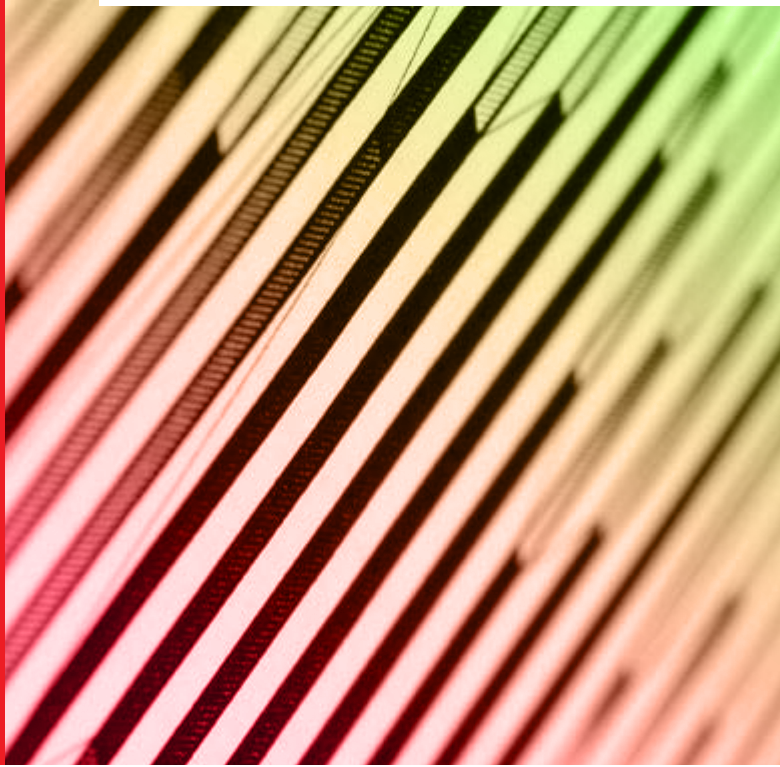
Key world energy statistics

Also available on smartphones and tablets



International Energy Agency
Secure Sustainable Together

2016

KEY WORLD ENERGY STATISTICS

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also participates in
the work of the IEA.

Foreword

The IEA was established in November 1974 to promote energy security and provide authoritative analysis on energy for its member countries and beyond. From the beginning, energy statistics have been and remain at the heart of all the work of the IEA. They provide a comprehensive view on energy production, transformation and final use, the factors that influence energy choices such as prices and RD&D and the wider impact of energy use on CO_2 emissions. Over the years with the cooperation of energy statisticians around the world, the IEA has gained recognition as one of the world's most authoritative sources for energy statistics.

The purpose of producing energy statistics is to use them to monitor changes in energy production and use, inform debate and provide a wider understanding of energy. In *Key World Energy Statistics (KWES)*, we look to highlight some of the key facts and trends from across the vast number of datasets the IEA produces to enable everyone to know more about energy. So if you want to know who are the top ten producers of oil or coal or the leading exporters of gas, what has been the evolution of electricity production since 1971, how energy use contributes to CO_2 emissions or if you simply want to see the world picture of energy production and use – that information and more is in *KWES*.

KWES is a summary of the comprehensive data made available by the IEA via its website: http://www.iea.org/statistics/. It is also available in app form for all major mobile devices.

Because energy plays such a vital role in our lives today, I hope that these statistics will not only inform but also help policymakers and others to make wise decisions so that energy is produced and consumed in a secure, affordable, efficient and sustainable manner.

As I like to say, in the world of energy, data always wins. I would therefore like to thank Duncan Millard, the IEA Chief Statistician and his excellent team for their work in ensuring we all have the data needed to gain a comprehensive understanding of energy.

Dr. Fatih Birol
Executive Director, International Energy Agency

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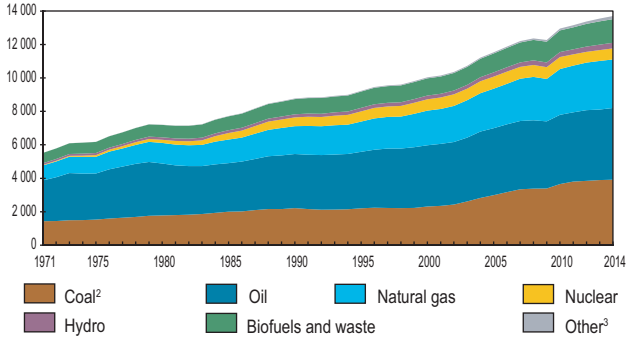
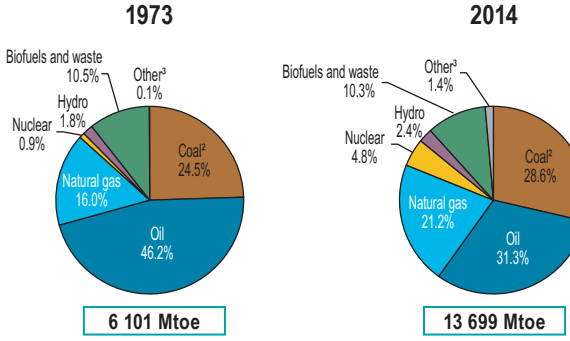
Total primary energy supply by fuel

World

World[1] total primary energy supply (TPES) from 1971 to 2014 by fuel (Mtoe)



1973 and 2014 fuel shares of TPES

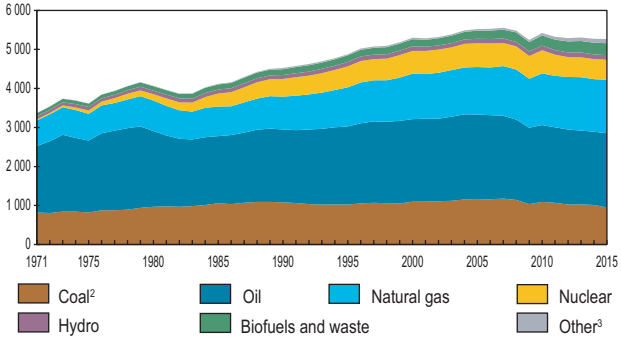


1. World includes international aviation and international marine bunkers.
2. In these graphs, peat and oil shale are aggregated with coal.
3. Includes geothermal, solar, wind, heat, etc.

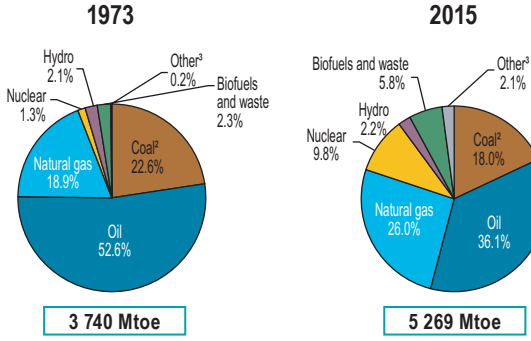
Total primary energy supply by fuel

OECD

OECD total primary energy supply[1] from 1971 to 2015 by fuel (Mtoe)



1973 and 2015 fuel shares of TPES[1]

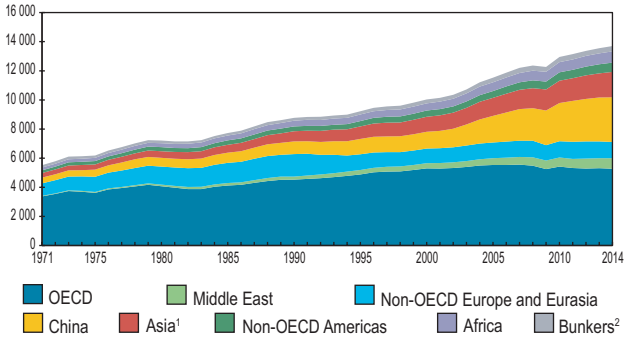


1. *Excludes electricity trade.*
2. *In these graphs, peat and oil shale are aggregated with coal.*
3. *Includes geothermal, solar, wind, heat, etc.*

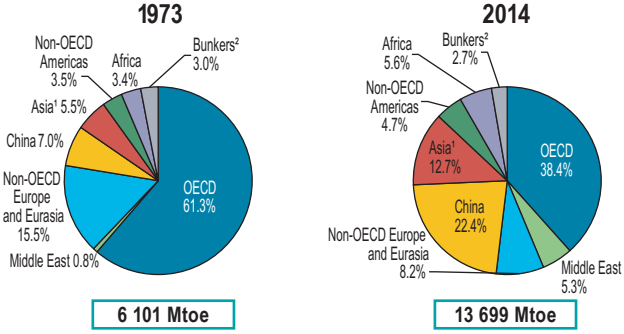
Total primary energy supply by region

World

World total primary energy supply from 1971 to 2014
by region (Mtoe)



1973 and 2014 regional shares of TPES

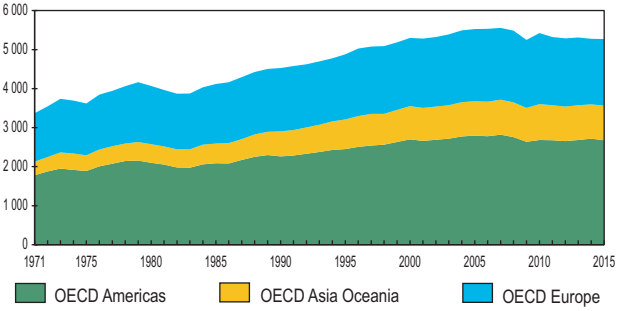


1. Asia excludes China and OECD countries of Asia.
2. Includes international aviation and international marine bunkers.

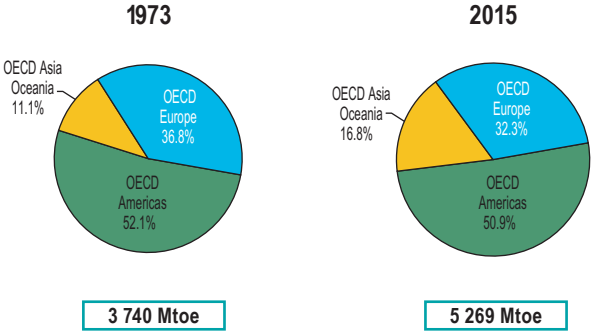
Total primary energy supply by region

OECD

OECD total primary energy supply[1] from 1971 to 2015 by region (Mtoe)



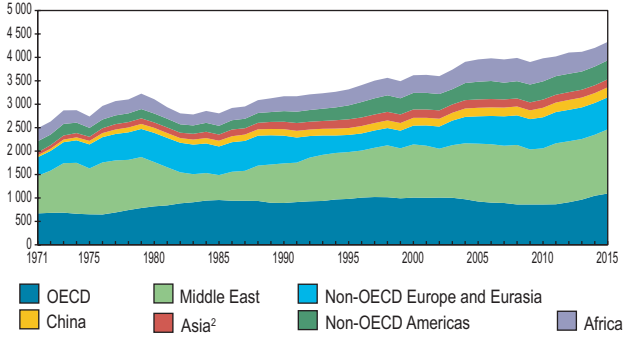
1973 and 2015 regional shares of TPES[1]



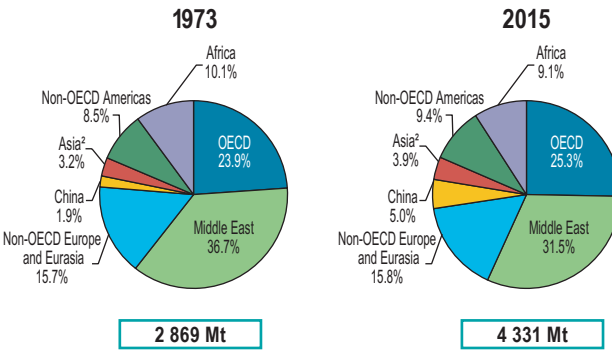
1. Excludes electricity trade.

