

# BP Statistical Review of World Energy June 2015

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## Natural gas

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64<sup>th</sup> edition

**Total proved reserves**

	At end 1994	At end 2004	At end 2013	At end 2014			
	Trillion cubic metres	Trillion cubic metres	Trillion cubic metres	Trillion cubic feet	Trillion cubic metres	Share of total	R/P ratio
US	4.6	5.5	9.6	<b>345.0</b>	<b>9.8</b>	5.2%	13.4
Canada	1.9	1.6	2.0	<b>71.7</b>	<b>2.0</b>	1.1%	12.5
Mexico	1.9	0.4	0.3	<b>12.3</b>	<b>0.3</b>	0.2%	6.0
<b>Total North America</b>	<b>8.5</b>	<b>7.5</b>	<b>12.0</b>	<b>429.0</b>	<b>12.1</b>	<b>6.5%</b>	<b>12.8</b>
Argentina	0.5	0.5	0.3	<b>11.6</b>	<b>0.3</b>	0.2%	9.3
Bolivia	0.1	0.8	0.3	<b>10.5</b>	<b>0.3</b>	0.2%	13.9
Brazil	0.1	0.3	0.5	<b>16.4</b>	<b>0.5</b>	0.2%	23.1
Colombia	0.2	0.1	0.2	<b>5.7</b>	<b>0.2</b>	0.1%	13.7
Peru	0.3	0.3	0.4	<b>15.0</b>	<b>0.4</b>	0.2%	33.0
Trinidad & Tobago	0.3	0.5	0.3	<b>12.2</b>	<b>0.3</b>	0.2%	8.2
Venezuela	4.0	4.3	5.6	<b>197.1</b>	<b>5.6</b>	3.0%	*
Other S. & Cent. America	0.2	0.1	0.1	<b>2.0</b>	<b>0.1</b>	♦	21.8
<b>Total S. &amp; Cent. America</b>	<b>5.7</b>	<b>7.0</b>	<b>7.7</b>	<b>270.6</b>	<b>7.7</b>	<b>4.1%</b>	<b>43.8</b>
Azerbaijan	n/a	0.9	0.9	<b>41.2</b>	<b>1.2</b>	0.6%	68.8
Denmark	0.1	0.1	†	<b>1.2</b>	†	♦	7.6
Germany	0.2	0.2	0.1	<b>1.5</b>	†	♦	5.6
Italy	0.3	0.1	0.1	<b>1.7</b>	†	♦	7.5
Kazakhstan	n/a	1.3	1.5	<b>53.2</b>	<b>1.5</b>	0.8%	78.2
Netherlands	1.7	1.3	0.8	<b>28.2</b>	<b>0.8</b>	0.4%	14.3
Norway	1.3	2.4	2.0	<b>67.9</b>	<b>1.9</b>	1.0%	17.7
Poland	0.1	0.1	0.1	<b>3.5</b>	<b>0.1</b>	0.1%	23.6
Romania	0.4	0.3	0.1	<b>3.9</b>	<b>0.1</b>	0.1%	9.6
Russian Federation	n/a	31.1	32.3	<b>1152.8</b>	<b>32.6</b>	17.4%	56.4
Turkmenistan	n/a	2.3	17.5	<b>617.3</b>	<b>17.5</b>	9.3%	*
Ukraine	n/a	0.7	0.6	<b>22.5</b>	<b>0.6</b>	0.3%	34.3
United Kingdom	0.7	0.5	0.2	<b>8.5</b>	<b>0.2</b>	0.1%	6.6
Uzbekistan	n/a	1.2	1.1	<b>38.3</b>	<b>1.1</b>	0.6%	19.0
Other Europe & Eurasia	3.9	0.2	0.2	<b>7.7</b>	<b>0.2</b>	0.1%	32.7
<b>Total Europe &amp; Eurasia</b>	<b>40.6</b>	<b>42.7</b>	<b>57.5</b>	<b>2049.5</b>	<b>58.0</b>	<b>31.0%</b>	<b>57.9</b>
Bahrain	0.2	0.1	0.2	<b>6.4</b>	<b>0.2</b>	0.1%	10.7
Iran	20.8	27.5	34.0	<b>1201.4</b>	<b>34.0</b>	18.2%	*
