

Natural gas information

Database documentation

April 2025 edition

International
Energy Agency

INTERNATIONAL ENERGY AGENCY

The IEA examines the full spectrum of energy issues including oil, gas and coal supply and demand, renewable energy technologies, electricity markets, energy efficiency, access to energy, demand side management and much more. Through its work, the IEA advocates policies that will enhance the reliability, affordability and sustainability of energy in its 32 member countries, 13 association countries and beyond.

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This document provides support information for the IEA *Annual Natural Gas Statistics* database. This document can be found online at:

<https://www.iea.org/data-and-statistics/data-product/natural-gas-information>.

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Changes from last edition

In January 2025, IEA changed its primary data sharing platform from Beyond 2020 (IVT files) to .Stat Data Explorer. The datasets in .Stat Data Explorer include different short names than the IVT and TXT files to improve harmonization across IEA datasets. The mapping between the old and new codes is available on the data product webpage, along with the updated documentation. TXT files will continue to be published using the new coding system, which includes the addition of a "qualifier" column as described below.

Qualifier legend

Code	Name	Description
A	Normal Value	Real observed value.
I	Imputed Value	A data point refers to any calculation produced by the IEA Secretariat, including aggregations (across energy products, energy flows, geographical areas or any other dimension), conversions using non-universal factors (such as the computation of energy values based on calorific values), as well as estimates.
O	Missing Value	Data point is missing.
M	Missing Value; Data cannot exist	Data point is not applicable.
P	Provisional Value	Data point is preliminary and likely to be revised.
C	Confidential Value	Data point is confidential.
D	Definition Differs	Definition of measurement differs from the dataset definition, and therefore is not comparable to other measures.
N	Not Qualified	Qualification is not available.

In this online data service, the default data display is figures rounded to zero decimal places. However, from 2017 data onwards, further detail, up to the three decimal place level, is available where reported by the national administrations. Please note that the constituent data summed to produce regional and flow aggregates may be reported at differing levels of precision. Therefore, care should be taken when using data for aggregated flows beyond the level of 0 decimal places. Data up to and including 2016 has been rounded to 0 decimal places. Note: Periods (.) are used to separate decimal places.

Geographical coverage

There are no changes in Geographical coverage in this edition.

Database structure

The Natural Gas Information database contains five files with the following annual data.

OECD datasets (Last updated in April 2025)

- Countries: 52 countries and 7 regional aggregates
(see section *Geographical coverage*)
- Years: 1960-2023
(unless otherwise specified, see section *Geographical coverage*)

OECD and selected countries Supply and Consumption by Sector

Natural gas statistics on production, total imports and exports, stock changes, stock levels, gross inland consumption and consumption in the transformation sector, energy sector, and end-use. (80 flows)
(Mcm; TJ)

OECD and selected countries imports by origin

Breakdown of imports by country of origin (167 different origins). Data are shown for total trade, pipeline, and LNG.
(Mcm; TJ)

OECD and selected countries exports by destination

Breakdown of exports by country of destination (167 different destinations). Data are shown for total trade, pipeline, and LNG.
(Mcm; TJ)

WORLD files (Last updated in July 2024)

- Countries: 152 countries and 24 regional aggregates
(see section *Geographical coverage*)
- Years: World natural gas statistics, 1960-2023
World imports by origin, 1993-2023
(unless otherwise specified, see section *Geographical coverage*)

World natural gas statistics

Natural gas statistics on production, total imports and exports, and gross inland consumption.
(Mcm; TJ)

World imports by origin

Breakdown of imports by country of origin
(165 different origins). Data are shown for total trade, pipeline, and LNG.
(Mcm; TJ)

Flow definitions

Supply

Flow	Short name	Definition
Indigenous Production	INDPROD	All dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGLs and sulphur. Extraction losses and quantities reinjected, vented or flared, are not included. Production includes quantities used within the natural gas industry; in gas extraction, pipeline systems and processing plants.
Indigenous production only from oil fields	INDPROD_OILFIELDS	Natural gas produced in association with crude oil.
Indigenous production excluding gases from oil fields	INDPROD_XOILFIELDS	Natural gas originating from fields producing hydrocarbons only in gaseous form.
Methane produced at coal mines	GAS_COLLIERY	Methane produced at coal mines, piped to the surface and consumed at collieries or transmitted by pipeline to consumers.
From Other Sources	OTH_SOURCES	Supplies of fuel of which production is covered in other fuel energy balances but which are blended with natural gas and consumed as a blend. The origin of the fuel could be oil, coal, or renewables.
From Other Sources - Oil	OSOURC_OIL	From Other Sources of which from Oil (See "From Other Sources").
From Other Sources - Coal	OSOURC_COAL	From Other Sources of which from Coal (See "From Other Sources").
From Other Sources - Renewables	OSOURC_RENEW	From Other Sources of which from Renewables (See "From Other Sources").
Imports (Balance)	IMPORTS	Amounts are regarded as imported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not. Imports of liquefied natural gas should cover only the dry marketable equivalent, including amounts used as own consumption in the regasification process. Imports by country of origin shown in NGIMPORT and NGWIMP concern imports of gas by ultimate origin for use in the country.

Flow	Short name	Definition
Exports (Balance)	EXPORTS	Amounts are regarded as exported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not. Exports by country of destination shown in NGEXPORT concern exports of domestically produced gas by ultimate destination.
International Marine Bunkers	BUNKERS_MARINE	Quantities of LNG or natural gas used by ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters.
Stock Changes (National territory)	STCHANAT	This is the change in stock level of recoverable gas held on national territory; the difference between opening stock level at the first day of the year and closing stock level at the last day of the year of stocks held on national territory. A stock build is shown as a negative number and a stock draw as a positive number.
Stock Changes (Cushion gas)	STCHANATCUSH	This is the change in stock level of cushion gas; the difference between opening stock level of cushion gas at the first day of the year and closing stock level of cushion gas at the last day of the year. A stock build is shown as a negative number and a stock draw as a positive number. Changes in cushion gas stock level could include the injection of gas to a new operating facility, the reallocation of cushion gas to marketable gas from stocks, or the reallocation of marketable gas stocks to cushion gas. Cushion gas stock changes can also represent cushion gas made directly available on the supply side and intended for consumption purposes.
Inland Consumption (Calculated)	GRDEL_INLAND_CALC	Inland Consumption (Calculated) is defined as: + Indigenous Production + From Other Sources + Imports - Exports + Stock Changes
Statistical Difference	STATDIFF_GRDEL	This is the difference between calculated and observed Inland Consumption. National administrations sometimes obtain the data components of domestic availability from a variety of sources. Owing to differences in concepts, coverage, timing and definitions, observed and calculated consumption are often not identical.
Inland Consumption (Observed)	GRDEL_INLAND_OBS	Represents deliveries of marketable gas to the inland market, including gas used by the gas industry for heating and operation of their equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants) and including losses in distribution.
Opening Stock Level (National territory)	OSNATTER	Refers to opening stock levels held on national territory, at the first day of the year (including government controlled stocks).

Flow	Short name	Definition
Closing Stock Level (National territory)	CSNATTER	Refers to closing stock levels held on national territory, at the last day of the year (including government controlled stocks).
Memo: Opening Stock Level (Held abroad)	OSABROAD	Refers to opening stock levels held abroad, at the first day of the year (including government controlled stocks). These amounts are not included in the stock changes.
Memo: Closing Stock Level (Held abroad)	CSABROAD	Refers to closing stock levels held abroad, at the last day of the year (including government controlled stocks). These amounts are not included in the stock changes.
Memo: Gas Vented	VENTED	The volume of gas released into the air on the production site or at the gas processing plant.
Memo: Gas Flared	FLARED	The volume of gas burned in flares on the production site or at the gas processing plant.
Memo: Opening Stock Level (Cushion gas)	OSNATCUSH	Refers to opening stock levels of cushion gas at the first day of the year. Cushion gas is the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle. These amounts are not included in stock levels/changes (national territory).
Memo: Closing Stock Level (Cushion gas)	CSNATCUSH	Refers to closing stock levels of cushion gas at the last day of the year. Cushion gas is the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle. These amounts are not included in stock levels/changes (national territory).

Transformation processes

Flow	Short name	Definition
Transformation processes	TOTTRANF	Comprises fuel inputs to both public and private electricity, combined heat and power plants and heat plants. An autoproducer is an industrial establishment which, in addition to its main activities, generates electricity, wholly or partly for its own use. It includes railway's own production of electricity. Heat plants and combined heat and power plants only cover fuel inputs for that part of the heat which is sold to a third party. Transformation sector also comprises fuels used as feedstocks in gas works, coke ovens and blast furnaces.
Main Activity Producer Electricity Plants	MAINELEC	Includes inputs of gas for the production of electricity in main activity producer electricity plants, whose primary purpose is to produce, transmit or distribute electricity.
Autoproducer Electricity Plants	AUTOELEC	Includes inputs of gas for the production of electricity by an enterprise which, in addition to its main activities, generates electricity wholly or partly for its own use, e.g. industrial establishments, railways, refineries, etc.

Flow	Short name	Definition
Main Activity Producer Combined Heat and Power Plants	MAINCHP	Includes inputs of gas to main activity producer combined heat and power plants which generate electricity and useful heat in a single installation.
Autoproducer Combined Heat and Power Plants	AUTOCHP	Includes inputs of gas to autoproducer combined heat and power plants which generate electricity and useful heat in a single installation. All fuel inputs for electricity production are taken into account, while for heat production, only that part of inputs to heat which is sold to third parties (e.g. to a network) is shown.
Main Activity Producer Heat Plants	MAINHEAT	Includes inputs of gas to main activity producer plants which are designed to produce heat only.
Autoproducer Heat Plants	AUTOHEAT	Includes inputs of gas to autoproducer plants which are designed to produce heat only. Data for autoproducer heat plants represent inputs of fuel to plants which sell heat to a third party under the provisions of a contract.
Gas Works (Transformation)	TGASWKS	Natural gas used in gas works and gasification plants. Gas used for heating and operation of equipment is not included here but reported in the Energy sector.
Coke Ovens (Transformation)	TCOKEOVS	Natural gas used in coke ovens. Gas used for heating and operation of equipment is not included here but reported in the Energy sector.
Blast Furnaces (Transformation)	TBLASTFUR	Natural gas used in blast furnaces.
Gas to Liquids (Transformation)	TGTL	Natural gas used as feedstock for the conversion to liquids.
Of which GTL technology (Transformation)	TGTLTECH	Natural gas used specifically in a process featuring reaction of methane with oxygen or steam to produce syngas followed by synthesis of liquid products from the syngas using Fischer-Tropsch catalytic synthesis.
Not Elsewhere Specified (Transformation)	TNONSPEC	Natural gas used in transformation activities not included elsewhere. It usually includes natural gas used to produce hydrogen for hydrocracking or hydrodesulphurization in oil refineries.

Energy industry own use and Losses

Flow	Short name	Definition
Energy Industry Own Use - Total	TOTENGY	Natural gas consumed by energy industry to support the extraction (mining, oil and gas production) or transformation activity. ISIC Divisions 05, 06, 19, 35, Group 091, Class 0892 and 0721 (NACE Divisions 05, 06, 19, 35, Group 09.1, Class 08.92 and 07.21). Quantities of natural gas transformed into another energy form are reported under the Transformation sector. Natural gas consumed in support of the operation of oil and gas pipelines is reported in the Transport sector.
Coal Mines	EMINES	Natural gas consumed to support the extraction and preparation of coal within the coal mining industry.

Flow	Short name	Definition
Oil and Gas Extraction	EOILGASEX	Natural gas consumed in the oil and gas extraction process and in natural gas processing plants. Pipeline losses are reported as distribution losses, and natural gas used to operate the pipelines is reported in the Transport sector.
Inputs to Oil Refineries	EREFINER	Own consumption of natural gas in oil refineries.
Coke Ovens (Energy)	ECOKEOVS	Own consumption of natural gas at coking plants.
Blast Furnaces (Energy)	EBLASTFUR	Natural gas consumed in blast furnaces operations.
Gas Works (Energy)	EGASWKS	Own consumption of natural gas at gas works and gasification plants.
Electricity CHP and Heat Plants	EPOWERPLT	Own consumption of natural gas in electric plants, combined heat and power plants, and heat plants.
Liquefaction (LNG) / Regasification	ELNG	Natural gas consumed as fuel at gas liquefaction and regasification plants.
Gas to Liquids (Energy)	EGTL	Natural gas consumed as fuel at the Gas-to-Liquid conversion plants.
Of which GTL technology (Energy)	EGTL_TECH	Natural gas consumed as fuel at the GTL technology plants.
Not Elsewhere Specified (Energy)	ENONSPEC	Natural gas used in energy activities not included elsewhere.
Transmission and Distribution Losses	DISTLOSS	Losses due to transport and distribution, as well as pipeline losses.