Crude oil production

Crude oil[1] production from 1971 to 2015
by region (Mt)



1973 and 2015 regional shares of
crude oil[1] production



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

Producers, net exporters and net importers of crude oil[1]

Producers	Mt	% of world total
Saudi Arabia	572	13.2
United States	567	13.1
Russian Federation	533	12.3
Canada	221	5.1
People's Rep. of China	215	5.0
Iraq	175	4.0
Islamic Rep. of Iran	168	3.9
United Arab Emirates	160	3.7
Kuwait	160	3.7
Venezuela	144	3.3
Rest of the world	1 416	32.7
World	**4 331**	**100.0**

2015 provisional data

Net exporters	Mt
Saudi Arabia	354
Russian Federation	222
United Arab Emirates	125
Iraq	124
Nigeria	111
Canada	104
Kuwait	101
Venezuela	91
Angola	81
Kazakhstan	64
Others	515
Total	**1 892**

2014 data

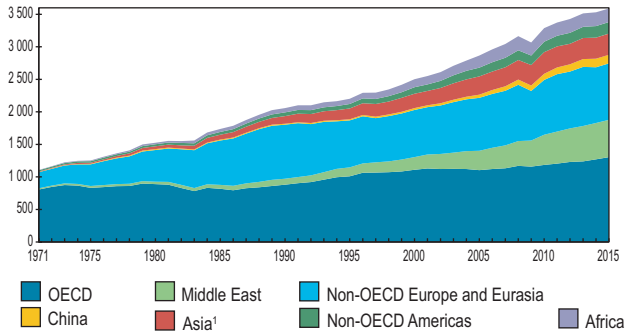
Net importers	Mt
United States	344
People's Rep. of China	308
India	189
Japan	165
Korea	126
Germany	89
Spain	61
Italy	59
France	54
Netherlands	54
Others	509
Total	**1 958**

2014 data

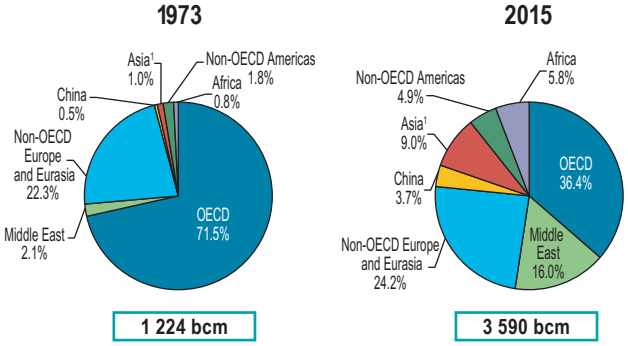
1. Includes production of crude oil, NGL, feedstocks, additives and other hydrocarbons. Excludes liquids from other fuel sources (renewable, coal and natural gas).

Natural gas production

Natural gas production from 1971 to 2015 by region
(billion cubic metres, bcm)



1973 and 2015 regional shares of
natural gas production



1. Asia excludes China and OECD countries of Asia.

Producers, net exporters and net importers[1] of natural gas

Producers	bcm	% of world total
United States	769	21.4
Russian Federation	638	17.8
Islamic Rep. of Iran	184	5.1
Qatar	164	4.6
Canada	164	4.6
People's Rep. of China	134	3.7
Norway	122	3.4
Saudi Arabia	87	2.4
Turkmenistan	83	2.3
Algeria	82	2.3
Rest of the world	1 163	32.4
World	**3 590**	**100.0**

2015 provisional data

Net exporters	bcm
Russian Federation	192
Qatar	115
Norway	115
Canada	59
Turkmenistan	51
Algeria	44
Indonesia	33
Australia	28
Malaysia	25
Nigeria	25
Others	143
Total	**830**

2015 provisional data

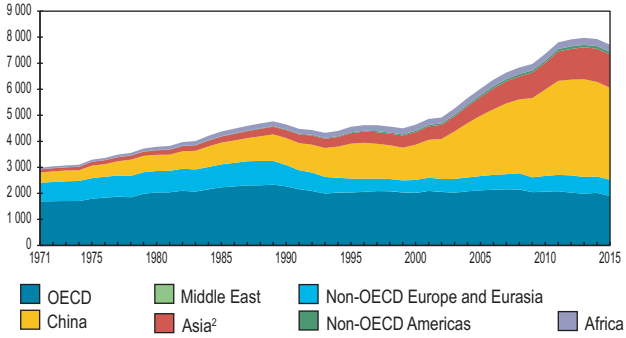
Net importers	bcm
Japan	117
Germany	73
Italy	61
People's Rep. of China	56
Turkey	48
Korea	43
France	39
Mexico	37
United Kingdom	31
Spain	27
Others	280
Total	**812**

2015 provisional data

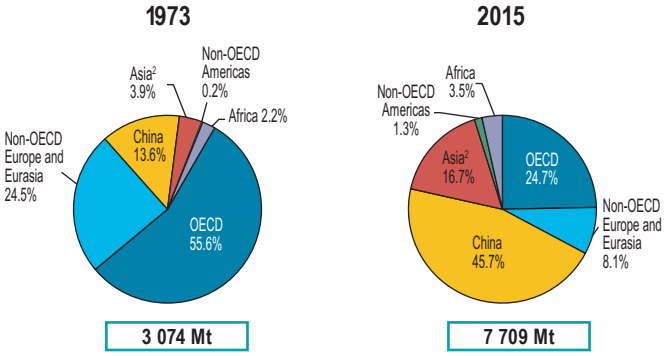
1. Net exports and net imports include pipeline gas and LNG.

Coal production

Coal[1] production from 1971 to 2015 by region (Mt)



1973 and 2015 regional shares of coal[1] production



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

Producers, net exporters and net importers of coal[1]

Producers	Mt	% of world total
People's Rep. of China	3 527	45.8
United States	813	10.5
India	691	9.0
Australia	509	6.6
Indonesia	469	6.1
Russian Federation	349	4.5
South Africa	252	3.3
Germany	185	2.4
Poland	136	1.8
Kazakhstan	107	1.4
Rest of the world	671	8.6
World	**7 709**	**100.0**

2015 provisional data

Net exporters	Mt
Australia	392
Indonesia	365
Russian Federation	129
Colombia	82
South Africa	76
United States	57
Kazakhstan	27
Canada	23
DPR of Korea	19
Mongolia	14
Others	9
Total	**1 193**

2015 provisional data

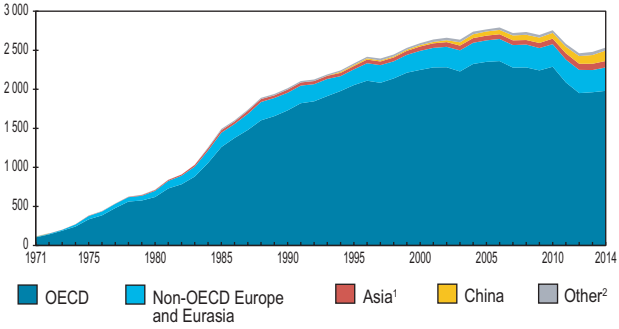
Net importers	Mt
India	221
People's Rep. of China	199
Japan	192
Korea	135
Chinese Taipei	66
Germany	54
Turkey	34
United Kingdom	25
Malaysia	24
Thailand	23
Others	233
Total	**1 206**

2015 provisional data

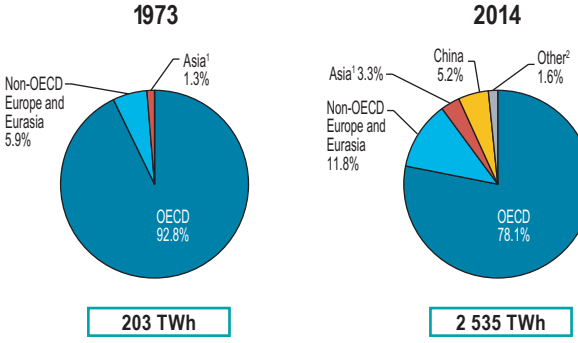
1. Includes steam coal, coking coal, lignite and recovered coal.

Nuclear production

Nuclear production from 1971 to 2014
by region (TWh)



1973 and 2014 regional shares of
nuclear production



1. Asia excludes China and OECD countries of Asia.
2. Other includes Africa, Non-OECD Americas and the Middle East.

Producers of nuclear electricity

Producers	TWh	% of world total
United States	831	32.8
France	436	17.2
Russian Federation	181	7.1
Korea	156	6.2
People's Rep. of China	133	5.2
Canada	108	4.3
Germany	97	3.8
Ukraine	88	3.5
Sweden	65	2.6
United Kingdom	64	2.5
Rest of the world	376	14.8
World	**2 535**	**100.0**

2014 data

Net installed capacity	GW
United States	99
France	63
Japan	42
Russian Federation	25
People's Rep. of China	24
Korea	21
Germany	14
Canada	14
Ukraine	13
Sweden	9
Rest of the world	60
World	**384**

2014 data

Sources: IEA, International Atomic Energy Agency.

