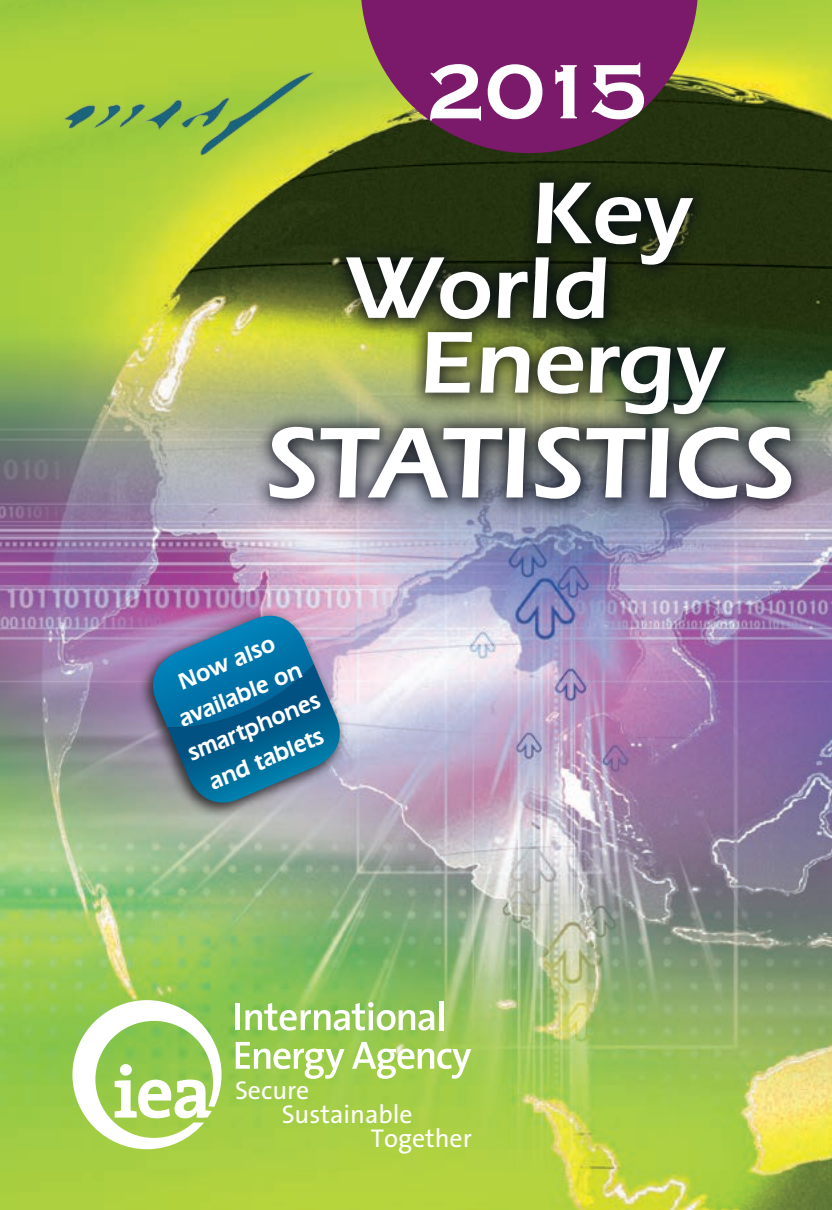




2015

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The International Energy Agency

The IEA, which was established in November 1974, has over the years gained recognition as one of the world's most authoritative sources for energy statistics. Its all-encompassing annual studies of oil, natural gas, coal, electricity and renewables are indispensable tools for energy policy makers, companies involved in the energy field and scholars.

In 1997 the IEA produced a handy, pocket-sized summary of key energy data. This new edition responds to the enormously positive reaction to the books since then. **Key World Energy Statistics** from the IEA contains timely, clearly-presented data on the supply, transformation and consumption of all major energy sources. The interested businessman, journalist or student will have at his or her fingertips the annual Australian production of coal, the electricity production in Japan, the price of diesel oil in Spain and thousands of other useful energy facts.

Gathering and analysing statistics is one of the important IEA functions. But the Agency – an autonomous body within the Organisation for Economic Co-operation and Development – also:

- administers a plan to guard member countries against the risk of a major disruption of oil supplies
- coordinates national efforts to conserve energy and develop alternative energy sources, as well as to limit pollution and energy-related climate change
- disseminates information on the world energy market and seeks to promote stable international trade in energy.

TABLE OF CONTENTS

Due to newly available revisions from China's National Bureau of Statistics, data for 2011, 2012 and 2013 for China have been revised in this publication. As such, care should be used when interpreting energy trends between 2010 and 2011. For the years 2000-2010, revisions will be published in the next edition of this publication.

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ENERGY BALANCES 4

PRICES 5

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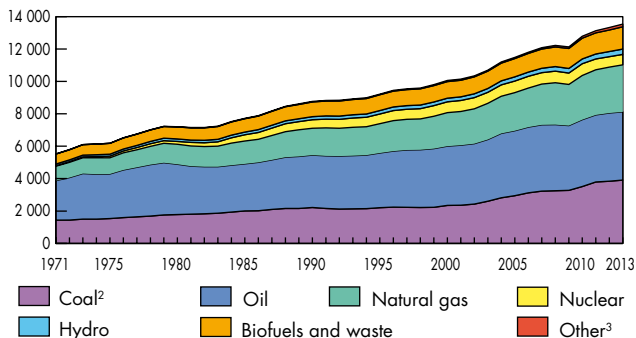
CONVERSION FACTORS 9

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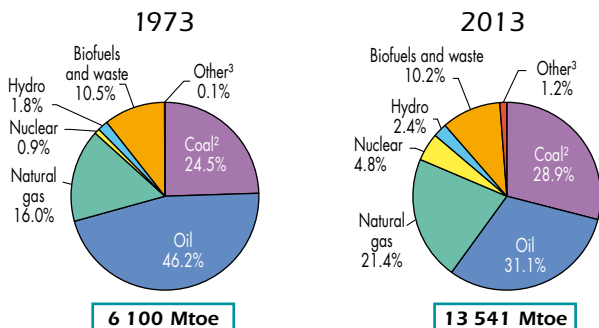
TOTAL PRIMARY ENERGY SUPPLY

World

World¹ total primary energy supply (TPES) from 1971 to 2013 by fuel (Mtoe)



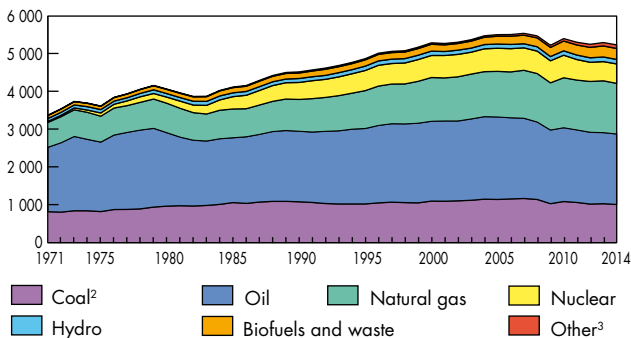
1973 and 2013 fuel shares of TPES



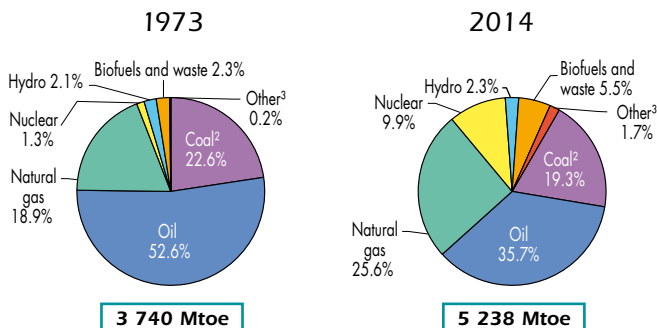
1. World includes international aviation and international marine bunkers.
2. In these graphs, peat and oil shale are aggregated with coal.
3. Includes geothermal, solar, wind, heat, etc.

OECD

OECD total primary energy supply¹ from 1971 to 2014
by fuel (Mtoe)



1973 and 2014 fuel shares of TPES¹



1. Excludes electricity trade.

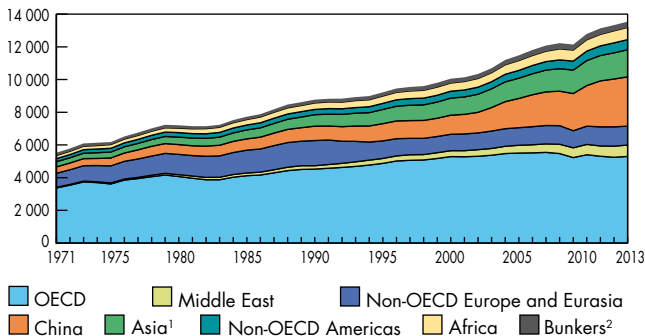
2. In these graphs, peat and oil shale are aggregated with coal.

3. Includes geothermal, solar, wind, heat, etc.

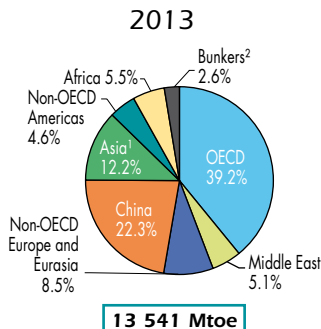
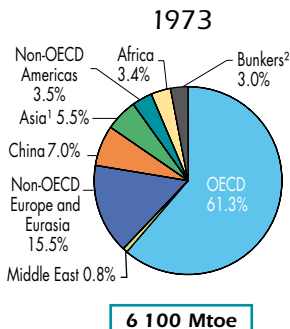
TOTAL PRIMARY ENERGY SUPPLY

World

World total primary energy supply from 1971 to 2013
by region (Mtoe)



1973 and 2013 regional shares of TPES



1. Asia excludes China.

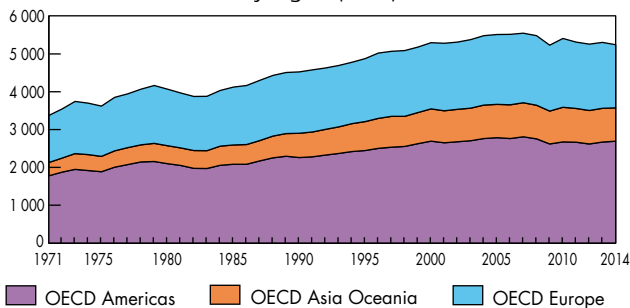
2. Includes international aviation and international marine bunkers.

BY REGION

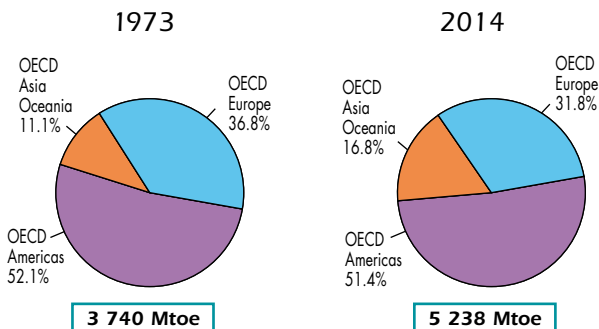
1

OECD

OECD total primary energy supply¹ from 1971 to 2014
by region (Mtoe)



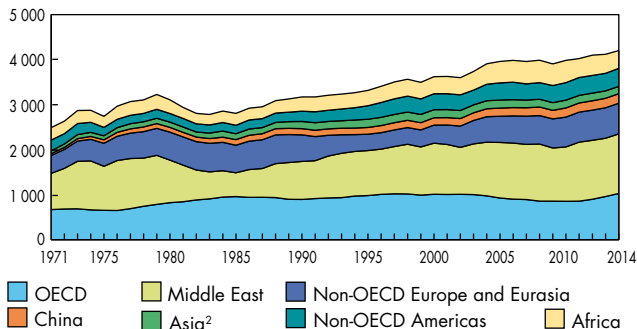
1973 and 2014 regional shares of TPES¹



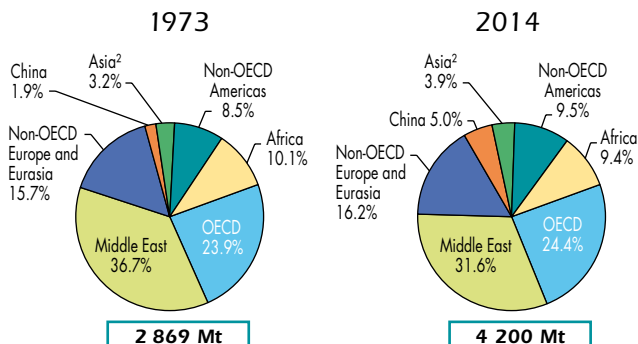
1. Excludes electricity trade.

Crude oil production

Crude oil¹ production from 1971 to 2014
by region (Mt)



1973 and 2014 regional shares of crude oil¹ production



1. Includes crude oil, NGL, feedstocks, additives and other hydrocarbons.
2. Asia excludes China.

Producers, net exporters and net importers of crude oil¹

1



Producers	Mt	% of world total
Saudi Arabia	542	12.9
Russian Federation	529	12.6
United States	509	12.1
People's Rep. of China	212	5.0
Canada	208	5.0
Islamic Rep. of Iran	166	4.0
Iraq	160	3.8
Kuwait	158	3.8
United Arab Emirates	157	3.7
Venezuela	151	3.6
Rest of the world	1 408	33.5
World	4 200	100.0

2014 provisional data

Net exporters	Mt
Saudi Arabia	377
Russian Federation	236
United Arab Emirates	125
Iraq	117
Nigeria	108
Kuwait	103
Canada	100
Venezuela	98
Angola	84
Mexico	62
Others	519
Total	1 929

2013 data

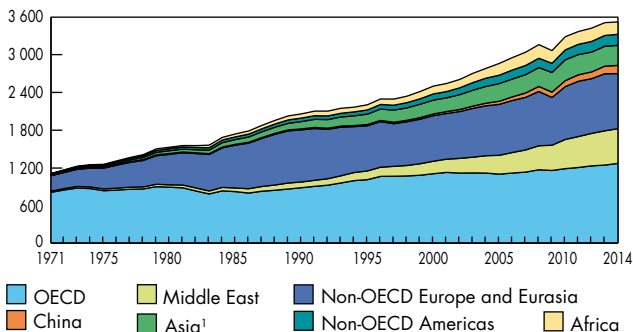
Net importers	Mt
United States	391
People's Rep. of China	280
India	189
Japan	178
Korea	123
Germany	91
Italy	65
Spain	60
France	56
Netherlands	54
Others	507
Total	1 994

2013 data

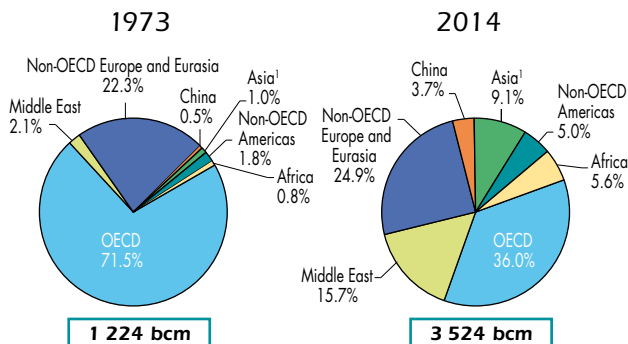
1. Includes crude oil, NGL, feedstocks, additives and other hydrocarbons.

