	0-5	0-5	0-5	0-5
Italy	10-20	> 20	5-10	> 20
Cyprus	0-5	0-5	0-5	0-5
Latvia	0-5	0-5	0-5	0-5
Lithuania	0-5	0-5	0-5	0-5
Luxembourg	0-5	0-5	0-5	0-5
Hungary	0-5	0-5	0-5	0-5
Malta	0-5	0-5	0-5	0-5
Netherlands	10-20	10-20	> 20	5-10
Austria	0-5	0-5	0-5	5-10
Poland	5-10	5-10	10-20	10-20
Portugal	0-5	0-5	0-5	0-5
Romania	0-5	0-5	0-5	0-5
Slovenia	0-5	0-5	0-5	0-5
Slovakia	0-5	0-5	0-5	0-5
Finland	0-5	0-5	5-10	0-5
Sweden	0-5	0-5	0-5	0-5

Source: Eurostat database (Comext) and Eurostat estimates

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**Table 1: Share of extra EU-27 imports of petroleum oils and natural gas by Member State, first semester 2020 (share (%) of trade in value)**

All Member States imported petroleum oils and natural gas in the first half of 2020. In four Member States (Estonia, Slovakia, Hungary and Finland), more than 75 % of their imports in petroleum oils came from Russia (Table 2). Ten Member States (Bulgaria, Czechia, Estonia, Latvia, Hungary, Austria, Romania, Slovenia, Slovakia and Finland) imported more than 75 % of their natural gas imports from Russia. In both cases, these are predominantly countries that are in close proximity to Russia. Most of the countries with shares below 25 % of imports from Russia in either product are further away from Russia.

### Share of Russia in national extra EU-27 imports of each Member State, first semester 2020

(share (%) of trade in value)

Country	Share (%) of Russia in national extra-EU-27 imports	
	Petroleum oils	Natural gas
Belgium	25-50	0-25
Bulgaria	50-75	75-100
Czechia	25-50	75-100
Denmark	0-25	0-25
Germany	25-50	50-75
Estonia	75-100	75-100
Ireland	0-25	0-25
Greece	0-25	25-50
Spain	0-25	0-25
France	0-25	0-25
Croatia	0-25	0-25
Italy	0-25	25-50
Cyprus	0-25	0-25
Latvia	0-25	75-100
Lithuania	50-75	25-50
Luxembourg	0-25	0-25
Hungary	75-100	75-100
Malta	0-25	0-25
Netherlands	25-50	0-25
Austria	0-25	75-100
Poland	50-75	50-75
Portugal	0-25	0-25
Romania	25-50	75-100
Slovenia	0-25	75-100
Slovakia	75-100	75-100
Finland	75-100	75-100
Sweden	0-25	25-50

Source: Eurostat database (Comext) and Eurostat estimates



**Table 2: Share of Russia in national extra EU-27 imports of each Member State, first semester 2020 (share (%) of trade in value)**

By combining tables 1 and 2 we are able to check the dependency on Russia for the largest importers of petroleum oils and natural gas in the EU. For petroleum oils, the largest importers from the extra EU-27 were Germany, Spain, Italy and the Netherlands (all between 10 % and 20 %) in the first half of 2020. Of those, the share of Russia in national imports was less than 25 % for Spain, France and Italy and between 25 % and 50 % for the Netherlands and Germany.

For natural gas the largest importers were Germany, Spain, France, Italy and the Netherlands. Of those four the share of Russia was less than 25 % for Spain, France and the Netherlands, between 25 % and 50 % for Italy and between 50 % and 75 % for Germany.

Part of the petroleum oils and natural gas imported from Russia and elsewhere is also traded in the EU Internal Market. Table 3 gives some indicative figures for this effect, but no indication is given of the origin of the energy products that are subsequently part of intra-EU trade flows. The shares of imports of petroleum oils are between 0-5 % for all but three of the 27 EU Member States. The exceptions were Belgium and Germany, with shares of more than 20 % and the Netherlands with 5-10 %. For natural gas, Germany and France, both with more than 20 %, were the exceptions. For intra-EU exports of petroleum oils only the Netherlands (more than 20 %) had a share above 5 % while for natural gas there were four exceptions: Germany, the Netherlands (both more than 20 %), France (10-20 %) and Belgium (5-10 %).

