NATURAL GAS INFORMATION 2018 PRELIMINARY EDITION

DATABASE DOCUMENTATION

This document provides support information for the IEA *Annual Natural Gas Statistics* database. This document can be found online at: http://wds.iea.org/wds/pdf/gas_documentation.pdf

Please address your inquiries to GASAQ@iea.org.

TABLE OF CONTENTS

1. CHANGES FROM LAST EDITION

In the current preliminary release only the files for OECD countries are updated with complete information for 2016. The World files NGWBAL and NGWIMP were published in August 2017 and include data up to 2015 with preliminary supply data for 2016. These files will be updated in August 2018 with the final release which will include World data up to 2016 and preliminary supply data for 2017.

Geographical coverage

Mexico became the 30th IEA Member in February 2018. Accordingly, starting with the preliminary 2018 edition, Mexico appears in the list of IEA Members for data starting in 1971. Note that in the World files NGWBAL and NGWIMP, which were published in August 2017, Mexico is included in the list of OECD Members but not IEA Members.

Brazil became an Association country in October 2017. Please note that in the World files NGWBAL and NGWIMP, which were published in August 2017, Brazil is not included in the list of the IEA and Accession/Association countries.

2. DATABASE STRUCTURE

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

OECD files (updated for the online data service preliminary release in April 2018)

- Countries: 35 countries and 5 regional aggregates (see section Geographical coverage)
- Years: 1960-2016 (unless otherwise specified, see section Geographical coverage)

NGALBALCON.IVT **OECD 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. (76 flows)
(Mcm; TJ)

NGIMPORT.IVT **OECD Imports**

Breakdown of imports by country of origin (over 80 different origins). Data are shown for total trade, pipeline and LNG.
(Mcm; TJ)

NGEXPORT.IVT **OECD Exports**

Breakdown of exports by country of destination (around 70 different destinations). Data are shown for total trade, pipeline and LNG.
(Mcm; TJ)

WORLD files (published in August 2017)

- Countries: 143 countries and 24 regional aggregates (see section Geographical coverage)
- Years: 1960-2015 for OECD countries, 1971-2015 for non-OECD countries and 2016 preliminary energy supply data for every country, unless otherwise specified (see section Geographical coverage)

NGWBAL.IVT **World Supply** (to be updated in August 2018)

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

NGWIMP.IVT **World Imports** (to be updated in August 2018)

Breakdown of imports by country of origin (over 80 different origins). Data are shown for total trade, pipeline and LNG.
(Mcm; TJ)

3. 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.
Associated Gas	AGASPRD	Natural gas produced in association with crude oil.
Non-Associated Gas	NAGASPRD	Natural gas originating from fields producing hydrocarbons only in gaseous form.
Colliery Gas	COLLIERY	Methane produced at coal mines, piped to the surface and consumed at collieries or transmitted by pipeline to consumers.
From Other Sources	OSOURCES	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 and renewables.
From Other Sources - Oil	OSOIL	From Other Sources of which from Oil (See "From Other Sources").
From Other Sources - Coal	OSCOAL	From Other Sources of which from Coal (See "From Other Sources").
From Other Sources - Renewables	OSRENEW	From Other Sources of which from Renewables (See "From Other Sources").
Imports (Balance)	TOTIMPSB	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.

Supply		
Flow	**Short name**	**Definition**
Exports (Balance)	TOTEXPSB	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	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	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.
Inland Consumption (Calculated)	INDCONC	Inland consumption calculated is defined as: + Indigenous Production + From Other Sources + Imports - Exports + Stock Changes
Statistical Difference	STATDIFF	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)	INDCONO	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).
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)	OSABR	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)	CSABR	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.

Supply		
Flow	**Short name**	**Definition**
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: Cushion Gas Closing Stock Level	CUSHCSNAT	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 the stock levels or stock changes.

Transformation processes		
Flow	**Short name**	**Definition**
Transformation - Total	TOTTRANF	Comprises fuel inputs to both public and private electricity, combined heat and power plants and heat plants. An auto-producer 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 electric-ity. 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.
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 de-signed 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.

Transformation processes		
Flow	**Short name**	**Definition**
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.
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.
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.

Energy industry own use and Losses		
Flow	**Short name**	**Definition**
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.
Not Elsewhere Specified (Energy)	ENONSPEC	Natural gas used in energy activities not included elsewhere.
Distribution Losses	DISTLOSS	Losses due to transport and distribution, as well as pipeline losses.

Final consumption		
Flow	**Short name**	**Definition**
Final Consumption	FINCONS	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.
of which Biogas	ROADBIOGAS	Amounts of biogas included in road consumption.
Pipeline Transport	PIPELINE	Natural gas used in support of the operation of oil and gas pipelines.
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.
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).

Final consumption		
Flow	**Short name**	**Definition**
Non-Metallic Mineral Products	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.
Mining and Quarrying	MINING	ISIC Divisions 07, 08 and Group 099 (NACE Divisions 07, 08 and Group 09.9).
Food Processing, Beverages 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).
Construction	CONSTRUC	ISIC Division 41, 42 and 43 (NACE Division 41, 42 and 43).
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.
Other - Total	TOTOTHER	Natural gas consumed in sectors not include elsewhere.
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.
Residential	RESIDENT	Natural gas consumed by all households including “households with employed persons”. (ISIC and NACE Divisions 97 and 98).
Agriculture	AGRICULT	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 refueled 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.

Final consumption		
Flow	**Short name**	**Definition**
Total Non-Energy Use	NONENTOTAL	Total non-energy use of natural gas.
Non-Energy Use in Industry	NONENINDUS	Non-energy use of natural gas for Industry.
of which Non-Energy use in the Chemical/ Petrochemical Industry	NONPETCH	Feedstocks to the petrochemical industry (ISIC Rev. 4 Group 201).
Other Non-Energy Use	OTHERNONENUSE	Non-energy use of natural gas in Transport and Other sectors.

4. 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	NATGAS	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	PIPE	In trade databases (NGEXPORT, NGIMPORT and NGWIMP), this product includes the natural gas that crossed the border through a pipeline in gaseous form.
Natural gas LNG trade	LNG	In trade databases (NGEXPORT, NGIMPORT and NGWIMP), this product includes the natural gas that crossed the border as LNG.

5. 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.

Country/Region	Short name	Definition
Australia	AUSTRALI	Excludes the overseas territories.
Austria	AUSTRIA	
Belgium	BELGIUM	
Canada	CANADA	
Chile	CHILE	Data start in 1971.
Czech Republic	CZECH	
Denmark	DENMARK	Excludes Greenland and the Faroe Islands.
Estonia	ESTONIA	Data start in 1990. Prior to that, they are included within Former Soviet Union.
Finland	FINLAND	
France	FRANCE	Includes Monaco and excludes the following overseas departments: Guadeloupe; French Guiana; Martinique; Mayotte; and Réunion; and collectivities: New Caledonia; French Polynesia; Saint Barthélemy; Saint Martin; Saint Pierre and Miquelon; and Wallis and Futuna.
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	

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.