Natural gas production

Natural gas production from 1971 to 2014 by region
(billion cubic metres, bcm)



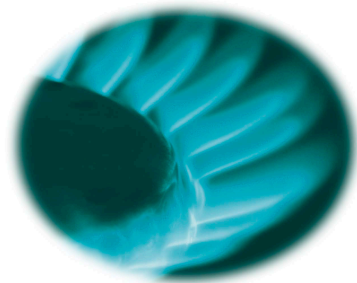
1973 and 2014 regional shares of natural gas production



1. Asia excludes China.

Producers, net exporters and net importers¹ of natural gas

1



Producers	bcm	% of world total
United States	730	20.7
Russian Federation	644	18.3
Islamic Rep. of Iran	169	4.8
Canada	162	4.6
Qatar	160	4.5
People's Rep. of China	130	3.7
Norway	113	3.2
Turkmenistan	87	2.5
Saudi Arabia	84	2.4
Algeria	80	2.3
Rest of the world	1 165	33.0
World	3 524	100.0

2014 provisional data

Net exporters	bcm
Russian Federation	179
Qatar	119
Norway	107
Turkmenistan	57
Canada	56
Algeria	45
Indonesia	34
Netherlands	30
Nigeria	25
Australia	25
Others	159
Total	836

2014 provisional data

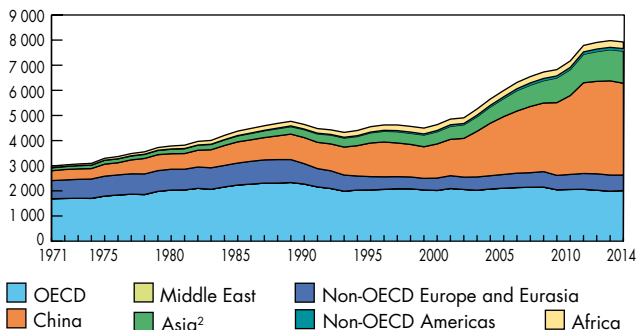
Net importers	bcm
Japan	128
Germany	68
Italy	56
People's Rep. of China	50
Korea	49
Turkey	48
France	38
United States	33
United Kingdom	32
Spain	28
Others	286
Total	816

2014 provisional data

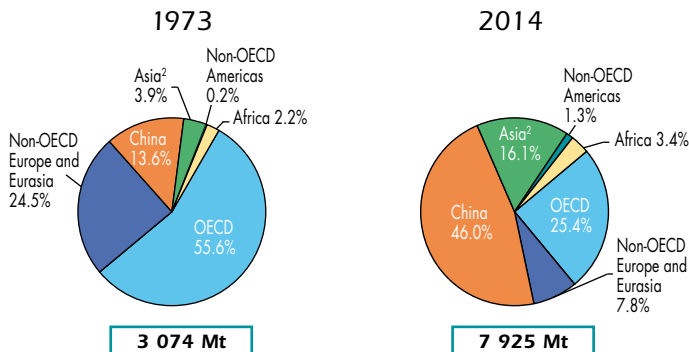
1. Net exports and net imports include pipeline gas and LNG.

Coal production

Coal¹ production from 1971 to 2014
by region (Mt)



1973 and 2014 regional shares of coal¹ production



1. Includes steam coal, coking coal, lignite and recovered coal.
2. Asia excludes China.

Producers, net exporters and net importers of coal¹

1



Producers	Mt	% of world total
People's Rep. of China	3 650	46.1
United States	916	11.6
India	668	8.4
Australia	491	6.2
Indonesia	471	5.9
Russian Federation	334	4.2
South Africa	253	3.2
Germany	187	2.4
Poland	137	1.7
Kazakhstan	115	1.5
Rest of the world	703	8.8
World	7 925	100.0

2014 provisional data

Net exporters	Mt
Indonesia	409
Australia	375
Russian Federation	130
Colombia	80
United States	78
South Africa	75
Kazakhstan	29
Canada	27
Mongolia	19
DPR of Korea	15
Others	18
Total	1 255

2014 provisional data

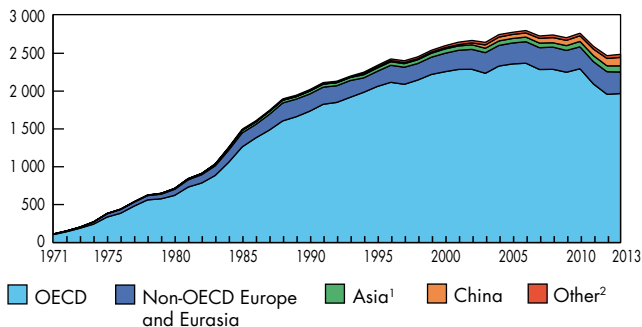
Net importers	Mt
People's Rep. of China	286
India	238
Japan	188
Korea	131
Chinese Taipei	67
Germany	56
United Kingdom	40
Turkey	30
Malaysia	23
Thailand	21
Others	215
Total	1 295

2014 provisional data

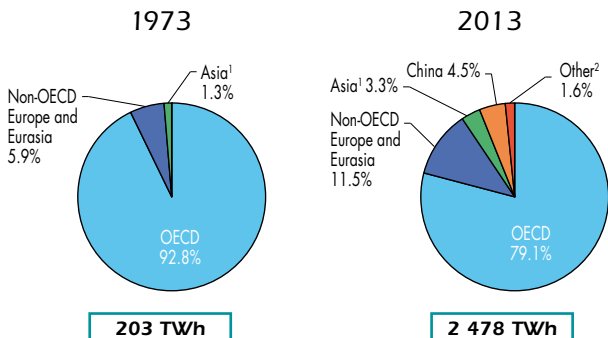
1. Includes steam coal, coking coal, lignite and recovered coal.

Nuclear production

Nuclear production from 1971 to 2013
by region (TWh)



1973 and 2013 regional shares of nuclear production



1. Asia excludes China.

2. Other includes Africa, Non-OECD Americas and the Middle East.

Producers of nuclear electricity

1



Producers	TWh	% of world total
United States	822	33.2
France	424	17.1
Russian Federation	173	7.0
Korea	139	5.6
People's Rep. of China	112	4.5
Canada	103	4.2
Germany	97	3.9
Ukraine	83	3.3
United Kingdom	71	2.9
Sweden	66	2.7
Rest of the world	388	15.6
World	2 478	100.0

2013 data

Net installed capacity	GW
United States	99
France	63
Japan	42
Russian Federation	24
Korea	21
People's Rep. of China	16
Canada	14
Ukraine	13
Germany	12
Sweden	9
Rest of the world	59
World	372

2013 data

Sources: IEA, International Atomic Energy Agency.

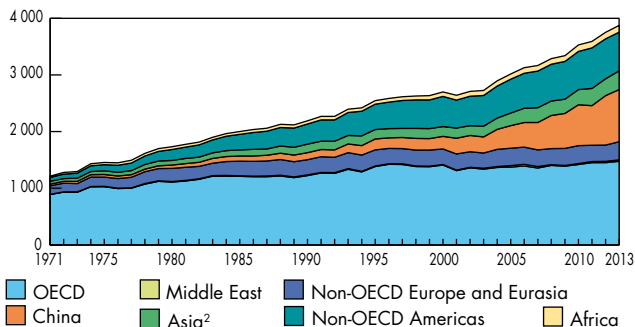
Country (top-ten producers)	% of nuclear in total domestic electricity generation
France	74.7
Sweden	43.4
Ukraine	43.0
Korea	25.8
United Kingdom	19.8
United States	19.2
Russian Federation	16.3
Canada	15.8
Germany	15.5
People's Rep. of China	2.1
Rest of the world ¹	7.9
World	10.6

2013 data

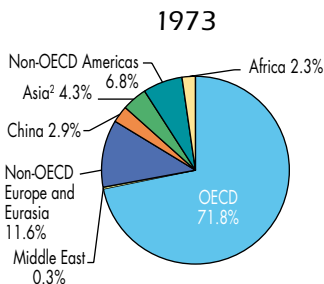
1. Excludes countries with no nuclear production.

Hydro production

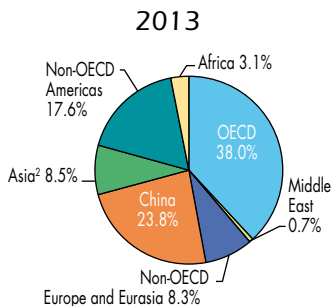
Hydro production¹ from 1971 to 2013
by region (TWh)



1973 and 2013 regional shares of hydro production¹



1 296 TWh



3 874 TWh

1. Includes electricity production from pumped storage.
2. Asia excludes China.

Producers of hydro electricity¹

1



Producers	TWh	% of world total
People's Rep. of China	920	23.8
Canada	392	10.1
Brazil	391	10.1
United States	290	7.5
Russian Federation	183	4.7
India	142	3.7
Norway	129	3.3
Japan	85	2.2
Venezuela	84	2.2
France	76	2.0
Rest of the world	1 182	30.4
World	3 874	100.0

2013 data

1. Includes electricity production from pumped storage.
2. Excludes countries with no hydro production.

Net installed capacity	GW
People's Rep. of China	194
United States	102
Brazil	86
Canada	76
Russian Federation	50
Japan	49
India	40
Norway	31
France	25
Italy	22
Rest of the world	359
World	1 034

2013 data

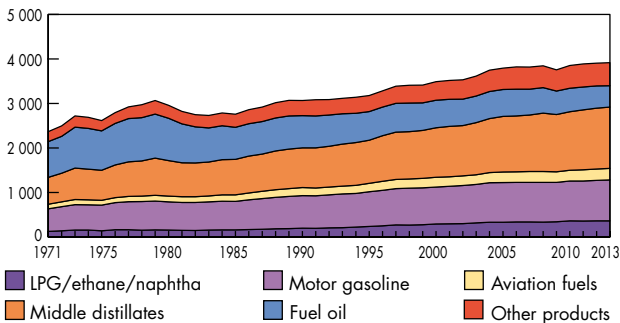
Sources: IEA, United Nations.

Country (top-ten producers)	% of hydro in total domestic electricity generation
Norway	96.1
Brazil	68.6
Venezuela	67.8
Canada	60.1
Russian Federation	17.3
People's Rep. of China	16.9
France	13.2
India	11.9
Japan	8.1
United States	6.7
Rest of the world ²	15.6
World	16.6

2013 data

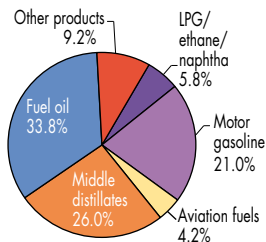
Refining by product

World refinery output from 1971 to 2013
by product (Mt)



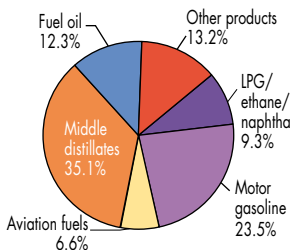
1973 and 2013 shares of refinery output by product

1973



2 719 Mt

2013



3 916 Mt

Producers, net exporters and net importers of oil products

2



Producers	Mt	% of world total
United States	801	20.5
People's Rep. of China	460	11.7
Russian Federation	265	6.8
India	228	5.8
Japan	171	4.4
Korea	126	3.2
Brazil	111	2.8
Germany	98	2.5
Islamic Rep. of Iran	95	2.4
Canada	93	2.4
Rest of the world	1 468	37.5
World	3 916	100.0

2013 data

Net exporters	Mt
Russian Federation	115
United States	81
India	53
Saudi Arabia	34
Kuwait	30
Qatar	20
Venezuela	19
Korea	16
Belarus	14
Canada	13
Others	146
Total¹	541

2013 data

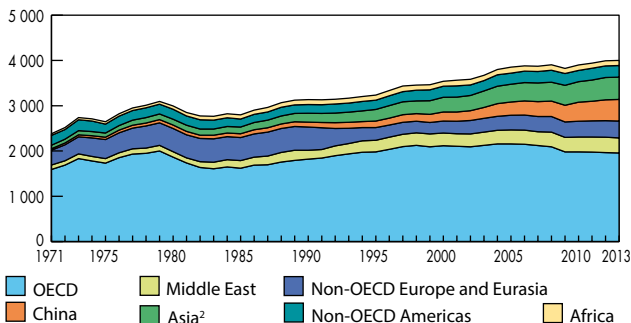
Net importers	Mt
Japan	29
Indonesia	26
France	22
People's Rep. of China	21
Singapore	21
Mexico	19
Germany	18
Australia	17
Hong Kong, China	17
Brazil	16
Others	268
Total¹	474

2013 data

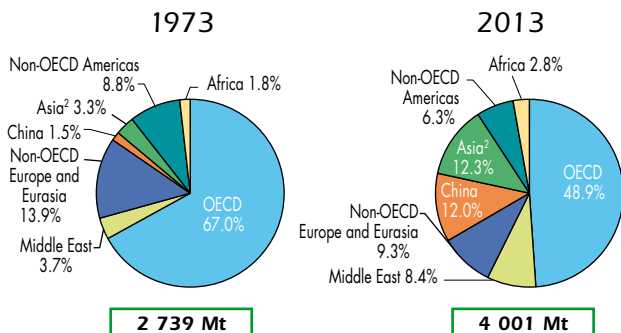
1. The discrepancy between total net exports and total net imports arises from different data sources and possible misallocation of bunkers into exports for some countries.

Refining by region

World refinery intake¹ from 1971 to 2013
by region (Mt)



1973 and 2013 regional shares of refinery intake¹



1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.
2. Asia excludes China.

Refinery capacity, net exporters and net importers of oil¹

2



Crude distillation capacity	kb/cd	% of world total
United States	17 726	18.6
People's Rep. of China ²	12 957	13.6
Russian Federation	5 992	6.3
Japan	4 349	4.6
India	4 394	4.6
Korea	3 051	3.2
Saudi Arabia	2 506	2.6
Germany	2 022	2.1
Italy	2 014	2.1
Brazil	2 006	2.1
Rest of the world	38 370	40.2
World	95 387	100.0

2014 data

Net exporters	Mt
Saudi Arabia	410
Russian Federation	351
Kuwait	132
United Arab Emirates	121
Venezuela	117
Canada	113
Iraq	106
Nigeria	101
Angola	80
Qatar	71
Others	518
Total	2 120

2013 data

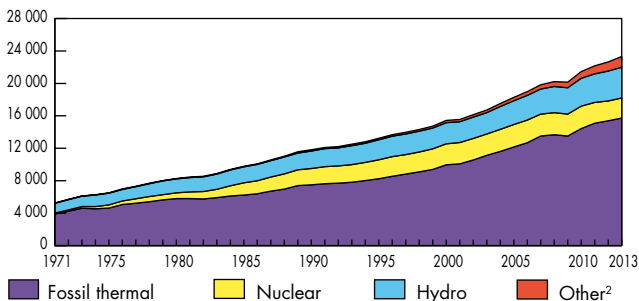
Net importers	Mt
United States	310
People's Rep. of China	302
Japan	207
India	136
Germany	108
Korea	107
France	78
Singapore	66
Spain	56
Italy	54
Others	695
Total	2 119

2013 data

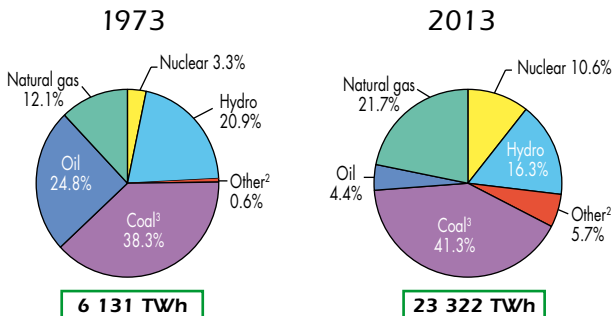
1. Includes crude oil and oil products.
2. Includes unlisted small teapot refineries estimated at 500 kb/cd (i.e. calendar day).