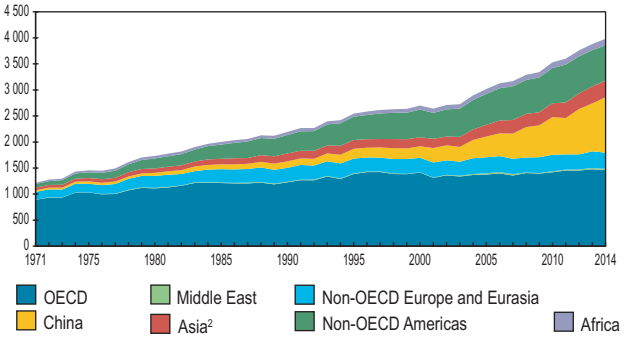
Country (top-ten producers)	% of nuclear in total domestic electricity generation
France	78.4
Ukraine	48.6
Sweden	42.3
Korea	28.7
United States	19.2
United Kingdom	19.0
Russian Federation	17.0
Canada	16.4
Germany	15.6
People's Rep. of China	2.3
Rest of the world[1]	9.4
World	**10.7**

2014 data

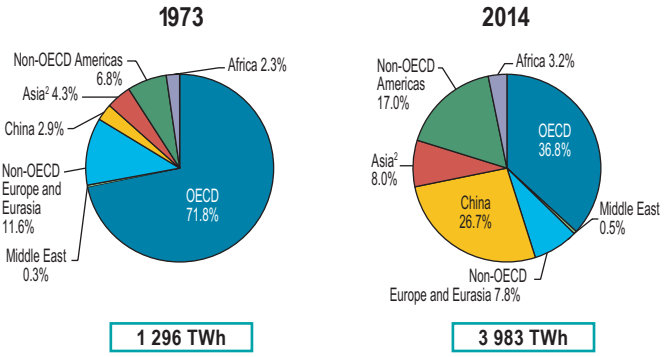
1. Excludes countries with no nuclear production.

Hydro production

Hydro production[1] from 1971 to 2014
by region (TWh)



1973 and 2014 regional shares of
hydro production[1]



1. Includes electricity production from pumped storage.
2. Asia excludes China and OECD countries of Asia.

Producers of hydro electricity[1]

Producers	TWh	% of world total
People's Rep. of China	1 064	26.7
Canada	383	9.6
Brazil	373	9.4
United States	282	7.1
Russian Federation	177	4.4
Norway	137	3.4
India	132	3.3
Venezuela	87	2.2
Japan	87	2.2
France	69	1.7
Rest of the world	1 192	30.0
World	**3 983**	**100.0**

2014 data

Net installed capacity	GW
People's Rep. of China	311
United States	102
Brazil	89
Canada	76
Russian Federation	51
Japan	50
India	40
Norway	31
France	25
Turkey	24
Rest of the world	372
World	**1 171**

2014 data

Sources: IEA, United Nations.

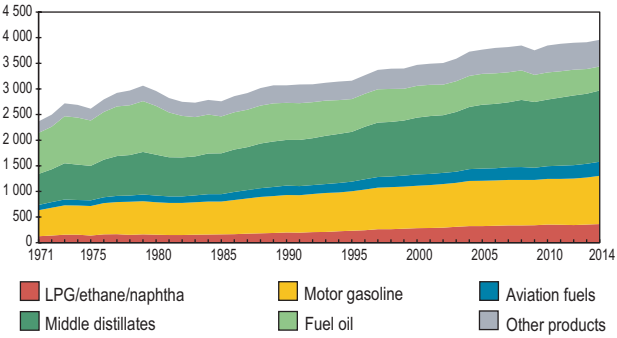
Country (top-ten producers)	% of hydro in total domestic electricity generation
Norway	96.0
Venezuela	68.3
Brazil	63.2
Canada	58.3
People's Rep. of China	18.7
Russian Federation	16.7
France	12.2
India	10.2
Japan	8.4
United States	6.5
Rest of the world[2]	15.6
World	**16.7**

2014 data

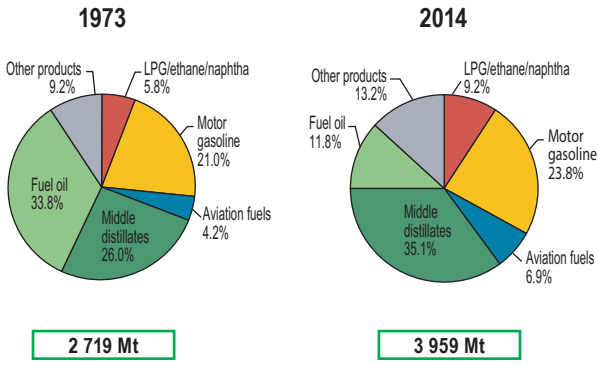
1. Includes electricity production from pumped storage.
2. Excludes countries with no hydro production.

Refining by product

World refinery output from 1971 to 2014
by product (Mt)



1973 and 2014 shares of
refinery output by product



Producers, net exporters and net importers of oil products

Producers	Mt	% of world total
United States	820	20.7
People's Rep. of China	485	12.3
Russian Federation	283	7.1
India	228	5.8
Japan	163	4.1
Korea	129	3.3
Brazil	113	2.9
Saudi Arabia	107	2.7
Germany	97	2.5
Canada	89	2.2
Rest of the world	1 445	36.4
World	**3 959**	**100.0**

2014 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.

Net exporters	Mt
Russian Federation	116
United States	86
India	45
Saudi Arabia	41
Kuwait	29
Algeria	21
Venezuela	21
Qatar	20
Korea	19
Belarus	14
Others	141
Total[1]	**553**

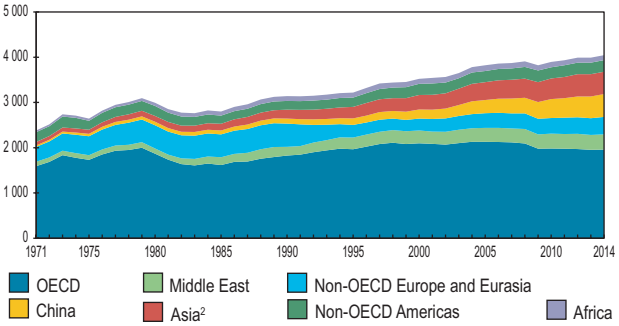
2014 data

Net importers	Mt
Japan	29
Singapore	26
Indonesia	23
France	22
Mexico	19
Australia	18
Brazil	18
Germany	16
Hong Kong, China	16
Turkey	16
Others	294
Total[1]	**497**

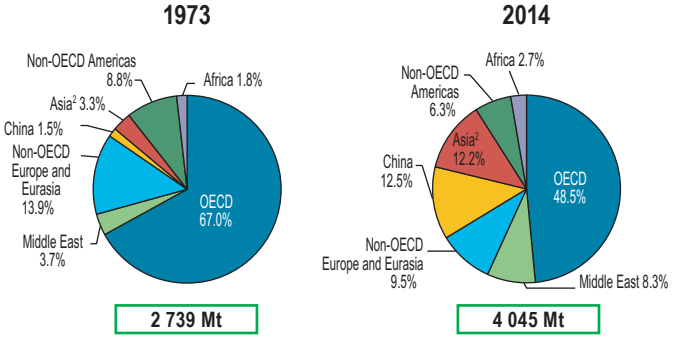
2014 data

Refining by region

World refinery intake[1] from 1971 to 2014
by region (Mt)



1973 and 2014 regional shares of
refinery intake[1]



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

Refinery capacity, net exporters and net importers of oil[1]

Crude distillation capacity	kb/cd	% of world total
United States	17 996	18.5
People's Rep. of China	13 160	13.5
Russian Federation	6 291	6.5
India	4 694	4.8
Japan	3 865	4.0
Korea	3 296	3.4
Saudi Arabia	2 906	3.0
Brazil	2 175	2.2
Germany	2 022	2.1
Canada	1 980	2.0
Rest of the world	38 813	40.0
World	**97 198**	**100.0**

2015 data

Net exporters	Mt
Saudi Arabia	396
Russian Federation	338
Kuwait	131
United Arab Emirates	117
Canada	114
Venezuela	112
Iraq	110
Nigeria	103
Angola	77
Norway	74
Others	506
Total	**2 078**

2014 data

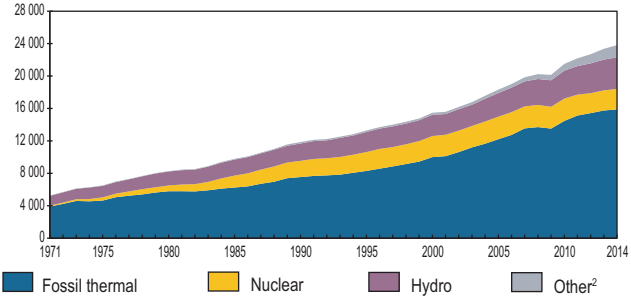
Net importers	Mt
People's Rep. of China	320
United States	258
Japan	195
India	145
Korea	107
Germany	105
France	76
Singapore	67
Spain	58
Italy	50
Others	707
Total	**2 088**

2014 data

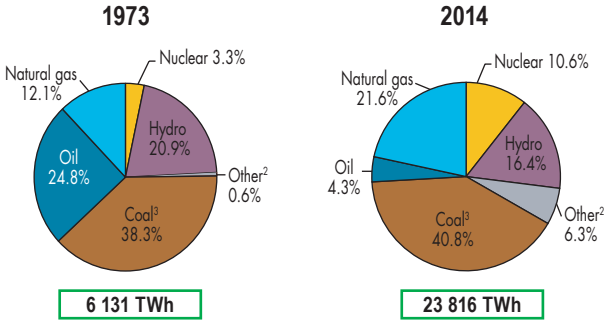
1. Includes crude oil and oil products.