Country/Region	Short name	Definition
Israel	ISRAEL	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. Data start in 1971.
Italy	ITALY	Includes San Marino and the Holy See .
Japan	JAPAN	Includes Okinawa.
Korea	KOREA	Data start in 1971.
Latvia	LATVIA	Data start in 1990. Prior to that, they are included within Former Soviet Union.
Luxembourg	LUXEMBOU	
Mexico	MEXICO	Data start in 1965. Mexico appears in the list of IEA Members and is included in the IEA aggregates ONLY in the files which have been updated for this edition: *NGALBALCON, NGIMPORT and NGEXPORT*. Mexico was not an IEA Member at the time of the preparation of the World data. Accordingly, in the files NGWBAL and NGWIMP, Mexico is included in the list of OECD Members but not IEA Members.
Netherlands	NETHLAND	Excludes Suriname, Aruba and the other former Netherland Antilles (Bonaire, Curaçao[1], Saba, Saint Eustatius and Sint Maarten[1]).
New Zealand	NZ	
Norway	NORWAY	
Poland	POLAND	
Portugal	PORTUGAL	Includes the Azores and Madeira.
Slovak Republic	SLOVAKIA	Data start in 1968.
Slovenia	SLOVENIA	Data start in 1990. Prior to that, they are included within Former Yugoslavia.
Spain	SPAIN	Includes the Canary Islands.

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.

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.

Country/Region	Short name	Definition
Sweden	SWEDEN	
Switzerland	SWITLAND	Does not include Liechtenstein.
Turkey	TURKEY	
United Kingdom	UK	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; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Israel[2]; Italy; Japan; Korea; Latvia; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey; the United Kingdom and the United States. Estonia, Latvia and Slovenia are included starting in 1990. Prior to 1990, data for Estonia and Latvia are included in Former Soviet Union and data for Slovenia in Former Yugoslavia.
OECD Americas	OECDAM	Includes Canada; Chile; Mexico and the United States.
OECD Asia Oceania	OECDAO	Includes Australia; Israel[2]; Japan; Korea and New Zealand.
OECD Europe	OECDEUR	Includes Austria; Belgium; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Italy; Latvia; Luxembourg; the Netherlands; Norway; Poland; Portugal; the Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey and the United Kingdom. Estonia, Latvia and Slovenia are included starting in 1990. Prior to 1990, data for Estonia and Latvia are included in Former Soviet Union and data for Slovenia in Former Yugoslavia.
IEA	IEATOT	Includes Australia; Austria; Belgium; Canada; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Japan; Korea; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal; the Slovak Republic; Spain; Sweden; Switzerland; Turkey; the United Kingdom and the United States. Estonia is included starting in 1990. Prior to 1990, data for Estonia are included in Former Soviet Union.

2. 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.

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.

Country/Region	Short name	Definition
The IEA and Accession/Association countries	IEAFAMILY	Includes: IEA member countries: Australia; Austria; Belgium; Canada; the Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Japan; Korea; Luxembourg; Mexico; the Netherlands; New Zealand; Norway; Poland; Portugal,; the Slovak Republic; Spain; Sweden; Switzerland; Turkey; the United Kingdom and the United States; Accession countries: Chile; Association countries: Brazil, the People's Republic of China; India; Indonesia; Morocco; Singapore; Thailand. Brazil became an Association country in October 2017. Please note that in the World files NGWBAL and NGWIMP, which were published in August 2017, Brazil is not included in the list of *IEA and Accession/Association countries*.
Argentina	ARGENTINA	
Bolivia	BOLIVIA	
Brazil	BRAZIL	Brazil became an Association country in October 2017. Please note that in the World files NGWBAL and NGWIMP, which were published in August 2017, Brazil is not included in the list of *IEA and Accession/Association countries*.
Colombia	COLOMBIA	
Costa Rica	COSTARICA	
Cuba	CUBA	
Dominican Republic	DOMINICANR	
Ecuador	ECUADOR	
El Salvador	ELSALVADOR	
Guatemala	GUATEMALA	
Haiti	HAITI	
Honduras	HONDURAS	
Jamaica	JAMAICA	
Nicaragua	NICARAGUA	
Panama	PANAMA	
Paraguay	PARAGUAY	

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.

Country/Region	Short name	Definition
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	
Venezuela	VENEZUELA	
Other Non-OECD Americas	OTHERLATIN	Includes Antigua and Barbuda; Aruba; Bahamas; Barbados; Belize; Bermuda; British Virgin Islands; Cayman Islands; Dominica; Falkland Islands (Malvinas); French Guiana; Grenada; Guadeloupe; Guyana; Martinique; Montserrat; Puerto Rico; 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 the Turks and Caicos Islands.
Non-OECD Americas	LATAMER	Includes Argentina; Plurinational State of Bolivia (Bolivia); Brazil; Colombia; Costa Rica; Cuba; Curaçao[3]; Dominican Republic; Ecuador; El Salvador; Guatemala; Haiti; Honduras; Jamaica; Nicaragua; Panama; Paraguay; Peru; Suriname (from 2000); Trinidad and Tobago; Uruguay; Bolivarian Republic of Venezuela (Venezuela) and Other Non-OECD Americas.
Albania	ALBANIA	
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.
Belarus	BELARUS	Data for Belarus are available starting in 1990. Prior to that, they are included in Former Soviet Union.
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.

3. 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.

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.

Country/Region	Short name	Definition
Cyprus	CYPRUS	**Note by Turkey:** *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. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus" issue.* **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 Turkey. The information in this report relates to the area under the effective control of the Government of the Republic of Cyprus.*
Former Yugoslav Republic of Macedonia	FYROM	Data for Former Yugoslav Rep. of Macedonia are available starting in 1990. Prior to that, they are included in Former Yugoslavia.
Georgia	GEORGIA	Data for Georgia are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Gibraltar	GIBRALTAR	
Kazakhstan	KAZAKHSTAN	Data for Kazakhstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Kosovo	KOSOVO	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.
Kyrgyzstan	KYRGYZSTAN	Data for Kyrgyzstan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Lithuania	LITHUANIA	Data for Lithuania are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Malta	MALTA	
Republic of Moldova	MOLDOVA	Data for Moldova are available starting in 1990. Prior to that, they are included in Former Soviet Union.
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	

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.