Electricity generation by fuel

World electricity generation¹ from 1971 to 2013
by fuel (TWh)



1973 and 2013 fuel shares of electricity generation¹



1. Excludes electricity generation from pumped storage.

2. Includes geothermal, solar, wind, heat, etc.

3. In these graphs, peat and oil shale are aggregated with coal.

Electricity production from fossil fuels

2



Coal ¹	TWh
People's Rep. of China	4 111
United States	1 712
India	869
Japan	337
Germany	293
South Africa	237
Korea	223
Russian Federation	162
Australia	161
Poland	140
Rest of the world	1 388
World	9 633

2013 data

Oil	TWh
Japan	150
Saudi Arabia	134
Islamic Rep. of Iran	71
Mexico	48
Kuwait	39
United States	37
Pakistan	36
Iraq	28
Indonesia	27
Brazil	27
Rest of the world	431
World	1 028

2013 data

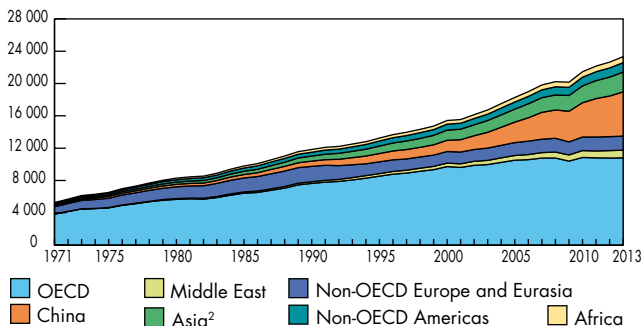
Natural gas	TWh
United States	1 158
Russian Federation	530
Japan	402
Islamic Rep. of Iran	178
Mexico	166
Saudi Arabia	150
Korea	145
Egypt	129
Thailand	117
Italy	109
Rest of the world	1 982
World	5 066

2013 data

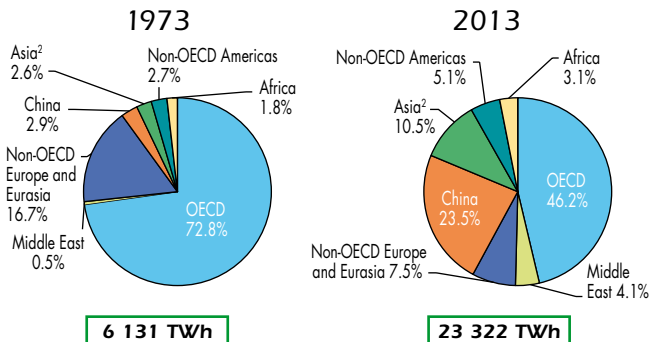
1. In this table, peat and oil shale are aggregated with coal.

Electricity generation by region

World electricity generation¹ from 1971 to 2013
by region (TWh)



1973 and 2013 regional shares of electricity generation¹



1. Excludes electricity generation from pumped storage.
2. Asia excludes China.

Producers, net exporters and net importers of electricity

2



Producers ¹	TWh	% of world total
People's Rep. of China	5 437	23.3
United States	4 287	18.4
India	1 193	5.1
Russian Federation	1 058	4.5
Japan	1 038	4.5
Canada	652	2.8
Germany	627	2.7
Brazil	570	2.4
France	567	2.4
Korea	538	2.3
Rest of the world	7 355	31.6
World	23 322	100.0

2013 data

Net exporters	TWh
Canada	50
France	48
Paraguay	47
Germany	32
Czech Republic	17
Russian Federation	14
People's Rep. of China	11
Sweden	10
Ukraine	10
Islamic Rep. of Iran	8
Others	61
Total	308

2013 data

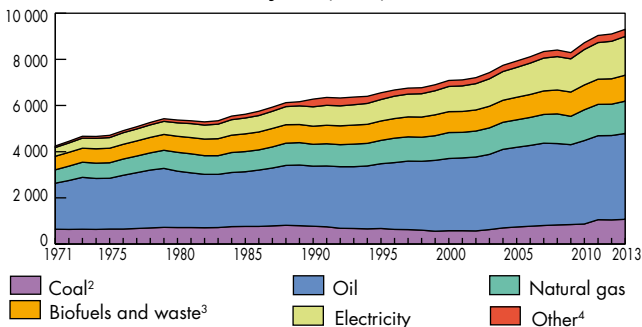
Net importers	TWh
United States	59
Italy	42
Brazil	40
Netherlands	18
Finland	16
United Kingdom	14
Argentina	14
Hungary	12
Thailand	11
Belgium	10
Others	107
Total	343

1. Gross production minus production from pumped storage plants. 2013 data

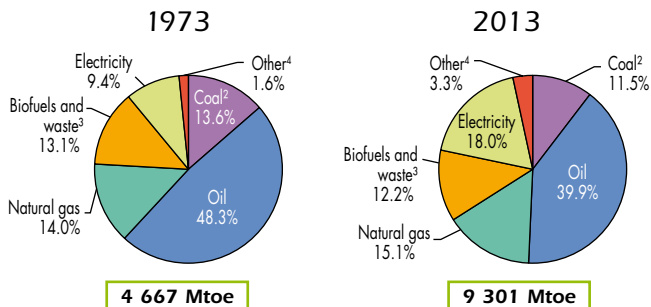
TOTAL FINAL CONSUMPTION

World

World¹ total final consumption from 1971 to 2013
by fuel (Mtoe)



1973 and 2013 fuel shares of total final consumption



1. World includes international aviation and international marine bunkers.

2. In these graphs, peat and oil shale are aggregated with coal.

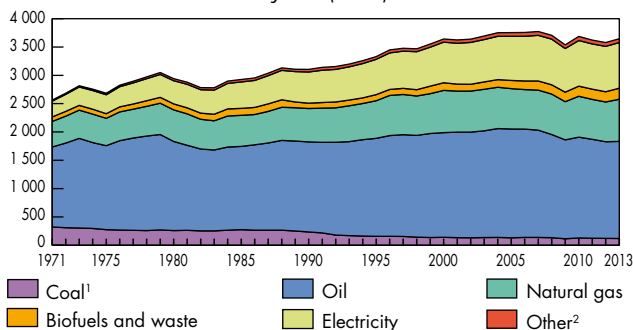
3. Data for biofuels and waste final consumption have been estimated for a number of countries.

4. Includes geothermal, solar, wind, heat, etc.

BY FUEL

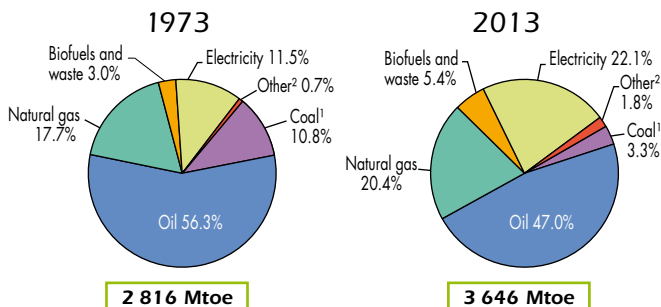
OECD

OECD total final consumption from 1971 to 2013
by fuel (Mtoe)



3

1973 and 2013 fuel shares of total final consumption

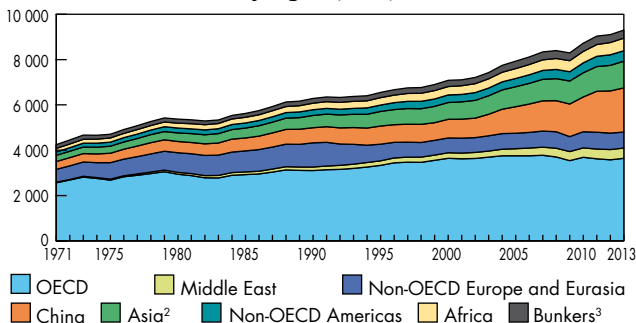


1. In these graphs, peat and oil shale are aggregated with coal.
2. Includes geothermal, solar, wind, heat, etc.

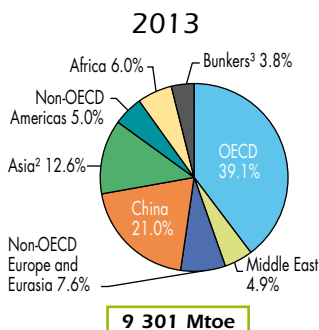
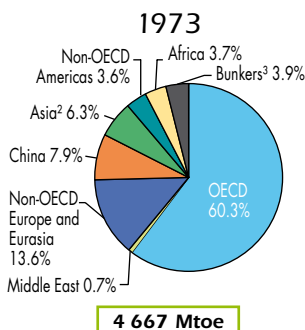
TOTAL FINAL CONSUMPTION

World

World total final consumption¹ from 1971 to 2013
by region (Mtoe)



1973 and 2013 regional shares of total final consumption¹

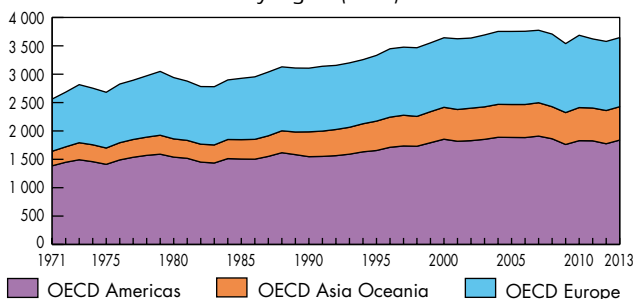


1. Data for biofuels and waste final consumption have been estimated for a number of countries.
2. Asia excludes China.
3. Includes international aviation and international marine bunkers.

BY REGION

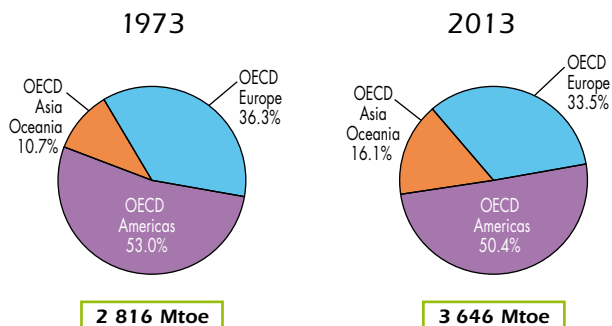
OECD

OECD total final consumption from 1971 to 2013
by region (Mtoe)



3

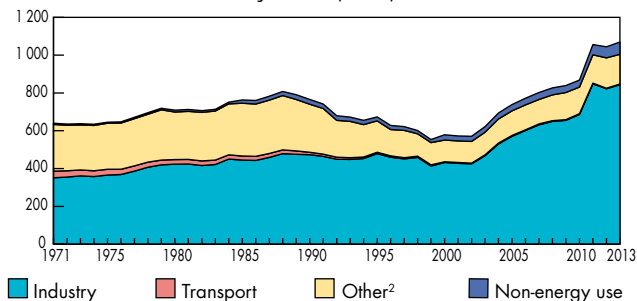
1973 and 2013 regional shares of total final consumption



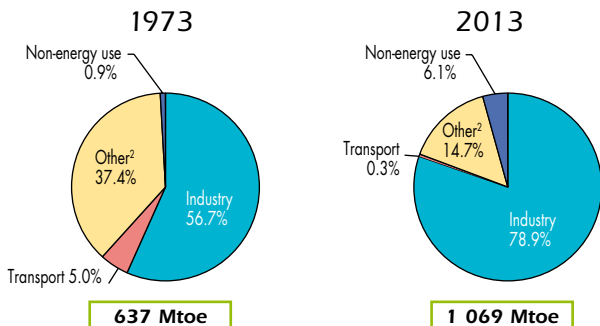
TOTAL FINAL CONSUMPTION

Coal¹

Total final consumption from 1971 to 2013
by sector (Mtoe)



1973 and 2013 shares of world coal¹ consumption

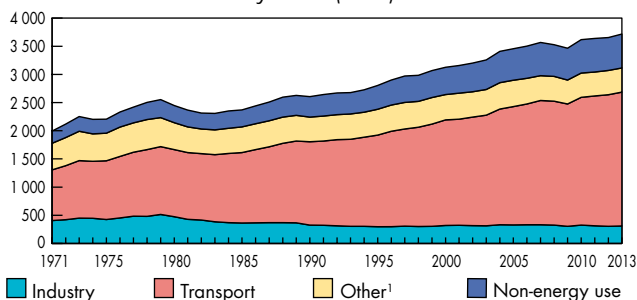


1. In these graphs, peat and oil shale are aggregated with coal.
2. Includes agriculture, commercial and public services, residential, and non-specified other.

BY SECTOR

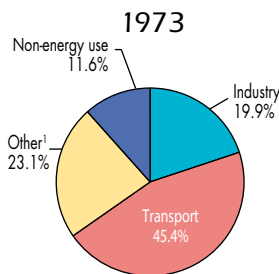
Oil

Total final consumption from 1971 to 2013
by sector (Mtoe)

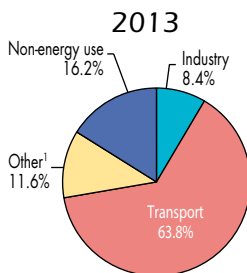


3

1973 and 2013 shares of world oil consumption



2 252 Mtoe



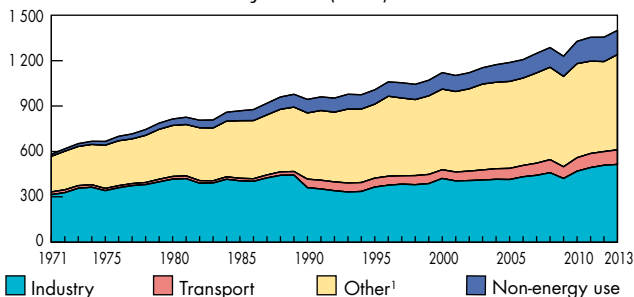
3 716 Mtoe

1. Includes agriculture, commercial and public services, residential, and non-specified other.

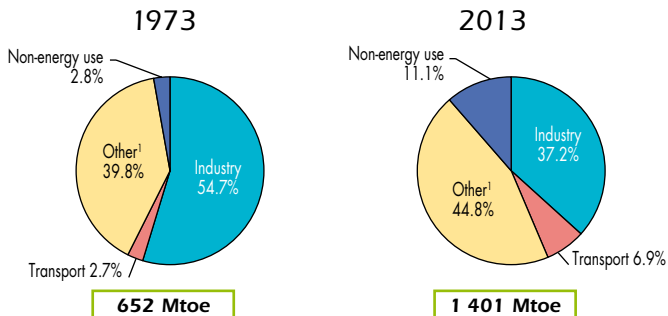
TOTAL FINAL CONSUMPTION

Natural gas

Total final consumption from 1971 to 2013
by sector (Mtoe)



1973 and 2013 shares of world natural gas consumption

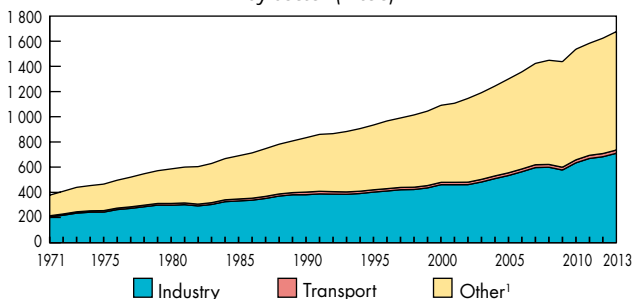


1. Includes agriculture, commercial and public services, residential, and non-specified other.

BY SECTOR

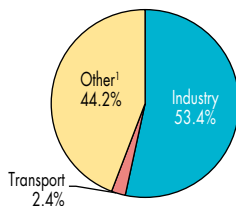
Electricity

Total final consumption from 1971 to 2013
by sector (Mtoe)



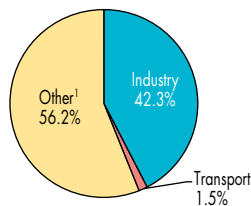
1973 and 2013 shares of world electricity consumption

1973



440 Mtoe

2013



1 677 Mtoe

1. Includes agriculture, commercial and public services, residential, and non-specified other.

SIMPLIFIED ENERGY

World

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal ¹	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste ²	Other ³	Total
Production	1 474.35	2 938.38	-	990.98	53.05	110.31	640.07	6.13	6 213.26
Imports	140.06	1 561.97	409.59	73.40	-	-	0.13	8.15	2 193.29
Exports	-130.35	-1 613.00	-442.94	-72.56	-	-	-0.19	-8.31	-2 267.35
Stock changes	12.47	-19.81	-16.37	-15.09	-	-	0.06	-	-38.75
TPES	1 496.52	2 867.54	-49.73	976.74	53.05	110.31	640.06	5.96	6 100.45
Transfers	-	-46.76	48.78	-	-	-	-	-	2.02
Statistical diff.	6.06	12.13	-6.19	4.78	-	-	-0.17	-0.19	16.41
Electricity plants	-555.65	-22.91	-318.13	-160.00	-52.95	-110.31	-2.40	503.76	-718.59
CHP plants	-86.40	-	-28.62	-50.84	-0.10	-	-0.91	100.94	-65.93
Heat plants	-7.81	-	-0.90	-0.68	-	-	-0.80	7.11	-3.08
Blast furnaces	-81.53	-	-2.72	-	-	-	-0.06	-	-84.30
Gas works	9.85	-0.60	-9.07	-6.18	-	-	-	-	-6.01
Coke ovens ⁴	-99.53	-	-0.68	-0.19	-	-	-0.02	-	-100.42
Oil refineries	-	-2 782.93	2 762.10	-	-	-	-	-	-20.82
Petchem. plants	-	5.09	-5.37	-	-	-	-	-	-0.28
Liquefaction plants	-0.73	0.23	-	-	-	-	-	-	-0.50
Other transf.	-	-	-0.12	-0.03	-	-	-26.16	-	-26.30
Energy ind. own use	-34.93	-2.59	-158.81	-105.99	-	-	-0.20	-57.68	-360.19
Losses	-9.06	-7.07	-0.27	-6.03	-	-	-0.25	-43.15	-65.83
TFC	636.80	22.14	2 230.27	651.57	-	-	609.10	516.76	4 666.63
Industry	360.91	16.41	432.59	356.29	-	-	86.71	286.90	1 539.81
Transport ⁵	31.96	-	1 020.82	17.72	-	-	0.24	10.60	1 081.34
Other	237.92	0.00	520.41	259.19	-	-	522.15	219.26	1 758.93
Non-energy use	6.01	5.73	256.45	18.37	-	-	-	-	286.56

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat, etc.