### Share of each Member State in intra EU-27 trade of oil and gas, first semester 2020

(share (%) of trade in value)

Country	Share (%) in total intra-EU-27 imports		Share (%) in total intra-EU-27 exports	
	Petroleum oils	Natural gas	Petroleum oils	Natural gas
Belgium	> 20	0-5	0-5	5-10
Bulgaria	0-5	0-5	0-5	0-5
Czechia	0-5	0-5	0-5	0-5
Denmark	0-5	0-5	0-5	0-5
Germany	> 20	> 20	0-5	> 20
Estonia	0-5	0-5	0-5	0-5
Ireland	0-5	0-5	0-5	0-5
Greece	0-5	0-5	0-5	0-5
Spain	0-5	0-5	0-5	0-5
France	0-5	> 20	0-5	10-20
Croatia	0-5	0-5	0-5	0-5
Italy	0-5	0-5	0-5	0-5
Cyprus	0-5	0-5	0-5	0-5
Latvia	0-5	0-5	0-5	0-5
Lithuania	0-5	0-5	0-5	0-5
Luxembourg	0-5	0-5	0-5	0-5
Hungary	0-5	0-5	0-5	0-5
Malta	0-5	0-5	0-5	0-5
Netherlands	5-10	0-5	> 20	> 20
Austria	0-5	0-5	0-5	0-5
Poland	0-5	0-5	0-5	0-5
Portugal	0-5	0-5	0-5	0-5
Romania	0-5	0-5	0-5	0-5
Slovenia	0-5	0-5	0-5	0-5
Slovakia	0-5	0-5	0-5	0-5
Finland	0-5	0-5	0-5	0-5
Sweden	0-5	0-5	0-5	0-5

Source: Eurostat database (Comext) and Eurostat estimates

eurostat 

**Table 3: Share of each Member State in intra EU-27 trade of oil and gas, first semester 2020 (share (%) of trade in value)**

## Source data for tables and graphs

The excel file below contains all figures and tables shown in the article as well as the detailed tables referred to in the text.

- [Tables and figures energy](#)

## Data sources

Trade in energy products being very sensitive, real trade figures may need to be made 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.

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 third 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 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 Community guidelines and may, therefore, differ from national data published by the 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.

The United Kingdom is considered as an extra-EU partner country for the EU-27 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-27 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-27 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-27 trade partners. **Energy products** This article analyses the EU imports of the following energy products, as classified according to the Combined Nomenclature (CN):

- 27090010: Petroleum oils from natural gas condensates;
- 27090090: Petroleum oils and oils obtained from bituminous minerals, crude;
- 27111100: Natural gas, liquefied;
- 27112100: Natural gas in gaseous state;
- 2701: Coal;
- 2702: Lignite;
- 2703: Peat; and
- 2704: Coke.

To give a full picture of the EU trade in energy products, it should be noted that Chapter 27 of the Combined Nomenclature (mineral fuels, mineral oils) contains more products than the ones considered in this article.

**Petroleum oils** correspond to the aggregation of the CN8 codes 27090010: Petroleum oils from natural gas condensates and 27090090: Petroleum oils and oils obtained from bituminous minerals, crude.

**Natural gas** corresponds to the aggregation of the CN8 codes 27111100: Natural gas, liquefied and 27112100: Natural gas in gaseous state.

**Data sources** This article is based on data available in Eurostat database ( [COMEXT](#) ) and on Eurostat estimation. Those data are issued from the European concept and definitions as set up by the EU legislation. Figures estimated by Eurostat cannot be found in Comext nor in other Eurostat databases or publications.

Note that data collected on the basis of Regulation (EC) No 1099/2008 relating to energy statistics are not considered in this article. More information on those statistics can be found 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):

- The sources for ITGS are the [Intrastat](#) declarations for intra-EU trade and the customs declarations for extra EU-27 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.
- In ITGS the partner country is the country of consignment for **intra EU-27** imports and the country of origin for **extra EU-27** imports. In energy statistics the partner country is the country of origin for both intra- and extra EU-27 imports.
- 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.
- 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, i.e. to the amount which would be invoiced in case of sale or purchase at the national border of the reporting country. It is called a [FOB](#) value (free on board) for exports and a [CIF](#) value (cost, insurance, freight) for imports.

- **Quantities** correspond to the net mass, i.e. to the mass without any packaging. Note that values of 0 or 0.0 mean very small values.

