Monthly Gas Data Service (MGDS)

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Database documentation

International Energy Agency

INTERNATIONAL ENERGY AGENCY

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1. Overview

The International Energy Agency (IEA) collects and analyses monthly gas data. The main source of the data is the Monthly Gas Questionnaire (MGS). MGS is a monthly survey covering OECD countries for which national administrations submit data to the IEA Secretariat. Data are collected on an M-2 basis, the so-called MGS month. The latest MGS Questionnaire can be downloaded on the IEA website here: https://www.iea.org/about/data-and-statistics/questionnaires.

Data are checked and assessed every month by the IEA Secretariat before being published on the MGS webpage: https://www.iea.org/data-and-statistics/data-product/monthly-gas-data-service-2. For the full publication schedule see the MGS webpage.

Data are available on the MGS webpage or through the .Stat Data Explorer platform. This platform allows users to view the data and export it in Excel and CSV formats.

The following table provides an overview of the different files available as part of the IEA Monthly Gas Data Service.

Dataset	Content
Natural gas balance	Natural gas balances for OECD countries (all balance items in million cubic meters and terajoules) Monthly data from 2005 onwards Historical data from 1984 to 2004: *Natural gas balance historical dataset*
Natural gas imports	Imports data by trading country for OECD countries (in million cubic meters and terajoules) Monthly data from 2005 onwards Historical data from 1984 to 2004: *Natural gas imports historical dataset*
Natural gas exports	Exports data by trading country for OECD countries (in million cubic meters and terajoules) Monthly data from 2005 onwards Historical data from 1984 to 2004: *Natural gas exports historical dataset*
LNG imports	Imports data by trading country for liquefied natural gas for OECD countries (in million cubic meters and terajoules) Monthly data from 2002 onwards
LNG exports	Exports data by trading country for liquefied natural gas for OECD countries (in million cubic meters and terajoules) Monthly data from 2002 onwards

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2. Natural Gas Balance

The Natural Gas Balance consists of two datasets: the Natural Gas Balance and the Natural Gas Balance Historical.

Structure

This dataset contains monthly balances for natural gas for OECD countries from 2005 onwards in million cubic meters and terajoules for all flows.

Historical data from 1984 to 2004 are available in Natural Gas Balance Historical.

Sources

Data published as part of the service is collected by the IEA through the Monthly Gas Questionnaire from OECD member countries.

Dimensions

Time

The data set contains monthly data from January 2005 to the current MGS month.

Product

Natural gas comprises gases, occurring naturally 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 and shale gas). Manufactured gas (produced from municipal or industrial waste, or sewage) and quantities vented or flared should not be included.

Product	Short name	Definition
Natural gas	**NATURAL_GAS**	Natural gas in any form, gaseous or liquefied.
Liquefied natural gas	**LNG**	Natural gas in liquefied form.

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Units

Unit	Short name	Definition
Million cubic metres	**M_M3**	Volumetric unit measured at standard conditions, i.e. 15°C and 760 mm Hg. (for LNG always on a re-gasified equivalent basis)
Terajoules	**TJ**	Energy unit : 1 Terajoule = 10^{12}Joules

Balance / Flow

Energy Balance Flow	Short name (.Stat)	Short name (.txt)	Definition
Indigenous production	**INDPROD**	**INDPROD**	Dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGL and sulphur. Production includes quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.. Production does not include quantities reinjected, manufactured gas (produced from municipal or industrial waste, or sewage) extraction losses and quantities vented or flared.
Receipts from other sources	**OTH_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
Total imports (entries)	**IMPORTS/ENTRIES**	**TOTIMPSB**	Amounts are considered as imported (entries) or exported (exits) when they have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. From January 2011 data onwards, this category includes transits; transit volumes are included as imports and exports. This definition differs from the annual data of natural gas trade published by the IEA, which reflects imports by country of origin

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			and exports by country of final destination, excluding any transits.
Total exports (exits)	**EXPORTS/EXITS**	**TOTEXPSB**	Amounts are considered as imported (entries) or exported (exits) when they have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. From January 2011 data onwards, this category includes transits; transit volumes are included as imports and exports. Please note that this definition differs from the annual data of natural gas trade published by the IEA, which reflects imports by country of origin and exports by country of final destination, excluding any transits.
International marine bunkers	**BUNKERS_MARINE**	**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. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship.
Stock change (national territory)[1]	**STCHANAT**	**STCHANAT**	Stock changes reflect the difference between the closing stock level and the opening stock level on national territory. Stock changes include additions to and withdrawals from LNG storage.
Stock change (cushion gas) [1]	**STCHANATCU**	**STCHANATCU**	Stock changes reflect the difference between the closing stock

[1] A stock build is shown as a positive number while a stock draw is shown as a negative number. This definition differs from the annual data of natural gas trade published by the IEA, for which stock changes reflect the difference between opening and closing stock levels, i.e. the mathematical signs for stock build and stock draws are reverse to monthly data.