4. Also includes peat fuel, BKB and peat briquette plants.

5. Includes international aviation and international marine bunkers.

BALANCE TABLE

World

2013

(Mtoe)

SUPPLY AND CONSUMPTION	Coal ¹	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste ²	Other ³	Total
Production	3958.10	4215.64	-	2908.64	646.50	325.96	1375.55	163.72	13594.11
Imports	830.67	2246.09	1177.25	873.04	-	-	15.89	59.94	5202.89
Exports	-863.26	-2181.50	-1237.91	-895.12	-	-	-13.84	-56.95	-5248.57
Stock changes	-18.30	-0.68	-3.03	15.37	-	-	-0.50	-	-7.14
TPES	3907.21	4279.54	-63.69	2901.94	646.50	325.96	1377.10	166.71	13541.28
Transfers	-0.61	-181.33	224.41	-0.00	-	-	-	-	42.47
Statistical diff.	-4.20	13.41	-7.36	9.90	-	-	-0.24	1.46	12.96
Electricity plants	-2098.90	-39.85	-211.12	-746.72	-638.87	-325.96	-87.17	1701.35	-2447.25
CHP plants	-175.68	-0.01	-16.74	-322.41	-7.63	-	-55.66	326.91	-251.23
Heat plants	-135.11	-0.81	-11.03	-98.20	-	-	-11.28	176.57	-79.86
Blast furnaces	-223.58	-	-0.43	-0.04	-	-	-0.03	-	-224.08
Gas works	-7.14	-	-3.13	3.51	-	-	-0.07	-	-6.84
Coke ovens ⁴	-70.14	-	-2.68	-0.00	-	-	-0.13	-	-72.95
Oil refineries	-	-4076.24	4004.94	-	-	-	-	-	-71.30
Petchem. plants	-	31.55	-31.47	-	-	-	-	-	0.07
Liquefaction plants	-8.53	11.33	-	-15.63	-	-	-	-	-12.82
Other transf.	-0.43	4.96	-0.64	-7.25	-	-	-78.20	-0.74	-82.30
Energy ind. own use	-109.94	-11.00	-186.70	-303.74	-	-	-13.80	-204.07	-829.24
Losses	-3.56	-8.76	-0.82	-20.68	-	-	-0.15	-183.90	-217.87
TFC	1069.41	22.79	3693.55	1400.68	-	-	1130.35	1984.28	9301.06
Industry	844.02	12.78	298.34	520.72	-	-	193.55	833.02	2702.44
Transport ⁵	3.22	0.02	2373.66	96.22	-	-	64.52	25.86	2563.52
Other	157.35	0.20	430.60	628.53	-	-	872.28	1125.40	3214.34
Non-energy use	64.81	9.80	590.95	155.20	-	-	-	-	820.76

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat, etc.

4. Also includes patent fuel, BKB and peat briquette plants.

5. Includes international aviation and international marine bunkers.

SIMPLIFIED ENERGY

OECD

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal ¹	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste ²	Other ³	Total
Production	819.10	710.51	-	706.22	49.22	78.94	87.29	6.13	2457.41
Imports	121.92	1277.50	336.20	62.55	-	-	0.03	7.55	1805.76
Exports	-111.10	-63.59	-172.72	-50.38	-	-	-0.01	-7.01	-404.81
Intl. marine bunkers	-	-	-73.65	-	-	-	-	-	-73.65
Intl. aviation bunkers	-	-	-24.64	-	-	-	-	-	-24.64
Stock changes	14.54	-10.78	-11.36	-12.07	-	-	0.06	-	-19.62
TPES	844.46	1913.65	53.83	706.32	49.22	78.94	87.36	6.66	3740.45
Transfers	-	-41.28	42.49	-	-	-	-	-	1.22
Statistical diff.	14.80	11.29	2.56	-5.61	-	-	-	-	23.04
Electricity plants	-387.59	-20.61	-228.38	-108.33	-49.12	-78.94	-1.43	364.70	-509.71
CHP plants	-52.07	-	-7.89	-11.64	-0.10	-	-0.75	30.94	-41.51
Heat plants	-7.81	-	-0.90	-0.68	-	-	-0.80	7.11	-3.08
Blast furnaces	-65.52	-	-2.72	-	-	-	-	-	-68.24
Gas works	11.02	-0.60	-8.72	-6.37	-	-	-	-	-4.68
Coke ovens ⁴	-25.70	-	-0.68	-0.19	-	-	-0.02	-	-26.59
Oil refineries	-	-1865.97	1868.42	-	-	-	-	-	2.45
Petrochem. plants	-	4.88	-5.16	-	-	-	-	-	-0.28
Liquefaction plants	-	0.02	-	-	-	-	-	-	0.02
Other transf.	-	-	-0.12	-0.03	-	-	-	-	-0.15
Energy ind. own use	-24.53	-0.99	-128.88	-72.36	-	-	-0.07	-33.38	-260.20
Losses	-3.80	-	-0.23	-2.63	-	-	-	-30.54	-37.20
TFC	303.27	0.39	1583.63	498.48	-	-	84.30	345.49	2815.56
Industry	182.79	0.39	312.91	250.44	-	-	42.26	169.41	958.18
Transport	7.34	-	665.68	17.00	-	-	-	5.30	695.32
Other	110.05	-	393.09	225.47	-	-	42.04	170.78	941.43
Non-energy use	3.10	-	211.95	5.58	-	-	-	-	220.63

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat, etc.

4. Also includes patent fuel, BKB and peat briquette plants.

BALANCE TABLE

OECD

2013

(Mtoe)

SUPPLY AND CONSUMPTION	Coal ¹	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste ²	Other ³	Total
Production	952.72	996.24	-	1 020.39	511.35	121.54	286.35	88.42	3 977.02
Imports	408.65	1 417.27	569.15	648.50	-	-	14.35	39.15	3 097.06
Exports	-351.55	-364.22	-579.58	-315.45	-	-	-7.50	-38.14	-1 656.45
Intl. marine bunkers	-	-	-72.24	-	-	-	-0.03	-	-72.27
Intl. aviation bunkers	-	-	-87.97	-	-	-	-	-	-87.97
Stock changes	19.45	3.08	2.43	17.46	-	-	-0.22	-	42.21
TPES	1 029.27	2 052.37	-168.21	1 370.91	511.35	121.54	292.95	89.43	5 299.61
Transfers	-	-71.46	103.67	-	-	-	-	-	32.20
Statistical diff.	-7.77	8.09	-14.93	4.87	-	-	-0.02	1.47	-8.29
Electricity plants	-741.28	-10.07	-53.91	-366.91	-504.27	-121.54	-44.56	760.96	-1 081.57
CHP plants	-77.25	-	-10.96	-106.11	-7.09	-	-44.97	144.50	-101.88
Heat plants	-4.56	-	-0.89	-8.61	-	-	-6.24	16.26	-4.04
Blast furnaces	-53.82	-	-0.43	-0.04	-	-	-	-	-54.28
Gas works	-1.98	-	-2.82	3.40	-	-	-0.06	-	-1.45
Coke ovens ⁴	-6.27	-	-1.16	-	-	-	-0.13	-	-7.57
Oil refineries	-	-2 003.09	1 985.51	-	-	-	-	-	-17.58
Petrochem. plants	-	27.40	-27.91	-	-	-	-	-	-0.51
Liquefaction plants	-0.98	0.59	-	-	-	-	-	-	-0.39
Other transf.	-0.21	3.40	-	-4.28	-	-	-0.43	-0.74	-2.26
Energy ind. own use	-15.14	-0.05	-100.79	-145.07	-	-	-1.30	-74.96	-337.31
Losses	-0.93	-	-0.03	-2.69	-	-	-0.02	-65.33	-69.02
TFC	119.09	7.18	1 707.13	745.47	-	-	195.22	871.58	3 645.67
Industry	96.31	2.21	95.32	248.36	-	-	74.59	278.68	795.46
Transport	0.15	-	1 111.81	28.73	-	-	44.16	9.04	1 193.89
Other	19.84	-	195.56	435.94	-	-	76.47	583.86	1 311.67
Non-energy use	2.79	4.97	304.45	32.44	-	-	-	-	344.65

1. In this table, peat and oil shale are aggregated with coal.

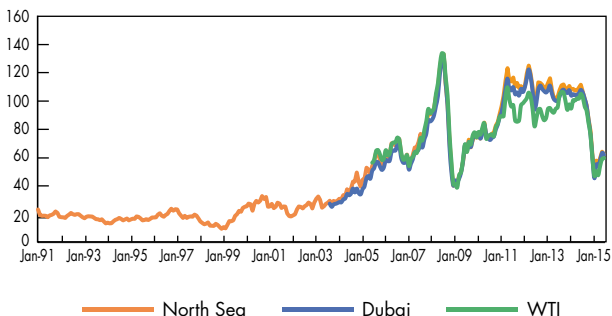
2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat, etc.

4. Also includes patent fuel, BKB and peat briquette plants.

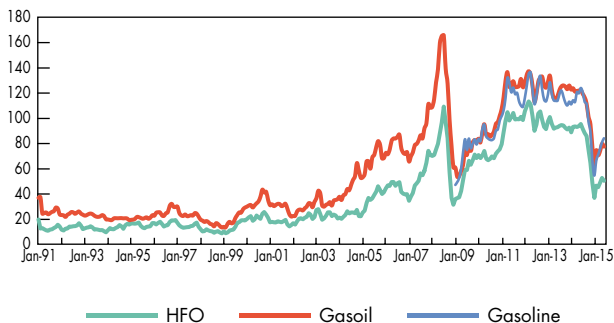
Crude oil

Average key crude oil spot prices in USD/barrel



Oil products

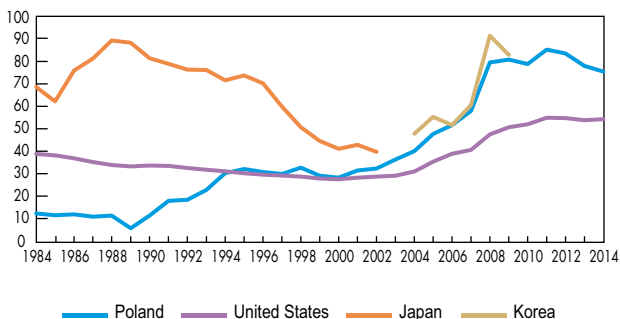
Average Rotterdam oil product spot prices in USD/barrel



Source for all prices: Based on Argus. Copyright
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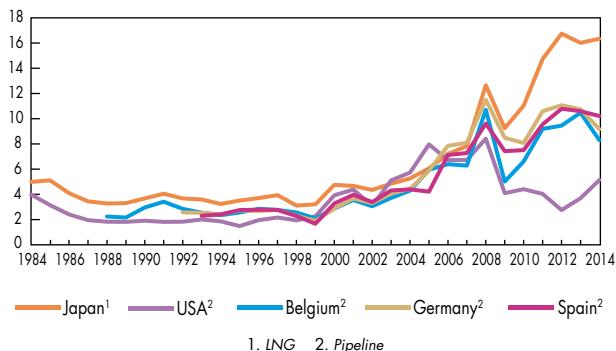
Coal

Average steam coal prices for electricity generation in USD/tonne



Natural gas

Average natural gas import prices in USD/MBtu



ENERGY PRICES¹ IN SELECTED

	Heavy fuel oil for industry ² (tonne)	Light fuel oil for households (1 000 litres)	Automotive diesel oil ³ (litre)	Unleaded premium ⁴ (litre)
Australia	..	..	..	1.027
Austria	403.86	820.13	0.892	1.317
Belgium	342.30	671.17	1.156	1.573
Canada	354.70	899.94	0.916	0.925
Chile	..	1 052.54	..	1.144
Czech Republic	279.23	748.54	1.062	1.255
Denmark	574.09	1 390.08	1.153	1.641
Estonia	..	884.82	1.037	1.197
Finland	..	974.33	1.164	1.546
France	437.15	815.35	1.090	1.494
Germany	320.00	680.42	1.206	1.521
Greece	431.35	1 018.66	1.056	1.605
Hungary	490.29	x	1.042	1.273
Ireland	712.02	785.35	1.125	1.485
Israel	c	1 613.59	c	1.678
Italy	455.59	1 352.10	1.308	1.700
Japan	597.43	711.71	0.843	1.164
Korea	561.61	906.94	..	1.704
Luxembourg	..	629.27	0.992	1.277
Mexico	280.66	x	0.816	0.931
Netherlands	564.00	1 158.39	1.158	1.718
New Zealand	407.00	..	0.617	1.444
Norway	..	1 268.36	1.276	1.775
Poland	483.81	849.26	0.984	1.204
Portugal	667.57	1 205.67	1.211	1.556
Slovak Republic	332.65	..	1.090	1.435
Slovenia	x	958.86	1.106	1.447
Spain	405.23	760.34	1.044	1.342
Sweden	907.53	..	1.288	1.549
Switzerland	..	791.37	1.327	1.526
Turkey	652.60	1 250.74	1.540	1.758
United Kingdom	c	725.19	1.467	1.650
United States	353.77	788.05	0.771	0.652

1. Prices are for 1st quarter 2015 or latest available quarter for oil products, and annual 2014 for other products.

2. Low sulphur fuel oil; high sulphur fuel oil for Canada, Ireland, Mexico, New Zealand, Turkey and the United States.

3. For commercial purposes.

OECD COUNTRIES in USD/unit

Nat. gas for industry (MWh GCV ⁵)	Nat. gas for households (MWh GCV ⁵)	Steam coal for industry ⁶ (tonne)	Electricity for industry (MWh)	Electricity for households (MWh)	
..	..	..	..	..	Australia
45.31	92.48	220.51	135.11	266.93	Austria
35.69	86.77	..	128.10	243.86	Belgium
15.98	34.92	..	..	..	Canada
..	102.67	..	103.84	151.44	Chile
42.80	76.99	c	122.84	174.44	Czech Republic
..	117.98	..	101.80	403.12	Denmark
47.39	64.23	..	117.89	168.90	Estonia
45.78	..	270.17	104.52	201.35	Finland
49.16	89.44	..	125.96	207.12	France
44.61	94.68	..	179.25	395.05	Germany
56.53	139.79	..	142.76	235.64	Greece
51.16	49.00	..	123.29	158.21	Hungary
48.62	100.46	..	166.38	305.27	Ireland
c	x	x	..	..	Israel
..	..	..	327.78	306.82	Italy
..	..	114.91	188.12	253.26	Japan
68.76	73.52	..	..	109.61	Korea
44.83	69.15	x	98.85	218.39	Luxembourg
..	35.38	x	121.46	90.08	Mexico
43.19	102.58	..	118.08	252.43	Netherlands
..	..	c	..	236.05	New Zealand
x	x	..	54.60	127.10	Norway
43.83	72.62	92.59	99.93	192.15	Poland
59.77	130.94	180.79	155.96	291.56	Portugal
44.16	70.75	..	156.96	213.98	Slovak Republic
51.74	88.55	c	115.11	212.72	Slovenia
44.44	118.87	..	..	..	Spain
54.93	153.95	..	81.73	214.45	Sweden
73.55	112.65	112.30	128.74	209.29	Switzerland
38.74	47.54	90.68	130.81	169.59	Turkey
40.06	83.43	167.60	157.24	255.66	United Kingdom
18.27	36.14	80.06	70.14	125.02	United States

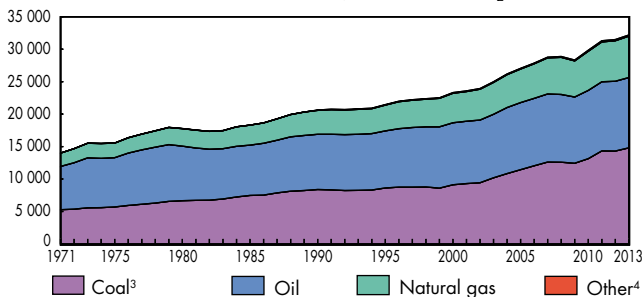
4. Unleaded premium gasoline (95 RON); unleaded regular for Japan.