Iraq	3.1	3.2	3.6	<b>126.7</b>	<b>3.6</b>	1.9%	*
Israel	†	†	0.2	<b>6.7</b>	<b>0.2</b>	0.1%	25.3
Kuwait	1.5	1.6	1.8	<b>63.0</b>	<b>1.8</b>	1.0%	*
Oman	0.3	1.0	0.7	<b>24.9</b>	<b>0.7</b>	0.4%	24.3
Qatar	7.1	25.4	24.7	<b>866.2</b>	<b>24.5</b>	13.1%	*
Saudi Arabia	5.3	6.8	8.2	<b>288.4</b>	<b>8.2</b>	4.4%	75.4
Syria	0.2	0.3	0.3	<b>10.1</b>	<b>0.3</b>	0.2%	65.5
United Arab Emirates	6.8	6.1	6.1	<b>215.1</b>	<b>6.1</b>	3.3%	*
Yemen	0.3	0.3	0.3	<b>9.5</b>	<b>0.3</b>	0.1%	28.0
Other Middle East	†	†	†	<b>0.2</b>	†	♦	40.4
<b>Total Middle East</b>	<b>45.5</b>	<b>72.2</b>	<b>80.0</b>	<b>2818.6</b>	<b>79.8</b>	<b>42.7%</b>	<b>*</b>
Algeria	3.0	4.5	4.5	<b>159.1</b>	<b>4.5</b>	2.4%	54.1
Egypt	0.6	1.9	1.8	<b>65.2</b>	<b>1.8</b>	1.0%	37.9
Libya	1.3	1.5	1.5	<b>53.2</b>	<b>1.5</b>	0.8%	*
Nigeria	3.5	5.2	5.1	<b>180.1</b>	<b>5.1</b>	2.7%	*
Other Africa	0.8	1.1	1.2	<b>42.2</b>	<b>1.2</b>	0.6%	60.3
<b>Total Africa</b>	<b>9.1</b>	<b>14.2</b>	<b>14.2</b>	<b>499.8</b>	<b>14.2</b>	<b>7.6%</b>	<b>69.8</b>
Australia	1.3	2.3	3.7	<b>132.0</b>	<b>3.7</b>	2.0%	67.6
Bangladesh	0.3	0.4	0.3	<b>8.9</b>	<b>0.3</b>	0.1%	10.7
Brunei	0.4	0.3	0.3	<b>9.7</b>	<b>0.3</b>	0.1%	23.3
China	1.7	1.5	3.5	<b>122.2</b>	<b>3.5</b>	1.8%	25.7
India	0.7	0.9	1.4	<b>50.4</b>	<b>1.4</b>	0.8%	45.0
Indonesia	1.8	2.8	2.9	<b>101.5</b>	<b>2.9</b>	1.5%	39.2
Malaysia	1.9	2.5	1.1	<b>38.1</b>	<b>1.1</b>	0.6%	16.2
Myanmar	0.3	0.5	0.3	<b>10.0</b>	<b>0.3</b>	0.2%	16.8
Pakistan	0.6	0.8	0.6	<b>20.4</b>	<b>0.6</b>	0.3%	13.8
Papua New Guinea	†	†	0.2	<b>5.3</b>	<b>0.2</b>	0.1%	31.0
Thailand	0.2	0.4	0.2	<b>8.4</b>	<b>0.2</b>	0.1%	5.7
Vietnam	0.1	0.2	0.6	<b>21.8</b>	<b>0.6</b>	0.3%	60.4
Other Asia Pacific	0.3	0.4	0.3	<b>10.2</b>	<b>0.3</b>	0.2%	15.6
<b>Total Asia Pacific</b>	<b>9.7</b>	<b>13.0</b>	<b>15.2</b>	<b>539.0</b>	<b>15.3</b>	<b>8.2%</b>	<b>28.7</b>
<b>Total World</b>	<b>119.1</b>	<b>156.5</b>	<b>186.5</b>	<b>6606.4</b>	<b>187.1</b>	<b>100.0%</b>	<b>54.1</b>
of which: OECD	14.5	14.8	19.4	<b>688.2</b>	<b>19.5</b>	10.4%	15.6
Non-OECD	104.6	141.7	167.0	<b>5918.3</b>	<b>167.6</b>	89.6%	75.8
European Union	3.6	2.8	1.5	<b>52.7</b>	<b>1.5</b>	0.8%	11.3
Former Soviet Union	35.5	37.5	53.9	<b>1926.9</b>	<b>54.6</b>	29.2%	71.8

\*More than 100 years.