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			level and the opening stock level for cushion gas.
Gross inland deliveries (calculated)	**GRDEL_INLAND_CALC**	**GDINCTRC**	Calculated gross inland deliveries are defined as: Indigenous Production + Receipts from other sources + Entries (Imports) – Exits (Exports) – International marine bunkers – Stock changes (National territory) – Stock changes (Cushion gas) = Gross inland deliveries (Calculated)
Statistical difference	**STATDIFF**	**STATDIFF**	The statistical difference reflects the difference between calculated and observed gross inland deliveries.
Gross inland deliveries (observed)	**GDINCTROGRDEL_INLAND_OBS**	**GDINCTRO**	Observed gross inland deliveries represent deliveries of marketable gas to the inland market, including gas used by the gas industry for heating and operation of its equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants). Observed gross inland deliveries also include any losses in distribution.
Gross inland deliveries adjustment for the Medium Term Gas Market Report	**ADJUSTMENT_GMR**	**GMRADJ**	The gross inland deliveries adjustment represents the difference in information on observed gross inland deliveries between annual and monthly IEA data for any particular year. The adjustment makes the yearly 12 months total of monthly data consistent with separately collected annual data. The adjustment is incorporated in the gross inland deliveries aggregates shown in

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			the Medium Term Gas Market Report.
Adjusted gross inland deliveries as defined in the Medium Term Gas Market Report	**GRDEL_IN-LAND_ADJ**	**GDINCTROAD**	The adjusted gross inland deliveries as defined in the Medium Term Gas Market Report are the sum of the observed gross inland deliveries observed and the gross inland deliveries adjustment.
Opening stock level - national territory	**OSNATTER**	**OSNATTER**	Opening stock levels cover the amount of stocks held on national territory independent of ownership (including government controlled stocks and stocks held for other countries), as of the first day of the month. Stock levels include all amounts of natural gas stored in special storage facilities (depleted gas and/or oil field, aquifer, salt cavity, mixed caverns or other) as well as liquefied natural gas storage. Amounts of cushion gas are not included.
Closing stock level - national territory	**CSNATTER**	**CSNATTER**	Closing stock levels cover the amount of stocks held on national territory independent of ownership (including government controlled stocks and stocks held for other countries), as of the last day of the month. Stock levels include all amounts of natural gas stored in special storage facilities (depleted gas and/or oil field, aquifer, salt cavity, mixed caverns or other) as well as liquefied natural gas storage. Amounts of cushion gas are not included.
Opening stock level – held abroad	**OSABROAD**	**OSABROAD**	Opening stock levels cover the amount of stocks held abroad as of the first day of the month. All natural gas that is stored in a third country but belongs to the country. These quantities are not included in the stock levels reported in 'Stocks held on national territory'.

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Closing stock level – held abroad	**CSABROAD**	**CSABROAD**	Closing stock levels cover the amount of stocks held abroad, as of the last day of the month. All natural gas that is stored in a third country but belongs to the country. These quantities are not included in the stock levels reported in 'Stocks held on national territory'.
Opening stock level – cushion gas	**OSNATCUSH**	**OSNATCUSH**	Opening stock levels cover the amount of stocks of cushion gas held, as of the first day of the month. Cushon gas refers to the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle.
Closing stock level – cushion gas	**CSNATCUSH**	**CSNATCUSH**	Closing stock levels cover the amount of stocks of cushion gas held, as of the last day of the month. Cushon gas refers to the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle.
Own use and losses	**OWNUSE_LOSSES**	**OWNUSE**	This category covers own use by the gas industry for heating and operation of its equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants). It also includes any losses occurring in the distribution system. Natural gas consumed as fuel at gas liquefaction and regasification plants should be included in this category.
Deliveries to power and heat generation	**DELPOWER**	**DELPOWER**	Deliveries to power generation cover the amounts of natural gas delivered to main activity producers of electricity, heat plants as