5. Gross calorific value. 6. Brown coal for Turkey.

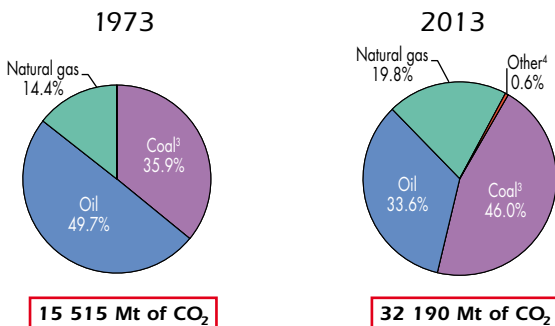
.. not available x not applicable c confidential

CO₂ Emissions by fuel

World¹ CO₂ emissions from fuel combustion²
from 1971 to 2013 by fuel (Mt of CO₂)



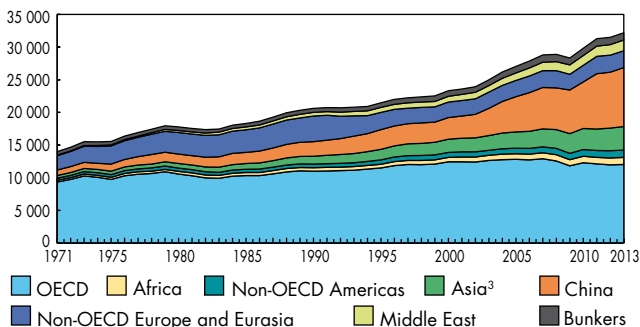
1973 and 2013 fuel shares of CO₂ emissions from fuel combustion²



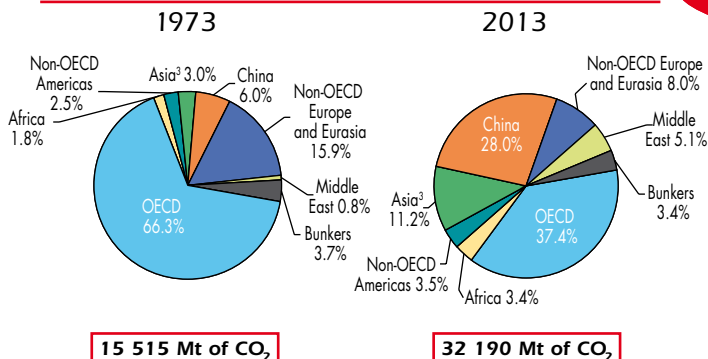
1. World includes international aviation and international marine bunkers.
2. CO₂ emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.
3. In these graphs, peat and oil shale are aggregated with coal.
4. Includes industrial waste and non-renewable municipal waste.

CO₂ Emissions by region

World¹ CO₂ emissions from fuel combustion² 1971 to 2013
by region (Mt of CO₂)



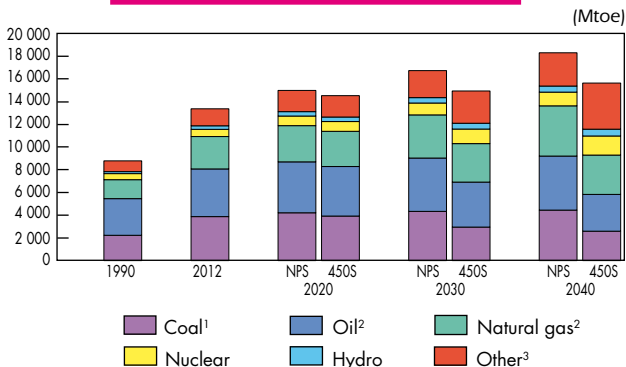
1973 and 2013 regional shares of CO₂ emissions from fuel combustion²



- World includes international aviation and international marine bunkers, which are shown together as Bunkers.
- CO₂ emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.
- Asia excludes China.

OUTLOOK FOR WORLD TPES

TPES Outlook by fuel

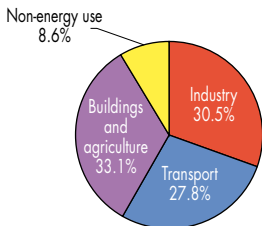


NPS: New Policies Scenario
(based on policies under consideration)

450S: 450 Scenario⁴
(based on policies needed to limit global average temperature increase to 2 °C)

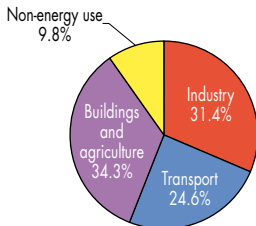
Total final consumption by sector in 2040

New Policies Scenario



12 487 Mtoe

450 Scenario



10 748 Mtoe

1. In these graphs, peat and oil shale are aggregated with coal.

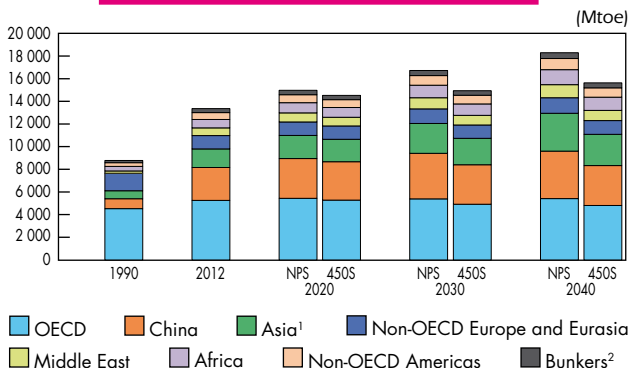
2. Includes international aviation and international marine bunkers.

3. Includes biofuels and waste, geothermal, solar, wind, tide, etc.

4. Based on a plausible post-2014 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO₂-equivalent.

TO 2040

TPES Outlook by region

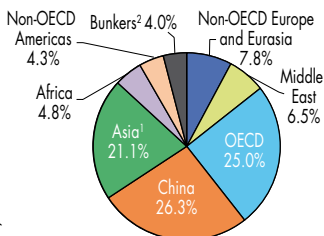


NPS: New Policies Scenario
(based on policies under consideration)

450S: 450 Scenario³
(based on policies needed to limit global average temperature increase to 2 °C)

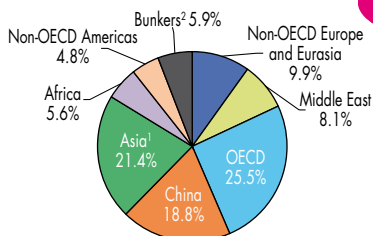
CO₂ emissions by region in 2040

New Policies Scenario



38 037 Mt of CO₂

450 Scenario



19 300 Mt of CO₂

1. Asia excludes China.

2. Includes international aviation and international marine bunkers.

3. Based on a plausible post-2014 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO₂-equivalent.
CO₂ emissions are from fossil fuel combustion only.

Selected indicators for 2013

Region/ Country/ Economy	Popu- lation (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons. ¹ (TWh)	CO ₂ emissions ² (Mt of CO ₂)
World	7 118	56 519	86 334	13 594	-	13 541 ⁽³⁾	21 538	32 190 ⁽⁴⁾
OECD	1 261	40 615	40 316	3 977	1 441	5 300	10 179	12 038
Middle East	218	1 490	4 299	1 791	-1 059	689	841	1 647
Non-OECD Europe and Eurasia	341	1 679	4 164	1 861	-677	1 156	1 538	2 573
China	1 367	5 105	14 257	2 566	532	3 023	5 165	9 023
Asia	2 348	3 754	13 293	1 473	247	1 655	2 155	3 607
Non-OECD Americas	472	2 468	5 546	796	-164	619	1 011	1 128
Africa	1 111	1 408	4 459	1 129	-365	747	649	1 075
Albania	2.90	11.35	25.97	2.03	0.58	2.32	7.33	3.64
Algeria	39.21	127.19	450.07	137.67	-89.19	47.58	48.78	113.87
Angola	21.47	58.79	143.15	98.01	-82.35	15.36	5.32	18.49
Argentina	41.45	331.26	666.21	71.43	12.01	80.59	131.59	182.28
Armenia	2.98	6.88	19.95	0.81	2.14	2.90	5.60	5.24
Australia	23.27	949.05	895.13	343.90	-209.70	129.14	234.27	388.68
Austria	8.48	349.52	317.07	12.11	21.12	33.22	72.19	65.13
Azerbaijan	9.42	30.63	139.12	59.35	-44.74	13.88	19.71	29.45
Bahrain	1.33	23.32	50.40	22.04	-7.87	13.73	24.58	28.30
Bangladesh	157.00	97.26	397.83	28.73	5.53	33.87	46.05	59.56
Belarus	9.47	46.51	143.73	3.99	23.57	27.28	34.54	58.25
Belgium	11.11	420.46	375.84	14.91	49.37	56.35	89.09	89.11
Benin	10.32	6.02	15.93	2.23	2.02	4.06	0.97	5.22
Bolivia	10.67	14.12	56.38	21.92	-13.71	8.17	7.34	17.31
Bosnia and Herzegovina	3.83	13.03	28.54	4.62	1.92	6.45	12.31	21.50
Botswana	2.02	14.20	27.44	1.33	1.31	2.39	3.40	5.48
Brazil	200.00	1 166.72	2 596.47	252.92	45.70	293.68	516.63	452.39
Brunei Darussalam	0.42	10.10	25.84	16.99	-13.78	3.04	3.99	6.85

1. Gross production + imports – exports – losses.

2. CO₂ emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO ₂ / TPES (t CO ₂ / toe)	CO ₂ / pop. (t CO ₂ / capita)	CO ₂ / GDP (kg CO ₂ / 2005 USD)	CO ₂ / GDP (PPP) (kg CO ₂ / 2005 USD)	Region/ Country/ Economy
1.90	0.24	0.16	3026	2.38	4.52	0.57	0.37	World
4.20	0.13	0.13	8072	2.27	9.55	0.30	0.30	OECD
3.17	0.46	0.16	3863	2.39	7.57	1.11	0.38	Middle East
3.39	0.69	0.28	4510	2.23	7.54	1.53	0.62	Non-OECD Europe and Eurasia
2.21	0.59	0.21	3778	2.98	6.60	1.77	0.63	China
0.71	0.44	0.12	918	2.18	1.54	0.96	0.27	Asia
1.31	0.25	0.11	2 142	1.82	2.39	0.46	0.20	Non-OECD Americas
0.67	0.53	0.17	584	1.44	0.97	0.76	0.24	Africa
0.80	0.20	0.09	2532	1.57	1.26	0.32	0.14	Albania
1.21	0.37	0.11	1 244	2.39	2.90	0.90	0.25	Algeria
0.72	0.26	0.11	248	1.20	0.86	0.31	0.13	Angola
1.94	0.24	0.12	3 175	2.26	4.40	0.55	0.27	Argentina
0.97	0.42	0.15	1 880	1.81	1.76	0.76	0.26	Armenia
5.55	0.14	0.14	10 067	3.01	16.70	0.41	0.43	Australia
3.92	0.10	0.10	8 515	1.96	7.68	0.19	0.21	Austria
1.47	0.45	0.10	2 092	2.12	3.13	0.96	0.21	Azerbaijan
10.30	0.59	0.27	18 455	2.06	21.24	1.21	0.56	Bahrain
0.22	0.35	0.09	293	1.76	0.38	0.61	0.15	Bangladesh
2.88	0.59	0.19	3 648	2.14	6.15	1.25	0.41	Belarus
5.07	0.13	0.15	8 023	1.58	8.02	0.21	0.24	Belgium
0.39	0.67	0.25	94	1.28	0.51	0.87	0.33	Benin
0.77	0.58	0.14	687	2.12	1.62	1.23	0.31	Bolivia
1.69	0.50	0.23	3 214	3.33	5.62	1.65	0.75	Bosnia and Herzegovina
1.18	0.17	0.09	1 684	2.29	2.71	0.39	0.20	Botswana
1.47	0.25	0.11	2 583	1.54	2.26	0.39	0.17	Brazil
7.28	0.30	0.12	9 553	2.25	16.39	0.68	0.27	Brunei Darussalam

3. TPES for world includes international aviation and international marine bunkers as well as electricity and heat trade.