†Less than 0.05.

♦Less than 0.05%.

n/a not available.

**Notes: Total proved reserves of natural gas** – Generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for proved natural gas reserves does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent BP's view of proved reserves by country.

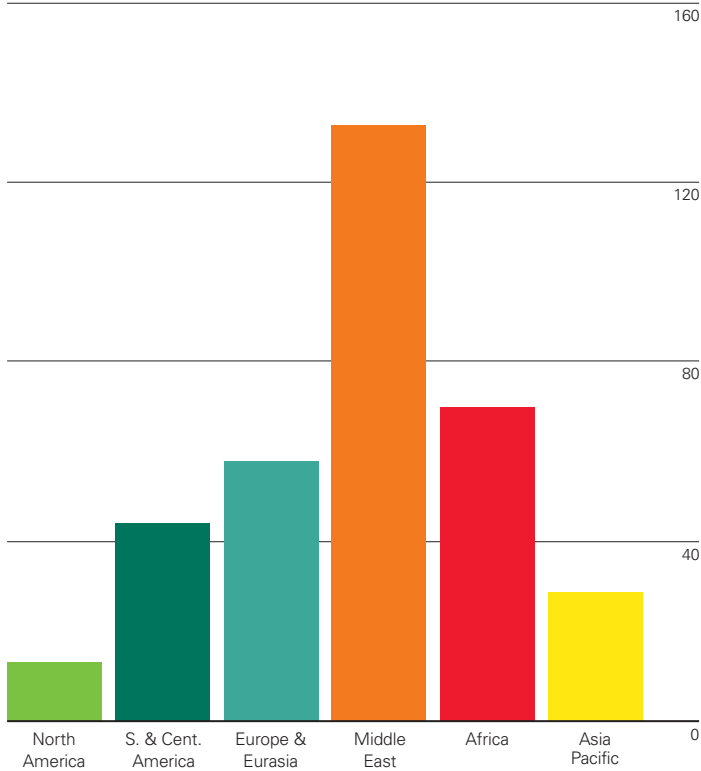
**Reserves-to-production (R/P) ratio** – If the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate.

**Source of data** – The estimates in this table have been compiled using a combination of primary official sources and third-party data from Cedigaz and the OPEC Secretariat.