Final consumption

Flow	Short name	Definition
Total final consumption	TFC	Final consumption is the sum of consumption by the different end-use sectors (in the Transport, Industry and Other sectors). It excludes deliveries for transformation and/or own use of the energy producing industries.
Transport - Total	TOTTRANS	Natural gas consumed for all transport activity irrespective of the economic sector in which the activity occurs. ISIC Divisions 49, 50 and 51 (NACE Divisions 49, 50 and 51).
Road	ROAD	Compressed natural gas (CNG) for use in road vehicles. Excludes natural gas consumed in stationary engines, which is reported under Other Sectors.
Road (of which bio-component)	ROAD_BIO	Amounts of biogas included in road consumption.
Pipeline Transport	PIPELINE	Natural gas used in support of the operation of oil and gas pipelines.

Flow	Short name	Definition
Not Elsewhere Specified (Transport)	TRNONSPE	Natural gas used in transport activities not included elsewhere.
Industry - Total	TOTIND	Natural gas consumed by the industrial undertaking in support of its primary activities. Includes quantities of natural gas consumed in heat only and CHP plants for the production of heat used by the plant itself. Quantities of natural gas consumed for production of heat that is sold and for the production of electricity, are reported under the appropriate Transformation sector.
Mining and Quarrying (excluding energy products)	MINING	ISIC Divisions 07, 08 and Group 099 (NACE Divisions 07, 08 and Group 09.9).
Construction	CONSTRUC	ISIC Division 41, 42 and 43 (NACE Division 41, 42 and 43).
Manufacturing	MANUFACT	<p>Manufacturing refers to the sum of the following industrial sub-sectors:</p> <ul style="list-style-type: none"> • Iron and Steel • Chemical and petrochemical • Non-ferrous metals • Non-metallic minerals • Transport equipment • Machinery • Food processing, beverages and tobacco • Paper, pulp and printing • Wood and wood products • Textile and leather <p>Definitions of the sub-sectors themselves can be found under the listing for each respective sub-sector below.</p>
Iron and Steel	IRONSTL	ISIC Group 241 and Class 2431 (NACE Divisions 24.1, 24.2, 24.3, 24.51 and 24.52).
Chemicals including Petrochemicals	CHEMICAL	ISIC Division 20, 21 (NACE Division 20, 21). Excludes petrochemical feedstocks.
Non-Ferrous Metals	NONFERR	ISIC Group 242 and Class 2432 (NACE Group 24.4 and Classes 24.53, 24.54).
Non-Metallic Minerals	NONMET	ISIC Division 23 (NACE Division 23). This category includes glass, ceramic, cement and other building materials industries.
Transport Equipment	TRANSEQ	ISIC Divisions 29 and 30 (NACE Divisions 29 and 30).
Machinery	MACHINE	ISIC Divisions 25, 26, 27 and 28 (NACE Divisions 25, 26, 27 and 28). This category includes fabricated metal products, machinery and equipment other than transport equipment.
Food and Tobacco	FOODPRO	ISIC Divisions 10, 11 and 12 (NACE Divisions 10, 11 and 12).
Pulp, Paper and Printing	PAPERPRO	ISIC Divisions 17 and 18 (NACE Divisions 17 and 18). This category includes reproduction of recorded media.
Wood and Wood Products	WOODPRO	ISIC Division 16 (NACE Division 16).

Flow	Short name	Definition
Textile and Leather	TEXTILES	ISIC Divisions 13-15 (NACE Divisions 13-15).
Not Elsewhere Specified (Industry)	INONSPEC	Any manufacturing industry not included elsewhere. ISIC and NACE Divisions 22, 31 and 32.
Residential	RESIDENT	Natural gas consumed by all households including "households with employed persons". (ISIC and NACE Divisions 97 and 98).
Commercial and Public Services	COMMPUB	Natural gas consumed by businesses and offices in the public and private sectors. ISIC and NACE Divisions 33, 36, 37, 38, 39, 45, 46, 47, 52, 53, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79, 80, 81, 82, 84 (excluding Class 8422), 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96 and 99.
Agriculture and forestry	AGRI_FOREST	Natural gas consumption by users classified as agriculture, fishing (ocean, coastal and inland fishing), hunting and forestry. ISIC Divisions 01 and 02 (NACE Divisions 01 and 02).
Fishing	FISHING	Natural gas delivered for inland, coastal and deep-sea fishing. Fishing should cover fuels delivered to ships of all flags that have refuelled in the country (include international fishing). Also include energy used in the fishing industry as specified in ISIC Division 03 (NACE Division 03).
Not Elsewhere Specified (Other)	ONONSPEC	All activities not included elsewhere; includes military use.
Total Non-Energy Use	NE_TOT	Total non-energy use of natural gas.
Non-Energy Use in Industry	NE_IND	Non-energy use of natural gas for Industry.
of which Non-Energy use in the Chemical/ Petrochemical Industry	NE_CHEM	Feedstocks to the petrochemical industry (ISIC Rev. 4 Group 201).
Other Non-Energy Use	NE_OTHER	Non-energy use of natural gas in Transport and Other sectors.

Product definitions

Natural gas

Natural gas is expressed in million cubic metres at 15°C and at 760 mmHg, i.e. Standard Conditions and in terajoules on a **gross calorific value** basis.

Flow	Short name	Definition
Natural gas	NATURAL_GAS	Natural gas comprises gases, occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane. It includes both “non-associated” gas originating from fields producing hydrocarbons only in gaseous form, and “associated” gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas). Manufactured gas (produced from municipal or industrial waste, or sewage) and quantities re-injected vented or flared are not included.
Natural gas pipeline trade	NATURAL_GAS_PIPELINE	In trade databases (this product includes the natural gas that crossed the border through a pipeline in gaseous form.
Natural gas LNG trade	LNG	In trade databases this product includes the natural gas that crossed the border as LNG.

Geographical coverage

Countries and regions

This document is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. In this publication, “country” refers to a country or territory, as the case may be. Data start in 1960 for OECD countries and regions, and in 1971 for non-OECD countries and regions, unless otherwise specified.

Long name	Short name	Definition
Australia	AUSTRALIA	Excludes the overseas territories. Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 July Y-1 and ends on 30 June Y are labelled as year Y.
Austria	AUSTRIA	
Belgium	BELGIUM	
Canada	CANADA	
Chile	CHILE	Data start in 1971.
Colombia	COLOMBIA	Data start in 1971.
Costa Rica	COSTARICA	There is no natural gas data for Costa Rica as there is neither production nor consumption of natural gas in this country.
Czech Republic	CZECH	Data start in 1971.
Denmark	DENMARK	Excludes Greenland and the Faroe Islands, except prior to 1990, where data on oil for Greenland were included with the Danish statistics.
Estonia	ESTONIA	Data start in 1990. Prior to that, they are included within Former Soviet Union.
Finland	FINLAND	

Long name	Short name	Definition
France	FRANCE	<p>From 2011 data onwards, France includes Monaco, and the following overseas departments (Guadeloupe; French Guiana; Martinique; Mayotte; and Réunion); and excludes the overseas collectivities (New Caledonia; French Polynesia; Saint Barthélemy; Saint Martin; Saint Pierre and Miquelon; and Wallis and Futuna).</p> <p>Prior to 2011, France includes Monaco and excludes the following overseas departments and collectivities: Guadeloupe; French Guiana; Martinique; Mayotte and Réunion; New Caledonia; French Polynesia; Saint Barthélemy; Saint Martin; Saint Pierre and Miquelon; and Wallis and Futuna.</p>
Germany	GERMANY	Includes the new federal states of Germany from 1970 onwards
Greece	GREECE	
Hungary	HUNGARY	Data start in 1965.
Iceland	ICELAND	There is no natural gas data for Iceland as there is neither production nor consumption of natural gas in this country.
Ireland	IRELAND	
Israel	ISRAEL	<p>The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.</p> <p>Data start in 1971.</p>
Italy	ITALY	Includes San Marino and the Holy See.

Long name	Short name	Definition
Japan	JAPAN	Includes Okinawa. Starting in 1990, data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y
Korea	KOREA	Data start in 1971.
Latvia	LATVIA	Data start in 1990. Prior to that, they are included in Former Soviet Union.
Lithuania	LITHUANIA	Data start in 1990. Prior to that, they are included in Former Soviet Union.
Luxembourg	LUXEMBOURG	
Mexico	MEXICO	Data start in 1971.
Netherlands	NETHERLANDS	Excludes Suriname, Aruba and the other former Netherlands Antilles (Bonaire, Curaçao, Saba, Saint Eustatius and Sint Maarten ¹)
New Zealand	NEWZEALAND	
Norway	NORWAY	
Poland	POLAND	
Portugal	PORTUGAL	Includes the Azores and Madeira.
Slovak Republic	SLOVAKIA	Data start in 1971.
Slovenia	SLOVENIA	Data start in 1990. Prior to that, they are included within Former Yugoslavia.
Spain	SPAIN	Includes the Canary Islands
Sweden	SWEDEN	
Switzerland	SWITZERLAND	Does not include Liechtenstein.

¹ Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent countries, Curaçao and Sint Maarten, with the remaining islands joining the Netherlands as special municipalities. From 2012 onwards, data now account for the energy statistics of Curaçao Island only. Prior to 2012, data remain unchanged and still cover the entire territory of the former Netherlands Antilles.

Long name	Short name	Definition
Republic of Türkiye	TURKIYE	Note by Republic of Türkiye: The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Republic of Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Republic of Türkiye shall preserve its position concerning the “Cyprus issue”.
United Kingdom	UK	UK is included in the EU28 aggregate but not the EU27_2020 aggregate. Exports of natural gas to the Isle of Man are included with the exports to Ireland.
United States	USA	Includes the 50 states and the District of Columbia.
OECD Total	OECDTOT	Includes Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Republic of Türkiye, the United Kingdom and the United States. Estonia, Latvia, Lithuania, and Slovenia are included starting in 1990. Prior to 1990, data for Estonia. Latvia and Lithuania are included in Former Soviet Union, and data for Slovenia in Former Yugoslavia.
OECD Americas	OECDAM	Includes Canada, Chile, Colombia, Costa Rica, Mexico, and the United States.
OECD Asia Oceania	OECDAO	Includes Australia, Israel, Japan, Korea and New Zealand.

Long name	Short name	Definition
OECD Europe	OECDEUR	Includes Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Republic of Türkiye, and the United Kingdom. Estonia, Latvia, Lithuania and Slovenia are included starting in 1990. Prior to 1990, data for Estonia, Latvia and Lithuania are included in Former Soviet Union, and data for Slovenia in Former Yugoslavia.
IEA Total	IEATOT	Includes Australia; Austria; Belgium; Canada; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Japan; Korea; Latvia, Lithuania; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Spain; Sweden; Switzerland; Republic of Türkiye; the United Kingdom; and the United States.