Country/Region	Short name	Definition
Russia	RUSSIA	Data for Russia are available starting in 1990. Prior to that, they are included in Former Soviet Union.
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.
Tajikistan	TAJIKISTAN	Data for Tajikistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
Turkmenistan	TURKMENIST	Data for Turkmenistan are available starting in 1990. Prior to that, they are included in Former Soviet Union.
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.
Other Former Soviet Union	OTHFUSSR	Before 1990, includes Armenia; Azerbaijan; Belarus; Estonia; Georgia; Kazakhstan; Kyrgyzstan; Latvia; Lithuania; Republic of Moldova; Russian Federation; Tajikistan; Turkmenistan; Ukraine and Uzbekistan.
Other Former Yugoslavia	OTHFYUGO	Before 1990, includes Bosnia and Herzegovina; Croatia; Former Yugoslav Republic of Macedonia; Kosovo; Montenegro; Slovenia and Serbia.
Non-OECD Europe and Eurasia	NOECDEUR	Includes Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Cyprus[4,5]; Former Yugoslav Republic of Macedonia; Georgia; Gibraltar; Kazakhstan; Kosovo; Kyrgyzstan; Latvia[6]; Lithuania; Malta; Republic of Moldova (Moldova); Montenegro; Romania; Russian Federation; Serbia[7]; Tajikistan; Turkmenistan; Ukraine; Uzbekistan; Former Soviet Union (prior to 1990) and Former Yugoslavia (prior to 1990). Prior to 1990, data for Estonia are included in Former Soviet Union and data for Slovenia in Former Yugoslavia.

4. Note by Turkey:
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. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
5. 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 Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
6. Latvia appears in the list of OECD Members and is included in the OECD aggregates ONLY in the files which have been updated for this edition: NGBALCON, NGEXPORT and NGIMPORT. Latvia was not an OECD Member at the time of the preparation of the World data. Accordingly, in the files NGWBAL and NGWIMP, Latvia is included in the non-OECD data. This file will be updated in August 2017.
7. Serbia includes Montenegro until 2004 and Kosovo until 1999.

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.

Country/Region	Short name	Definition
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	
Democratic Republic of the Congo	CONGOREP	
Côte d'Ivoire	COTEIVOIRE	
Egypt	EGYPT	Data for Egypt are reported on a fiscal year basis. Data for 2014 are for 1 July 2014-30 June 2015.
Eritrea	ERITREA	Data for Eritrea are available from 1992. Prior to that, they are included in Ethiopia.
Ethiopia	ETHIOPIA	Ethiopia includes Eritrea prior to 1992.
Gabon	GABON	
Ghana	GHANA	
Kenya	KENYA	
Libya	LIBYA	
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	Prior to 2000, data for Niger are presented in Other Africa.
Nigeria	NIGERIA	
Senegal	SENEGAL	
South Africa	SOUTHAFRIC	
South Sudan	SSUDAN	Data for South Sudan are available from 2012. Prior to 2012, they are included in Sudan.

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.

Country/Region	Short name	Definition
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	
Togo	TOGO	
Tunisia	TUNISIA	
Zambia	ZAMBIA	
Zimbabwe	ZIMBABWE	
Other Africa	OTHERAFRIC	Includes Botswana (until 1980); Burkina Faso; Burundi; Cape Verde; Central African Republic; Chad; Comoros; Djibouti; Equatorial Guinea; Gambia; Guinea; Guinea-Bissau; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Namibia (until 1990); Niger (until 1999) Réunion; Rwanda; Sao Tome and Principe; Seychelles; Sierra Leone; Somalia; Swaziland; and Uganda.
Africa	AFRICA	Includes Algeria; Angola; Benin; Botswana (from 1981); Cameroon; the Republic of the Congo (Congo); Côte d'Ivoire; the Democratic Republic of the Congo; Egypt; Eritrea; Ethiopia; Gabon; Ghana; Kenya; Libya; Mauritius; Morocco; Mozambique; Namibia (from 1991); Niger (from 2000); Nigeria; Senegal; South Africa; South Sudan (from 2012), Sudan; the United Republic of Tanzania (Tanzania); Togo; Tunisia; Zambia; Zimbabwe and Other Africa.
Bahrain	BAHRAIN	
Islamic Republic of Iran	IRAN	Data are reported according to the Iranian calendar year. Data for 2014 correspond to 20 March 2014 – 19 March 2015.
Iraq	IRAQ	
Jordan	JORDAN	
Kuwait	KUWAIT	
Lebanon	LEBANON	
Oman	OMAN	
Qatar	QATAR	
Saudi Arabia	SAUDIARABI	

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.

Country/Region	Short name	Definition
Syrian Arab Republic	SYRIA	
United Arab Emirates	UAE	
Yemen	YEMEN	
Middle East	MIDEAST	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 for Bangladesh are reported on a fiscal year basis. Data for 2014 are for 1 July 2014-30 June 2015.
Brunei Darussalam	BRUNEI	
Cambodia	CAMBODIA	Data for Cambodia are available starting in 1995. Prior to that, they are included in Other Asia.
Democratic People's Republic of Korea	KOREADPR	
India	INDIA	Data are reported on a fiscal year basis. Data for 2014 are for April 1 2014-March 31 2015.
Indonesia	INDONESIA	
Malaysia	MALAYSIA	
Mongolia	MONGOLIA	Data for Mongolia are available starting in 1985. Prior to that, they are included in Other Asia.
Myanmar	MYANMAR	
Nepal	NEPAL	Data for Nepal are reported on a fiscal year basis.
Pakistan	PAKISTAN	
Philippines	PHILIPPINE	
Singapore	SINGAPORE	
Sri Lanka	SRILANKA	
Chinese Taipei	TAIPEI	
Thailand	THAILAND	
Viet Nam	VIETNAM	
Other Asia	OTHERASIA	Includes Afghanistan; Bhutan; Cambodia (until 1994); Cook Islands; Fiji; French Polynesia; Kiribati; Lao People's Democratic Republic; Macau, China; the Maldives; Mongolia (until 1984); New Caledonia; Palau (from 1994); Papua New Guinea; Samoa; the Solomon Islands; Timor-Leste; Tonga and Vanuatu.

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.

Country/Region	Short name	Definition
Asia (excluding China)	ASIA	Includes Bangladesh; Brunei Darussalam; Cambodia (from 1995); Democratic People's Republic of Korea; India; Indonesia; Malaysia; Mongolia (from 1985); Myanmar; Nepal; Pakistan; Philippines; Singapore; Sri Lanka; Chinese Taipei; Thailand; Viet Nam and Other Asia.
Hong Kong (China)	HONGKONG	
China (People's Republic of)	CHINA	In early 2016, the National Bureau of Statistics (NBS) of the People's Republic of China (China) supplied the IEA with detailed energy balances for 2000 to 2010 and the IEA revised its data accordingly. In September 2015, the NBS published China's energy statistics for 2013, as well as revised statistics for the years 2011 and 2012. These have already been taken into account by the IEA in the "Special data release with revisions for the People's Republic of China" in November 2015.
China (Region)	CHINAREG	Includes the People's Republic of China and Hong Kong, China.
Non-OECD Total	NOECDTOT	Includes Africa; Asia (excluding China); China (P.R. 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); Non-OECD Americas; Middle East; Non-OECD Europe and Eurasia; World aviation bunkers and World marine bunkers.

6. COUNTRY NOTES AND SOURCES

OECD Countries

General notes

Natural Gas Information 2017 is the latest edition of a publication on natural gas that has been produced annually since 1996. Previously, statistical information on natural gas was included in the publication *Oil and Gas Information*; however given the increasing prominence of natural gas in the global economy, the need was seen for a publication dedicated solely to this energy source.