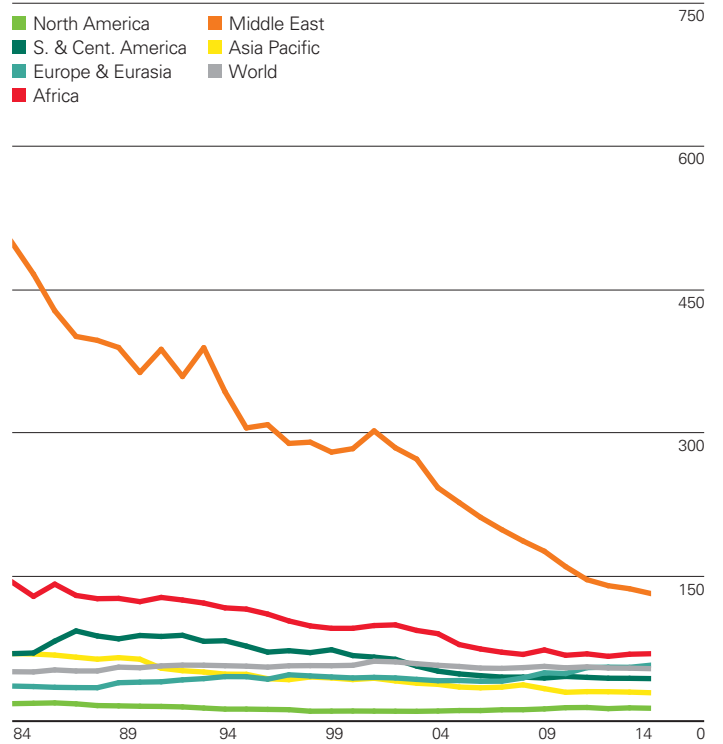
## Reserves-to-production (R/P) ratios

Years

### 2014 by region



### History

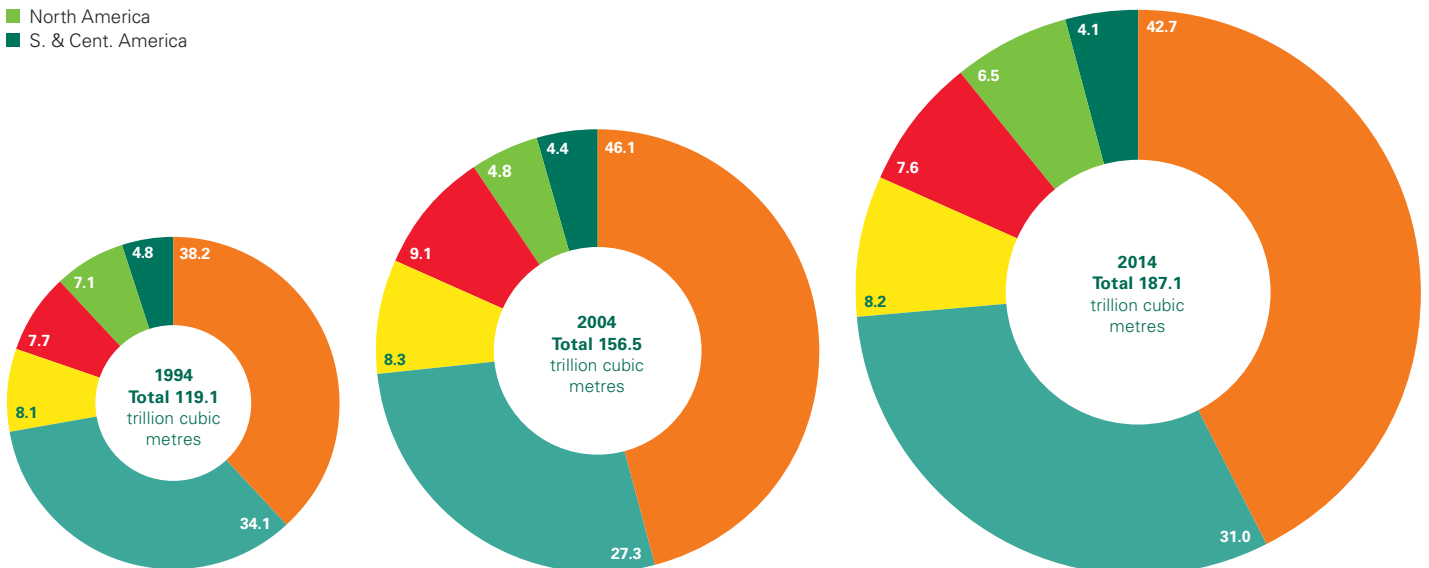


World proven natural gas reserves at end-2014 stood at 187.1 trillion cubic metres (tcm), sufficient to meet 54.1 years of global production. Proved reserves grew by 0.3% relative to end-2013. Growth in Russia (+0.4 tcm), Azerbaijan (+0.3 tcm) and the US (+0.2 tcm) accounted for all of the gross increase in global proved reserves in 2014. Iran (34.0 tcm) and Russia (32.6 tcm) hold the largest proved reserves.

