



O&G GR

volume 2

World Gas and Renewables Review 2019

World Gas and Renewables Review 2019

I am pleased to present the **second volume** of the **World Oil, Gas and Renewables Review 2019**. Following our focus of July on oil and the refining industry, we now provide figures and statistics on natural gas, biofuels and modern renewables.

The energy world is at the crossroads of a major transformation and is confronting a complex dual challenge of supporting the growth and the evolution of the world's population by fulfilling its energy needs, while, at the same time, delivering the structural changes necessary to address the environmental issues.

Providing sustainable access to energy for all will be crucial in this challenge. Natural gas and renewables are progressively assuming greater roles in the energy transition to a less carbon-intensive energy system: knowing their trends is nowadays fundamental to understand this evolution.

The key findings from the World Gas and Renewables Review are:

- Global gas demand has been strong in 2018, increasing by 4.6%, the highest y-o-y increase since 2010, and growing in all regions except Europe.
- Global gas production confirms the growth trend that began in 2010 and accelerated over the last two years, increasing more than 3% y-o-y in 2017 and 2018.
- Gas production in the USA and Australia grew more than 10%, primarily due to the start-up of new LNG plants. In 2018, the two countries became the fourth and fifth ranked exporting countries in the world respectively or the third and the second ranked exporting country considering only LNG.
- Renewables continue to grow rapidly accompanied by sharp reduction in costs. At the end of 2018, solar and wind installed capacity accounted for almost 15% of all power sources, more than 40% of renewables sources.
- China maintains its leadership in solar and wind capacity, accounting for 34% of worldwide installed capacity. In particular, the additional solar capacity installed by China in 2018 was comparable to the whole solar installed capacity in the USA.

I hope that the World Oil, Gas and Renewables Review 2019 will be your guide to the profound changes in the energy world and to a better comprehension of how new energy sources are integrating with traditional ones.


Claudio Descalzi
Chief Executive Officer
and General Manager

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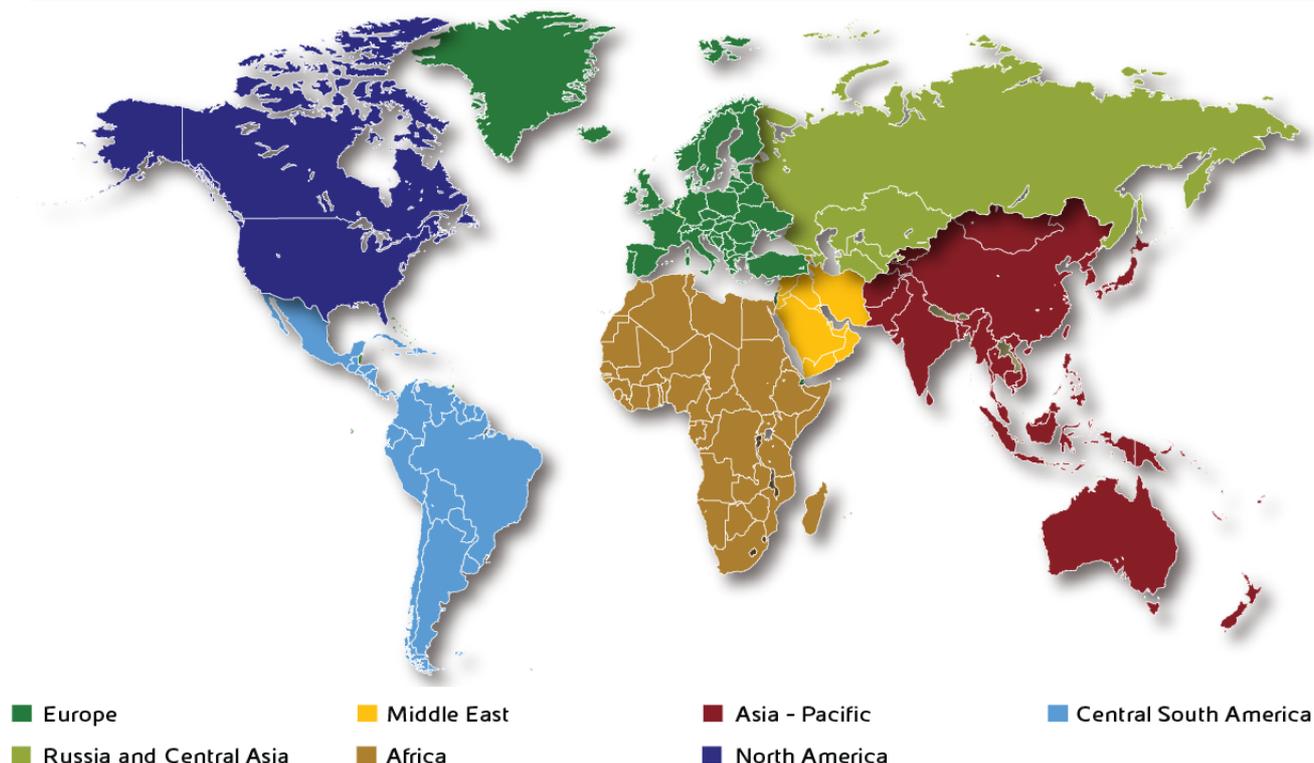
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List of Countries:

- **Europe:** Albania, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and United Kingdom.
- **Russia and Central Asia:** Russia, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
- **Middle East:** Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen.
- **Africa:** Algeria, Angola, Benin, Cameroon, Chad, Congo, Côte d'Ivoire, Dem. Rep. Congo, Egypt, Equatorial Guinea, Ethiopia, Gabon, Ghana, Kenya, Libya, Madagascar, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zambia and Zimbabwe.
- **Asia - Pacific:** Afghanistan, Australia, Bangladesh, Brunei, China, East Timor, Hong Kong, India, Indonesia, Japan, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, North Korea, Pakistan, Papua New Guinea, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand and Vietnam.
- ■ **Americas:** North America and Central South America.
- **North America:** Canada and the United States.
- **Central South America:** Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.
- **European Union:** Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom.
- **OECD:** Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.
- **OPEC:** Algeria, Angola, Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.
- **MENA (Middle East and North Africa):** Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen and Algeria, Egypt, Libya, Morocco and Tunisia.

This Review adopts the most commonly used names for countries and not necessarily the official name.

The names used do not in any way indicate the opinion of Eni on the legal status of countries, territories, cities or areas mentioned. The term "country" is used to indicate, when necessary, also a territory or area. Borders between countries are indicated on the maps and do not imply judgement of any kind or the position of Eni with regard to current international disputes.

This Review has been prepared by the Scenarios, Positioning and Medium-Long Term Plan Department.

Notes and Methods

Natural Gas

Renewables

The sources of the data are: Cedigaz, DECC, EIA DOE, Enerdata, International Energy Agency (IEA), International Renewable Energy Agency (IRENA), IHS Global Insight, Italian Ministry for Economic Development, Norwegian Petroleum Directorate, Oil & Gas Journal, OPEC, Wood MacKenzie and other official sources.

Blank spaces in the tables indicate that the figure was not available, zero indicates a figure that is not significant (except for the two chapters **"Imports by Country of Origin"** and **"LNG Liquefaction and Regasification Capacity"** in the section "Natural Gas" and for the whole section "Renewables").

Total may differ from the sum of the individual figures as a result of rounding up/down.

Percentages have been calculated before rounding.

Data for Sudan also include South Sudan.

In all the chapters of natural gas, in some countries figures may include natural gas from non conventional sources and others sources of supply.

The figures for **"Reserves"** of natural gas refer to proven reserves as at 31st December. The figures for other chapters indicate annual averages.

In the chapters **"Production"**, **"Consumption"**, **"Exports"** and **"Imports"** of natural gas, figures are assessed by using the same calorific value per cubic metre (39 MJ/cm, GCV), in order to make data among countries comparable.

In the chapter **"Production"** of natural gas, the figures concern traded production and do not include quantities of flared, dispersed or re-injected gas.

In the chapter **"Imports"** of natural gas, the figure reported as total imports for a single country may differ from the sum of "Imports by LNG and pipeline" for the same country, because of the different sources and different calorific attached to the cubic metre. The imports of liquefied natural gas cover only the dry marketable equivalent after regasification.

In all the chapters, the list of the "The world top 10 or 5..." is drawn up by ordering the countries on the basis of the last available year. In the chapters **"Reserves/Production Ratio"** and **"Production/Consumption Ratio"** of natural gas, the list of the "The world top 10..." is drawn up by selecting the largest producers in the last available year and ordering them on the basis of the value of the reserves/production and production/consumption ratio. In the chapter **"Per Capita Consumption"** of natural gas, the list of the world top is drawn up by selecting the largest consumers in the last available year and ordering them by the value of per capita consumption.

Natural Gas - Supply and Demand

Reserves

Production

Reserves/Production Ratio

Consumption

Per Capita Consumption

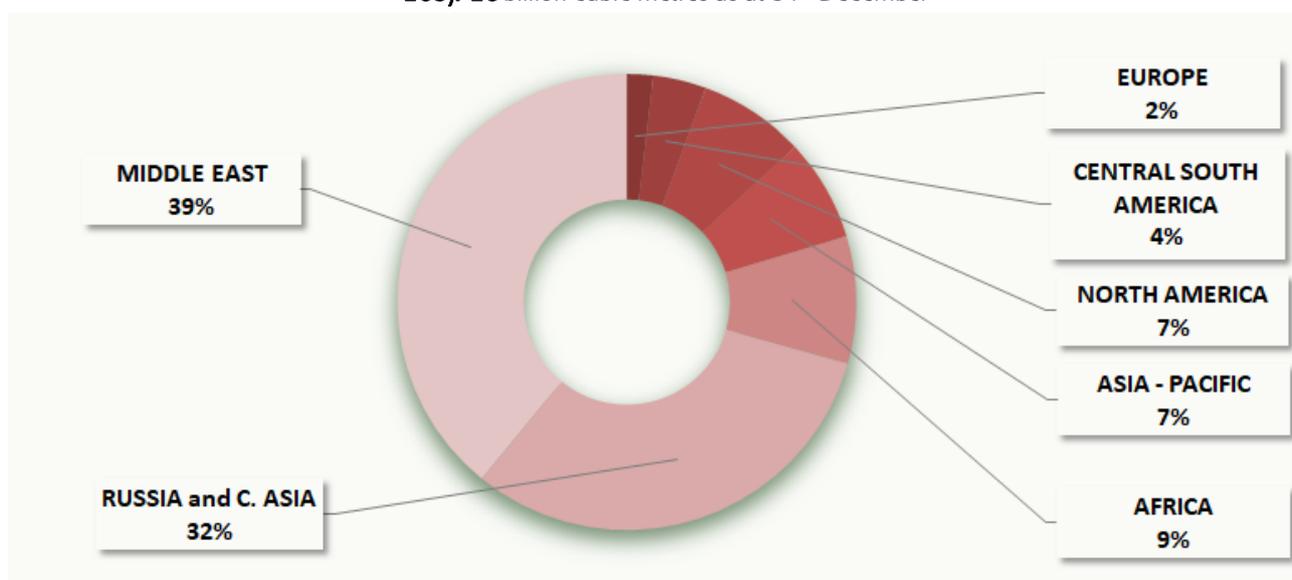
Production/Consumption Ratio

Areas and Aggregates^(*)

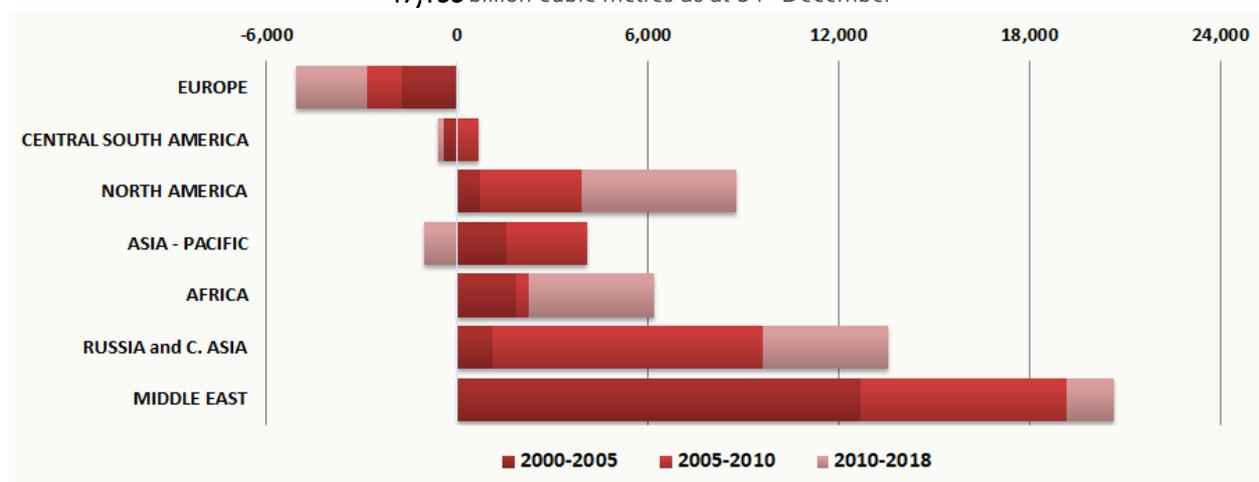
(billion cubic metres as at 31st December)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	8,862	7,103	6,039	4,371	4,130	3,980	3,795	-4.6%	-4.6%
Russia and Central Asia	51,360	52,471	60,949	64,871	65,213	65,010	64,891	-0.2%	1.3%
Middle East	59,811	72,493	78,946	79,193	80,140	80,060	80,454	0.5%	1.7%
Africa	12,358	14,196	14,587	17,453	17,893	18,116	18,545	2.4%	2.3%
Asia - Pacific	11,857	13,403	15,936	15,550	15,251	15,016	14,892	-0.8%	1.3%
Americas	14,345	14,624	18,451	18,772	19,068	22,261	23,151	4.0%	2.7%
- North America	6,707	7,419	10,597	10,880	11,216	14,491	15,455	6.7%	4.7%
- Central South America	7,638	7,205	7,854	7,892	7,852	7,770	7,695	-1.0%	0.0%
World	158,593	174,290	194,908	200,210	201,695	204,443	205,728	0.6%	1.5%
European Union	3,931	2,916	2,267	1,571	1,414	1,328	1,263	-4.9%	-6.1%
MENA	67,149	80,477	87,223	87,354	88,435	88,356	88,750	0.4%	1.6%
OECD	7,570	5,885	4,920	3,931	3,705	3,572	3,404	-4.7%	-4.3%
NON OECD	151,023	168,405	189,988	196,279	197,990	200,871	202,324	0.7%	1.6%
OPEC	72,495	86,782	94,436	94,822	95,856	95,849	96,239	0.4%	1.6%
NON OPEC	86,097	87,508	100,472	105,388	105,839	108,595	109,489	0.8%	1.3%

World Natural Gas Reserves (2018)
205,728 billion cubic metres as at 31st December



World Natural Gas Reserves Growth (2000-2018)
47,135 billion cubic metres as at 31st December



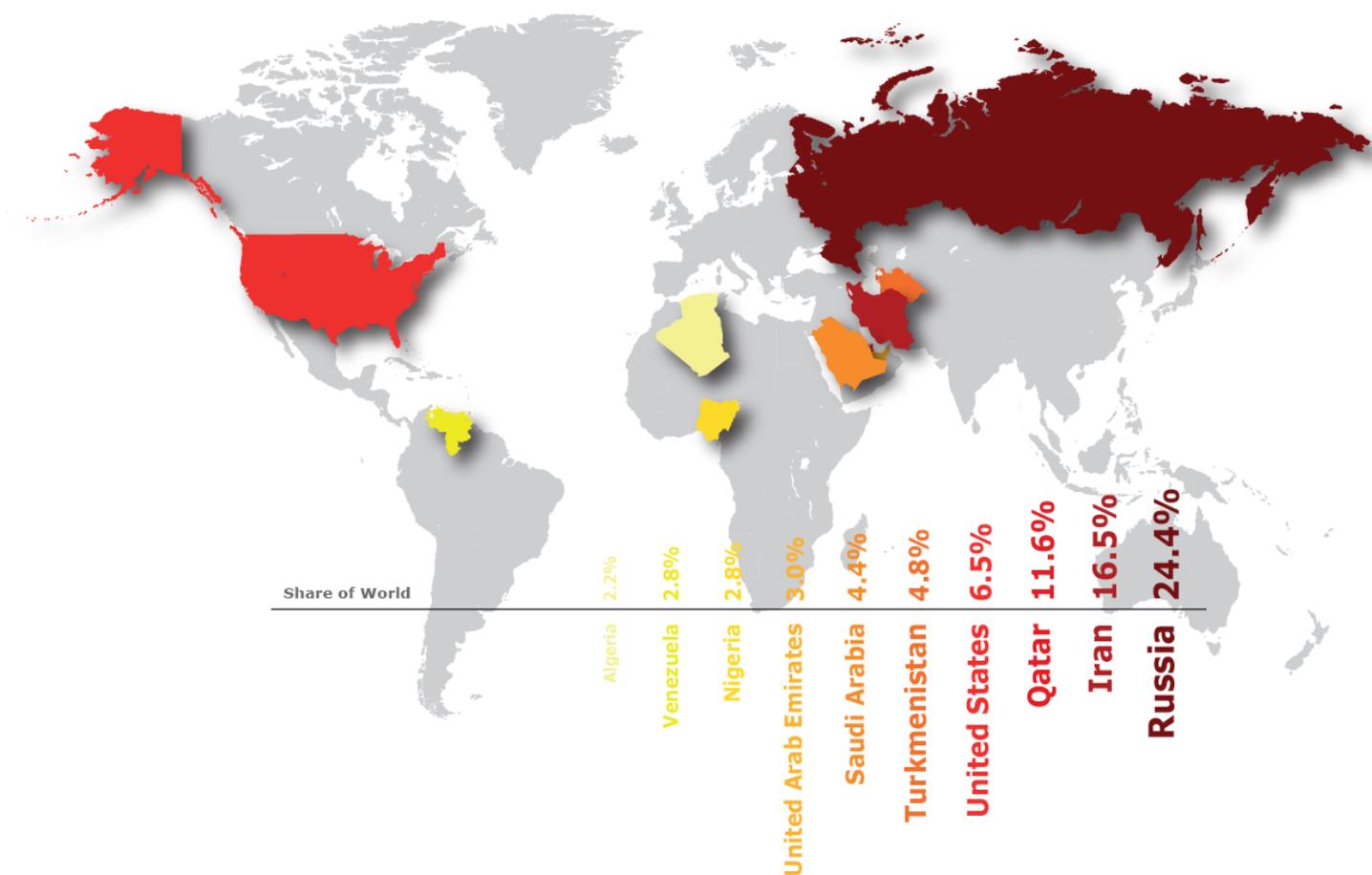
^(*) Data source: Eni's estimates on Enerdata *Global Energy Market and CO2 Data* and other official data sources.

The World Top 10 Reserves Holders^(*)

(billion cubic metres as at 31st December)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia	43,809	44,860	46,000	50,205	50,617	50,508	50,279	-0.5%	0.8%
Iran	26,600	27,580	33,090	33,500	33,721	33,810	33,899	0.3%	1.4%
Qatar	14,443	25,636	25,201	24,299	24,073	23,861	23,846	-0.1%	2.8%
United States	5,024	5,787	8,620	8,709	9,119	12,408	13,447	8.4%	5.6%
Turkmenistan	2,680	2,680	10,000	9,870	9,838	9,805	9,805	0.0%	7.5%
Saudi Arabia	6,301	6,900	8,016	8,588	8,619	8,715	9,069	4.1%	2.0%
United Arab Emirates	6,060	6,060	6,091	6,091	6,091	6,091	6,091	0.0%	0.0%
Nigeria	4,106	5,152	5,178	5,284	5,475	5,627	5,675	0.9%	1.8%
Venezuela	4,152	4,315	5,525	5,702	5,740	5,707	5,674	-0.6%	1.7%
Algeria	4,523	4,504	4,504	4,504	4,504	4,504	4,504	0.0%	0.0%
The World Top 10	117,698	133,474	152,225	156,752	157,797	161,035	162,289	0.8%	1.8%
Rest of the World	40,894	40,815	42,684	43,458	43,898	43,408	43,439	0.1%	0.3%
World	158,593	174,290	194,908	200,210	201,695	204,443	205,728	0.6%	1.5%

The World Top 10 (2018)



^(*) Data source: Eni's estimates on Enerdata *Global Energy Market and CO2 Data* and other official data sources.

Natural Gas - Supply and Demand

Reserves

Countries^(*)

(billion cubic metres as at 31st December)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	8,862	7,103	6,039	4,371	4,130	3,980	3,795	-4.6%	-4.6%
Albania	1	0	0	0	0	0	0	0.0%	-9.5%
Austria	26	21	15	9	8	8	7	-10.9%	-7.1%
Belarus	2	1	1	1	1	1	1	0.0%	-7.4%
Bulgaria	6	3	5	4	4	4	4	0.0%	-2.0%
Croatia	29	30	25	11	10	9	6	-31.9%	-8.2%
Czech Republic	5	5	4	3	3	3	3	0.0%	-2.4%
Denmark	144	122	101	80	77	72	69	-4.7%	-4.0%
France	8	7	5	9	9	9	9	0.0%	0.5%
Germany	264	178	87	46	42	37	30	-19.1%	-11.4%
Greece	1	1	1	1	1	1	1	0.0%	0.0%
Hungary	32	21	12	9	7	6	7	6.3%	-8.3%
Ireland	34	25	25	30	30	30	29	-3.1%	-0.9%
Italy ^(**)	199	117	66	49	38	45	48	8.5%	-7.5%
Moldova	2	1	1	1	1	1	1	0.0%	-7.4%
Netherlands	1,684	1,431	1,236	825	740	695	659	-5.1%	-5.1%
Norway	3,841	3,108	2,762	2,461	2,388	2,334	2,226	-4.6%	-3.0%
Poland	119	106	71	61	58	56	73	29.8%	-2.7%
Romania	202	143	110	103	99	92	87	-5.3%	-4.6%
Serbia and Montenegro	10	10	8	6	6	6	5	-5.5%	-3.6%
Slovakia	7	6	5	5	5	4	4	2.3%	-2.3%
Slovenia	0	0	1	1	1	0	0		
Spain	5	3	3	3	3	3	3	-0.3%	-2.3%
Turkey	6	6	6	6	6	6	6	0.0%	0.0%
Ukraine	1,040	1,030	969	314	304	296	288	-2.7%	-6.9%
United Kingdom	1,195	728	520	333	288	263	228	-13.0%	-8.8%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia	51,360	52,471	60,949	64,871	65,213	65,010	64,891	-0.2%	1.3%
Russia	43,809	44,860	46,000	50,205	50,617	50,508	50,279	-0.5%	0.8%
Armenia	18	18	18	18	18	18	18	0.0%	0.0%
Azerbaijan	1,275	1,275	1,317	1,284	1,277	1,270	1,435	13.0%	0.7%
Georgia	1	1	1	1	1	1	1	0.0%	-3.8%
Kazakhstan	1,840	1,900	1,950	1,907	1,898	1,865	1,830	-1.9%	0.0%
Kyrgyzstan	1	1	1	1	1	1	1	0.0%	-3.8%
Tajikistan	1	1	1	1	1	1	1	0.0%	-3.8%
Turkmenistan	2,680	2,680	10,000	9,870	9,838	9,805	9,805	0.0%	7.5%
Uzbekistan	1,735	1,735	1,661	1,585	1,564	1,543	1,522	-1.3%	-0.7%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East	59,811	72,493	78,946	79,193	80,140	80,060	80,454	0.5%	1.7%
Bahrain	110	90	92	92	92	92	92	0.0%	-1.0%
Iran	26,600	27,580	33,090	33,500	33,721	33,810	33,899	0.3%	1.4%
Iraq	3,109	3,170	3,158	3,158	3,820	3,744	3,729	-0.4%	1.0%
Israel	45	45	215	206	465	488	497	1.7%	14.3%
Jordan	7	6	6	6	6	6	6	0.0%	-0.9%
Kuwait	1,557	1,572	1,784	1,784	1,784	1,784	1,784	0.0%	0.8%
Oman	859	670	520	705	705	705	677	-3.9%	-1.3%
Qatar	14,443	25,636	25,201	24,299	24,073	23,861	23,846	-0.1%	2.8%
Saudi Arabia	6,301	6,900	8,016	8,588	8,619	8,715	9,069	4.1%	2.0%
Syria	241	285	285	285	285	285	285	0.0%	0.9%
United Arab Emirates	6,060	6,060	6,091	6,091	6,091	6,091	6,091	0.0%	0.0%
Yemen	479	479	488	479	479	479	479	0.0%	0.0%

(*) Data source: Eni's estimates on Enerdata *Global Energy Market and CO2 Data* and other official data sources.

(**) Data source: Italian Ministry for Economic Development.

Natural Gas - Supply and Demand

Reserves

Countries^(*)

(billion cubic metres as at 31st December)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa	12,358	14,196	14,587	17,453	17,893	18,116	18,545	2.4%	2.3%
Algeria	4,523	4,504	4,504	4,504	4,504	4,504	4,504	0.0%	0.0%
Angola	269	270	275	316	440	422	383	-9.4%	2.0%
Benin	1	1	1	0	0	0	0		-100.0%
Cameroon	102	165	155	153	152	151	150	-0.8%	2.2%
Chad	0	0	1	1	1	1	1	0.0%	
Congo	122	130	182	285	285	285	285	0.0%	4.8%
Côte d'Ivoire	28	31	27	22	21	20	18	-7.7%	-2.4%
Dem. Rep. Congo	1	1	1	1	1	1	1	0.0%	0.0%
Egypt	1,433	1,920	2,210	2,086	2,221	2,221	2,221	0.0%	2.5%
Equatorial Guinea	17	91	82	54	47	42	42	0.0%	5.2%
Ethiopia	25	25	28	28	28	120	120	0.0%	9.1%
Gabon	33	30	28	25	26	26	26	1.9%	-1.3%
Ghana	24	24	27	55	55	58	56	-3.2%	4.8%
Libya	1,314	1,491	1,495	1,505	1,505	1,505	1,505	0.0%	0.8%
Madagascar	2	2	2	2	2	2	2	0.0%	0.0%
Mauritania	0	0	28	28	28	28	240	758.0%	
Morocco	3	3	3	1	1	1	1	0.0%	-4.0%
Mozambique	62	61	75	2,830	2,830	2,830	2,830	0.0%	23.6%
Namibia	85	70	70	70	70	70	70	0.0%	-1.1%
Nigeria	4,106	5,152	5,178	5,284	5,475	5,627	5,675	0.9%	1.8%
Senegal	11	11	10	2	2	2	214		17.9%
Somalia	6	6	6	6	6	6	6	0.0%	0.0%
South Africa	17	29	12	3	2	3	2	-21.0%	-10.8%
Sudan	86	86	85	85	85	85	85	0.0%	-0.1%
Tanzania	23	28	37	37	37	37	37	0.0%	2.7%
Tunisia	65	65	65	65	65	65	65	0.0%	0.0%
Uganda	0	0	0	5	5	5	5	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific	11,857	13,403	15,936	15,550	15,251	15,016	14,892	-0.8%	1.3%
Afghanistan	100	100	100	99	99	99	99	-0.5%	-0.1%
Australia	2,203	2,428	3,759	3,205	3,193	3,193	3,193	0.0%	2.1%
Bangladesh	306	407	354	385	588	568	591	4.1%	3.7%
Brunei	366	333	301	258	252	240	228	-5.0%	-2.6%
China	1,269	1,690	2,244	2,644	2,716	2,732	2,720	-0.5%	4.3%
India	760	1,101	1,098	1,252	1,227	1,284	1,330	3.6%	3.2%
Indonesia	2,608	2,659	3,068	2,865	2,841	2,745	2,707	-1.4%	0.2%
Japan	40	39	37	31	29	28	27	-4.3%	-2.2%
Malaysia	2,335	2,411	2,507	2,842	2,470	2,346	2,290	-2.4%	-0.1%
Myanmar	489	687	724	484	368	355	355	0.0%	-1.8%
New Zealand	57	62	52	56	50	50	50	-0.4%	-0.7%
Pakistan	677	852	810	723	711	699	650	-7.0%	-0.2%
Papua New Guinea	3	3	263	216	238	226	217	-4.3%	26.2%
Philippines	108	100	86	71	69	66	66	0.0%	-2.7%
South Korea	0	3	1	1	1	1	1	-15.2%	
Taiwan	6	4	4	3	3	3	3	-3.0%	-4.4%
Thailand	360	304	300	207	193	181	171	-5.6%	-4.0%
Vietnam	170	220	228	207	203	199	195	-2.0%	0.8%

^(*) Data source: Eni's estimates on Enerdata *Global Energy Market and CO2 Data* and other official data sources.

Countries^(*)

(billion cubic metres as at 31st December)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas	14,345	14,624	18,451	18,772	19,068	22,261	23,151	4.0%	2.7%
Argentina	778	439	359	350	337	355	357	0.3%	-4.2%
Barbados	0	2	2	2	0	1	1	0.0%	
Bolivia	675	710	281	305	310	303	303	0.0%	-4.4%
Brazil	221	306	417	429	378	370	368	-0.4%	2.9%
Canada	1,683	1,632	1,977	2,171	2,097	2,083	2,008	-3.6%	1.0%
Chile	17	13	8	6	5	5	4	-8.9%	-7.5%
Colombia	129	113	153	123	114	110	107	-2.9%	-1.0%
Cuba	18	17	14	9	8	8	8	0.0%	-4.4%
Ecuador	10	9	8	11	11	11	11	0.0%	0.5%
Mexico	835	412	353	257	208	199	188	-5.4%	-7.9%
Peru	245	338	353	399	456	455	466	2.5%	3.6%
Trinidad and Tobago	557	531	381	300	286	246	208	-15.4%	-5.3%
United States	5,024	5,787	8,620	8,709	9,119	12,408	13,447	8.4%	5.6%
Venezuela	4,152	4,315	5,525	5,702	5,740	5,707	5,674	-0.6%	1.7%

^(*) Data source: Eni's estimates on Enerdata *Global Energy Market and CO2 Data* and other official data sources.

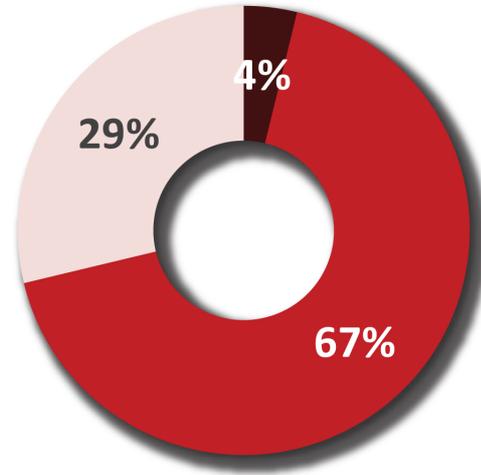
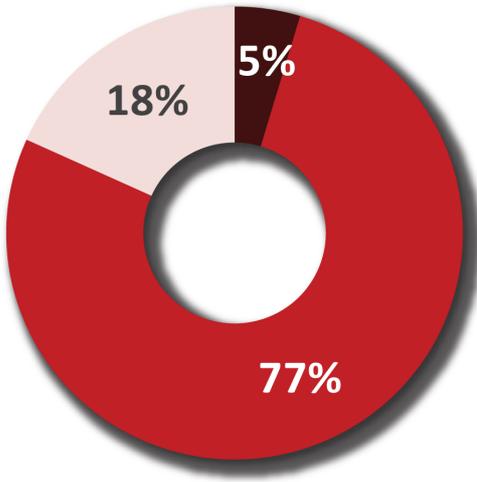
Cluster of Companies^(*)

2000

2018

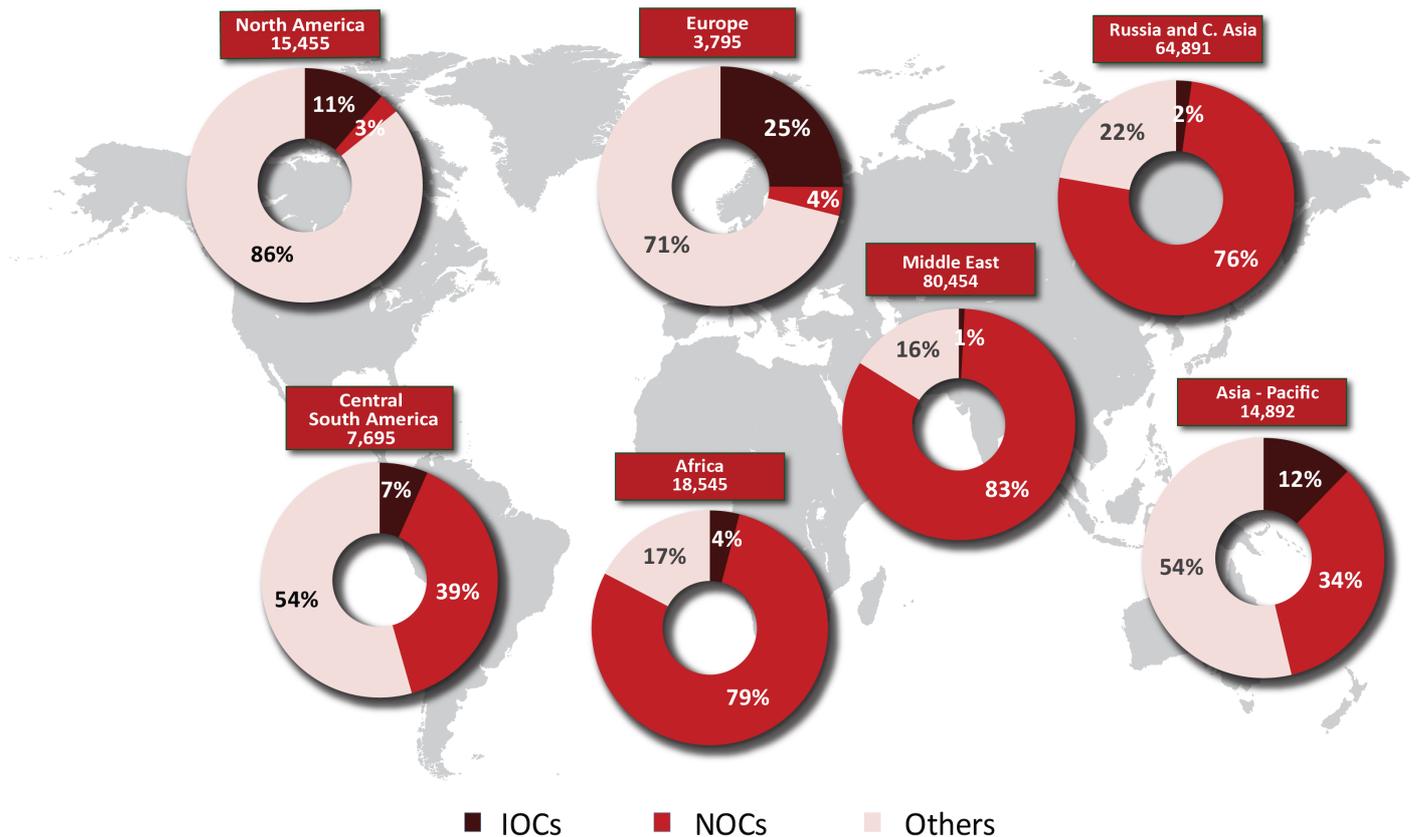
World: 158,593 billion cubic metres as at 31st December

World: 205,728 billion cubic metres as at 31st December



2018

(billion cubic metres as at 31st December)



IOCs: Anadarko, Apache, BG, BHP Billiton, BP, Chevron, ConocoPhillips, Eni, Equinor, ExxonMobil, Marathon Oil, OMV, Repsol, Shell, Total, Woodside Petroleum.

NOCs: ADNOC, Bahrain NOC, Bashneft, CNOOC, CNPC-PetroChina, CPC Taiwan, Dubai Petroleum, Ecopetrol, EGPC, Gazprom, INOC, Israel NOC, KazMunaiGaz, KNOC, KPC, Lybian NOC, Lukoil, MEDCO Energy, MOGE, Morocco NOC, Mubadala - Abu Dhabi, NIOC, NNPC, Novatek, Oil India, ONGC, Pakistan Oil Field, Pakistan Petroleum, PDO, PdVSA, Pemex, Pertamina, Petrobras, Petronas, PetroVietnam, PGNiG, PTTEP, QP, Rosneft, Saudi Aramco, Sinopec, SOCAR Azerbaijan, Sonangol, Sonatrach, Surgutneftegas, Syria Petroleum, Tatneft, Turkmenogas, Uzbekneftegas, YPF.