In the current preliminary release only the files for OECD countries in the online data service are updated (NGBALCON, NGEXPORT and NGIMPORT). The World files (NGWBAL and NGWIMP) were published in August 2017 and include data up to 2015 with preliminary supply data for 2016. These files will be updated in August 2018 with the final release which will include World data up to 2015 and preliminary supply data for 2016.

Natural Gas Information 2017 brings together in one volume the basic statistics compiled by the IEA on natural gas supply and demand. It also includes information on prices, storage capacity, LNG and pipeline trade, LNG terminals as well as maps on the distribution network in OECD countries[8,9].

The notes given in this document refer to the data for the years 1960 to 2016 published in the on-line 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. Energy data for 2016 for non-Member countries published in the World files have been estimated by the IEA secretariat.

Revisions on 2016 data may occur for certain countries between this preliminary release and the final release, which will be published in August this year.

Australia

Source

Department of the Environment and Energy, Canberra.

General notes

- In the 2016 edition, the Australian Administration revised natural gas demand data for some flows back to 2010, resulting in breaks in time series between 2009 and 2010.
- 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).
- For reasons of data confidentiality, Australia does not provide a breakdown of exports by destination and data prior to 2015 are estimated by the Secretariat. From 2017 edition, Australian administration started to provide estimates of the LNG exports to their main markets.

8. 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.

9. In this publication, "country" refers to a country or a territory, as the case may be.

Supply

- Around 30% of the production (mainly coal seam gas) is estimated by the Australian Administration.
- In 2015 the Australian Administration revised production and certain consumption flows back to 2006. The production figures now include previously uncaptured flows.
- Pipeline imports are from the Joint Petroleum Development Area, an area jointly administered by Timor-Leste and Australia pursuant to the Timor Sea Treaty.

Transformation

- Non-specified transformation of natural gas represents amounts used to produce hydrogen for hydrocracking in refineries.
- Prior to 1973 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

- Consumption in the residential and agriculture sectors are estimated by the Australian Administration based on models.
- Between 2009 and 2010 some breaks in time series may occur due to changes in methodologies and to improved data sources. Revisions to the consumption data include changes to energy use in liquefaction plants, and a shift of gas works gas (transformation) to non-specified energy from 2006 onwards. Revisions to previous years are pending.
- 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 distribution losses.

Supply

- Export amounts are calculated by the national administration by subtracting stock changes and domestic consumption from import figures. The split by country is confidential so all the exports are reported under Not elsewhere specified since 2002.

Transformation

- In the 2018 edition, the timeseries for Blast Furnaces was reclassified from 1990 onwards, and thus moved from the Transformation to the Energy sector.
- Between 1995 and 1996 there is a break in time series for autoproducer electricity and CHP plants due to the availability of more detailed data.
- In 1980 the consumption of natural gas in gas works within the transformation sector stopped.

Consumption

- In the 2018 edition, Austrian administration revised consumption data in 2014 and 2015 to include information from new surveys on energy consumption in small and medium sized industries.
- In 2013 the increase in pipeline transport consumption is due to a new methodology of data collection. Historical revisions are pending.
- There are inconsistencies in the time series for commercial/public services as this sub-sector is computed as a residual.

Belgium

Source

Observatoire de l'Energie, Brussels.

Supply

- Since 2009 gas trade in Belgium includes imported LNG which is regasified and subsequently exported to other countries.
- Imports include spot purchases.

Transformation

- The Belgian Administration is in the process of revising 2011 and 2010 transformation sector data. Due to this reason, an unusually high quantity of

natural gas is reported under not elsewhere specified (transformation).

- Since 2000 natural gas begun to replace blast furnace gas in the iron and steel industry.

Consumption

- Consumption in transport equipment decreased in 2015 due to the closure of a big industry of this sector in December 2014.
- In 2003 the large decrease in non-specified industry consumption is due to improvements in data collection.

Canada

Source

Natural Resources Canada, Ottawa.

General notes

- The 2018 edition includes numerous timeseries revisions for the years 2005-2016. This is due to the 10 year revision of the Report on Energy Supply and Demand, which is the main set of Canadian annual data. The majority of these revisions were applied to the demand side.
- Prior to 1990 data for consumption of natural gas for construction are not available.
- Prior to 1978 consumption in the non-specified category of the industry sector 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 initially estimated the stock level back to 2011. The 2018 edition expanded the timeseries back to 2005.
- Associated gas has been estimated by the Canadian administration for 2016.
- Non-associated gas production data include colliery gas as well as associated gas produced in Alberta.

Transformation

- In 2000 the increase in main activity electricity producer data is due to new generation plants in Alberta and Ontario.
- Due to confidentiality reasons, the Canadian administration estimated natural gas consumption in oil refineries for the 2014-2016.
- Gas-to-liquids (transformation) represents quantities of natural gas consumed in the production of synthetic crude oil.
- Non-specified (transformation) represents quantities of natural gas used for the upgrading of refined oil products.

Consumption

- Starting from 2014, distribution losses will no longer be reported by Canada as this flow was historically computed as a balancing variable.
- Due to confidentiality reasons, the Canadian administration estimated natural gas consumption in the following sectors for 2014-2016: iron and steel between, non-ferrous metal, transport equipment and machinery.
- From the 2015 edition of this publication, the Canadian Administration revised time series back to 2005, creating a break in series between 2004 and 2005. Among others, the amounts reported as transport equipment, machinery, food, beverages and tobacco, wood and wood products, and textiles and leather were reported as non-specified industry prior to 2005.
- In 2011 the increase consumption by non-metallic mineral production is due to switching from coal to natural gas in cement manufacturing.
- Prior to 1978 agriculture is included in industry, and no detailed industry sub-sector data are available.

Chile

Source

Ministerio de Energía, Santiago.

General notes

Since 2008 stocks levels data are available.

Supply

- Since 2009 data representing LPG injected into the natural gas distribution network are available. They are reported in from other sources – oil.

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.

Consumption

- Natural gas used for oil and gas extraction is included in gas consumption for energy sector own use under oil refineries.
- Non-specified transport corresponds to marine transport.

Czech Republic

Source

Czech Statistical Office, Prague.

General notes

- Prior to 1994 data in transport 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.

Supply

- From 2013 all non-associated gas production was reclassified as colliery gas production.

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, petrochemical consumption includes both energy and non-energy use.

Denmark

Source

Danish Energy Agency, Copenhagen.

General note

In the 2004 edition, the Danish Administration revised the time series back to 1972.

Consumption

- The consumption of LNG for marine transport and international marine bunkers is not reported due to confidentiality.
- The breakdown for industrial consumption for the latest year is estimated by the Danish Administration using the previous year's split and revised the following year.

Estonia

Source

Statistics Estonia, Tallinn.

General note

Data for Estonia 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

- Finland imports LNG since September 2016. As there is only one company operating in this market, LNG supply data is confidential.
- Between 1999 and 2000 there are some breaks in the time series due to a new survey system and a reclassification of the data.

- Between 1989 and 1990 there are some breaks in the times series as data from 1990 to 1999 were revised by the Finnish Administration in 2002.