Long name	Short name	Definition
The IEA and Accession/Association countries	IEAFAMILY	<p>Includes: IEA member countries: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Republic of Türkiye, the United Kingdom and the United States;</p> <p>Accession countries: Chile, Colombia, Costa Rica, Israel;</p> <p>Association countries: Argentina, Brazil, the People's Republic of China, Egypt, India, Indonesia, Kenya, Morocco, Senegal, Singapore, South Africa, Thailand, Ukraine.</p> <p>Estonia, and Lithuania are included starting in 1990. Prior to 1990, data for Estonia and Lithuania are included in Former Soviet Union.</p>
Memo: European Union - 28	EU28	<p>Data start 1990. Please note that in interest of having comparable data, all of these countries are included since 1990 despite different entry dates into the European Union.</p> <p>Includes: All current EU members and the UK: Austria; Belgium; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Netherlands; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Bulgaria; Croatia; Cyprus; Malta; Romania; and the UK.</p>

Long name	Short name	Definition
		Data start 1990. Please note that in interest of having comparable data, all of these countries are included since 1990 despite different entry dates into the European Union.
Memo: European Union - 27	EU27	Includes: All current EU members: Austria; Belgium; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; the Netherlands; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Bulgaria; Croatia; Cyprus; Malta; and Romania.
Argentina	ARGENTINA	
Bolivia	BOLIVIA	
Brazil	BRAZIL	
Cuba	CUBA	
Netherlands Antilles/ Curaçao	CURACAO	Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent countries, Curaçao and Sint Maarten, with the remaining islands joining the Netherlands as special municipalities. From 2012 onwards, data now account for the energy statistics of Curaçao Island only. Prior to 2012, data remain unchanged and still cover the entire territory of the former Netherlands Antilles.
Dominican Republic	DOMINICANREP	
Ecuador	ECUADOR	
El Salvador	ELSALVADOR	
Guatemala	GUATEMALA	
Guyana	GUYANA	
Haiti	HAITI	
Honduras	HONDURAS	

Long name	Short name	Definition
Jamaica	JAMAICA	
Nicaragua	NICARAGUA	
Panama	PANAMA	
Paraguay	PARAGUAY	
Peru	PERU	
Suriname	SURINAME	Data for Suriname are available starting in 2000. Prior to that, they are included in Other non-OECD Americas.
Trinidad and Tobago	TRINIDAD	
Uruguay	URUGUAY	
Bolivarian Republic of Venezuela	VENEZUELA	
Other non-OECD Americas	OTH_NON_OECDAM	Includes Anguilla, Antigua and Barbuda; Aruba; the Bahamas; Barbados; Belize; Bermuda; Bonaire (from 2012); the British Virgin Islands; the Cayman Islands; Dominica; the Falkland Islands (Malvinas); French Guiana (until 2010); Grenada; Guadeloupe (until 2010); Martinique (until 2010); Montserrat; Puerto Rico (for natural gas and – up to 2016 data, electricity); Saba (from 2012); Saint Eustatius (from 2012); Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Maarten (from 2012); Suriname (until 1999); and Turks and Caicos Islands.
Non-OECD Americas	NON_OECDAM	Includes Argentina; Plurinational State of Bolivia (Bolivia); Brazil; Costa Rica; Cuba; Curaçao (from 2012); Dominican Republic; Ecuador; El Salvador; Guatemala; Guyana; Haiti; Honduras; Jamaica; Nicaragua; Panama; Paraguay; Peru; Suriname (from 2000); Trinidad and Tobago; Uruguay; Bolivarian Republic of Venezuela (Venezuela) and Other NonOECD Americas.
Albania	ALBANIA	

Long name	Short name	Definition
Bosnia and Herzegovina	BOSNIAHERZ	Data for Bosnia and Herzegovina are available starting in 1990. Prior to that, they are included in Former Yugoslavia.
Bulgaria	BULGARIA	
Croatia	CROATIA	Data for Croatia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.
Cyprus	CYPRUS	<p>Note by Republic of Türkiye: The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Republic of Türkiye recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Republic of Türkiye shall preserve its position concerning the “Cyprus” issue.</p> <p>Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Republic of Türkiye. The information in this report relates to the area under the effective control of the Government of the Republic of Cyprus.</p>
Gibraltar	GIBRALTAR	
Kosovo	KOSOVO	<p>Data for Kosovo are available starting in 2000. Between 1990 and 1999, data for Kosovo are included in Serbia. Prior to 1990, they are included in Former Yugoslavia.</p> <p>This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the Advisory Opinion of the International Court of Justice on Kosovo’s declaration of independence.</p>
Malta	MALTA	

Long name	Short name	Definition
Montenegro	MONTENEGRO	Data for Montenegro are available starting in 2005. Between 1990 and 2004, data for Montenegro are included in Serbia. Prior to 1990, they are included in Former Yugoslavia.
Romania	ROMANIA	
Republic of North Macedonia	NORTHMACED	Data for the Republic of North Macedonia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.
Serbia	SERBIA	Data for Serbia are available starting in 1990. Prior to that, they are included in Former Yugoslavia. Serbia includes Montenegro until 2004 and Kosovo until 1999.
Former Yugoslavia (if no detail)	F_YUGOSLAVIA	Before 1990, includes Bosnia and Herzegovina; Croatia; Kosovo; Montenegro; the Republic of North Macedonia; Slovenia and Serbia.
Non-OECD Europe and Eurasia	NON_OECDEURAS	Includes Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Cyprus ^{2,3} ; Georgia; Gibraltar; Kazakhstan; Kosovo; Kyrgyzstan; Malta; Republic of Moldova (Moldova); Montenegro; Republic of North Macedonia; Romania; Russian Federation; Serbia ⁴ ; Tajikistan; Turkmenistan; Ukraine; Uzbekistan; Former Soviet Union (prior to 1990) and Former Yugoslavia (prior to 1990).
Armenia	ARMENIA	Data for Armenia are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Azerbaijan	AZERBAIJAN	Data for Azerbaijan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

². Note by Republic of Türkiye:

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Republic of Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Republic of Türkiye shall preserve its position concerning the “Cyprus issue”.

³. Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Republic of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

⁴. Serbia includes Montenegro until 2004 and Kosovo until 1999.

Long name	Short name	Definition
Belarus	BELARUS	Data for Belarus are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Georgia	GEORGIA	Data for Georgia are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Kazakhstan	KAZAKHSTAN	Data for Kazakhstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Kyrgyzstan	KYRGYZSTAN	Data for Kyrgyzstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Republic of Moldova	MOLDOVA	<p>Data for Moldova are available starting in 1990. Prior to that, they are included in Former Soviet Union.</p> <p>Official figures on natural gas imports, natural gas inputs to power plants, electricity production, foreign trade and consumption are modified by the IEA Secretariat to include estimates for supply and demand for the districts from the left side of the river Nistru and municipality Bender. Other energy production or consumption from these districts is not included in the Moldovan data. This may lead to breaks in the time series for some products.</p> <p>Due to the inclusion of estimated data in the Moldova energy balance, indicators for per capita energy consumption or energy intensity may appear inconsistent with expected trends.</p>
Russian Federation	RUSSIA	Data for Russia are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Tajikistan	TAJIKISTAN	Data for Tajikistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Turkmenistan	TURKMENISTAN	Data for Turkmenistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Long name	Short name	Definition
Ukraine	UKRAINE	Data for Ukraine are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Uzbekistan	UZBEKISTAN	Data for Uzbekistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Former Soviet Union (if no detail)	F-USSR	Before 1990, includes Armenia; Azerbaijan; Belarus; Estonia; Georgia; Kazakhstan; Kyrgyzstan; Latvia; Lithuania; Republic of Moldova; Russian Federation; Tajikistan; Turkmenistan; Ukraine and Uzbekistan.
Algeria	ALGERIA	
Angola	ANGOLA	
Benin	BENIN	
Botswana	BOTSWANA	Data for Botswana are available from 1981. Prior to that, they are included in Other Africa.
Cameroon	CAMEROON	
Congo	CONGO_REPUB	
Democratic Republic of the Congo	CONGO_DRC	
Côte d'Ivoire	COTEIVOIRE	
Egypt	EGYPT	Data for Egypt are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 July Y and ends on 30 June Y+1 are labelled as year Y.
Equatorial Guinea	EQGUINEA	
Eritrea	ERITREA	Data for Eritrea are available from 1992. Prior to that, they are included in Ethiopia.
Kingdom of Eswatini	ESWATINI	
Ethiopia	ETHIOPIA	Ethiopia includes Eritrea prior to 1992.

Long name	Short name	Definition
Gabon	GABON	
Ghana	GHANA	
Kenya	KENYA	
Libya	LIBYA	
Madagascar	MADAGASCAR	
Mauritius	MAURITIUS	
Morocco	MOROCCO	
Mozambique	MOZAMBIQUE	
Namibia	NAMIBIA	Data for Namibia are available starting in 1991. Prior to that, data are included in Other Africa.
Niger	NIGER	
Nigeria	NIGERIA	
Rwanda	RWANDA	
Senegal	SENEGAL	
South Africa	SOUTHAFRICA	Nuclear and Hydro electricity generation data are reported on a fiscal year basis, beginning on the 1 April Y and ending on the 31 March Y+1.
South Sudan	SSUDAN	Data for South Sudan are available from 2012. Prior to 2012, they are included in Sudan.
Sudan	SUDAN	South Sudan became an independent country on 9 July 2011. From 2012, data for South Sudan are reported separately.
United Republic of Tanzania	TANZANIA	Oil data are reported on a fiscal year basis, beginning on the 1 July Y and ending on the 30 June Y+1.
Togo	TOGO	
Tunisia	TUNISIA	

Long name	Short name	Definition
Uganda	UGANDA	Data for Uganda are available from 1971.
Zambia	ZAMBIA	
Zimbabwe	ZIMBABWE	
Other Africa	OTH_NON_OECDAGR	Includes Botswana (until 1980); Burkina Faso; Burundi; Cape Verde; Central African Republic; Chad; Comoros; Djibouti; Gambia; Guinea; Guinea-Bissau; Lesotho; Liberia; Malawi; Mali; Mauritania; Namibia (until 1990); Niger (until 1999); Réunion; Sao Tome and Principe; Seychelles; Sierra Leone; Somalia; and Swaziland.
Africa	NON_OECDAGR	Includes Algeria; Angola; Benin; Botswana; Cameroon; Republic of Congo (Congo); Côte d'Ivoire; Democratic Republic of Congo; Egypt; Equatorial Guinea; Eritrea; the Kingdom of Eswatini; Ethiopia; Gabon; Ghana; Kenya; Libya; Madagascar; Mauritius; Morocco; Mozambique; Namibia (from 1991); Niger; Nigeria; Rwanda; Senegal; South Africa; South Sudan; Sudan, United Republic of Tanzania (Tanzania); Togo; Tunisia; Uganda; Zambia; Zimbabwe and Other Africa.
Bahrain	BAHRAIN	
Islamic Republic of Iran	IRAN	Data are reported according to the Iranian calendar year. By convention data for the year that starts on 20 March Y and ends on 19 March Y+1 are labelled as year Y.
Iraq	IRAQ	
Jordan	JORDAN	
Kuwait	KUWAIT	
Lebanon	LEBANON	
Oman	OMAN	
Qatar	QATAR	

Long name	Short name	Definition
Saudi Arabia	SAUDIARABIA	
Syrian Arab Republic	SYRIA	
United Arab Emirates	UAE	
Yemen	YEMEN	
Middle East	NON_OECDME	Includes Bahrain, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen.
Bangladesh	BANGLADESH	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 July Y-1 and ends on 30 June Y are labelled as year Y.
Brunei	BRUNEI	
Cambodia	CAMBODIA	Data for Cambodia are available starting in 1995. Prior to that, they are included in Other Asia.
India	INDIA	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y.
Indonesia	INDONESIA	
Democratic People's Republic of Korea	KOREADPR	
Lao People's Democratic Republic	LAO	Data for the Lao People's Democratic Republic are available starting in 1992. Prior to that, they are included in Other Asia.
Malaysia	MALAYSIA	
Mongolia	MONGOLIA	Data for Mongolia are available starting in 1985. Prior to that, they are included in Other Asia.
Myanmar	MYANMAR	Data were reported on a fiscal year basis until 2015 data. By convention data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y.

Long name	Short name	Definition
Nepal	NEPAL	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 July Y and ends on 30 June Y+1 are labelled as year Y.
Pakistan	PAKISTAN	Data are reported on a fiscal year basis. By convention fiscal year Y/Y+1 is labelled as year Y.
Philippines	PHILIPPINES	
Singapore	SINGAPORE	
Sri Lanka	SRILANKA	
Chinese Taipei	TAIPEI	
Thailand	THAILAND	
Vietnam	VIETNAM	
Other non-OECD Asia	OTH_NON_OECDAS	Includes Afghanistan; Bhutan; Cambodia (until 1994); Cook Islands; Fiji; French Polynesia; Kiribati; the Lao People's Democratic Republic (until 1999); Macau, China; Maldives; Mongolia (until 1984); New Caledonia; Palau (from 1994); Papua New Guinea; Samoa; the Solomon Islands; Timor-Leste; Tonga; and Vanuatu.
Non-OECD Asia excluding China	NON_OECDAS_X_CHINA	Includes Bangladesh; Brunei Darussalam; Cambodia (from 1995); India; Indonesia; the Democratic People's Republic of Korea; Malaysia; Mongolia (from 1985); Myanmar; Nepal; Pakistan; the Philippines; Singapore; Sri Lanka; Chinese Taipei; Thailand; Viet Nam; Other non-OECD Asia.
People's Republic of China	CHINA	
Hong Kong, China	HONGKONG	
China Region	CHINAREG	Includes the People's Republic of China and Hong Kong, China.

Long name	Short name	Definition
Non-OECD Total	NON_OECDTOT	Includes Africa; Asia (excluding China); China (People's Republic of China and Hong Kong, China); Non-OECD Americas; Middle East; and Non-OECD Europe and Eurasia.
World	WORLD	Includes OECD Total; Africa; Asia (excluding China); China (P.R. of China and Hong Kong, China); NonOECD Americas; Middle East; Non-OECD Europe and Eurasia.
Africa (UN)	AFRICA_UN	Includes Algeria; Angola; Benin; Botswana; Burkina Faso; Burundi; Cabo Verde; Cameroon; Central African Republic; Chad; Comoros; the Republic of the Congo (Congo); Côte d'Ivoire; the Democratic Republic of the Congo; Djibouti; Egypt; Equatorial Guinea; Eritrea; the Kingdom of Eswatini; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Libya; Madagascar; Malawi; Mali; Mauritania; Mauritius; Morocco; Mozambique; Namibia; Niger; Nigeria; Réunion (until 2010); Rwanda; Sao Tome and Principe; Senegal; the Seychelles; Sierra Leone; Somalia; South Africa; South Sudan (from 2012); Sudan; the United Republic of Tanzania (Tanzania); Togo; Tunisia; Uganda; Zambia; Zimbabwe. Note that Memo: Africa (UN) is identical to Africa.