## Distribution of proved reserves in 1994, 2004 and 2014

Percentage

- Middle East
- Europe & Eurasia
- Asia Pacific
- Africa
- North America
- S. & Cent. America





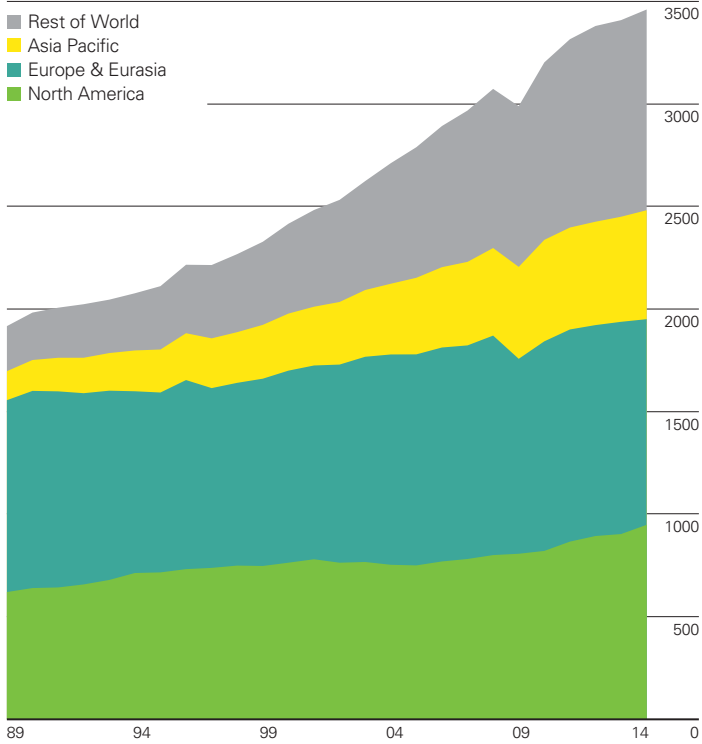






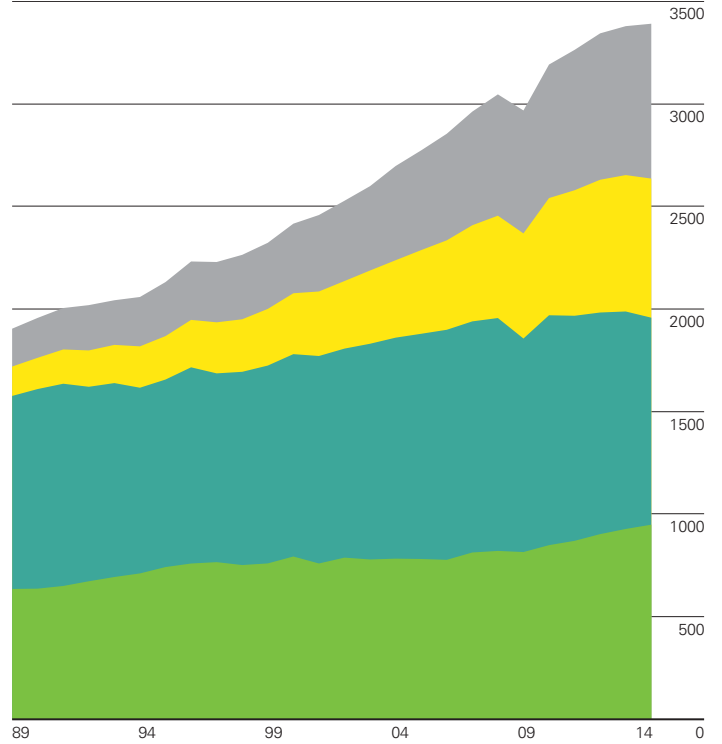
## Production by region

Billion cubic metres



## Consumption by region

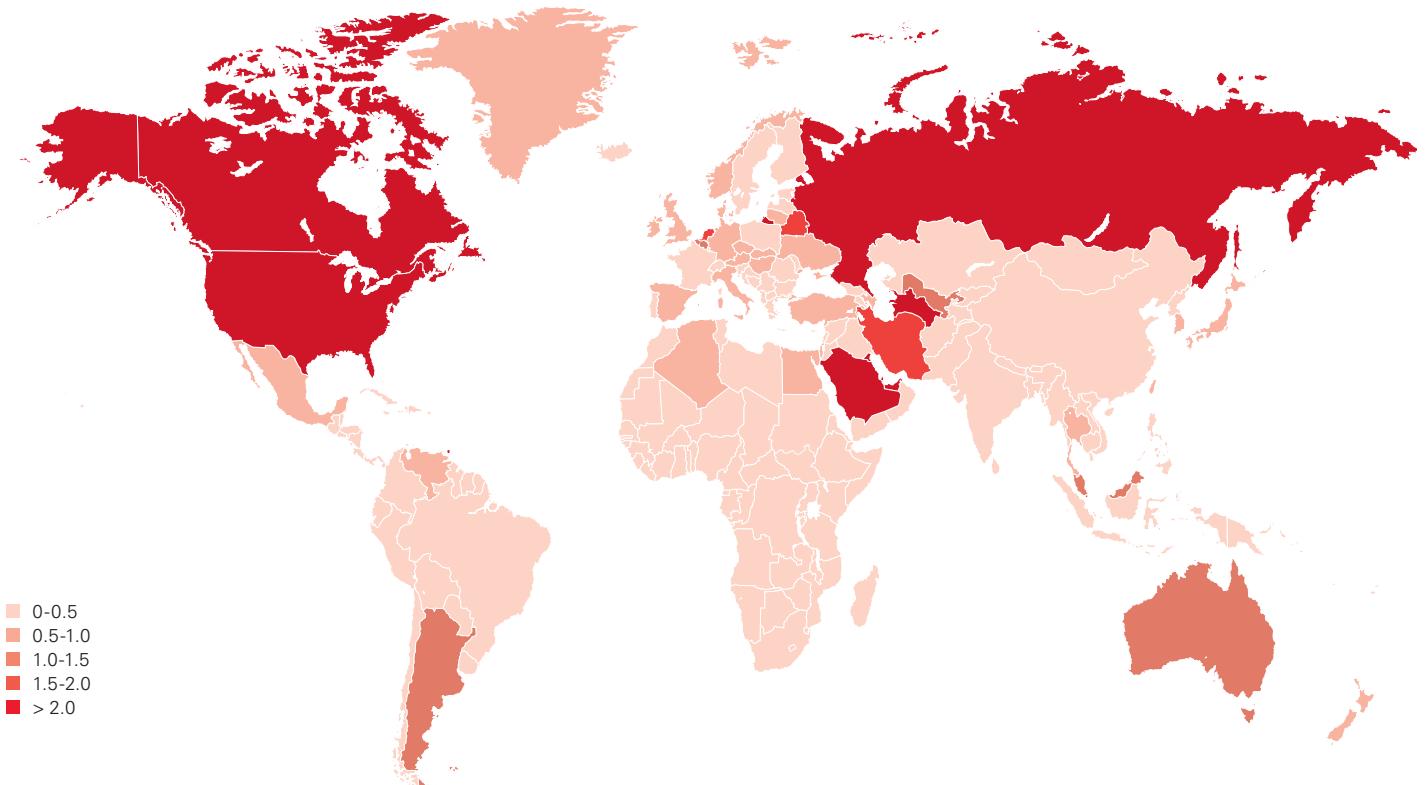
Billion cubic metres



World natural gas production increased by 1.6% in 2014, four times the growth rate of global consumption (+0.4%). Production growth was below average in all regions except North America. The US (+6.1%) recorded the largest growth increment while Russia had the largest decline (-4.3%). Consumption growth was below average in all regions except North America and the Middle East. The US (+2.9%) recorded the largest growth in consumption in the world while the EU had the biggest decline on record (-11.6%).

## Consumption per capita 2014

Tonnes oil equivalent



Source: Includes data from Cedigaz.