Transformation

- Non-specified transformation data represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and hydrocracking in oil refineries

Consumption

- Not elsewhere specified (transport) includes LNG consumption for domestic navigation and international marine bunkers.
- Since 1995 the breakdown between residential and commerce-public services is available due to new system of data collection.
- Prior to 1989 data for consumption in the residential and agricultural sectors were estimated by the Finnish Administration.

France

Source

Ministère de l'Environnement, de l'Energie et de la Mer, Paris.

General notes

- The French administration revised the methodology used in the 2018 cycle to bring it more in line with the international standards. More specifically, (i) Supply figures were revised for the period 2007-2016, (ii) Transformation sector consumption for 2007-2016, (iii) Energy sector consumption for 2011-2016, (iv) Transport and Commercial and Public services for 2000-2016, (v) Industry sector for 2011-2016 and (vi) Imports and Exports for 2011-2016.
- Until 2007 some statistical differences reported by the French utilities were included in distribution losses. Since 2008 these amounts are included under statistical differences.
- 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 onwards the exports breakdown is not available.
- There is a break in stocks between 2004 and 2005.
- Pipeline imports from non-specified/other 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

- The increase in natural gas consumption in the electricity sector for 2016 is mainly driven by the decrease in Nuclear generation due to maintenance operations, which is compensated by Gas fired power plants.
- The revisions for the Transformation sector in 2007-2008 are still pending implementation by the Secretariat, for consistency reasons with the electricity figures.
- Between 2005 and 2006 there is a break in time series in the industry sub-sectors.
- Gas for pipelines is included in distribution losses.

Germany

Source

Federal Ministry for Economic Affairs and Energy, Berlin.

General notes

- Between 2009 and 2010 there is a break in time series due to a new, more comprehensive legal framework that resulted in methodological changes for production and new calorific values for natural gas.
- Between 2002 and 2003 there are breaks in 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.

Supply

- In 2016, natural gas imports from the Netherlands are included under non-specified origin due to confidentiality.
- Non-specified imports also include gas imported from UK and Denmark.

- Imports include all the gas purchased by German companies, whether it is finally consumed in Germany or not.
- Exports include all the gas sold by German companies (these are mainly re-exports) and the country of destination is not reported due to confidentiality issues.
- The difference between the 2016 data for imports/exports in this edition and the corresponding 2016 preliminary data in 2017 edition is related to the use of different sources for trade data.
- The low GCV of the vented gas is due to its high Sulphur content. This flow was revised back to 2003.

Transformation

- In 2003 there is a break in time series for electricity and CHP plants (both autoproducers and main activity producers).
- Prior to 1995 inputs of natural gas for main activity producer heat plants are included with main activity producer CHP plants.

Consumption

- Since 2003 there are no official data for the construction sector.
- Since 2003 consumption in agriculture and other non-specified, which were previously estimated, are no longer shown, and losses data have been included in statistical differences.
- Since 2003 gas consumption in coke ovens was negligible.
- Prior to 1995 end-use consumption data are based on Arbeitsgemeinschaft Energiebilanzen.
- Before 1970 there is no detailed breakdown available for the industry sector with the exception of iron and steel and chemical industries.

Greece

Source

Ministry for Environment and Energy, Athens.

General notes

- 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

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

Consumption

- 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

- Between 2012 and 2013 there is a break in the stock levels due to a change in the methodology.
- Between 2001 and 2002 there is a break in series for the stock levels.
- From 2001 to 2004 statistical difference includes natural gas used for refilling cushion gas.

Transformation

- Since 2010, data reported for non-specified (Transformation) represent natural gas used for hydrogen manufacture used in refineries for hydrodesulphurization. Prior to this year, these quantities are reported under petroleum 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.
- Since 1997, two autoproducer heat plants have been reclassified to main activity producer heat plants.

Consumption

- Consumption under the non-specified Other sector includes military usage.
- Between 2012 and 2013 there are some breaks in time series for energy sector, transport and industry consumption due to a new methodology. Historical revisions are pending.

Iceland

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

Ireland

Sources

Sustainable Energy Authority of Ireland, Cork.

Supply

- In 2009 the data sources for the opening stock level and the closing stock level are different. This has resulted in a very low value for the GCV of the stock change.
- 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

- Since 2006 a different methodology for allocating unsold steam from autoproducer CHP is used.
- Non specified (transformation) corresponds to natural gas blended with refinery gas.

Consumption

- In the 2018 edition, Irish administration revised industrial and commercial consumption in 2015 due to the reclassification of some consumers.
- In 2011, the increase in non-ferrous metals consumption is due to a fuel switch to natural gas.
- Since 2009 the disaggregation of the consumption into all the industry sub sectors excluding non-ferrous metals is done according to data from the Census of Industrial Production (CIP). The last energy consumption data available from the CIP are from 2009 and therefore the 2009-2015 subsector breakdown is the same every year.
- In 2007, the increase in machinery consumption is due to changes in industry sub-sector structure and fuel usage.
- In 2004, there is a break in series in food, beverages and tobacco consumption due to a change in methodology.
- In 2003, feedstock use in the petrochemical industry stopped due to the shutdown of a fertiliser plant.
- In 2001, 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

- For the 2018 edition, gas data have been revised based on a publication by the Israeli Natural Gas Authority. This included revisions in the Consumption side back to 2013, and as a result, breaks in the timeseries have been introduced between 2012 and 2013.
- From 2012 all natural gas data, except inputs to electricity production, are estimated by the IEA Secretariat.

Supply

- Imports of natural gas began in 2008.

Transformation

- In the 2017 and 2018 edition, the Israeli Administration revised transformation data back to 2013 creating breaks in the timeseries between 2012 and 2013.
- In the 2018 edition, the 2016 gas inputs to main producers and autoproducers of electricity were estimated by the IEA Secretariat.

Consumption

- In the 2018 edition, the Israeli administration revised Industry and Other sector data back to 2013.

Due to lack of categorisation, industry is classified as Non specified Industry and the other sectors as Non specified Other.

Italy

Source

Ministry of Economic Development, Rome.

General notes

- Since 1991 data for 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

- Imports from Croatia represent 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

- In the 2018 edition, Italian administration estimated the split of the energy sector. These figures will be revised in the next edition.
- Since 2007 a more detailed breakdown of consumption for energy industry own use is available.
- Prior to 1990 consumption in commerce/public services is included in residential.
- Prior to 1970 the breakdown of industry data is only available for iron and steel and chemical industry; all other data are included in non-specified industry.
- Except for liquefaction plants, data in the energy sector are estimated and include statistical differences and other non-specified consumption.

Japan

Source

The Institute of Energy Economics, Tokyo.

General note

- The 2018 edition contains major revisions to timeseries which go back to 1990. These have occurred as the result of a change in the statistical methodology implemented in November 2017.
- 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 the 2018 edition, receipts from other sources, import data, stock changes and stock levels were revised back to 1990.