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			well as combined heat and power plants. For some OECD countries, information for deliveries to power generation is not available. Therefore, regional subtotals for this flow are not presented
Deliveries to industry	**TOTIND**	**DELIND**	The amount of natural gas consumed by the industrial sector undertaking in support of its primary activities. It includes both energy and non-energy use. Amount of gas consumed by the energy sector industries, like oil refineries, to support extraction (mining, oil and gas production) or plant operation of transformation activities is also included. Other sectors not included elsewhere, like agriculture, fishing, etc. are also reported in this category.
Deliveries to households and services	**RESCOMMPUB**	**DELOTHSECT**	The amount of natural gas consumed by businesses and offices in the public and private sectors and natural gas consumed by all households including "households with employed persons"
Gas vented	**VENTED**	**VENTED**	The volume of gas released into the air on the production site or at the gas processing plant.
Gas flared	**FLARED**	**FLARED**	The volume of gas burned in flares on the production site or at the gas processing plant.

Countries

Country	Short name	Definition
OECD Total	**OECDTOT**	Includes Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden,

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Country	Short name	Definition
		Switzerland, Turkey, the United Kingdom and the United States.
OECD Americas	**OECDAM**	Includes Canada, Chile, Mexico and the United States.
OECD Asia Oceania	**OECDAO**	Includes Australia, Israel, 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, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
Australia	**AUSTRALIA**	Australia excludes the overseas territories.
Austria	**AUSTRIA**	
Belgium	**BELGIUM**	
Canada	**CANADA**	
Chile	**CHILE**	
Czech Republic	**CZECH**	
Denmark	**DENMARK**	Denmark excludes the Danish Faroes and Greenland.
Estonia	**ESTONIA**	
Finland	**FINLAND**	
France	**FRANCE**	France includes Monaco and excludes the overseas territories Guadeloupe, Martinique, French Guyana, Reunion, St.-Pierre and Miquelon, New Caledonia, French Polynesia, Wallis and Futuna, and Mayotte. Following a methodological change in the French statistics coverage, data from January 2017 includes the overseas departments (French Guiana, Guadeloupe, Martinique, Mayotte and Reunion).
Germany	**GERMANY**	
Greece	**GREECE**	
Hungary	**HUNGARY**	
Iceland	**ICELAND**	
Ireland	**IRELAND**	
Israel[2]	**ISRAEL**	
Italy	**ITALY**	Italy includes San Marino and the Vatican.
Japan	**JAPAN**	Japan includes Okinawa.

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.

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Country	Short name	Definition
Korea	**KOREA**	
Latvia	**LATVIA**	
Lithuania	**LITHUANIA**	
Luxembourg	**LUXEMBOURG**	
Mexico	**MEXICO**	
Netherlands	**NETHERLANDS**	The Netherlands exclude Suriname and the Netherlands Antilles.
New Zealand	**NEWZEALAND**	
Norway	**NORWAY**	
Poland	**POLAND**	
Portugal	**PORTUGAL**	Portugal includes the Azores and Madeira.
Slovak Republic	**SLOVAKIA**	
Slovenia	**SLOVENIA**	
Spain	**SPAIN**	Spain includes the Canary Islands, the Balearic Islands, and Ceuta and Melilla.
Sweden	**SWEDEN**	
Switzerland	**SWITZERLAND**	Switzerland includes Liechtenstein.
Turkey	**TURKIYE**	
United Kingdom	**UK**	
United States	**USA**	The United States includes the 50 States, District of Columbia, Puerto Rico, Guam, the US Virgin Islands and the Hawaiian Foreign Trade Zone.

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3. Natural Gas Trade

Trade datasets contain detailed information on trade between OECD countries as well as trade between OECD countries and the rest of the world. All the files related to trade contain the same dimensions, except for differences in country lists. Monthly data of natural gas trade is published in six separate files: Natural Gas Imports, Natural Gas Exports, Liquefied Natural Gas Imports, Liquefied Natural Gas Exports as well as Natural Gas Imports Historical and Natural Gas Exports Historical.

