

euro  gas

The European Union of the Natural Gas Industry

2012

STATISTICAL REPORT



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FOREWORD

➤ BY THE SECRETARY GENERAL



Dear Reader,

I am pleased to introduce this year's *Eurogas Statistical Report* and to summarise its main findings. We are happy to know that this report is appreciated for the information that it provides and the soundness of the data collection on which it is based. It is our endeavour to keep up this standard.

In view of moving towards a low-carbon energy system, 2011 was both an encouraging and a disappointing year. On the positive side, the use of renewable energy sources other than hydro in primary energy consumption rose by 5%, compared with 2010. On the negative side, the use of gas declined by 10% whereas that of higher carbon solid fossil fuels rose by 3%. The reason is mainly that coal is relatively cheap and that current energy and climate policy in the EU does not sufficiently recognise the advantages of gas.

Europeans are doing well on energy efficiency. On average, energy use per capita in the EU Member States is slightly lower than that of Japan, and it is substantially lower than that of the United States.

Gas consumption experienced a slump in demand in 2011, particularly in power generation. On a positive note, although transport only made up 0.3% of natural gas sales, the volumes delivered increased by 4%, compared with 2010.

On the gas production side, gas supplies from EU Member States accounted for 33% of total net supplies and were still the largest source for EU customers, followed by Russia (24%), Norway (19%) and Algeria (9%), delivered both by pipeline and as liquefied natural gas (LNG). Other sources from different parts of the world contributed the remaining 15%.

When considering net gas imports to the EU from non-EU countries, 25% was delivered as LNG. LNG regasification capacity of the EU has more than doubled in the past five years.

Six new storage facilities were introduced in the EU in 2011, and capacity is expected to continue increasing in the coming years.

Global gas reserves continued to rise around the world, adding further to the security of supply.

The statistical data presented in this report has been collated with the assistance of the national gas associations and member companies of Eurogas. Additionally, for a full picture of the European Union (EU), data was kindly provided by the natural gas company from Estonia (EestiGas). Malta and Cyprus are not included as they are not supplied with natural gas.

As a consequence of the increasing number of players in the liberalised European natural gas market and cross-border trading, it is proving more difficult to collect energy data on a national basis. The data in this report is based on available national and gas industry information, completed with best estimates, which Eurogas has combined to provide the most comprehensive survey at the time of publication. When no data was available, own estimates have been produced and supplemented with data from international organisations in order to obtain an idea of the EU total. Comments and comparisons between 2011 and 2010 refer to the EU totals.

Members of the Eurogas Statistics and Forecasting Committee have made a substantial contribution to this report.

I hope that you will find the report useful. The Eurogas experts are at your disposal to answer any questions that you may have on this report.

Beate Raabe
SECRETARY GENERAL

1: PRIMARY ENERGY CONSUMPTION

The primary energy consumption (PEC) of a country is defined as the total gross energy supply (indigenous production plus net imports) before any conversion of the primary energy into final energy forms has taken place.

Primary energy consumption includes net energy losses in the production of electricity and synthetic gas, refinery use and other energy sector uses and losses (i.e. transformation and distribution losses).

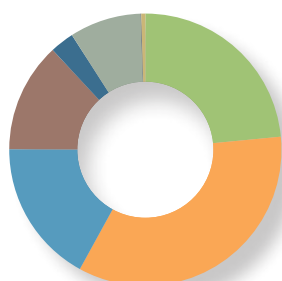
▶ PRIMARY ENERGY CONSUMPTION IN EUROGAS MEMBER COUNTRIES, 2011

MTOE	Oil	Solid fossil fuels	Natural gas	Nuclear electricity	Hydro	Other renewables	Electricity net imports	Others	Total	% Change 2011/2010
AUSTRIA	12.5	3.7	7.8	0.0	3.1	6.7	0.7	0.0	34.4	-1%
BELGIUM	22.7	2.7	14.3	12.6	0.0	3.5	0.2	0.1	56.0	-12%
BULGARIA	3.5	8.4	2.7	3.7	0.6	0.3	0.0	0.0	19.2	7%
CZECH REPUBLIC	9.2	20.8	7.0	7.4	2.4	0.2	-1.5	0.0	45.5	-3%
DENMARK	7.2	3.2	3.7	0.0	0.0	4.2	0.1	0.4	18.9	-6%
ESTONIA	0.5	4.1	0.5	0.0	0.0	0.8	-0.3	0.1	5.6	0%
FINLAND	8.0	5.7	3.2	5.8	1.1	7.4	1.2	0.9	33.2	-5%
FRANCE	81.2	9.8	36.9	106.0	14.9	16.0	-4.9	0.0	259.8	-3%
GERMANY	108.4	78.8	67.1	28.1	1.5	34.0	-0.5	5.6	323.0	-5%
GREECE	15.0	9.2	3.8	0.0	0.3	1.6	0.5	0.0	30.4	-6%
HUNGARY	9.1	2.9	9.6	4.1	0.0	2.2	0.6	0.0	28.6	-3%
IRELAND	7.1	2.0	4.1	0.0	0.1	0.8	0.1	0.0	14.2	-7%
ITALY	69.7	15.9	63.8	0.0	10.1	14.4	3.9	0.0	177.8	-2%
LATVIA	1.5	0.1	1.3	0.0	0.3	1.1	0.1	0.1	4.5	-6%
LITHUANIA	2.4	0.2	2.7	0.0	0.0	1.0	0.6	0.2	7.3	4%
LUXEMBOURG	2.9	0.1	1.0	0.0	0.0	0.2	0.4	0.0	4.6	-1%
NETHERLANDS	29.9	7.5	34.3	1.0	0.0	3.2	0.8	0.0	76.6	-7%
POLAND	26.1	55.4	12.8	0.0	0.2	8.6	-0.5	0.0	102.6	1%
PORTUGAL	10.4	2.4	4.5	0.0	1.0	3.7	0.2	0.4	22.7	-1%
ROMANIA	9.0	7.1	13.0	2.7	3.4	0.2	0.0	0.0	35.4	2%
SLOVAKIA	3.5	3.5	4.9	3.9	0.3	1.0	0.1	0.0	17.1	-2%
SLOVENIA	2.5	1.5	0.8	1.6	0.3	0.7	-0.1	0.0	7.3	0%
SPAIN	58.3	12.5	28.9	15.0	2.6	12.5	-0.5	0.0	129.3	-1%
SWEDEN	14.9	2.0	1.2	14.5	5.7	12.3	-0.6	0.0	50.0	-5%
UNITED KINGDOM	72.6	31.5	70.1	15.6	0.5	8.8	0.5	0.6	200.3	-6%
EU	588.2	290.87	400.0	221.9	48.5	145.0	1.2	8.3	1 704.1	-4%
% Change 2011/2010	-4%	3%	-10%	-2%	-13%	5%	-17%	7%	-4%	
SWITZERLAND	11.8	0.1	2.7	6.7	2.9	1.3	0.2	1.3	27.0	-5%
TURKEY	32.0	32.4	41.2	0.0	11.8	1.3	0.0	0.0	118.7	9%