Electricity generation by fuel

World electricity generation[1] from 1971 to 2014
by fuel (TWh)



1973 and 2014 fuel shares of
electricity generation[1]



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

Coal[1]	TWh
People's Rep. of China	4 115
United States	1 713
India	967
Japan	349
Germany	285
South Africa	232
Korea	232
Russian Federation	158
Australia	152
Poland	132
Rest of the world	1 372
World	**9 707**

2014 data

Oil	TWh
Saudi Arabia	152
Japan	116
Islamic Rep. of Iran	59
Iraq	50
Kuwait	43
Pakistan	42
United States	40
Brazil	35
Mexico	33
Indonesia	26
Rest of the world	427
World	**1 023**

2014 data

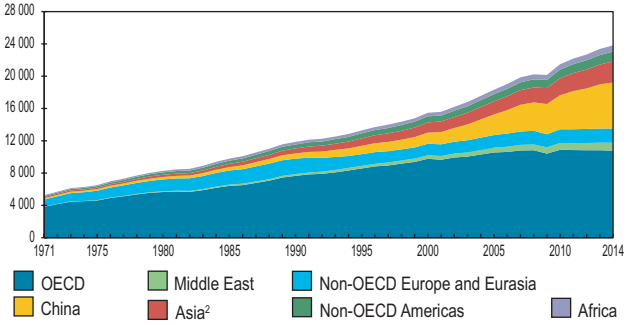
Natural gas	TWh
United States	1 161
Russian Federation	533
Japan	421
Islamic Rep. of Iran	196
Mexico	172
Saudi Arabia	160
Egypt	135
Korea	130
Turkey	121
Thailand	119
Rest of the world	2 007
World	**5 155**

2014 data

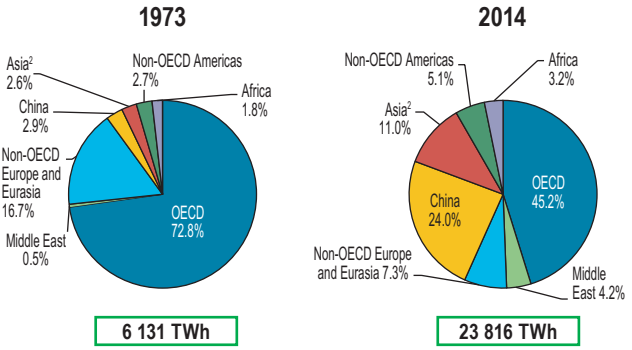
1. In this table, peat and oil shale are aggregated with coal.

Electricity generation by region

World electricity generation[1] from 1971 to 2014
by region (TWh)



1973 and 2014 regional shares of
electricity generation[1]



1. Excludes electricity generation from pumped storage.
2. Asia excludes China and OECD countries of Asia.

Producers, net exporters and net importers of electricity

Producers[1]	TWh	% of world total
People's Rep. of China	5 666	23.8
United States	4 319	18.1
India	1 287	5.4
Russian Federation	1 062	4.5
Japan	1 036	4.4
Canada	656	2.8
Germany	622	2.6
Brazil	591	2.5
France	557	2.3
Korea	546	2.3
Rest of the world	7 474	31.3
World	**23 816**	**100.0**

2014 data

Net exporters	TWh
France	67
Canada	46
Paraguay	41
Germany	34
Czech Republic	16
Sweden	16
Norway	16
People's Rep. of China	11
Bulgaria	9
Ukraine	8
Others	64
Total	**328**

2014 data

Net importers	TWh
United States	53
Italy	44
Brazil	34
United Kingdom	21
Finland	18
Belgium	18
Netherlands	15
Hungary	13
Iraq	12
Thailand	11
Others	117
Total	**356**

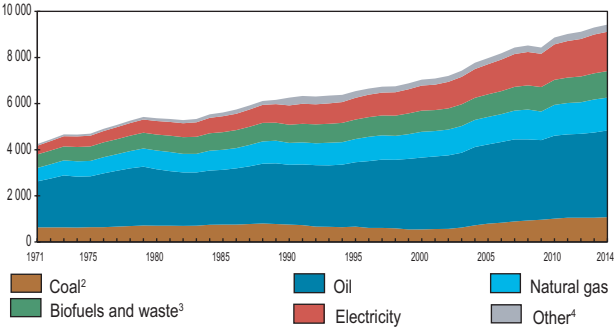
2014 data

1. Gross production minus production from pumped storage plants.

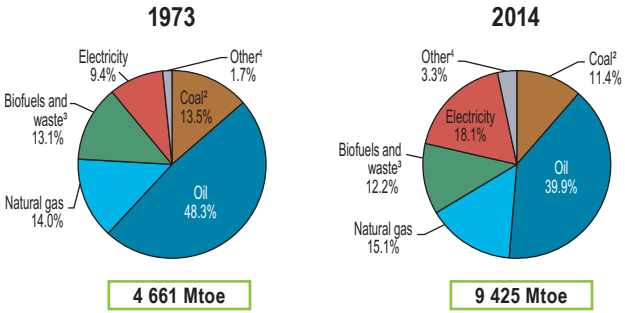
Total final consumption by fuel

World

World[1] total final consumption from 1971 to 2014 by fuel (Mtoe)



1973 and 2014 fuel shares of total final consumption

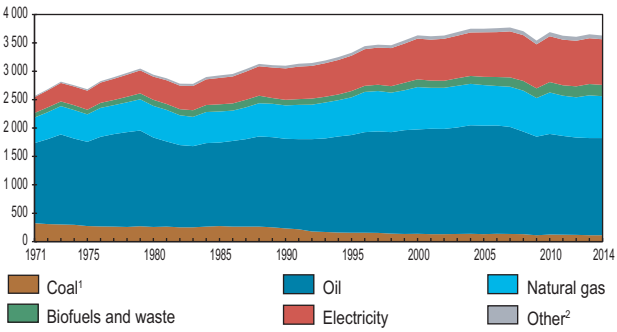


1. World includes international aviation and international marine bunkers.
2. In these graphs, peat and oil shale are aggregated with coal.
3. Data for biofuels and waste final consumption have been estimated for a number of countries.
4. Includes geothermal, solar, wind, heat, etc.

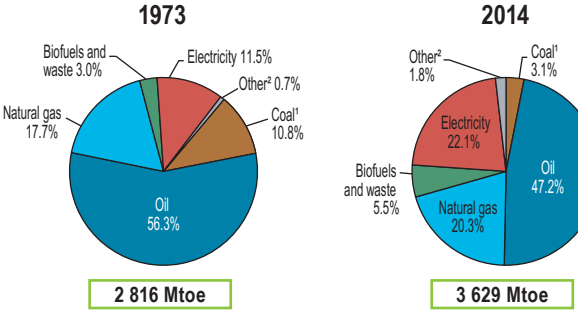
Total final consumption by fuel

OECD

OECD total final consumption from 1971 to 2014 by fuel (Mtoe)



1973 and 2014 fuel shares of total final consumption

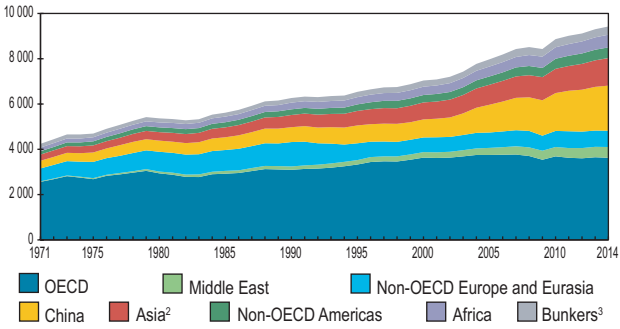


1. In these graphs, peat and oil shale are aggregated with coal.
2. Includes geothermal, solar, wind, heat, etc.

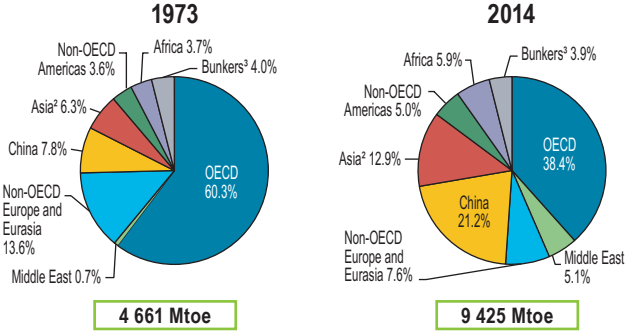
Total final consumption by region

World

World total final consumption[1] from 1971 to 2014 by region (Mtoe)



1973 and 2014 regional shares of total final consumption[1]

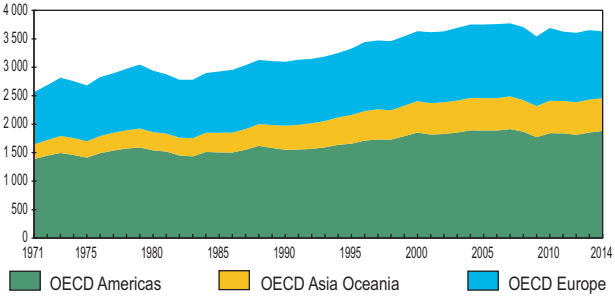


1. Data for biofuels and waste final consumption have been estimated for a number of countries.
2. Asia excludes China and OECD countries of Asia.
3. Includes international aviation and international marine bunkers.