Long name	Short name	Definition
Americas (UN)	AMERICAS_UN	Includes Antigua and Barbuda; Argentina; Aruba; the Bahamas; Barbados; Belize; Bermuda; the Plurinational State of Bolivia (Bolivia); Bonaire (from 2012); the British Virgin Islands; Brazil; Canada; the Cayman Islands; Chile; Colombia; Costa Rica; Cuba; Curaçao; Dominica; the Dominican Republic; Ecuador; El Salvador; the Falkland Islands (Malvinas); Guatemala; French Guiana (until 2010); Grenada; Guadeloupe (until 2010); Guyana; Haiti; Honduras; Jamaica; Martinique (until 2010); Mexico; Montserrat; Nicaragua; Panama; Paraguay; Peru; Puerto Rico (for natural gas and electricity); Saba (from 2012); Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Eustatius (from 2012); Sint Maarten (from 2012); Suriname; Trinidad and Tobago; the Turks and Caicos Islands; the United States; Uruguay; the Bolivarian Republic of Venezuela (Venezuela).
Asia (UN)	ASIA_UN	Includes Afghanistan; Armenia; Azerbaijan; Bahrain; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; the People's Republic of China; Cyprus; Georgia; Hong Kong, China; India; Indonesia; the Islamic Republic of Iran; Iraq; Israel; Japan; Jordan; the Democratic People's Republic of Korea; Korea; Kazakhstan; Kuwait; Kyrgyzstan; the Lao People's Democratic Republic; Lebanon; Macau, China; Malaysia; the Maldives; Mongolia; Myanmar; Nepal; Oman; Pakistan; the Philippines; Qatar; Saudi Arabia; Singapore; Sri Lanka; the Syrian Arab Republic; Tajikistan; Chinese Taipei; Thailand; Timor-Leste; Republic of Türkiye; Turkmenistan; the United Arab Emirates; Uzbekistan; Viet Nam; and Yemen.

Long name	Short name	Definition
Europe (UN)	EUROPE_UN	Includes Albania; Austria; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; the Czech Republic; Denmark; Estonia; Finland; France; ⁵ Germany; Gibraltar; Greece; Hungary; Iceland; Ireland; Italy; Kosovo; ⁶ Latvia; Lithuania; Luxembourg; Malta; the Republic of Moldova (Moldova); Montenegro; the Netherlands; the Republic of North Macedonia; Norway; Poland; Portugal; Romania; the Russian Federation; Serbia; ⁷ the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Ukraine; the United Kingdom.
Oceania (UN)	OCEANIA_UN	Includes Australia; New Zealand; Cook Islands; Fiji; French Polynesia; Kiribati; New Caledonia; Palau; Papua New Guinea; Samoa; the Solomon Islands; Tonga; Vanuatu.

Fiscal year

This table lists the countries for which data are reported on a fiscal year basis. More information on beginning and end of fiscal years by country is reported in the column 'Definition'.

This document is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. In this publication, 'country' refers to country or territory, as case may be. Data start in 1960 for OECD countries and regions, and in 1971 for non-OECD countries and regions, unless otherwise specified.

Country/Region	Short name	Definition
Australia	AUSTRALI	Data are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 July Y-1 and ends on 30 June Y are labelled as year Y.
Bangladesh	BANGLADESH	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 July Y-1 and ends on 30 June Y are labelled as year Y.
Egypt	EGYPT	Data are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 July Y and ends on 30 June Y+1 are labelled as year Y.
Ethiopia	ETHIOPIA	Data are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 July Y and ends on 30 June Y+1 are labelled as year Y.
India	INDIA	Data are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y. This convention is different from the one used by Government of India, whereby fiscal year starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y+1.
Islamic Republic of Iran	IRAN	Data are reported according to the Iranian calendar year. By convention data for the year that starts on 20 March Y and ends on 19 March Y+1 are labelled as year Y.
Japan	JAPAN	Starting 1990, data are reported on a fiscal year basis. By convention, data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y.
Kenya	KENYA	Electricity data are reported on a fiscal year basis, beginning on the 1 July Y and ending on the 30 June of Y+1.
Myanmar	MYANMAR	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 April Y and ends on 31 March Y+1 are labelled as year Y.
Nepal	NEPAL	Data are reported on a fiscal year basis. By convention data for the fiscal year that starts on 1 July Y and ends on 30 June Y+1 are labelled as year Y.
Pakistan	PAKISTAN	Data are reported on a fiscal year basis. By convention fiscal year Y/Y+1 is labelled as year Y.
South Africa	SOUTHAFRIC	Nuclear and Hydro electricity generation data are reported on a fiscal year basis, beginning on the 1 April Y and ending on the 31 March Y+1.
United Republic of Tanzania	TANZANIA	Oil data are reported on a fiscal year basis, beginning on the 1 July Y and ending on the 30 June Y+1.

Country notes and sources

OECD Countries

General notes

In this release, the files for OECD countries and the World files in the online data service are updated as of April 2025. The files include data up to 2023. The notes given in this document refer to data for the years 1960 to 2023 published in the online data service. In general, more detailed notes are available for data starting in 1990.

Data are obtained through annual submission of natural gas questionnaires from National Administrations, as indicated for each country in the sources section.

In some instances, it has been necessary for the IEA to estimate some data. Explanations of the estimates are provided in the country notes.

Australia

Source

Department of Climate Change, Energy, the Environment and Water, Canberra.

General notes

Prior to 1991 **natural gas** data included ethane.

Data after 1973 are based on national surveys.

All data refer to fiscal years, which run from 1 July to 30 June (e.g. 2016 = 1 July 2015 to 30 June 2016).

Prior to 2015 for reasons of data confidentiality, Australia did not provide a breakdown of *exports* by destination and data prior to 2015 are estimated by the IEA Secretariat.

Supply

In the 2025 edition, *associated gas*, *colliery gas*, *exports*, *gas vented* and *gas flared* were revised to reflect a new way of processing the data that uses slightly different conversion factors..

In 2023, the Bayu-Undan gas field began closing down resulting in a decrease to *total imports*. This is the only source of imported **gas**.

The GCV of *inland consumption (calculated)* has been falling since 2017 due to increases in liquefaction and the volume lost during this process.

Around 30% of *production* (mainly coal seam gas) is estimated by the Australian administration.

Pipeline *imports* are from the Joint Petroleum Development Area, an area jointly administered by Timor-Leste and Australia pursuant to the Timor Sea Treaty.

All **gas** imports come from the Bayu-Undun field in Timor Leste. Earlier questionnaires reported that the source was *not elsewhere specified* for reasons of confidentiality. Import data from 2016-17 has been revised and provides the actual source.

Extraction from the Bayu-Undun field ceased in June 2023. Australia's **gas** imports fell significantly in 2023.

Australia's **gas** exports to Thailand nearly doubled between 2022 and 2023. Trade analysis shows that Thailand, along with China and Malaysia, have historically produced enough **gas** to meet their own demands, but declining production and reserves have led them to import **LNG**.

Transformation

In the 2025 edition, consumption in *main activity producer electricity; autoproducer electricity; main activity producer CHP; and autoproducer CHP* was revised from 2017 to 2019 by Australian administration using a new calculation method to ensure that annual questionnaire values match the Australian administration other publications.

From 2011 to 2015, *not elsewhere specified (transformation)* represents **gas** that is used to produce **hydrogen** for hydrocracking in refineries.

Prior to 1974 there are no detailed data available for *autoproducers* and for sub-sector industry consumption. *Autoproducer* data are included in *main activity producer* before 1974.

Consumption

Between 2021 and 2022 there is a break in the time series in the *transport sector* due to a change in estimation methodology by the Australian Administration.

Consumption in the *residential* and *agriculture and forestry* sectors are estimated by the Australian administration based on models.

There are breaks between 2002 and 2003 due to major revisions made in the *oil and gas extraction*, and *liquefaction (LNG) / regasification plants*.

Until 2005, **natural gas** consumed to fuel the distribution of natural gas in natural gas networks was reported as transformation for *gas works gas* production.

Between 2001 and 2002 there are breaks in time series for consumption data due to an industry structural shift and changes in methodology.

In 1999 and 2000 end-use consumption data are estimated by the Australian Administration.

Austria

Source

Bundesanstalt Statistik Österreich, Vienna.

General note

Prior to 2000, differences due to measurement are included with *transmission and distribution losses*.

Supply

In the 2023 edition, trade data was revised back to 2005 due to a change in methodology to eliminate the reporting of transit trade. This results in no *exports* reported and a decrease in *imports*.

All *imports* are reported under *not elsewhere specified* since 2009 due to confidentiality reasons.

Consumption

Any inconsistencies in the time series for *commercial/public services* until 2011 are the result of this sub-sector being computed as a residual. Since 2012 the *commercial/public services* consumption figures are surveyed annually and the consumption quantities in small and medium enterprises in industry are the projected results of biannual sample surveys.

Belgium

Source

Service Public Fédéral Économie, Brussels.

General Notes

In the 2025 edition, some revisions have been made due to methodological corrections to better meet definitions or to correct calculation errors and survey data corrections.

In the 2022 edition, historical revisions were made back to 2013 due to better data availability and harmonisation with other gas data.

Supply

In the 2023 edition, a new methodology was used to report *imports* from Germany. The quantities were redistributed resulting in no *imports* from Germany since 2017.

Since 2020, the consistent increase of *from other sources – renewables* is an expected trend as more injection points of biomethane become active and increase production.

Since 2009 gas trade in Belgium includes *imported LNG* which is regasified and subsequently *exported* to other countries.

Imports include spot purchases.

Transformation

From 2000 **natural gas** began to replace **blast furnace gas** in the *iron and steel* industry.

Consumption

In the 2024 edition, several methodological changes were applied to *total final consumption* data resulting in some discrepancies between 2021 and 2022. Revisions are expected in the next edition to align the time series and resolve these discrepancies.

Consumption in the *transport equipment* sub-sector decreased in 2015 due to the closure of a big industry of this sector in December 2014.

In 2003, the large decrease in *not elsewhere specified (Industry)* is due to improvements in data collection.

Canada

Source

Natural Resources Canada, Ottawa.

General notes

Prior to 1990, data for consumption of **natural gas** for *construction* are not available.

Prior to 1978, consumption in *not elsewhere specified (Industry)* includes gas used as fuel in *oil refineries*.

Supply

2015 is the first year when stock levels were measured in Canada. Based on this measurement and the *stock change* of previous years, Canadian authorities have estimated the stock level back to 2005.

Indigenous production is measured by the Canadian administration by upscaling the marketable production by approximately 11% to account for own-use in the extraction process.

Associated gas has been estimated by the Canadian administration for 2016 and 2017.

Prior to 2005, *non-associated gas* production data includes *colliery gas* as well as *associated gas* produced in Alberta.

Transformation

Due to confidentiality reasons, the Canadian administration estimated **natural gas** consumption in *oil refineries* for 2014-2017.

Gas-to-liquids (Transformation) represents quantities of **natural gas** consumed in the production of synthetic crude oil.

Not elsewhere specified (Transformation) represents quantities of **natural gas** used for the upgrading of refined oil products.

In 2000 the increase in *main activity electricity producer* data is due to new generation plants in Alberta and Ontario.

Consumption

In the 2019 edition, an improved methodology was applied to *industry sector* for 2005 onwards resulting in a share of the *not elsewhere specified (Industry)* being allocated to various industrial sub-sectors and creating breaks between 2004 and 2005.

Due to confidentiality reasons, the Canadian administration estimated **natural gas** consumption in the following sectors for 2014-2017: *iron and steel, non-ferrous metals, transport equipment and machinery*.

In 2011 the increase consumption by *non-metallic minerals* production is due to switching from **coal** to **natural gas** in cement manufacturing.

Significant y-o-y changes in *transmission and distribution losses* are seen due to this flow being used as a balancing variable.

Prior to 1990, *construction* data are not available.

Prior to 1978, consumption in *not elsewhere specified (Industry)* includes gas used as fuel in *oil refineries*.

Prior to 1978, *agriculture/forestry* is included in *not elsewhere specified (Industry)*, and no detailed industry sub-sector data are available.

Chile

Source

Ministerio de Energía, Santiago.

General notes

The 2017 values for *not elsewhere specified (Transformation)* and *oil refineries* have been estimated by the IEA Secretariat.