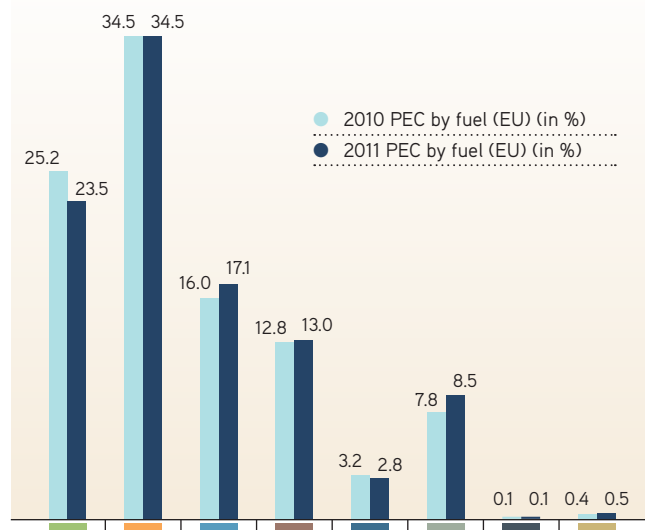
Units: million tonnes of oil equivalent (net calorific value).
 Note: other renewables includes biomass, wind, solar and geothermal energy.

In 2011, primary energy consumption in the EU decreased by 4% compared with 2010, to 1 704 Mtoe. Consumption of natural gas decreased by 10%, oil by 4%, nuclear by 2% and hydropower by 13%, whereas consumption of other renewable energy sources increased by 5%. The consumption of solid fossil fuels (i.e. coal and peat) increased by 3% reflecting the price competitiveness of coal throughout 2011.

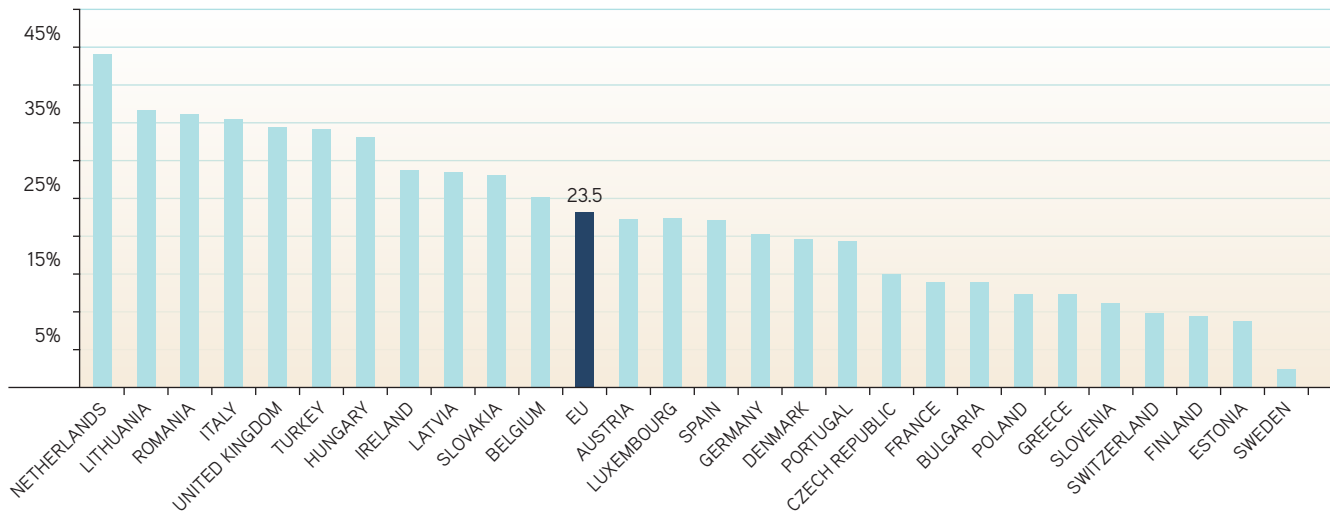
▶ PRIMARY ENERGY CONSUMPTION BY FUEL (EU), 2011



▶ SHARE OF PRIMARY ENERGY CONSUMPTION BY FUEL (EU), 2011 AND 2010



SHARE OF NATURAL GAS IN PRIMARY ENERGY CONSUMPTION (%), 2011



The share of natural gas in the EU primary energy consumption fell to 23% in comparison with 25% in 2010.