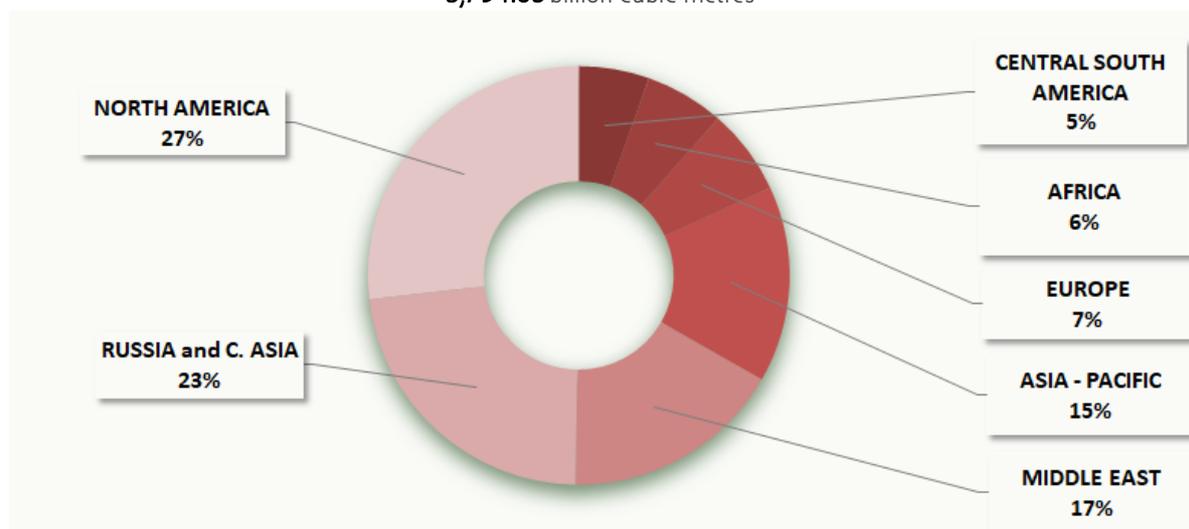
Areas and Aggregates^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	316.81	328.35	314.55	262.80	262.51	265.31	251.15	-5.3%	-1.3%
Russia and Central Asia	659.65	740.60	772.99	805.61	814.13	869.49	870.44	0.1%	1.6%
Middle East	191.26	294.94	458.21	577.90	599.46	621.67	643.67	3.5%	7.0%
Africa	121.45	182.72	203.70	193.62	206.80	225.63	231.69	2.7%	3.7%
Asia - Pacific	281.10	361.33	472.48	527.97	543.67	566.99	575.02	1.4%	4.1%
Americas	831.96	849.47	932.94	1,116.25	1,111.49	1,129.35	1,222.68	8.3%	2.2%
- North America	692.35	670.09	725.96	902.28	902.26	924.71	1,017.96	10.1%	2.2%
- Central South America	139.61	179.38	206.98	213.97	209.24	204.64	204.72	0.0%	2.1%
World	2,402.23	2,757.41	3,154.87	3,484.15	3,538.07	3,678.44	3,794.65	3.2%	2.6%
EUROPEAN UNION	243.98	221.57	185.25	124.83	124.81	119.89	109.18	-8.9%	-4.4%
MENA	297.11	445.55	615.49	711.37	745.72	777.91	805.90	3.6%	5.7%
OECD	1,058.84	1,058.11	1,124.30	1,258.67	1,271.45	1,312.02	1,405.80	7.1%	1.6%
NON OECD	1,343.39	1,699.30	2,030.57	2,225.48	2,266.61	2,366.42	2,388.85	0.9%	3.2%
OPEC	291.87	402.20	554.81	677.21	708.50	738.22	757.03	2.5%	5.4%
NON OPEC	2,110.37	2,355.20	2,600.06	2,806.94	2,829.56	2,940.23	3,037.62	3.3%	2.0%

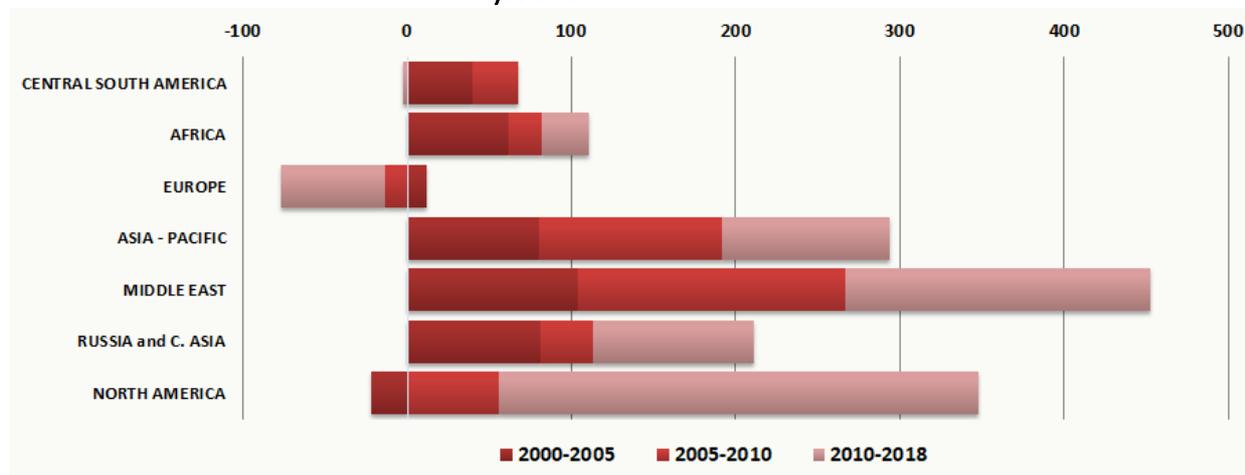
World Natural Gas Production (2018)

3,794.65 billion cubic metres



World Natural Gas Production Growth (2000-2018)

1,392.42 billion cubic metres

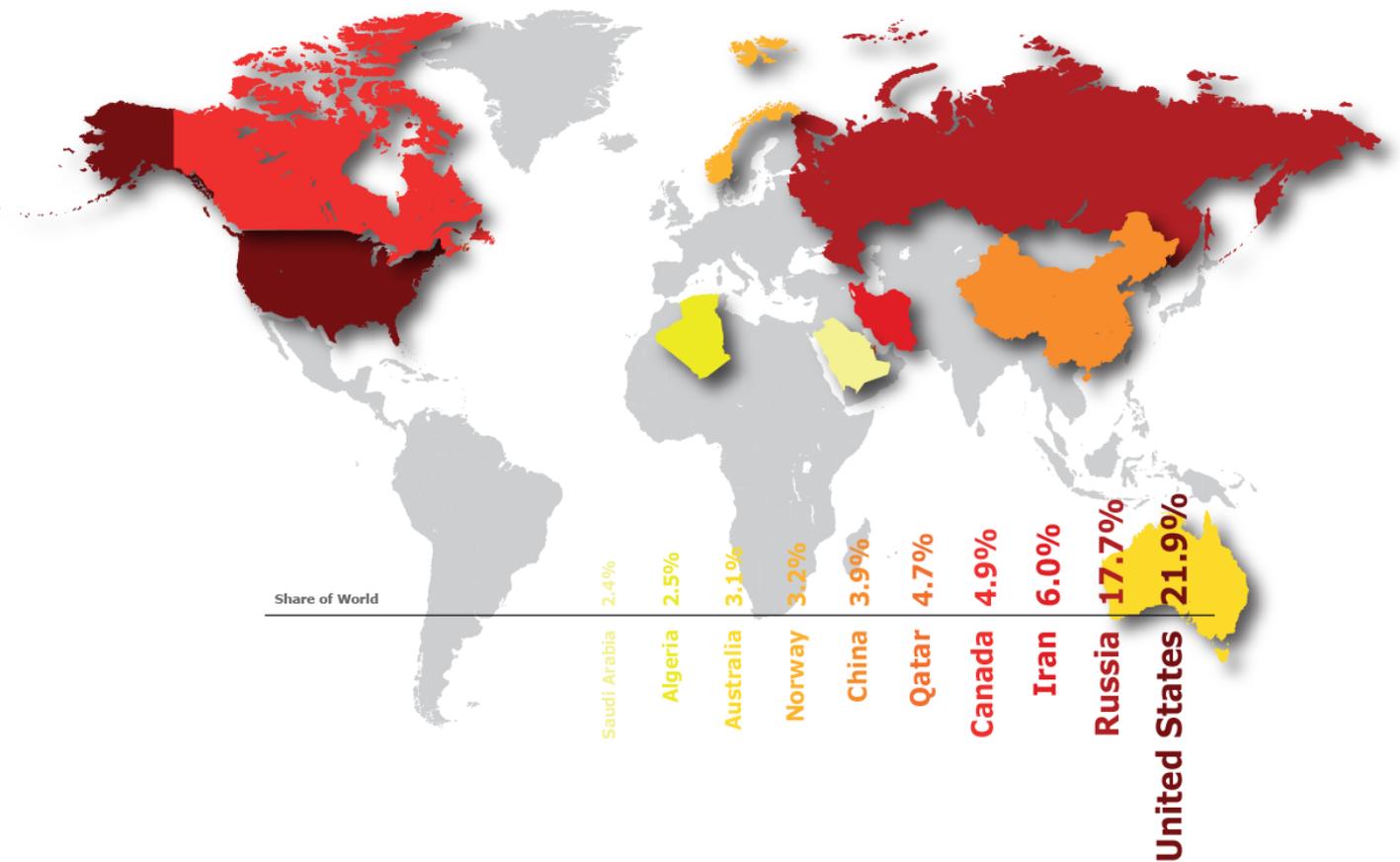


^(*) Data source: Eni's calculations. The original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

The World Top 10 Producers^(*) (billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
United States	519.80	490.27	575.44	740.45	729.57	746.27	832.60	11.6%	2.7%
Russia	547.47	599.92	628.20	609.79	626.16	675.65	671.72	-0.6%	1.1%
Iran	57.98	97.07	141.56	181.12	196.62	212.24	226.75	6.8%	7.9%
Canada	172.54	179.81	150.52	161.83	172.69	178.44	185.36	3.9%	0.4%
Qatar	25.34	46.36	124.79	172.62	174.85	174.20	176.87	1.5%	11.4%
China	26.47	48.00	93.23	131.01	133.21	144.08	149.25	3.6%	10.1%
Norway	53.83	87.27	110.16	119.61	119.02	126.44	123.14	-2.6%	4.7%
Australia	33.19	36.47	51.73	67.14	82.43	102.14	117.34	14.9%	7.3%
Algeria	81.24	87.94	83.70	83.06	93.69	95.17	94.84	-0.3%	0.9%
Saudi Arabia	35.80	53.46	69.66	82.89	86.25	90.72	92.32	1.8%	5.4%
The World Top 10	1,553.65	1,726.58	2,029.00	2,349.53	2,414.47	2,545.36	2,670.19	4.9%	3.1%
Rest of the World	848.58	1,030.83	1,125.87	1,134.62	1,123.59	1,133.08	1,124.46	-0.8%	1.6%
World	2,402.23	2,757.41	3,154.87	3,484.15	3,538.07	3,678.44	3,794.65	3.2%	2.6%

The World Top 10 (2018)



^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Natural Gas - Supply and Demand

Production

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	316.81	328.35	314.55	262.80	262.51	265.31	251.15	-5.3%	-1.3%
Albania	0.01	0.01	0.01	0.03	0.04	0.04	0.04	-7.6%	7.8%
Austria	1.80	1.55	1.62	1.20	1.12	1.21	1.00	-17.6%	-3.2%
Belarus	0.21	0.19	0.16	0.17	0.16	0.14	0.15	2.6%	-2.0%
Bulgaria	0.01	0.45	0.07	0.10	0.09	0.08	0.08	-0.1%	9.8%
Croatia	1.58	2.17	2.58	1.71	1.59	1.43	1.18	-17.2%	-1.6%
Czech Republic	0.20	0.18	0.23	0.24	0.21	0.22	0.21	-4.7%	0.3%
Denmark	8.62	10.91	8.54	4.82	4.71	5.06	4.29	-15.2%	-3.8%
France	1.75	1.06	0.75	0.02	0.02	0.02	0.01	-45.2%	-25.4%
Germany	18.38	16.67	12.92	7.37	7.62	7.01	5.41	-22.8%	-6.6%
Greece	0.05	0.02	0.01	0.01	0.01	0.01	0.01	39.8%	-6.5%
Hungary	2.88	2.71	2.60	1.59	1.66	1.64	1.69	3.2%	-2.9%
Ireland	1.11	0.57	0.27	0.13	2.89	3.31	3.20	-3.5%	6.0%
Italy	15.84	11.50	8.01	6.45	5.51	5.28	5.19	-1.6%	-6.0%
Netherlands	61.36	65.33	75.27	45.88	44.29	38.57	32.27	-16.3%	-3.5%
Norway	53.83	87.27	110.16	119.61	119.02	126.44	123.14	-2.6%	4.7%
Poland	3.85	4.52	4.29	4.28	4.13	4.08	3.98	-2.5%	0.2%
Romania	12.76	11.28	10.02	10.22	9.05	9.91	9.93	0.2%	-1.4%
Serbia	0.73	0.27	0.36	0.53	0.48	0.45	0.42	-8.1%	-3.0%
Slovakia	0.15	0.15	0.10	0.09	0.09	0.14	0.09	-33.6%	-2.9%
Slovenia	0.01	0.00	0.01	0.00	0.00	0.01	0.02	89.8%	4.6%
Spain	0.17	0.17	0.05	0.06	0.06	0.03	0.09	217.0%	-3.7%
Turkey	0.61	0.86	0.65	0.36	0.35	0.34	0.41	20.5%	-2.2%
Ukraine	17.45	18.19	17.95	17.26	17.64	17.99	17.82	-1.0%	0.1%
United Kingdom	113.46	92.34	57.90	40.66	41.74	41.89	40.53	-3.2%	-5.6%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia	659.65	740.60	772.99	805.61	814.13	869.49	870.44	0.1%	1.6%
Russia	547.47	599.92	628.20	609.79	626.16	675.65	671.72	-0.6%	1.1%
Azerbaijan	5.32	5.40	16.27	18.78	18.28	17.76	18.75	5.6%	7.3%
Georgia	0.06	0.02	0.01	0.01	0.01	0.01	0.01	9.4%	-10.4%
Kazakhstan	8.86	18.41	28.62	38.80	40.77	46.20	46.65	1.0%	9.7%
Kyrgyzstan	0.03	0.02	0.02	0.03	0.03	0.02	0.02	4.8%	-1.3%
Tajikistan	0.04	0.03	0.02	0.00	0.00	0.00	0.00	9.5%	-17.2%
Turkmenistan	44.44	59.68	42.91	79.28	75.56	76.25	76.61	0.5%	3.1%
Uzbekistan	53.42	57.12	56.94	58.91	53.33	53.60	56.67	5.7%	0.3%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East	191.26	294.94	458.21	577.90	599.46	621.67	643.67	3.5%	7.0%
Bahrain	7.96	9.71	12.29	14.15	13.99	14.01	14.17	1.2%	3.3%
Iran	57.98	97.07	141.56	181.12	196.62	212.24	226.75	6.8%	7.9%
Iraq	2.99	1.73	4.87	6.60	7.26	8.25	8.62	4.5%	6.1%
Israel	0.01	1.53	3.11	7.86	8.82	9.63	9.78	1.6%	47.3%
Jordan	0.25	0.21	0.16	0.12	0.10	0.10	0.08	-15.6%	-6.0%
Kuwait	9.12	11.69	11.15	16.06	16.43	16.25	16.53	1.8%	3.4%
Oman	10.53	20.84	27.64	32.89	33.58	33.72	35.74	6.0%	7.0%
Qatar	25.34	46.36	124.79	172.62	174.83	174.20	176.87	1.5%	11.4%
Saudi Arabia	35.80	53.46	69.66	82.89	86.25	90.72	92.32	1.8%	5.4%
Syria	5.37	5.75	8.43	4.05	3.53	3.49	3.49	0.0%	-2.4%
United Arab Emirates	35.91	46.60	48.31	56.69	57.54	58.46	58.73	0.5%	2.8%
Yemen	0.00	0.00	6.26	2.86	0.50	0.60	0.60	0.0%	

^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Natural Gas - Supply and Demand

Production

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa	121.45	182.72	203.68	193.62	206.80	225.63	231.69	2.7%	3.7%
Algeria	81.24	87.94	83.70	83.06	93.69	95.17	94.84	-0.3%	0.9%
Angola	0.54	0.62	0.70	0.73	1.62	5.51	5.88	6.7%	14.2%
Cameroon	0.00	0.00	0.30	0.48	0.52	0.58	1.24	115.6%	
Congo	0.00	0.02	0.10	0.50	0.57	0.60	0.60	0.0%	
Côte d'Ivoire	1.47	1.46	1.54	1.96	1.97	2.19	2.37	8.0%	2.7%
Egypt	16.79	49.58	53.97	36.39	40.45	49.86	55.83	12.0%	6.9%
Gabon	0.12	0.14	0.31	0.52	0.52	0.38	0.38	0.0%	6.7%
Ghana	0.00	0.00	0.00	0.70	0.62	0.89	0.89	0.0%	
Libya	5.59	10.73	15.97	11.02	9.41	8.65	8.99	4.0%	2.7%
Morocco	0.04	0.04	0.05	0.08	0.07	0.07	0.07	0.2%	2.7%
Mozambique	0.00	2.17	3.12	4.76	4.86	4.81	4.81	0.0%	60.4%
Nigeria	11.84	23.00	30.91	41.50	38.28	42.85	41.72	-2.6%	7.2%
Senegal	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.0%	22.1%
South Africa	1.63	2.07	1.47	1.19	1.07	0.86	0.86	0.0%	-3.5%
Tanzania	0.00	0.39	0.75	0.85	0.81	0.75	0.75	0.0%	
Tunisia	2.19	2.32	3.58	2.93	2.64	2.49	2.49	0.0%	0.7%
Others Africa	0.00	2.23	7.18	6.93	9.68	9.95	9.95	0.0%	63.5%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific	281.10	361.33	472.48	527.97	543.67	566.99	575.02	1.4%	4.1%
Australia	33.19	36.47	51.73	67.14	82.43	102.14	117.34	14.9%	7.3%
Bangladesh	8.58	12.57	19.34	24.58	26.87	26.83	26.77	-0.2%	6.5%
Brunei	11.01	11.63	11.94	10.95	10.56	11.57	11.16	-3.5%	0.1%
China	26.47	48.00	93.23	131.01	133.21	144.08	149.25	3.6%	10.1%
India	26.83	30.17	49.97	30.35	30.08	30.94	31.15	0.7%	0.8%
Indonesia	71.13	76.27	87.00	76.16	75.08	72.87	73.32	0.6%	0.2%
Japan	2.66	3.37	3.73	2.76	2.85	2.98	2.71	-9.2%	0.1%
Malaysia	49.50	64.40	59.32	67.27	66.56	65.23	65.22	0.0%	1.5%
Myanmar	6.02	11.98	11.83	17.18	18.61	18.55	18.54	0.0%	6.4%
New Zealand	5.88	3.75	4.48	4.70	4.92	4.86	4.31	-11.4%	-1.7%
Pakistan	19.39	29.82	31.38	28.21	25.15	22.03	20.00	-9.2%	0.2%
Philippines	0.01	3.14	3.55	3.34	3.83	3.78	4.01	6.0%	39.4%
South Korea	0.00	0.51	0.56	0.20	0.16	0.36	0.32	-10.4%	
Taiwan	0.70	0.51	0.28	0.31	0.27	0.22	0.22	0.0%	-6.1%
Thailand	18.19	21.52	28.76	30.00	29.42	27.47	26.75	-2.6%	2.2%
Vietnam	1.30	6.96	9.45	10.21	10.18	9.08	9.26	2.0%	11.5%
Others Asia Pacific	0.24	0.26	5.92	23.59	23.49	24.01	14.69	-38.8%	25.7%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas	831.96	849.47	932.94	1,116.25	1,111.49	1,129.35	1,222.68	8.3%	2.2%
Argentina	39.92	46.43	41.14	39.04	41.82	41.71	43.36	4.0%	0.5%
Bolivia	4.68	11.93	14.29	21.13	20.14	19.33	18.74	-3.0%	8.0%
Brazil	7.25	11.03	14.93	23.76	24.00	27.15	25.21	-7.1%	7.2%
Canada	172.54	179.81	150.52	161.83	172.69	178.44	185.36	3.9%	0.4%
Chile	1.86	1.87	1.80	0.98	1.18	1.20	1.49	24.1%	-1.2%
Colombia	6.35	7.12	10.96	12.07	11.14	11.41	11.12	-2.5%	3.2%
Cuba	0.53	0.69	0.99	1.15	1.10	0.97	0.97	0.0%	3.4%
Ecuador	0.00	0.33	0.50	0.65	0.69	0.63	0.48	-24.6%	
Mexico	38.83	44.73	49.52	39.97	35.39	30.90	30.36	-1.7%	-1.4%
Peru	0.57	1.89	8.87	14.76	16.34	14.54	14.26	-1.9%	19.5%
Trinidad and Tobago	14.18	30.82	41.67	37.20	32.63	32.49	34.37	5.8%	5.0%
United States	519.80	490.27	575.44	740.45	729.57	746.27	832.60	11.6%	2.7%
Venezuela	25.41	22.53	22.28	23.24	24.78	24.30	24.32	0.1%	-0.2%
Others Americas	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.0%	-3.4%

^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

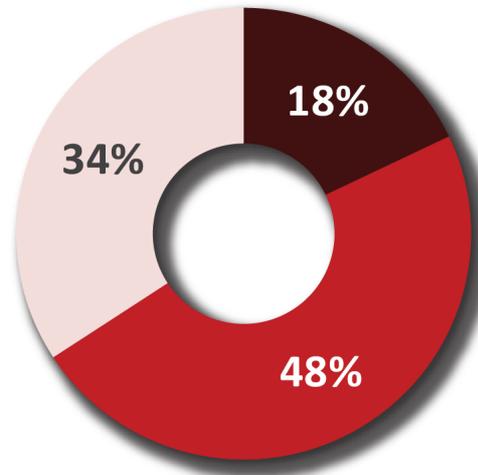
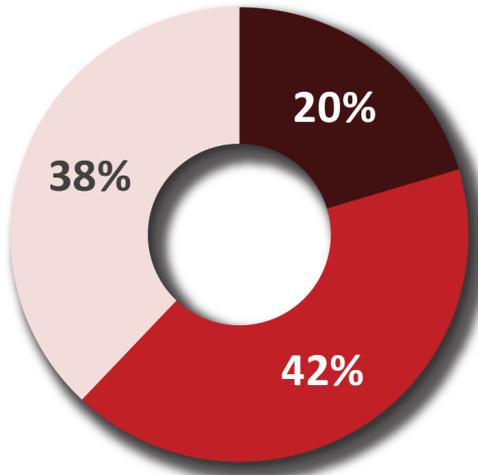
Cluster of Companies^(*)

2000

2018

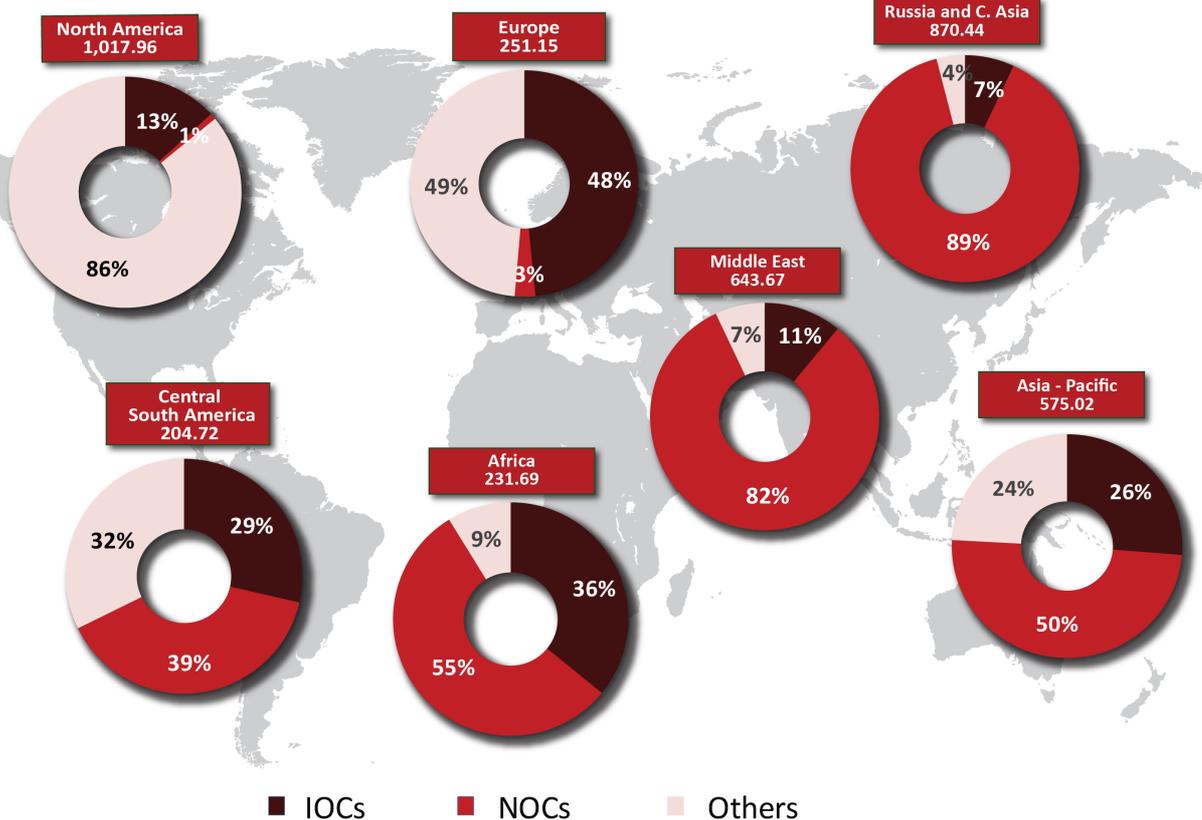
World: 2,402.23 billion cubic metres

World: 3,794.65 billion cubic metres



2018

(billion cubic metres)



IOCs: Anadarko, Apache, BG, BHP Billiton, BP, Chevron, ConocoPhillips, Eni, Equinor, ExxonMobil, Marathon Oil, OMV, Repsol, Shell, Total, Woodside Petroleum.

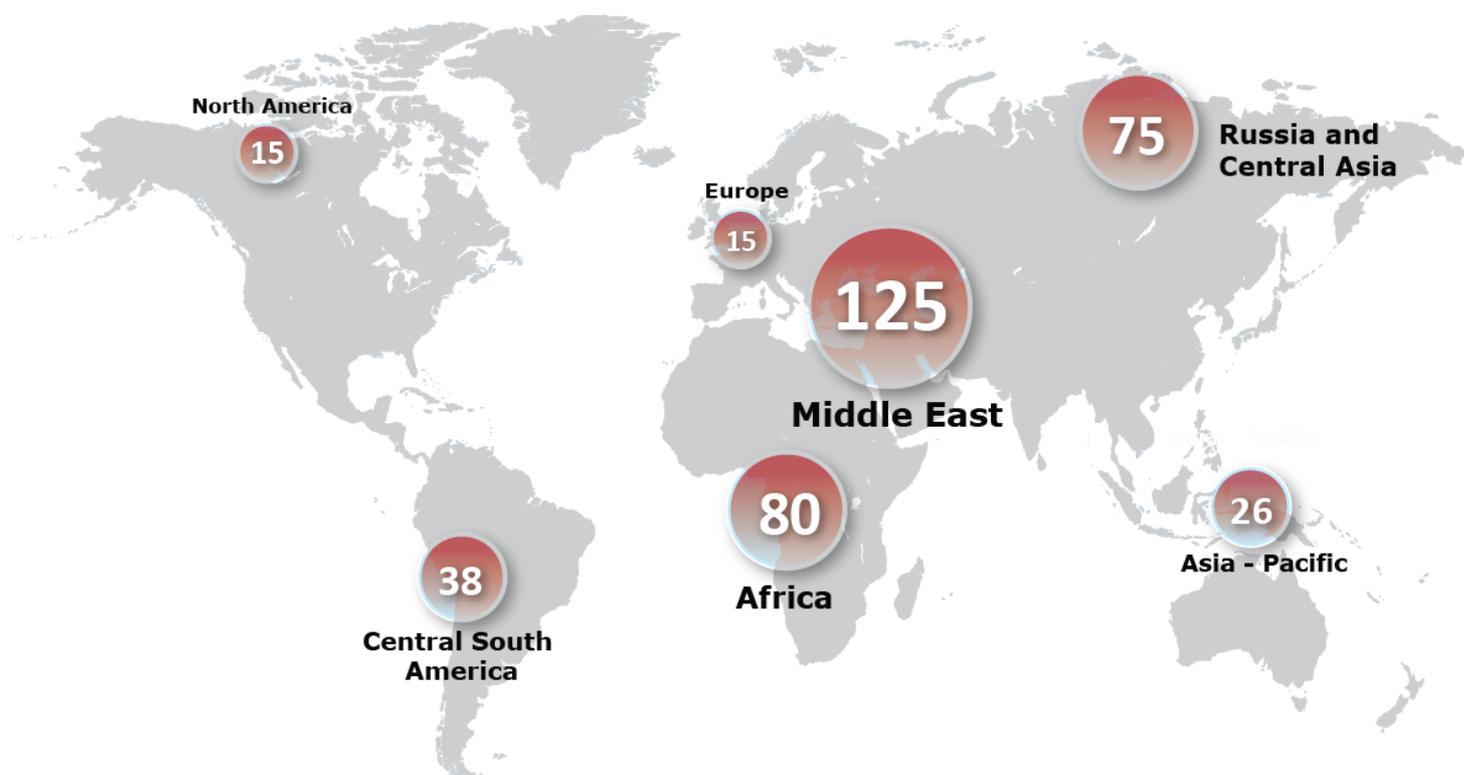
NOCs: ADNOC, Bahrain NOC, Bashneft, CNOOC, CNPC-PetroChina, CPC Taiwan, Dubai Petroleum, Ecopetrol, EGPC, Gazprom, INOC, Israel NOC, KazMunaiGaz, KNOC, KPC, Lybian NOC, Lukoil, MEDCO Energy, MOGE, Morocco NOC, Mubadala - Abu Dhabi, NIOC, NNPC, Novatek, Oil India, ONGC, Pakistan Oil Field, Pakistan Petroleum, PDO, PdVSA, Pemex, Pertamina, Petrobras, Petronas, PetroVietnam, PGNiG, PTTEP, QP, Rosneft, Saudi Aramco, Sinopec, SOCAR Azerbaijan, Sonangol, Sonatrach, Surgutneftegas, Syria Petroleum, Tatneft, Turkmengas, Uzbekneftegas, YPF.

Areas and Aggregates^(*) (years)

	2000	2005	2010	2015	2016	2017	2018
Europe	28	22	19	17	16	15	15
Russia and Central Asia	78	71	79	81	80	75	75
Middle East	313	246	172	137	134	129	125
Africa	102	78	72	90	87	80	80
Asia - Pacific	42	37	34	29	28	26	26
Americas	17	17	20	17	17	20	19
-North America	10	11	15	12	12	16	15
-Latin America	55	40	38	37	38	38	38
World	66	63	62	57	57	56	54
European Union	16	13	12	13	11	11	12
MENA	226	181	142	123	119	114	110
OECD	7	6	4	3	3	3	2
NON OECD	112	99	94	88	87	85	85
OPEC	248	216	170	140	135	130	127
NON OPEC	41	37	39	38	37	37	36

Reserves/Production Ratio (2018)

World: 54 years



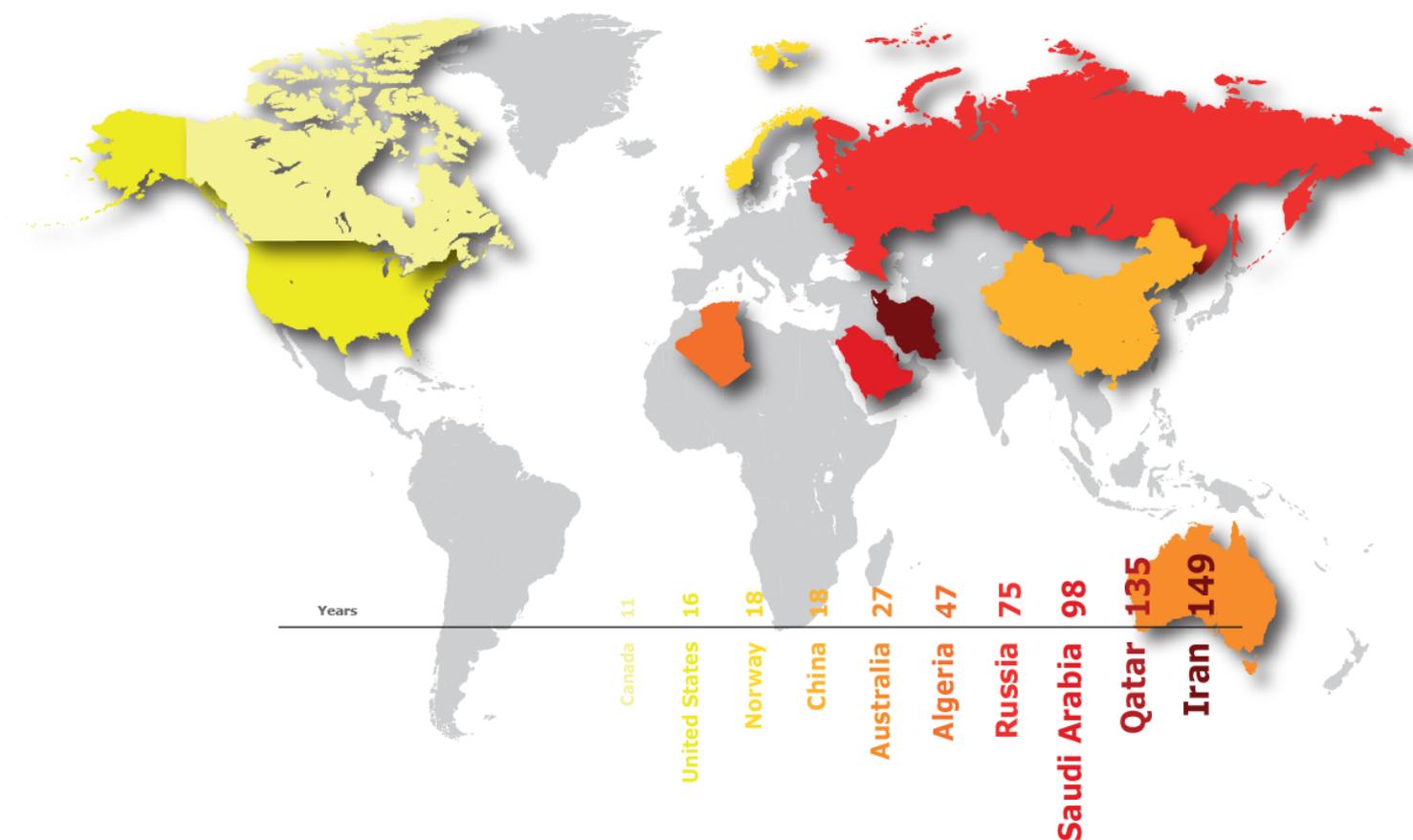
^(*) Data source: Eni's calculations on Enerdata *Global Energy & CO2 Data*, IEA (2019) *Extended Balances* and other official data sources. All rights reserved.

Natural Gas - Supply and Demand Reserves/Production Ratio

The World Top 10 Producers Ranked by Reserves/Production Ratio^(*)
(years)

	2000	2005	2010	2015	2016	2017	2018
Iran	459	284	234	185	172	159	149
Qatar	570	553	202	141	138	137	135
Saudi Arabia	176	129	115	104	100	96	98
Russia	80	75	73	82	81	75	75
Algeria	56	51	54	54	48	47	47
Australia	66	67	73	48	39	31	27
China	48	35	24	20	20	19	18
Norway	71	36	25	21	20	18	18
United States	10	12	15	12	12	17	16
Canada	10	9	13	13	12	12	11

The World Top 10 (2018)



^(*) Data source: Eni's calculations on Enerdata *Global Energy & CO2 Data*, IEA (2019) *Extended Balances* and other official data sources. All rights reserved.

Natural Gas - Supply and Demand Reserves/Production Ratio

Countries^(*)
(years)

	2000	2005	2010	2015	2016	2017	2018
Europe	28	22	19	17	16	15	15
Albania	57	29	7	3	2	2	2
Austria	14	14	9	7	7	6	7
Belarus	9	5	6	3	3	3	3
Bulgaria	419	7	73	45	48	55	55
Croatia	18	14	10	7	6	6	5
Czech Republic	26	26	17	14	16	15	16
Denmark	17	11	12	17	16	14	16
France	5	7	7	391	416	529	965
Germany	14	26	17	14	16	15	16
Greece	20	47	113	183	90	95	68
Hungary	11	11	12	17	16	14	16
Ireland	31	44	92	229	10	9	9
Italy (**)	13	10	8	8	7	8	9
Netherlands	27	22	16	18	17	18	20
Norway	71	36	25	21	20	18	18
Poland	31	23	17	14	14	14	18
Romania	16	13	11	10	11	9	9
Serbia and Montenegro	14	36	23	12	12	12	12
Slovakia	44	39	51	51	51	32	49
Slovenia	0	0	143	333	201	0	0
Spain	30	20	56	55	61	122	38
Turkey	10	7	10	17	18	19	15
Ukraine	60	57	54	18	17	16	16
United Kingdom	11	8	9	8	7	6	6
	2000	2005	2010	2015	2016	2017	2018
Russia and Central Asia	78	71	79	81	80	75	75
Russia	80	75	73	82	81	75	75
Azerbaijan	240	236	81	68	70	72	77
Georgia	15	56	159	45	78	60	55
Kazakhstan	208	103	68	49	47	40	39
Kyrgyzstan	32	41	45	17	19	21	20
Tajikistan	27	39	46	128	164	443	405
Turkmenistan	60	45	233	124	130	129	128
Uzbekistan	32	30	29	27	29	29	27
	2000	2005	2010	2015	2016	2017	2018
Middle East	313	246	172	137	134	129	125
Bahrain	14	9	7	7	7	7	6
Iran	459	284	234	185	172	159	149
Iraq	1039	1833	648	478	526	454	433
Israel	4931	29	69	26	53	51	51
Jordan	28	29	38	51	60	62	74
Kuwait	171	135	160	111	109	110	108
Oman	82	32	19	21	21	21	19
Qatar	570	553	202	141	138	137	135
Saudi Arabia	176	129	115	104	100	96	98
Syria	45	50	34	70	81	82	82
United Arab Emirates	169	130	126	107	106	104	104
Yemen			78	168	956	797	797

(*) Data source: Eni's calculations on Enerdata *Global Energy & CO2 Data*, IEA (2019) *Extended Balances* and other official data sources. All rights reserved.

(**) The original data are from Italian Ministry for Economic Development and IEA (2019) *Extended Balances*. All rights reserved.