4. CO₂ emissions for world include emissions from international aviation and international marine bunkers.

Region/ Country/ Economy	Popu- lation (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons. ¹ (TWh)	CO ₂ emissions ² (Mt of CO ₂)
Bulgaria	7.27	34.93	91.78	10.63	6.64	16.91	33.71	39.32
Cambodia	15.14	10.73	39.67	4.09	1.95	5.97	3.33	5.18
Cameroon	22.25	22.02	54.28	8.99	-1.52	7.35	6.18	5.90
Canada	35.15	1 327.40	1 325.34	435.07	-184.55	253.20	545.59	536.32
Chile	17.64	172.01	288.55	14.98	25.21	38.69	68.18	82.01
China, People's Rep. of	1 360.00	4 864.00	13 927.71	2 565.67	503.90	3 009.47	5 121.93	8 977.10
Colombia	48.32	212.33	517.36	125.55	-96.05	31.65	55.73	68.34
Congo	4.45	8.72	22.49	14.98	-12.57	2.44	1.03	2.34
Costa Rica	4.87	28.45	58.26	2.47	2.53	4.84	9.20	7.13
Côte d'Ivoire	20.32	21.93	56.21	12.60	0.52	13.09	5.46	8.68
Croatia	4.26	44.92	68.26	3.63	4.13	7.72	15.98	16.01
Cuba	11.27	62.80	122.56	5.85	6.05	11.71	16.20	29.79
Curaçao ⁵	0.15	1.85	1.66	0.00	3.48	1.82	0.77	4.45
Cyprus ⁵	0.87	17.81	19.38	0.11	2.32	1.93	4.10	5.62
Czech Republic	10.51	154.01	257.72	30.16	11.75	41.95	66.08	101.13
DPR of Korea	24.90	27.79	104.32	24.10	-9.65	14.45	16.44	47.68
Dem. Rep. of the Congo	67.51	19.46	47.08	21.62	-0.24	21.20	7.98	2.63
Denmark	5.61	265.14	185.10	16.84	2.25	17.45	33.91	38.81
Dominican Republic	10.40	50.81	109.26	1.02	7.01	7.52	15.59	19.69
Ecuador	15.74	58.24	147.70	29.73	-15.00	15.34	20.88	39.50
Egypt	82.06	128.55	784.16	82.82	-3.95	77.54	148.72	184.32
El Salvador	6.34	19.42	42.42	2.27	2.05	4.22	5.57	5.78
Eritrea	6.33	1.25	6.53	0.64	0.18	0.82	0.31	0.55
Estonia	1.32	15.89	25.45	5.65	0.90	6.09	8.78	18.86
Ethiopia	94.10	27.74	111.91	45.32	3.02	47.94	6.11	8.50
Finland	5.44	212.43	174.80	18.16	16.54	33.04	84.36	49.19
FYR of Macedonia	2.11	7.54	20.21	1.44	1.31	2.80	7.37	8.30
France	65.90	2 351.95	2 048.28	136.25	124.00	253.32	486.48	315.57
Gabon	1.67	11.60	27.75	13.68	-11.04	2.37	1.93	2.83
Georgia	4.49	9.69	27.69	1.43	2.56	3.90	9.29	6.63

1. Gross production + imports – exports – losses.

2. CO₂ emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO ₂ / TPES (t CO ₂ / toe)	CO ₂ / pop. (t CO ₂ / capita)	CO ₂ / GDP (kg CO ₂ / 2005 USD)	CO ₂ / GDP (PPP) (kg CO ₂ / 2005 USD)	Region/ Country/ Economy
2.33	0.48	0.18	4640	2.33	5.41	1.13	0.43	Bulgaria
0.39	0.56	0.15	220	0.87	0.34	0.48	0.13	Cambodia
0.33	0.33	0.14	278	0.80	0.27	0.27	0.11	Cameroon
7.20	0.19	0.19	15520	2.12	15.26	0.40	0.40	Canada
2.19	0.22	0.13	3865	2.12	4.65	0.48	0.28	Chile
2.21	0.62	0.22	3766	2.98	6.60	1.85	0.64	China, People's Rep. of
0.65	0.15	0.06	1153	2.16	1.41	0.32	0.13	Colombia
0.55	0.28	0.11	231	0.96	0.53	0.27	0.10	Congo
0.99	0.17	0.08	1888	1.47	1.46	0.25	0.12	Costa Rica
0.64	0.60	0.23	269	0.66	0.43	0.40	0.15	Côte d'Ivoire
1.81	0.17	0.11	3754	2.07	3.76	0.36	0.23	Croatia
1.04	0.19	0.10	1438	2.54	2.64	0.47	0.24	Cuba
11.79	0.98	1.10	5000	2.45	28.91	2.41	2.69	Curaçao ⁵
2.23	0.11	0.10	4739	2.91	6.49	0.32	0.29	Cyprus ⁵
3.99	0.27	0.16	6287	2.41	9.62	0.66	0.39	Czech Republic
0.58	0.52	0.14	660	3.30	1.92	1.72	0.46	DPR of Korea
0.31	1.09	0.45	118	0.12	0.04	0.14	0.06	Dem. Rep. of the Congo
3.11	0.07	0.09	6042	2.22	6.91	0.15	0.21	Denmark
0.72	0.15	0.07	1499	2.62	1.89	0.39	0.18	Dominican Republic
0.97	0.26	0.10	1327	2.57	2.51	0.68	0.27	Ecuador
0.94	0.60	0.10	1812	2.38	2.25	1.43	0.24	Egypt
0.67	0.22	0.10	879	1.37	0.91	0.30	0.14	El Salvador
0.13	0.66	0.13	49	0.67	0.09	0.44	0.08	Eritrea
4.62	0.38	0.24	6655	3.10	14.29	1.19	0.74	Estonia
0.51	1.73	0.43	65	0.18	0.09	0.31	0.08	Ethiopia
6.07	0.16	0.19	15510	1.49	9.04	0.23	0.28	Finland
1.33	0.37	0.14	3498	2.97	3.94	1.10	0.41	FYR of Macedonia
3.84	0.11	0.12	7382	1.25	4.79	0.13	0.15	France
1.42	0.20	0.09	1153	1.20	1.69	0.24	0.10	Gabon
0.87	0.40	0.14	2070	1.70	1.48	0.68	0.24	Georgia

5. Please refer to geographical coverage section for more details.

Region/ Country/ Economy	Popu- lation (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons. ¹ (TWh)	CO ₂ emissions ² (Mt of CO ₂)
Germany	82.10	3 161.94	2 933.04	120.38	207.31	317.66	576.49	759.60
Ghana	25.91	19.93	89.12	9.62	-0.09	8.99	10.00	13.65
Gibraltar	0.03	1.12	0.96	0.00	3.98	0.18	0.18	0.50
Greece	11.03	199.82	225.03	9.31	16.17	23.40	55.14	68.89
Guatemala	15.47	36.21	97.26	8.69	3.20	12.04	8.71	12.22
Haiti	10.32	4.88	15.14	3.33	0.84	4.10	0.51	2.17
Honduras	8.10	12.77	32.05	2.52	2.72	5.20	5.66	8.45
Hong Kong, China	7.19	241.03	329.62	0.10	28.46	13.93	42.65	46.05
Hungary	9.89	113.12	175.57	10.21	12.00	22.56	38.49	39.50
Iceland	0.32	19.20	12.20	5.27	0.81	5.89	17.74	2.03
India	1 250.00	1 489.78	5 846.09	523.34	254.70	775.45	978.82	1 868.62
Indonesia	250.00	452.34	2 058.78	459.99	-245.76	213.64	197.92	424.61
Islamic Rep. of Iran	77.45	242.55	1 041.76	298.93	-55.78	228.40	223.67	525.92
Iraq	33.42	84.13	430.57	157.58	-107.36	50.02	60.74	137.98
Ireland	4.60	217.27	172.94	2.27	12.34	13.06	26.22	34.36
Israel	8.06	196.18	236.86	6.44	19.24	23.94	52.86	68.17
Italy	60.65	1 754.56	1 627.97	36.76	123.20	155.37	310.76	338.22
Jamaica	2.72	11.06	18.75	0.51	2.68	2.94	3.06	7.45
Japan	127.33	4 784.55	4 070.52	27.96	437.00	454.65	997.78	1 235.06
Jordan	6.46	18.45	65.60	0.27	7.59	7.73	15.18	22.82
Kazakhstan	17.04	92.42	340.80	169.07	-85.45	81.54	83.35	244.89
Kenya	44.35	28.05	106.83	17.59	4.84	21.49	7.33	11.70
Korea	50.22	1 199.00	1 556.46	43.60	234.11	263.83	523.69	572.25
Kosovo	1.82	5.09	12.40	1.79	0.57	2.36	5.30	8.31
Kuwait	3.37	98.15	240.31	170.47	-134.04	35.07	53.58	84.10
Kyrgyzstan	5.72	3.58	15.84	1.76	2.31	3.95	10.79	8.88
Latvia	2.01	17.85	33.37	2.14	2.63	4.35	6.99	6.93
Lebanon	4.47	32.35	66.12	0.25	7.13	7.07	16.89	20.64
Libya	6.20	37.99	74.34	61.70	-44.31	16.99	24.58	43.23
Lithuania	2.96	31.19	58.23	1.64	5.44	6.97	10.84	10.73
Luxembourg	0.55	43.20	36.46	0.14	4.21	3.97	7.71	9.77

1. Gross production + imports – exports – losses.

2. CO₂ emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO ₂ / TPES (t CO ₂ / toe)	CO ₂ / pop. (t CO ₂ / capita)	CO ₂ / GDP (kg CO ₂ / 2005 USD)	CO ₂ / GDP (PPP) (kg CO ₂ / 2005 USD)	Region/ Country/ Economy
3.87	0.10	0.11	7022	2.39	9.25	0.24	0.26	Germany
0.35	0.45	0.10	386	1.52	0.53	0.68	0.15	Ghana
5.57	0.16	0.19	5545	2.71	15.12	0.45	0.52	Gibraltar
2.12	0.12	0.10	5000	2.94	6.25	0.34	0.31	Greece
0.78	0.33	0.12	563	1.01	0.79	0.34	0.13	Guatemala
0.40	0.84	0.27	49	0.53	0.21	0.44	0.14	Haiti
0.64	0.41	0.16	699	1.63	1.04	0.66	0.26	Honduras
1.94	0.06	0.04	5933	3.31	6.41	0.19	0.14	Hong Kong, China
2.28	0.20	0.13	3890	1.75	3.99	0.35	0.22	Hungary
18.16	0.31	0.48	54759	0.34	6.26	0.11	0.17	Iceland
0.62	0.52	0.13	783	2.41	1.49	1.25	0.32	India
0.85	0.47	0.10	792	1.99	1.70	0.94	0.21	Indonesia
2.95	0.94	0.22	2888	2.30	6.79	2.17	0.50	Islamic Rep. of Iran
1.50	0.59	0.12	1817	2.76	4.13	1.64	0.32	Iraq
2.84	0.06	0.08	5697	2.63	7.47	0.16	0.20	Ireland
2.97	0.12	0.10	6562	2.85	8.46	0.35	0.29	Israel
2.56	0.09	0.10	5124	2.18	5.58	0.19	0.21	Italy
1.08	0.27	0.16	1126	2.53	2.75	0.67	0.40	Jamaica
3.57	0.10	0.11	7836	2.72	9.70	0.26	0.30	Japan
1.20	0.42	0.12	2350	2.95	3.53	1.24	0.35	Jordan
4.79	0.88	0.24	4893	3.00	14.38	2.65	0.72	Kazakhstan
0.48	0.77	0.20	165	0.54	0.26	0.42	0.11	Kenya
5.25	0.22	0.17	10428	2.17	11.39	0.48	0.37	Korea
1.29	0.46	0.19	2908	3.52	4.56	1.63	0.67	Kosovo
10.41	0.36	0.15	15905	2.40	24.96	0.86	0.35	Kuwait
0.69	1.10	0.25	1887	2.25	1.55	2.48	0.56	Kyrgyzstan
2.16	0.24	0.13	3472	1.59	3.44	0.39	0.21	Latvia
1.58	0.22	0.11	3780	2.92	4.62	0.64	0.31	Lebanon
2.74	0.45	0.23	3963	2.54	6.97	1.14	0.58	Libya
2.36	0.22	0.12	3663	1.54	3.63	0.34	0.18	Lithuania
7.29	0.09	0.11	14150	2.46	17.93	0.23	0.27	Luxembourg

Region/ Country/ Economy	Popu- lation (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons. ¹ (TWh)	CO ₂ emissions ² (Mt of CO ₂)
Malaysia	29.72	207.95	597.67	94.63	-0.89	88.98	132.95	207.25
Malta	0.42	7.08	10.05	0.01	2.14	0.73	2.01	2.33
Mauritius	1.26	8.66	19.21	0.22	1.71	1.38	2.70	3.83
Mexico	118.40	1 044.04	1 596.47	216.51	-21.72	191.27	254.53	451.76
Moldova	3.56	4.04	14.32	0.31	2.79	3.07	4.81	6.70
Mongolia	2.84	5.10	23.08	16.34	-11.78	5.22	5.46	18.66
Montenegro	0.62	2.91	6.67	0.76	0.28	1.03	3.49	2.27
Morocco	33.01	84.97	208.28	1.87	18.83	18.88	28.98	50.34
Mozambique	25.83	11.19	24.60	16.63	-4.11	10.78	11.53	2.95
Myanmar	53.26	20.96	96.03	23.19	-6.50	16.57	8.71	13.34
Namibia	2.30	10.52	19.02	0.44	1.33	1.74	3.78	3.43
Nepal	27.80	11.37	53.78	8.62	1.78	10.29	3.57	5.14
Netherlands	16.80	720.79	646.76	69.40	24.62	77.39	114.62	156.23
New Zealand	4.46	129.72	120.02	16.20	4.62	19.51	40.35	30.73
Nicaragua	6.08	8.31	24.33	2.13	1.41	3.53	3.56	4.21
Niger	17.83	5.18	14.08	3.01	-0.12	2.80	0.89	1.85
Nigeria	174.00	183.31	838.22	255.66	-121.63	133.59	24.52	61.00
Norway	5.08	337.86	244.66	191.62	-158.11	32.71	118.49	35.29
Oman	3.63	46.39	132.51	75.68	-50.19	24.35	23.37	57.92
Pakistan	182.00	143.82	722.31	65.16	21.25	86.04	81.53	134.83
Panama	3.86	29.91	64.66	0.99	6.64	4.02	7.76	9.21
Paraguay	6.80	13.12	47.44	7.45	-2.59	4.94	9.52	4.93
Peru	30.38	124.83	308.21	21.69	-3.01	21.65	38.81	45.52
Philippines	98.39	155.60	554.20	24.49	20.74	44.60	67.53	89.63
Poland	38.50	415.43	719.11	70.92	25.86	97.59	149.79	292.44
Portugal	10.46	188.59	221.60	5.77	17.20	21.78	48.99	44.92
Qatar	2.17	129.89	259.93	223.98	-181.31	40.18	32.51	72.40
Romania	19.98	121.24	248.23	25.91	5.92	31.82	49.85	68.84
Russian Federation	143.00	993.52	2 206.46	1 340.21	-592.94	730.89	938.42	1 543.12
Saudi Arabia	28.83	520.66	1 336.45	614.48	-419.78	192.18	264.00	472.38
Senegal	14.13	11.25	27.31	1.81	2.19	3.71	3.12	6.00

1. Gross production + imports – exports – losses.

2. CO₂ emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO ₂ / TPES (t CO ₂ / toe)	CO ₂ / pop. (t CO ₂ / capita)	CO ₂ / GDP (kg CO ₂ / 2005 USD)	CO ₂ / GDP (PPP) (kg CO ₂ / 2005 USD)	Region/ Country/ Economy
2.99	0.43	0.15	4474	2.33	6.97	1.00	0.35	Malaysia
1.74	0.10	0.07	4740	3.17	5.50	0.33	0.23	Malta
1.09	0.16	0.07	2148	2.78	3.04	0.44	0.20	Mauritius
1.62	0.18	0.12	2150	2.36	3.82	0.43	0.28	Mexico
0.86	0.76	0.21	1353	2.18	1.88	1.66	0.47	Moldova
1.84	1.02	0.23	1923	3.57	6.57	3.66	0.81	Mongolia
1.65	0.35	0.15	5620	2.22	3.66	0.78	0.34	Montenegro
0.57	0.22	0.09	878	2.67	1.53	0.59	0.24	Morocco
0.42	0.96	0.44	446	0.27	0.11	0.26	0.12	Mozambique
0.31	0.79	0.17	164	0.80	0.25	0.64	0.14	Myanmar
0.76	0.17	0.09	1641	1.97	1.49	0.33	0.18	Namibia
0.37	0.91	0.19	128	0.50	0.18	0.45	0.10	Nepal
4.61	0.11	0.12	6823	2.02	9.30	0.22	0.24	Netherlands
4.37	0.15	0.16	9048	1.58	6.89	0.24	0.26	New Zealand
0.58	0.42	0.15	585	1.19	0.69	0.51	0.17	Nicaragua
0.16	0.54	0.20	50	0.66	0.10	0.36	0.13	Niger
0.77	0.73	0.16	141	0.46	0.35	0.33	0.07	Nigeria
6.44	0.10	0.13	23324	1.08	6.95	0.10	0.14	Norway
6.70	0.52	0.18	6434	2.38	15.95	1.25	0.44	Oman
0.47	0.60	0.12	448	1.57	0.74	0.94	0.19	Pakistan
1.04	0.13	0.06	2007	2.29	2.38	0.31	0.14	Panama
0.73	0.38	0.10	1400	1.00	0.73	0.38	0.10	Paraguay
0.71	0.17	0.07	1278	2.10	1.50	0.36	0.15	Peru
0.45	0.29	0.08	686	2.01	0.91	0.58	0.16	Philippines
2.53	0.23	0.14	3890	3.00	7.60	0.70	0.41	Poland
2.08	0.12	0.10	4685	2.06	4.30	0.24	0.20	Portugal
18.52	0.31	0.15	14988	1.80	33.38	0.56	0.28	Qatar
1.59	0.26	0.13	2495	2.16	3.45	0.57	0.28	Romania
5.11	0.74	0.33	6562	2.11	10.79	1.55	0.70	Russian Federation
6.67	0.37	0.14	9157	2.46	16.39	0.91	0.35	Saudi Arabia
0.26	0.33	0.14	221	1.62	0.42	0.53	0.22	Senegal