PRIMARY ENERGY CONSUMPTION PER CAPITA AND PER UNIT OF GDP, 2011

TOE	PEC/ Capita*	PEC/ GDP**
AUSTRIA	4.09	0.13
BELGIUM	5.09	0.17
BULGARIA	2.61	0.71
CZECH REPUBLIC	4.34	0.37
DENMARK	3.40	0.09
ESTONIA	4.16	0.46
FINLAND	6.17	0.20
FRANCE	3.99	0.14
GERMANY	3.95	0.13
GREECE	2.69	0.17
HUNGARY	2.86	0.32
IRELAND	3.10	0.08
ITALY	2.93	0.12
LATVIA	2.17	0.34
LITHUANIA	2.39	0.31
LUXEMBOURG	8.93	0.14
NETHERLANDS	4.60	0.14
POLAND	2.66	0.32
PORTUGAL	2.14	0.15
ROMANIA	1.65	0.38
SLOVAKIA	3.17	0.34
SLOVENIA	3.57	0.23
SPAIN	2.80	0.14
SWEDEN	5.31	0.15
UNITED KINGDOM	3.20	0.10
EU	3.40	0.15
SWITZERLAND	3.43	0.08
TURKEY	1.61	0.24
UNITED STATES	7.03	0.21
JAPAN	3.61	0.12

Primary energy use per capita (PEC/Capita) reflects both the geography and the industrial structure of a country. Accordingly, it varies widely among EU countries. As an impact of the poor economic growth, the average primary energy consumption per capita in the EU in 2011 decreased by 4% to 3.40 tonnes of oil equivalent (toe) in comparison with 2010. On average, EU countries have a slightly lower energy use per capita than Japan and substantially lower than the US.

Energy intensity, as measured by PEC per unit of gross domestic product (GDP), is a measure of the energy efficiency of a nation's economy and indicates the cost of converting energy into GDP. In 2011, the energy intensity in EU countries decreased by 5% compared with 2010.

* Units: tonnes of oil equivalent per capita.
Eurostat figures for population.

** Units: tonnes of oil equivalent per thousand euros of GDP.
Eurostat figures for GDP (in millions of euro, chain-linked volumes, reference year 2005 – at 2005 exchange rates).

2: FINAL ENERGY CONSUMPTION

The final energy consumption (FEC) is calculated from the sectoral use of energy, for which reliable data is available with a significant time-lag. FEC figures are shown for 2010. FEC is equivalent to PEC excluding net energy losses in the

production of electricity and synthetic gas, refinery use and other energy sector uses and losses (i.e. transformation and distribution losses). The major part of the difference can be attributed to the conversion of primary fuels into electricity.

FINAL ENERGY CONSUMPTION (FEC) IN EUROGAS MEMBER COUNTRIES, 2010

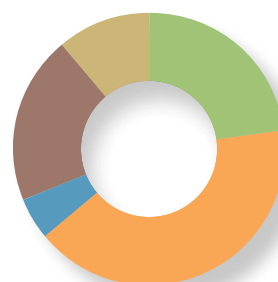
MTOE	Oil products	Solid fossil fuels	Natural gas	Electricity	Others	Total	% Change-2010/2009
AUSTRIA	10.5	0.4	4.6	6.0	5.2	26.6	5%
BELGIUM	21.7	1.4	12.0	7.2	1.8	44.1	7%
BULGARIA	3.1	0.4	1.3	2.3	1.9	9.1	0%
CZECH REPUBLIC	7.2	4.0	6.9	4.8	4.0	26.8	9%
DENMARK	6.8	0.1	1.6	2.7	3.9	15.1	0%
ESTONIA	0.9	0.1	0.1	0.6	1.1	2.8	35%
FINLAND	8.1	0.7	1.0	6.7	9.5	26.0	7%
FRANCE	66.5	5.7	34.6	38.6	14.6	160.1	3%
GERMANY	80.4	12.9	53.7	45.4	30.0	222.4	7%
GREECE	13.6	0.3	0.8	4.6	1.5	20.8	-3%
HUNGARY	6.1	0.4	6.4	2.9	2.3	18.1	0%
IRELAND	7.2	0.6	1.6	2.2	0.0	11.7	-2%
ITALY	62.1	4.0	42.0	25.7	4.8	138.6	4%
LATVIA	1.5	0.1	0.5	0.5	1.7	4.3	8%
LITHUANIA	1.8	0.2	1.1	0.7	1.7	5.5	6%
LUXEMBOURG	2.9	0.1	0.7	0.6	0.1	4.3	7%
NETHERLANDS	29.9	1.9	22.8	10.0	5.8	70.4	15%
POLAND	22.9	13.3	10.6	10.2	12.8	69.7	8%
PORTUGAL	9.1	0.1	1.5	4.3	2.8	17.7	-1%
ROMANIA	6.8	0.7	6.8	3.6	5.7	23.6	0%
SLOVAKIA	2.4	1.1	3.1	2.1	1.3	10.0	8%
SLOVENIA	2.4	0.1	0.7	1.0	0.8	5.1	6%
SPAIN	46.5	1.7	15.6	22.4	5.6	91.8	1%
SWEDEN	9.7	1.4	0.6	11.2	11.2	34.0	8%
UNITED KINGDOM	68.1	2.6	47.0	28.3	3.8	149.7	4%
EU	498.1	54.0	277.6	244.6	133.9	1208.3	5%
% Change 2010/2009	0%	21%	10%	5%	12%	5%	
SWITZERLAND	11.8	0.2	2.8	5.1	1.9	21.8	4%
TURKEY	28.4	14.1	13.1	14.6	7.4	77.6	6%

Units: million tonnes of oil equivalent (net calorific value).

In 2010, final energy consumption in the EU increased by 5% to 1 208 Mtoe, compared with 2009. As a consequence of the partial economic recovery, final consumption of all fuels increased, except for oil products which registered a stable consumption. Oil products, nevertheless, remain the largest component of final energy consumption with a share of 41%. In 2010, natural gas use in final energy consumption increased by 10%, solid fossil fuels by 21% and electricity by 5%. The category "others", which includes renewables and heat, increased by 12%.

As a result of the lower primary energy consumption registered for 2011, final energy consumption figures are also expected to be lower.

FINAL ENERGY CONSUMPTION BY FUEL (EU), 2010



Natural gas	23%
Oil products	41%
Solid fossil fuels	5%
Electricity	20%
Others	11%

3: INLAND DELIVERIES OF NATURAL GAS

Inland deliveries represent deliveries of marketable gas to the inland market, including gas used by the gas industry for heating and operating their equipment and includes losses in distribution.