Natural Gas - Supply and Demand Reserves/Production Ratio

Countries(*)
(years)

	2000	2005	2010	2015	2016	2017	2018
Africa	102	78	72	90	87	80	80
Algeria	56	51	54	54	48	47	47
Angola	497	437	391	432	271	77	65
Cameroon			514	319	294	263	121
Côte d'Ivoire	19	21	18	11	11	9	8
Egypt	85	39	41	57	55	45	40
Gabon	278	211	89	48	49	66	68
Ghana				79	89	65	63
Libya	235	139	94	137	160	174	167
Morocco	68	76	57	13	14	20	20
Mozambique		28	24	595	583	588	589
Nigeria	347	224	167	127	143	131	136
Senegal		662	402	85	91	85	9111
South Africa	10	14	8	2	2	3	3
Tanzania		72	49	44	46	49	49
Tunisia	30	28	18	22	25	26	26

	2000	2005	2010	2015	2016	2017	2018
Asia - Pacific	42	37	34	29	28	26	26
Australia	66	67	73	48	39	31	27
Bangladesh	36	32	18	16	22	21	22
Brunei	33	29	25	24	24	21	20
China	48	35	24	20	20	19	18
India	28	36	22	41	41	42	43
Indonesia	37	35	35	38	38	38	37
Japan	15	12	10	11	10	9	10
Malaysia	47	37	42	42	37	36	35
Myanmar	81	57	61	28	20	19	19
New Zealand	10	17	12	12	10	10	12
Pakistan	35	29	26	26	28	32	33
Philippines		32	24	21	18	17	16
South Korea		6	2	6	7	3	3
Taiwan	8	8	13	9	10	12	12
Thailand	20	14	10	7	7	7	6
Vietnam	131	32	24	20	20	22	21

	2000	2005	2010	2015	2016	2017	2018
Americas	17	17	20	17	17	20	19
Argentina	19	9	9	9	8	9	8
Bolivia	144	60	20	14	15	16	16
Brazil	30	28	28	18	16	14	15
Canada	10	9	13	13	12	12	11
Chile	9	7	5	6	4	4	3
Colombia	20	16	14	10	10	10	10
Cuba	34	25	14	8	7	8	8
Ecuador		28	16	17	16	17	23
Mexico		9	7	6	6	6	6
Peru	427	179	40	27	28	31	33
Trinidad and Tobago	39	17	9	8	9	8	6
United States	10	12	15	12	12	17	16
Venezuela	163	192	248	245	232	235	233

(*) Data source: Eni's calculations on Enerdata *Global Energy & CO2 Data*, IEA (2019) *Extended Balances* and other official data sources. All rights reserved.

Areas and Aggregates^(*) (billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	576.42	653.68	658.40	526.10	552.78	576.25	566.32	-1.7%	-0.1%
Russia and Central Asia	449.22	497.70	547.77	535.62	539.78	560.39	569.61	1.6%	1.3%
Middle East	169.13	248.69	362.14	464.40	482.97	496.38	522.11	5.2%	6.5%
Africa	54.88	86.90	103.34	125.33	134.06	142.54	148.18	4.0%	5.7%
Asia - Pacific	298.91	397.92	564.63	680.47	703.95	732.88	778.75	6.3%	5.5%
Americas	861.51	860.39	942.30	1,098.76	1,112.25	1,104.65	1,193.74	8.1%	1.8%
- North America	723.38	684.28	734.75	853.81	869.92	866.20	952.38	9.9%	1.5%
- Central South America	138.13	176.11	207.55	244.94	242.33	238.45	241.35	1.2%	3.1%
World	2,410.07	2,745.28	3,178.59	3,430.67	3,525.79	3,613.10	3,778.70	4.6%	2.5%
European Union	460.54	517.68	520.56	416.24	445.13	463.32	454.07	-2.0%	-0.1%
MENA	213.55	317.00	444.20	558.53	583.61	605.02	636.16	5.1%	6.3%
OECD	1,352.46	1,412.65	1,535.37	1,600.25	1,650.53	1,665.75	1,751.04	5.1%	1.4%
NON OECD	1,057.62	1,332.63	1,643.22	1,830.42	1,875.26	1,947.35	2,027.66	4.1%	3.7%
OPEC	206.45	284.88	384.40	497.23	515.98	529.23	555.96	5.1%	5.7%
NON OPEC	2,203.62	2,460.39	2,794.19	2,933.44	3,009.81	3,083.87	3,222.75	4.5%	2.1%

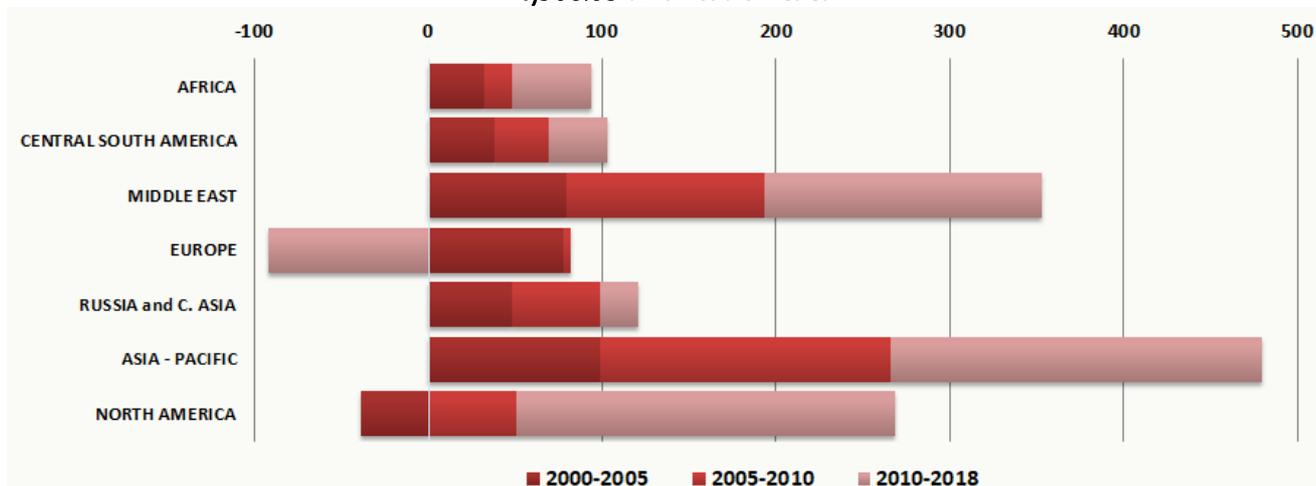
World Natural Gas Consumption (2018)

3,778.70 billion cubic metres



World Natural Gas Consumption Growth (2000-2018)

1,368.63 billion cubic metres



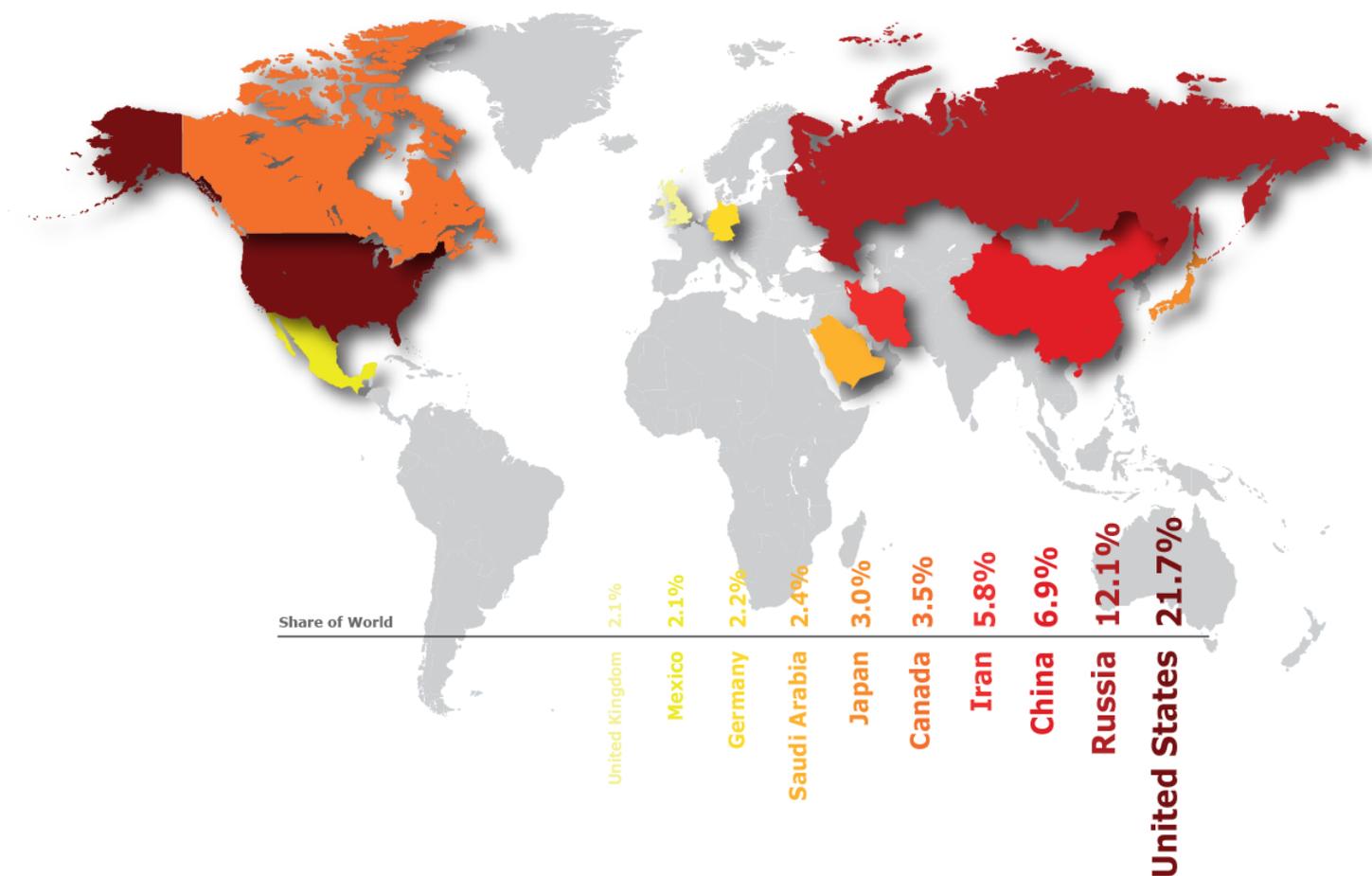
^(*) Data source: Eni's calculations. The original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

The World Top 10 Consumers^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
United States	637.02	589.89	646.72	751.89	759.30	748.90	820.36	9.5%	1.4%
Russia	371.01	406.67	446.06	423.63	431.84	451.63	458.08	1.4%	1.2%
China	24.14	45.11	103.95	184.44	198.61	227.01	260.87	14.9%	14.1%
Iran	61.21	97.50	142.06	180.63	193.48	203.03	219.39	8.1%	7.3%
Canada	86.36	94.39	88.03	101.93	110.62	117.30	132.03	12.6%	2.4%
Japan	76.33	82.17	99.88	116.55	118.27	117.34	112.83	-3.8%	2.2%
Saudi Arabia	35.80	53.46	69.66	82.89	86.25	90.72	92.32	1.8%	5.4%
Germany	83.57	90.46	88.28	75.77	81.79	87.62	83.12	-5.1%	0.0%
Mexico	41.27	53.62	63.08	75.20	76.97	72.80	79.90	9.7%	3.7%
United Kingdom	101.65	99.40	98.64	71.97	80.81	78.90	78.95	0.1%	-1.4%
The World Top 10	1,518.34	1,612.67	1,846.37	2,064.89	2,137.95	2,195.26	2,337.85	6.5%	2.4%
Rest of the World	891.74	1,132.60	1,332.22	1,365.78	1,387.84	1,417.84	1,440.86	1.6%	2.7%
World	2,410.07	2,745.28	3,178.59	3,430.67	3,525.79	3,613.10	3,778.70	4.6%	2.5%

The World Top 10 (2018)



^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	576.42	653.68	658.40	526.10	552.78	576.25	566.32	-1.7%	-0.1%
Albania	0.01	0.01	0.01	0.03	0.04	0.04	0.04	-0.5%	8.2%
Austria	7.66	9.40	9.45	7.99	8.28	9.04	8.60	-4.9%	0.6%
Belarus	16.55	19.67	21.06	18.41	18.30	18.73	19.92	6.3%	1.0%
Belgium	15.55	17.14	19.48	16.25	16.63	16.85	17.27	2.5%	0.6%
Bosnia Herzegovina	0.23	0.35	0.23	0.21	0.21	0.23	0.23	-0.3%	0.0%
Bulgaria	3.41	3.26	2.68	3.02	3.12	3.21	3.08	-4.1%	-0.6%
Croatia	2.57	2.76	3.06	2.42	2.52	2.90	2.67	-8.1%	0.2%
Czech Republic	8.72	8.96	9.38	7.54	8.16	8.37	7.93	-5.3%	-0.5%
Denmark	5.17	5.12	5.14	3.32	3.35	3.20	3.09	-3.3%	-2.8%
Estonia	0.77	0.93	0.65	0.45	0.50	0.47	0.48	1.9%	-2.6%
Finland	3.99	4.19	4.46	2.60	2.39	2.25	2.53	12.8%	-2.5%
France	41.60	47.71	49.56	40.75	44.53	44.77	42.71	-4.6%	0.1%
Germany	83.57	90.46	88.28	75.77	81.79	87.62	83.12	-5.1%	0.0%
Greece	1.98	2.74	3.76	3.11	4.06	4.89	4.79	-2.1%	5.0%
Hungary	11.23	14.07	11.42	8.71	9.34	9.93	9.61	-3.3%	-0.9%
Ireland	4.00	4.07	5.47	4.37	4.94	5.02	5.22	4.1%	1.5%
Italy	67.38	82.17	79.15	64.32	67.55	71.58	69.22	-3.3%	0.1%
Latvia	1.27	1.58	1.70	1.28	1.29	1.15	1.40	20.8%	0.5%
Lithuania	2.40	2.88	2.90	2.40	2.14	2.23	2.23	-0.2%	-0.4%
Luxembourg	0.78	1.37	1.39	0.89	0.82	0.81	0.80	-1.4%	0.1%
Macedonia	0.06	0.07	0.11	0.13	0.20	0.26	0.24	-7.5%	7.8%
Malta	0.00	0.00	0.00	0.00	0.00	0.28	0.33	17.3%	
Moldova	2.47	2.78	2.69	2.48	2.50	2.30	2.49	8.5%	0.0%
Netherlands	40.71	41.08	46.60	33.30	34.93	35.95	35.70	-0.7%	-0.7%
Norway	4.82	4.74	7.30	7.10	6.44	5.40	7.09	31.1%	2.2%
Poland	11.58	14.23	14.89	16.02	17.02	17.96	18.70	4.1%	2.7%
Portugal	2.37	4.36	5.22	4.71	5.03	6.30	5.84	-7.3%	5.2%
Romania	15.91	16.19	12.55	10.37	10.49	11.19	11.55	3.3%	-1.8%
Serbia	1.78	2.26	2.16	2.04	2.20	2.46	2.44	-1.0%	1.8%
Slovakia	6.72	6.84	5.82	4.51	4.53	4.81	4.74	-1.4%	-1.9%
Slovenia	0.96	1.08	1.00	0.77	0.82	0.86	0.85	-1.2%	-0.7%
Spain	17.70	34.71	36.20	28.54	29.12	31.71	31.50	-0.7%	3.3%
Sweden	0.90	0.98	1.70	0.84	0.95	1.07	1.16	8.8%	1.4%
Switzerland	2.83	3.24	3.50	3.32	3.48	3.50	3.32	-5.1%	0.9%
Turkey	14.70	26.51	36.51	45.80	44.50	51.44	47.79	-7.1%	6.8%
Ukraine	72.42	76.37	64.26	30.33	29.77	28.56	28.69	0.5%	-5.0%
United Kingdom	101.65	99.40	98.64	71.97	80.81	78.90	78.95	0.1%	-1.4%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia	449.22	497.70	547.77	535.62	539.78	560.39	569.61	1.6%	1.3%
Russia	371.01	406.67	446.06	423.63	431.84	451.63	458.08	1.4%	1.2%
Armenia	1.30	1.56	1.50	2.05	2.13	2.27	2.29	1.0%	3.2%
Azerbaijan	5.62	9.42	9.13	11.15	10.93	10.62	10.81	1.8%	3.7%
Georgia	1.11	1.23	1.18	2.35	2.20	2.28	2.18	-4.2%	3.8%
Kazakhstan	7.65	14.49	25.95	31.93	33.41	34.69	34.17	-1.5%	8.7%
Kyrgyzstan	0.67	0.72	0.29	0.27	0.28	0.30	0.32	10.1%	-3.9%
Tajikistan	0.73	0.62	0.19	0.00	0.00	0.00	0.00	9.5%	-29.8%
Turkmenistan	12.68	16.58	20.17	24.83	24.83	24.83	25.32	2.0%	3.9%
Uzbekistan	48.46	46.41	43.30	39.42	34.16	33.78	36.42	7.8%	-1.6%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East	169.13	248.69	362.14	464.40	482.97	496.38	522.11	5.2%	6.5%
Bahrain	7.96	9.79	12.29	14.15	13.99	14.03	14.17	1.0%	3.3%
Iran	61.21	97.50	142.06	180.63	193.48	203.03	219.39	8.1%	7.3%
Iraq	2.99	1.73	4.87	6.60	7.26	8.25	11.05	33.9%	7.5%
Israel	0.01	1.53	5.12	8.01	9.16	10.04	10.48	4.3%	47.9%
Jordan	0.25	1.61	2.66	2.26	3.94	4.08	3.60	-11.9%	16.0%
Kuwait	9.12	11.69	13.80	19.85	21.14	21.50	21.87	1.7%	5.0%
Lebanon	0.00	0.00	0.25	0.00	0.00	0.00	0.00		
Oman	6.27	8.65	17.33	24.52	24.52	24.14	25.77	6.8%	8.2%
Qatar	11.01	16.02	26.67	50.54	48.83	47.31	48.24	2.0%	8.6%
Saudi Arabia	35.80	53.46	69.66	82.89	86.25	90.72	92.32	1.8%	5.4%
Syria	5.37	5.75	9.08	4.05	3.53	3.49	3.49	0.0%	-2.4%
United Arab Emirates	29.13	40.96	57.39	69.94	70.36	69.19	71.14	2.8%	5.1%
Yemen	0.00	0.00	0.95	0.96	0.50	0.60	0.60	0.0%	

(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Natural Gas - Supply and Demand

Consumption

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa	54.88	86.90	103.32	125.32	134.06	142.54	148.18	4.0%	5.7%
Algeria	19.58	23.87	27.12	40.03	40.31	41.75	43.20	3.5%	4.5%
Angola	0.54	0.62	0.70	0.73	0.76	0.80	0.80	0.6%	2.2%
Cameroon	0.00	0.00	0.30	0.48	0.52	0.58	0.58	0.0%	
Congo	0.00	0.02	0.10	0.50	0.57	0.60	0.60	0.0%	
Côte d'Ivoire	1.47	1.46	1.54	1.96	1.97	2.19	2.37	8.0%	2.7%
Egypt	16.79	34.87	41.65	42.77	48.22	55.09	56.45	2.5%	7.0%
Gabon	0.12	0.14	0.31	0.52	0.52	0.38	0.40	5.0%	7.0%
Ghana	0.00	0.00	0.41	1.24	0.72	1.20	1.12	-6.8%	
Libya	4.83	5.54	6.71	4.27	4.84	4.27	6.82	59.5%	1.9%
Morocco	0.04	0.44	0.66	1.18	1.20	1.19	1.20	0.6%	20.1%
Mozambique	0.00	0.02	0.08	0.89	0.78	0.71	0.71	0.7%	44.3%
Nigeria	6.70	10.48	10.26	16.49	16.18	16.47	16.47	0.0%	5.1%
Senegal	0.00	0.02	0.02	0.02	0.02	0.02	0.02	-0.3%	22.0%
South Africa	1.63	3.21	4.51	5.06	5.14	4.96	4.99	0.7%	6.4%
Tanzania	0.00	0.39	0.75	0.85	0.81	0.75	0.75	0.0%	
Tunisia	3.18	3.60	5.91	5.88	6.06	6.32	6.38	1.0%	4.0%
Others Africa	0.00	2.23	2.28	2.46	5.43	5.24	5.30	1.2%	57.9%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific	298.91	397.92	564.63	680.47	703.95	732.88	778.75	6.3%	5.5%
Australia	22.42	22.06	33.08	38.56	38.24	36.42	38.02	4.4%	3.0%
Bangladesh	8.58	12.57	19.34	24.58	26.87	26.83	28.65	6.8%	6.9%
Brunei	2.15	2.14	3.11	2.49	2.71	3.43	3.02	-11.8%	1.9%
China	24.14	45.11	103.95	184.44	198.61	227.01	260.87	14.9%	14.1%
Hong Kong	2.85	2.55	3.64	3.09	3.17	3.16	3.38	7.0%	0.9%
India	26.83	37.00	63.27	52.48	55.80	59.34	62.10	4.6%	4.8%
Indonesia	30.90	34.04	45.15	44.04	45.46	45.24	41.57	-8.1%	1.7%
Japan	76.33	82.17	99.88	116.55	118.27	117.34	112.83	-3.8%	2.2%
Malaysia	28.76	37.07	36.28	43.66	41.59	37.46	39.30	4.9%	1.8%
Myanmar	1.39	2.66	1.49	3.52	4.10	4.23	4.62	9.2%	6.9%
New Zealand	5.88	3.75	4.34	4.76	4.90	4.94	4.48	-9.3%	-1.5%
Pakistan	19.38	29.82	31.40	30.89	30.05	30.28	36.47	20.5%	3.6%
Philippines	0.01	3.14	3.55	3.34	3.83	3.78	3.95	4.5%	39.3%
Singapore	1.30	5.83	7.55	9.94	10.19	10.39	12.64	21.7%	13.5%
South Korea	19.78	31.84	44.93	45.76	48.05	50.26	56.05	11.5%	6.0%
Taiwan	6.46	10.30	15.45	17.20	17.97	20.81	20.83	0.1%	6.7%
Thailand	20.20	30.16	38.34	43.90	42.96	41.88	40.50	-3.3%	3.9%
Vietnam	1.30	5.46	9.45	10.21	10.18	9.08	9.29	2.2%	11.5%
Others Asia Pacific	0.24	0.26	0.43	1.07	0.99	1.01	0.17	-82.8%	-1.7%

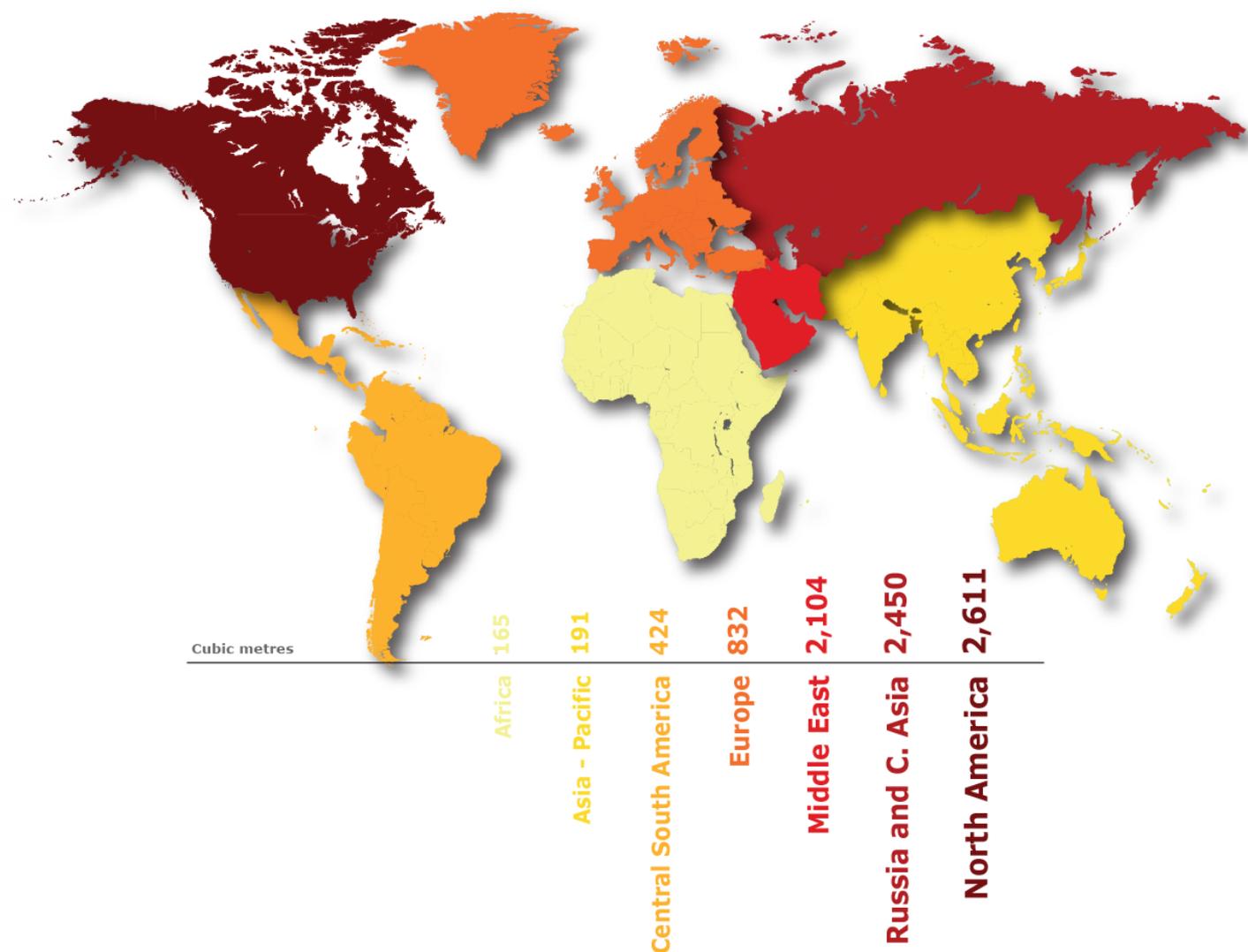
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas	861.51	860.39	942.30	1,098.76	1,112.25	1,104.65	1,193.74	8.1%	1.8%
Argentina	35.40	41.66	44.18	49.95	51.93	52.48	52.10	-0.7%	2.2%
Bolivia	2.72	2.29	2.91	4.00	4.40	4.25	4.45	4.6%	2.8%
Brazil	9.46	19.99	27.52	42.09	35.68	37.83	35.76	-5.5%	7.7%
Canada	86.36	94.39	88.03	101.93	110.62	117.30	132.03	12.6%	2.4%
Chile	6.06	7.91	5.20	4.63	5.06	5.05	5.89	16.6%	-0.2%
Colombia	6.35	7.12	9.57	11.74	11.15	11.42	9.49	-16.9%	2.3%
Cuba	0.53	0.69	0.99	1.15	1.10	0.97	0.99	1.7%	3.5%
Dominican Republic	0.00	0.20	0.79	1.09	1.03	1.18	1.25	6.1%	
Ecuador	0.00	0.33	0.50	0.65	0.69	0.63	0.48	-24.6%	
Jamaica	0.00	0.00	0.00	0.00	0.02	0.08	0.10	18.2%	
Mexico	41.27	53.62	63.08	75.20	76.97	72.80	79.90	9.7%	3.7%
Peru	0.57	1.89	6.39	9.17	9.65	8.16	8.41	3.0%	16.1%
Trinidad and Tobago	9.96	17.10	21.35	20.16	18.15	17.57	17.41	-0.9%	3.2%
United States	637.02	589.89	646.72	751.89	759.30	748.90	820.36	9.5%	1.4%
Uruguay	0.04	0.10	0.07	0.05	0.06	0.07	0.07	0.5%	3.7%
Venezuela	25.41	22.53	24.23	23.60	24.78	24.30	23.18	-4.6%	-0.5%
Others Americas	0.37	0.69	0.77	1.46	1.67	1.64	1.89	14.8%	9.5%

^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Areas and Aggregates^(*) (cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Europe	898	1,002	992	781	818	849	832
Russia and Central Asia	2,063	2,281	2,464	2,340	2,345	2,422	2,450
Middle East	1,005	1,322	1,696	1,957	2,006	2,026	2,104
Africa	94	133	140	150	157	163	165
Asia - Pacific	89	111	150	172	176	182	191
Americas	1,093	1,031	1,070	1,190	1,194	1,176	1,261
- North America	2,308	2,082	2,136	2,392	2,419	2,392	2,611
- Central South America	291	373	406	447	437	424	424
World	418	448	490	500	509	516	534
European Union	945	1,046	1,034	820	875	908	888
MENA	682	920	1,160	1,320	1,357	1,383	1,433
OECD	1,179	1,189	1,247	1,262	1,294	1,298	1,357
NON OECD	229	270	312	327	331	340	351
OPEC	625	772	924	1,062	1,081	1,085	1,121
NON OPEC	405	427	460	459	466	473	490

Per Capita Consumption (2018)

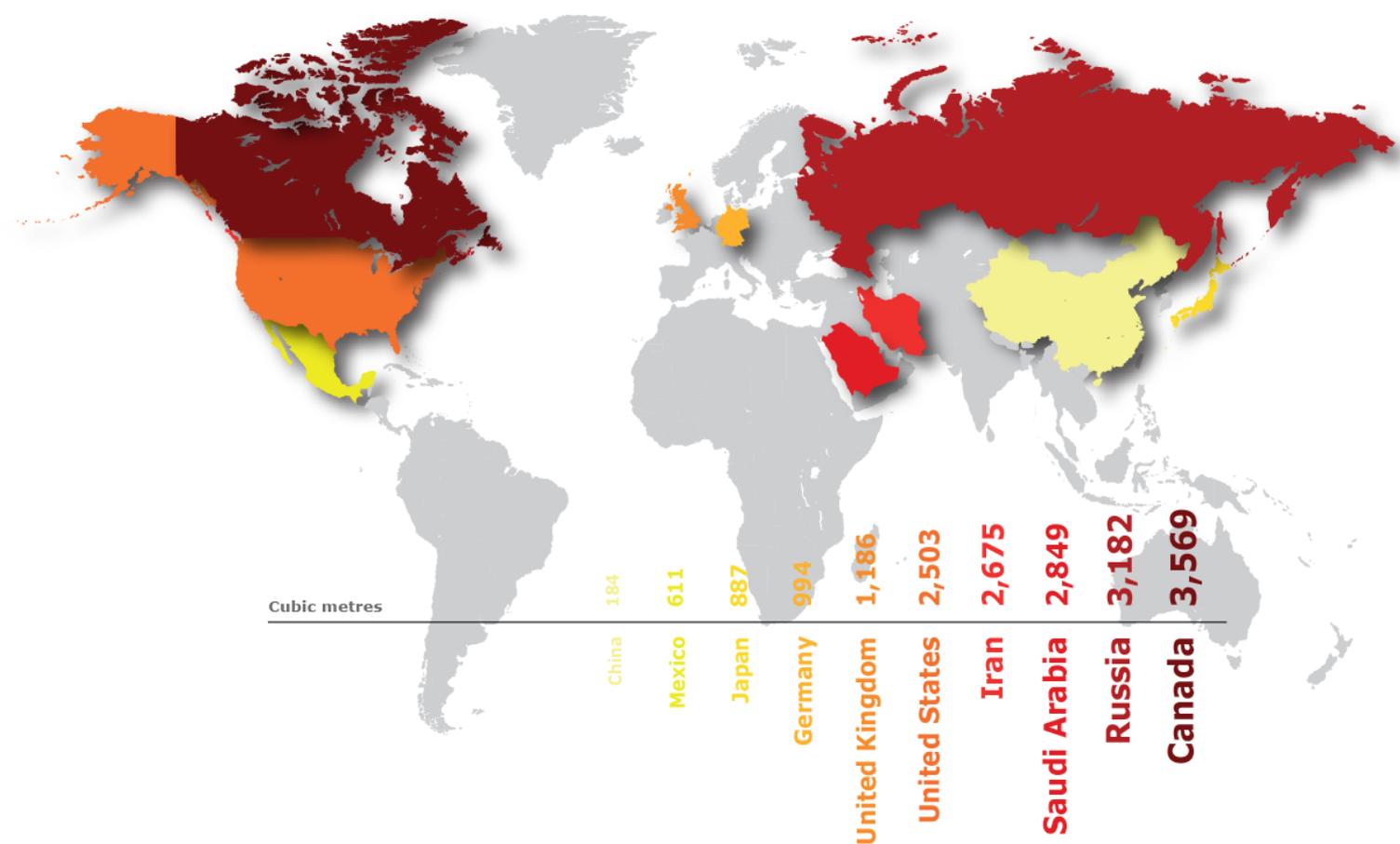


^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* and IHS Global Insight data. All right reserved.

The World Top 10 Consumers Ranked by Per Capita Consumption Ratio^(*)
(cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Canada	2,818	2,931	2,592	2,857	3,068	3,215	3,569
Russia	2,534	2,832	3,116	2,944	3,000	3,137	3,182
Saudi Arabia	1,732	2,245	2,540	2,613	2,717	2,787	2,849
Iran	926	1,385	1,905	2,276	2,410	2,502	2,675
United States	2,253	1,990	2,086	2,340	2,346	2,300	2,503
United Kingdom	1,724	1,649	1,558	1,101	1,228	1,192	1,186
Germany	1,026	1,112	1,100	928	992	1,054	994
Japan	598	640	777	911	926	920	887
Mexico	406	494	538	597	603	564	611
China	19	34	76	132	142	161	184

The World Top 10 (2018)



^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* and IHS Global Insight data. All right reserved.

Natural Gas - Supply and Demand

Per Capita Consumption

Countries^(*)
(cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Europe	898	1,002	992	781	818	849	832
Albania	3	3	5	11	14	15	15
Austria	949	1,139	1,123	921	950	1,035	983
Belarus	1,666	2,045	2,223	1,941	1,931	1,978	2,107
Belgium	1,512	1,626	1,780	1,440	1,464	1,474	1,502
Bosnia Herzegovina	62	93	62	58	61	66	66
Bulgaria	426	424	361	420	438	453	438
Croatia	580	630	707	572	599	692	640
Czech Republic	848	873	891	711	769	789	746
Denmark	969	944	926	583	586	557	537
Estonia	550	686	491	345	380	361	368
Finland	769	798	832	474	435	407	457
France	698	779	786	632	688	689	655
Germany	1,026	1,112	1,100	928	992	1,054	994
Greece	178	242	329	278	363	438	430
Hungary	1,099	1,394	1,150	890	957	1,022	992
Ireland	1,038	965	1,182	930	1,045	1,053	1,086
Italy	1,176	1,397	1,325	1,081	1,137	1,206	1,167
Latvia	533	701	802	641	657	592	723
Lithuania	685	861	928	820	736	773	775
Luxembourg	1,790	2,988	2,740	1,577	1,431	1,379	1,344
Macedonia	31	36	53	63	98	126	117
Malta	0	0	0	0	0	653	763
Moldova	679	772	755	697	703	647	703
Netherlands	2,556	2,510	2,793	1,966	2,056	2,110	2,090
Norway	1,071	1,022	1,495	1,366	1,225	1,019	1,324
Poland	300	371	389	419	445	471	491
Portugal	228	413	490	452	485	610	568
Romania	719	756	614	522	531	569	590
Serbia	237	304	296	287	312	351	348
Slovakia	1,244	1,267	1,077	829	832	883	870
Slovenia	483	541	491	372	395	413	408
Spain	433	788	774	615	628	684	679
Sweden	102	108	182	86	97	108	117
Switzerland	395	437	447	399	415	413	389
Turkey	232	390	505	585	560	637	583
Ukraine	1,486	1,632	1,408	677	667	643	650
United Kingdom	1,724	1,649	1,558	1,101	1,228	1,192	1,186

	2000	2005	2010	2015	2016	2017	2018
Russia and Central Asia	2,063	2,281	2,464	2,340	2,345	2,422	2,450
Russia	2,534	2,832	3,116	2,944	3,000	3,137	3,182
Armenia	424	522	522	702	729	773	780
Azerbaijan	691	1,103	1,011	1,158	1,123	1,078	1,087
Georgia	235	275	279	593	560	583	559
Kazakhstan	512	941	1,597	1,817	1,874	1,919	1,865
Kyrgyzstan	136	141	53	46	47	49	53
Tajikistan	117	91	24	0	0	0	0
Turkmenistan	2,808	3,486	3,964	4,462	4,385	4,312	4,327
Uzbekistan	1,950	1,751	1,514	1,273	1,086	1,058	1,125

^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* and IHS Global Insight data. All right reserved.

Natural Gas - Supply and Demand

Per Capita Consumption

Countries^(*)

(cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Middle East	1,005	1,322	1,696	1,957	2,006	2,026	2,104
Bahrain	11,980	11,010	9,906	10,311	9,814	9,388	9,030
Iran	926	1,385	1,905	2,276	2,410	2,502	2,675
Iraq	127	64	164	186	198	220	287
Israel	2	231	690	993	1,118	1,207	1,240
Jordan	49	282	371	247	417	421	363
Kuwait	4,459	5,147	4,611	5,176	5,342	5,301	5,286
Lebanon	0	0	50	0	0	0	0
Oman	2,764	3,446	5,699	5,746	5,475	5,173	5,336
Qatar	18,597	18,520	14,987	20,368	19,000	17,924	17,900
Saudi Arabia	1,732	2,245	2,540	2,613	2,717	2,787	2,849
Syria	327	314	432	216	192	191	191
United Arab Emirates	9,296	8,928	6,713	7,550	7,517	7,293	7,386
Yemen	0	0	40	36	18	21	21

	2000	2005	2010	2015	2016	2017	2018
Africa	94	133	140	150	157	163	165
Algeria	628	717	751	1,004	993	1,011	1,028
Angola	33	32	30	26	26	27	26
Cameroon	0	0	15	21	22	23	23
Congo	0	6	22	100	112	114	111
Côte d'Ivoire	90	79	75	84	83	90	94
Egypt	240	454	495	456	504	565	568
Gabon	97	103	202	296	290	209	215
Ghana	0	0	17	45	25	41	38
Libya	901	956	1,087	684	770	671	1,054
Morocco	2	14	20	34	34	33	33
Mozambique	0	1	3	33	28	25	24
Nigeria	55	75	65	91	87	86	84
Senegal	0	1	2	2	1	2	1
South Africa	36	66	87	92	92	87	87
Tanzania	0	10	17	17	15	14	13
Tunisia	328	356	556	522	531	548	548
Others Africa	0	14	12	12	25	24	23

^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* and IHS Global Insight data. All right reserved.