Region/ Country/ Economy	Popu- lation (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons. ¹ (TWh)	CO ₂ emissions ² (Mt of CO ₂)
Serbia	7.16	28.41	71.35	11.36	3.59	14.89	31.84	45.31
Singapore	5.40	199.22	366.48	0.64	73.51	26.10	47.73	46.56
Slovak Republic	5.41	64.99	118.22	6.66	10.43	17.21	28.16	32.38
Slovenia	2.06	38.40	50.48	3.56	3.25	6.85	14.08	14.34
South Africa	53.16	323.75	589.43	165.72	-19.80	141.27	230.08	420.40
South Sudan ⁵	11.30	10.95	36.98	5.23	-4.51	0.68	0.45	1.47
Spain	46.59	1 172.45	1 232.55	34.50	89.88	116.73	251.80	235.66
Sri Lanka	20.48	41.05	171.90	5.43	5.18	10.03	10.82	13.74
Sudan ⁵	37.96	29.27	110.35	15.65	-0.94	14.43	7.93	13.58
Sweden	9.60	436.37	347.72	35.08	16.57	49.26	133.16	37.50
Switzerland	8.09	477.25	340.99	12.95	15.20	26.73	63.16	41.54
Syrian Arab Republic	22.85	41.21	109.09	7.53	5.87	12.91	21.77	33.47
Chinese Taipei	23.41	481.26	800.38	13.51	97.82	108.63	244.79	248.70
Tajikistan	8.21	3.95	17.77	1.72	0.77	2.46	13.64	3.31
Tanzania	49.25	23.30	100.68	21.06	2.72	23.59	4.49	9.70
Thailand	67.01	230.37	831.20	78.07	56.82	134.06	166.66	247.45
Togo	6.82	2.89	8.17	2.57	0.69	3.21	1.02	1.67
Trinidad and Tobago	1.34	19.27	35.19	39.90	-19.78	19.60	9.27	22.95
Tunisia	10.89	43.34	104.37	7.30	3.46	10.41	15.62	23.65
Turkey	75.77	654.07	1 057.98	32.35	86.67	116.49	209.22	283.84
Turkmenistan	5.24	18.64	63.24	76.54	-49.81	26.26	13.64	66.02
Ukraine	45.49	97.27	344.58	85.93	31.68	116.14	163.77	265.05
United Arab Emirates	9.35	234.97	482.62	201.67	-113.14	69.53	98.58	167.61
United Kingdom	64.11	2 577.06	2 227.97	110.08	94.53	190.95	346.76	448.71
United States	316.47	14 451.51	14 451.51	1 881.03	308.31	2 188.36	4 109.84	5 119.70
Uruguay	3.41	26.60	57.53	2.18	2.55	4.60	10.17	7.11
Uzbekistan	30.24	27.20	134.69	54.13	-11.20	42.93	49.51	96.16
Venezuela	30.41	194.65	476.84	192.14	-120.82	68.76	98.25	155.57
Viet Nam	89.71	92.28	409.31	69.28	-6.23	59.93	117.19	130.05
Yemen	24.41	18.12	83.28	18.23	-9.76	8.27	6.31	23.92
Zambia	14.54	15.32	49.18	8.78	0.87	9.63	11.15	3.44
Zimbabwe	14.15	6.73	4.23	9.90	1.40	11.29	7.92	13.46

1. Gross production + imports – exports – losses.

2. CO₂ emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO ₂ / TPES (t CO ₂ / toe)	CO ₂ / pop. (t CO ₂ / capita)	CO ₂ / GDP (kg CO ₂ / 2005 USD)	CO ₂ / GDP (PPP) (kg CO ₂ / 2005 USD)	Region/ Country/ Economy
2.08	0.52	0.21	4444	3.04	6.33	1.60	0.64	Serbia
4.83	0.13	0.07	8840	1.78	8.62	0.23	0.13	Singapore
3.18	0.26	0.15	5203	1.88	5.98	0.50	0.27	Slovak Republic
3.32	0.18	0.14	6833	2.09	6.96	0.37	0.28	Slovenia
2.66	0.44	0.24	4328	2.98	7.91	1.30	0.71	South Africa
0.06	0.06	0.02	39	2.18	0.13	0.13	0.04	South Sudan ⁵
2.51	0.10	0.09	5404	2.02	5.06	0.20	0.19	Spain
0.49	0.24	0.06	528	1.37	0.67	0.33	0.08	Sri Lanka
0.38	0.49	0.13	209	0.94	0.36	0.46	0.12	Sudan ⁵
5.13	0.11	0.14	13871	0.76	3.91	0.09	0.11	Sweden
3.30	0.06	0.08	7808	1.55	5.14	0.09	0.12	Switzerland
0.57	0.31	0.12	953	2.59	1.47	0.81	0.31	Syrian Arab Republic
4.64	0.23	0.14	10458	2.29	10.63	0.52	0.31	Chinese Taipei
0.30	0.62	0.14	1662	1.35	0.40	0.84	0.19	Tajikistan
0.48	1.01	0.23	91	0.41	0.20	0.42	0.10	Tanzania
2.00	0.58	0.16	2487	1.85	3.69	1.07	0.30	Thailand
0.47	1.11	0.39	150	0.52	0.24	0.58	0.20	Togo
14.62	1.02	0.56	6913	1.17	17.12	1.19	0.65	Trinidad and Tobago
0.96	0.24	0.10	1435	2.27	2.17	0.55	0.23	Tunisia
1.54	0.18	0.11	2761	2.44	3.75	0.43	0.27	Turkey
5.01	1.41	0.42	2602	2.51	12.60	3.54	1.04	Turkmenistan
2.55	1.19	0.34	3600	2.28	5.83	2.72	0.77	Ukraine
7.44	0.30	0.14	10547	2.41	17.93	0.71	0.35	United Arab Emirates
2.98	0.07	0.09	5409	2.35	7.00	0.17	0.20	United Kingdom
6.92	0.15	0.15	12987	2.34	16.18	0.35	0.35	United States
1.35	0.17	0.08	2986	1.54	2.09	0.27	0.12	Uruguay
1.42	1.58	0.32	1637	2.24	3.18	3.54	0.71	Uzbekistan
2.26	0.35	0.14	3231	2.26	5.12	0.80	0.33	Venezuela
0.67	0.65	0.15	1306	2.17	1.45	1.41	0.32	Viet Nam
0.34	0.46	0.10	259	2.89	0.98	1.32	0.29	Yemen
0.66	0.63	0.20	767	0.36	0.24	0.22	0.07	Zambia
0.80	1.68	2.67	560	1.19	0.95	2.00	3.18	Zimbabwe

5. Please refer to geographical coverage section for more details.

Sources: Energy data: IEA.

Population: OECD/World Bank.

GDP and GDP(PPP) (in 2005 USD): OECD/World Bank/CEPII (Paris).

General conversion factors for energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
TJ	1	2.388×10^2	2.388×10^{-5}	9.478×10^2	2.778×10^{-1}
Gcal	4.187×10^{-3}	1	1.000×10^{-7}	3.968	1.163×10^{-3}
Mtoe	4.187×10^4	1.000×10^7	1	3.968×10^7	1.163×10^4
MBtu	1.055×10^{-3}	2.520×10^{-1}	2.520×10^{-8}	1	2.931×10^{-4}
GWh	3.600	8.598×10^2	8.598×10^{-5}	3.412×10^3	1

Conversion factors for mass

To:	kg	t	lt	st	lb
From:	multiply by:				
kilogramme (kg)	1	1.000×10^3	9.842×10^{-4}	1.102×10^{-3}	2.205
tonne (t)	1.000×10^3	1	9.842×10^{-1}	1.102	2.205×10^3
long ton (lt)	1.016×10^3	1.016	1	1.120	2.240×10^3
short ton (st)	9.072×10^2	9.072×10^{-1}	8.929×10^{-1}	1	2.000×10^3
pound (lb)	4.536×10^{-1}	4.536×10^{-4}	4.464×10^{-4}	5.000×10^{-4}	1

Conversion factors for volume

To:	gal U.S.	gal U.K.	bbl	ft ³	l	m ³
From:	multiply by:					
U.S. gallon (gal)	1	8.327×10^{-1}	2.381×10^{-2}	1.337×10^{-1}	3.785	3.785×10^{-3}
U.K. gallon (gal)	1.201	1	2.859×10^{-2}	1.605×10^{-1}	4.546	4.546×10^{-3}
barrel (bbl)	4.200×10^1	3.497×10^1	1	5.615	1.590×10^2	1.590×10^{-1}
cubic foot (ft ³)	7.481	6.229	1.781×10^{-1}	1	2.832×10^1	2.832×10^{-2}
litre (l)	2.642×10^{-1}	2.200×10^{-1}	6.290×10^{-3}	3.531×10^{-2}	1	1.000×10^{-3}
cubic metre (m ³)	2.642×10^2	2.200×10^2	6.290	3.531×10^1	1.000×10^3	1

Selected country-specific net calorific values

Steam Coal

Top-ten producers in 2014	toe/tonne
People's Rep. of China	0.479
United States	0.530
India	0.395
Indonesia	0.575
South Africa	0.564
Australia	0.597
Russian Federation	0.602
Kazakhstan	0.444
Colombia	0.650
Poland	0.546

Crude oil¹

Top-ten producers in 2014	toe/tonne
Russian Federation	1.005
Saudi Arabia	1.016
United States	1.033
People's Rep. of China	1.000
Iraq	1.023
Kuwait	1.016
Canada	1.022
Islamic Rep. of Iran	1.019
Venezuela	1.069
United Arab Emirates	1.018

1. Excludes NGL, feedstocks, additives and other hydrocarbons.

Default net calorific values

Oil products

	OECD Europe ²	OECD Americas	OECD Asia Oceania	Non-OECD
	toe/tonne			
Refinery gas	1.182	1.149	1.149	1.149
Ethane	1.182	1.180	1.180	1.180
Liquefied petroleum gases	1.099	1.130	1.139	1.130
Motor gasoline excl. biofuels	1.051	1.070	1.065	1.070
Aviation gasoline	1.051	1.070	1.065	1.070
Gasoline type jet fuel	1.027	1.070	1.065	1.070
Kerosene type jet fuel	1.027	1.065	1.063	1.065
Kerosene	1.027	1.046	1.025	1.046
Gas/diesel oil excl. biofuels	1.017	1.017	1.017	1.034
Fuel oil	0.955	0.960	1.017	0.960
Naphtha	1.051	1.075	1.032	1.075
White spirit	1.041	1.027	1.027	1.027
Lubricants	1.003	1.003	1.025	1.003
Bitumen	0.931	0.955	0.927	0.931
Paraffin waxes	0.955	0.955	0.955	0.955
Petroleum coke	0.764	0.764	0.807	0.764
Non-specified oil products	0.955	0.955	0.955	0.955

2. Defaults for OECD Europe were also applied to non-OECD Europe and Eurasia countries.

Selected country-specific gross calorific values

Natural gas

Top-ten producers in 2014	kJ/m ³
United States	38 118
Russian Federation	38 230
Islamic Rep. of Iran	39 356
Canada	38 850
Qatar	41 400
People's Rep. of China	38 931
Norway	39 256
Turkmenistan	37 889
Saudi Arabia	38 000
Algeria	39 565

Note: to calculate the net calorific value, the gross calorific value is multiplied by 0.9.

Conventions for electricity

Figures for electricity production, trade, and final consumption are calculated using the energy content of the electricity (i.e. at a rate of 1 TWh = 0.086 Mtoe). Hydro-electricity production (excluding pumped storage) and electricity produced by other non-thermal means (wind, tide/wave/ocean, photovoltaic, etc.) are accounted for similarly using 1 TWh = 0.086 Mtoe. However, the primary energy equivalent of nuclear electricity is calculated from the gross generation by assuming a 33% conversion efficiency, i.e. 1 TWh = $(0.086 \div 0.33)$ Mtoe. For geothermal and solar thermal, if no country-specific information is reported, the primary energy equivalent is calculated as follows:

- 10% for geothermal electricity;
- 50% for geothermal heat;
- 33% for solar thermal electricity;
- 100% for solar thermal heat.

Coal	<i>Coal</i> includes all coal, both primary (including coking coal, steam coal and lignite) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, gas works gas, coke oven gas, blast furnace gas and other recovered gases). For presentational purposes, peat (including peat products) and oil shale are also included in this category where applicable.
Steam coal	<i>Steam coal</i> comprises anthracite, other bituminous coal and sub-bituminous coal.
Crude oil	<i>Crude oil</i> comprises crude oil, natural gas liquids, refinery feedstocks and additives as well as other hydrocarbons.
Oil products	<i>Oil products</i> comprises refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other oil products.
Natural gas	<i>Natural gas</i> includes both “associated” and “non-associated” gas.
Nuclear	<i>Nuclear</i> shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33%.
Hydro	<i>Hydro</i> shows the energy content of the electricity produced in hydro power plants. Hydro output excludes output from pumped storage plants.
Biofuels and waste	<i>Biofuels and waste</i> comprises solid biofuels, liquid biofuels, biogases, industrial waste and municipal waste. Biofuels are defined as any plant matter used directly as fuel or converted into fuels (e.g. charcoal) or electricity and/or heat. Included here are wood, vegetal waste (including wood waste and crops used for energy production), ethanol, animal materials/wastes and sulphite lyes. Municipal waste comprises wastes produced by residential, commercial and public services, that are collected by local authorities for disposal in a central location for the production of heat and/or power.
Other	<i>Other</i> includes geothermal, solar, wind, tide/wave/ocean energy, electricity and heat. Unless the actual efficiency of geothermal and solar thermal is known, the quantity of geothermal and solar energy entering electricity generation is inferred from the electricity/heat production at geothermal and solar plants assuming an average thermal efficiency of: ■ 10% for geothermal electricity; ■ 50% for geothermal heat; ■ 33% for solar thermal electricity; ■ 100% for solar thermal heat.

Other (ctd.) For solar PV, wind and tide/wave/ocean energy, the quantities entering electricity generation are equal to the electrical energy generated. Direct use of geothermal and solar heat is also included here. Electricity is accounted for at the same heat value as electricity in final consumption (i.e. 1 GWh = 0.000086 Mtoe). Heat includes heat that is produced for sale and is accounted for in the transformation sector.

Production *Production* is the production of primary energy, i.e. coking coal, steam coal, lignite, peat, oil shale, crude oil, NGLs, natural gas, biofuels and waste, nuclear, hydro, geothermal, solar and the heat from heat pumps that is extracted from the ambient environment. Production is calculated after removal of impurities (e.g. sulphur from natural gas).

Imports and exports *Imports and exports* comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place.

a) Oil and natural gas

Quantities of crude oil and oil products imported or exported under processing agreements (i.e. refining on account) are included. Quantities of oil in transit are excluded. Crude oil, NGL and natural gas are reported as coming from the country of origin; refinery feedstocks and oil products are reported as coming from the country of last consignment. Re-exports of oil imported for processing within bonded areas are shown as exports of product from the processing country to the final destination.

b) Coal

Imports and exports comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit is not included.

c) Electricity

Amounts are considered as imported or exported when they have crossed the national territorial boundaries of the country.

International marine bunkers

International marine bunkers covers those quantities delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded.