▾ INLAND SALES OF NATURAL GAS BY SECTOR IN EUROGAS MEMBER COUNTRIES AND EU, 2011

TWh	Residential Commercial	Industry	Power plants	Transport	Other uses	Total Inland sales	% Change 2011/2010
AUSTRIA	22.5	37.7	32.1	0.1	3.3	95.6	-6%
BELGIUM	82.4	47.0	53.9	0.0	0.0	183.3	-15%
BULGARIA	1.2	15.0	10.9	0.6	4.6	32.3	11%
CZECH REPUBLIC	38.1	45.6	0.0	0.1	1.6	85.5	-10%
DENMARK	10.8	9.6	6.7	0.0	13.5	40.6	-18%
ESTONIA	0.9	0.5	0.4	0.0	4.7	6.5	-10%
FINLAND	0.9	21.3	21.0	0.0	0.1	43.3	-12%
FRANCE	245.3	149.0	65.1	1.2	16.6	477.2	-13%
GERMANY	335.1	352.0	155.0	2.9	19.7	864.7	-11%
GREECE	6.1	10.8	33.9	0.4	0.0	51.2	23%
HUNGARY	45.6	33.9	35.0	0.0	9.5	124.0	-6%
IRELAND	11.6	6.8	33.9	0.0	0.8	53.2	-12%
ITALY	330.4	169.2	295.9	9.2	19.5	824.4	-6%
LATVIA	3.1	2.2	10.8	0.0	0.0	16.2	-13%
LITHUANIA	2.8	17.5	14.4	0.0	0.2	35.0	9%
LUXEMBOURG	4.5	3.5	5.4	0.0	0.0	13.4	-13%
NETHERLANDS	120.3	253.5	84.5	0.0	0.0	458.3	-10%
POLAND	56.3	80.6	15.5	0.0	5.5	157.9	2%
PORTUGAL	6.3	30.2	21.8	0.0	0.3	58.5	0%
ROMANIA	42.0	67.6	35.3	0.0	6.0	150.8	3%
SLOVAKIA	22.5	15.0	13.2	0.1	6.9	57.7	-3%
SLOVENIA	3.3	4.8	0.6	0.0	0.1	8.8	-16%
SPAIN	44.9	128.4	198.1	0.9	0.0	372.2	-7%
SWEDEN	2.0	5.6	6.9	0.4	0.0	14.9	-20%
UNITED KINGDOM	353.9	184.5	330.9	0.0	35.5	904.7	-17%
EU	1 792.8	1 691.9	1 481.1	16.0	148.6	5 130.3	-10%
% Change 2011/2010	-18%	-1%	-10%	4%	-2%	-10%	
SWITZERLAND	18.9	10.7	2.3	0.2	2.4	34.5	-10%
TURKEY	120.5	124.3	225.0	0.0	0.0	469.7	18%

Units: terawatt hours (gross calorific value).

Note: figures are best estimates available at the time of publication.

The natural gas demand between 2010 and 2011 decreased by 10%, to 5 130 TWh. Although the natural gas markets vary significantly across Europe, some general trends can be distinguished for most of the EU countries.

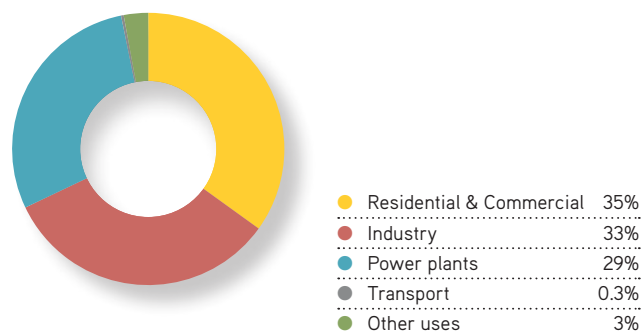
Mild weather versus cold weather: Due to very mild weather conditions in 2011, natural gas demand decreased by 18% in the residential and commercial sector compared with 2010, which had been characterised by exceptionally cold temperatures.

Economics of power generation: The power sector played a large part in the decrease in consumption. Lower electricity demand due to the sluggish economic situation and additional generation from renewables in some countries as well as nuclear power in others, led to a decrease of 10% in the volume of gas used for power generation. Moreover, the economics of power generation favoured coal in 2011 after favouring gas for most of 2010. Industrial production in 2010 had recovered (+6.7%)* from the deep recession of the previous year. Recovery continued up to the first quarter of 2011, but

then stalled, and finally amounted to +3.2%* for the whole year as compared to the previous year. This contributed to a somewhat reduced energy consumption of 1% in the sector.

Transport represented only 0.3% of natural gas sales in 2011, but volumes delivered increased by 4% compared with 2010.

▾ NATURAL GAS SALES BY SECTOR, 2011



* Source: Eurostat.

4: NATURAL GAS SUPPLIES

Natural gas supplies (or inland consumption calculated) are defined as: indigenous production+imports-exports+stock changes.