Natural Gas - Supply and Demand

Per Capita Consumption

Countries(*)

(cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Asia - Pacific	89	111	150	172	176	182	191
Australia	1,176	1,090	1,495	1,620	1,585	1,489	1,535
Bangladesh	67	90	131	157	170	168	178
Brunei	6,458	5,855	8,011	5,953	6,413	7,994	6,960
China	19	34	76	132	142	161	184
Hong Kong	428	373	518	426	434	429	455
India	25	32	51	40	42	44	46
Indonesia	146	150	186	171	174	171	156
Japan	598	640	777	911	926	920	887
Malaysia	1,240	1,445	1,291	1,421	1,334	1,185	1,227
Myanmar	30	55	30	67	78	79	86
New Zealand	1,525	908	992	1,031	1,050	1,049	943
Pakistan	136	186	175	155	148	146	172
Philippines	0	36	38	33	37	36	37
Singapore	333	1,298	1,488	1,795	1,812	1,819	2,183
South Korea	417	654	907	904	946	986	1,095
Taiwan	296	456	669	733	763	881	879
Thailand	321	461	570	639	624	607	585
Vietnam	16	65	107	109	108	95	96
Others Asia-Pacific	7	6	9	20	18	18	3

	2000	2005	2010	2015	2016	2017	2018
Americas	1,093	1,031	1,070	1,190	1,194	1,176	1,261
Argentina	955	1,064	1,072	1,150	1,184	1,185	1,166
Bolivia	327	251	293	373	404	385	396
Brazil	54	107	140	204	172	181	170
Canada	2,818	2,931	2,592	2,857	3,068	3,215	3,569
Chile	397	490	306	261	282	280	324
Colombia	157	164	208	243	229	233	192
Cuba	48	61	87	100	95	85	86
Dominican Republic	0	22	81	106	99	112	118
Ecuador	0	24	33	40	42	38	28
Jamaica	0	0	0	0	6	28	33
Mexico	406	494	538	597	603	564	611
Peru	22	68	218	292	304	254	258
Trinidad and Tobago	7,856	13,184	16,074	14,821	13,298	12,834	12,686
United States	2,253	1,990	2,086	2,340	2,346	2,300	2,503
Uruguay	11	31	22	16	18	20	20
Venezuela	1,038	841	835	759	796	773	755
Others Americas	55	100	112	234	265	261	299

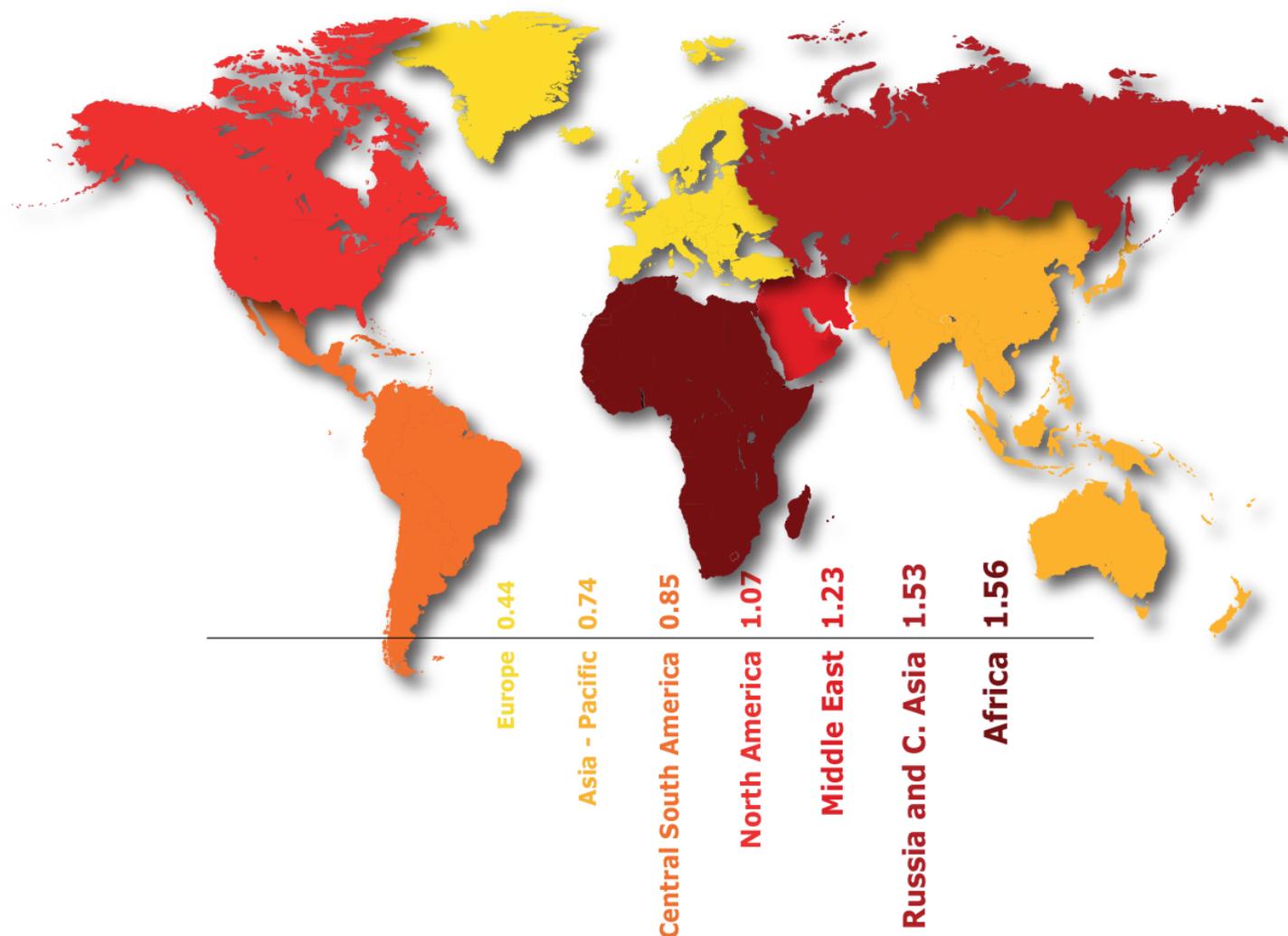
(*) Data source: Eni calculations on IEA (2019) *Extended Balances* and IHS Global Insight data. All right reserved.

Natural Gas - Supply and Demand Production/Consumption Ratio

Areas and Aggregates^(*)

	2000	2005	2010	2015	2016	2017	2018
Europe	0.55	0.50	0.48	0.50	0.47	0.46	0.44
Russia and Central Asia	1.47	1.49	1.41	1.50	1.51	1.55	1.53
Middle East	1.13	1.19	1.27	1.24	1.24	1.25	1.23
Africa	2.21	2.10	1.97	1.54	1.54	1.58	1.56
Asia - Pacific	0.94	0.91	0.84	0.78	0.77	0.77	0.74
Americas	0.97	0.99	0.99	1.02	1.00	1.02	1.02
- North America	0.96	0.98	0.99	1.06	1.04	1.07	1.07
- Central South America	1.01	1.02	1.00	0.87	0.86	0.86	0.85
World	1.00	1.00	0.99	1.02	1.00	1.02	1.00
European Union	0.53	0.43	0.36	0.30	0.28	0.26	0.24
MENA	1.39	1.41	1.39	1.27	1.28	1.29	1.27
OECD	0.78	0.75	0.73	0.79	0.77	0.79	0.80
NON OECD	1.27	1.28	1.24	1.22	1.21	1.22	1.18
OPEC	1.41	1.41	1.44	1.36	1.37	1.39	1.36
NON OPEC	0.96	0.96	0.93	0.96	0.94	0.95	0.94

Production/Consumption Ratio (2018)



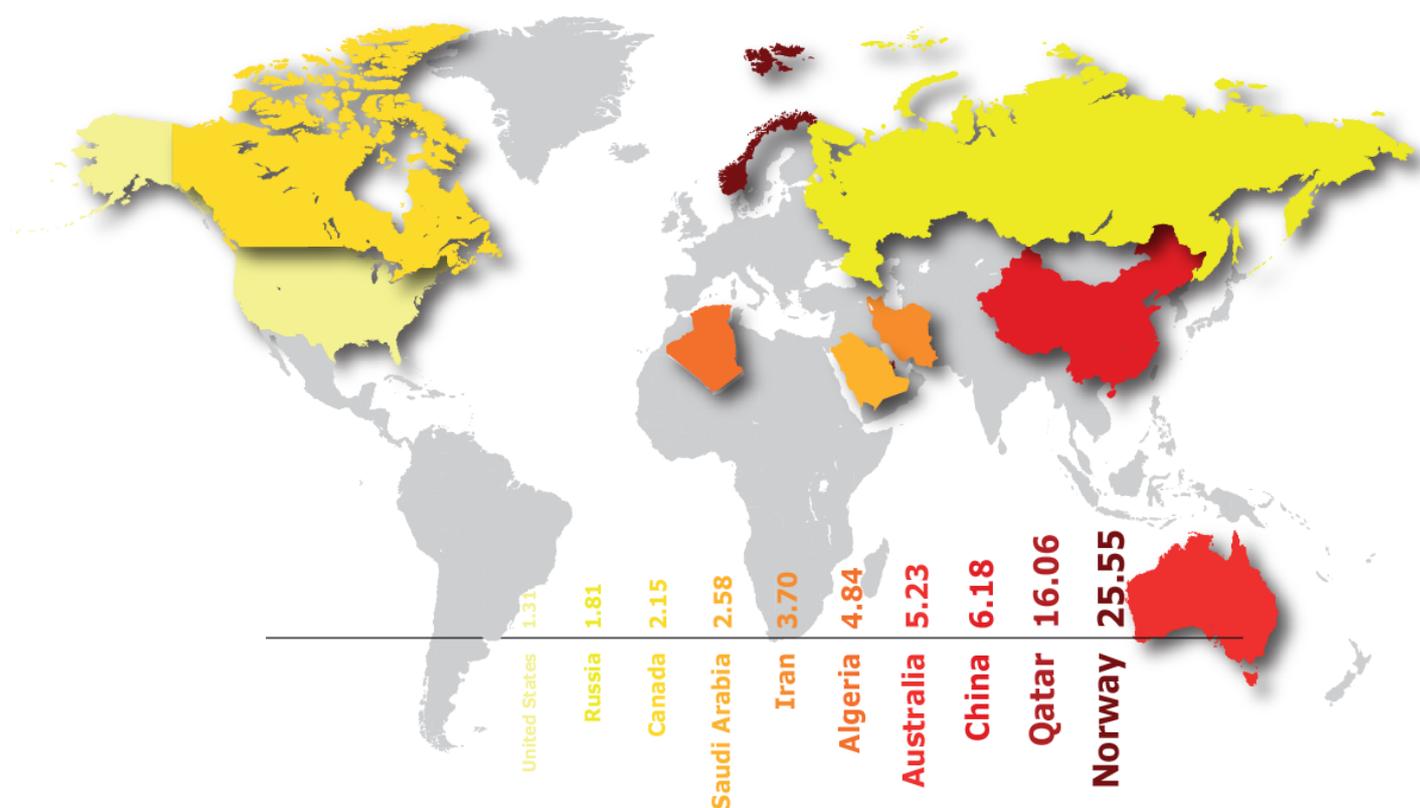
^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* data. All right reserved.

Natural Gas - Supply and Demand Production/Consumption Ratio

The World Top 10 Producers Ranked by Production/Consumption Ratio (*)

	2000	2005	2010	2015	2016	2017	2018
Norway	11.17	18.11	22.85	24.81	24.69	26.23	25.55
Qatar	2.30	4.21	11.33	15.67	15.87	15.82	16.06
China	1.10	1.99	3.86	5.43	5.52	5.97	6.18
Australia	1.48	1.63	2.31	3.00	3.68	4.56	5.23
Algeria	4.15	4.49	4.27	4.24	4.78	4.86	4.84
Iran	0.95	1.59	2.31	2.96	3.21	3.47	3.70
Saudi Arabia	1.00	1.49	1.95	2.32	2.41	2.53	2.58
Canada	2.00	2.08	1.74	1.87	2.00	2.07	2.15
Russia	1.48	1.62	1.69	1.64	1.69	1.82	1.81
United States	0.82	0.77	0.90	1.16	1.15	1.17	1.31

The World Top 10 (2018)



(*) Data source: Eni calculations on IEA (2019) *Extended Balances* data. All right reserved.

Natural Gas - Supply and Demand Production/Consumption Ratio

Countries^(*)

	2000	2005	2010	2015	2016	2017	2018
Europe	0.55	0.50	0.48	0.50	0.47	0.46	0.44
Albania	1.00	1.00	1.00	1.00	1.00	1.00	0.93
Austria	0.24	0.16	0.17	0.15	0.14	0.13	0.12
Belarus	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bulgaria	0.00	0.14	0.03	0.03	0.03	0.02	0.02
Croatia	0.61	0.79	0.84	0.71	0.63	0.49	0.44
Czech Republic	0.02	0.02	0.02	0.03	0.03	0.03	0.03
Denmark	1.67	2.13	1.66	1.45	1.41	1.58	1.39
France	0.04	0.02	0.02	0.00	0.00	0.00	0.00
Germany	0.22	0.18	0.15	0.10	0.09	0.08	0.07
Greece	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Hungary	0.26	0.19	0.23	0.18	0.18	0.17	0.18
Ireland	0.28	0.14	0.05	0.03	0.59	0.66	0.61
Italy	0.24	0.14	0.10	0.10	0.08	0.07	0.07
Netherlands	1.51	1.59	1.62	1.38	1.27	1.07	0.90
Norway	11.17	18.43	15.08	16.84	18.48	23.40	17.38
Poland	0.33	0.32	0.29	0.27	0.24	0.23	0.21
Romania	0.80	0.70	0.80	0.99	0.86	0.89	0.86
Serbia	0.41	0.12	0.17	0.26	0.22	0.18	0.17
Slovakia	0.02	0.02	0.02	0.02	0.02	0.03	0.02
Slovenia	0.01	0.00	0.01	0.00	0.01	0.01	0.02
Spain	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	0.04	0.03	0.02	0.01	0.01	0.01	0.01
Ukraine	0.24	0.24	0.28	0.57	0.59	0.63	0.62
United Kingdom	1.12	0.93	0.59	0.56	0.52	0.53	0.51

	2000	2005	2010	2015	2016	2017	2018
Russia and Central Asia	1.47	1.49	1.41	1.50	1.51	1.55	1.53
Russia	1.48	1.48	1.41	1.44	1.45	1.50	1.47
Azerbaijan	0.95	0.57	1.78	1.69	1.67	1.67	1.73
Georgia	0.06	0.01	0.01	0.00	0.00	0.00	0.00
Kazakhstan	1.16	1.27	1.10	1.21	1.22	1.33	1.37
Kyrgyzstan	0.05	0.03	0.08	0.11	0.09	0.08	0.08
Tajikistan	0.05	0.04	0.12	1.00	1.00	1.00	1.00
Turkmenistan	3.51	3.60	2.13	3.19	3.04	3.07	3.03
Uzbekistan	1.10	1.23	1.32	1.49	1.56	1.59	1.56

^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* data. All right reserved.

Natural Gas - Supply and Demand Production/Consumption Ratio

Countries^(*)

	2000	2005	2010	2015	2016	2017	2018
Middle East	1.13	1.19	1.27	1.24	1.24	1.25	1.23
Bahrain	1.00	0.99	1.00	1.00	1.00	1.00	1.00
Iran	0.95	1.00	1.00	1.00	1.02	1.05	1.03
Iraq	1.00	1.00	1.00	1.00	1.00	1.00	0.78
Israel	1.00	1.00	0.61	0.98	0.96	0.96	0.93
Jordan	1.00	0.13	0.06	0.05	0.03	0.02	0.02
Kuwait	1.00	1.00	0.81	0.81	0.78	0.76	0.76
Oman	1.68	2.41	1.59	1.34	1.37	1.40	1.39
Qatar	2.30	2.89	4.68	3.42	3.58	3.68	3.67
Saudi Arabia	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Syria	1.00	1.00	0.93	1.00	1.00	1.00	1.00
United Arab Emirates	1.23	1.14	0.84	0.81	0.82	0.84	0.83
Yemen			6.57	2.97	1.00	1.00	1.00

	2000	2005	2010	2015	2016	2017	2018
Africa	2.21	2.10	1.97	1.54	1.54	1.58	1.56
Algeria	4.15	3.68	3.09	2.08	2.32	2.28	2.20
Angola	1.00	1.00	1.00	1.00	2.14	6.90	7.33
Cameroon			1.00	1.00	1.00	1.00	2.16
Congo		1.00	1.00	1.00	1.00	1.00	1.00
Côte d'Ivoire	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Egypt	1.00	1.42	1.30	0.85	0.84	0.91	0.99
Gabon	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ghana			0.00	0.56	0.85	0.74	0.80
Libya	1.16	1.94	2.38	2.58	1.94	2.02	1.32
Morocco	1.00	0.09	0.08	0.07	0.06	0.06	0.06
Mozambique	1.00	104.68	39.54	5.37	6.22	6.78	6.73
Nigeria	1.77	2.19	3.01	2.52	2.37	2.60	2.53
Senegal	1.00	1.00	1.02	1.00	1.00	1.00	1.00
South Africa	1.00	0.65	0.33	0.24	0.21	0.17	0.17
Tanzania		1.00	1.00	1.00	1.00	1.00	1.00
Tunisia	0.69	0.64	0.61	0.50	0.44	0.39	0.39
Others Africa	1.00	1.00	3.15	2.82	1.78	1.90	1.88

^(*) Data source: Eni calculations on IEA (2019) *Extended Balances* data. All right reserved.

Natural Gas - Supply and Demand Production/Consumption Ratio

Countries(*)

	2000	2005	2010	2015	2016	2017	2018
Asia - Pacific	0.94	0.91	0.84	0.78	0.77	0.77	0.74
Australia	1.48	1.65	1.56	1.74	2.16	2.80	3.09
Bangladesh	1.00	1.00	1.00	1.00	1.00	1.00	0.93
Brunei	5.12	5.44	3.84	4.40	3.89	3.38	3.70
China	1.10	1.06	0.90	0.71	0.67	0.63	0.57
India	1.00	0.82	0.79	0.58	0.54	0.52	0.50
Indonesia	2.30	2.24	1.93	1.73	1.65	1.61	1.76
Japan	0.03	0.04	0.04	0.02	0.02	0.03	0.02
Malaysia	1.72	1.74	1.64	1.54	1.60	1.74	1.66
Myanmar	4.32	4.50	7.92	4.87	4.53	4.39	4.01
New Zealand	1.00	1.00	1.03	0.99	1.00	0.98	0.96
Pakistan	1.00	1.00	1.00	0.91	0.84	0.73	0.55
Philippines	1.00	1.00	1.00	1.00	1.00	1.00	1.01
South Korea	0.00	0.02	0.01	0.00	0.00	0.01	0.01
Taiwan	0.11	0.05	0.02	0.02	0.01	0.01	0.01
Thailand	0.90	0.71	0.75	0.68	0.68	0.66	0.66
Vietnam	1.00	1.28	1.00	1.00	1.00	1.00	1.00
Others Asia-Pacific	1.00	1.00	13.89	22.03	23.72	23.73	84.54

	2000	2005	2010	2015	2016	2017	2018
Americas	0.97	0.99	0.99	1.02	1.00	1.02	1.02
Argentina	1.13	1.11	0.93	0.78	0.81	0.79	0.83
Bolivia	1.72	5.21	4.92	5.29	4.57	4.55	4.22
Brazil	0.77	0.55	0.54	0.56	0.67	0.72	0.71
Canada	2.00	1.91	1.71	1.59	1.56	1.52	1.40
Chile	0.31	0.24	0.35	0.21	0.23	0.24	0.25
Colombia	1.00	1.00	1.15	1.03	1.00	1.00	1.17
Cuba	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Ecuador		1.00	1.00	1.00	1.00	1.00	1.00
Mexico	0.94	0.83	0.79	0.53	0.46	0.42	0.38
Peru	1.00	1.00	1.39	1.61	1.69	1.78	1.70
Trinidad and Tobago	1.42	1.80	1.95	1.85	1.80	1.85	1.97
United States	0.82	0.83	0.89	0.98	0.96	1.00	1.01
Venezuela	1.00	1.00	0.92	0.98	1.00	1.00	1.05
Others Americas	0.10	0.04	0.03	0.01	0.01	0.01	0.01

(*) Data source: Eni calculations on IEA (2019) *Extended Balances* data. All right reserved.

Natural Gas – Trade and Prices

Exports

Imports

Traded Gas

LNG – Liquefaction and Regasification Capacity

Natural Gas Balance – Italy

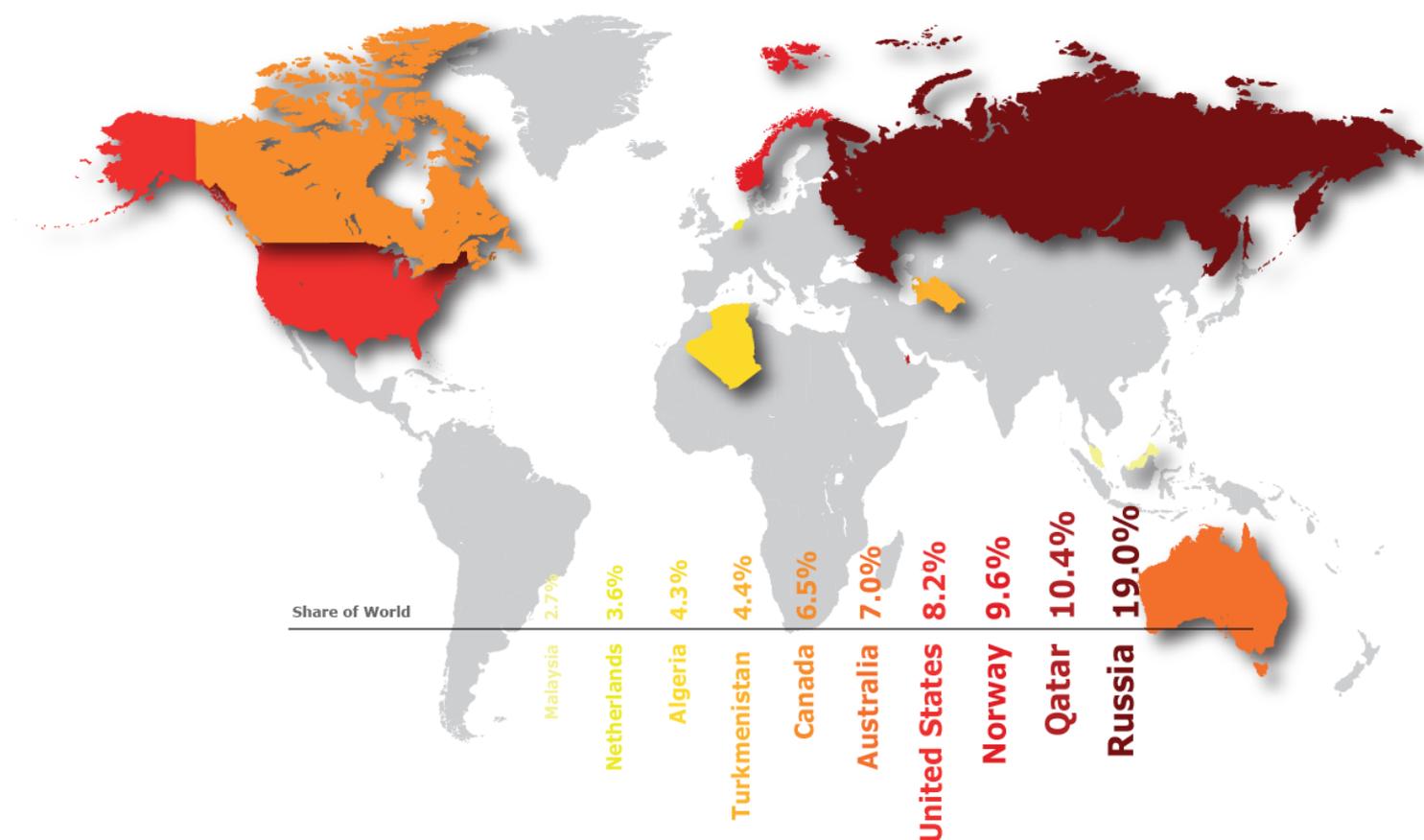
Natural Gas Prices

The World Top 10 Exporters^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia	182.12	194.71	179.31	191.86	203.66	218.13	230.21	5.5%	1.3%
Qatar	14.32	30.35	98.11	122.08	126.00	126.90	125.59	-1.0%	12.8%
Norway	49.01	82.54	102.90	112.52	112.54	120.94	116.03	-4.1%	4.9%
United States	6.48	19.42	30.42	47.33	61.26	86.57	98.68	14.0%	16.3%
Australia	10.78	14.40	24.30	34.15	50.47	71.44	84.50	18.3%	12.1%
Canada	96.16	101.65	92.05	76.77	79.98	82.63	78.33	-5.2%	-1.1%
Turkmenistan	31.76	43.10	22.74	54.45	50.73	51.42	52.96	3.0%	2.9%
Algeria	61.65	64.07	56.58	43.03	53.38	53.42	51.83	-3.0%	-1.0%
Netherlands	34.50	43.47	49.61	46.21	49.91	46.71	43.81	-6.2%	1.3%
Malaysia	20.74	28.89	31.20	32.70	32.91	35.91	33.03	-8.0%	2.6%
The World Top 10	507.51	622.58	687.22	761.11	820.84	894.07	914.95	2.3%	3.3%
Rest of the World	120.73	220.84	269.32	296.46	274.64	301.23	294.43	-2.3%	5.1%
World	628.24	843.42	956.55	1,057.57	1,095.48	1,195.29	1,209.39	1.2%	3.7%

The World Top 10 (2018)



^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe									
Austria	0.02	1.03	4.74	5.56	6.69	5.26	5.04	-4.3%	36.9%
Belgium	0.00	0.00	3.20	1.68	0.67	0.75	1.32	75.7%	
Croatia	0.00	0.42	0.46	0.35	0.38	0.19	0.11	-43.4%	
Czech Republic	0.00	0.08	0.15	0.00	0.00	0.00	0.00		-100.0%
Denmark	3.35	5.83	3.67	2.29	2.21	2.33	1.60	-31.4%	-4.0%
France	0.79	1.05	2.97	5.66	3.88	6.31	6.19	-1.9%	12.1%
Germany	4.91	19.72	19.95	31.68	22.48	31.29	31.87	1.9%	11.0%
Hungary	0.08	0.00	0.22	0.53	1.04	3.42	4.85	41.8%	26.1%
Italy	0.05	0.38	0.13	0.21	0.20	0.26	0.37	43.3%	12.1%
Netherlands	34.50	43.47	49.61	46.21	49.91	46.71	43.81	-6.2%	1.3%
Norway	49.01	82.54	102.90	112.52	112.54	120.94	116.03	-4.1%	4.9%
Poland	0.04	0.04	0.04	0.05	0.83	1.18	0.66	-44.4%	17.0%
Slovakia	0.00	0.36	0.00	0.00	0.00	0.00	0.00		
Spain	0.00	0.00	1.17	5.13	4.03	2.92	3.29	12.7%	
Turkey	0.00	0.00	0.62	0.60	0.65	0.60	0.64	6.8%	
Ukraine	2.80	2.59	0.01	0.00	0.00	0.00	0.00		-100.0%
United Kingdom	13.17	8.66	15.14	13.80	9.79	10.80	7.29	-32.4%	-3.2%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia									
Russia	182.12	194.71	179.31	191.86	203.66	218.13	230.21	5.5%	1.3%
Azerbaijan	0.00	0.00	6.04	7.95	7.86	8.65	9.68	11.9%	
Kazakhstan	5.09	15.05	6.08	12.39	14.44	17.34	17.51	1.0%	7.1%
Turkmenistan	31.76	43.10	22.74	54.45	50.73	51.42	52.96	3.0%	2.9%
Uzbekistan	6.50	11.75	13.64	19.49	19.17	19.82	21.33	7.6%	6.8%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East									
Iran	0.00	4.66	8.35	8.92	8.92	13.01	11.76	-9.7%	
Oman	4.27	12.19	12.27	10.42	11.09	11.62	13.83	19.0%	6.8%
Qatar	14.32	30.35	98.11	122.08	126.00	126.90	125.59	-1.0%	12.8%
United Arab Emirates	6.78	6.96	7.45	7.16	7.13	6.70	6.64	-0.9%	-0.1%
Yemen	0.00	0.00	5.30	1.89	0.00	0.00	0.00		

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa									
Algeria	61.65	64.07	56.58	43.03	53.38	53.42	51.83	-3.0%	-1.0%
Angola	0.00	0.00	0.00	0.00	0.86	2.30	2.30	0.0%	
Egypt	0.00	14.71	12.33	0.24	1.31	2.27	3.76	65.8%	
Libya	0.76	5.20	9.26	6.75	4.56	4.37	4.20	-3.8%	10.0%
Mozambique	0.00	2.15	3.04	3.87	4.08	4.10	4.09	-0.2%	
Nigeria	5.14	12.52	20.65	25.01	22.11	26.37	25.57	-3.0%	9.3%
Others Africa	0.00	0.00	4.90	4.47	4.26	4.71	4.24	-10.0%	

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Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific									
Australia	10.78	14.40	24.30	34.15	50.47	71.44	84.50	18.3%	12.1%
Brunei	8.87	9.49	8.83	8.36	7.88	8.23	7.61	-7.5%	-0.9%
China	2.33	2.89	3.92	3.16	3.29	3.44	3.35	-2.5%	2.0%
Indonesia	40.24	42.22	41.85	32.13	29.62	27.63	27.33	-1.1%	-2.1%
Malaysia	20.74	28.89	31.20	32.70	32.91	35.91	33.03	-8.0%	2.6%
Myanmar	4.63	9.32	10.34	13.66	14.51	14.31	14.30	0.0%	6.5%
Others Asia - Pacific	0.00	0.00	5.64	22.52	22.51	23.00	14.54	-36.8%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas									
Argentina	4.52	6.47	0.45	0.06	0.06	0.01	0.34	2186.9%	-13.4%
Bolivia	1.95	9.64	11.38	17.14	15.74	15.08	14.16	-6.1%	11.6%
Canada	96.16	101.65	92.05	76.77	79.98	82.63	78.33	-5.2%	-1.1%
Chile	0.00	0.00	0.00	0.00	0.35	0.21	0.09	-54.2%	
Colombia	0.00	0.00	1.39	0.33	0.00	0.00	0.00		
Mexico	0.24	0.25	0.92	0.03	0.03	0.02	0.01	-21.4%	-15.0%
Peru	0.00	0.00	2.48	5.58	6.69	6.37	6.05	-5.0%	
Trinidad and Tobago	4.22	13.72	20.33	17.05	14.48	14.92	17.35	16.3%	8.2%
United States	6.48	19.42	30.42	47.33	61.26	86.57	98.68	14.0%	16.3%
Others Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

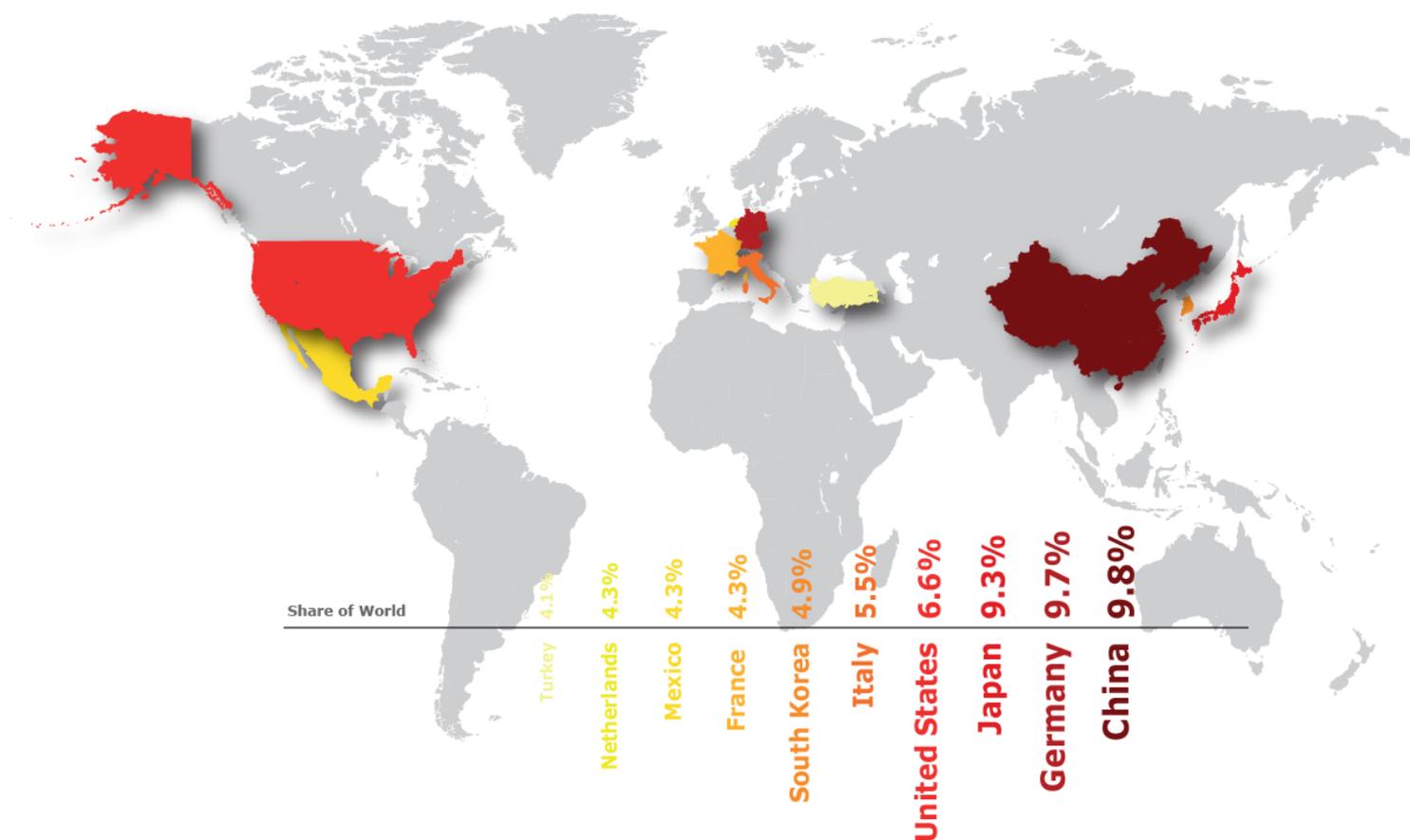
^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

The World Top 10 Importers^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
China	0.00	0.00	14.64	56.58	68.69	86.37	115.67	33.9%	
Germany	71.04	91.76	91.65	99.92	94.92	111.35	113.90	2.3%	2.7%
Japan	73.81	78.92	96.12	113.79	115.39	114.22	109.68	-4.0%	2.2%
United States	102.09	117.32	101.09	73.15	80.88	81.88	77.66	-5.2%	-1.5%
Italy	54.72	69.97	71.77	58.36	62.18	66.34	64.65	-2.5%	0.9%
South Korea	19.85	30.37	45.69	45.29	46.06	50.74	58.39	15.1%	6.2%
France	42.40	48.41	48.98	45.80	47.96	50.19	50.92	1.5%	1.0%
Mexico	2.80	8.94	14.70	35.09	41.35	41.53	49.54	19.3%	17.3%
Netherlands	14.51	19.12	21.46	34.00	38.45	45.13	49.15	8.9%	7.0%
Turkey	14.02	25.74	36.42	46.38	44.39	52.90	48.22	-8.8%	7.1%
The World Top 10	395.24	490.54	542.53	608.36	640.27	700.64	737.78	5.3%	3.5%
Rest of the World	224.62	332.55	414.00	413.78	422.65	446.20	441.93	-1.0%	3.8%
World	619.86	823.09	956.53	1,022.14	1,062.92	1,146.84	1,179.71	2.9%	3.6%

The World Top 10 (2018)



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Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe									
Austria	6.19	9.35	11.85	11.36	13.79	13.42	12.59	-6.21%	4.02%
Belarus	16.53	19.43	20.83	18.14	18.00	18.36	19.62	6.89%	0.96%
Belgium	15.44	17.23	22.73	17.82	17.40	17.33	18.69	7.86%	1.07%
Bosnia Herzegovina	0.23	0.35	0.23	0.21	0.21	0.23	0.23	-0.28%	-0.01%
Bulgaria	3.19	2.86	2.48	2.93	3.02	3.17	3.01	-4.93%	-0.32%
Croatia	1.05	1.08	1.01	1.01	1.22	1.75	1.53	-12.78%	2.09%
Czech Republic	8.70	8.84	8.11	7.17	7.81	8.53	7.68	-9.97%	-0.69%
Denmark	0.00	0.00	0.16	0.69	0.71	0.54	0.40	-25.32%	
Estonia	0.77	0.93	0.65	0.45	0.50	0.47	0.48	1.89%	-2.58%
Finland	3.99	4.19	4.46	2.60	2.39	2.23	2.54	14.13%	-2.47%
France	42.40	48.41	48.98	45.80	47.96	50.19	50.92	1.45%	1.02%
Germany	71.04	91.76	91.65	99.92	94.92	111.35	113.90	2.30%	2.66%
Greece	1.96	2.71	3.76	3.11	4.03	4.91	4.82	-1.90%	5.12%
Hungary	8.54	11.41	9.20	6.60	8.40	12.98	12.35	-4.86%	2.07%
Ireland	2.88	3.50	5.21	4.21	1.98	1.64	2.02	23.48%	-1.94%
Italy	54.72	69.97	71.77	58.36	62.18	66.34	64.65	-2.55%	0.93%
Latvia	1.29	1.67	1.05	1.26	1.07	1.18	1.38	17.11%	0.35%
Lithuania	2.40	2.90	2.89	2.49	2.20	2.42	2.34	-3.07%	-0.13%
Luxembourg	0.78	1.37	1.39	0.89	0.82	0.81	0.80	-1.37%	0.10%
Macedonia	0.06	0.07	0.11	0.13	0.20	0.26	0.24	-7.49%	7.86%
Malta	0.00	0.00	0.00	0.00	0.00	0.30	0.37	26.16%	
Moldova	2.47	2.78	2.69	2.48	2.50	2.30	2.49	8.35%	0.04%
Netherlands	14.51	19.12	21.46	34.00	38.45	45.13	49.15	8.92%	7.01%
Poland	7.72	9.96	10.36	11.62	14.17	15.15	15.21	0.39%	3.84%
Portugal	2.37	4.53	5.24	4.73	4.96	6.32	5.90	-6.67%	5.20%
Romania	3.15	4.87	2.11	0.19	1.37	1.11	1.46	32.16%	-4.17%
Serbia	1.06	2.00	1.82	1.61	1.66	2.02	1.99	-1.37%	3.58%
Slovakia	6.64	7.03	5.82	4.29	4.21	5.08	4.25	-16.41%	-2.45%
Slovenia	0.95	1.08	1.00	0.77	0.82	0.85	0.84	-1.92%	-0.71%
Spain	17.99	35.18	37.16	32.78	32.79	35.04	35.23	0.55%	3.80%
Sweden	0.90	0.98	1.70	0.84	0.95	1.10	1.21	9.88%	1.62%
Switzerland	2.83	3.24	3.50	3.32	3.48	3.50	3.32	-5.14%	0.89%
Turkey	14.02	25.74	36.42	46.38	44.39	52.90	48.22	-8.85%	7.11%
Ukraine	57.77	58.72	34.38	15.46	10.24	13.10	9.76	-25.51%	-9.41%
United Kingdom	2.34	15.60	54.56	44.59	47.40	46.73	46.23	-1.06%	18.02%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia									
Russia	12.24	7.21	4.07	8.41	8.54	8.39	8.81	5.0%	-1.8%
Armenia	1.30	1.56	1.59	2.20	2.15	2.29	2.29	0.0%	3.2%
Azerbaijan	0.28	4.41	0.00	0.00	0.29	2.06	1.76	-14.8%	10.8%
Georgia	1.04	1.22	1.17	2.43	2.19	2.27	2.17	-4.2%	4.2%
Kazakhstan	4.12	10.95	3.43	5.69	6.69	6.12	6.58	7.5%	2.6%
Kyrgyzstan	0.64	0.69	0.27	0.24	0.25	0.27	0.30	10.6%	-4.1%
Tajikistan	0.69	0.60	0.17	0.00	0.00	0.00	0.00		-100.0%
Uzbekistan	1.54	1.04	0.00	0.00	0.00	0.00	0.00		-100.0%

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Natural Gas - Trade and Prices

Imports

Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East									
Iran	3.23	5.09	8.85	8.43	5.77	3.80	4.69	23.4%	2.1%
Israel	0.00	0.00	2.01	0.15	0.34	0.48	0.70	44.4%	
Jordan	0.00	1.40	2.50	2.14	4.64	5.05	3.78	-25.2%	
Kuwait	0.00	0.00	2.65	3.79	4.71	5.25	5.09	-3.0%	
Oman	0.00	0.00	1.97	2.06	2.04	2.04	2.04	0.0%	
United Arab Emirates	0.00	1.33	16.54	20.41	19.95	17.43	17.43	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa									
Egypt	0.00	0.00	0.00	6.62	9.08	7.50	2.81	-62.5%	
Ghana	0.00	0.00	0.41	0.54	0.11	0.31	0.31	0.0%	
Morocco	0.00	0.40	0.61	1.10	1.13	1.12	1.13	1.1%	
South Africa	0.00	1.13	3.04	3.87	4.08	4.10	4.10	0.0%	
Tunisia	0.99	1.28	2.34	2.95	3.41	3.83	3.83	0.0%	7.8%
Others Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific									
Australia	0.00	0.00	5.64	5.57	6.28	5.73	5.17	-9.7%	
China	0.00	0.00	14.64	56.58	68.69	86.37	115.67	33.9%	
Hong Kong	2.85	2.55	3.64	3.09	3.17	3.16	3.08	-2.5%	0.4%
India	0.00	6.83	13.30	22.14	25.72	28.40	29.69	4.5%	
Japan	73.81	78.92	96.12	113.79	115.39	114.22	109.68	-4.0%	2.2%
Malaysia	0.00	1.56	8.16	9.09	7.94	8.14	7.73	-5.0%	
Singapore	1.30	5.83	7.55	9.89	10.13	10.33	12.64	22.3%	13.5%
South Korea	19.85	30.37	45.69	45.29	46.06	50.74	58.39	15.1%	6.2%
Taiwan	6.01	9.71	15.05	17.85	18.60	20.70	21.01	1.5%	7.2%
Thailand	2.01	8.64	9.58	13.91	13.54	14.41	14.69	2.0%	11.7%
Others Asia - Pacific	0.00	0.00	0.15	0.00	0.01	0.01	0.01	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas									
Argentina	0.00	1.69	3.49	10.97	10.16	10.79	9.58	-11.2%	
Brazil	2.20	8.96	12.60	18.33	11.68	10.68	10.55	-1.2%	9.1%
Canada	1.55	9.11	21.78	19.25	19.79	23.35	20.78	-11.0%	15.5%
Chile	4.27	6.14	3.50	3.64	4.25	4.08	4.55	11.5%	0.3%
Colombia	0.00	0.00	0.00	0.00	0.01	0.01	0.29	2158.1%	
Dominican Republic	0.00	0.24	0.79	1.11	1.02	1.22	1.28	4.6%	
Jamaica	0.00	0.00	0.00	0.00	0.02	0.08	0.10	18.2%	
Mexico	2.80	8.94	14.70	35.09	41.35	41.53	49.54	19.3%	17.3%
United States	102.09	117.32	101.09	73.15	80.88	81.88	77.66	-5.2%	-1.5%
Uruguay	0.04	0.10	0.07	0.05	0.06	0.07	0.07	0.5%	3.7%
Venezuela	0.00	0.00	1.95	0.36	0.00	0.00	0.00		
Others Americas	0.33	0.66	0.75	1.44	1.65	1.62	1.87	15.0%	10.1%

^(*) Data source: the original data are from IEA (2019) *Extended Balances*. All rights reserved. Data have been converted by Eni using a unified gross calorific value of 40 MJ/cm.