Transformation

- In the 2018 edition, main activity and autoproducer electricity plants were revised back to 1990. Similarly, flows of the energy sector were revised back up to 1990.
- In the 2017 edition, the Japanese Administration revised transformation data for the period 1990-1999.
- Since 1990 most of the gas works gas production and consumption has been included with natural gas.

Consumption

- In the 2018 edition, all the Industry flows and other sectors flows were revised back to 1990 and the transport sector back to 2011.

Korea

Source

Korea Energy Economics Institute, Ulsan.

General note

Energy industry own-use in liquefaction plants includes measuring errors and losses.

Supply

- Korea reports production of natural gas since 2004. The production is decreasing and the reservoir is expected to be depleted by the end of 2017.

Consumption

- Prior to 2007 consumption of natural gas in machinery was included with transport equipment.
- From 1987 to 1991 the breakdown of final consumption has been estimated by the Secretariat, as well as the residential subsector for 1992.

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 in World Energy Statistics.

Supply

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

Consumption

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

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 series in transformation and industry due to a change in methodology.

Supply

- Non-specified imports include gas purchased on the spot market.

Transformation

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

Consumption

- In the 2017 edition, Luxembourg integrated supplementary data from ETS companies and revised industrial consumption back to the year 2000.
- The breakdown of Total final consumption for the latest year is preliminary and will be finalised in the next edition of the book.
- Since 2012, 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

- Mexico is currently improving the data collection process and revisions of historical data are expected in the following editions.
- In 2013 there are breaks in series due to a change in the methodology for reporting energy data. The Mexican Administration is currently working on the revision of historical data.
- Since 1993 data have been submitted by the “Secretaría de Energía”.

- 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.

Consumption

- The split of natural gas used for hydrogen manufacture and used in refineries is not currently available and it will be provided in the next cycle.
- Losses and pipeline transport are included in oil and gas extraction.
- From 1993 to 1999 oil and gas extraction and non-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

- Natural gas production in 2015 decreased due to a production cap set by the government. This cap continues for 2016.
- Due to confidentiality issues, the split of LNG imports is estimated by the Dutch Administration based on trade data.
- In the past, the amounts reported under *indigenous production* also included quantities coming from *stock changes*. The reason was that the Dutch Administration could not distinguish between quantities of natural gas falling under marketable production and amounts being moved from offshore fields to onshore fields without undergoing any purification and/or other necessary production processes. From 2015 the data reported distinguish between amounts to be reported as indigenous production and amounts that should be classified as stock changes. This created a break in stocks levels between 2014 and2015.
- Dutch trade figures include transit volumes.
- Imports from Germany include imports from Russia.

Transformation

- The values for Not elsewhere specified (energy) represents 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

Between 1987 and 1988 there is a break in 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

- 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 losses are included in the statistical difference.

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 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 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 detailed consumption breakdown for industry is available.

Norway

Source

Statistics Norway, Oslo.

General note

- In the 2018 edition, the Norwegian administration made widespread revisions to their data back to 2010, following the introduction of a new system for energy balances and energy accounts. Breaks in series may appear between 2009 and 2010 as a result.
- Since 2008 data on stocks are available.

Supply

- For Norway, supply of natural gas is the residual of two very large and opposite amounts: 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.
- In 2008 there is a break in series for indigenous production as the production of gas amounts consumed by the offshore platforms was included.
- In 2000 non-associated natural gas production ceased.
- In 1992 the large increase in oil and gas extraction is due to the start-up of new fields.
- The export data were revised in the context of the 2018 cycle from 2010 onwards. For the years 2010-2014 no split between countries of origin was provided, therefore these were estimated by the IEA Secretariat.

Transformation

- Since 2007 gas inputs to all electricity and CHP plants are included in autoproducer electricity plants due to confidentiality.

Consumption

- In 2017 edition consumption figures for industry sector and other sectors were revised back to 2010.
- In 2007 the increase in non-specified transport is due to the wider use of gas-powered sea vessels.
- Since 2002 domestic navigation is included under non-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

- Distribution losses may include some statistical differences.

Supply

- 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 FSU are from Turkmenistan, Kazakhstan or Uzbekistan.
- Natural gas reported in associated production contains some heavier hydrocarbons. This results in a high gross calorific value for this flow.

Transformation

- Non-specified transformation data represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization 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 plants.

Consumption

- Non-specified energy industry own use includes gas used for heating and pumping operations in the distribution network.

Portugal

Source

Direcção-Geral de Energia e Geologia, Lisbon.

Supply

- 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

- In 2014, the decrease in Autoproducer CHP plants consumption was due to a plant closure.
- Since 2012, data reported for Non-specified (Transformation) represent natural gas used for hydrogen manufacture. Prior to this year, these quantities are reported under Petroleum 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 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 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.
- Non-specified transformation data represent natural gas used for hydrogen manufacture. This hydrogen is used for hydrodesulphurization and for hydrocracking in oil refineries.

Consumption

- 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/public services as this sub-sector is computed as a residual.

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

- The country of origin for the imports is often the country of the trading post where the gas was purchased and not the country where the gas was produced.

Transformation

- In 2014, improvements in a CHP plant resulted in a substantial reduction of natural gas consumption in this sector.

Consumption

- In 2011 the decrease in the chemical sector 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 of Energy, Tourism and the Digital Agenda, Madrid.

General notes

- Spain in the 2018 edition implemented an improvement in data collection for industry, so there are currently breaks in the time series and historical revisions for 2015.
- In 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 stocks levels due to the exclusion of mechanically recoverable cushion gas from the reported levels.
- Between 2006 and 2007 there is a break in stocks levels due to a new methodology of including stocks in transport facilities and in storage facilities during testing phase .
- 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 stocks levels due to an improvement in stocks level 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.

Transformation

- 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 producer 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.
- 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

- Since 2001 the final consumption breakdown is estimated by the Spanish Administration.
- Since 1988 the increase of natural gas used as feedstock is due to a substitution of naphtha for the production of fertilisers.
- Prior to 1982 natural gas consumption in textiles and leather, transportation equipment and machinery has been included in non-specified industry.

Sweden

Source

Energimyndigheten, Eskilstuna.

General notes

- For 2013 data, the gas consumed by oil refineries has been estimated by the Secretariat.
- For 2008 data, total final consumption and its breakdown have been estimated by the Secretariat based on other Statistics Sweden publications.
- Since 2005 the natural gas inputs to gas works has been estimated by the Secretariat.

Transformation

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

Consumption

- Prior to 1993 road transport is included in commerce/public services.

Switzerland

Source

Swiss Federal Office of Energy - SFOE, Ittigen.

Transformation

- Since 2013 there are fluctuations in gas consumption in 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

- There are inconsistencies in the time series for agriculture/forestry as this sub-sector is computed by the Swiss Administration as a residual.
- Between 1998 and 1999 there are breaks in series for the final consumption breakdown due to the introduction of a new survey.
- Between 1977 and 1978 there are breaks in time series due to the introduction of a new survey by industry type.

Turkey

Source

Petrol İşleri Genel Müdürlüğü, Ankara.