International aviation bunkers	<i>International aviation bunkers</i> covers deliveries of aviation fuels to aircraft for international aviation. Fuels used by airlines for their road vehicles are excluded. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. For many countries this incorrectly excludes fuel used by domestically owned carriers for their international departures.
Stock changes	<i>Stock changes</i> reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.
Total primary energy supply (TPES)	<i>Total primary energy supply (TPES)</i> is made up of production + imports – exports – international marine bunkers – international aviation bunkers ± stock changes. For the world total, international marine bunkers and international aviation bunkers are not subtracted from TPES.
Transfers	<i>Transfers</i> includes both interproduct transfers, products transferred and recycled products.
Statistical differences	<i>Statistical differences</i> includes the sum of the unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. It also includes the statistical differences that arise because of the variety of conversion factors in the coal and oil columns.
Electricity plants	<i>Electricity plants</i> refers to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producers and autoproducer plants are included here.
Oil refineries	<i>Oil refineries</i> shows the use of primary energy for the manufacture of finished oil products and the corresponding output. Thus, the total reflects transformation losses. In certain cases the data in the total column are positive numbers. This can be due to either problems in the primary refinery balance or to the fact that the IEA uses regional net calorific values for oil products.
Other transformation	<i>Other transformation</i> covers non-specified transformation not shown elsewhere, such as the transformation of primary solid biofuels into charcoal.

Energy industry own use

Energy industry own use contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes [ISIC 05, 06, 19 and 35, Group 091 and Classes 0892 and 0721].

Losses

Losses includes losses in energy distribution, transmission and transport.

Total final consumption (TFC)

Total final consumption (TFC) is the sum of consumption by the different end-use sectors. Backflows from the petrochemical industry are not included in final consumption.

Industry

Industry consumption is specified in the following subsectors (energy used for transport by industry is not included here but reported under transport):

- *Iron and steel industry* [ISIC Group 241 and Class 2431]
- *Chemical and petrochemical industry* [ISIC Divisions 20 and 21] excluding petrochemical feedstocks
- *Non-ferrous metals* basic industries [ISIC Group 242 and Class 2432]
- *Non-metallic minerals* such as glass, ceramic, cement, etc. [ISIC Division 23]
- *Transport equipment* [ISIC Divisions 29 and 30]
- *Machinery* comprises fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 25 to 28]
- *Mining (excluding fuels) and quarrying* [ISIC Divisions 07 and 08 and Group 099]
- *Food and tobacco* [ISIC Divisions 10 to 12]
- *Paper, pulp and printing* [ISIC Divisions 17 and 18]
- *Wood and wood products* (other than pulp and paper) [ISIC Division 16]
- *Construction* [ISIC Divisions 41 to 43]
- *Textile and leather* [ISIC Divisions 13 to 15]
- *Non-specified* (any manufacturing industry not included above) [ISIC Divisions 22, 31 and 32].

Transport

Transport includes all fuels used for transport [ISIC Divisions 49 to 51]. It includes transport in industry and covers domestic aviation, road, rail, pipeline transport, domestic navigation and non-specified transport. Fuel used for ocean, coastal and inland fishing (included under fishing) and military consumption (included in other non-specified) are excluded from transport. Please note that international marine and international aviation bunkers are also included here for world total.

Other

Other covers residential, commercial and public services [ISIC Divisions 33, 36-39, 45-47, 52, 53, 55, 56, 58-66, 68-75, 77-82, 84 (excluding Class 8422), 85-88, 90-99], agriculture/forestry [ISIC Divisions 01 and 02], fishing [ISIC Division 03] and non-specified consumption.

Non-energy use

Non-energy use covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. Non-energy use also includes petrochemical feedstocks. Non-energy use is shown separately in final consumption under the heading *non-energy use*.

Unit abbreviations

bcm	billion cubic metres	MBtu	million British thermal units
Gcal	gigacalorie	Mt	million tonnes
GCV	gross calorific value	Mtoe	million tonnes of oil equivalent
GW	gigawatt	MWh	megawatt hour
GWh	gigawatt hour	PPP	purchasing power parity
kb/cd	thousand barrels per calendar day	t	metric ton = tonne = 1 000 kg
kcal	kilocalorie	TJ	terajoule
kg	kilogramme	toe	tonne of oil equivalent = 10 ⁷ kcal
kJ	kilojoule	TWh	terawatt hour
kWh	kilowatt hour	USD	United States dollar

GEOGRAPHICAL COVERAGE

OECD¹	Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.
Middle East	Bahrain, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen.
Non-OECD Europe and Eurasia	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus ² , Former Yugoslav Republic of Macedonia, Georgia, Gibraltar, Kazakhstan, Kosovo ³ , Kyrgyzstan, Latvia, Lithuania, Malta, Republic of Moldova, Montenegro ³ , Romania, Russian Federation, Serbia ³ , Tajikistan, Turkmenistan, Ukraine and Uzbekistan.
China	People's Republic of China and Hong Kong (China).
Asia	Bangladesh, Brunei Darussalam, Cambodia, India, Indonesia, Democratic People's Republic of Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, Viet Nam and Other Asia.
Non-OECD Americas	Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Curaçao ⁴ , Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela and Other Non-OECD Americas.
Africa	Algeria, Angola, Benin, Botswana, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Kenya, Libya, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Senegal, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Zambia, Zimbabwe and Other Africa.

1. OECD includes Estonia and Slovenia starting in 1990. Prior to 1990, data for these two countries are included in Non-OECD Europe and Eurasia.

2. Note by Turkey:

The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

3. Serbia includes Kosovo from 1990 to 1999 and Montenegro from 1990 to 2004.

4. The Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent countries, Curaçao and Sint Maarten, with the other islands joining the Netherlands. However, due to a lack of detailed data, the IEA secretariat's data and estimates under the Netherlands Antilles still refer to the whole territory of the Netherlands Antilles as it was known prior to 10 October 2010 up to the end of 2011. Data refer only to the island of Curaçao from 2012. The other islands of the former Netherlands Antilles are added to Other Non-OECD Americas from 2012.

Note: The countries listed above are those for which the IEA secretariat has direct statistics contacts. This document is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. In this publication "country" refers to country or territory, as the case may be.

Ten annual publications

Energy Statistics of OECD Countries, 2015 edition

This volume contains data on energy supply and consumption in original units for coal, oil, gas, electricity, heat, renewables and waste. Complete data are available for 2012 and 2013 as well as provisional data for the most recent year (i.e. 2014). Historical tables summarise data on production, trade and final consumption by sector. The book also includes definitions of products and flows and explanatory notes on the individual country data

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This volume contains data for 2012 and 2013 on the supply and consumption of coal, oil, natural gas, electricity, heat, renewables and waste presented as comprehensive energy balances. Data are expressed in thousand tonnes of oil equivalent for over 100 non-OECD countries. Historical tables summarise data on production, trade and final consumption by sector data as well as key energy and economic indicators. These tables also include initial estimates of 2014 production (and trade when available) for natural gas, primary coal and oil. This book includes definitions of products and flows, explanatory notes on the individual country data and conversion factors from original units to energy units.

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Electricity Information provides a comprehensive review of historical and current market trends in the OECD electricity sector, including 2014 provisional data. It provides an overview of the world electricity developments in 2013 covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. More detail is provided for the 34 OECD countries with information covering production, installed capacity, input energy mix to electricity and heat production, consumption, electricity trades, input fuel prices and end-user electricity prices as well as monthly OECD production and trade electricity data for 2014. It provides comprehensive statistical details on overall energy consumption, economic indicators, electricity and heat production by energy form and plant type, electricity imports and exports, sectoral energy and electricity consumption, as well as prices for electricity and electricity input fuels for each country and regional aggregate.

Published August 2015 - Price €150

Coal Information 2015

Coal Information provides a comprehensive review of historical and current market trends in the world coal sector, including 2014 provisional data. It provides a review of the world coal market in 2014, alongside a statistical overview of developments, which covers world coal production and coal reserves, coal demand by type, coal trade and coal prices. A detailed and comprehensive statistical picture of historical and current coal developments in the 34 OECD member countries, by region and individually is presented in tables and charts. Complete coal balances and coal trade data for selected years are presented on 22 major non-OECD coal-producing and -consuming countries, with summary statistics on coal supply and end-use statistics for about 40 countries and regions worldwide

Published August 2015 - Price €165

Natural Gas Information 2015

Natural Gas Information is a detailed reference work on gas supply and demand covering not only the OECD countries but also the rest of the world, this publication contains essential information on LNG and pipeline trade, gas reserves, storage capacity and prices. The main part of the book, however, concentrates on OECD countries, showing a detailed supply and demand balance for each country and for the three OECD regions: Americas, Asia-Oceania and Europe, as well as a breakdown of gas consumption by end user. Import and export data are reported by source and destination.

Published August 2015 - Price €165

Oil Information 2015

Oil Information is a comprehensive reference book on current developments in oil supply and demand. The first part of this publication contains key data on world production, trade, prices and consumption of major oil product groups, with time series back to the early 1970s. The second part gives a more detailed and comprehensive picture of oil supply, demand, trade, production and consumption by end-user for each OECD country individually and for the OECD regions. Trade data are reported extensively by origin and destination.

Published August 2015 - Price €165

Renewables Information 2015

Renewables Information provides a comprehensive review of historical and current market trends in OECD countries, including 2014 preliminary data. It provides an overview of the development of renewables and waste in the world over the 1990 to 2013 period. A greater focus is given to the OECD countries with a review of electricity generation and capacity from renewable and waste energy sources, including detailed tables. However, an overview of developments in the world and OECD renewable and waste market is also presented. The publication encompasses energy indicators, generating capacity, electricity and heat production from renewable and waste sources, as well as production and consumption of renewables and waste.

Published August 2015 - Price €110

CO₂ Emissions from Fuel Combustion, 2015 edition

In recognition of fundamental changes in the way governments approach energy related environmental issues, the IEA has prepared this publication on CO₂ emissions from fuel combustion. This annual publication was first published in 1997 and has become an essential tool for analysts and policy makers in many international fora such as the Conference of the Parties, which will be meeting in Paris, France from 30 November to 11 December 2015. The data in this book are designed to assist in understanding the evolution of the emissions of CO₂ from 1971 to 2013 for more than 140 countries and regions by sector and by fuel. Emissions were calculated using IEA energy databases and the default methods and emission factors from the 2006 *IPCC Guidelines for National Greenhouse Gas Inventories*.

Published November 2015 - Price €165

Two quarterlies

Oil, Gas, Coal and Electricity, Quarterly Statistics

This publication provides up-to-date, detailed quarterly statistics on oil, coal, natural gas and electricity for OECD countries. Oil statistics cover production, trade, refinery intake and output, stock changes and consumption for crude oil, NGL and nine selected oil product groups. Statistics for electricity, natural gas and coal show supply and trade. Import and export data are reported by origin and destination. The gas trade data from 1st quarter 2011 onwards corresponds to physical flows (entries/exits). Moreover, oil as well as hard coal and brown coal production are reported on a worldwide basis.

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Energy Prices and Taxes, Quarterly Statistics

This publication responds to the needs of the energy industry and OECD governments for up-to-date information on prices and taxes in national and international energy markets. It contains crude oil import prices by crude stream, industry prices and consumer prices. The end-user prices for OECD member countries cover main petroleum products, gas, coal and electricity. Every issue includes full notes on sources and methods and a description of price mechanisms in each country. Time series availability varies with each data series.

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World Energy Outlook 2015

The precipitous fall in oil prices, continued geopolitical instability and the ongoing global climate negotiations are witness to the increasingly dynamic nature of energy markets. In a time of so much uncertainty, understanding the implications of the shifting energy landscape for economic, environmental and security priorities is vital. The **World Energy Outlook 2015 (WEO-2015)**, will present projections through 2040 based on the latest data and market developments; insights on the trajectories of fossil fuels, renewables, the power sector and energy efficiency; and analysis on trends in CO₂ emissions, fossil-fuel and renewable energy subsidies, and on universal access to modern energy services.

In addition, the WEO-2015 will be informed by in-depth analysis on several topical issues:

- **Special Report on Energy and Climate Change:** Given the crucial importance of COP21, this report will provide decision-makers with analysis of national climate pledges in the context of the recent downturn in fossil-fuel prices, suggest pragmatic policy measures to advance climate goals without blunting economic growth and assess adaptation needs, including in the power sectors of China and India (released 15 June).
- **Focus on India:** How India develops will have widespread implications for global energy markets. Analysis will focus on the current state of the energy sector, how it might evolve and how challenges such as improving access to electricity, expanding domestic energy production and managing increasing energy imports might be addressed. It will also assess implications for regional and global markets.
- **A lower oil price future:** The decline in oil prices and changing market conditions has prompted questions as to how the market will re-balance. This analysis will examine the implications for markets, policies, competitiveness, investment and the fuel mix if lower oil prices persist.
- **Unconventional gas in China:** In addition to an update on the opportunities and challenges that face the development of unconventional gas globally, analysis will focus on the prospects for unconventional gas in China and how this might affect China's energy outlook as well as regional and global balances.
- **Special Report on Southeast Asia:** There is significant headroom in the region for economic and energy demand growth. Analysis will focus on how these rising energy needs might be met, the investment required to expand energy infrastructure and the implications of the region's changing position in international energy trade (to be released in October).

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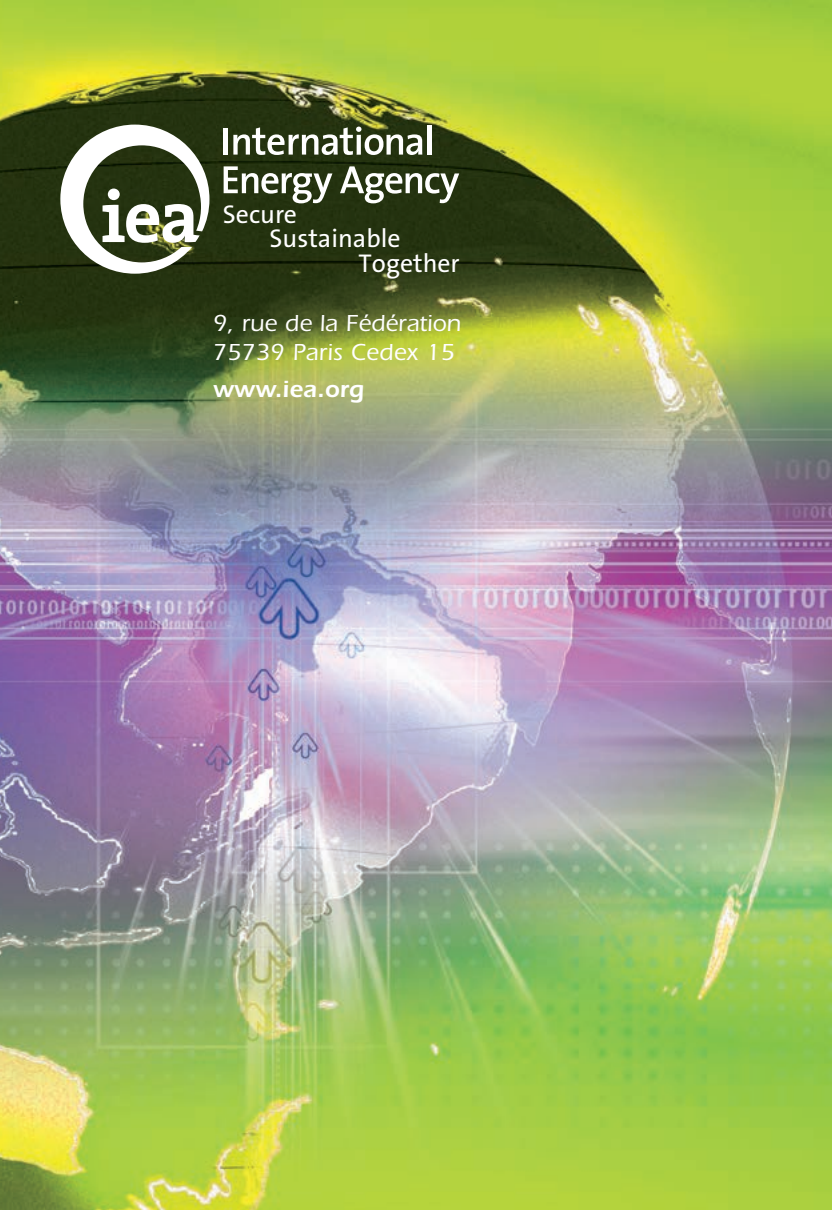


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