Since 2008 *stocks level* data are available.

Supply

Exports of regasified **LNG** to Argentina started in 2016, after the works to enable reverse flows in the interconnector finished.

From other sources – oil reported between 2009 and 2016 represent **LPG** injected into the **natural gas** distribution network.

Transformation

For 2009 and 2010, inputs of **natural gas** to *autoproducer CHP* plants were estimated by the Chilean administration. For other years these inputs are included in *autoproducer electricity*.

Not elsewhere specified (Transformation) represents **natural gas** that is blended with refinery gas.

Consumption

Natural gas used for *oil and gas extraction* is included in gas consumption for energy sector own use under *oil refineries*.

Not elsewhere specified (Transport) corresponds to marine transport.

Colombia

Source

Ministry of Mines and Energy, Unidad de Planeación Minero Energética, Bogota.

General notes

Colombia joined the OECD in April 2020. Data start in 1971.

In the 2025 edition, the IEA Secretariat made revisions to data dating back to 2006 for many flows in *final consumption* to align them with the historical data of the Colombian administration. These changes have caused a break in the time series between 2005 and 2006.

No 2022 or 2023 data were submitted to the IEA from the Colombian Administration, therefore extensive estimations were required to be made by the IEA Secretariat. The estimations were made using a number of different sources including the Colombia Aggregated National Energy Balance, Colombia Natural Gas Market Manager Annual Report, data from other international organizations, and data from the other fuel questionnaires that were submitted.

In the 2023 edition, revisions were made back to 2006 for many flows in *final consumption* to align with the historical data of the Colombian Administration. This has resulted in a break in the time series between 2005 and 2006.

Costa Rica

There is no **natural gas** data for Costa Rica, as there is neither production nor consumption.

Czech Republic

Source

Czech Statistical Office, Prague.

General notes

Prior to 1994 data in *transport sector* are for former Czechoslovakia.

Between 1993 and 1994 there are some breaks in time series due to a change in the energy balance methodology between former Czechoslovakia and the Czech Republic.

Transformation

In the 2020 data, the large increase in *autoproducer electricity* is due to the cessation of energy gas production (gas works gas) in one company and its replacement being **natural gas**.

Consumption

There is a break in time series in the *industry* and *transformation sectors* between 2009 and 2010 due to new available data from distribution companies.

Since 2008 hydrogen production is reported in petrochemical feedstocks as non-energy use. Up to 2007, *chemical and petrochemical* consumption includes both energy and non-energy use.

Denmark

Source

Danish Energy Agency, Copenhagen.

Supply

The GCV for *stock changes (National territory)* often do not match the data exactly due to the different calorific values in the successive years.

Consumption

The consumption of **LNG** for marine transport and *international marine bunkers* is not reported due to confidentiality.

Estonia

Source

Statistics Estonia, Tallinn.

General note

Data are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Consumption

Consumption reported under *not elsewhere specified (Energy)* represents consumption of different activities of companies in the *energy sector* (NACE 35) for own uses without transformation.

There are inconsistencies in the time series for *residential* consumption as this sector is computed as a residual.

In 2014, Estonia's main company in the *chemical and petrochemical* sector ceased activity, resulting in no non-energy use of **natural gas**.

In 2009, Estonia's main producer of fertilisers ceased activity, resulting in a sharp decrease in the non-energy use of **natural gas**. The plant reopened in 2012.

Finland

Source

Statistics Finland, Helsinki.

General notes

There have been major changes in the **natural gas** operating environment in Finland during 2022 and 2023 due to changes and disruptions in the supply of **natural gas** and **LNG**. In 2023 Finland was a net exporter of **natural gas** via pipelines and relied on **LNG** imports. Exported **natural gas** is regasified LNG.

From the 2025 edition, on-grid liquefied biogas (LBG) amounts sold via mass-balance guarantees-of-origin certificates used in *road transport* have been included under the **natural gas** balance and excluded from the renewables **biogas** balance. Imported Guarantees-of-Origin LBG has been included under the **natural gas** balance imports and excluded from the renewables **biogas** balance.

In 2018, more operators entered the market. As a result, *stock data* stopped being confidential.

Finland *imports LNG* since September 2016. Before 2018 there was only one company operating in this market, **LNG** supply data was thus confidential and excluded from the supply side flows.

Between 1989 and 1990 and between 1990 and 2000 there are some breaks in the time series as data from 1990 to 1999 were revised by the Finnish administration in 2002.

Supply

The *opening* and *closing stock levels* data are confidential and *stock changes* data for 2017 onwards are estimated by the Finnish administration.

Transformation

Not elsewhere specified (Transformation) data represents **natural gas** used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and hydrocracking in oil refineries.

Consumption

In the 2025 edition, gas leakage caused by Balticconnector pipeline is included under *transmission losses*.

In the 2025 edition, the consumption of **biogas** in *road transport* was removed due to uncertainty about the amount of **biogas** used in *transport*.

Transmission and distribution losses include the quantities of boil-off **natural gas** originating from the natural evaporation of LNG in tanks.

Not elsewhere specified (transport) includes LNG consumption for domestic navigation.

Since 1995, the breakdown between *residential* and *commercial/public services* is available due to new system of data collection.

Prior to 1989, data for consumption in the *residential* and *agriculture/forestry* sectors were estimated by the Finnish administration.

France

Source

Ministère de la Transition Écologique et Solidaire, Paris.

General notes

The data includes the French overseas departments, however **natural gas** is neither produced, nor consumed in these departments.

Between 2017 and 2018 there are some breaks in the time series throughout consumption due to a new methodology for preparing the **natural gas** balances.

Until 2007 some *statistical differences* reported by the French utilities were included in *transmission and distribution losses*. Since 2008 these amounts are included under *statistical difference*.

Between 1999 and 2000 there are some breaks in time series due to a new methodology for preparing the **natural gas** balances.

Supply

From 2000 - 2013 the *exports* breakdown is not available.

There is a break in *stocks* between 2004 and 2005.

Pipeline *imports* from *not elsewhere specified* origin may contain spot purchases of LNG.

The pipeline *imports* and pipeline *exports* data include transit amounts.

From 1990 to 1998 *statistical differences* include gas consumption which is not broken down by sectors.

Consumption

Not elsewhere specified (Transport) is consumption for maritime transport, prior to 2018 this data was included in *commercial and public services*.

The increase in **natural gas** consumption in the electricity sector for 2016 and 2017 was mainly driven by the decrease in nuclear generation due to maintenance operations, which was compensated by gas-fired power plants.

Germany

Source

Federal Statistical Office (DESTATIS), Wiesbaden.

General notes

In the 2025 edition, several flows were revised in supply, transformation, final consumption and non-energy use for 2022 due to values being preliminary in 2024 edition.

Between 2016 and 2017 there is a break in the gross calorific value of **natural gas** in the *inland consumption (Observed)*, because the German administration acquired better information on the import amounts of L-Gas (low calorific gas).

Between 2002 and 2003 there are breaks in the time series for some sectors due to modifications in reporting methodology.

Between 1994 and 1995 there are some breaks in time series due to the fact that the industry sub-sector breakdown is based on the 1995 NACE classification. Prior to 1995 the data was based on the Arbeitsgemeinschaft Energiebilanzen.

Supply

Due to a structural change, *from other sources – renewables* are reported starting in 2021. In previous years, **biomethane** was implicitly reported under **biogas** in the Renewables Questionnaire.

Between 2017 and 2018 there is a break in the time series for *imports* and *exports* due to an updated methodology to eliminate the reporting of transit trade. Prior to 2018, trade data includes transit trade.

Since 2018, *indigenous production* is being phased out, leading to a decrease in *non-associated gas*.

Since 2016, *not elsewhere specified imports* include *imports* from the Netherlands, UK, and Denmark due to confidentiality.

The low GCV of the *vented gas* is due to its high sulphur content.

Transformation

In 2003 there is a break in time series for the *transformation sector*.

Prior to 1995 inputs of **natural gas** for *main activity producer heat* plants are included with *main activity producer CHP* plants.

Consumption

Between 2021 and 2022 there is a break in the time series for *agriculture/forestry* due to an adjustment to the methodology.

Since 2018, gas distribution networks are included in *pipeline transport*, while it was only covering transmission networks before.

Between 2003 - 2009 consumption in *construction* and *agriculture/forestry* are not available.

Since 2003, transmission and distribution losses have been included in *statistical difference*.

Since 2003, gas consumption in *coke ovens* was negligible.

Before 1970, there is no detailed breakdown available for the industry sector with the exception of *iron and steel* and *chemical and petrochemical* industries.

Greece

Source

Ministry for Environment and Energy, Athens.

General notes

In 2020, the Trans Adriatic Pipeline (TAP) became operational, running through Greece to Albania and Italy. Moreover, the Interconnector Greece – Bulgaria (IBG) pipeline was connected to the TAP and became operational in 2022.

Between 2016 and 2017 there is a break in the time series due to more disaggregated data and a revised methodology.

Natural gas produced in Greece has a higher than average GCV due to a high content of C2/C4 hydrocarbons.

In 1997, a new pipeline between Russia and Greece became operational.

Supply

The significant increase of *exports* in 2022 is due to the regasification and subsequent export of *LNG imports*.

Stocks (Held abroad) refers to stocks of natural gas held in underground storage facilities in Italy and Bulgaria.

In November 1998 the production of natural gas stopped and started again in December 1999.

Consumption

Between 2021 and 2020 there is a break in the time series for many flows in the *industry sector* due to more detailed data becoming available.

Prior to 2017, consumption of liquefaction (LNG) / regasification plants is included in transmission and distribution losses.

Between 2010 and 2011 there is a break in time series for the *non-ferrous metals* due to a new methodology for measuring gas consumed by this sub-sector.

In 1998 consumption in the *residential* sector is included with *commercial/public services*.

Hungary

Source

Hungarian Energy and Public Utility Regulatory Authority, Budapest.

General note

Between 1996 and 1997 some breaks in time series exist due to a new methodology applied by the Hungarian administration.

Supply

In 2025, higher stock levels are due to storage level obligations of the EU and energy security concerns.

The imports by origin data are based on estimates of **natural gas** flow models. In the 2025 edition, the methodology was further improved by reallocating higher amounts from *not elsewhere specified* to the likely origin countries.

In 2022, the value reported for *stock changes (cushion gas)* in TJ is due to a technical reclassification.

Between 2015 and 2016 there is a break in the time series for trade data due to a new methodology which eliminates the reporting of transit trade.

Between 2012 and 2013 there is a break in the time series for *stock levels* due to a change in the methodology.

Between 2001 and 2002 there is a break in the time series for *stock levels*.

From 2001 to 2004 *statistical difference* includes **natural gas** used for refilling *cushion gas*.

Transformation

Since 2010, data reported for *not elsewhere specified (transformation)* represent **natural gas** used for **hydrogen** manufacture used in refineries for hydrodesulfurization. Prior to this year, these quantities are reported under *oil refineries*.

Prior to 2004, *iron and steel* consumption includes transformation of **natural gas** in *blast furnaces*.

The increase in *main activity producer CHP* plants data in 2000 is due to a reclassification of *autoproducer plants* into *main activity producer plants*.

In 1997, two *autoproducer heat* plants were reclassified to *main activity producer heat* plants.

Consumption

Consumption under the *not elsewhere specified (Other)* sector includes military usage.

Between 2012 and 2013 there are some breaks in the time series for the *energy*, *transport* and *industry* sectors due to a new methodology.

Iceland

There is no **natural gas** data for Iceland, as there is neither production nor consumption.

Ireland

Sources

Sustainable Energy Authority of Ireland, Cork.

General note

Since April 2017 there is no gas storage facility in Ireland.

Supply

Natural gas *indigenous production* increased in 2016 when the Corrib Gas field began production. Production from the field peaked in 2017 and is expected to decline throughout the 2020s.

Since 1996 the increase in *imports* is due to the depletion of the Kinsale gas field and the availability of a new pipeline system to the United Kingdom.

Transformation

Between 2005 and 2006 there is a break in the time series for *autoproducer CHP* due to a new methodology for allocating unsold steam.

Not elsewhere specified (Transformation) corresponds to **natural gas** blended with **refinery gas**.

Consumption

Since 2009, the disaggregation of consumption into all the industry sub-sectors is done according to data from the Census of Industrial Production (CIP).

In 2007, the increase in *machinery* consumption is due to changes in industry sub-sector structure and fuel usage.

In 2004, *chemical and petrochemical* non-energy use stopped due to the shutdown of a fertiliser plant.

In 2002, **natural gas** consumption in the *iron and steel* industry stopped due to the shutdown of Ireland's main steel plant.

Prior to 1986, detailed figures for the consumption of **natural gas** in *industry* and *other sectors* are not available.