General notes

- From 2009 there are some breaks in time series across all sectors as consumption data started being collected by a different institution, the Turkish Energy Market Regulatory Authority.
- In 2008, there is a break in time series for stock change due to a revision of storage capacity.
- In 2006 there is a break in time series for non-energy use in chemical industry due to classification improvements.
- Non-specified industry includes the natural gas distributed by OIZ (Organised Industrial Zones).

Supply

- Exports reported the by Turkish Administration represent transit gas.

Transformation

- In the 2018 edition, Turkish administration revised 2014 and 2015 data, as some main activity producing plants in Turkey were reclassified as autoproducers
- Non-specified transformation of natural gas represents amounts used to produce hydrogen for hydrocracking in refineries.

Consumption

- In 2015, new survey was introduced by the Turkish Administration to collect industrial consumption data, resulting in a substantial decrease of consumption reported under non-specified industry.
- In 2013 no natural gas was consumed by blast furnaces due to it being replaced by coal and coke.
- Prior to 2001 commerce/public services consumption was included in the residential data.
- Between 1999 and 2001 the decrease in natural gas consumption in petrochemical feedstocks is due to the fertiliser industry.
- Since 1988 natural gas consumption data in the chemical industry (for fertilisers) and in non-specified industry (dye industry) are available.
- Non-specified energy sector includes gas used for heating and pumping operations in the distribution network.

United Kingdom

Source

Department for Business, Energy and Industrial Strategy - BEIS, London.

General notes

- Since 1992 distribution losses include metering differences and losses due to pipeline leakage.
- Prior to 1985 distribution losses include stock changes.

Supply

- In the 2018 edition, UK administration revised the supply balance back to 2008 to update Norwegian imports from two terminals previously reported as indigenous production.

- In 2009 the increase in LNG imports is due to the expansion of the Isle of Grain terminal and to two new terminals at Milford Haven. These included gas that arrived at the Isle of Grain terminal in November and December 2008 but which was not unloaded until 2009.
- 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 oven transformation is used to form synthetic coke oven gas rather than undergoing a coking process.

Consumption

- In the 2018 edition, natural gas consumption in the sectors of industry, residential, commercial and public services, was revised back to 2008 to include information from other data sources such as the Purchases Inquiry, EU ETS and ONS Index of Services and Production.
- Before 2008 consumption of natural gas in the commercial sector is included in other non-specified 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.
- Non-specified energy includes gas used for heating and pumping operations in the distribution network.
- Data in the non-specified industry sector refer to sales by independent gas suppliers unallocated by categories.
- Natural gas consumed by the mining and quarrying and the wood and wood products sectors is included under non-specified industry.

United States

Source

Energy Information Administration, Washington, DC.

General notes

- Since the 2014 edition of this publication, energy final consumption data for the United States present breaks in time series with historical data due to a change in methodology. The break in time series occurs between 2011 and 2012 for oil; and between 2001 and 2002 for electricity and natural gas. The new methodology is based on the last historical year of the most recent Annual Energy Outlook (AEO) publication. Changes occur primarily in reported energy final consumption in the industrial sector and its subsectors, including the non-manufacturing industries of mining, construction and agriculture. Historical revisions are pending.
- From 1995 to 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.
- Puerto Rico is currently not included in US data. LNG imports into Puerto Rico are reported under Other non-OECD Americas.

Supply

- In the 2017 edition of this publication, the indigenous production data of 2014 was revised by US Administration creating break in time series in the breakdown between 2013 and 2014 due to a change in the methodology. In addition, this increased the statistical difference that remained high in 2015 and 2016.
- LNG exports include re-exports.

Transformation

- Since 2012, data reported for Non-specified (Transformation) represent natural gas used for hydrogen manufacture. Prior to this year, these quantities are reported under the petrochemical sector.
- Between 1999 and 2000 there are some breaks in time series for the transformation subsectors due to a new data reporting method.

- From 1990 to 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 is available since 1991. Prior to these years these consumptions are included with industry and commerce/public services.

Consumption

- The Administration of the United made significant revisions to the iron and steel model in the 2017 edition. For this reason, there is a break in time series between 2014 and 2015 for the consumption in blast furnaces (Energy).
- Until 2001 agriculture and 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.
- *Non-specified energy industry own use* represents gas consumed for the production of ethanol.
- Consumption in fisheries included under industry.

7. UNITS AND CONVERSIONS

General conversion factors for energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
Terajoule (TJ)	1	2.388×10^{2}	2.388×10^{-5}	9.478×10^{2}	2.778×10^{-1}
Gigacalorie (Gcal)	4.187×10^{-3}	1	1.000×10^{-7}	3.968	1.163×10^{-3}
Million tonnes of oil equivalent (Mtoe)	4.187×10^{4}	1.000×10^{7}	1	3.968×10^{7}	1.163×10^{4}
Million British thermal units (MBtu)	1.055×10^{-3}	2.520×10^{-1}	2.520×10^{-8}	1	2.931×10^{-4}
Gigawatt hour (GWh)	3.600	8.598×10^{2}	8.598×10^{-5}	3.412×10^{3}	1

Conversion factors for mass

To:	kg	t	lt	st	lb
From:	multiply by:				
Kilogramme (kg)	1	1.000×10^{-3}	9.842×10^{-4}	1.102×10^{-3}	2.205
Tonne (t)	1.000×10^{3}	1	9.842×10^{-1}	1.102	2.205×10^{3}
Long ton (lt)	1.016×10^{3}	1.016	1	1.120	2.240×10^{3}
Short ton (st)	9.072×10^{2}	9.072×10^{-1}	8.929×10^{-1}	1	2.000×10^{3}
Pound (lb)	4.536×10^{-1}	4.536×10^{-4}	4.464×10^{-4}	5.000×10^{-4}	1

Conversion factors for volume

To:	gal U.S.	gal U.K.	bbl	ft^3	l	cm
From:	multiply by:					
U.S. gallon (gal U.S.)	1	8.327×10^{-1}	2.381×10^{-2}	1.337×10^{-1}	3.785	3.785×10^{-3}
U.K. gallon (gal U.K.)	1.201	1	2.859×10^{-2}	1.605×10^{-1}	4.546	4.546×10^{-3}
Barrel (bbl)	4.200×10^{1}	3.497×10^{1}	1	5.615	1.590×10^{2}	1.590×10^{-1}
Cubic foot (ft^3)	7.481	6.229	1.781×10^{-1}	1	2.832×10^{1}	2.832×10^{-2}
Litre (l)	2.642×10^{-1}	2.200×10^{-1}	6.290×10^{-3}	3.531×10^{-2}	1	1.000×10^{-3}
Cubic metre (cm)	2.642×10^{2}	2.200×10^{2}	6.290	3.531×10^{1}	1.000×10^{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	40.00	37 913	33.32	31 581	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 Hg
2. In gaseous state – average OECD imports

Conversion factors for natural gas

Scm versus Ncm

To:	Standard cm	Normal cm
From:	multiply by:	
Standard cm[3]	1	9.480×10^{-1}
Normal cm[4]	1.055	1