RUSSIA AND CENTRAL ASIA						MIDDLE EAST			AFRICA						ASIA-PACIFIC						AMERICAS						TOTAL BY COUNTRY			
Russia	Armenia	Azerbaijan	Georgia	Kazakhstan	Kyrgyzstan	Iran	Oman	United Arab Emirates	Benin	Egypt	Ghana	Morocco	South Africa	Tunisia	Others Africa	Australia	China	Malaysia	Singapore	Thailand	Others Asia - Pacific	Argentina	Brazil	Canada	Chile	Mexico		United States	Uruguay	
																														0.7
																														4.1
																														0.0
																														0.1
																														0.4
																														1.2
																														1.3
																														12.7
																														0.0
																														4.8
																														0.1
																														60.7
																														97.8
																														0.7
																														0.0
																														0.0
																														0.4
																														0.5
																														0.6
																														9.5
																														230.1
																														7.6
																														14.4
																														36.4
																														7.2
																														0.3
																														9.1
																														19.3
																														39.9
																														4.5
																														0.3
																														3.2
																														14.5
																														1.4
																														14.2
																														0.4
																														14.5
																														79.5
																														64.0
																														46.5
9.4	2.4	1.8	2.2	6.8	0.3	4.8	2.0	17.3	0.0	0.3	0.3	1.2	4.3	3.8	0.0	5.1	53.3	6.0	9.9	10.2	0.0	6.4	8.1	20.7	0.4	43.3	79.5	0.1	803.0	

Natural Gas - Trade and Prices

Imports

Imports by Country of Origin - LNG 2018^(*)

(billion cubic metres)

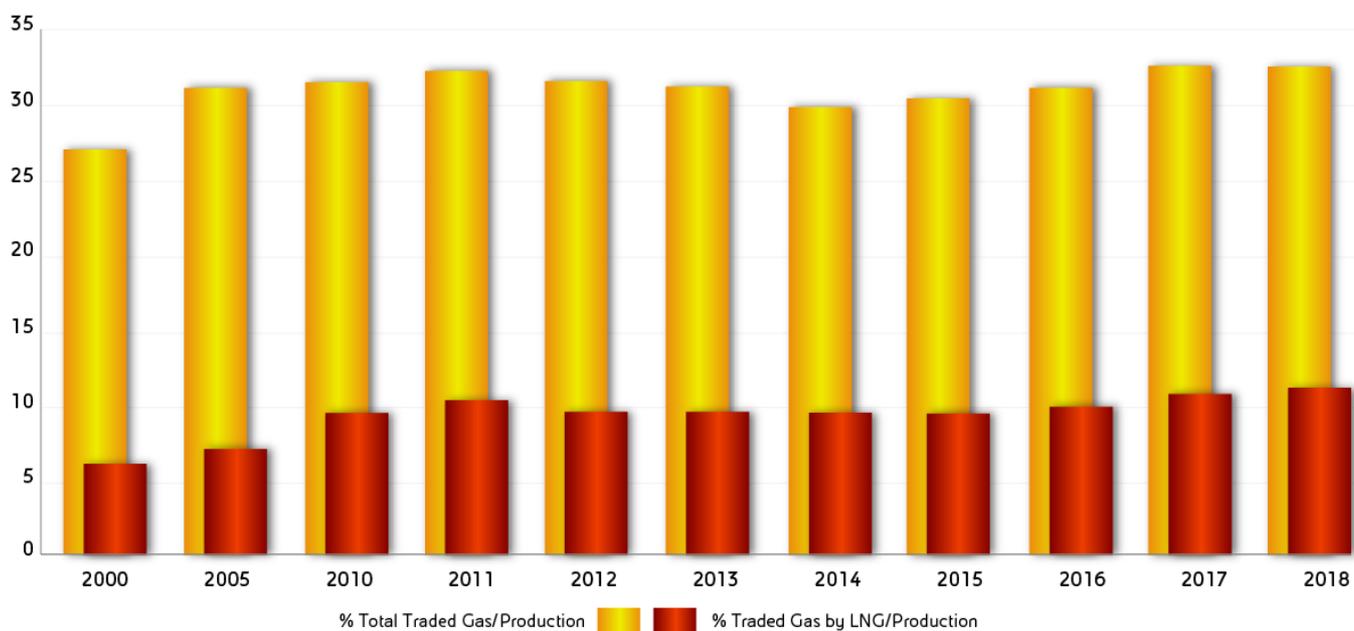
Importers Exporters	EUROPE														MIDDLE EAST				AFRICA
	Belgium	France	Greece	Finland	Italy	Lithuania	Malta	Netherlands	Poland	Portugal	Spain	Sweden	Turkey	United Kingdom	Israel	Jordan	Kuwait	United Arab Emirates	Egypt
Europe																			
Belgium										0.08	0.08								
Bulgaria									0.16										
Finland											0.02								
France					0.00					0.04		0.18							
Lithuania								0.00			0.00	0.09							
Netherlands				0.02				0.00			0.00	0.09							
Norway		0.22		0.05	0.16	1.10	0.01	3.21	0.34	0.08	0.58	0.14	0.09	0.18	0.09	0.18		0.62	
Spain					0.00								0.09						
United Kingdom																			
Russia and Central Asia																			
Russia		0.88							0.03		0.87		1.40		0.36	0.09			0.17
Middle East																			
Oman																0.62			
Qatar	2.45	1.37	0.08		6.53				2.29	0.68	3.35	2.98	4.37	0.15	1.79				1.25
United Arab Emirates																			
Africa																			
Algeria		3.45	0.84		0.88		0.23		0.13	1.50		4.60	0.32	0.10		0.35			
Angola	0.08				0.09					0.09		0.10			0.62	0.09			
Cameroon					0.09					0.08									
Egypt					0.04							0.20	0.19			0.08			
Equatorial Guinea					0.09		0.06					0.09	0.07		0.17	0.17			0.08
Nigeria		3.26			0.09		0.05	0.38		2.19	4.09		2.15		0.80	0.52	0.08		0.16
South Africa												0.01							
Asia-Pacific																			
Australia																	0.15		
Brunei																			
Indonesia																			
Japan																			
Malaysia																			
Papua New Guinea																			
Singapore																			
Americas																			
Canada																			
Mexico																			
Peru							0.06				1.72		0.06						
Trinidad and Tobago							0.12	0.46			2.16	0.42	0.81	0.58	0.30	0.08			0.08
United States		0.16	0.10		0.65		0.08		0.08	0.49	0.30		0.44	0.52	0.16	1.10	0.28	0.10	0.19
Non-specified/Others		1.00			0.04		0.00		0.01						1.78	0.92	0.25		0.09
TOTAL BY COUNTRY	2.5	10.3	1.0	0.1	8.7	1.1	0.4	4.3	2.7	3.7	14.9	0.3	11.3	7.9	0.7	4.8	5.4	1.0	2.6

^(*) Data source: IEA (2019) *Natural Gas Information*. All rights reserved.

ASIA-PACIFIC										AMERICAS										TOTAL BY COUNTRY	
Bangladesh	China	India	Japan	Malaysia	Pakistan	Singapore	South Korea	Taiwan	Thailand	Argentina	Brazil	Canada	Chile	Colombia	Dominican Republic	Jamaica	Mexico	United States	Others Americas		
																					0.2
																					0.2
																					0.0
				0.36					0.66					0.02					0.08		1.3
				0.09					0.17												0.0
	0.37	0.09	0.09		0.18			0.16	0.08			0.09									0.5
								0.09			0.25	0.08	0.07			0.09	0.01				8.5
								0.07											0.09		0.2
								0.07													0.2
	1.54	0.54	8.78		0.08		2.03		0.08	0.05	0.45										17.4
	0.68	1.50	3.62		0.18		5.70	0.41	0.09												12.8
0.89	12.34	14.45	13.32		5.69	0.49	18.67	6.42	2.68	1.50	0.09		0.04								103.9
		0.41	6.51		0.18			0.08	0.08												7.2
	0.10	0.29			0.18					0.08											13.0
	0.70	2.20	0.37		0.09	0.17	0.25	0.08			0.08										5.0
	0.23	0.34						0.08													0.8
	0.24	0.22	0.17				0.17		0.09												1.4
	0.89	1.07	0.09		0.42	0.36	0.08			0.08			0.27								4.0
	1.50	3.60	1.45		1.17		0.61	0.24	1.22	0.48	0.25						1.24	0.08			25.6
																					0.0
	28.28	1.55	40.47	1.17	0.10	2.07	10.24	4.47	0.10												88.6
	0.28		5.94	0.52			1.00	0.98	0.08												8.8
	6.50		6.54		0.17	0.17	4.27	1.52	0.25								0.16				19.6
							0.08														0.1
	7.98	0.34	13.69		0.08		3.77	3.46	0.71												30.0
	3.31		4.72			0.11	0.10	1.52													9.8
							0.15														0.2
																			0.06		0.1
																		0.09			0.1
	0.08		0.64				1.27	0.08									0.04				3.9
	0.51	0.46			0.08	0.07	0.24	0.31	0.52	0.52	0.47	0.43	3.23	0.19	1.09	0.06	0.27	1.86	1.97	17.2	
	2.56	1.63	3.89		0.37		6.19	0.47		0.78	1.01	0.01	0.65	0.14	0.17	0.04	6.69				29.2
	0.99			0.17	4.91			0.09													10.2
0.9	69.1	28.7	110.7	1.9	13.8	3.4	56.0	20.3	5.9	3.5	2.6	0.6	4.3	0.3	1.3	0.1	8.4	2.3	2.0	420.0	

	Traded Gas by LNG/ Total Traded Gas (%)	Traded Gas by Pipeline/ Total Traded Gas (%)	Total Traded Gas/ Production (%)	Traded Gas by LNG/ Production (%)	Traded Gas by Pipeline/ Production (%)
2000	21.53	78.47	26.79	5.77	21.03
2005	22.53	77.47	30.84	6.95	23.89
2010	30.25	69.75	31.32	9.47	21.84
2011	31.94	68.06	32.09	10.25	21.84
2012	30.62	69.38	31.22	9.56	21.66
2013	30.46	69.54	30.98	9.44	21.54
2014	31.97	68.03	29.55	9.45	20.10
2015	31.59	68.41	30.23	9.55	20.68
2016	31.67	68.33	30.98	9.81	21.17
2017	32.92	67.08	32.31	10.64	21.67
2018	34.34	65.66	32.23	11.07	21.16

Total Traded Gas on Production
(percentage)



Natural Gas - Trade and Prices LNG - Liquefaction and Regasification Capacity

Liquefaction Capacity - Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Europe			5.6	5.6	5.6	5.6	5.6
Norway			5.6	5.6	5.6	5.6	5.6
Russia and Central Asia			13.0	15.0	15.0	15.7	26.3
Russia			13.0	15.0	15.0	15.7	26.3
Middle East	33.7	47.5	113.2	136.5	136.5	136.5	136.5
Oman	7.1	10.1	14.2	14.2	14.2	14.2	14.2
Qatar	19.1	29.8	83.4	105.6	105.6	105.6	105.6
United Arab Emirates	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Yemen			8.0	9.1	9.1	9.1	9.1
Africa	42.0	55.0	82.3	83.6	83.6	83.6	85.6
Algeria	31.8	28.1	27.9	31.1	31.1	31.1	31.1
Angola				7.1	7.1	7.1	7.1
Cameroon							2.0
Egypt		11.1	16.6	9.8	9.8	9.8	9.8
Equatorial Guinea			5.6	5.6	5.6	5.6	5.6
Libya	2.2	2.2	2.2				
Nigeria	8.1	13.6	30.1	30.1	30.1	30.1	30.1
Asia - Pacific	83.1	92.4	114.1	126.8	155.2	180.4	193.8
Australia	10.4	16.1	28.2	45.1	70.3	90.7	102.9
Brunei	9.8	9.8	10.1	10.1	10.0	10.1	10.1
Indonesia	41.3	35.7	42.3	26.7	28.6	28.6	28.6
Malaysia	21.6	30.8	33.7	34.9	36.2	41.0	41.4
Papua New Guinea				10.1	10.1	10.1	10.9
Americas	6.1	15.6	26.0	28.7	36.3	49.8	60.3
United States	2.0	2.0	2.0	2.0	9.6	23.1	33.6
Peru			3.3	6.0	6.0	6.0	6.0
Trinidad and Tobago	4.1	13.6	20.6	20.6	20.7	20.7	20.7
World	164.9	210.5	354.2	396.2	432.2	471.5	508.0

^(*) Nominal Capacity. Data source: Wood Mackenzie LNG Tool.

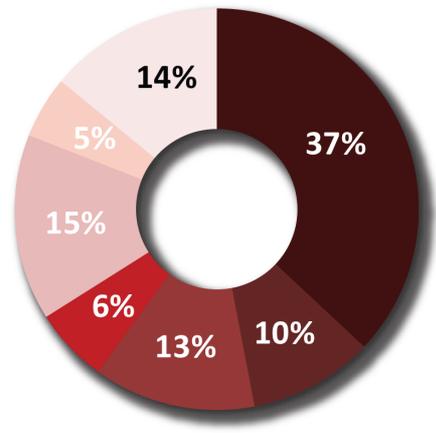
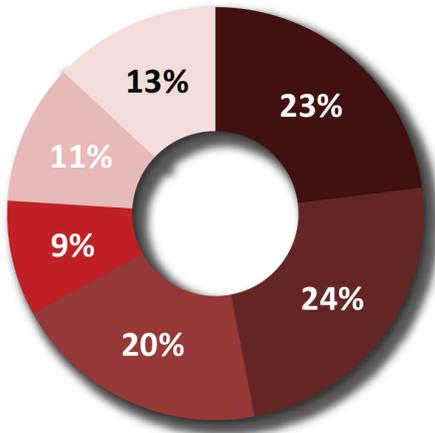
Liquefaction Capacity - Cluster of Companies^(*)

2000

2018

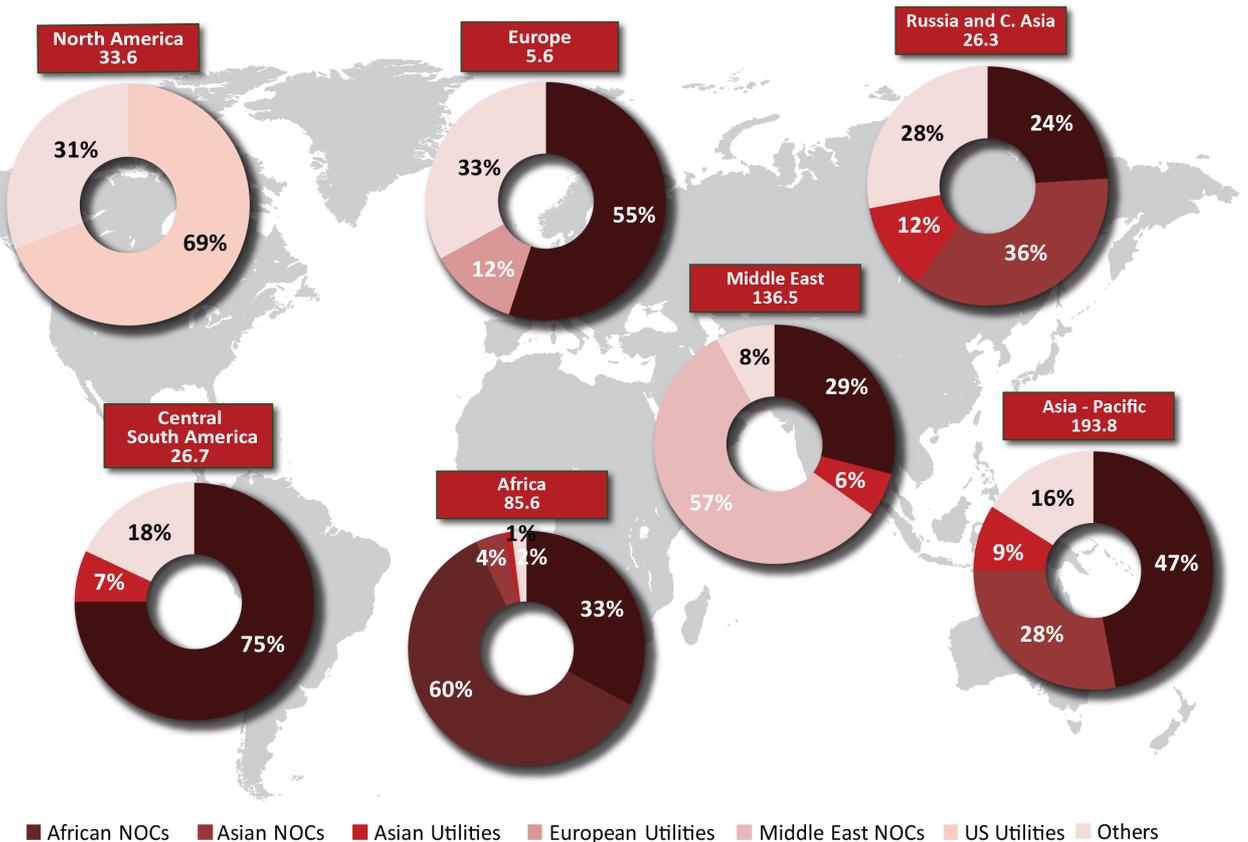
World: 164.9 billion cubic metres

World: 508.0 billion cubic metres



2018

(billion cubic metres)



IOCs: BG, BHP Billiton, BP, Chevron, ConocoPhillips, Eni, Equinor, ExxonMobil, Marathon Oil, Repsol, Shell, Total, Woodside Petroleum. **African NOCs:** EGAS (Egyptian Natural Gas Holding Co.), EGPC (Egyptian General Petroleum Corporation), GEPetrol/Sonagas, National Libyan Oil Company (NOC), NNPC, Sonangol, Sonatrach. **Asian NOCs:** CNOOC, CNPC, Gazprom, MRDC (Mineral Resources Dev. Co), Pertamina, Petronas, Sinopec. **Asian Utilities:** Hyundai, JERA, JILCO, Kansai Electric, KOGAS, Kyushu, LNG Japan Corporation, Marubeni, Mitsubishi, Mitsui, Osaka Gas, SK Corp, Toho Gas, Tokyo Gas. **European Utilities:** Gas Natural Fenosa, Engie. **Middle East NOCs:** ADNOC, KUFPEC, Yemen Gas Co. **US Utilities:** Cheniere, Dominion.

Natural Gas - Trade and Prices LNG - Liquefaction and Regasification Capacity

Regasification Capacity - Countries^(*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Europe	46.4	73.2	175.9	201.0	211.8	233.5	242.1
Belgium	4.5	4.5	9.0	9.0	9.0	9.0	9.0
France	15.5	15.5	26.5	22.3	28.0	34.7	34.7
Greece	1.3	1.3	5.4	5.4	5.4	5.4	5.4
Italy	3.5	3.5	11.5	15.3	15.3	15.3	15.3
Lithuania				4.0	4.0	4.0	4.0
Malta					0.1	0.6	0.6
Netherlands				12.7	12.7	12.7	12.7
Poland				0.3	5.0	5.0	5.0
Portugal		5.6	5.6	8.3	8.3	8.3	8.3
Spain	15.2	34.2	62.4	63.6	63.6	63.6	63.6
Turkey	6.3	6.3	12.3	12.3	12.7	27.1	35.7
United Kingdom		2.3	43.2	47.9	47.9	47.9	47.9
Middle East			5.5	17.1	25.4	28.5	28.5
Israel				2.7	2.7	2.7	2.7
Jordan				3.1	5.2	5.2	5.2
Kuwait			5.2	6.6	6.6	6.6	6.6
United Arab Emirates			0.3	4.7	10.9	14.0	14.0
Africa				4.8	10.3	10.3	9.3
Egypt				4.8	10.3	10.3	9.3
Asia - Pacific	278.9	346.2	428.8	560.8	582.1	613.3	649.6
Bangladesh				0.0	0.0	0.0	3.9
China			17.6	62.0	69.7	80.0	89.6
India		9.4	18.4	34.1	36.3	41.5	41.8
Indonesia				7.7	8.4	8.5	8.5
Japan	227.3	243.3	258.6	283.2	288.1	290.4	294.4
Malaysia				5.2	5.2	6.0	10.0
Pakistan				4.6	6.1	6.6	12.3
Singapore				8.2	8.2	8.2	15.1
South Korea	45.6	82.8	115.1	128.0	130.4	136.2	136.5
Taiwan	5.9	10.7	19.1	21.0	22.8	22.8	24.0
Thailand				6.8	6.8	13.1	13.7
Americas	11.5	34.5	188.9	243.7	244.9	249.0	251.3
Argentina			4.1	11.3	11.3	11.3	10.4
Brazil			7.7	14.9	14.9	14.9	14.9
Canada			10.3	10.3	10.3	10.3	10.3
Chile			5.3	7.3	7.5	7.5	7.5
Colombia				0.0	0.7	4.1	4.1
Dominican Republic		2.6	2.6	3.9	3.9	3.9	3.9
Jamaica				0.0	0.4	1.0	3.4
Mexico			15.5	20.7	20.7	20.7	20.7
Panama				0.0	0.0	0.0	0.9
United States (**)	11.5	31.9	143.4	175.3	175.3	175.3	175.3
World	336.7	453.8	799.0	1,027.3	1,074.5	1,134.5	1,180.7

(*) Data source: Wood Mackenzie LNG Tool.

(**) The United States includes Puerto Rico.

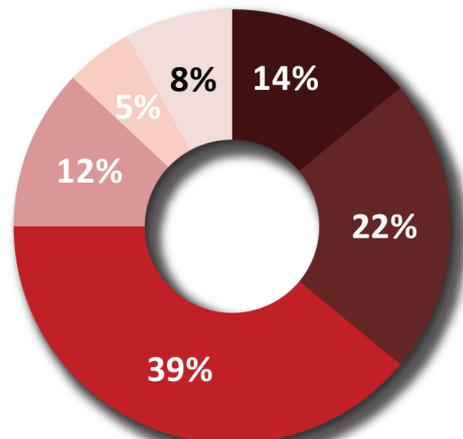
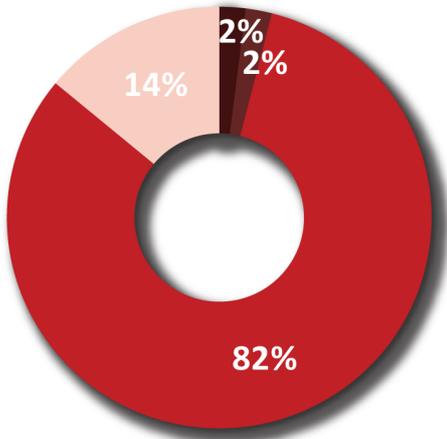
Regasification Capacity - Cluster of Companies(*)

2000

2018

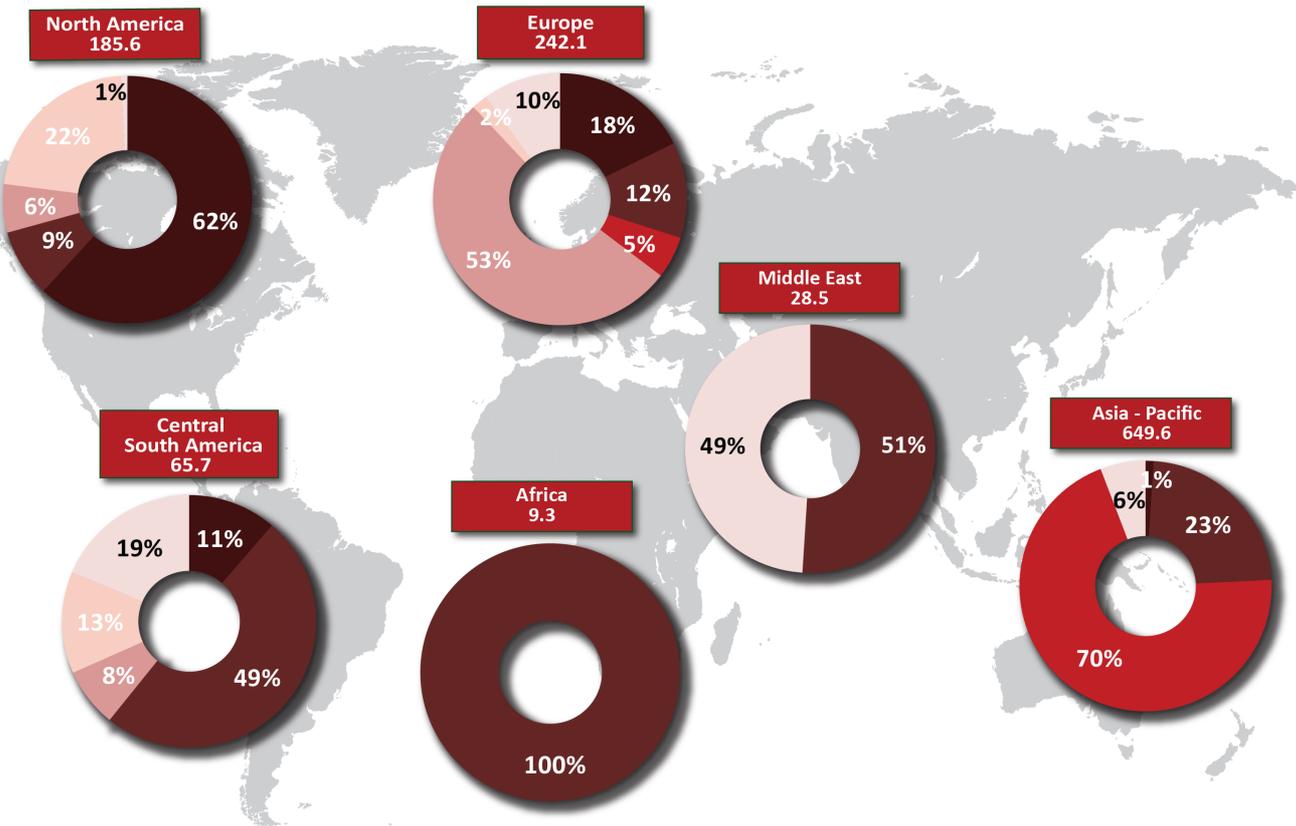
World: 336.7 billion cubic metres

World: 1,180.7 billion cubic metres



2018

(billion cubic metres)



■ IOCs
 ■ NOCs
 ■ Asian Utilities
 ■ European Utilities
 ■ US Utilities
 ■ Others

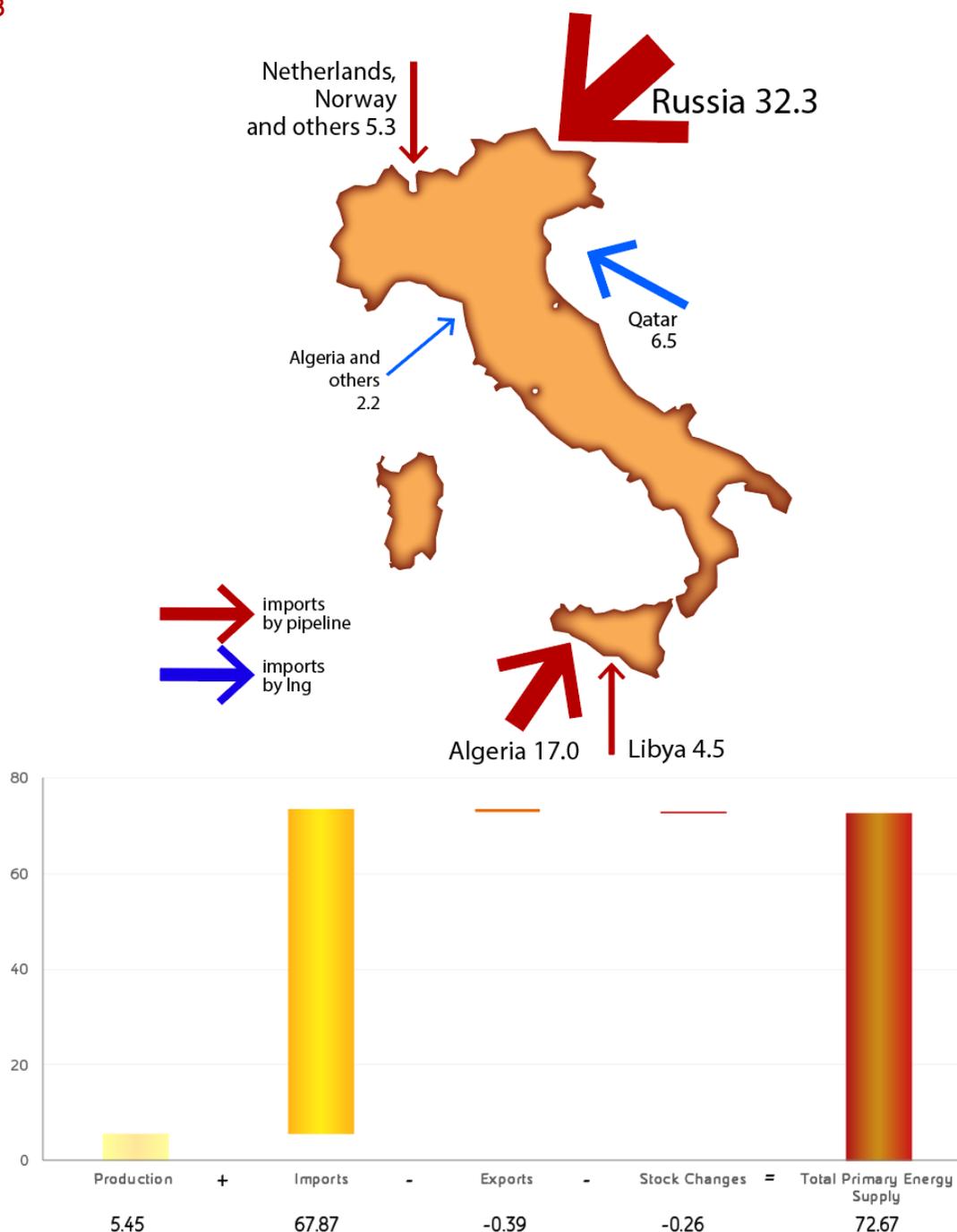
IOCs: Anadarko, Apache, BG, BHP Billiton, BP, Chevron, ConocoPhillips, Eni, Equinor, ExxonMobil, Marathon Oil, OMV, Repsol, Shell, Total, Woodside Petroleum. **NOCs:** ADNOC, BPCL (Bharat Petroleum Corporation Limited), CFE, CNOOC, CPC, Egas, Enap, Enarsa, Gazprom, IOC (Indian Oil Corporation), Kuwait National Petroleum Corp, Oman Oil, ONGC, Pertamina, Petrobras, PetroChina, Petronas, PGNiG, PTT, Qatar Petroleum, Sinopec, Sonangol, Sonatrach. **Asian Utilities:** Chubu Electric Power, Chugoku Electric Power, Egegaz, GAIL, Hiroshima Gas, Hokkaido Gas, HongKong & China Gas, HongKong Electric, Kansai Electric Power, KOGAS, K-Power, Kyushu Electric Power, Maharashtra Utility, Mitsui, Nippon Gas, NTPC, Oita Gas, Okinawa Electric Power, Osaka Gas, Perusahaan Gas Negara, POSCO, Saibu Gas, Shenergy, Shenzhen Gas Corp, Shikoku Electric Power, Shizouka Gas, Singapore LNG Corp, Toho Gas, Tohoku Electric, Tokyo Electric Power, Tokyo Gas. **European Utilities:** Botas, Centrica, CEPSA, Depa, DONG Energy, E.On, EconGas, EdF, Enagas, Enel, Engie, Essent, EVE, Gas Natural Fenosa, Gasunie, Iberdrola, Iren, SNAM, Union Fenosa Gas. **US Utilities:** AES, Cheniere, Dominion, Dow Chemical, Excelerate Energy, Freeport LNG Development LP, Sempra Energy, Southern Union.

Italy (*)

(billion cubic metres)

	2000	2005	2010	2015	2016	2017	2018
Production	16.63	12.07	8.41	6.77	5.79	5.54	5.45
Imports	57.45	73.46	75.35	61.20	65.28	69.65	67.87
Exports	-0.05	-0.40	-0.14	-0.22	-0.21	-0.27	-0.39
Stock Changes	-3.29	1.13	-0.52	-0.23	0.06	0.24	-0.26
Total Primary Energy Supply	70.75	86.27	83.10	67.52	70.91	75.15	72.67

2018



(*) Data source: Italian Ministry for Economic Development. Gas volumes are quoted in Italian calorific value of 38.1 MJ/cm.