## Prices

\$/Mmbtu



## Prices

US dollars per million Btu	LNG Japan cif	Natural gas			Canada (Alberta)‡	Crude oil OECD countries cif
		Average German Import Price*	UK (Heren NBP Index)†	US Henry Hub‡		
1984	5.10	4.00	-	-	-	5.00
1985	5.23	4.25	-	-	-	4.75
1986	4.10	3.93	-	-	-	2.57
1987	3.35	2.55	-	-	-	3.09
1988	3.34	2.22	-	-	-	2.56
1989	3.28	2.00	-	-	-	3.01
1990	3.64	2.78	-	1.64	1.05	3.82
1991	3.99	3.19	-	1.49	0.89	3.33
1992	3.62	2.69	-	1.77	0.98	3.19
1993	3.52	2.50	-	2.12	1.69	2.82
1994	3.18	2.35	-	1.92	1.45	2.70
1995	3.46	2.39	-	1.69	0.89	2.96
1996	3.66	2.46	1.87	2.76	1.12	3.54
1997	3.91	2.64	1.96	2.53	1.36	3.29
1998	3.05	2.32	1.86	2.08	1.42	2.16
1999	3.14	1.88	1.58	2.27	2.00	2.98
2000	4.72	2.89	2.71	4.23	3.75	4.83
2001	4.64	3.66	3.17	4.07	3.61	4.08
2002	4.27	3.23	2.37	3.33	2.57	4.17
2003	4.77	4.06	3.33	5.63	4.83	4.89
2004	5.18	4.32	4.46	5.85	5.03	6.27
2005	6.05	5.88	7.38	8.79	7.25	8.74
2006	7.14	7.85	7.87	6.76	5.83	10.66
2007	7.73	8.03	6.01	6.95	6.17	11.95
2008	12.55	11.56	10.79	8.85	7.99	16.76
2009	9.06	8.52	4.85	3.89	3.38	10.41
2010	10.91	8.01	6.56	4.39	3.69	13.47
2011	14.73	10.49	9.04	4.01	3.47	18.56
2012	16.75	10.93	9.46	2.76	2.27	18.82
2013	16.17	10.73	10.63	3.71	2.93	18.25
2014	16.33	9.11	8.22	4.35	3.87	16.80

\*Source: 1984-1990 German Federal Statistical Office, 1991-2014 German Federal Office of Economics and Export Control (BAFA).

†Source: ICIS Heren Energy Ltd.

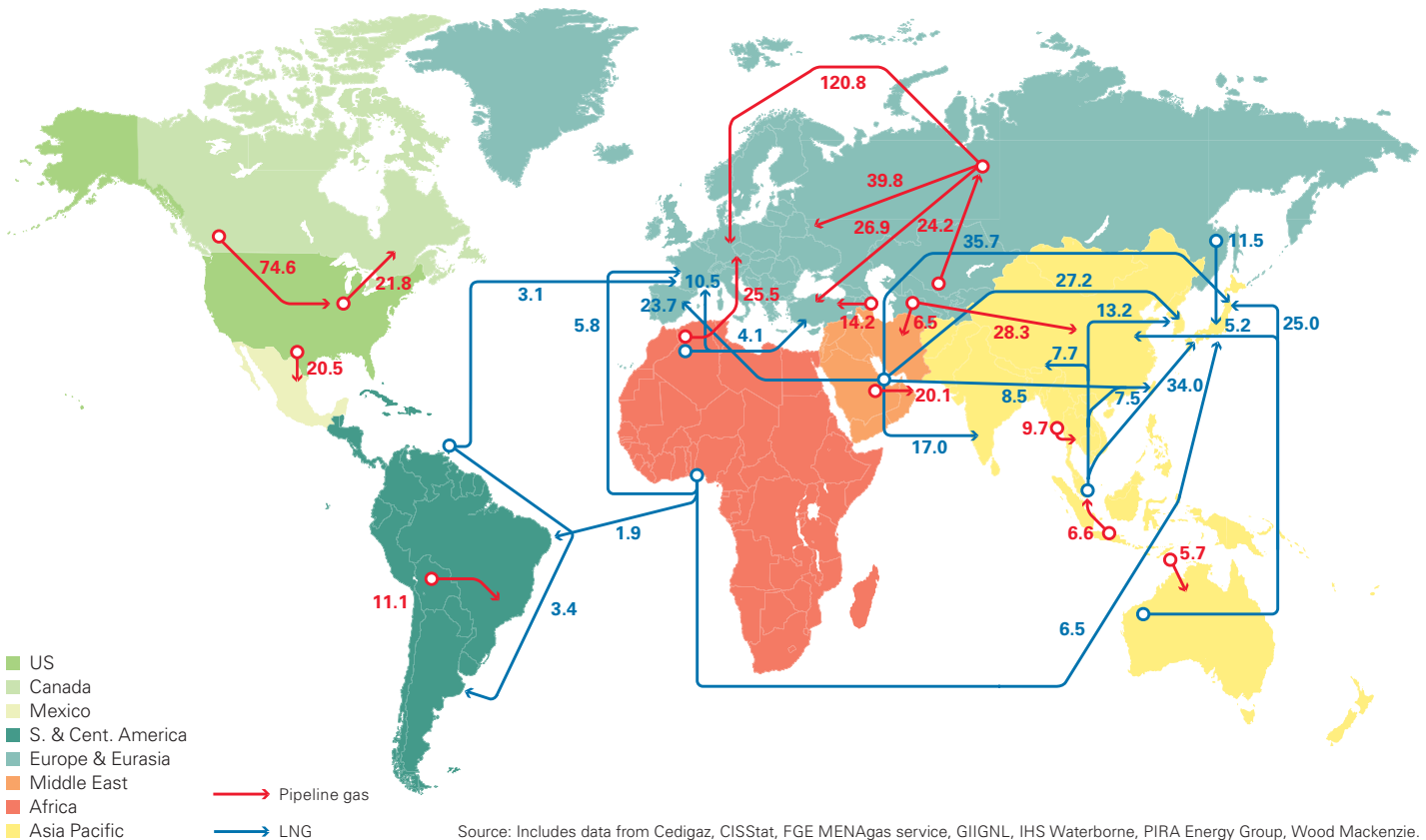
‡Source: Energy Intelligence Group, *Natural Gas Week*.