Structure

The datasets on imports and exports contain monthly trade data for natural gas for OECD countries in million cubic meters and terajoules. Data for natural gas imports and exports (including amounts of LNG) is published from 2005 onwards. Data for LNG imports and exports is also published separately from 2002 onwards. Historical data for natural gas imports and exports from 1984 to 2004 are available with the same dimensions.

Amounts are considered as imported (entries) or exported (exits) when they have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. From January 2011 data onwards, this category includes transits; transit volumes are included as imports and exports. Please note that this definition differs from the annual data of natural gas trade published by the IEA, which reflects imports by country of origin and exports by country of final destination, excluding any transits.

Sources

Data published as part of the service is collected by the IEA through the Monthly Gas Questionnaire from OECD member countries.

Dimensions

Time

Data for natural gas imports and exports contains monthly data from January 2005 to the current MOS month. Historical data for natural gas imports and exports contains monthly data from January 1984 to December 2004. Data for liquefied natural gas imports and exports contains monthly data from January 2002 to the current MGS month.

Products

Natural gas comprises gases, occurring naturally 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 and shale gas). Manufactured

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gas (produced from municipal or industrial waste, or sewage) and quantities vented or flared should not be included.

Liquefied natural gas (LNG) is natural gas which has been cooled to a temperature of about -160°C at which it becomes a liquid at atmospheric pressure. The volume of LNG occupies around 1/600th of its original volume in a gaseous state.

Product	Short name	Definition
Natural gas	**NATURAL_GAS**	Natural gas in any form, gaseous or liquefied.
Liquefied natural gas	**LNG**	Natural gas in liquefied form.

Units

Unit	Short name	Definition
Million cubic metres	**M_M3**	Volumetric unit measured at standard conditions, i.e. 15°C and 760 mm Hg. (for LNG always on a re-gasified equivalent basis)
Terajoules	**TJ**	Energy unit: 1 Terajoule = 10^{12}Joules

Countries

OECD countries (see the list of countries under Natural Gas Balance for a list of long and short names as well as definitions for OECD countries).

Imports and Exports

Partner Country	Short name	Imports / Exports	Definition
Australia	**AUSTRALIA**	Both	
Austria	**AUSTRIA**	Both	
Belgium	**BELGIUM**	Both	
Canada	**CANADA**	Both	
Chile	**CHILE**	Both	
Czech Republic	**CZECH**	Both	

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Partner Country	Short name	Imports / Exports	Definition
Denmark	DENMARK	Both	
Estonia	ESTONIA	Both	
Finland	FINLAND	Both	
France	FRANCE	Both	
Germany	GERMANY	Both	
Greece	GREECE	Both	
Hungary	HUNGARY	Both	
Iceland	ICELAND	Both	
Ireland	IRELAND	Both	
Israel	ISRAEL	Both	
Italy	ITALY	Both	
Japan	JAPAN	Both	
Korea	KOREA	Both	
Latvia	LATVIA	Both	
Lithuania	LITHUANIA	Both	
Luxembourg	LUXEMBOURG	Both	
Mexico	MEXICO	Both	
Netherlands	NETHERLANDS	Both	
New Zealand	NEWZEALAND	Both	
Norway	NORWAY	Both	
Poland	POLAND	Both	
Portugal	PORTUGAL	Both	
Slovak Republic	SLOVAKIA	Both	
Slovenia	SLOVENIA	Both	
Spain	SPAIN	Both	
Sweden	SWEDEN	Both	
Switzerland	SWITZERLAND	Both	
Turkey	TURKEY	Both	
United Kingdom	UK	Both	
United States	USA	Both	

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Partner Country	Short name	Imports / Exports	Definition
Total OECD	**TOTOECD**	Both	Includes Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.
Algeria	**ALGERIA**	IMPORTS	
Brunei Darussalam	**BRUNEI**	IMPORTS	
Bulgaria	**BULGARIA**	EXPORTS	
Egypt	**EGYPT**	IMPORTS	
Indonesia	**INDONESIA**	IMPORTS	
Iran	**IRAN**	IMPORTS	
Iraq	**IRAQ**	IMPORTS	
Libya	**LIBYA**	IMPORTS	
Malaysia	**MALAYSIA**	IMPORTS	
Morocco	**MOROCCO**	IMPORTS	
Nigeria	**NIGERIA**	IMPORTS	
Oman	**OMAN**	IMPORTS	
Peru	**PERU**	IMPORTS	
Qatar	**QATAR**	IMPORTS	
Romania	**ROMANIA**	EXPORTS	
Trinidad and Tobago	**TRINIDAD**	IMPORTS	
Tunisia	**TUNISIA**	IMPORTS	
Total Former Soviet Union	**FSU**	Both	Former Soviet Union does not include Estonian or Latvian data. Estonian, Latvian and Lithuanian data are available as a part of the OECD total.
Belarus	**BELARUS**	Both	
Georgia	**GEORGIA**	IMPORTS	
Kazakhstan	**KAZAKHSTAN**	IMPORTS	
Republic of Moldova	**MOLDOVA**	EXPORTS	