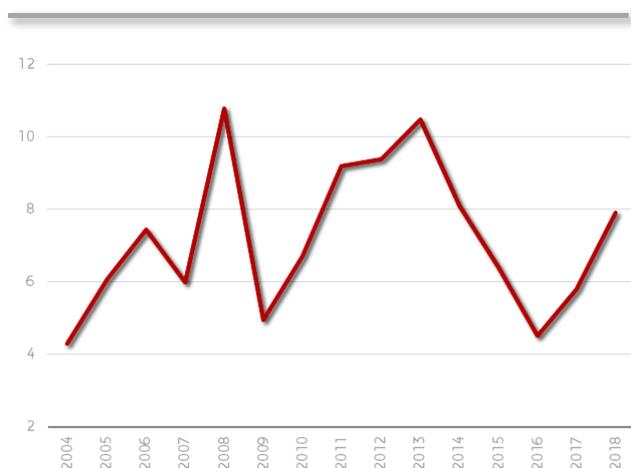
Natural Gas Prices^(*)

(\$/Mbtu)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
TTF		6.1	6.7	6.4	4.5	5.8	7.9	36.2%	2.1%
Henry Hub	4.3	8.7	4.4	2.6	2.5	3.0	3.1	5.4%	-4.1%
Japan			7.7	8.2	6.2	7.4	10.3	39.4%	3.7%

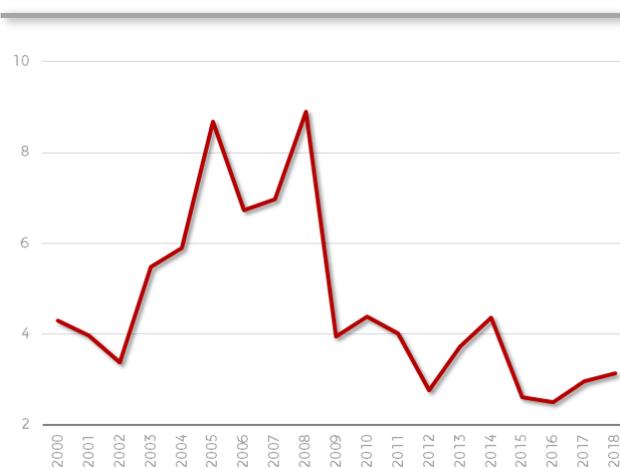
TTF^(*)

(\$/Mbtu)



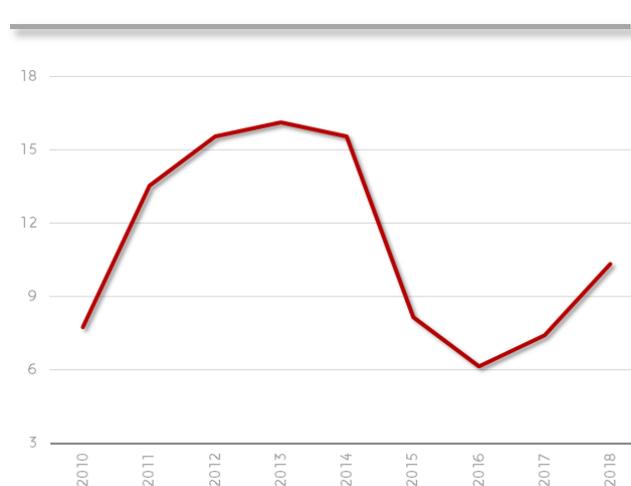
Henry Hub^(*)

(\$/Mbtu)



Japan^(*)

(\$/Mbtu)

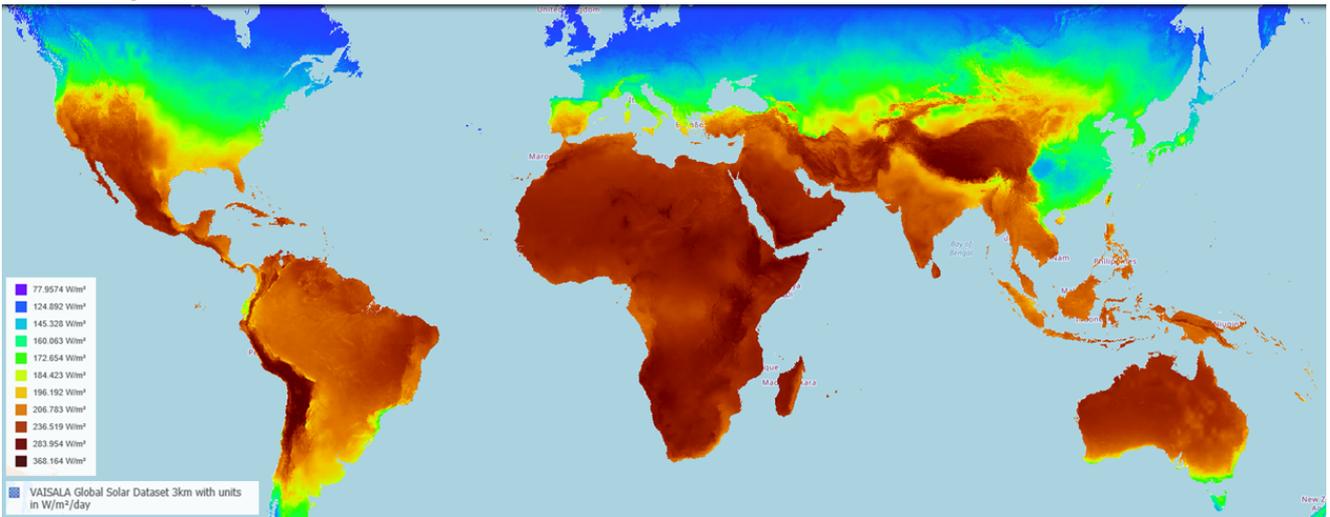


^(*) Data source: ICE London, Wood Mackenzie and EIA DOE.

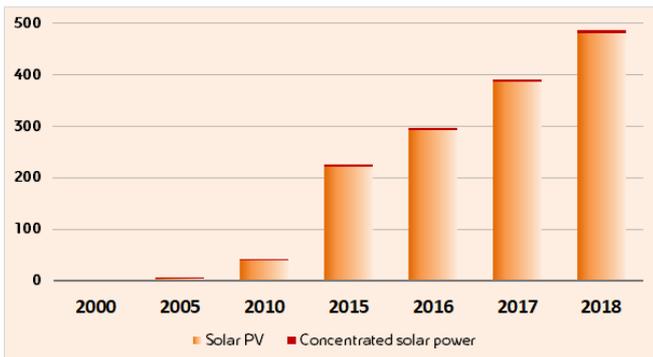
Renewables

Solar Photovoltaic
Concentrated Solar Power
Wind
Biofuels

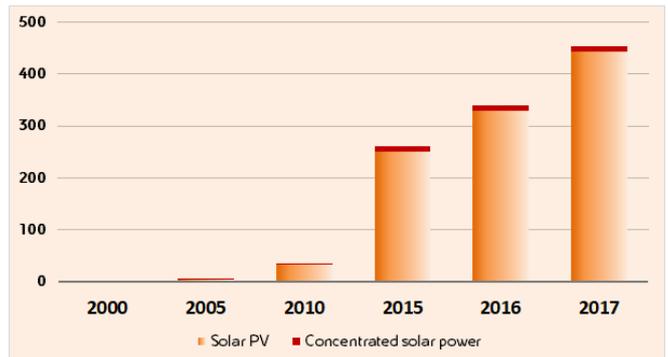
Solar Resources Map (Global Horizontal Irradiance)^(*)
(W/m²/day)



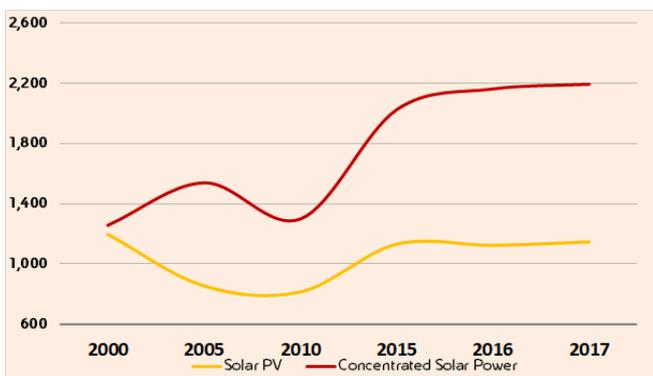
Solar Power Capacity
(GW)



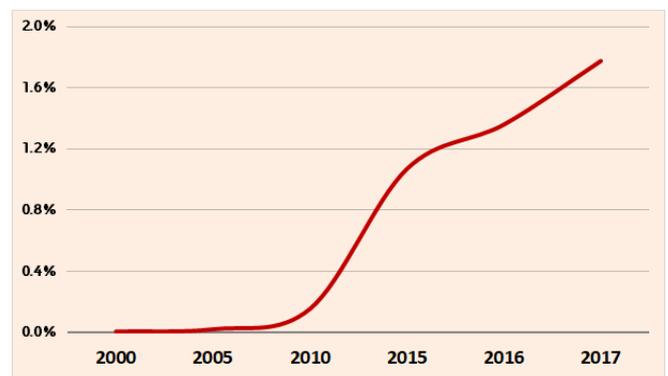
Solar Power Generation
(TWh)



Capacity Factor
(hours per year - world average)



Share of Solar on Total Power Generation



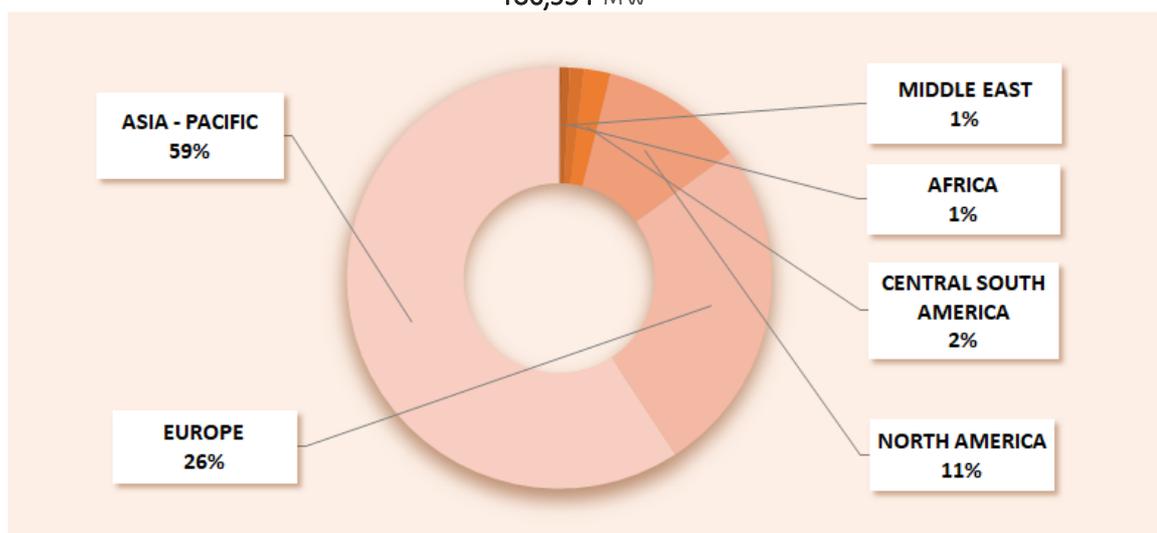
^(*) IRENA Global Atlas, Map Data: 'Vaisala Global Solar Dataset, 2019', © 2019 Open Street Map Contributors (<https://www.openstreetmap.org>).

Areas and Aggregates (*) (MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Europe	199	2,317	30,124	97,546	104,629	113,539	124,436	9.6%	19.4%
Russia and Central Asia			0	125	164	329	812	146.7%	168.6%
Middle East	0	1	85	1,047	1,529	2,077	3,025	45.7%	56.3%
Africa	11	27	195	1,935	2,973	3,759	5,118	36.1%	50.4%
Asia - Pacific	396	1,659	5,923	94,218	144,302	216,678	284,411	31.3%	62.2%
Americas	201	542	3,276	26,197	38,846	49,722	62,552	25.8%	44.6%
- North America	183	510	3,130	24,201	35,761	44,146	52,805	19.6%	42.4%
- Central South America	18	32	146	1,996	3,085	5,576	9,747	74.8%	69.1%
World	808	4,547	39,603	221,068	292,442	386,104	480,354	24.4%	36.6%
European Union	177	2,280	29,979	94,995	101,052	106,765	114,846	7.6%	18.3%
MENA	8	14	119	1,173	1,860	2,723	4,442	63.1%	57.3%
OECD	755	4,331	37,984	161,971	190,379	217,948	251,237	15.3%	26.6%
NON OECD	53	216	1,619	59,097	102,062	168,156	229,116	36.3%	85.7%
OPEC	0	2	28	278	519	997	1,421	42.5%	63.7%
NON OPEC	808	4,544	39,575	220,791	291,923	385,108	478,933	24.4%	36.6%

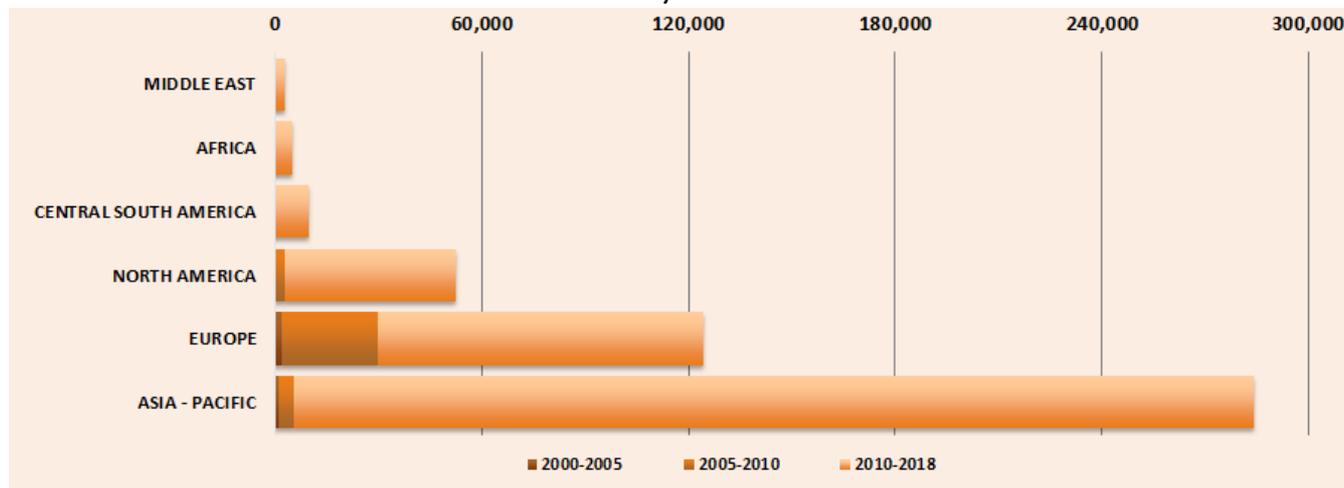
World Solar Photovoltaic Power Capacity (2018)

480,354 MW



World Solar Photovoltaic Power Capacity Growth (2000-2018)

479,546 MW

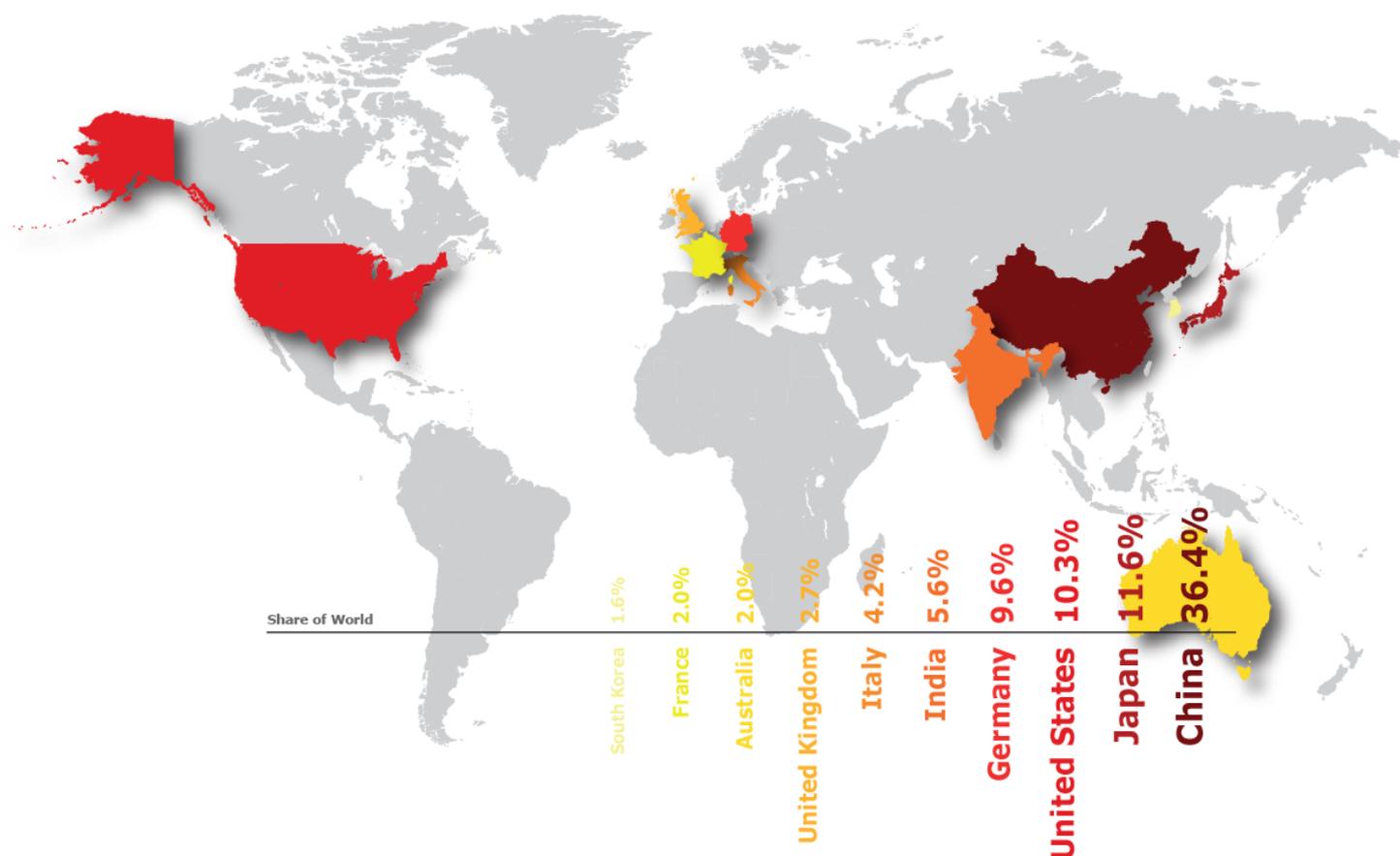


(*) Data source: Eni's calculations on IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi, data.

The World Top 10^(*) (MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
China	34	141	1,022	43,538	77,788	130,802	175,018	33.8%	90.2%
Japan	330	1,422	3,618	34,150	42,040	49,040	55,500	13.2%	40.7%
United States	176	493	2,909	21,684	33,100	41,273	49,692	20.4%	42.6%
Germany	114	2,056	18,005	39,243	40,714	42,337	45,930	8.5%	12.4%
India	1	12	65	5,168	9,418	17,644	26,869	52.3%	112.2%
Italy	19	34	3,592	18,901	19,283	19,682	20,120	2.2%	24.0%
United Kingdom	2	11	95	9,601	11,912	12,776	13,108	2.6%	85.1%
Australia	25	52	399	4,357	4,718	5,988	9,763	63.0%	49.1%
France	7	13	1,044	7,138	7,702	8,610	9,483	10.1%	31.8%
South Korea	4	14	650	3,613	4,502	5,835	7,862	34.7%	36.6%
The World Top 10	712	4,248	31,399	187,392	251,177	333,988	413,345	23.8%	38.0%
Rest of the World	97	299	8,204	33,676	41,265	52,117	67,008	28.6%	30.0%
World	808	4,547	39,603	221,068	292,442	386,104	480,354	24.4%	36.6%

The World Top 10 (2018)



^(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries (*)

(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Europe	199	2,317	30,124	97,546	104,629	113,539	124,436	9.6%	19.4%
Albania		0	0	1	1	1	1	0.0%	12.1%
Austria	5	21	89	937	1,096	1,269	1,431	12.8%	41.5%
Belarus				13	51	153	154	1.1%	
Belgium		2	1,007	3,131	3,325	3,610	4,026	11.5%	18.9%
Bosnia Herzegovina		0	0	8	14	17	19	15.2%	68.0%
Bulgaria			25	1,029	1,028	1,036	1,036	0.0%	59.3%
Croatia				48	56	60	61	1.7%	
Cyprus		1	7	76	84	110	113	2.7%	41.6%
Czech Republic	0	1	1,727	2,075	2,068	2,070	2,078	0.4%	2.3%
Denmark	1	3	7	782	851	906	998	10.1%	85.9%
Estonia			0	7	11	11	11	0.0%	80.0%
Finland	2	4	7	15	35	74	125	68.5%	43.3%
France	7	13	1,044	7,138	7,702	8,610	9,483	10.1%	31.8%
Germany	114	2,056	18,005	39,243	40,714	42,337	45,930	8.5%	12.4%
Greece		1	202	2,604	2,604	2,606	2,652	1.8%	38.0%
Hungary			2	172	235	344	665	93.3%	106.6%
Ireland			1	2	6	16	29	82.8%	59.1%
Italy	19	34	3,592	18,901	19,283	19,682	20,120	2.2%	24.0%
Latvia				0	1	1	1	71.4%	
Lithuania			0	69	70	74	84	13.6%	132.0%
Luxembourg		24	30	116	122	128	134	4.6%	20.8%
Macedonia				17	17	17	21	23.4%	
Malta		0	1	74	93	112	127	13.4%	83.3%
Moldova				1	2	2	2	0.0%	
Montenegro			1	3	3	3	3	0.0%	24.2%
Netherlands	13	51	90	1,515	2,049	2,903	4,150	43.0%	61.4%
Norway	6	7	9	15	27	45	68	52.3%	28.7%
Poland				108	187	287	487	69.5%	
Portugal	1	2	134	447	513	579	670	15.7%	22.3%
Romania			0	1,326	1,372	1,374	1,377	0.2%	229.1%
Serbia		0	1	9	11	10	10	0.0%	29.0%
Slovakia			19	533	533	528	531	0.6%	51.6%
Slovenia			12	238	233	247	256	3.6%	46.6%
Spain	10	52	3,873	4,704	4,716	4,725	4,744	0.4%	2.6%
Sweden	3	4	11	104	153	291	421	44.7%	57.7%
Switzerland	16	28	125	1,394	1,664	1,906	2,246	17.8%	43.5%
Turkey	0	2	6	249	833	3,421	5,063	48.0%	133.6%
Ukraine			3	841	955	1,200	2,003	66.9%	130.7%
United Kingdom	2	11	95	9,601	11,912	12,776	13,108	2.6%	85.1%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Russia and Central Asia			0	125	164	329	812	146.7%	
Russia				62	77	236	546	131.5%	
Armenia					1	2	17	620.8%	
Azerbaijan			0	5	25	28	36	28.2%	82.2%
Kazakhstan				57	57	59	209	255.4%	
Uzbekistan				1	4	4	4	0.0%	

(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries^(*)

(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Middle East	0	1	85	1,047	1,529	2,077	3,025	45.7%	
Bahrain				5	5	5	5	0.0%	
Iran			0	9	43	111	286	157.6%	127.4%
Iraq				37	37	37	37	0.0%	
Israel		1	70	766	866	969	1,070	10.4%	40.6%
Jordan				29	296	396	772	94.8%	
Kuwait				3	31	31	31	0.0%	
Lebanon			0	11	24	36	42	15.8%	85.3%
Oman				2	2	8	8	0.0%	
Qatar				4	5	5	5	0.0%	
Saudi Arabia	0	0	2	74	74	89	89	0.0%	57.2%
United Arab Emirates			11	35	42	255	494	93.8%	61.2%
Yemen			1	60	80	100	150	50.0%	87.1%
Others Middle East				12	25	35	37	5.1%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Africa	11	27	195	1,935	2,973	3,759	5,118	36.1%	50.4%
Algeria				49	219	400	410	2.5%	
Angola		1	7	13	13	13	13	0.0%	8.3%
Benin	0	0	0	5	8	8	8	0.0%	50.7%
Cameroon		0	1	7	9	12	14	22.4%	39.3%
Congo				1	1	1	1	0.0%	
Cote d'Ivoire		0	2	5	5	8	8	0.0%	22.8%
Dem. Rep. Congo				1	3	5	7	30.8%	
Egypt	0	1	15	25	48	169	750	343.8%	63.1%
Gabon		0	1	1	1	1	1	0.0%	0.0%
Ghana				30	34	39	64	64.8%	
Kenya			0	31	32	38	93	144.1%	115.3%
Libya		1	4	5	5	5	5	0.0%	4.1%
Madagascar		0	2	9	11	13	33	153.8%	47.2%
Mauritania				18	35	85	86	1.5%	
Morocco	7	10	14	20	22	26	206	705.9%	40.5%
Mozambique				10	13	15	17	13.3%	
Namibia	1	2	4	27	36	46	79	70.9%	44.3%
Niger	1	1	2	7	8	9	20	122.2%	32.5%
Nigeria				17	18	19	19	1.1%	
Rwanda			0	14	19	27	30	11.4%	78.0%
Senegal	1	2	3	11	43	113	134	18.6%	58.9%
Sierra Leone			0	0	1	4	4	10.5%	59.6%
Somalia				0	5	7	7	2.9%	
South Africa			2	1,252	1,974	2,186	2,559	17.0%	144.6%
Sudan		0	2	11	12	13	18	39.7%	29.0%
Tanzania				13	18	22	25	16.0%	
Tunisia	1	1	2	27	37	47	47	0.0%	52.6%
Uganda	0	3	15	22	24	46	48	4.3%	15.7%
Zambia		1	1	3	3	4	5	42.9%	19.5%
Zimbabwe				4	5	6	11	68.3%	
Others Africa	1	4	118	298	311	373	397	6.3%	16.4%

(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries^(*)

(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Asia - Pacific	396	1,659	5,923	94,218	144,302	216,678	284,411	31.3%	62.2%
Afghanistan			0	19	20	22	22	0.0%	96.2%
Australia	25	52	399	4,357	4,718	5,988	9,763	63.0%	49.1%
Bangladesh		3	32	145	155	200	201	0.4%	25.7%
China	34	141	1,022	43,538	77,788	130,802	175,018	33.8%	90.2%
India	1	12	65	5,168	9,418	17,644	26,869	52.3%	112.2%
Indonesia	0.3	1	15	51	58	59	60	2.2%	19.4%
Japan	330	1,422	3,618	34,150	42,040	49,040	55,500	13.2%	40.7%
Malaysia			1	229	279	317	438	37.9%	133.2%
Mongolia		0	5	5	15	48	63	31.4%	38.6%
Myanmar			0	26	55	55	55	0.0%	85.0%
Nepal		2	4	13	14	53	53	0.0%	37.0%
North Korea		0	1	8	10	11	11	0.0%	34.5%
New Zealand			3	38	42	59	79	34.0%	50.6%
Pakistan			9	230	411	742	1,568	111.4%	89.8%
Philippines		1	1	165	759	886	886	0.0%	133.6%
Singapore			3	46	97	116	150	29.2%	63.8%
South Korea	4	14	650	3,613	4,502	5,835	7,862	34.7%	36.6%
Sri Lanka	0	4	7	37	80	130	159	22.8%	47.8%
Taiwan	0	1	22	842	1,245	1,768	2,618	48.1%	81.7%
Thailand			49	1,420	2,446	2,697	2,720	0.8%	65.4%
Vietnam	1	3	4	5	5	8	106	1281.8%	49.8%
Others Asia - Pacific	1	3	13	114	146	199	209	5.1%	41.8%

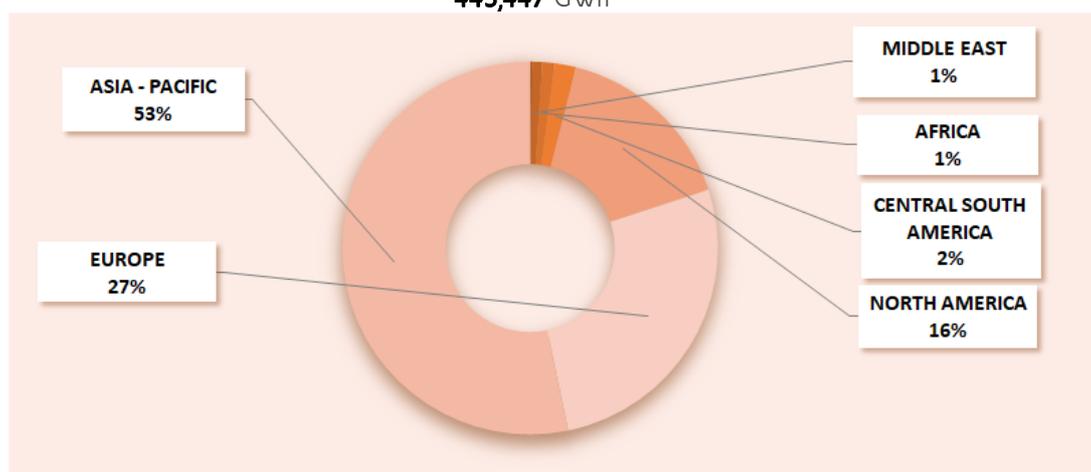
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Americas	201	542	3,276	26,197	38,846	49,722	62,552	25.8%	44.6%
Argentina				9	9	9	191	2073.9%	
Barbados		0	1	9	19	19	24	26.3%	48.8%
Bolivia	0	1	3	6	6	8	71	846.7%	48.5%
Brazil			1	23	80	1,097	2,296	109.3%	163.1%
Canada	7	17	221	2,517	2,661	2,873	3,113	8.4%	39.2%
Chile				576	1,125	1,809	2,137	18.1%	
Colombia	1	1	1	1	2	12	87	652.2%	86.1%
Costa Rica	0	3	6	23	24	28	28	0.0%	20.7%
Cuba				24	37	66	96	46.9%	
Dominican Republic				23	68	103	166	61.9%	
Ecuador				26	26	26	26	0.0%	
El Salvador				25	26	119	184	54.7%	
Guatemala	0	0	1	93	93	99	114	14.3%	92.6%
Honduras	2	3	4	393	414	451	516	14.4%	85.4%
Jamaica		0	1	7	28	56	56	0.0%	65.2%
Mexico	14	16	29	173	389	674	2,541	277.2%	74.9%
Nicaragua	0	1	4	10	19	30	30	0.3%	31.0%
Panama	0	1	2	49	93	147	147	0.0%	72.2%
Peru	1	5	13	139	146	153	345	125.0%	51.4%
United States	176	493	2,909	21,684	33,100	41,273	49,692	20.4%	42.6%
Uruguay			0	65	90	239	248	3.8%	143.6%
Venezuela			2	5	5	5	4	-11.1%	10.5%
Others Americas	0	3	80	320	388	429	441	2.7%	23.8%

(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

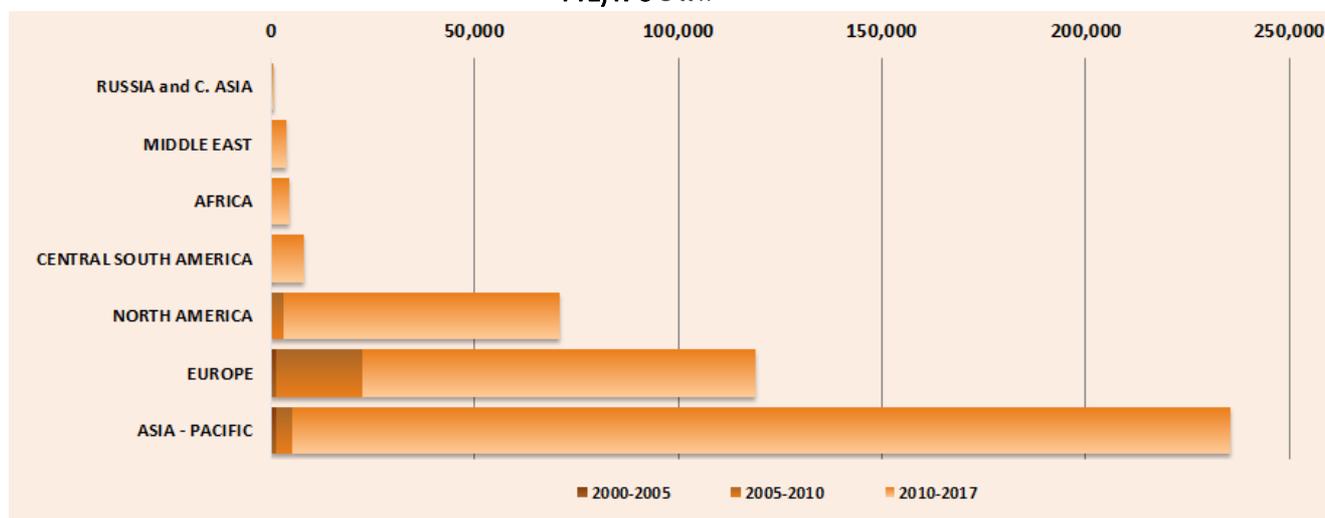
Areas and Aggregates^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Europe	125	1,488	22,599	104,621	108,804	118,971	132,533	11.4%	47.3%
Russia and Central Asia				388	587	692		17.9%	
Middle East			72	1,419	2,857	3,962		38.7%	
Africa	12	25	337	3,359	4,018	4,671		16.3%	42.0%
Asia - Pacific	626	1,813	5,813	103,216	158,030	236,133		49.4%	41.8%
Americas	206	552	3,358	37,563	54,822	79,018		44.1%	41.9%
- North America	199	541	3,318	34,986	49,898	70,966		42.2%	41.3%
- Central South America	7	11	40	2,577	4,924	8,052		63.5%	51.4%
World	969	3,878	32,179	250,566	329,118	443,447		11.4%	43.4%
European Union	114	1,467	22,505	102,787	105,847	113,509		7.2%	50.1%
MENA		2	215	595	1,685	3,330		97.6%	
OECD	731	3,551	30,700	181,888	216,361	262,153	315,516	21.2%	40.1%
NON OECD	238	327	1,479	68,678	112,757	181,294		60.8%	47.7%
OPEC		2	8	894	975	2,007		105.8%	
NON OPEC	969	3,876	32,171	249,672	328,143	441,440		34.5%	43.3%

World Solar Photovoltaic Power Generation (2017) 443,447 GWh



World Solar Photovoltaic Power Generation Growth (2000-2017) 442,478 GWh



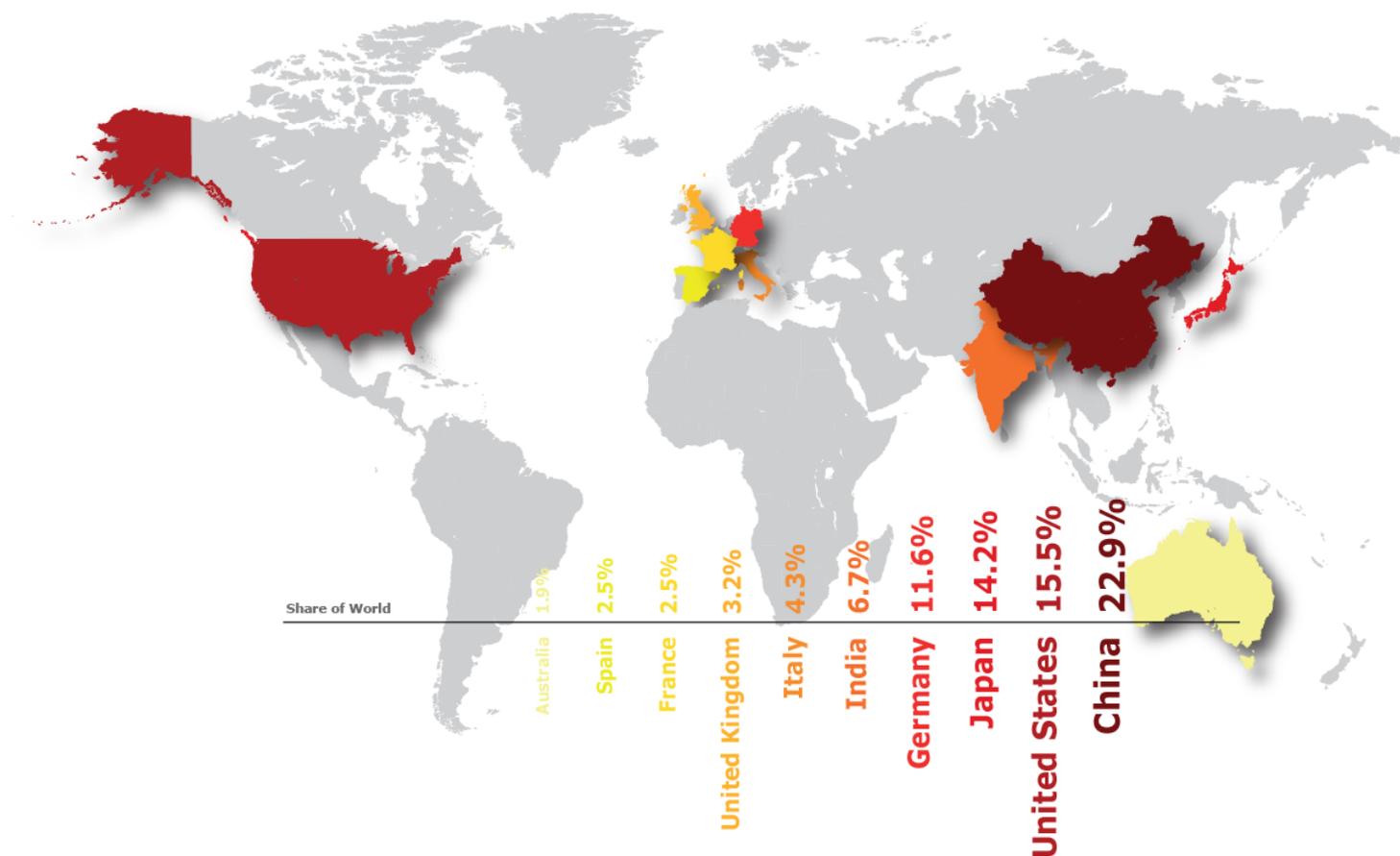
^(*) Data source: Eni's calculations on IEA (2019) *Extended Balances* data. All rights reserved.

^(**) When 2018 data is missing, the figure refers to the latest available years.