Israel

Source

Israel Central Bureau of Statistics, Jerusalem.

General note

Since 2012, all natural gas data, except inputs to electricity production and oil refineries, have been estimated by the IEA Secretariat.

Supply

In the 2020 data, the large increase in *indigenous production* and *exports* are due to more gas fields coming online and exports beginning to Egypt.

Imports of **natural gas** began in 2008.

Transformation

Not elsewhere specified (Transformation) since 2013 refers to quantities of **natural gas** used for the generation of hydrogen, which is subsequently used for hydrosulphurization in oil refineries. In the previous editions, these figures were reported as energy consumption of gas in *oil refineries*.

2016 and 2017 gas inputs to *main producers* and *autoproducers* of electricity were estimated by the IEA Secretariat.

Italy

Source

Ministry of Environment and Energy Security (MASE), Rome

Gestore dei Servizi Energetici GSE S.p.A., Rome

Acquirente Unico S.p.A., Rome

Terna S.p.A., Rome

General notes

From 1991 to 1993, data for *transmission and distribution losses* include some *statistical differences*. However, since 1994 improved collection methods have decreased these differences.

Between 1989 and 1990 there is a break in *stocks level*.

Supply

In 2021, the trade outlook changed considerably due to the Trans Adriatic Pipeline (TAP) starting operation.

Imports from Croatia represent **natural gas** transferred with a pipeline directly to Italy from fields in Croatian territory in the Adriatic Sea.

Transformation

Prior to 2008, inputs of **natural gas** to all heat production in *industry* were reported in *final consumption*.

Between 2003 and 2004 there are breaks in time series in *industry* and *transformation* due to a new data reporting methodology.

From 2000 to 2002 no *autoproducer* data are available due to confidentiality reasons. These data are included in *main activity producer plants*.

In 1996 the *production* of gas works gas from **natural gas** ceased.

Consumption

Between 2020 and 2021 there is a break in the time series across *total final consumption* due to a change in methodology to improve data quality and align data between natural gas TSOs and operators collecting data in the distribution network.

Between 2006 and 2007 there is a break in the time series of the energy sector.

Prior to 1990, consumption in *commercial/public services* is included in *residential*.

Prior to 1970, the breakdown of industry data is only available for *iron and steel* and *chemical and petrochemical* industry; all other data are included in *not elsewhere specified (Industry)*.

Except for liquefaction plants, data for the energy sector are estimated and include *statistical differences* and *other non-specified consumption*.

Japan

Source

The Institute of Energy Economics, Tokyo.

General notes

Since 1990, data are reported on a fiscal year basis, which runs from 1 April to 31 March (e.g. 2015 = April 2015 to March 2016).

Supply

In certain cases, the country of the last consignment of **natural gas** is reported as the country of origin for the **LNG imports**, instead of the country where the gas was produced.

Transformation

Since 1990 most of the *gas works gas* production and consumption has been included with **natural gas**.

Korea

Source

Korea Energy Economics Institute, Ulsan.

General note

In the 2024 edition, general revisions were made for the entire time series, 1990 to 2022. The revisions were made due to new more reliable data sources being used and a change in methodology to provide more detailed data.

Supply

Since 2013, *from other sources – oil* is estimated.

From other sources – oil represent the amount of liquefied petroleum gases that are either blended with **natural gas** or are directly used in city gas distribution networks.

Transformation

Consumption in *not elsewhere specified (transformation)* represents gas that is used in **hydrogen** fuel cell generators.

Consumption

Prior to 2015, consumption in *liquefaction (LNG) / regasification plants* included *transmission and distribution losses* and measuring errors

From 1993 to 2006, consumption of **natural gas** in *transport equipment* is included in the *machinery* flow.

Latvia

Source

Central Statistical Bureau, Riga.

General note

Data for Latvia are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Supply

Stock levels in Latvia do not include stocks held in national territory for other countries.

Transformation

Between 2016 and 2017 there is a break in the time series for *main activity producer CHP* and *main activity producer heat* due to a reclassification according to the units of plant rather than the plants as a whole.

Consumption

The consumption in the *iron and steel* industry decreased in 2014 due to the bankruptcy of the major company in the market.

Lithuania

Source

Statistics Lithuania, Vilnius.

General note

Data for Lithuania are available starting in 1990. Prior to that, they are included in Former Soviet Union.

Supply

The *export* quantities since 2014 represent imported **LNG** which is regasified and subsequently exported to other countries.

Transformation

Natural gas consumption for power generation has been falling significantly from 2010 onwards as gas-fired power and heating plants are being retired, largely replaced by biomass.

Not elsewhere specified (transformation) data represent **natural gas** used for **methanol** manufacture, which is used as input in *oil refineries*.

Consumption

There is a break between 2010 and 2011 in the *not elsewhere specified (energy)* timeseries due to **natural gas** being consumed for heat that was used to destroy radioactive waste after the decommissioning of the only Lithuanian nuclear plant at the end of 2009.

Luxembourg

Source

STATEC – Institut national de la statistique et des études économiques du Grand-Duché du Luxembourg, Luxembourg.

General note

In 1982 there is a break in the time series in *transformation* and *industry* sectors due to a change in methodology.

Supply

Not elsewhere specified imports include gas purchased on the spot market.

Transformation

The last *main activity producer electricity* gas-consuming plant closed in 2016.

In 2002, the increase of gas consumption in the *transformation sector* is due to a new 350-MW combined cycle power plant.

Consumption

Between 2020 and 2021 there is a break in the time series of the *industry sector* due to a change in methodology in which energy consumption is estimated at the company level and a NACE reallocation of notable companies.

Since 2012, the methodology to determine final consumption was changed in order to integrate basic data from National Accounts.

Since 2000, a more detailed breakdown of final consumption data is available due to a change in methodology.

Since 2000, consumption in the *non-ferrous metals* sub-sector is included in *iron and steel* for reasons of confidentiality.

Since 2000, consumption in *not elsewhere specified (Industry)* includes activity of companies reclassified to preserve the confidentiality.

Prior to 2000, residential consumption includes consumption in commercial/public services and agriculture/forestry.

Mexico

Source

Secretaría de Energía, Mexico City.

General note

Natural gas reported in the IEA publications may be different from what is reported in the Mexican energy publications, as the IEA includes only dry gas and excludes **natural gas liquids**, which are considered as part of **oil products**.

Supply

In the 2025 edition imports from the US for 2022 and 2023 were considerably lower than expected compared to the official values in national balance and historical values, and they were adjusted using the US values that were submitted officially by the US as exports to Mexico..

Consumption

In the 2025 edition, *Main activity electricity producer*, *Autoproducer electricity* and *Autoproducer CHP flows* are adjusted to be in line with the electricity questionnaire values.

Transmission and distribution losses and *pipeline transport* are included in *oil and gas extraction*.

From 1993 to 1999 *oil and gas extraction* and *not elsewhere specified (industry)* data were estimated.

Since 1993, the breakdown of the *energy sector* and of *other sectors* is available.

Netherlands

Source

Statistics Netherlands, The Hague.

General note

Between 1981 and 1982, and between 1983 and 1984 there are breaks in time series due to the introduction of more comprehensive surveys on end-use consumption.

Supply

In October 2023, the largest gas field in the country closed resulting in a decrease to *indigenous production*.

LNG imports data are obtained from customs by Statistics Netherlands, as a result there may be the reporting of *imports* from countries which do not produce **natural gas**.

In the 2023 edition, the trade methodology was updated to eliminate the reporting of transit trade with Belgium, this has resulted in a break in the time series between 2016 and 2017.

A production cap of **natural gas** was set by the government in 2015, leading to decreasing *production*.

Dutch trade figures include transit volumes.

Transformation

The values for *not elsewhere specified (energy)* represents **natural gas** combusted by the distribution operator for the purpose of operating the grid.

In 2009 the increase in *main activity electricity* consumption is due to the opening of a new plant in the second half of 2008.

In 2008 the large increase in *autoproducer CHP* plants consumption is due to a new *autoproducer CHP* plant which came on-stream.

Consumption

Data for *not elsewhere specified (other) non-energy use* represents the volume of gas injected as cushion gas in a new underground storage.

Between 1987 and 1988 there is a break in the time series in the *commercial/public services* consumption due to a major reorganisation of three public utility companies.

New Zealand

Source

Ministry of Business, Innovation and Employment, Wellington.

General notes

In the 2025 edition, most of the data submitted for 1990 to 2022 was revised due to the adoption of an improved methodology for filling out the natural gas questionnaire.

Calorific Values of *opening/closing stock level (national territory)* are calculated on the mean calorific value of **natural gas** produced in the year.

2018 data was estimated based on monthly data submitted to the IEA Secretariat.

Between 2012 and 2013 there are breaks in series for the final consumption breakdown due to the introduction of a new survey.

From 1977 to 1979 and from 1986 to 1989 *transmission and distribution losses* are included in the *statistical difference*.

Supply

There are no *imports* or *exports* of **natural gas** for New Zealand.

Transformation

In 1998 there is a large increase in *autoproducer CHP* plants consumption as two new *autoproducer CHP plants* came on-stream.

Consumption

In 2005 the decline in *chemical and petrochemical* industry consumption was due to the closure of the Motunui methanol production plant. The Motunui plant was then reopened in late 2008.

Prior to 2003 **natural gas** consumed in industry includes some gas for energy industry own use.

In February 1997 production of synthetic gasoline from **natural gas** ended.

Since 1990 a detailed consumption breakdown for *industry* is available.

Norway

Source

Statistics Norway, Oslo.

General note

Between 2009 and 2010 there is a break in the time series due to a new system for energy balance and energy accounts.

Data on *stocks* became available in 2008.

Supply

For Norway, the supply of **natural gas** is the residual of two very large and opposite amounts: *indigenous production* and *exports*. As a result, large *statistical differences* in some years may lead to discrepancies in the growth rates of supply and demand of **natural gas**.

Between 2007 and 2008 there is a break in the time series for *indigenous production* as the production of gas amounts consumed by the offshore platforms began to be included.

In 2000, *non-associated gas* production ceased.

In 1992, the large increase in *oil and gas extraction* is due to the start-up of new fields.

For the years 2010 - 2012 no split between countries of origin of *imports* was provided, therefore these were estimated by the IEA Secretariat.

Consumption

In 2007 the increase in *not elsewhere specified (transport)* is due to the wider use of gas-powered sea vessels.

Since 2002 domestic navigation is included under *not elsewhere specified (transport)*.

Before 2000 *oil and gas extraction* consumption also included some data which should have been included under *total final consumption*.

Consumption for pipeline transport is included in oil and gas extraction.

Poland

Source

Central Statistical Office, Warsaw.

General notes

Transmission and distribution losses may include some statistical differences.

Supply

In 2023, certain *imports* and *exports* were grouped into country blocks due to confidentiality reasons.

Exports include **natural gas** that is injected into underground storage facilities abroad. This process was very economically favourable for the years 2016 – 2020.

Exports include all the gas sold by companies operating in Poland (these are mainly re-exports).

Imports from Germany mainly represent **natural gas** purchased through virtual reverse flow in the Polish section of the Yamal-Europe pipeline.

Since 2010 gas *imports* from Russia include gas produced in Azerbaijan, Turkmenistan, Kazakhstan or Uzbekistan.

In 2009 *imports* reported from Other Former Soviet Union are from Turkmenistan, Kazakhstan or Uzbekistan.

Natural gas reported in *associated gas* production contains some heavier hydrocarbons. This results in a high gross calorific value for this flow.

Transformation

Not elsewhere specified (Transformation) data represent **natural gas** used for hydrogen manufacture. This hydrogen is used for hydrosulphurization in oil refineries.

In 2013 and 2014, some CHP plants were used as backup reserve plants, resulting in a decrease in consumption under *main activity producers CHP* plants.

In 2004 and 2005, small amounts of gas were used to start up *main activity electricity producer* plants.

Consumption

Not elsewhere specified (Energy) own use includes gas used for heating and pumping operations in the distribution network.

Portugal

Source

Direção-Geral de Energia e Geologia, Lisbon.

Supply

The increase in 2017 *imports* is attributed to the consumption of gas-fired power plants that filled in the gap of decreased hydro-generation due to a drought.

The *imports* reported under *not elsewhere specified* represent gas entering Portugal through the pipeline from Spain.

Prior to February 2004 most **LNG imports** from Nigeria arrived via the Huelva terminal in Spain, where they were regasified and sent by pipeline to Portugal. From February 2004 **LNG imports** arrive directly at the Sines terminal.

Transformation

Since 2012, data reported for *not elsewhere specified (transformation)* represent **natural gas** used for **hydrogen** manufacture. Prior to this year, these quantities are reported under *oil refineries*.

In 2002 the decrease in **natural gas** used for *gas works* is due to the closing of the Lisbon gas works plant in May 2001.