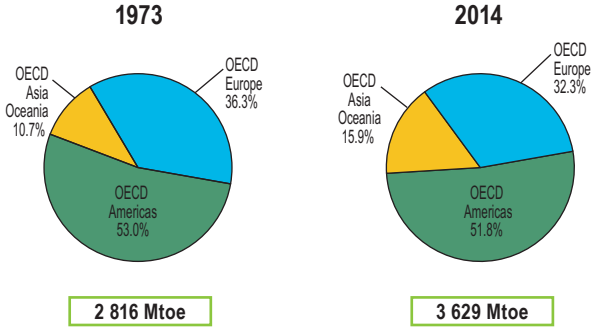
Total final consumption by region

OECD

OECD total final consumption from 1971 to 2014 by region (Mtoe)



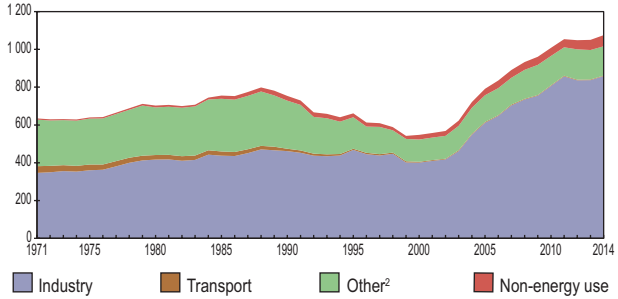
1974 and 2014 regional shares of total final consumption



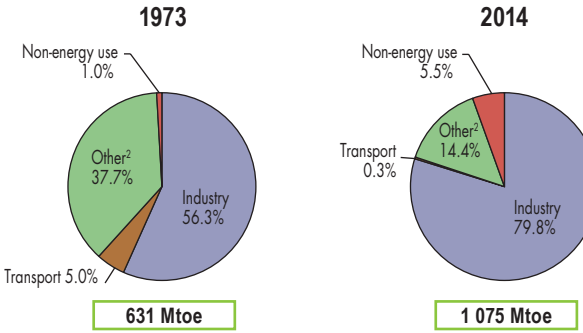
Total final consumption by sector

Coal[1]

Total final consumption from 1971 to 2014 by sector (Mtoe)



1973 and 2014 shares of world coal[1] consumption

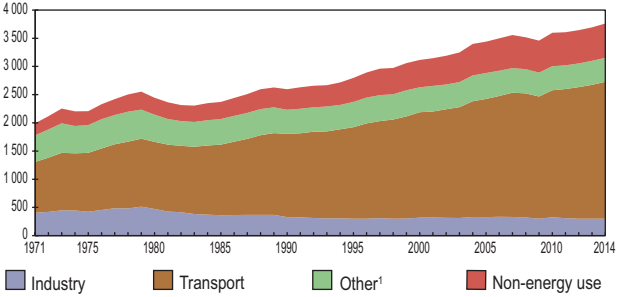


1. In these graphs, peat and oil shale are aggregated with coal.
2. Includes agriculture, commercial and public services, residential, and non-specified other.

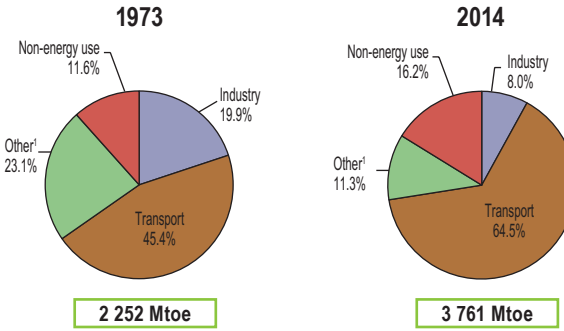
Total final consumption by sector

Oil

Total final consumption from 1971 to 2014 by sector (Mtoe)



1973 and 2014 shares of world oil consumption

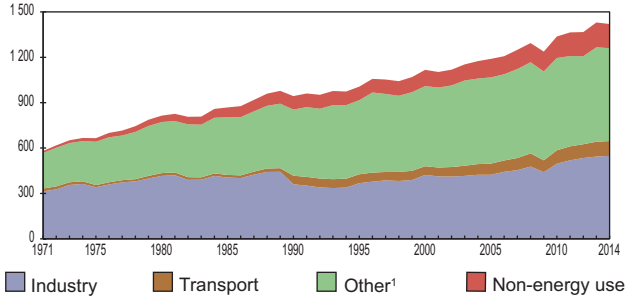


1. Includes agriculture, commercial and public services, residential, and non-specified other.

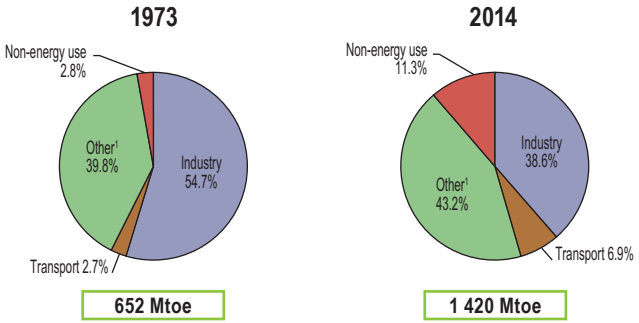
Total final consumption by sector

Natural gas

Total final consumption from 1971 to 2014 by sector (Mtoe)



1973 and 2014 shares of world natural gas consumption

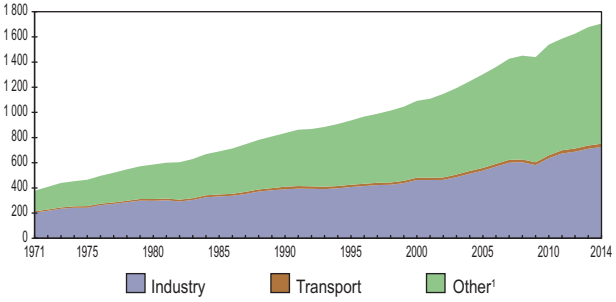


1. Includes agriculture, commercial and public services, residential, and non-specified other.

Total final consumption by sector

Electricity

Total final consumption from 1971 to 2014 by sector (Mtoe)



1973 and 2014 shares of world electricity consumption

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

Simplified energy balance table

World

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal[1]	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste[2]	Other[3]	Total
Production	1474.00	2938.38	-	990.98	53.05	110.31	640.84	6.13	6213.69
Imports	140.06	1561.97	409.59	73.40	-	-	0.13	8.15	2193.29
Exports	-130.35	-1613.00	-442.94	-72.56	-	-	-0.19	-8.31	-2267.34
Stock changes	12.48	-19.81	-16.37	-15.09	-	-	0.06	-	-38.74
TPES	**1496.19**	**2867.54**	**-49.73**	**976.73**	**53.05**	**110.31**	**640.84**	**5.96**	**6100.90**
Transfers	-	-46.76	48.78	-	-	-	-	-	2.02
Statistical diff.	0.99	12.13	-6.18	4.78	-	-	-0.17	-0.19	11.35
Electricity plants	-555.56	-22.91	-318.13	-160.00	-52.95	-110.31	-2.21	503.74	-718.32
CHP plants	-86.40	-	-28.62	-50.84	-0.10	-	-1.11	100.96	-66.10
Heat plants	-7.81	-	-0.90	-0.68	-	-	-0.80	7.11	-3.08
Blast furnaces	-81.58	-	-2.72	-	-	-	-0.06	-	-84.35
Gas works	9.85	-0.60	-9.07	-6.18	-	-	-	-	-6.01
Coke ovens [4]	-99.54	-	-0.68	-0.19	-	-	-0.02	-	-100.43
Oil refineries	-	-2782.93	2762.10	-	-	-	-	-	-20.82
Petchem. plants	-	5.09	-5.37	-	-	-	-	-	-0.28
Liquefaction plants	-0.73	0.23	-	-	-	-	-	-	-0.50
Other transf.	-	-	-0.12	-0.03	-	-	-27.02	-	-27.17
Energy ind. own use	-34.93	-2.59	-158.81	-105.99	-	-	-0.20	-57.68	-360.18
Losses	-9.06	-7.07	-0.27	-6.03	-	-	-0.25	-43.15	-65.83
TFC	**631.43**	**22.14**	**2230.28**	**651.57**	**-**	**-**	**609.10**	**516.76**	**4661.19**
Industry	355.69	16.41	432.59	356.29	-	-	86.59	286.91	1534.49
Transport [5]	31.88	-	1020.83	17.72	-	-	0.24	10.60	1081.26
Other	237.85	0.00	520.41	259.19	-	-	522.18	219.26	1758.88
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 and electricity trade.
4. Also includes patent fuel, BKB and peat briquette plants.
5. Includes international aviation and international marine bunkers.

Simplified energy balance table

World

2014

(Mtoe)

SUPPLY AND CONSUMPTION	Coal[1]	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste[2]	Other[3]	Total
Production	3 976.14	4 308.45	-	2 928.32	661.35	334.94	1 413.06	183.17	13 805.44
Imports	842.15	2 213.37	1 193.32	844.32	-	-	20.22	61.73	5 175.12
Exports	-863.14	-2 159.50	-1 242.64	-863.25	-	-	-18.97	-59.35	-5 206.85
Stock changes	-36.66	-12.46	-15.23	-8.81	-	-	-1.41	-	-74.58
TPES	**3 918.49**	**4 349.86**	**-64.56**	**2 900.58**	**661.35**	**334.94**	**1 412.91**	**185.55**	**13 699.13**
Transfers	-0.47	-204.86	231.24	-	-	-	-	-	25.92
Statistical diff.	-21.91	0.12	4.51	14.68	-	-	0.16	-0.94	-3.38
Electricity plants	-2 112.98	-40.62	-201.89	-771.07	-653.73	-334.94	-95.03	1 726.81	-2 483.47
CHP plants	-164.61	-0.01	-17.07	-307.53	-7.62	-	-57.43	325.45	-228.81
Heat plants	-130.32	-0.68	-13.19	-78.82	-	-	-11.45	178.30	-56.17
Blast furnaces	-209.84	-	-0.38	-0.16	-	-	-0.05	-	-210.43
Gas works	-10.92	-	-2.73	5.08	-	-	-0.09	-	-8.67
Coke ovens [4]	-76.25	-	-2.80	-0.01	-	-	-0.12	-	-79.19
Oil refineries	-	-4 123.03	4 049.60	-	-	-	-	-	-73.43
Petchem. plants	-	33.00	-32.62	-	-	-	-	-	0.38
Liquefaction plants	-9.67	14.03	-	-17.42	-	-	-	-	-13.07
Other transf.	-0.43	10.07	-0.52	-11.88	-	-	-82.90	-0.73	-86.40
Energy ind. own use	-101.76	-11.42	-205.29	-291.69	-	-	-13.94	-209.33	-833.44
Losses	-3.89	-8.90	-0.65	-21.77	-	-	-0.19	-188.89	-224.29
TFC	**1 075.42**	**17.57**	**3 743.64**	**1 419.98**	**-**	**-**	**1 151.86**	**2 016.21**	**9 424.69**
Industry	858.49	6.80	294.67	548.54	-	-	193.52	849.15	2 751.17
Transport [5]	2.86	-	2 426.33	97.90	-	-	73.89	26.04	2 627.02
Other	155.39	0.18	424.53	613.41	-	-	884.45	1 141.03	3 218.98
Non-energy use	58.68	10.60	598.11	160.13	-	-	-	-	827.52

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 and electricity trade.
4. Also includes patent fuel, BKB and peat briquette plants.
5. Includes international aviation and international marine bunkers.