➤ NATURAL GAS SUPPLIES IN EUROGAS MEMBER COUNTRIES AND EU, 2011

TWh	Indigenous Production	Russia	Norway	Algeria	Qatar	Other sources*	Changes in stocks**	Other balances	Total Net Supplies	% Change 2011/2010
AUSTRIA	18.8	59.8	14.5	0.0	0.0	29.4	-22.1	-4.9	95.6	-6%
BELGIUM	0.0	3.4	82.4	0.0	30.8	66.9	-0.2	0.0	183.3	-15%
BULGARIA	4.2	29.3	0.0	0.0	0.0	0.0	0.2	-1.4	32.3	11%
CZECH REPUBLIC	1.4	63.3	12.2	0.0	0.0	23.2	-10.0	-4.6	85.5	-10%
DENMARK	81.7	0.0	0.0	0.0	0.0	-31.9	-1.8	-7.4	40.6	-18%
ESTONIA	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	6.5	-10%
FINLAND	0.0	43.4	0.0	0.0	0.0	0.0	0.0	0.0	43.4	-12%
FRANCE	6.5	72.6	182.9	66.7	37.4	135.0	-22.4	-1.5	477.2	-13%
GERMANY	137.3	336.9	303.1	0.0	0.0	110.2	-22.8	0.0	864.7	-11%
GREECE	0.0	30.3	0.0	8.7	1.9	10.5	-0.1	-0.1	51.2	23%
HUNGARY	32.5	72.6	0.0	0.0	0.0	5.6	14.0	-0.6	124.2	-6%
IRELAND	2.1	0.0	0.0	0.0	0.0	51.1	0.0	0.0	53.2	-12%
ITALY	88.5	247.1	38.6	242.8	65.7	149.0	-8.2	0.9	824.4	-6%
LATVIA	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0.0	16.2	-13%
LITHUANIA	0.0	57.0	0.0	0.0	0.0	-21.9	-0.1	0.0	35.0	9%
LUXEMBOURG	0.0	3.2	6.9	0.0	0.0	3.2	0.0	0.0	13.4	-13%
NETHERLANDS	746.7	44.0	129.0	0.9	3.7	-481.6	0.0	15.8	458.3	-10%
POLAND	47.6	102.7	0.0	0.0	0.0	17.4	-8.4	-1.4	157.9	2%
PORTUGAL	0.0	0.0	0.0	21.6	0.0	36.9	0.0	0.0	58.5	0%
ROMANIA	117.0	34.2	0.0	0.0	0.0	0.0	-0.4	0.0	150.8	3%
SLOVAKIA	1.0	62.4	0.0	0.0	0.0	-5.7	0.2	-0.1	57.7	-3%
SLOVENIA	0.0	5.3	0.0	2.6	0.0	0.9	-0.1	0.1	8.8	-16%
SPAIN	1.9	0.0	13.9	147.4	51.5	160.4	-4.5	1.6	372.2	-7%
SWEDEN	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.0	14.9	-20%
UNITED KINGDOM	526.7	0.0	244.2	2.6	230.6	-76.7	-22.6	-0.1	904.7	-17%
EU	1 813.9	1 290.1	1 027.7	493.3	421.6	196.8	-109.2	-3.7	5 130.5	-10%
% Change 2011/2010	-11%	2%	-3%	-8%	21%	-45%	-199%	-78%	-10%	
SWITZERLAND	0.0	7.6	7.3	0.0	0.0	19.6	0.0	0.0	34.5	-10%
TURKEY	8.1	270.3	0.0	44.2	0.0	144.7	0.0	2.4	469.7	18%

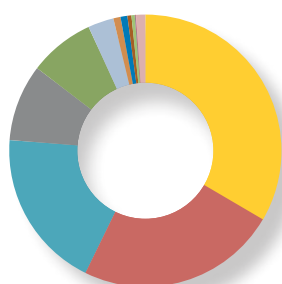
Units: terawatt hour (gross calorific value).

Note: Figures are best estimates available at the time of publication.

* Including net exports.

** (-) Injection / (+) Withdrawal.

➤ BREAKDOWN OF EU SUPPLIES, 2011



Indigenous Production	33%
Russia	24%
Norway	19%
Algeria	9%
Qatar	8%
Nigeria	3%
Trinidad Tobago	1%
Egypt	1%
Libya	0.5%
Peru	0.4%
Yemen	0.4%
Oman	0.04%
Others*	1%

* Including supplies from sources that cannot be identified

In 2011, indigenous production was still the largest source of gas for EU customers, making up 33% of total net supplies. However, indigenous gas production provides customers with flexible off-take options, which in 2011 led to a decrease of 11% to 1 814 TWh (168 bcm) in EU. This decrease is largely in response to lower demand and in line with the continued decline in production from mature basins.

The main external sources of pipeline supply came from Russia at 24% and Norway at 19%. Algeria, with 9%, supplied both pipeline gas and LNG.

More than ten countries supplied gas by LNG, which accounts for 15% of supplies in 2011.

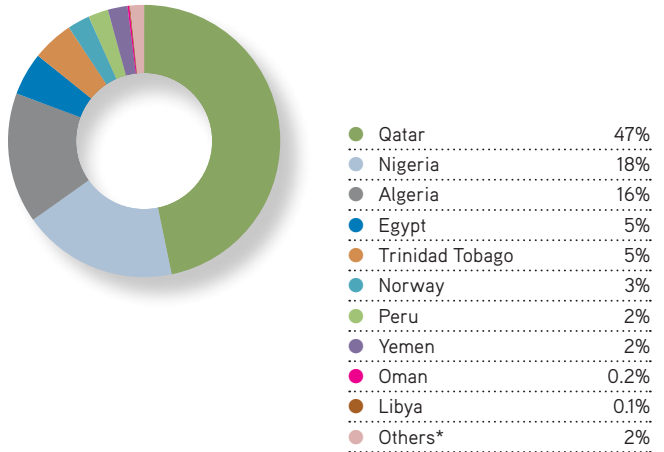
5: LNG IMPORTS

↳ LNG SUPPLIES IN EUROGAS MEMBER COUNTRIES AND EU, 2011

TWh	LNG Net-Imports	% Change 2011/2010
BELGIUM	49.8	-19%
FRANCE	163.9	5%
GREECE	13.5	5%
ITALY	94.2	-2%
NETHERLANDS	9.5	
PORTUGAL	34.7	7%
SPAIN	257.2	-18%
UNITED KINGDOM	270.7	33%
EU	893.5	2%
TURKEY	68.9	-21%

Units: terawatt hours (gross calorific value).

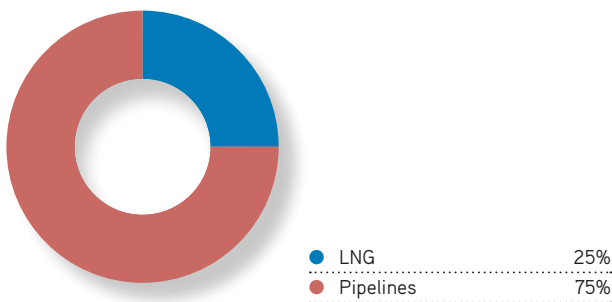
↳ BREAKDOWN OF EU LNG SUPPLIES, 2011



Compared with 2010, LNG supplies in the EU grew by 2% in 2011, to 894 TWh. The majority of the extra LNG came from Qatar, Europe's leading LNG provider, whose share in EU LNG imports reached 47%.