Slovak Republic

Source

Statistical Office of the Slovak Republic, Bratislava.

General notes

Data for *transmission and distribution losses* were not available between 2009 and 2013.

Between 1970 and 1971, and between 1978 and 1979 there are breaks in time series due to a revision of data for 1968-1969 and 1979-92 made in 2003. Data for 1970 were estimated by the Secretariat.

Supply

In 2021, *exports* are reported for the first time in the past 8 years due to large movements in stocks.

In 2002, the GCV of *indigenous production* increased significantly as extraction from a field with a low GCV ended.

Imports include gas used for pipeline compressor stations.

Transformation

In 2014, the decrease in *autoproducer CHP* plants consumption was due to a plant closure.

The last *autoproducer electricity* plant stopped operation in 2016.

Not elsewhere specified (Transformation) data represents **natural gas** used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and for hydrocracking in oil refineries.

Consumption

In 2018, following a change in the nature of its economic activity (as per the NACE classification), a big consuming company is now accounted for in the natural gas consumption for *mining and quarrying*, leading to a substantial increase.

In 2016, non-energy use of **natural gas** in the *chemical and petrochemical* industry decreased due to a two-month stoppage in ammonia production.

In 2001, there is a break in time series for energy use in *oil and gas extraction* due to the application of the IEA's definition starting that year.

There are inconsistencies in the time series for *commercial and public services* as this sub-sector is computed as a residual.

Data collection for the Transport Sector began in 2001, with no data being available for years 1990 to 2000. For years prior to 1990, the reported figures are estimates compiled by the Slovak Administration using various sources.

Starting in 2023, oil and gas extraction data in the energy sector is no longer available due to reporting units changing their NACE classification.

Slovenia

Source

Statistical Office of the Republic of Slovenia, Ljubljana.

General notes

From 1990 data for Slovenia are available. Prior to that, they are included in Former Yugoslavia.

Between 1999 and 2000 there are some breaks in series due to the implementation of a new energy data collection system in January 2001.

Supply

In the 2025 edition, the growing imports from different countries are largely driven by supply insecurity related to supply of gas of Russian –origin.

The country of the trading station where the gas was purchased is often reported as the country of origin for the *imports*, instead of the country where the gas was produced.

In 2017, Slovenia started exporting small quantities of **natural gas** to Croatia.

Transformation

In the 2025 edition, the electricity production by main activity producers decreased significantly due to a correction in the 2022 data, which reclassified one unit from electricity-only to CHP. Additionally, in 2023, production by this flexible unit declined further due to favourable hydrological conditions, changes in the electricity market influenced by the Russian-Ukrainian war, and falling natural gas prices.

Heat production of main activity producers for 2023 was in line with the 2021 value. The decrease in 2022 was due to high natural gas prices and disruptions in the supply of natural gas.

In 2014, improvements in a *main activity producer CHP* plant resulted in a substantial reduction of **natural gas** consumption in this sector.

Consumption

In 2011, the decrease in the *chemical and petrochemical* sector non-energy use consumption is due to minimal use of gas for production of methanol.

There are inconsistencies in the time series for *commercial/public services* as this sub-sector is computed by the Slovenian administration as a residual.

Spain

Source

Ministry for the Ecological Transition and the Demographical Challenge, Madrid.

General notes

Between 2014 and 2015, there is a break in the time series due to an improvement in data collection for the *industry* sector.

Between 2013 and 2014 there are breaks in series for some *transformation* sectors due to the implementation of a new tool for data collection.

Between 2008 and 2009 there is a break in stock levels due to the exclusion of mechanically recoverable *cushion gas* from the reported levels.

Between 2005 and 2006 there are some breaks in time series for the energy *industry own use* and for *final consumption* due to a change in the estimation methodology.

Between 2002 and 2003 there is a break in *stock levels* due to an improvement in *stock levels* data from 2003 onwards.

Supply

Between 1996 and 1997 total *imports* and domestic supply increased due to the enlargement of the gas grid.

Pipeline *imports* data from France are reported based on the country of last consignment.

Exports include re-exported gas volumes.

Stock changes (Cushion gas) includes both extractable and non-extractable cushion gas through mechanical methods.

Transformation

The increase in the *transformation sector* consumption for 2017 comes from more gas-fired plants being used to compensate decreased hydro generation due to a drought.

Due to the implementation of an updated tool for gathering information on electricity generation plants in 2013 many *autoproducer electricity* plants were reclassified as *autoproducer CHP* plants.

In 1997, the increase in *main activity producer electricity* consumption is due to two *main activity electricity producers* running on **natural gas**.

Between 1993 and 1994 there is a break in time series in *autoproducer CHP* plants consumption, since a new survey revealed a large number of CHP autoproducers that were previously included in industry consumption.

In 2023, electricity production by *Main Activity Producer Plants* increased to offset France's decrease in nuclear generation in the summer of 2022, driving Spain to operate at higher loads and boost electricity exports.

Since 1990 the decrease of **natural gas** inputs into **gas works gas** production is due to the substitution of **natural gas** by manufactured gas.

Consumption

Between 2021 and 2022 there is a break in the time series for *transmission and distribution losses* and *pipeline transport* in which some data was reassigned from the former to the latter.

In 2023, some consumption was reclassified from *Not elsewhere specified (Energy)* to *Oil and gas extraction* due to improved classification, resulting in a break in the series.

Since 2021, data reported in *liquefaction / regasification plants* represent **LNG** that is used for cooldown of international ships. Previously this data was included in *transmission and distribution losses*.

Since 2001, the final consumption breakdown is estimated by the Spanish administration.

Prior to 1982, **natural gas** consumption in textiles and leather, transportation equipment and machinery are included in not elsewhere specified (Industry).

Sweden

Source

Energimyndigheten, Eskilstuna.

General notes

In 2013, the **natural gas** consumed by *oil refineries* has been estimated by the IEA Secretariat.

In 2008, total final consumption and its breakdown have been estimated by the IEA Secretariat based on other Statistics Sweden publications.

Supply

From Other Sources – Renewables were estimated in 2022 edition using data from the renewables questionnaire.

Natural gas consumption data in *international marine bunkers* are available for the first time for the year 2017.

Transformation

In the 2021 edition, there was a revision of the products included under *gas works gas*. As a result, the figures for the years 2011 to 2018 were put to zero. Previously this product included some mixture of **LNG** with air to form a lower calorie product.

Autoproducer inputs to waste-heat production that are sold are reported in the respective end-use sectors and not in the *transformation sector*.

Consumption

Prior to 1993 *road* transport is included in *commercial/public services*.

Switzerland

Source

Swiss Federal Office of Energy - SFOE, Ittigen.

General notes

Since 2017, consumption reported in *not elsewhere specified (other)* is calculated as residual flow for **natural gas**. Prior to this, the statistical differences used to be absorbed by agriculture/forestry.

Supply

Prior to 2023, import data reflected the supplier's country of registration. From 2023 onward, they reflect the border entry point, driving the sharp increase in reported imports.

Transformation

Since 2013, there are fluctuations in **natural gas** consumption of *main activity producers CHP* plants due to the fuel flexibility of a plant.

In 1996, the increase of gas consumption in *main activity CHP* plants is due to more complete accounting for all producing entities.

Consumption

Between 1977 and 1978, there are breaks in time series due to the introduction of a new survey by industry type.

Between 1998 and 1999 there are breaks in series for the final consumption breakdown due to the introduction of a new survey.

Republic of Türkiye

Source

Petrol İşleri Genel Müdürlüğü, Ankara.

General notes

Between 2008 and 2009 there is a break in the time series due to consumption data being collected by a different institution, the Turkish Energy Market Regulatory Authority.

In 2006, there is a break in time series for non-energy use in *chemical and petrochemical* industry due to classification improvements.

Not elsewhere specified (Industry) includes the **natural gas** distributed by OIZ (Organised Industrial Zones).

In December 2016, the first Floating Storage and Regasification Unit (FSRU) terminal started to work allowing greater *import* quantities and *stock levels*.

Supply

In 2023, the Sakarya gas field became operational leading to a significant increase in *Indigenous Production*.

LNG Exports to Switzerland is natural gas which is sold to a Swiss-based company by loading it on a cargo ship, the destination of consumption is unknown.

LNG Exports to Serbia are exported by road tanker.

Exports reported the by the Turkish administration represent transit gas.

Transformation

Not elsewhere specified (Transformation) of **natural gas** represents amounts used to produce hydrogen for hydrocracking in refineries.

Consumption

In 2015, a new survey was introduced by the Turkish administration to collect industrial consumption data, resulting in a substantial decrease of consumption reported under *not elsewhere specified (Industry)*.

Prior to 2001, *commercial/public services* consumption was included in the *residential* data.

Between 1999 and 2001 the decrease in **natural gas** consumption in *chemical and petrochemical* non-energy use is due to the fertiliser industry.

Not elsewhere specified (Energy) sector includes gas used for heating and pumping operations in the distribution network.

United Kingdom

Source

Department for Energy Security and Net Zero, London.

General notes

In the 2025 edition, revisions were made to years 2020, 2021 and 2022 due to the use of improved data.

Since 1992, *transmission and distribution losses* include metering differences and losses due to pipeline leakage.

Prior to 1985, *transmission and distribution losses* include *stock changes*.

Supply

In 2009, the increase in **LNG imports** is due to the expansion of the Isle of Grain terminal and two new terminals at Milford Haven.

In 2002, the increase in *imports* is due to increased supplies from the Norwegian sector of the North Sea through the Vesterled pipeline, which was commissioned in the 4th quarter of 2001.

Imports from Belgium reflect physical flows from unknown origin through the Bacton-Zeebrugge Interconnector.

Exports reported under *not elsewhere specified* are all delivered to the Isle of Man.

Transformation

The **natural gas** reported in *coke ovens (transformation)* is used to form synthetic coke oven gas rather than undergoing a coking process.

Consumption

In the 2025 edition, the overall demand that has declining trend since 2021 continues.

In the 2025 edition, non-energy use in chemical and petrochemical flow drop to 0 since due to the last remaining ammonia production site permanently closed.

Between 2015 and 2016 there are some breaks in the time series in the *energy*, *industry*, and *other sectors* due to a change in methodology.

Before 2008 consumption of **natural gas** in the *commercial* sector is included in *not elsewhere specified (Other)* while *public services* consumption is shown separately.

Between 2007 and 2008 there are some breaks in time series in sectoral consumption due to a new methodology of data estimation.

Consumption includes substitute **natural gas** made at gas works and piped into the **natural gas** distribution system.

Not elsewhere specified (energy) includes gas used for heating and pumping operations in the distribution network.

Data in *not elsewhere specified (industry)* refers to sales by independent gas suppliers unallocated by categories.

Natural gas consumed by the *mining and quarrying* and the *wood and wood products* sub-sectors is included under *not elsewhere specified (industry)*.

United States

Source

Energy Information Administration, Washington, DC.

General notes

Puerto Rico is currently not included in US data for natural gas with the exception of gas consumed for electricity generation. LNG imports into Puerto Rico are reported as *Other non-OECD Americas*.

The data for the Industrial Sector consumption is based on models by the EIA.

Between 2001 and 2002 there is a break in the time series for the energy and industry sectors due to a new methodology based on the last historical year of the most recent Annual Energy Outlook (AEO) publication.

Between 1995 and 2001 the detailed breakdown of industry consumption is estimated by the Energy Information Administration using the Manufacturing Energy Consumption Survey (MECS), which is conducted quadrennially.

Supply

The *LNG exports* have been increasing since 2015, due to new liquefaction capacity (i.e. Sabine Pass) coming online which also resulted in numerous new export destinations. *LNG exports* include re-exports.

Transformation

Since 2012, data reported for *not elsewhere specified (Transformation)* represent **natural gas** used for hydrogen manufacture. Prior to 2012, these quantities are reported under the *chemical and petrochemical* sector.

Between 1999 and 2000 there are some breaks in time series for the transformation subsectors due to a new data reporting method.

Between 1990 and 2002 the amounts of **gas works gas** that are blended with **natural gas** have been estimated on the basis of the output efficiency of the process.

Since 1989 consumption by *autoproducer CHP* plants is available, while consumption by *autoproducer electricity* and *main activity producer CHP* plants are available since 1991. Prior to these years these consumptions are included in *industry* and *commercial/public services*.

Consumption

Between 2009 and 2010 then 2020 and 2021 there is a break in the times series for the flow *construction* due to a change in methodology.

Due to revisions made to the iron and steel model, there is a break in the time series between 2014 and 2015 for the consumption in *blast furnaces (Energy)*.

Until 2001, *agriculture/forestry* consumption is included under *industry*.

Prior to 1995 a detailed breakdown of *industry* consumption is not available (between 1990 and 1994 chemical consumption is estimated by the American administration).