Simplified energy balance table

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	-	-	-0.00	0.00	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 and electricity trade.
4. Also includes patent fuel, BKB and peat briquette plants.

Simplified energy balance table

OECD

2014

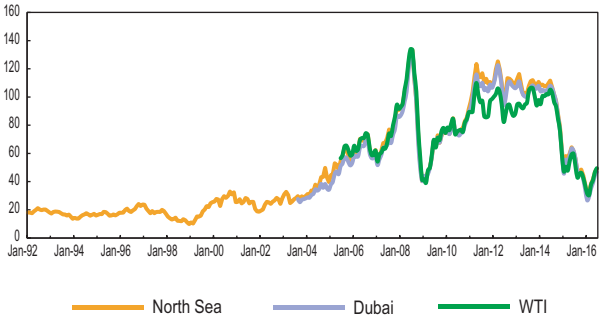
(Mtoe)

SUPPLY AND CONSUMPTION	Coal[1]	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste[2]	Other[3]	Total
Production	976.17	1092.20	-	1046.09	516.27	120.47	293.81	98.92	4143.93
Imports	405.60	1371.96	562.67	618.98	-	-	18.06	41.23	3018.50
Exports	-361.92	-397.21	-578.73	-306.56	-	-	-11.75	-40.83	-1697.00
Intl. marine bunkers	-	-	-69.87	-	-	-	-0.08	-	-69.95
Intl. aviation bunkers	-	-	-91.47	-	-	-	-	-	-91.47
Stock changes	-7.39	-5.23	-3.21	-14.67	-	-	-0.25	-	-30.75
TPES	**1012.46**	**2061.71**	**-180.60**	**1343.84**	**516.27**	**120.47**	**299.79**	**99.32**	**5273.27**
Transfers	-	-80.77	96.86	-	-	-	-	-	16.10
Statistical diff.	-11.23	3.13	1.02	9.67	-	-	0.27	-0.61	2.25
Electricity plants	-725.07	-5.87	-44.25	-364.36	-509.18	-120.47	-47.28	752.11	-1064.37
CHP plants	-73.20	-	-11.45	-103.39	-7.09	-	-45.41	141.18	-99.35
Heat plants	-4.10	-	-1.18	-7.98	-	-	-6.33	15.49	-4.11
Blast furnaces	-55.74	-	-0.38	-0.16	-	-	-	-	-56.27
Gas works	-2.08	-	-2.41	3.45	-	-	-0.07	-	-1.11
Coke ovens [4]	-7.17	-	-1.30	-0.01	-	-	-0.12	-	-8.61
Oil refineries	-	-2010.35	1986.83	-	-	-	-	-	-23.53
Petrochem. plants	-	28.65	-29.00	-	-	-	-	-	-0.35
Liquefaction plants	-1.04	0.66	-	-	-	-	-	-	-0.39
Other transf.	-0.20	8.65	-0.00	-8.61	-	-	-0.23	-0.73	-1.12
Energy ind. own use	-18.80	-0.06	-108.11	-133.74	-	-	-1.26	-74.53	-336.49
Losses	-1.03	-	-0.04	-2.19	-	-	-0.02	-63.76	-67.04
TFC	**112.81**	**5.75**	**1705.98**	**736.53**	**-**	**-**	**199.33**	**868.46**	**3628.86**
Industry	91.21	0.05	95.31	266.53	-	-	74.01	281.38	808.49
Transport	0.01	-	1126.61	28.61	-	-	50.95	8.98	1215.16
Other	18.22	-	182.93	408.56	-	-	74.37	578.10	1262.19
Non-energy use	3.37	5.71	301.13	32.83	-	-	-	-	343.03

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

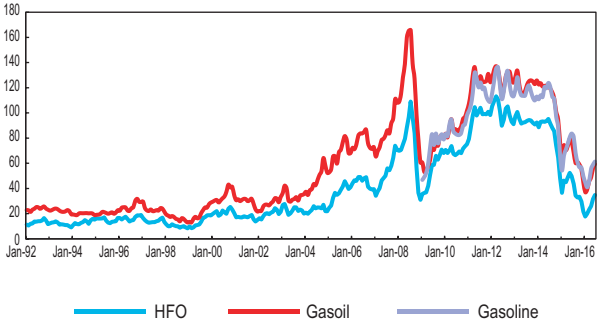
Crude oil

Average key crude oil spot prices in USD/barrel



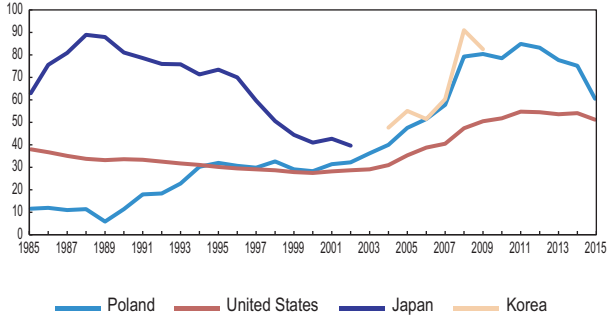
Oil products

Average Rotterdam oil product spot prices in USD/barrel



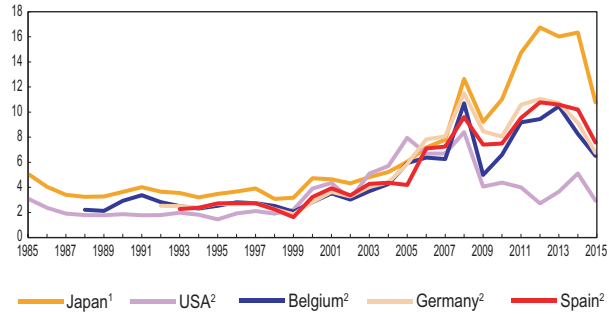
Coal

Average steam coal prices for electricity generation
in USD/tonne



Natural gas

Average natural gas import prices
in USD/MBtu



1. LNG.
2. Pipeline.

Energy prices[1] in selected OECD countries in USD/unit

	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	..	..	..	0.985
Austria	267.99	602.36	0.641	1.164
Belgium	197.66	449.69	0.999	1.404
Canada	186.00	670.45	..	0.766
Chile	..	812.73	..	0.992
Czech Republic	222.26	548.52	0.878	1.105
Denmark	414.56	1 160.09	0.962	1.481
Estonia	..	679.46	0.886	1.097
Finland	..	713.66	1.007	1.464
France	300.68	628.33	0.948	1.388
Germany	180.15	473.71	0.912	1.360
Greece	287.05	790.71	0.887	1.463
Hungary	308.79	x	0.850	1.113
Ireland	557.30	563.37	0.958	1.348
Israel	c	1 518.80	c	1.575
Italy	286.54	1 137.12	1.099	1.536
Japan	430.12	542.46	0.720	0.991
Korea	365.53	646.26	..	1.444
Luxembourg	..	422.91	0.822	1.141
Mexico	129.37	x	0.660	0.774
Netherlands	452.60	911.50	0.965	1.555
New Zealand	233.05	..	0.391	1.222
Norway	..	1 008.24	1.062	1.528
Poland	320.29	603.75	0.783	1.017
Portugal	513.72	984.24	1.064	1.459
Slovak Republic	195.93	..	0.900	1.283
Slovenia	x	737.96	0.907	1.265
Spain	249.71	546.44	0.861	1.215
Sweden	764.59	..	1.179	1.464
Switzerland	..	636.28	1.098	1.341
Turkey	435.70	916.76	1.191	1.444
United Kingdom	c	509.73	1.216	1.454
United States	216.28	544.30	0.547	0.567

1. Prices are for 1st quarter 2016 or latest available quarter for oil products, and annual 2015 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.
4. Unleaded premium gasoline (95 RON); unleaded regular for Japan.

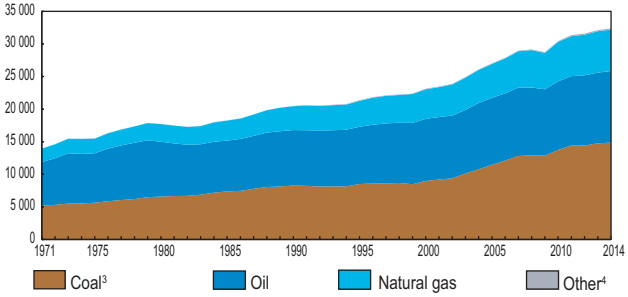
Energy prices[1] in selected OECD countries in USD/unit

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)	
..	..	..	..	215.79	Australia
41.95	87.35	169.79	108.61	221.51	Austria
28.29	66.83	..	106.93	226.90	Belgium
10.16	26.84	..	75.65	107.17	Canada
..	83.89	..	114.64	157.85	Chile
33.71	66.97	c	97.69	146.59	Czech Republic
..	87.56	..	85.79	337.38	Denmark
33.61	46.00	..	98.00	139.43	Estonia
41.30	..	245.73	84.47	168.91	Finland
40.50	74.63	..	110.13	181.48	France
34.12	78.35	..	145.09	327.07	Germany
36.92	112.67	..	105.32	196.23	Greece
34.24	39.86	..	99.72	128.14	Hungary
35.88	80.48	..	132.37	252.37	Ireland
c	x	x	91.02	146.41	Israel
..	..	..	..	..	Italy
..	..	96.51	161.99	225.12	Japan
53.22	58.30	..	..	102.71	Korea
42.36	53.80	x	71.88	188.57	Luxembourg
..	27.19	x	81.69	75.33	Mexico
31.56	82.06	..	88.46	206.90	Netherlands
17.67	92.63	c	..	195.59	New Zealand
x	x	..	35.34	94.52	Norway
31.84	59.62	70.09	89.69	163.80	Poland
44.10	108.59	109.20	127.23	253.13	Portugal
36.28	58.02	..	130.79	171.20	Slovak Republic
37.96	69.56	c	88.08	176.26	Slovenia
33.23	97.44	..	..	..	Spain
44.42	127.85	..	58.80	170.59	Sweden
65.76	100.54	98.72	122.42	205.94	Switzerland
32.60	40.77	80.75	111.99	145.27	Turkey
33.27	75.00	137.60	143.04	236.95	United Kingdom
12.67	34.22	75.21	68.95	126.71	United States