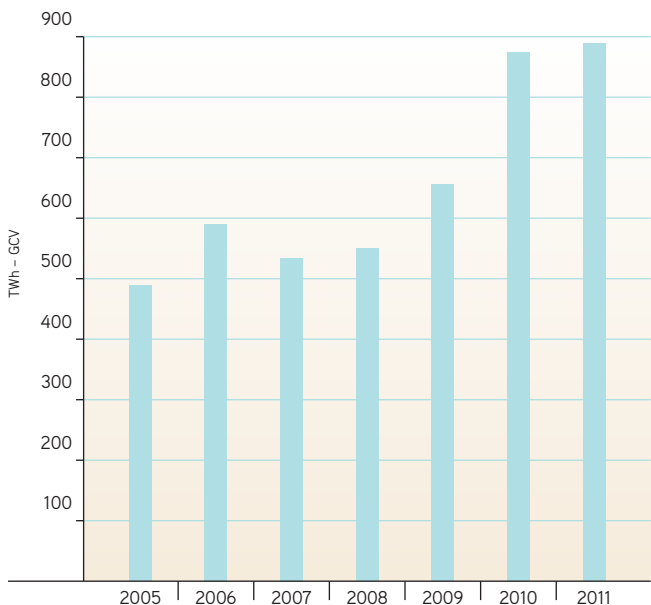
The EU LNG regasification capacity has more than doubled in the past five years. In 2011, the first Dutch LNG import terminal opened, which increased the capacity to receive LNG in Europe. The 19 LNG terminals in the EU in 2011 provided a total nominal regasification capacity of 187 bcm** (2 020 TWh) per year of gas.

↳ NET IMPORTS TO EU FROM NON-EU COUNTRIES BY TYPE OF TRANSPORT, 2011



In 2011, one quarter of the EU's net imports was delivered by LNG. This represents a significant increase compared with 2009 when LNG represented only 19% of total net imports from non-EU countries.

↳ LNG SUPPLIES TO EU SINCE 2005



* Including supplies from sources that cannot be identified

** Source: IEA Natural Gas Information 2012.

6: STORAGE FACILITIES

➤ NATURAL GAS STORAGE AT 1 JANUARY 2012

The figures show natural gas storage facilities for peak shaving, seasonal variations and strategic security of supply.

Six new storage facilities were introduced into the EU in 2011, which increased working volumes by 8% and withdrawal capacity by 6%. Many countries are planning to construct new storage sites or expand existing ones. The number of facilities and working volumes are, therefore, expected to increase in the coming years.

	Number of storage facilities	Maximum working volume*	Maximum withdrawal capacity**
AUSTRIA	7	7 451	85
BELGIUM	1	700	15
BULGARIA	1	600	4
CZECH REPUBLIC	8	3 337	55
DENMARK	2	1 020	18
ESTONIA	0	0	0
FINLAND	0	0	0
FRANCE	16	15 487	212
GERMANY	48	20 431	521
GREECE	0	0	0
HUNGARY	5	6 130	80
IRELAND	1	230	3
ITALY	10	15 600	150
LATVIA	1	2 325	26
LITHUANIA	0	0	0
LUXEMBOURG	0	0	0
NETHERLANDS	4	5 078	176
POLAND	8	1 939	39
PORTUGAL	3	190	7
ROMANIA	8	3 100	30
SLOVAKIA	1	2 900	42
SLOVENIA	0	0	0
SPAIN	2	2 367	13
SWEDEN	1	9	1
UNITED KINGDOM	7	4 340	103
EU	134	93 234	1 580
SWITZERLAND	0	0	0
TURKEY	2	2 661	20

* Units: million cubic metres

** Units: million cubic metres per day

7: NATURAL GAS INDUSTRY IN FIGURES

As of 1 January 2012	Total length of pipelines (in kilometres)	Number of gas customers (in thousands)*	Number of employees	Number of natural gas vehicles**	Gas power generation capacity installed (in megawatts)
AUSTRIA	42 756	1 349	2 700	5 870	5 102
BELGIUM	72 772	3 095	5 800	139	6 938
BULGARIA	6 520	62	1 700	61 506	N/A
CZECH REPUBLIC	77 092	2 869	4 955	3 250	838
DENMARK	20 400	391	1 500	14	4 500
ESTONIA	2 860	52	335	40	200
FINLAND	3 197	35	400	965	2 842
FRANCE	230 327	11 381	32 000	13 000	3 750
GERMANY	475 000	19 477	38 600	93 831	25 810
GREECE	6 827	272	894	750	4 500
HUNGARY	88 408	3 529	5 275	322	5 656
IRELAND	13 225	647	600	2	4 116
ITALY	282 783	22 391	30 000	779 090	54 128
LATVIA	6 071	443	1 270	18	806
LITHUANIA	10 000	554	1 719	190	N/A
LUXEMBOURG	2 985	85	210	122	491
NETHERLANDS	138 100	7 275	9 500	4 225	26 600
POLAND	127 871	6 666	36 000	2 094	N/A
PORTUGAL	17 333	1 251	1 070	435	4 687
ROMANIA	53 666	3 122	41 391	0	N/A
SLOVAKIA	35 215	1 494	3 800	1 069	1 800
SLOVENIA	4 854	150	510	10	308
SPAIN	76 403	7 297	6 516	3 176	26 251
SWEDEN	3 220	40	250	38 609	790
UNITED KINGDOM	285 600	23 211	52 734	559	32 091
EU	2 083 485	117 138	279 729	1 009 286	
SWITZERLAND	18 352	430	1 553	10 300	572
TURKEY	24 000	8 902	77 800	2 000	N/A