In 1991 data on **natural gas** use in the *road sector* were collected for the first time and are not available for previous years.

Consumption in *fisheries* is included under *industry*.

Units and conversions

General conversion factors for energy

To	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
terajoule (TJ)	1	2.388x10 ²	2.388x10 ⁻⁵	9.478x10 ²	2.778x10 ⁻¹
gigacalorie (Gcal)	4.187x10 ⁻³	1	1.000x10 ⁻⁷	3.968	1.163x10 ⁻³
million tonnes of oil equivalent (Mtoe)	4.187x10 ⁴	1.000x10 ⁷	1	3.968x10 ⁷	1.163x10 ⁴
million British thermal units (MBtu)	1.055x10 ⁻³	2.520x10 ⁻¹	2.520x10 ⁻⁸	1	2.931x10 ⁻⁴
gigawatt hour (GWh)	3.600	8.598x10 ²	8.598x10 ⁻⁵	3.412x10 ³	1

Conversion factors for mass

To	kg	t	lt	st	lb
From:	multiply by:				
kilogramme (kg)	1	1.000x10 ⁻³	9.842x10 ⁻⁴	1.102x10 ⁻³	2.205
tonne (t)	1.000x10 ³	1	9.842x10 ⁻¹	1.102	2.205x10 ³
long ton (lt)	1.016x10 ³	1.016	1	1.120	2.240x10 ³
short ton (st)	9.072x10 ²	9.072x10 ⁻¹	8.929x10 ⁻¹	1	2.000x10 ³
pound (lb)	4.536x10 ⁻¹	4.536x10 ⁻⁴	4.464x10 ⁻⁴	5.000x10 ⁻⁴	1

Conversion factors for volume

To	gal U.S.	gal U.K.	bbl	ft ³	l	m ³
From:	multiply by:					
U.S. gallon (gal U.S.)	1	8.327x10 ⁻¹	2.381x10 ⁻²	1.337x10 ⁻¹	3.785	3.785x10 ⁻³
U.K. gallon (gal U.K.)	1.201	1	2.859x10 ⁻²	1.605x10 ⁻¹	4.546	4.546x10 ⁻³
barrel (bbl)	4.200x10 ¹	3.497x10 ¹	1	5.615	1.590x10 ²	1.590x10 ⁻¹
cubic foot (ft ³)	7.481	6.229	1.781x10 ⁻¹	1	2.832x10 ¹	2.832x10 ⁻²
litre (l)	2.642x10 ⁻¹	2.200x10 ⁻¹	6.290x10 ⁻³	3.531x10 ⁻²	1	1.000x10 ⁻³
cubic metre (m ³)	2.642x10 ²	2.200x10 ²	6.290	3.531x10 ¹	1.000x10 ³	1

Conversion factors from mass or volume to heat (Gross calorific value)

	LNG ²		GAS									
			Norway		Netherlands		Russia		Algeria		Qatar	
To:	MJ	Btu	MJ	Btu	MJ	Btu	MJ	Btu	MJ	Btu	MJ	Btu
From:	multiply by:											
cm ¹	40.00	37 913	39.43	37 373	33.31	31 572	38.23	36 235	39.19	37 145	41.17	39 018
Kg	54.25	51 417	52.22	49 495	42.07	39 875	55.25	52 363	52.46	49 726	54.98	52 107

¹. At 15°C and 760 mm Hg². In gaseous state – average exports

Conversion factors for natural gas

Scm versus Ncm

To:	Standard cm	Normal cm
From:	multiply by:	
Standard cm ³	1	9.480x10 ⁻¹
Normal cm ⁴	1.055	1

³. 1 Scm measured at 15°C and 760 mm Hg⁴. 1 Ncm measured at 0°C and 760 mm Hg

LNG versus GAS

To:	t of LNG	cm of LNG	Standard cm
From:	multiply by:		
t of LNG	1	2.220	1.360x10 ³
cm of LNG	4.500x10 ⁻¹	1	6.150x10 ²
Standard cm ⁵	7.350x10 ⁻⁴	1.626x10 ⁻³	1

⁵. 1 Scm = 40 MJ

Gross versus net calorific value

$$1 \text{ NCV}^6 = 0.9 \text{ GCV}^7$$

⁶. NCV = Net Calorific Value⁷. GCV = Gross Calorific Value

Conversion factors for natural gas flow rates⁸

To	Bcm per year	Mt per year	Bcf/d	Tcf per year	PJ per year	TWh per year	MBtu per year	Mtoe per year
From:	multiply by:							
Bcm per year	1	7.350x10 ⁻¹	9.681x10 ⁻²	3.534x10 ⁻²	4.000x10 ¹	1.111x10 ¹	3.790x10 ⁷	9.554x10 ⁻¹
Mt per year	1.360	1	1.317x10 ⁻¹	4.808x10 ⁻²	5.440x10 ¹	1.511x10 ¹	5.160x10 ⁷	1.299
Bcf/d	1.033x10 ¹	7.595	1	3.650x10 ⁻¹	4.132x10 ²	1.148x10 ²	3.910x10 ⁸	9.869
Tcf per year	2.830x10 ¹	2.081x10 ¹	2.740	1	1.132x10 ³	3.145x10 ²	1.070x10 ⁹	2.704x10 ¹
PJ per year	2.500x10 ⁻²	1.838x10 ⁻²	2.420x10 ⁻³	8.834x10 ⁻⁴	1	2.778x10 ⁻¹	9.470x10 ⁵	2.388x10 ⁻²
TWh per year	9.000x10 ⁻²	6.615x10 ⁻²	8.713x10 ⁻³	3.180x10 ⁻³	3.600	1	3.410x10 ⁶	8.598x10 ⁻²
MBtu per year	2.638x10 ⁻⁸	1.939x10 ⁻⁸	2.554x10 ⁻⁹	9.320x10 ⁻¹⁰	1.055x10 ⁻⁶	2.930x10 ⁻⁷	1	2.520x10 ⁻⁸
Mtoe per year	1.047	7.693x10 ⁻¹	1.013x10 ⁻¹	3.698x10 ⁻²	4.187x10 ¹	1.163x10 ¹	3.970x10 ⁷	1

⁸. Based on gas with calorific value of 40 MJ/cm at standard conditions

Decimal prefixes

10 ¹	deca (da)	10 ⁻¹	deci (d)
10 ²	hecto (h)	10 ⁻²	centi (c)
10 ³	kilo (k)	10 ⁻³	milli (m)
10 ⁶	mega (M)	10 ⁻⁶	micro (μ)
10 ⁹	giga (G)	10 ⁻⁹	nano (n)
10 ¹²	tera (T)	10 ⁻¹²	pico (p)
10 ¹⁵	peta (P)	10 ⁻¹⁵	femto (f)
10 ¹⁸	exa (E)	10 ⁻¹⁸	atto (a)

Country specific conversion factors

Average¹ Gross Calorific Value of Natural Gas (kJ/m³)

	Production	Imports	Exports	Consumption
Albania	35384	0	0	35384
Algeria	39565	39565	39565	39565
Angola	38000	38000	38000	38000
Argentina	38937	38937	38937	38937
Armenia	0	38576	0	38576
Australia	37800	31499	41103	38774
Austria	38854	38832	0	38826
Azerbaijan	39060	39060	39060	39060

Average¹ Gross Calorific Value of Natural Gas (kJ/m³)

	Production	Imports	Exports	Consumption
Bahrain	38000	38000	38000	38000
Bangladesh	38861	38861	38861	38861
Belarus	37142	37142	-	37142
Belgium	35385	38635	39458	38423
Plurinational State of Bolivia	38940	38940	38940	38940
Bosnia and Herzegovina	-	37861	-	37861
Brazil	43023	39861	19713	42106
Brunei Darussalam	35144	42000	35144	35144
Bulgaria	39298	39027	25816	38969
Cameroon	38000	38000	38000	38000
Canada	39272	39224	39225	39272
Chile	39109	39109	7822	39109
People's Republic of China	38931	38865	38931	38931
Colombia	35653	35654	-	35666
Republic of the Congo	38000	38000	38000	38000
Democratic Republic of the Congo	40000	40000	40000	40000
Côte d'Ivoire	37283	37283	37283	37283
Croatia	39269	39269	39269	39269
Cuba	36957	36957	36957	36957
Czech Republic	38523	38648	-	38582
Denmark	39476	39476	39476	39476
Dominican Republic	38000	34750	38000	34750
Ecuador	34783	34783	34783	34783
Egypt	38377	38000	38377	38377
Estonia	-	38630	-	38622
Finland	-	38475	38561	38493
France	41760	41429	41760	41760
Gabon	37700	37700	37700	37700
Georgia	39989	39989	-	39989
Germany	33312	38093	-	37767
Ghana	38000	38000	38000	38000
Greece	49778	39533	39810	39509
Hong Kong (China)	38675	38675	38675	38675
Hungary	35692	39033	-	38472
India	39000	41400	38520	40102
Indonesia	40600	40600	40600	40600
Islamic Republic of Iran	39356	39356	39356	39356
Iraq	38000	38000	38000	38000
Ireland	37662	39656	-	39015
Israel	37950	37951	37950	37951

Average¹ Gross Calorific Value of Natural Gas (kJ/m³)

	Production	Imports	Exports	Consumption
Italy	38100	38100	38100	38100
Japan	39534	41168	-	41520
Jordan	31223	31223	31223	31223
Kazakhstan	40586	40751	40586	40532
Korea	41638	41663	-	41776
Kuwait	38000	38000	38000	38000
Kyrgyzstan	36058	39023	-	38832
Latvia	-	38344	-	38344
Libya	38000	38000	38000	38000
Lithuania	0	38818	38829	38815
Luxembourg	-	41247	-	41239
Malaysia	39249	39249	39249	39249
Mexico	39157	38608	30021	38367
Republic of Moldova	32043	33859	-	33859
Morocco	33067	39162	-	38235
Mozambique	41270	41270	41270	41270
Myanmar	39269	39269	39269	39269
Netherlands	33339	33339	33339	33339
Nigeria	38000	38000	38000	38000
Republic of North Macedonia	-	38829	-	38838
Norway	39500	39372	39372	42160
New Zealand	39513	-	-	39640
Oman	37865	41400	41700	38012
Pakistan	36514	39145	36514	36514
Peru	44922	44922	44922	44922
Philippines	38549	38549	38549	38549
Poland	27961	38791	37940	35982
Portugal	-	40215	-	40215
Qatar	41400	41400	41400	41400
Romania	38247	37064	37973	37973
Russian Federation	38230	38230	38230	38893
Saudi Arabia	38000	38000	38000	38000
Senegal	39532	39532	39532	39532
Serbia	37042	37042	-	37042
Singapore	38000	38000	38000	38000
Slovak Republic	38656	38982	38512	38903
Slovenia	39802	37862	39509	37873
South Africa	38000	38000	38000	38000
Spain	40436	40478	40481	40474
Sweden	-	40859	42770	39270

Average¹ Gross Calorific Value of Natural Gas (kJ/m³)

	Production	Imports	Exports	Consumption
Switzerland	-	38088	-	38088
Syrian Arab Republic	37700	37700	37700	37700
Chinese Taipei	37216	41868	37263	41848
Tajikistan	34571	40000	-	39905
United Republic of Tanzania	38139	38000	38139	38139
Thailand	36396	36396	36396	36396
Trinidad and Tobago	38937	38937	38937	38937
Tunisia	39443	39546	-	39410
Republic of Türkiye	38290	38303	38304	38303
Turkmenistan	37889	37889	37889	37889
United Arab Emirates	37679	38000	37679	37679
United Kingdom	39901	39332	39632	39622
Ukraine	37315	38230	-	37436
Uruguay	38000	38000	38000	38000
United States	38632	38591	38855	38632
Uzbekistan	34001	34001	34001	34001
Bolivarian Republic of Venezuela	35755	35755	35755	35755
Viet Nam	41054	38612	38612	41054
Yemen	40089	40089	40089	40089

¹. Average values for 2019 to 2023.

Abbreviations

Bcm	:	billion cubic metres
Btu	:	British thermal unit
cm	:	cubic metre
GWh	:	gigawatt hour
kcal	:	kilocalorie
kg	:	kilogramme
kJ	:	kilojoule
m ³	:	cubic metre
Mcm	:	million cubic metres
Mt	:	million metric tonnes
Ncm	:	normal cubic metre
Scm	:	standard cubic metre
t	:	metric ton = tonne
TJ	:	terajoule
toe	:	tonne of oil equivalent
CHP	:	combined heat and power
GCV	:	gross calorific value
LNG	:	liquefied natural gas
NCV	:	net calorific value
TPES	:	total primary energy supply
IEA	:	International Energy Agency
OECD	:	Organisation for Economic Co-Operation and Development

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