The World Top 10^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
China	22	84	699	44,783	75,257	130,659		73.6%	66.7%
United States	183	524	3,063	32,091	46,633	67,393	87,183	29.4%	40.9%
Japan	357	1,421	3,543	34,803	45,761	55,069	67,609	22.8%	33.8%
Germany	60	1,282	11,729	38,726	38,098	39,401	46,164	17.2%	44.7%
India	2	3	126	10,420	18,778	26,035		38.6%	74.6%
Italy	18	31	1,906	22,942	22,104	24,378	22,653	-7.1%	48.7%
United Kingdom	1	8	40	7,533	10,411	11,525	12,922	12.1%	69.2%
France	5	11	620	7,750	8,657	9,573	10,196	6.5%	52.7%
Spain	14	48	6,425	8,266	8,064	8,514	7,512	-11.8%	41.8%
Australia	38	78	386	5,019	6,205	8,071	9,927	23.0%	36.2%
The World Top 10	700	3,490	28,537	212,333	279,968	380,618		36.0%	44.8%
Rest of the World	269	388	3,642	38,233	49,150	62,829		27.8%	37.8%
World	969	3,878	32,179	250,566	329,118	443,447		34.7%	43.4%

The World Top 10 (2017)



(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

Countries^(*)
(GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	125	1,488	22,599	104,621	108,804	118,971	132,533	11.4%	47.3%
Austria	3	21	89	937	1,096	1,269	1,438	13.3%	40.9%
Belarus				8	28	89	177	98.9%	
Belgium		1	560	3,053	3,092	3,288	3,972	20.8%	
Bulgaria			15	1,383	1,386	1,403	1,337	-4.7%	
Croatia				57	66	79	75	-5.1%	
Cyprus		1	7	126	146	172	192	11.6%	
Czech Republic			616	2,264	2,131	2,193	2,340	6.7%	
Denmark	1	2	6	604	744	751	953	26.9%	46.4%
Finland	2	3	5	9	19	44	162	268.2%	27.7%
France	5	11	620	7,750	8,657	9,573	10,196	6.5%	52.7%
Germany	60	1,282	11,729	38,726	38,098	39,401	46,164	17.2%	44.7%
Greece		1	158	3,900	3,930	3,991	3,792	-5.0%	
Hungary			1	141	244	349	607	73.9%	
Ireland				3	6	11	15	36.4%	
Italy	18	31	1,906	22,942	22,104	24,378	22,653	-7.1%	48.7%
Lithuania				73	66	68	87	27.9%	
Luxembourg		18	21	104	100	108	112	3.7%	
Macedonia				23	24	24	24	0.0%	
Malta			1	95	127	155	190	22.6%	
Netherlands	8	35	56	1,109	1,602	2,204	3,201	45.2%	39.5%
Poland				57	124	165	301	82.4%	
Portugal	1	3	211	796	871	992	1,020	2.8%	46.9%
Romania				1,982	1,820	1,856	1,771	-4.6%	
Serbia				11	12	13	13	0.0%	
Slovakia			17	506	533	506	585	15.6%	
Slovenia			13	274	267	284	255	-10.2%	
Spain	14	48	6,425	8,266	8,064	8,514	7,512	-11.8%	41.8%
Sweden	1	2	9	97	143	230	404	75.7%	39.6%
Switzerland	11	21	94	1,119	1,333	1,683	1,884	11.9%	33.1%
Turkey				194	1,043	2,889	7,477	158.8%	
Ukraine				477	491	739	677	-8.4%	
United Kingdom	1	8	40	7,533	10,411	11,525	12,922	12.1%	69.2%
Others Europe				2	26	25	25	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Russia and Central Asia				388	587	692		17.9%	
Armenia				1	1	3		200.0%	
Azerbaijan				5	35	37	39	5.4%	
Russia				335	462	558	624	11.8%	
Kazakhstan				47	89	94	115	22.3%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Middle East			72	1,419	2,857	3,962		38.7%	
Iran				1	4	85		2025.0%	
Israel			70	1,115	1,544	1,511	1,724	14.1%	
Jordan				2	491	895		82.3%	
Kuwait					2	4		100.0%	
Saudi Arabia				129	129	155		20.2%	
United Arab Emirates				53	95	535		463.2%	
Yemen			2	110	549	732		33.3%	
Others Middle East				9	43	45		4.7%	

(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

Renewables

Solar Photovoltaic Power Generation

Countries^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Africa	12	25	337	3,359	4,018	4,671		19.6%	43.8%
Algeria				58	87	572		557.5%	
Benin				5	5	5		0.0%	
Cameroon			1	10	12	12		0.0%	
Congo				576	576	576		0.0%	
Egypt			206	168	210	210		0.0%	
Ethiopia			8	95	110	118		7.3%	
Gabon				2	2	2		0.0%	
Ghana				3	27	28		3.7%	
Kenya	9	13	19	37	40	40		0.0%	9.2%
Libya		2	6	8	8	8		0.0%	
Nigeria				24	26	26		0.0%	
Senegal	2	3	5	18	87	137		57.5%	28.2%
South Africa				2,183	2,600	2,634		1.3%	
Tanzania		3	7	15	18	19		5.6%	
Tunisia			1	65	109	133		22.0%	
Uganda					6	23		283.3%	
Others Africa	1	4	84	92	95	128		34.7%	
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Asia - Pacific	626	1,813	5,813	103,216	158,030	236,133		49.4%	41.8%
Australia	38	78	386	5,019	6,205	8,071	9,927	23.0%	36.2%
Bangladesh				154	165	177		7.3%	
Brunei				2	1	2		100.0%	
China	22	84	699	44,783	75,257	130,659		73.6%	66.7%
Hong Kong				1	1	1		0.0%	
India	2	3	126	10,420	18,778	26,035		38.6%	74.6%
Indonesia			1	5	21	29		38.1%	
Japan	357	1,421	3,543	34,803	45,761	55,069		20.3%	34.5%
Malaysia		1		273	310	330		6.5%	
New Zealand			4	36	55	75	97	29.3%	
Philippines		2	1	139	1,097	1,201		9.5%	
Singapore			5	69	146	169	229	35.5%	
South Korea	5	15	772	3,975	5,123	7,056		37.7%	53.2%
Sri Lanka	8	14	17	21	23	141		513.0%	18.4%
Taiwan		1	23	876	1,132	1,692		49.5%	
Thailand			20	2,378	3,377	4,543		34.5%	
Others Asia-Pacific	194	194	216	262	578	883		52.8%	9.3%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Americas	206	552	3,358	37,563	54,822	79,018		44.1%	41.9%
Argentina				15	14	16		14.3%	
Bolivia			3	11	11	11		0.0%	
Brazil				59	85	832	3,461	316.0%	
Canada	16	17	255	2,895	3,265	3,573	3,849	7.7%	35.6%
Chile				1,261	2,639	3,915	5,121	30.8%	
Costa Rica				3	3	4		33.3%	
Cuba				29	39	60		53.8%	
Dominican Republic				32	75	139		85.3%	
Ecuador				36	39	37		-5.1%	
Guatemala				150	193	199		3.1%	
Mexico	7	9	31	239	464	1,085	3,199	194.8%	40.5%
Panama				16	71	156		119.7%	
Peru				230	241	287		19.1%	
Uruguay				49	152	269		77.0%	
United States	183	524	3,063	32,091	46,633	67,393	87,183	29.4%	40.9%
Others Americas		2	6	447	898	1,042			

(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

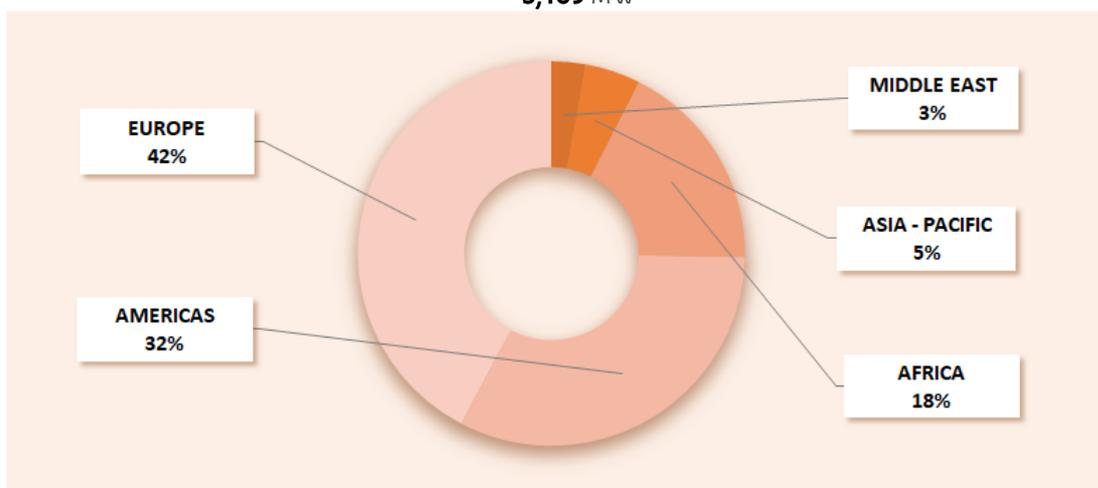
Areas and Aggregates (*)

(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Europe			739	2,313	2,313	2,313	2,313	0.0%	15.3%
Middle East			6	106	106	106	156	47.1%	50.0%
Africa			45	325	425	525	975	85.7%	46.9%
Asia - Pacific		0	6	250	250	253	253	0.0%	60.7%
Americas	419	388	473	1,758	1,758	1,758	1,772	0.8%	18.0%
- North America	419	388	473	1,758	1,758	1,758	1,758	0.0%	17.8%
- Central South America							14		
World	419	388	1,269	4,753	4,853	4,955	5,469	10.4%	20.0%
European Union			739	2,312	2,312	2,312	2,312	0.0%	15.3%
MENA			51	331	331	331	731	120.8%	39.5%
OECD	419	388	1,221	4,080	4,080	4,083	4,097	0.3%	16.3%
NON OECD			48	672	772	872	1,373	57.3%	52.2%
OPEC			25	125	125	125	175	40.0%	27.5%
NON OPEC	419	388	1,244	4,628	4,728	4,830	5,294	9.6%	19.9%

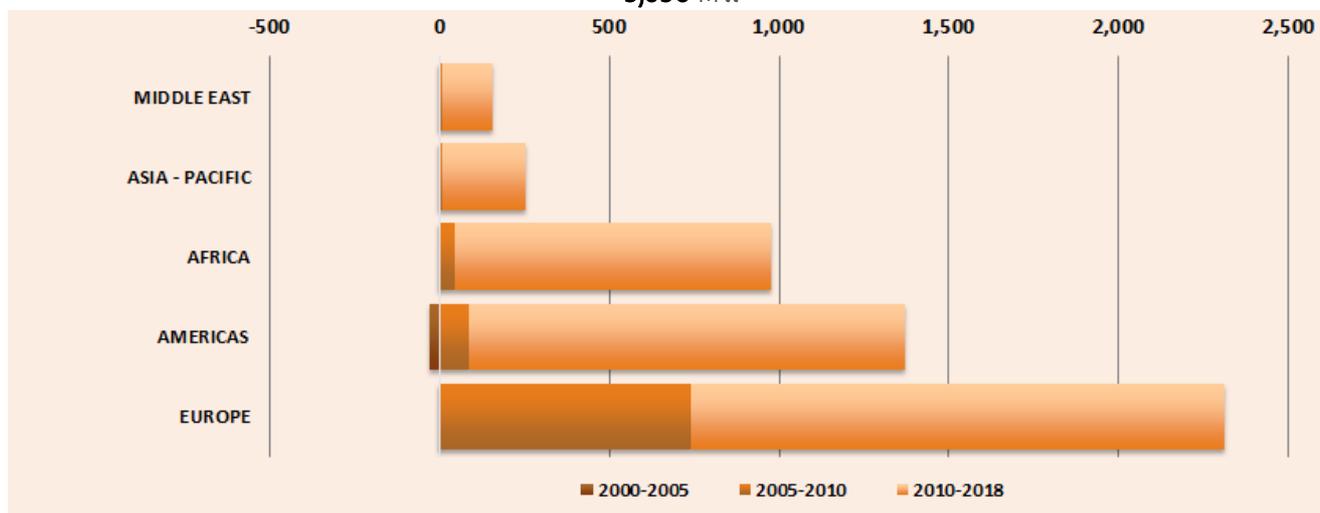
World Concentrated Solar Power Capacity (2018)

5,469 MW



World Concentrated Solar Power Capacity Growth (2000-2018)

5,050 MW

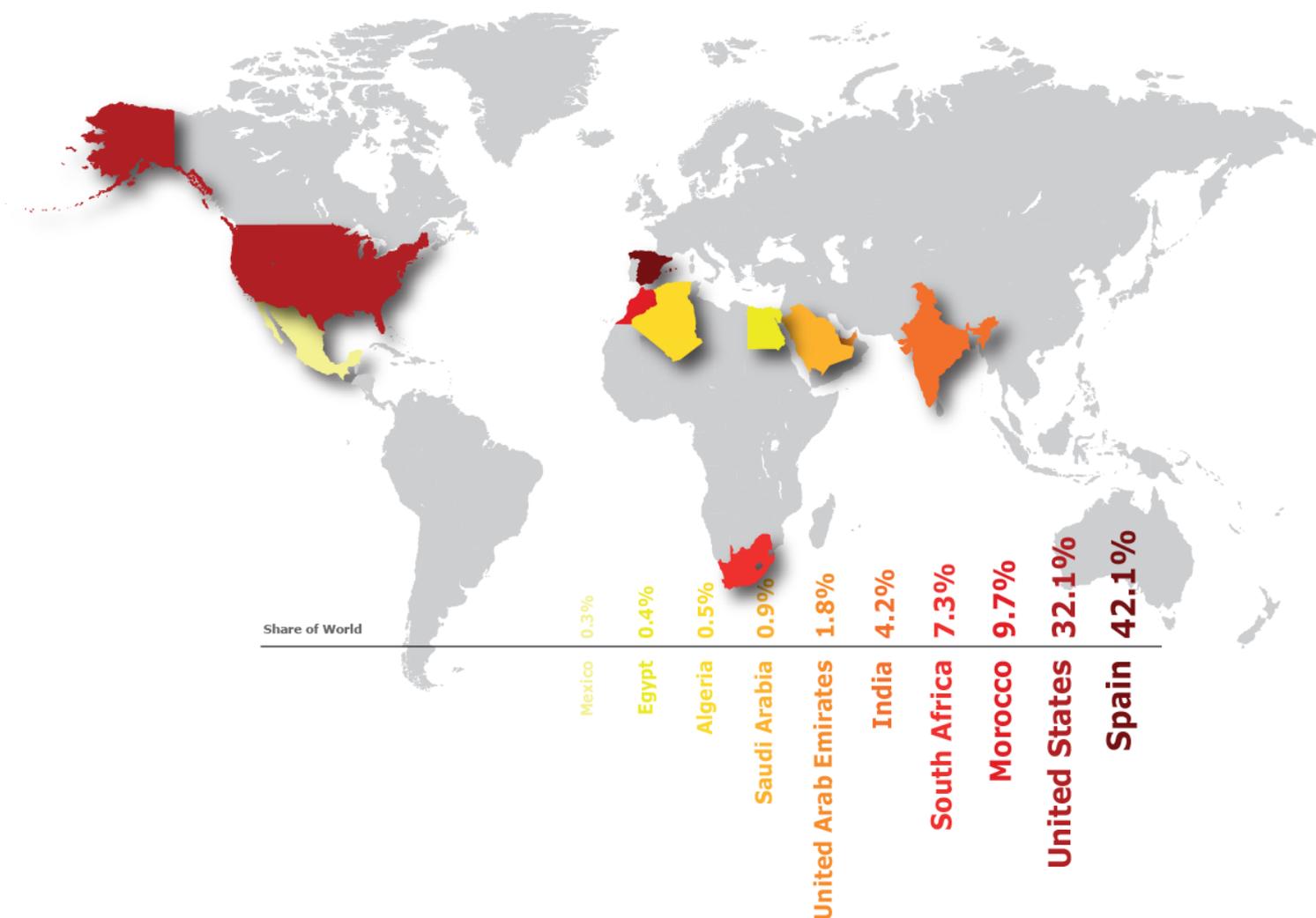


(*) Data source: Eni's calculations on IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi, data.

The World Top 10^(*) (MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Spain			732	2,304	2,304	2,304	2,304	0.0%	15.4%
United States	419	388	473	1,758	1,758	1,758	1,758	0.0%	17.8%
Morocco			20	180	180	180	530	194.4%	50.6%
South Africa				100	200	300	400	33.3%	
India				229	229	229	229	0.0%	
United Arab Emirates				100	100	100	100	0.0%	
Saudi Arabia							50		
Algeria			25	25	25	25	25	0.0%	0.0%
Egypt				20	20	20	20	0.0%	
Mexico							14		
The World Top 10	419	388	1,250	4,716	4,816	4,916	5,430	10.5%	20.2%
Rest of the World		0	19	37	37	40	40	0.0%	10.0%
World	419	388	1,269	4,753	4,853	4,955	5,469	10.4%	20.0%

The World Top 10 (2018)



^(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries^(*)
(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Europe			739	2,313	2,313	2,313	2,313	0.0%	15.3%
Germany			2	2	2	2	2	0.0%	0.0%
Italy			5	6	6	6	6	0.0%	3.3%
Spain			732	2,304	2,304	2,304	2,304	0.0%	15.4%
Turkey				1	1	1	1	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Middle East			6	106	106	106	156	47.1%	50.0%
Israel			6	6	6	6	6	0.0%	0.0%
Saudi Arabia							50		
United Arab Emirates				100	100	100	100	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Africa			45	325	425	525	975	85.7%	46.9%
Algeria			25	25	25	25	25	0.0%	0.0%
Egypt				20	20	20	20	0.0%	
Morocco			20	180	180	180	530	194.4%	50.6%
South Africa				100	200	300	400	33.3%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Asia - Pacific		0	6	250	250	253	253	0.0%	60.7%
Australia		0	3	3	3	6	6	0.0%	8.1%
China			3	14	14	14	14	0.0%	22.7%
India				229	229	229	229	0.0%	
Thailand				5	5	5	5	0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2010)
Americas	419	388	473	1,758	1,758	1,758	1,772	0.8%	18.0%
Mexico							14		
United States	419	388	473	1,758	1,758	1,758	1,758	0.0%	17.8%

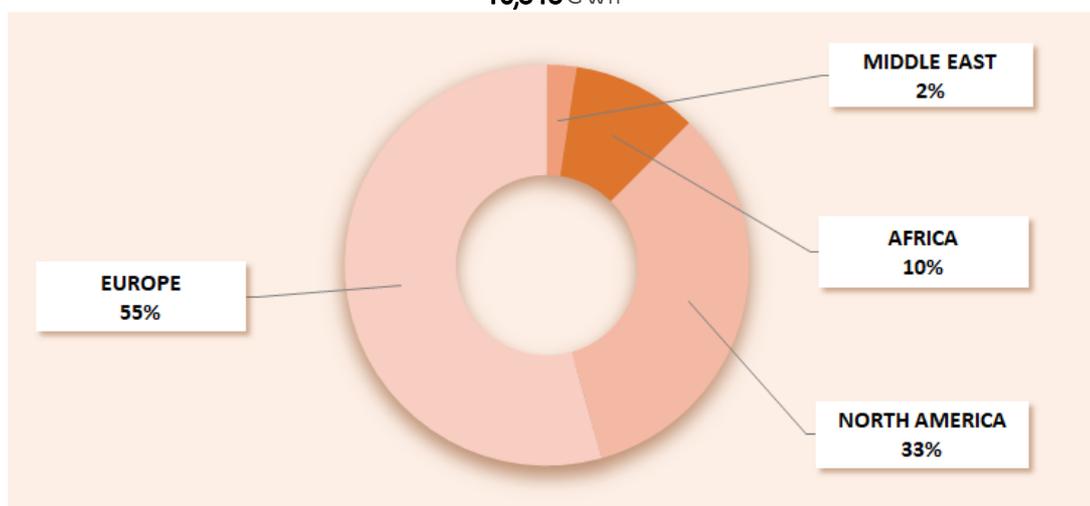
(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Areas and Aggregates^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Europe			761	5,593	5,579	5,883	5,191	-11.8%	
Middle East				243	261	257		-1.5%	
Africa				194	900	1,090		21.1%	
Asia - Pacific		1	5	31	33	31		-6.1%	
Americas	526	596	879	3,544	3,701	3,587	4,640	29.4%	12.9%
- North America	526	596	879	3,544	3,701	3,587	4,640	29.4%	12.9%
World	526	597	1,645	9,605	10,474	10,848		9.0%	20.6%
European Union			761	5,593	5,579	5,883	5,191	-11.8%	
MENA				247	661	671		1.5%	
OECD	526	597	1,643	9,141	9,284	9,472	9,834	3.8%	17.7%
NON OECD			2	464	1,190	1,376		15.6%	
OPEC				243	261	257		-1.5%	
NON OPEC	526	597	1,645	9,362	10,213	10,591		3.7%	19.3%

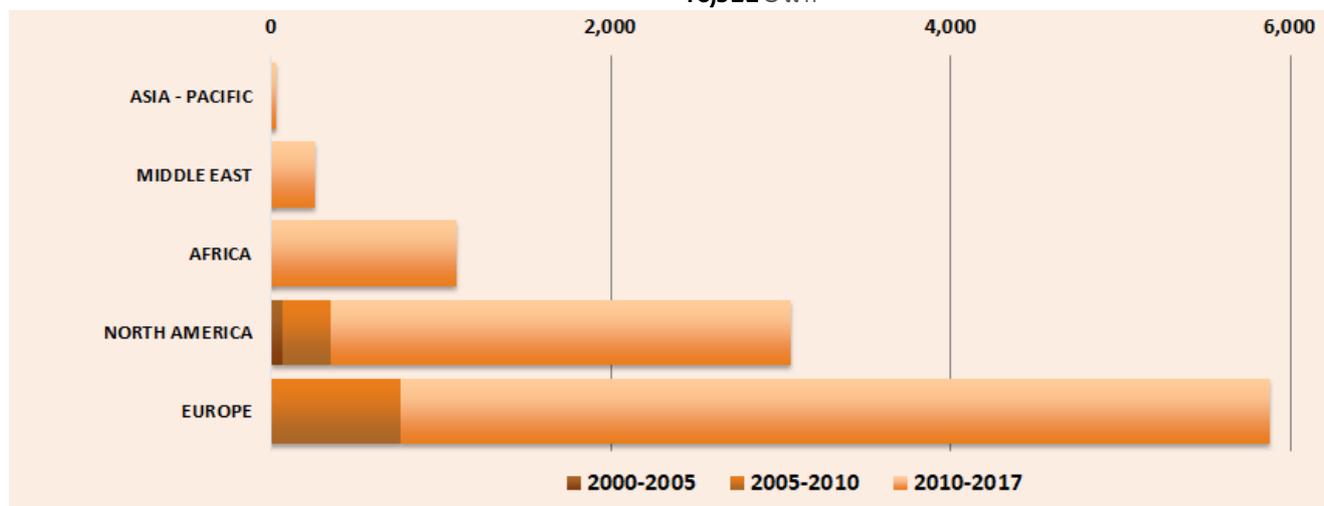
World Concentrated Solar Power Generation (2017)

10,848 GWh



World Concentrated Solar Power Generation Growth (2000-2017)

10,322 GWh



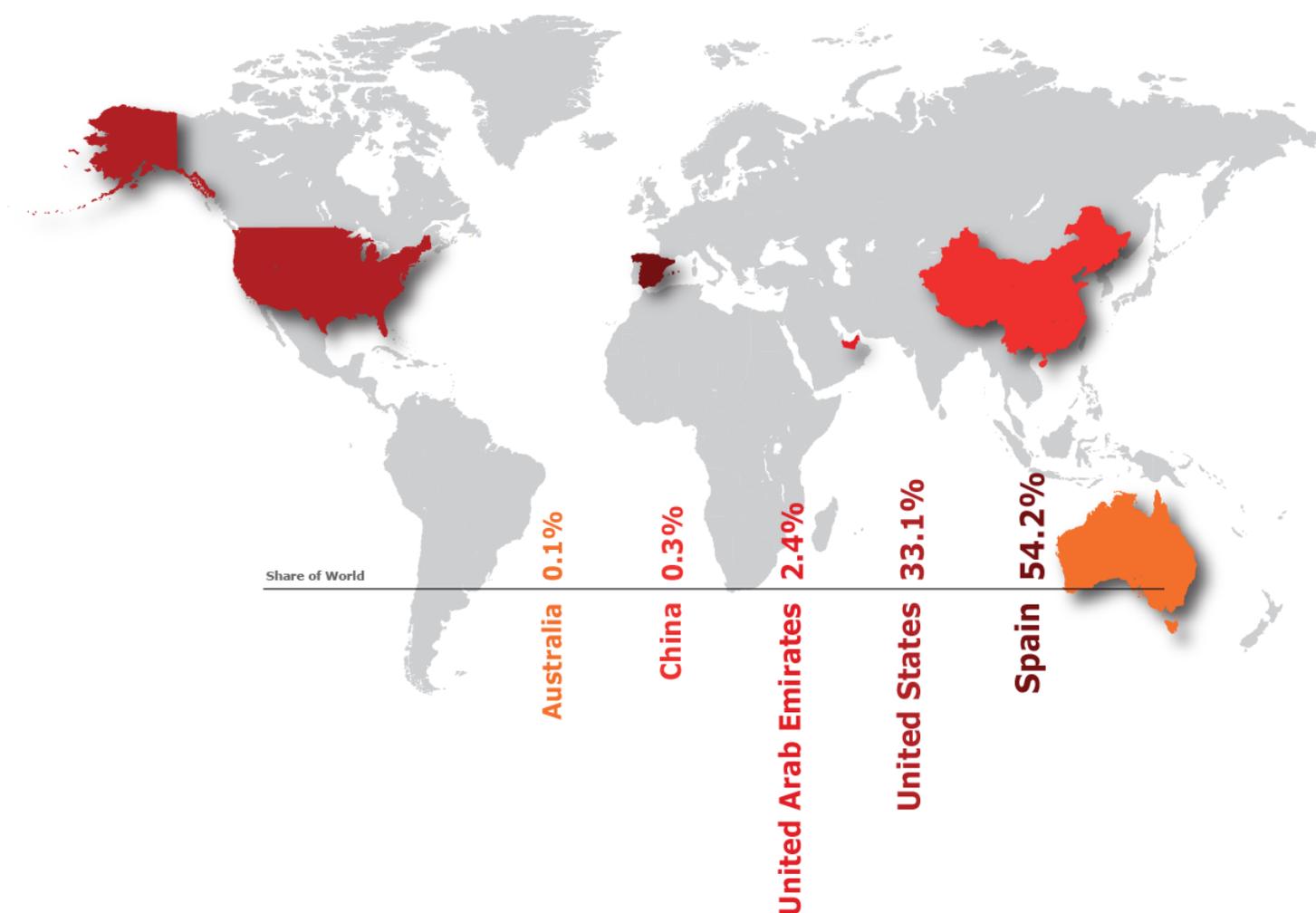
(*) Data source: Eni's calculations on IEA (2019) *Extended Balances* data. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

The World Top 5^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Spain			761	5,593	5,579	5,883	5,191	-11.8%	
United States	526	596	879	3,544	3,701	3,587	4,640	29.4%	12.9%
United Arab Emirates				243	261	257		-1.5%	
China			2	27	29	29		0.0%	
Australia		1	3	4	4	2	3	50.0%	
The World Top 5	526	597	1,645	9,411	9,574	9,758		1.7%	19.9%
Rest of the World				194	900	1,090		21.1%	
World	526	597	1,645	9,605	10,474	10,848		9.0%	20.6%

The World Top 5 (2017)



(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

Renewables

Concentrated Solar Power Generation

Countries^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe			761	5,593	5,579	5,883	5,191	-11.8%	
Spain			761	5,593	5,579	5,883	5,191	-11.8%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Middle East				243	261	257		-1.5%	
United Arab Emirates				243	261	257		-1.5%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Africa				194	900	1,090		21.1%	
Morocco				4	400	414		3.5%	
South Africa				190	500	676		35.2%	

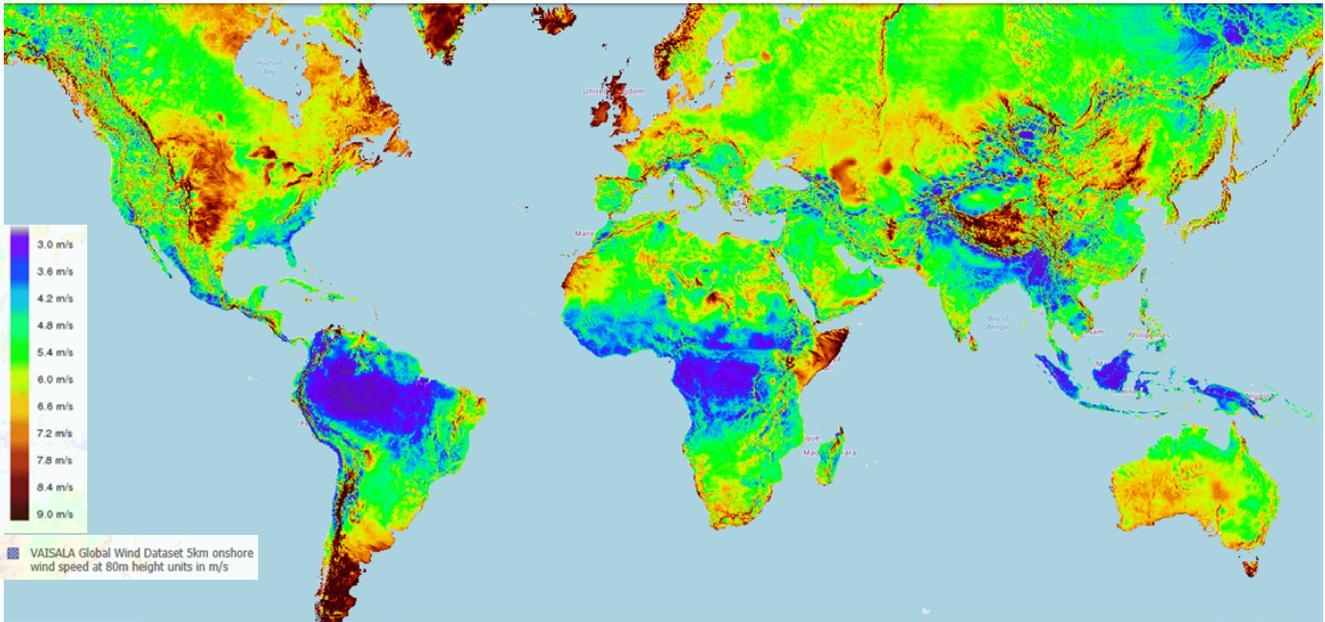
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Asia - Pacific		1	5	31	33	31		-6.1%	
Australia		1	3	4	4	2	3	50.0%	
China			2	27	29	29		0.0%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas	526	596	879	3,544	3,701	3,587	4,640	29.4%	12.9%
United States	526	596	879	3,544	3,701	3,587	4,640	29.4%	12.9%

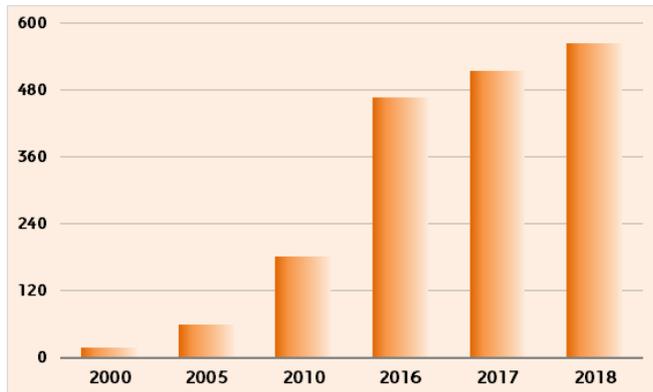
(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

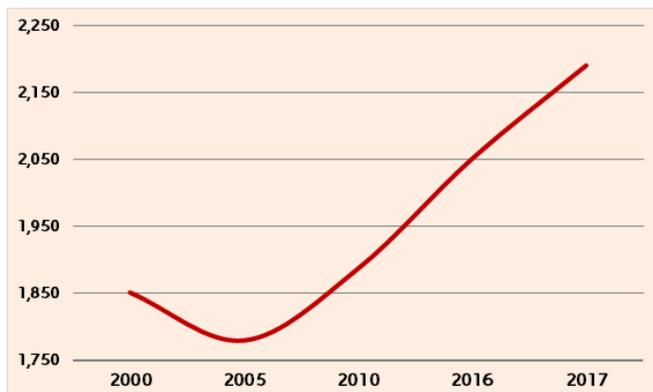
Wind Resources Map (Average Wind Speed)^(*)
(m/s)



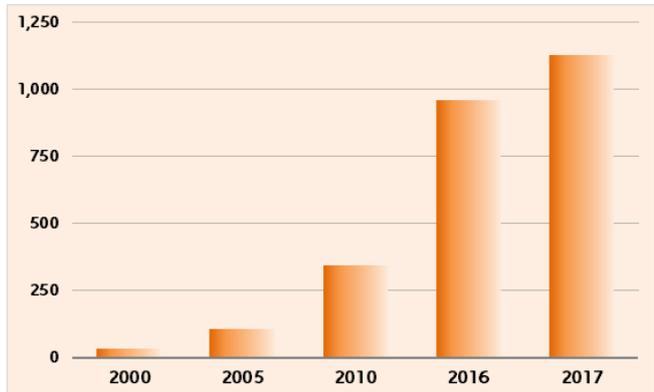
Wind Power Capacity
(GW)



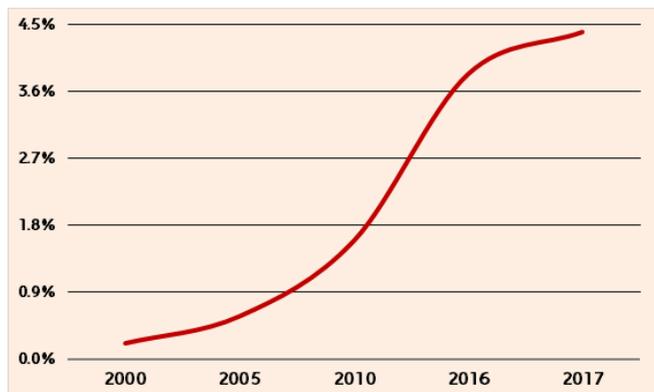
Capacity Factor
(hours per year - world average)



Wind Power Generation
(TWh)



Share of Wind on Total Power Generation



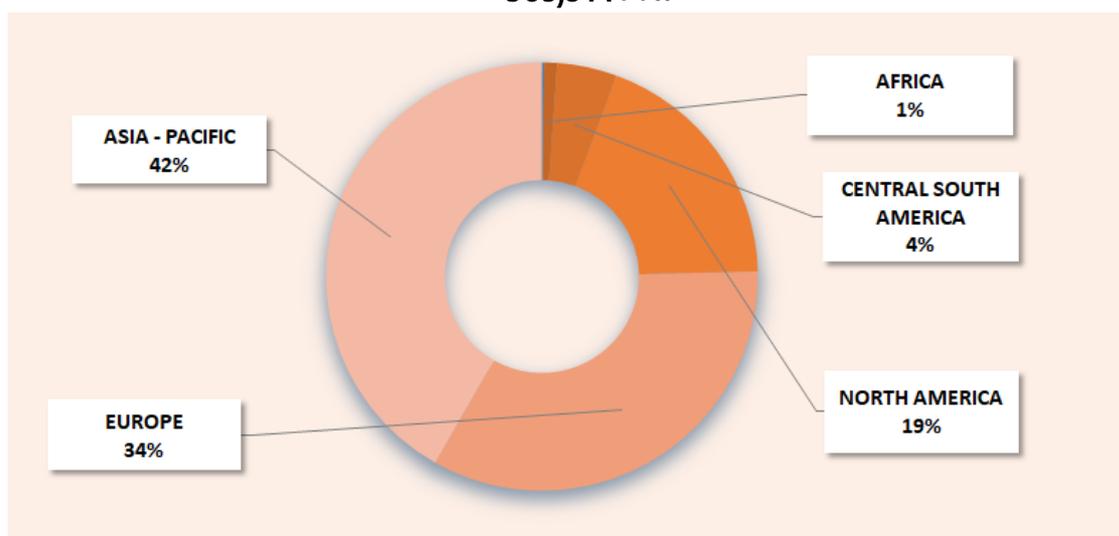
^(*) IRENA Global Atlas, Map Data: 'Vaisala Global Wind Dataset, 2019', © 2019 Open Street Map Contributors (<https://www.openstreetmap.org>).