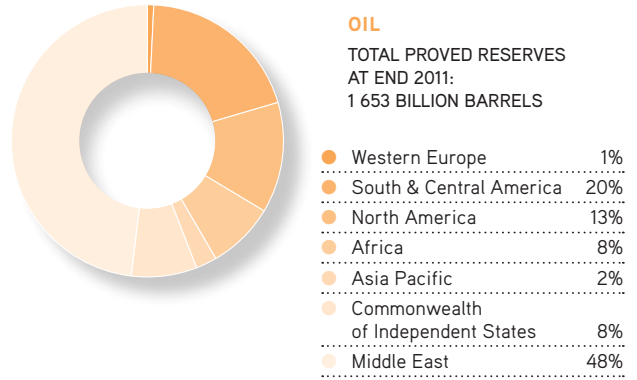
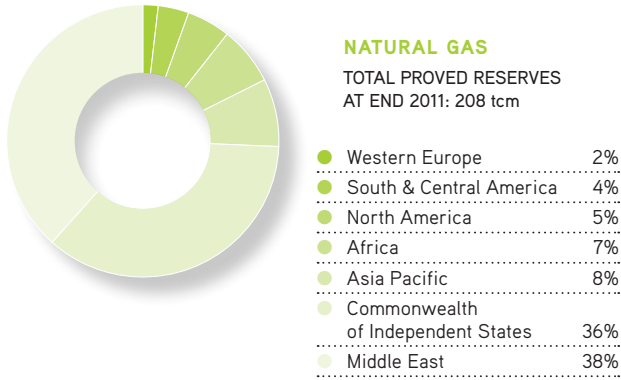
Note: Figures are best estimates available at the time of publication. N/A: not available.

* Number of gas customers are counted by number of meters, and include domestic, as well as non-domestic (industrial, commercial and other), customers, except Germany for which the number of domestic customers is equivalent to the number of dwellings supplied with natural gas for heating.

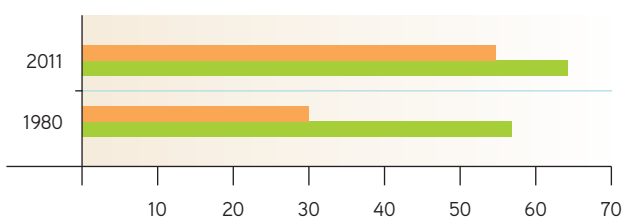
** Eurogas and NGVA Europe.

8: NATURAL GAS RESERVES

GLOBAL GAS AND OIL RESERVES BY REGION, 2011 *



GLOBAL RESERVES-TO-PRODUCTION RATIOS GAS VS OIL (YEARS) *



The reserves-to-production (R/P) ratio represents the length of time the remaining reserves would last if production was to continue at the same level of that year.

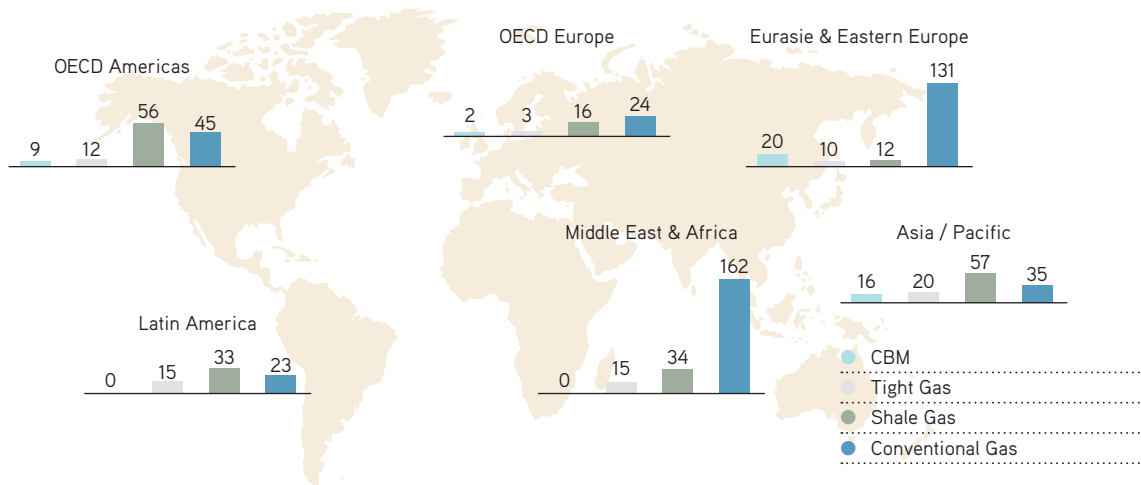
In 1980, the R/P ratio for gas was about 56 years, and for oil 29 years. By 2011, the gas R/P ratio had increased to 64 years, and to 54 for oil. This reflects the fact that discovery of gas reserves has outstripped production and use of gas.

UNCONVENTIONAL GAS, ESTIMATED GLOBAL RESOURCES

New production techniques mean that unconventional gas can now be produced from shale, coalbed methane (CBM), and other "tight" formations (i.e. natural gas in impermeable hard rock). It is difficult to predict the additional reserves that will come from recoverable

unconventional resources as there are currently no reliable industry estimates. It is expected that recoverable resources will be many times higher than from the reserves referred to in the figures above.

REMAINING TECHNICALLY RECOVERABLE NATURAL GAS RESOURCES BY TYPE AND REGION, END-2011 (TCM)**



* Source: BP

** Source: IEA - International Energy Agency golden rules for a golden age of gas - May 2012.

9: EXPECTATIONS FOR 2012

Gas demand in Europe is expected to remain relatively stable in 2012 overall compared with 2011, according to the latest forecast from Eurogas. However, a 2% drop in demand was recorded in the first half of 2012 compared with the same period in 2011.

These latest estimates are the result of an annual survey, conducted by Eurogas in September 2012 and published on 1 October 2012, covering 90% of the EU gas market. According to Eurogas, the drop in EU gas demand recorded for the first six months of 2012 can be attributed to the economics of power generation favouring coal, as well as poor economic growth, all factors that are expected to continue to influence demand also in the second half of the year.

During the first half of 2012, gas use in power generation continued to slide as a result of the low coal price, which was pushed down by relatively low demand in Asia and lower demand in the US. A weak carbon price also favoured coal generation. The growing share of electricity produced from renewables also lowered the demand for base-load natural gas in the power generation segment.