**Note:** cif = cost+insurance+freight (average prices).



## Major trade movements 2014

Trade flows worldwide (billion cubic metres)



## Gas trade in 2013 and 2014

Billion cubic metres	2013				2014			
	Pipeline imports	LNG imports	Pipeline exports	LNG exports	Pipeline imports	LNG imports	Pipeline exports	LNG exports
US	78.9	2.7	44.4	0.1	74.6	1.7	42.3	0.4
Canada	25.8	1.1	78.9	-	21.8	0.6	74.6	-
Mexico	18.6	7.8	†	-	20.5	9.3	†	-
Trinidad and Tobago	-	-	-	19.8	-	-	-	19.3
Other S. & Cent. America	18.6	19.6	18.6	5.7	17.8	21.4	17.8	5.8
France	30.5	8.7	1.1	0.6	27.4	7.1	1.1	0.6
Germany	98.4	-	15.1	-	85.0	-	10.1	-
Italy	51.6	5.5	0.2	-	46.9	4.5	0.2	-
Netherlands	21.5	0.8	51.3	0.2	23.2	1.1	44.1	0.6
Norway	†	-	102.4	3.8	†	-	101.1	5.3
Spain	15.3	14.9	0.9	2.6	15.4	15.5	0.6	5.1
Turkey	38.2	6.1	0.6	-	41.1	7.3	0.6	-
United Kingdom	40.0	9.4	9.0	-	32.9	11.3	10.6	-
Other Europe	99.5	6.0	11.8	1.6	90.0	5.3	10.8	2.0
Russian Federation	27.0	-	212.0	14.2	24.2	-	187.4	14.5
Ukraine	25.0	-	-	-	17.5	-	-	-
Other Former Soviet Union	32.2	-	67.1	-	32.1	-	69.3	-
Qatar	-	-	19.9	105.6	-	-	20.1	103.4
Other Middle East	25.5	4.5	9.4	28.5	27.2	5.4	9.6	27.5
Algeria	-	-	28.8	14.9	-	-	23.5	17.3
Other Africa	7.2	-	9.3	31.6	8.5	-	10.8	31.2
China	27.3	24.5	-	-	31.3	27.1	-	-
Japan	-	119.0	-	-	-	120.6	-	-
Indonesia	-	-	10.0	22.4	-	-	9.5	21.7
South Korea	-	54.2	-	-	-	51.1	-	0.2
Other Asia Pacific	26.4	40.4	16.7	73.5	26.5	43.9	20.0	78.6
<b>Total World</b>	<b>707.5</b>	<b>325.3</b>	<b>707.5</b>	<b>325.3</b>	<b>663.9</b>	<b>333.3</b>	<b>663.9</b>	<b>333.3</b>

† Less than 0.05.

Source: Includes data from CISStat, FGE MENAgas service, GIIGNL, IHS Waterborne, PIRA Energy Group, Poten, Wood Mackenzie.