Areas and Aggregates^(*) (MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	12,749	40,676	86,241	147,517	161,655	177,525	189,459	6.7%	16.2%
Russia and Central Asia	3	13	15	93	148	198	317	60.4%	29.6%
Middle East	12	45	104	284	408	435	612	40.8%	24.2%
Africa	133	237	861	3,317	3,828	4,570	5,464	19.6%	22.9%
Asia - Pacific	1,452	7,811	48,522	166,768	189,252	210,499	235,584	11.9%	32.7%
Americas	2,576	9,594	45,111	98,317	111,858	121,472	132,375	9.0%	24.5%
- North America	2,469	9,383	43,103	83,787	93,359	99,946	107,111	7.2%	23.3%
- Central South America	107	211	2,008	14,530	18,499	21,526	25,263	17.4%	35.4%
World	16,926	58,375	180,853	416,296	467,149	514,698	563,811	10.2%	22.2%
European Union	12,671	40,214	84,163	140,453	152,707	166,890	177,335	8.7%	16.4%
MENA	145	263	928	2,081	2,310	2,457	3,212	11.0%	18.1%
OECD	15,273	51,729	132,573	236,581	261,637	284,530	305,155	10.6%	18.8%
NON OECD	1,653	6,646	48,280	179,715	205,512	230,168	258,656	14.4%	33.7%
OPEC	11	39	100	240	276	289	380	15.3%	21.2%
NON OPEC	16,915	58,336	180,753	416,056	466,873	514,409	563,431	12.2%	22.2%

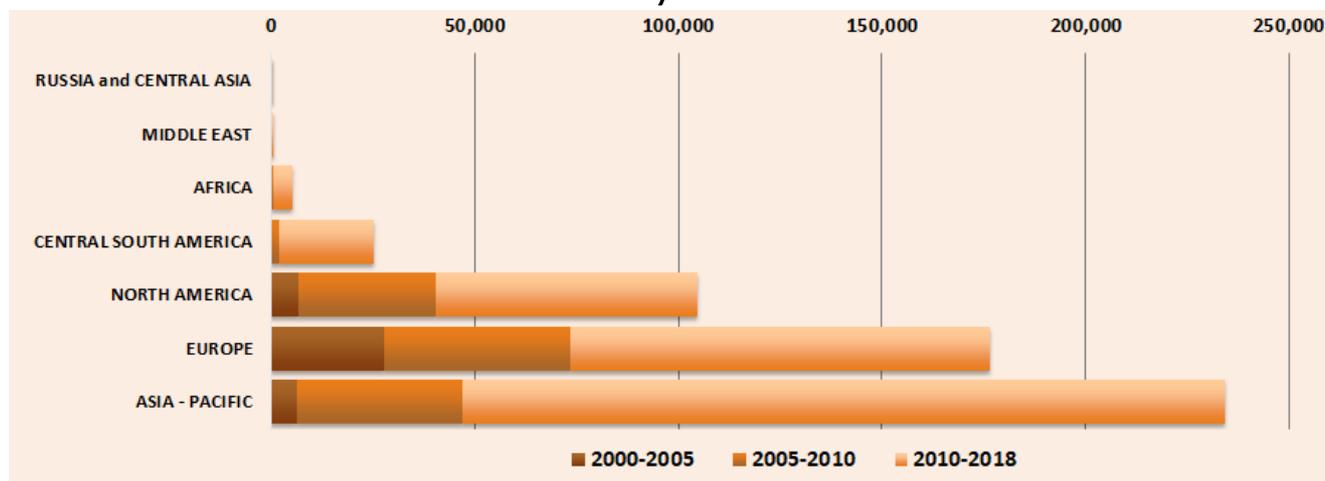
World Wind Power Capacity (2018)

563,811 MW



World Wind Power Capacity Growth (2010-2018)

546,885 MW

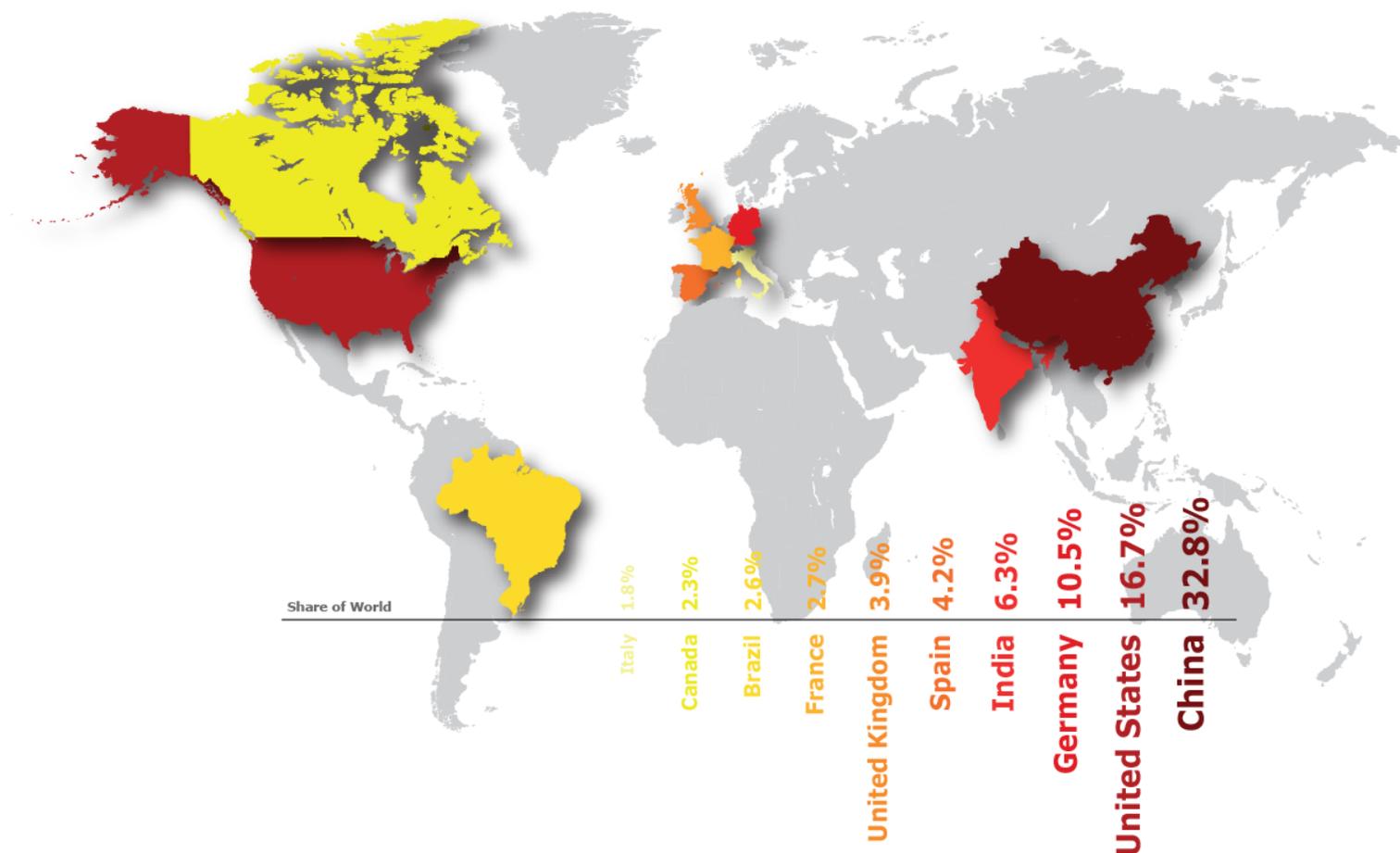


^(*) Data source: Eni's calculations on IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi, data.

The World Top 10^(*) (MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
China	341	1,060	29,634	131,048	148,517	164,392	184,696	12.4%	41.9%
United States	2,377	8,706	39,135	72,573	81,386	87,543	94,295	7.7%	22.7%
Germany	6,095	18,248	26,903	44,580	49,592	55,718	59,420	6.6%	13.5%
India	941	4,434	13,184	25,088	28,700	32,849	35,288	7.4%	22.3%
Spain	2,206	9,918	20,693	22,943	22,990	23,100	23,436	1.5%	14.0%
United Kingdom	412	1,565	5,421	14,306	16,174	19,835	21,736	9.6%	24.6%
France	38	690	5,912	10,258	11,511	13,512	15,108	11.8%	39.4%
Brazil	22	29	927	7,633	10,124	12,294	14,401	17.1%	43.4%
Canada	92	677	3,967	11,214	11,973	12,403	12,816	3.3%	31.6%
Italy	363	1,635	5,794	9,137	9,384	9,737	10,310	5.9%	20.4%
The World Top 10	12,887	46,962	151,570	348,780	390,351	431,382	471,507	9.3%	22.1%
Rest of the World	4,039	11,413	29,283	67,516	76,798	83,316	92,304	10.8%	19.0%
World	16,926	58,375	180,853	416,296	467,149	514,698	563,811	9.5%	21.5%

The World Top 10 (2018)



^(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries(*)
(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	12,749	40,676	86,241	147,517	161,655	177,525	189,459	6.7%	16.2%
Austria	50	825	1,016	2,489	2,730	2,887	3,078	6.6%	25.7%
Belarus	0	1	2	43	68	83	101	22.1%	38.2%
Belgium	14	167	912	2,176	2,370	2,806	3,157	12.5%	35.1%
Bosnia Herzegovina				0	0	0	51		
Bulgaria		8	488	699	699	698	698	0.0%	
Croatia		6	79	418	483	576	582	1.0%	
Cyprus			82	158	158	158	158	0.0%	
Czech Republic	1	22	213	281	282	308	316	2.5%	37.7%
Denmark	2,390	3,128	3,802	5,077	5,246	5,522	5,758	4.3%	5.0%
Estonia		31	108	300	310	312	312	0.0%	
Finland	38	82	197	1,005	1,565	2,041	2,041	0.0%	24.8%
France	38	690	5,912	10,258	11,511	13,512	15,108	11.8%	39.4%
Germany	6,095	18,248	26,903	44,580	49,592	55,718	59,420	6.6%	13.5%
Greece	226	491	1,298	2,091	2,370	2,624	2,877	9.6%	15.2%
Hungary		17	293	329	329	329	329	0.0%	
Iceland				3	3	3	3	0.0%	
Ireland	117	493	1,390	2,451	2,786	3,318	3,518	6.0%	20.8%
Italy	363	1,635	5,794	9,137	9,384	9,737	10,310	5.9%	20.4%
Latvia	2	26	30	68	70	77	77	0.0%	22.5%
Lithuania		1	133	436	509	518	521	0.6%	
Luxembourg	14	35	44	64	120	120	150	25.1%	14.1%
Macedonia				37	37	37	37	0.0%	
Moldova			1	2	2	2	2	0.0%	
Montenegro						72	118	63.9%	
Netherlands	447	1,224	2,237	3,391	4,257	4,202	4,471	6.4%	13.6%
Norway	13	265	425	867	883	1,207	1,675	38.8%	31.0%
Poland	4	121	1,108	4,886	5,747	5,759	5,775	0.3%	49.8%
Portugal	83	1,064	3,796	4,937	5,124	5,124	5,191	1.3%	25.8%
Romania		1	389	3,130	3,025	3,030	3,030	0.0%	
Serbia				10	17	25	374	1396.0%	
Slovakia		5	3	3	3	4	4	0.0%	
Slovenia				5	5	5	5	0.0%	
Spain	2,206	9,918	20,693	22,943	22,990	23,100	23,436	1.5%	14.0%
Sweden	209	493	2,019	5,840	6,434	6,611	7,318	10.7%	21.8%
Switzerland	3	12	42	60	75	75	75	0.0%	19.6%
Turkey	19	21	1,320	4,503	5,751	6,516	7,005	7.5%	38.9%
Ukraine	5	77	88	514	526	553	621	12.3%	30.7%
United Kingdom	412	1,565	5,421	14,306	16,174	19,835	21,736	9.6%	24.6%
Others Europe	0	4	4	20	20	20	20	0.0%	29.3%
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia	3	13	15	93	148	198	317	60.4%	29.6%
Russia	3	10	10	11	11	46	106	130.7%	21.9%
Armenia		3	3	3	3	3	3	0.0%	
Azerbaijan			2	8	16	16	66	320.4%	
Georgia					21	21	21	0.0%	
Kazakhstan				72	98	112	122	8.1%	
	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East	12	45	104	284	408	435	612	40.8%	24.2%
Bahrain			1	1	1	1	1	0.0%	
Iran	11	37	95	153	191	191	282	47.7%	19.7%
Israel		6	6	6	27	27	27	0.0%	
Jordan	1	1	1	118	184	198	285	43.4%	34.3%
Kuwait						10	10	0.0%	
Lebanon				3	3	3	3	0.0%	
Saudi Arabia						3	3	0.0%	
Syria		1	1	1	1	1	1	0.0%	
United Arab Emirates				2	1	1	1	0.0%	

(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Countries^(*)
(MW)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Africa	133	237	861	3,317	3,828	4,570	5,464	19.4%	22.9%
Algeria				10	10	10	10	0.0%	
Egypt	69	145	550	750	750	750	1,125	50.0%	16.8%
Ethiopia				324	324	324	324	0.0%	
Kenya	0	0	6	26	26	26	336	1182.8%	45.4%
Mauritania				34	34	34	34	0.0%	
Morocco	54	54	221	797	897	1,017	1,220	20.0%	18.9%
Nigeria		2	2	3	3	3	3	0.0%	
South Africa		3	10	1,079	1,473	2,094	2,094	0.0%	
Tunisia	10	19	53	240	245	245	245	0.0%	19.4%
Others Africa		13	19	53	66	66	72	8.6%	

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Asia - Pacific	1,452	7,811	48,522	166,768	189,252	210,499	235,584	11.9%	32.7%
Australia	33	740	1,864	4,234	4,327	4,874	5,816	19.3%	33.3%
China	341	1,060	29,634	131,048	148,517	164,392	184,696	12.4%	41.9%
India	941	4,434	13,184	25,088	28,700	32,849	35,288	7.4%	22.3%
Japan	84	1,227	2,294	2,808	3,246	3,392	3,653	7.7%	23.3%
Mongolia			1	51	51	101	156	54.5%	
New Zealand	36	168	524	683	688	688	688	0.0%	17.8%
Pakistan			6	308	591	789	1,186	50.3%	
Philippines		33	33	427	427	427	427	0.0%	
South Korea	7	99	382	847	1,067	1,143	1,311	14.7%	33.7%
Sri Lanka	3	3	33	127	132	146	146	0.0%	24.1%
Taiwan	3	24	476	647	682	692	704	1.7%	36.5%
Thailand			6	234	507	628	1,018	62.1%	
Vietnam			31	136	160	205	237	15.6%	
Others Asia-Pacific	4	23	55	131	158	173	258	49.0%	26.1%

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Americas	2,576	9,594	45,111	98,317	111,858	121,472	132,375	9.0%	24.5%
Argentina	14	28	28	215	215	257	750	191.6%	24.7%
Bolivia			0	3	27	27	27	0.0%	
Brazil	22	29	927	7,633	10,124	12,294	14,401	17.1%	43.4%
Canada	92	677	3,967	11,214	11,973	12,403	12,816	3.3%	31.6%
Chile		2	163	910	1,039	1,305	1,524	16.8%	
Colombia		10	18	18	18	18	18	0.0%	
Costa Rica	43	69	120	278	319	378	408	7.9%	13.4%
Cuba	1	2	7	12	12	12	12	0.0%	19.2%
Dominican Rep				86	135	135	183	35.8%	
Ecuador			2	21	21	21	21	0.0%	
Guatemala				76	76	76	107	41.5%	
Honduras				152	175	225	225	0.0%	
Jamaica		21	39	39	99	99	99	0.0%	
Mexico	17	18	519	3,271	4,051	4,199	4,875	16.1%	36.9%
Nicaragua			63	186	186	186	186	0.0%	
Panama				253	270	270	270	0.0%	
Peru	1	1	1	240	240	240	372	55.2%	41.7%
United States	2,377	8,706	39,135	72,573	81,386	87,543	94,295	7.7%	22.7%
Uruguay			41	857	1,212	1,511	1,511	0.0%	
Venezuela				50	50	50	50	0.0%	
Others Americas	11	32	81	230	230	223	222	-0.2%	18.4%

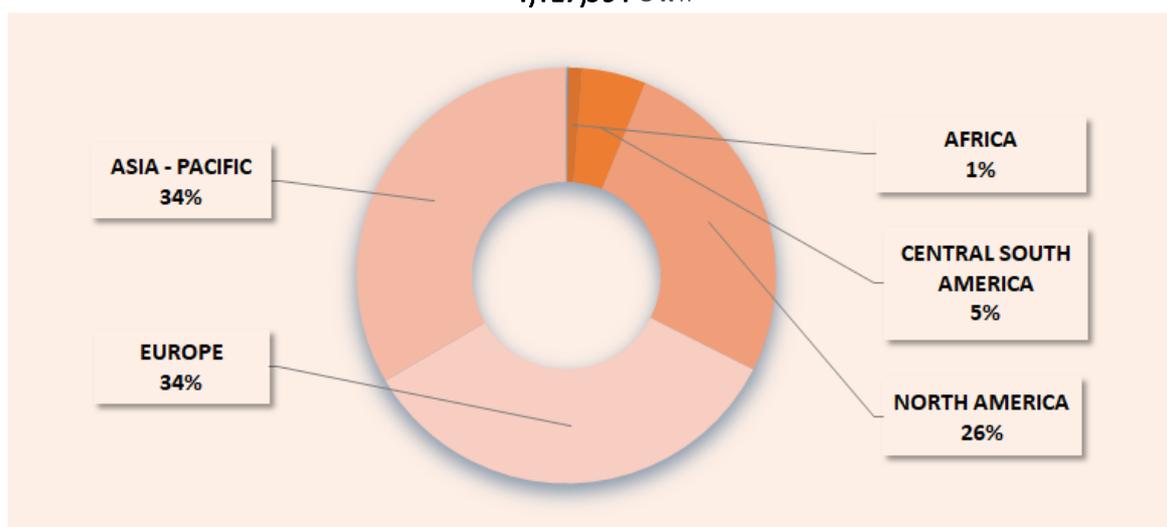
(*) Data source: IRENA (2019), Renewable Capacity Statistics 2019, International Renewable Energy Agency (IRENA), Abu Dhabi.

Areas and Aggregates^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
Europe	22,296	71,057	153,257	317,476	321,778	384,652	404,501	5.2%	17.5%
Russia and Central Asia	2	7	12	288	457	591		29.3%	39.7%
Middle East	40	85	174	351	648	935	1,226	31.1%	20.9%
Africa	232	818	2,370	8,552	10,832	12,278		13.3%	26.3%
Asia - Pacific	2,606	11,729	76,949	252,330	309,370	376,873		21.8%	34.0%
Americas	6,164	20,207	108,563	259,278	315,214	352,202		11.7%	26.9%
- North America	5,933	19,467	105,111	228,183	270,312	296,466	320,643	8.2%	24.8%
- Central South America	231	740	3,452	31,095	44,902	55,736		24.1%	38.1%
World	31,340	103,903	341,325	838,275	958,299	1,127,531		14.3%	23.8%
European Union	22,223	70,452	149,372	301,955	302,860	362,413	378,806	19.7%	17.8%
MENA	264	874	2,462	5,388	6,714	6,853		24.6%	22.4%
OECD	28,282	92,756	266,205	551,185	600,329	689,103	736,791	14.8%	20.7%
NON OECD	3,058	11,147	75,120	287,090	357,970	438,428		24.7%	34.7%
OPEC	37	71	166	427	451	511	591	5.6%	16.9%
NON OPEC	31,303	103,832	341,159	837,848	957,848	1,127,020		14.3%	23.8%

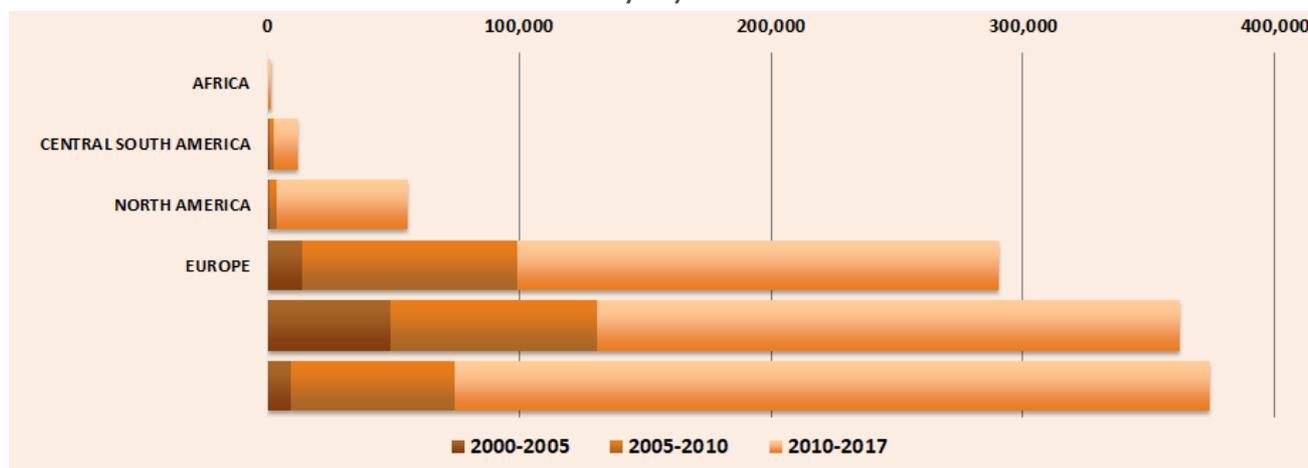
World Wind Power Generation (2017)

1,127,531 GWh



World Wind Power Generation Growth (2000-2017)

1,096,191 GWh



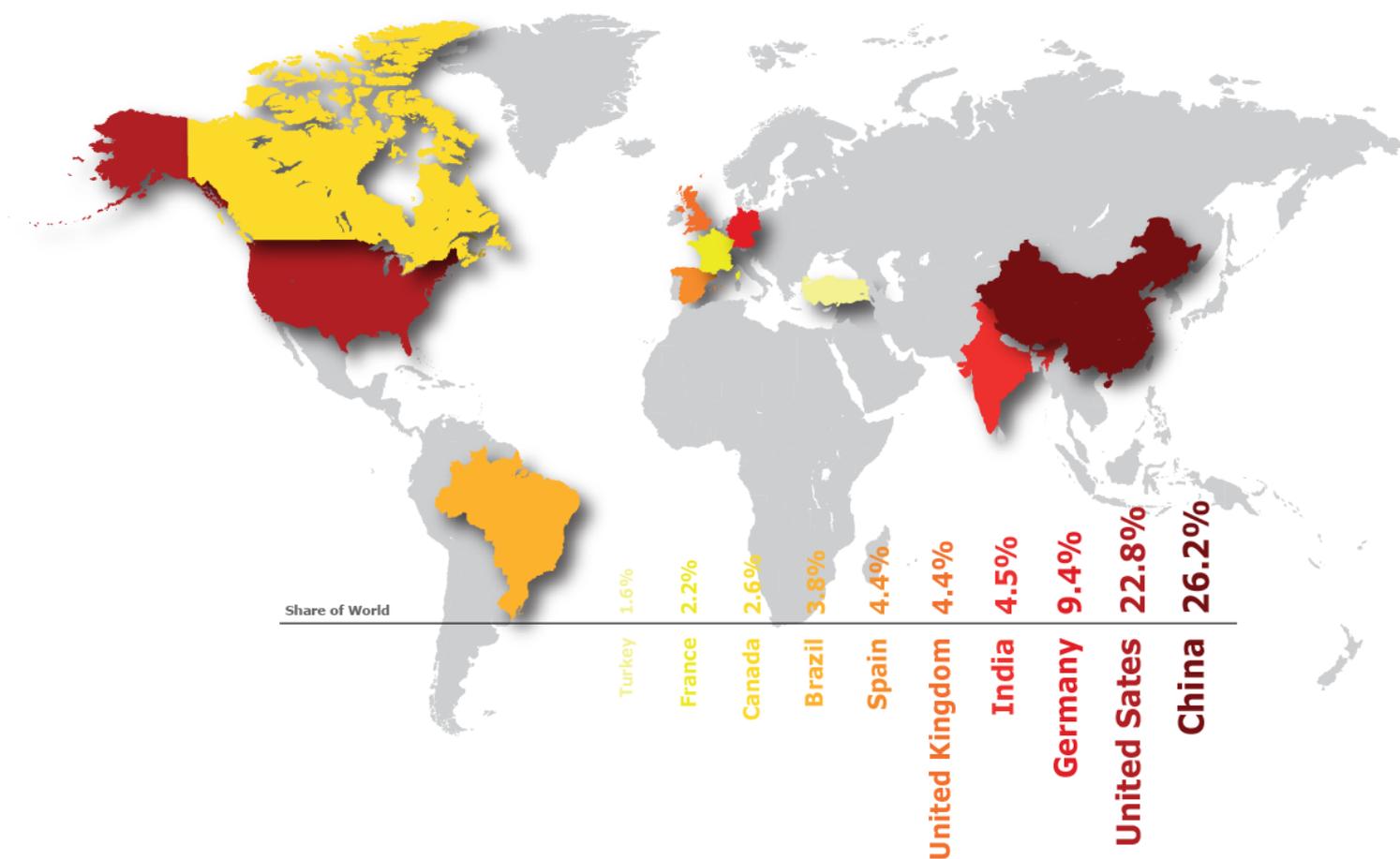
^(*) Data source: Eni's calculations on IEA (2019) *Extended Balances* data. All rights reserved.

^(**) When 2018 data is missing, the figure refers to the latest available years.

The World Top 10^(*) (GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)**	CAGR (2018-2000)**
China	615	2,028	44,623	185,768	237,073	295,025		24.4%	43.8%
United States	5,650	17,881	95,148	192,992	229,471	257,249	277,918	8.0%	24.2%
Germany	9,352	27,229	37,793	79,206	78,598	105,693	111,590	5.6%	14.8%
India	1,684	6,211	19,657	41,663	44,739	51,061		14.1%	22.2%
United Kingdom	947	2,904	10,286	40,275	37,263	50,004	57,116	14.2%	25.6%
Spain	4,727	21,176	44,271	49,325	48,905	49,127	50,810	3.4%	14.1%
Brazil	2	93	2,177	21,626	33,488	42,373	48,475	14.4%	75.2%
Canada	264	1,567	8,724	26,446	30,463	28,775	29,651	3.0%	30.0%
France	48	962	9,945	21,319	21,473	24,711	28,501	15.3%	42.6%
Turkey	33	59	2,916	11,652	15,517	17,904	19,882	11.0%	42.7%
The World Top 10	23,322	80,110	275,540	670,272	776,990	921,922		18.7%	24.1%
Rest of the World	8,018	23,793	65,785	168,003	181,309	205,609		13.4%	21.0%
World	31,340	103,903	341,325	838,275	958,299	1,127,531		17.7%	23.5%

The World Top 10 (2017)



(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.

(**) When 2018 data is missing, the figure refers to the latest available years.

Countries^(*)
(GWh)

	2000	2005	2010	2015	2016	2017	2018	Δ y/y (2018-2017)	CAGR (2018-2000)
Europe	22,296	71,057	153,257	317,476	321,778	384,652	404,501	5.2%	17.5%
Austria	67	1,331	2,064	4,837	5,232	6,574	6,030	-8.3%	28.4%
Belarus		1	1	26	75	97	119	22.7%	
Belgium	16	227	1,292	5,574	5,437	6,511	7,499	15.2%	40.7%
Bulgaria		5	681	1,452	1,425	1,504	1,318	-12.4%	
Croatia		10	139	796	1,014	1,204	1,355	12.5%	
Cyprus			31	221	226	211	221	4.7%	
Czech Republic	1	21	335	573	497	591	609	3.0%	42.8%
Denmark	4,241	6,614	7,809	14,133	12,782	14,780	13,899	-6.0%	6.8%
Estonia		54	277	715	594	723	636	-12.0%	
Finland	78	170	294	2,327	3,068	4,795	5,857	22.1%	27.1%
France	48	962	9,945	21,319	21,473	24,711	28,501	15.3%	42.6%
Germany	9,352	27,229	37,793	79,206	78,598	105,693	111,590	5.6%	14.8%
Greece	451	1,266	2,714	4,621	5,146	5,537	6,300	13.8%	15.8%
Hungary		10	534	693	684	758	607	-19.9%	
Iceland				11	9	8	4	-50.0%	
Ireland	244	1,112	2,815	6,573	6,149	7,445	8,455	13.6%	21.8%
Italy	563	2,344	9,126	14,844	17,689	17,742	17,492	-1.4%	21.0%
Kosovo	0	0	1	0	0	0	30		
Latvia	4	47	49	147	128	150	122	-18.7%	20.9%
Lithuania		2	224	810	1,136	1,364	1,144	-16.1%	
Luxembourg	25	52	55	102	101	235	245	4.3%	13.5%
Macedonia				121	109	110	97	-11.8%	
Moldova				2	3	7	23	228.6%	
Netherlands	829	2,067	3,993	7,550	8,170	10,569	10,549	-0.2%	15.2%
Norway	31	499	879	2,515	2,116	2,852	3,876	35.9%	30.8%
Poland	5	135	1,664	10,858	12,588	14,909	12,844	-13.9%	54.7%
Portugal	168	1,773	9,182	11,607	12,474	12,248	12,650	3.3%	27.1%
Romania			306	7,063	6,590	7,407	6,322	-14.6%	
Slovakia		6	6	6	6	6	6	0.0%	
Serbia					26	48	150	212.5%	
Spain	4,727	21,176	44,271	49,325	48,905	49,127	50,810	3.4%	14.1%
Sweden	457	935	3,487	16,322	15,479	17,609	16,623	-5.6%	22.1%
Switzerland	3	8	37	110	109	133	121	-9.0%	22.8%
Turkey	33	59	2,916	11,652	15,517	17,904	19,882	11.0%	42.7%
United Kingdom	947	2,904	10,286	40,275	37,263	50,004	57,116	14.2%	25.6%
Ukraine	6	38	51	1,084	954	983	1,127	14.6%	33.8%
Others Europe				6	6	103	272	164.1%	

	2000	2005	2010	2015	2016	2017	2018**	Δ y/y (2018-2017)	CAGR (2018-2000)
Russia and Central Asia	2	7	12	288	457	591	850	43.9%	40.0%
Russia	2	7	4	148	148	140	237	69.3%	30.4%
Armenia			7	3	2	2	2	0.0%	
Azerbaijan			1	5	23	22	83	277.3%	
Georgia					9	88	84	-4.5%	
Kazakhstan				132	275	339	444	31.1%	

	2000	2005	2010	2015	2016	2017	2018**	Δ y/y (2018-2017)	CAGR (2018-2000)
Middle East	40	85	174	351	648	935	1,226	31.1%	20.9%
Iran	37	71	163	221	250	306	473	54.7%	15.2%
Israel		11	8	7	7	180	205	13.9%	
Jordan	3	3	3	123	391	449	547	21.9%	33.5%

(*) Data source: IEA (2019) *Extended Balances*. All rights reserved.(**) Data source: IEA (2019) *Extended Balances* and Eni's estimates. All rights reserved.

Countries^(*)
(GWh)

	2000	2005	2010	2015	2016	2017	2018**	Δ y/y (2018-2017)***	CAGR (2018-2000)***
Africa	232	818	2,370	8,552	10,832	12,278		13.3%	26.3%
Algeria				19	29	44	44	52.6%	
Egypt	137	552	1,498	2,058	2,570	2,570		0.0%	18.8%
Ethiopia				759	782	862		10.2%	
Kenya			18	57	63	48		-23.8%	
Morocco	64	206	659	2,519	3,000	3,035	3,545	16.8%	25.0%
South Africa		12	34	2,500	3,700	5,090		37.6%	
Tunisia	23	42	139	448	474	449	449	0.0%	17.9%
Others Africa	8	6	22	192	214	180		-16.0%	20.1%

	2000	2005	2010	2015	2016	2017	2018**	Δ y/y (2018-2017)***	CAGR (2018-2000)***
Asia - Pacific	2,606	11,729	76,949	252,330	309,370	376,873		21.8%	34.0%
Australia	58	885	5,052	11,467	12,199	12,597	15,174	20.5%	36.2%
Bangladesh				4	5	5	5	0.0%	
China	615	2,028	44,623	185,768	237,073	295,025		24.4%	43.8%
Hong Kong			1	2	2	2	2	0.0%	
India	1,684	6,211	19,657	41,663	44,739	51,061		14.1%	22.2%
Indonesia			4	4	6	6	188	3033.3%	
Japan	108	1,751	4,016	5,580	6,166	6,490	7,632	17.6%	26.7%
Mongolia			1	154	154	309		100.6%	
Nepal				6	6	6	6	0.0%	
New Zealand	120	614	1,637	2,353	2,306	2,141	2,068	-3.4%	17.1%
Pakistan				786	1,409	2,101		49.1%	
Philippines		17	62	748	975	1,094		12.2%	
South Korea	17	130	817	1,342	1,683	2,169	2,465	13.6%	31.8%
Sri Lanka	3	2	53	343	345	365		5.8%	32.6%
Taiwan	1	91	976	1,525	1,464	1,731	1,687	-2.5%	51.1%
Thailand			0	329	345	1,109	1,613	45.4%	
Vietnam			50	124	218	323		48.2%	
Others Asia-Pacific				132	275	339		23.3%	

	2000	2005	2010	2015	2016	2017	2018**	Δ y/y (2018-2017)***	CAGR (2018-2000)***
Americas	6,164	20,207	108,563	259,278	315,214	352,202		11.7%	26.9%
Argentina	35	75	25	599	554	616	1,413	129.4%	22.8%
Bolivia				12	35	60		71.4%	
Brazil	2	93	2,177	21,626	33,488	42,373	48,475	14.4%	75.2%
Canada	264	1,567	8,724	26,446	30,463	28,775	29,651	3.0%	30.0%
Chile		7	332	2,115	2,449	3,521		43.8%	
Colombia		49	39	68	51	3		-94.1%	
Costa Rica	183	204	359	1,080	1,147	1,288	1,516	17.7%	12.5%
Cuba	1	2	12	21	21	21	21	0.0%	18.4%
Dominican Republic				290	323	390		20.7%	
Guatemala				107	215	218	263	20.4%	
Honduras				665	574	578	650	12.5%	
Jamaica		50	53	125	190	289	289	0.0%	
Mexico	19	19	1,239	8,745	10,378	10,442	13,074	25.2%	43.8%
Nicaragua			163	865	729	635	635	0.0%	
Panama				419	625	491	491	0.0%	
Peru	1	1	1	595	1,063	1,073	1,368	27.5%	49.4%
United States	5,650	17,881	95,148	192,992	229,471	257,249	277,918	12.1%	25.2%
Uruguay			68	2,065	2,994	3,774	4,189	26.1%	
Venezuela				88	88	88		0.0%	
Others Americas	9	259	223	355	356	318		-10.7%	23.3%

(*) Data source: IEA (2019) *Extended Balances* data. All rights reserved.

(**) Data source: IEA (2019) *Extended Balances* and Eni's estimates. All rights reserved.

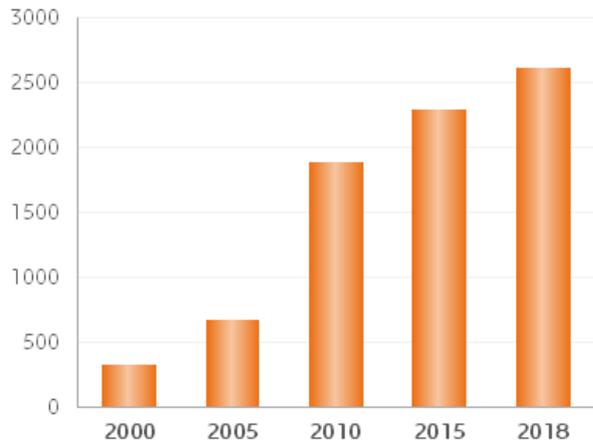
(***) When 2018 data is missing, the figure refers to the latest available years.

Renewables

Biofuels Production

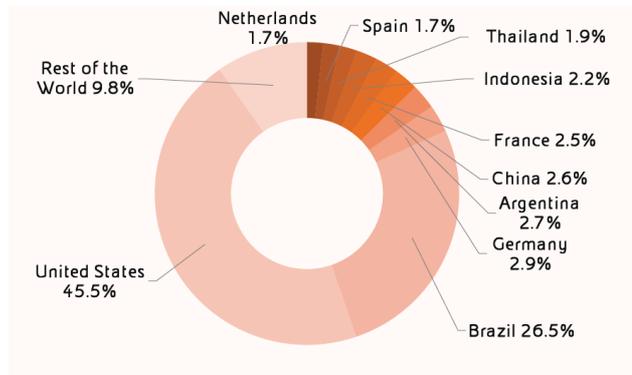
Total Biofuels(*) (thousand barrels/day)

World



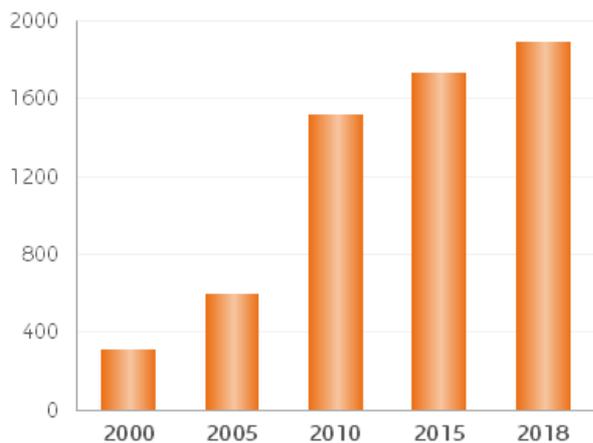
2018

World: 2,616 thousand barrels/day



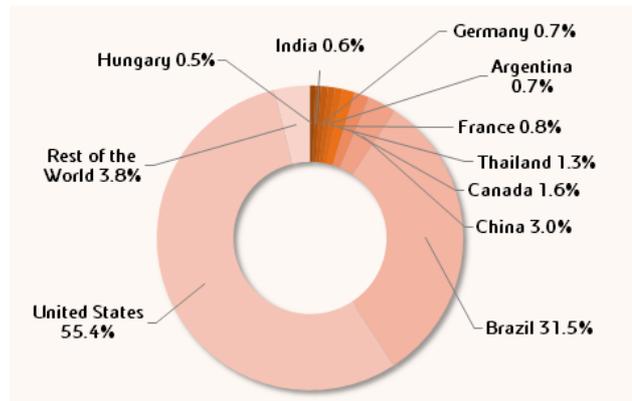
Biogasoline(*) (thousand barrels/day)

World



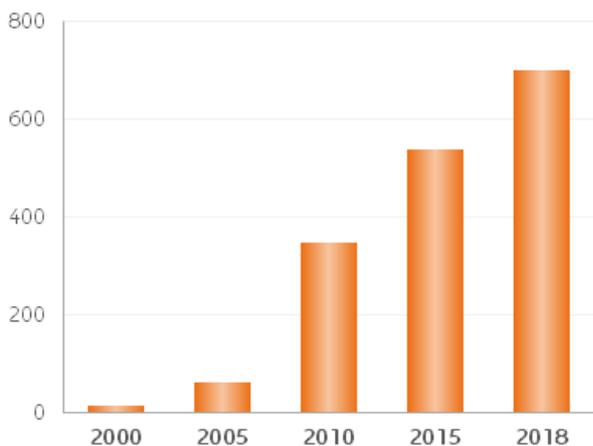
2018

World: 1,890 thousand barrels/day



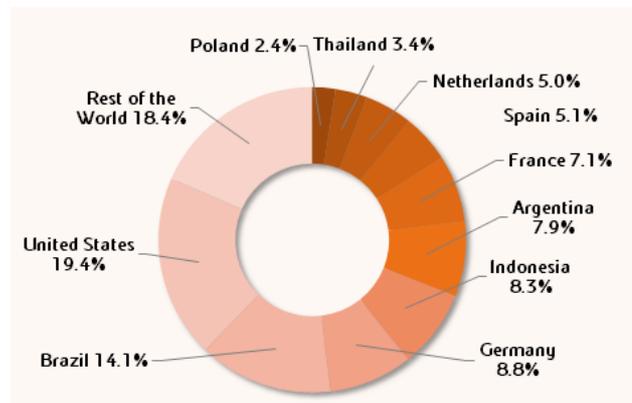
Biodiesel(*) (thousand barrels/day)

World



2018

World: 702 thousand barrels/day



(*) Data source: IEA (2019) *Extended Balances* and EIA DOE. All rights reserved.
Total Biofuels include biogasoline (also ethanol used pure in Brazil "Hydrous"), biodiesel and other liquid biofuels.



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