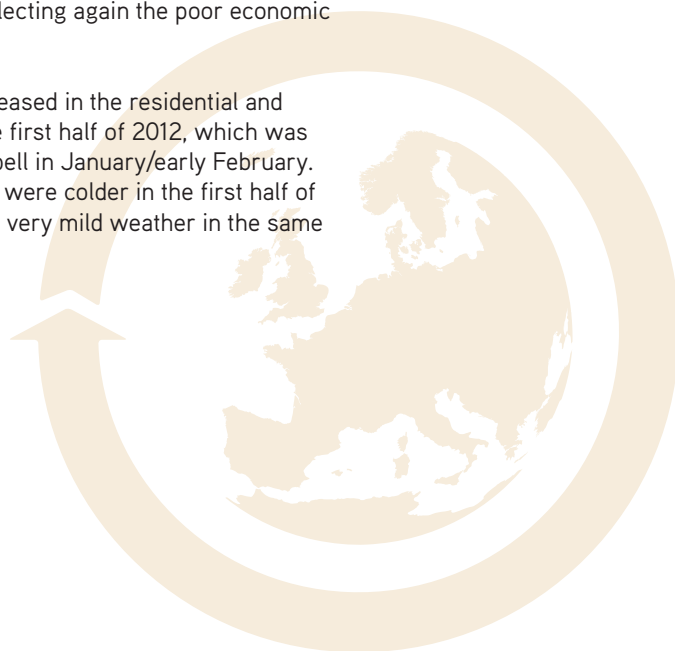
In the industrial sector, gas demand did not bounce back from pre-2011 levels, reflecting again the poor economic growth.

Demand for heating increased in the residential and commercial sector in the first half of 2012, which was mostly due to the cold spell in January/early February. Temperatures in general were colder in the first half of 2012, compared with the very mild weather in the same period of 2011.

Outlook for the rest of 2012

Early indications from the Eurogas data suggest that gas demand in Europe is likely to remain stable throughout 2012, registering a slight decrease of 1% compared with 2011. However, demand in the second half of 2012 will still remain under pressure, mainly driven by the developments in the power sector as well as continuing economic uncertainty. As to the residential sector, assuming temperatures remain normal, a slightly higher demand could be expected for 2012, compared with 2011. On this basis, taking 2012 as a whole, gas demand would correspond to an annual consumption of about 5 090 TWh (470 bcm) for the EU and Switzerland.

Over time, Eurogas expects that gas demand will resume its growth. Based on the highly efficient, proven technologies and environmental friendliness, gas should continue to play a key role in a realistic EU climate policy.



10: THE EUROPEAN NATURAL GAS GRID IN 2012



<p>Pipelines integrated in the European system</p> <ul style="list-style-type: none"> — Existing - - - Under construction, projection or planned <p>Other pipelines</p> <ul style="list-style-type: none"> — Existing - - - Under construction, projected or planned <p>▲ Natural gas fields</p>	<p>Liquefied natural gas (LNG) receiving terminal</p> <ul style="list-style-type: none"> In operation Under construction or projected
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APPENDIX

Definitions and units

The *gross calorific value* (GCV), or higher heating value, measures the total (maximum) amount of heat that is produced by combustion, including latent heat before combustion or generated in the combustion process. The *net calorific value* (NCV), or lower heating value, excludes this latent heat.

Natural gas in international trade is usually measured on the basis of GCV. Modern technologies in gas combustion are able to capture the latent heat of condensation. But since the most current technologies for other fossil fuels are still not able to recover the latent heat, NCVs need to be used rather than GCVs when building an energy balance. Natural gas data presented in million tonnes of oil equivalent (Mtoe) is expressed as NCV. For natural gas, the NCV is 10% less than the GCV.

Natural gas sales and supplies are stated in terawatt hours (TWh) because of different national gas qualities. The data is provided in GCV. When the Eurogas data is converted into billion cubic metres (bcm), we advise you to use an assumed energy content of 1 million cubic metres (mcm) of natural gas of 10.8 kilowatt hours (kWh) (GCV), which implies that 1 TWh equals approximately 92.6 mcm of natural gas. This corresponds closely to the weighted average heat content of all natural gas that is sold in the EU.

Conversion factors

UNITS GLOSSARY

bcm	→	billion cubic metres
GJ	→	gigajoule
GWh	→	gigawatt hour
kWh	→	kilowatt hour
MBtu	→	million British thermal units
mcm	→	million cubic metres
Mtoe	→	million tonnes of oil equivalent
MWh	→	megawatt hour
m ³	→	cubic metres
Pcal	→	petacalories
PJ	→	petajoule
TWh	→	terawatt hour
toe	→	tonnes of oil equivalent
tcm	→	trillion cubic metres

GENERAL CONVERSION FOR UNITS OF ENERGY AND VOLUME

1 Mtoe = 10 Pcal	→	41.86 PJ (NCV) = 11.63 TWh (NCV)
1 cubic metre (m ³)	→	35.315 cubic feet (cf)
1 mcm of LNG	→	593 mcm of gas

EUROGAS CONVERSION FACTORS FROM VOLUME TO ENERGY UNITS

92.3 mcm gas	→	1 TWh (GCV)
1 m ³ of natural gas	→	39 MJ (GCV) = 10.83 kWh (GCV)

COMMON CONVERSION FACTORS FROM GROSS TO NET CALORIFIC VALUE

Natural gas: NCV	→	0.9 GCV
Oil: NCV	→	0.95 GCV
Solid fossil fuels: NCV	→	0.97 GCV

EQUIVALENTS

1 gigawatt hour	→	10 ⁶ kWh (GWh)
1 megawatt hour	→	10 ³ kWh (MWh)
1 petawatt hour	→	10 ¹² kWh (PWh)
1 terawatt hour	→	10 ⁹ kWh (TWh)

HEAT UNIT EQUIVALENTS

	GJ	kWh	MBtu	th	therm
1 Gigajoule (GJ)	1	277.8	0.948	238.9	9.479
1 kilowatt-hour (kWh)	3.6 10 ⁻³	1	3.411 10 ⁻³	0.86	3.411 10 ⁻²
1 Million British thermal units (MBtu)	1.055	293.2	1	252	10
1 thermie (th)	4.186 10 ⁻³	1.162	3.968 10 ⁻³	1	3.968 10 ⁻²
1 therm	0.1055	29.32	110-1	25.2	1

Design: Philippe Dieu &
Pascal-Emmanuel Lambiotte
Printing: JCB Gam
Paper: Cyclus Print 150 & 250 gr.



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