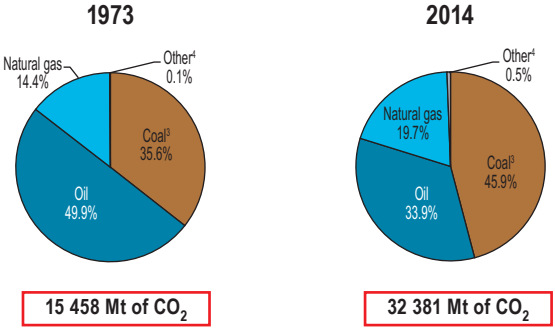
5. Gross calorific value. 6. Brown coal for Turkey.
.. not available x not applicable c confidential

CO_2 Emissions by fuel

World[1] CO_2 emissions from fuel combustion[2] from 1971 to 2014 by fuel (Mt of CO_2)



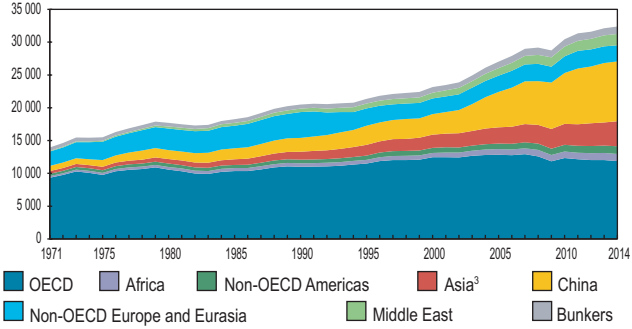
1973 and 2014 fuel shares of CO_2 emissions from fuel combustion[2]



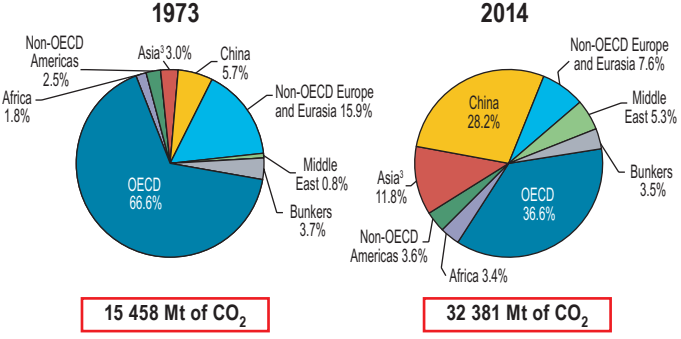
1. *World includes international aviation and international marine bunkers.*
2. *CO_2 emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.*
3. *In these graphs, peat and oil shale are aggregated with coal.*
4. *Includes industrial waste and non-renewable municipal waste.*

CO_2 Emissions by region

World[1] CO_2 emissions from fuel combustion[2] from 1971 to 2014 by region (Mt of CO_2)



1973 and 2014 regional shares of CO_2 emissions from fuel combustion[2]

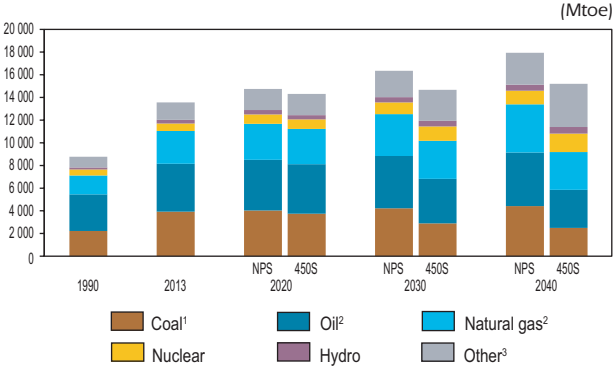


1. *World includes international aviation and marine bunkers, which are shown together as Bunkers.*
2. *CO_2 emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.*
3. *Asia excludes China and OECD countries of Asia.*

Outlook for world TPES

(Source: IEA, *World Energy Outlook 2015*)

TPES Outlook by fuel to 2040

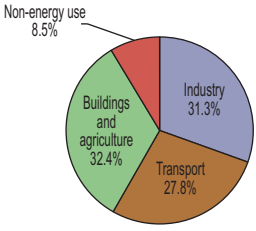


NPS: New Policies Scenario (based on policies under consideration)

450S: 450 Scenario[4] (based on policies needed to limit global average temperature increase to 2 °C)

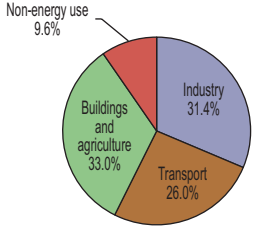
Total final consumption by sector in 2040

New Policies Scenario



12 244 Mtoe

450 Scenario



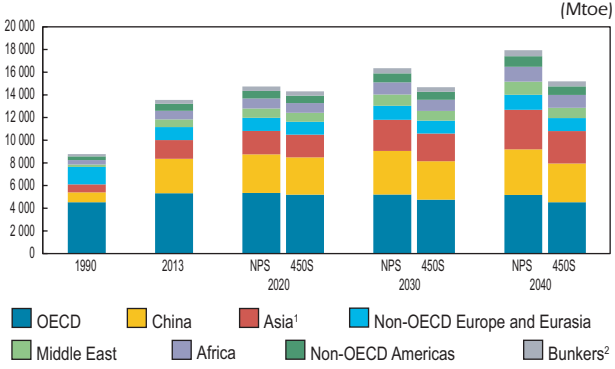
10 551 Mtoe

1. *In these graphs, peat and oil shale are aggregated with coal.*
2. *Includes international aviation and marine bunkers.*
3. *Includes biofuels and waste, geothermal, solar, wind, tide, etc.*
4. *Based on a plausible post-2015 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO_2-equivalent.*

Outlook for world TPES

(Source: IEA, *World Energy Outlook 2015*)

TPES Outlook by region to 2040

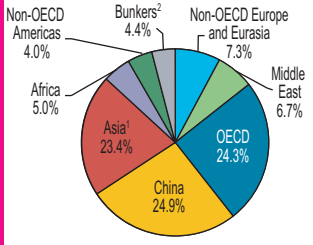


NPS: New Policies Scenario (based on policies under consideration)

450S: 450 Scenario[3] (based on policies needed to limit global average temperature increase to 2 °C)

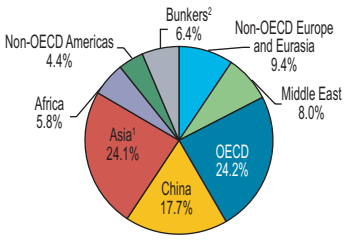
CO_2 emissions by region in 2040

New Policies Scenario



36 673 Mt of CO_2

450 Scenario



18 777 Mt of CO_2

1. *Asia excludes China and OECD countries of Asia.*
2. *Includes international aviation and international marine bunkers.*
3. *Based on a plausible post-2015 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO_2-equivalent.*

CO_2 emissions are from fossil fuel combustion only.

Selected indicators for 2014

(alphabetical order)

Region/ Country/ Economy	Population (million)	GDP (billion 2010 USD)	GDP (PPP) (billion 2010 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[1] (TWh)	CO_2 emissions[2] (Mt of CO_2)
World	7249	72874	101390	13805	-	13699[3]	21963	32381[4]
OECD	1267	47107	46238	4144	1322	5273	10171	11856
Middle East	224	2190	4946	1807	-1050	721	875	1728
Non-OECD Europe and Eurasia	343	2700	5461	1819	-665	1124	1557	2446
China	1372	8488	17214	2593	535	3066	5402	9135
Asia	2408	5685	15871	1496	317	1741	2280	3807
Non-OECD Americas	480	4480	6528	817	-152	639	1021	1174
Africa	1156	2223	5131	1129	-338	772	657	1105
Albania	2.89	12.82	29.12	2.01	0.67	2.34	6.67	4.12
Algeria	38.93	182.67	516.54	143.20	-89.74	51.67	53.05	122.93
Angola	24.23	97.50	133.79	94.05	-78.59	14.67	8.41	19.30
Argentina	42.98	521.27	807.82	75.33	13.57	86.62	131.20	192.41
Armenia	3.01	11.11	22.68	0.85	2.15	2.96	5.71	5.22
Australia	23.64	1438.97	1043.89	365.71	-235.04	125.24	236.43	373.78
Austria	8.54	406.94	365.39	12.09	21.66	32.16	71.41	60.78
Azerbaijan	9.54	58.38	156.16	58.78	-44.25	14.32	21.00	30.79
Bahrain	1.36	29.95	57.92	22.88	-8.36	14.16	26.18	29.69
Bangladesh	159.08	147.00	464.33	29.46	6.10	35.42	49.48	62.27
Belarus	9.47	60.88	160.97	3.67	24.31	27.75	34.87	57.43
Belgium	11.16	499.42	441.78	12.53	47.50	52.77	86.41	87.36
Benin	10.60	8.55	20.11	2.29	2.20	4.29	1.03	5.74
Bolivia	10.56	24.48	65.45	23.16	-14.78	8.33	7.95	18.30
Bosnia and Herzegovina	3.82	17.76	35.48	6.05	1.71	7.82	12.00	21.62
Botswana	2.22	16.23	33.41	1.51	1.06	2.72	3.79	6.88
Brazil	206.08	2412.23	3061.43	267.25	42.78	303.24	531.23	476.02
Brunei Darussalam	0.42	12.39	27.77	16.26	-12.49	3.55	4.22	6.70

1. Gross production + imports – exports – losses.

2. CO_2 emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

Selected indicators for 2014 (continued)