3. 1 Scm measured at 15°C and 760 mm Hg
4. 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	1.360×10^{3}
cm of LNG	4.500×10^{-1}	1	6.150×10^{2}
Standard cm[5]	7.350×10^{-4}	1.626×10^{-3}	1

5. 1 Scm = 40 MJ

Gross versus net calorific value

1 NCV[6] = 0.9 GCV[7]

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

Conversion factors for natural gas flow rates[8]

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

Average[1] Gross Calorific Value of Natural Gas (kJ/m^3)

	Production	Imports	Exports	Consumption
Albania	37 677	37 700	37 700	37 437
Algeria	39 565	39 565	39 565	39 565
Angola	38 000	38 000	38 000	38 000
Argentina	38 942	38 942	38 942	38 942
Armenia	-	37 700	-	37 700
Australia	39 300	40 000	40 000	38 812
Austria	38 162	38 167	38 158	38 167
Azerbaijan	39 040	-	39 040	39 040
Bahrain	38 000	38 000	38 000	38 000
Bangladesh	38 807	38 807	38 807	38 807
Belarus	38 622	38 622	-	38 622
Belgium	-	38 240	39 611	38 130
Bolivia	38 940	38 940	38 940	38 940
Bosnia and Herzegovina	37 861	37 862	37 861	37 862
Brazil	39 425	39 425	39 425	39 425
Brunei Darussalam	39 463	39 463	39 463	39 463
Bulgaria	37 339	38 231	36 864	38 168
Cameroon	38 000	38 000	38 000	38 000
Canada	38 683	38 483	38 683	38 638
Chile	39 112	39 108	-	39 266
China, People's Republic	38 931	38 865	38 931	38 931
Colombia	34 598	34 598	34 598	34 598
Congo	38 000	38 000	38 000	38 000
Cote d'Ivoire	37 283	37 283	37 283	37 283
Croatia	37 889	37 889	37 889	37 889
Cuba	36 957	36 957	36 957	36 957
Czech Republic	37 882	38 148	39 790	38 191
Congo, Democratic Republic	38 000	38 000	38 000	38 000
Denmark	41 517	41 507	41 517	41 517
Dominican Republic	38 000	38 000	38 000	38 000
Ecuador	41 612	41 612	41 612	41 612
Egypt	38 000	38 000	38 000	38 000
Estonia	-	37 785	-	37 785
Finland	-	37 986	37 523	37 986
Former Yugoslav Republic of Macedonia	-	38 264	-	38 266
France	39 615	40 760	41 029	40 707
Gabon	37 700	37 700	37 700	37 700
Georgia	33 944	39 144	-	39 272
Germany	34 055	38 988	38 988	38 212
Ghana	38 000	38 000	38 000	38 000
Greece	49 199	38 963	-	39 023
Hong Kong (China)	38 000	38 000	38 000	38 000
Hungary	36 123	38 372	38 384	38 050
India	39 000	41 400	38 520	39 663
Indonesia	40 600	40 600	40 600	40 600
Iran, Islamic Republic	39 356	39 356	39 356	39 356
Iraq	38 000	38 000	38 000	38 000
Ireland	37 691	39 625	-	39 522

Average[1] Gross Calorific Value of Natural Gas (kJ/m^3)

	Production	Imports	Exports	Consumption
Israel	38 268e	38 390e	-	38 240e
Italy	38 100	38 100	38 100	38 100
Japan	42 312	39 106	-	39 524
Jordan	31 223	31 223	31 223	31 223
Kazakhstan	42 057	39 020	39 023	43 683
Korea	41 707	41 705	-	41 817
Kuwait	38 000	38 000	38 000	38 000
Kyrgyzstan	39 021	39 021	-	39 021
Latvia	-	37 651	-	37 651
Lebanon	38 000	38 897	38 000	38 897
Libya	38 000	38 000	38 000	38 000
Lithuania	-	37 861	37 000	37 860
Luxembourg	-	40 525	-	40 512
Malaysia	39 249	39 249	39 249	39 249
Mexico	39 852	38 200	37 019	38 358
Moldova, Republic	33 880	33 865	-	33 862
Morocco	39 685	39 685	39 685	39 685
Mozambique	41 270	41 270	41 270	41 270
Myanmar	39 269	39 269	39 269	39 269
Netherlands	33 339	33 339	33 339	33 339
Nigeria	38 000	38 000	38 000	38 000
Norway	39 502	-	39 498	39 502
New Zealand	37 999	-	-	37 871
Oman	37 805	41 400	42 116	38 025
Other Africa	38 000	38 000	38 000	38 000
Other Asia and Pacific	38 000	38 000	38 000	38 000
Other Latin America	38 000	38 000	38 000	38 000
Pakistan	32 319	32 319	32 319	32 319
Peru	44 922	44 922	44 922	44 922
Philippines	38 499	38 499	38 499	38 499
Poland	28 676	38 155	38 191	35 173
Portugal	-	40 379	-	40 379
Qatar	41 400	41 400	41 400	41 400
Romania	36 926	37 061	-	36 929
Russian Federation	38 231	38 230	38 230	38 230
Saudi Arabia	38 000	38 000	38 000	38 000
Senegal	33 494	33 494	33 494	33 494
Serbia	37 042	37 042	-	37 042
Singapore	38 000	38 000	38 000	38 000
Slovak Republic	39 369	38 351	38 680	38 369
Slovenia	39 935	37 862	-	37 872
South Africa	38 000	38 000	38 000	38 000
Spain	40 589	40 465	40 457	40 428
Sweden	-	41 468	-	41 470
Switzerland	-	38 088	-	38 088
Syrian Arab Republic	37 700	37 700	37 700	37 700
Chinese Taipei	37 263	41 449	37 263	41 185
Tajikistan	38 000	38 000	37 700	38 000
Tanzania, United Republic	38 139	38 000	38 139	38 139
Thailand	36 396	36 396	36 396	36 396
Trinidad and Tobago	38 937	38 937	38 937	38 937
Tunisia	40 264	39 941	42 600	40 266
Turkey	38 315	38 303	38 310	38 303
Turkmenistan	37 858	37 858	37 858	37 858
United Arab Emirates	37 899	38 000	37 899	37 899
United Kingdom	39 813	39 300	39 656	39 608
Ukraine	35 571	38 230	35 587	37 199
Uruguay	38 000	38 000	38 000	38 000
United States	38 211	38 089	37 584	38 211
Uzbekistan	37 889	37 889	37 889	37 889
Venezuela	41 143	41 143	41 143	41 143
Vietnam	38 612	38 612	38 612	38 612
Yemen	40 431	40 770	40 431	40 431

1. Average values for 2009 to 2014.

8. ABBREVIATIONS

Bcm:	billion cubic metres
Btu:	British thermal unit
cm:	cubic metre
GWh:	gigawatt hour
kcal:	kilocalorie
kg:	kilogramme
kJ:	kilojoule
m3:	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
c	confidential
e	estimated
..	not available
-	nil
x	not applicable