### Data limitations

- **A bias in the geographical allocation of extra EU-27 flows** — Extra EU-27 imports and exports are reported by the Member State where the customs declaration is lodged, usually the place where the goods cross the EU external frontier (here referred to as the exit/entry Member State). This is not necessarily the Member State of actual import or export. The geographical allocation of an extra EU-27 flow is biased in the case the entry/exit Member State is not the actual importing/exporting Member State. In such a case, the extra EU-27 trade will be allocated to the entry/exit Member State and the actual importing/exporting Member State will report only intra-EU flows with the exit/entry Member State. This issue particularly impacts the extra EU-27 imports of Member States having important ports for transshipment of goods like Antwerp in Belgium and Rotterdam in the Netherlands.
- **Missing EU data** — This article is mostly based on collected data (confidential and non-confidential). Wherever necessary, estimates for missing indicators have been compiled on the basis of other available indicators and EU averages for similar trade. 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. According to energy statistics, in 2014, 33 % of natural gas consumption was supplied from a source within the EU. Similarly about 54 % of coal (all coals) and about 13 % of oil (crude oil and all petroleum products) consumed in the EU was supplied from a source within the EU.

## Context

Having a secure supply of energy is crucial for the well-being of European citizens and the economy. The EU works to ensure that energy supplies are uninterrupted and energy prices remain stable.

In response to the political crisis in Ukraine and the overall importance of a stable and abundant supply of energy for the EU's citizens and economy, the European Commission released an EU energy security strategy on 28 May 2014.

This strategy is based on an in-depth study of Member States' energy dependence and addresses medium and long-term security of supply challenges.

### Other articles

- [Extra-EU trade in primary goods](#)
- [Energy production and imports](#)
- [Statistical analysis of EU trade in energy products, with focus on trade with the Russian Federation - Statistics in focus 13/2014](#)

### Publications

- [Energy, transport and environment indicators - 2016 edition](#)

### Data visualisations

- [Top 5 partners in trade in goods](#)
- [My Country in a bubble](#)

## Main tables

- [International trade in goods \(t\\_ext\\_go\)](#), see:

[International trade in goods - long-term indicators \(t\\_ext\\_go\\_lti\)](#)

[International trade in goods - short-term indicators \(t\\_ext\\_go\\_sti\)](#)

## Database

- [International trade in goods \(ext\\_go\)](#), see:

[International trade in goods - aggregated data \(ext\\_go\\_agg\)](#)

[International trade in goods - long-term indicators \(ext\\_go\\_lti\)](#)

[International trade in goods - short-term indicators \(ext\\_go\\_sti\)](#)

[International trade in goods - detailed data \(detail\)](#)

## Dedicated section

- [International trade in goods](#)

## Methodology

- [International trade in goods statistics - background](#)
- [International trade in goods \(ESMS metadata file — ext\\_go\\_agg\\_esms\)](#)
- [User guide on European statistics on international trade in goods](#)

## Legislation

- [Regulation \(EC\) No 1099/2008](#) of 22 October 2008 on energy statistics
- [Regulation \(EC\) No 471/2009](#) of 6 May 2009 on Community statistics relating to external trade with non-member countries
- [Summaries of EU Legislation: Extrastat: statistics relating to trade with non-EU countries](#)
- [Regulation \(EU\) No 92/2010](#) of 2 February 2010 implementing Regulation (EC) No 471/2009, as regards data exchange between customs authorities and national statistical authorities, compilation of statistics and quality assessment
- [Regulation \(EU\) No 113/2010](#) of 9 February 2010 implementing Regulation (EC) No 471/2009, as regards trade coverage, definition of the data, compilation of statistics on trade by business characteristics and by invoicing currency, and specific goods or movements.
- [Regulation \(EC\) No 638/2004](#) of 31 March 2004 on Community statistics relating to the trading of goods between Member States and repealing Council Regulation (EEC) No 3330/91.
- [Summaries of EU Legislation: Intrastat: statistics relating to the trading of goods between EU countries](#)
- [Commission Regulation \(EC\) No 1982/2004](#) of 18 November 2004 implementing Regulation (EC) No 638/2004 of the European Parliament and of the Council on Community statistics relating to the trading of goods between Member States and repealing Commission Regulations (EC) No 1901/2000 and (EEC) No 3590/92.

## External links

- [European Energy Security Strategy](#)