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Partner Country	Short name	Imports / Exports	Definition
Russian Federation	**RUSSIA**	Both	
Ukraine	**UKRAINE**	Both	
Other Former USSR	**OTHFUSSR**	IMPORTS	Includes Armenia, Azerbaijan, Lithuania, the Republic of Moldova and non-specified former FSU.
Other Former USSR	**OTHFUSSR**	EXPORTS	Includes Armenia and non-specified former FSU.
United Arab Emirates	**UAE**	IMPORTS	
Bosnia and Herzegovina	**BOSNIAHERZ**	EXPORTS	
Croatia	**CROATIA**	EXPORTS	
North Macedonia	**NORTHMACED**	EXPORTS	
Montenegro	**MONTENEGRO**	EXPORTS	
Serbia	**SERBIA**	EXPORTS	
Other Former Yugoslavia (if no detail)	**FORMERYUGO**	EXPORTS	
Other Asia and Pacific	**OTHERASIA**	IMPORTS	Bangladesh, Cambodia, China, Fiji, Kiribati, Macao, Maldives, Myanmar (Burma), Nauru, North Korea, Pakistan, Palau, Philippines, Solomon Islands, Sri Lanka, Chinese Taipei, Thailand, Tonga, Tuvalu, Vanuatu
Not elsewhere specified	**NONSPEC**	Both	Includes non-specified origins.
Total exports	**TOTEXPST**	EXPORTS	
Total imports	**TOTIMPST**	IMPORTS	

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4. Units and conversions

Selected Conversion Factors from Mass or Volume to Heat (Gross Calorific Value)

To	Norway		Netherlands		Russia		Algeria		Qatar	
	MJ	Btu	MJ	Btu	MJ	Btu	MJ	Btu	MJ	Btu
From	multiply by									
Cubic metre[1]	40.00	37913	33.32	31518	38.23	36235	39.19	37145	41.17	39018
Kilogramme	52.62	49495	42.07	39875	55.25	52363	52.46	49726	64.98	52107

[1]At 15°C and 760 mm Hg

The gross calorific value for methane is 55.52 MJ/kg or 37.652MJ/m3. As natural gas contains gases in addition to methane (usually ethane and propane), the heavier gases raise the calorific value per cubic meter. The table above illustrates this large variance.

Conversion Equivalents between Standard Cubic Metres and Normal Cubic Metres

To	Standard cubic metre[1]	Normal cubic metre[2]
From	multiply by	
Standard cubic metre[1]	**1**	0.948
Normal cubic metre[2]	1.055	**1**

[1]1 Standard cubic metre measured at 15ºC and 760mm Hg.
[2]1 Normal cubic metre measured at 0ºC and 760 mm Hg.

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Conversion Equivalents between LNG and Natural Gas Units

To	Metric ton of LNG	Cubic metre of LNG	Standard cubic metre[1]
From	**multiply by**		
Metric ton of LNG	**1**	2.22	1360
Cubic metre of LNG	0.45	**1**	615
Standard cubic metre[1]	$7.35*10^{-4}$	$1.626*10^{-3}$	**1**

[1]1 Standard cubic metre measured at 15ºC and 760mm Hg.

Gross versus Net Calorific Value of Natural Gas

1 Net Calorific Value = 0.9 Gross Calorific Value

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General Conversion Factors for Volume

To	gal U.S.	gal U.K.	bbl	ft^3	l	m^3
From	**multiply by**					
U.S. gallon (gal U.S.)	**1**	8.327×10^{-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 (m^3)	2.642×10^{2}	2.200×10^{2}	6.290	3.531×10^{1}	1.000×10^{3}	**1**

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**

General 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**

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