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2010 USD)	TPES/ GDP (PPP) (toe/000 2010 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/ 2010 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2010 USD)	Region/ Country/ Economy
1.89	0.19	0.14	3030	2.36	4.47	0.44	0.32	World
4.16	0.11	0.11	8028	2.25	9.36	0.25	0.26	OECD
3.22	0.33	0.15	3909	2.40	7.72	0.79	0.35	Middle East
3.28	0.42	0.21	4543	2.18	7.14	0.91	0.45	Non-OECD Europe and Eurasia
2.24	0.36	0.18	3938	2.98	6.66	1.08	0.53	China
0.72	0.31	0.11	947	2.19	1.58	0.67	0.24	Asia
1.33	0.14	0.10	2125	1.84	2.44	0.26	0.18	Non-OECD Americas
0.67	0.35	0.15	568	1.43	0.96	0.50	0.22	Africa
0.81	0.18	0.08	2305	1.76	1.42	0.32	0.14	Albania
1.33	0.28	0.10	1363	2.38	3.16	0.67	0.24	Algeria
0.61	0.15	0.11	347	1.32	0.80	0.20	0.14	Angola
2.02	0.17	0.11	3052	2.22	4.48	0.37	0.24	Argentina
0.98	0.27	0.13	1901	1.76	1.74	0.47	0.23	Armenia
5.30	0.09	0.12	10002	2.98	15.81	0.26	0.36	Australia
3.76	0.08	0.09	8358	1.89	7.11	0.15	0.17	Austria
1.50	0.25	0.09	2202	2.15	3.23	0.53	0.20	Azerbaijan
10.39	0.47	0.24	19224	2.10	21.80	0.99	0.51	Bahrain
0.22	0.24	0.08	311	1.76	0.39	0.42	0.13	Bangladesh
2.93	0.46	0.17	3682	2.07	6.06	0.94	0.36	Belarus
4.73	0.11	0.12	7745	1.66	7.83	0.17	0.20	Belgium
0.40	0.50	0.21	97	1.34	0.54	0.67	0.29	Benin
0.79	0.34	0.13	753	2.20	1.73	0.75	0.28	Bolivia
2.05	0.44	0.22	3144	2.76	5.66	1.22	0.61	Bosnia and Herzegovina
1.22	0.17	0.08	1708	2.53	3.10	0.42	0.21	Botswana
1.47	0.13	0.10	2578	1.57	2.31	0.20	0.16	Brazil
8.52	0.29	0.13	10113	1.88	16.06	0.54	0.24	Brunei Darussalam

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

4. CO_2 emissions for world include emissions from international aviation and international marine bunkers.

Selected indicators for 2014 (continued)

Region/ Country/ Economy	Population (million)	GDP (billion 2010 USD)	GDP (PPP) (billion 2010 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[1] (TWh)	CO_2 emissions[2] (Mt of CO_2)
Bulgaria	7.22	52.30	116.83	11.36	6.45	17.90	34.02	42.13
Cambodia	15.33	14.86	46.75	4.26	2.18	6.37	4.15	6.10
Cameroon	22.77	28.77	63.27	9.76	-2.02	7.60	6.24	6.04
Canada	35.54	1773.55	1497.77	469.99	-184.87	279.88	552.42	554.80
Chile	17.84	257.20	367.13	12.92	24.29	36.10	68.90	75.81
China (People's Rep. of)	1364.27	8230.12	16840.98	2593.11	507.94	3051.50	5357.55	9086.96
Colombia	47.79	349.22	596.69	127.23	-88.27	34.01	61.63	72.50
Republic of Congo	4.51	14.24	26.43	15.68	-12.67	2.63	0.96	2.64
Costa Rica	4.76	42.72	66.34	2.46	2.63	4.91	9.32	7.17
Côte d'Ivoire	22.16	31.23	67.48	12.89	1.04	13.87	6.22	9.35
Croatia	4.24	57.38	80.63	4.35	3.62	8.04	15.74	15.14
Cuba	11.38	72.47	230.10	5.88	6.66	11.70	16.41	29.45
Curaçao	0.16	1.88	1.69	0.00	3.61	1.97	0.75	4.75
Cyprus[5]	0.86	22.86	25.50	0.12	2.28	1.97	4.18	5.76
Czech Republic	10.53	212.20	290.64	29.26	12.53	41.21	65.88	96.55
DPR of Korea	25.03	38.15	143.19	20.82	-8.90	11.91	15.08	37.80
Dem. Rep. of the Congo	74.88	27.81	52.20	28.16	0.80	28.72	8.01	4.66
Denmark	5.64	326.54	236.98	16.06	2.20	16.21	33.06	34.51
Dominican Republic	10.41	63.93	129.00	1.02	7.06	7.64	16.42	19.26
Ecuador	15.90	85.92	169.04	30.45	-15.35	14.18	21.96	38.73
Egypt	89.58	237.74	881.94	80.36	-4.41	74.83	152.20	173.27
El Salvador	6.11	23.16	47.68	2.06	2.15	4.07	5.90	5.88
Eritrea	5.11	2.55	7.33	0.63	0.18	0.81	0.32	0.56
Estonia	1.32	23.07	33.25	5.83	0.68	6.04	8.85	17.52
Ethiopia	96.96	44.09	135.92	45.51	3.31	48.37	6.79	9.13
Finland	5.46	246.91	204.80	18.26	16.96	33.93	83.29	45.25
FYR of Macedonia	2.08	10.21	26.14	1.27	1.38	2.62	7.27	7.43
France	66.17	2729.47	2406.79	137.13	114.24	242.64	460.20	285.68
Gabon	1.69	17.84	30.65	15.91	-10.58	5.08	2.20	3.49
Georgia	4.50	14.34	31.92	1.37	3.10	4.39	10.02	7.72
Germany	80.98	3624.17	3438.04	119.75	196.49	306.07	569.75	723.27

1. Gross production + imports – exports – losses.

2. CO_2 emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

Selected indicators for 2014 (continued)

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2010 USD)	TPES/ GDP (PPP) (toe/000 2010 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/ 2010 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2010 USD)	Region/ Country/ Economy
2.48	0.34	0.15	4709	2.35	5.83	0.81	0.36	Bulgaria
0.42	0.43	0.14	270	0.96	0.40	0.41	0.13	Cambodia
0.33	0.26	0.12	274	0.79	0.27	0.21	0.10	Cameroon
7.88	0.16	0.19	15544	1.98	15.61	0.31	0.37	Canada
2.02	0.14	0.10	3863	2.10	4.25	0.29	0.21	Chile
2.24	0.37	0.18	3927	2.98	6.66	1.10	0.54	China (People's Rep. of)
0.71	0.10	0.06	1290	2.13	1.52	0.21	0.12	Colombia
0.58	0.18	0.10	213	1.00	0.59	0.19	0.10	Republic of Congo
1.03	0.11	0.07	1958	1.46	1.51	0.17	0.11	Costa Rica
0.63	0.44	0.21	281	0.67	0.42	0.30	0.14	Côte d'Ivoire
1.90	0.14	0.10	3715	1.88	3.57	0.26	0.19	Croatia
1.03	0.16	0.05	1442	2.52	2.59	0.41	0.13	Cuba
12.64	1.05	1.17	4795	2.41	30.43	2.53	2.82	Curaçao
2.30	0.09	0.08	4868	2.92	6.72	0.25	0.23	Cyprus[5]
3.92	0.19	0.14	6259	2.34	9.17	0.46	0.33	Czech Republic
0.48	0.31	0.08	602	3.17	1.51	0.99	0.26	DPR of Korea
0.38	1.03	0.55	107	0.16	0.06	0.17	0.09	Dem. Rep. of the Congo
2.87	0.05	0.07	5859	2.13	6.12	0.11	0.15	Denmark
0.73	0.12	0.06	1578	2.52	1.85	0.30	0.15	Dominican Republic
0.89	0.17	0.08	1381	2.73	2.44	0.45	0.23	Ecuador
0.84	0.31	0.08	1699	2.32	1.93	0.73	0.20	Egypt
0.67	0.18	0.09	966	1.44	0.96	0.25	0.12	El Salvador
0.16	0.32	0.11	63	0.69	0.11	0.22	0.08	Eritrea
4.59	0.26	0.18	6725	2.90	13.31	0.76	0.53	Estonia
0.50	1.10	0.36	70	0.19	0.09	0.21	0.07	Ethiopia
6.21	0.14	0.17	15246	1.33	8.28	0.18	0.22	Finland
1.26	0.26	0.10	3500	2.83	3.58	0.73	0.28	FYR of Macedonia
3.67	0.09	0.10	6955	1.18	4.32	0.10	0.12	France
3.01	0.28	0.17	1303	0.69	2.07	0.20	0.11	Gabon
0.97	0.31	0.14	2225	1.76	1.71	0.54	0.24	Georgia
3.78	0.08	0.09	7035	2.36	8.93	0.20	0.21	Germany

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

Selected indicators for 2014 (continued)

Region/ Country/ Economy	Popu-lation (million)	GDP (billion 2010 USD)	GDP (PPP) (billion 2010 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[1] (TWh)	CO_2 emissions[2] (Mt of CO_2)
Ghana	26.79	44.75	102.20	9.77	-0.64	9.03	9.56	13.11
Gibraltar	0.03	1.14	0.98	0.00	3.02	0.20	0.19	0.54
Greece	10.93	245.70	264.53	8.80	16.93	23.13	55.14	65.88
Guatemala	16.02	47.93	111.59	8.88	4.35	13.22	9.20	16.14
Haiti	10.57	7.70	17.11	3.24	0.94	4.15	0.41	2.76
Honduras	7.96	18.15	36.53	2.52	2.69	5.35	5.55	8.75
Hong Kong, China	7.24	257.49	372.87	0.19	27.48	14.25	43.98	47.94
Hungary	9.87	137.47	228.01	10.14	14.19	22.84	39.13	40.28
Iceland	0.33	14.45	13.41	5.22	0.84	5.87	17.62	2.04
India	1295.29	2195.65	6902.09	541.81	289.72	824.74	1042.33	2019.67
Indonesia	254.46	942.54	2501.42	458.00	-231.45	225.51	207.14	436.53
Islamic Rep. of Iran	78.14	463.90	1263.83	316.25	-75.32	237.08	234.11	556.09
Iraq	34.81	177.05	489.96	162.99	-111.28	49.48	45.71	141.03
Ireland	4.62	241.27	216.23	2.01	11.66	12.77	26.42	33.86
Israel	8.21	268.11	252.10	7.48	16.53	22.70	54.23	64.69
Italy	60.80	2033.75	1969.37	36.69	115.06	146.77	304.09	319.71
Jamaica	2.72	13.50	22.58	0.50	2.68	2.81	3.02	7.17
Japan	127.12	5642.89	4437.13	26.59	422.27	441.74	995.26	1188.63
Jordan	6.61	29.49	74.42	0.26	8.37	8.18	16.63	24.11
Kazakhstan	17.29	184.93	391.54	166.28	-89.01	76.67	96.82	223.69
Kenya	44.86	49.40	123.88	19.57	4.60	23.63	7.67	12.35
Korea	50.42	1233.97	1697.11	49.11	232.84	268.41	532.66	567.81
Kosovo	1.82	6.57	15.53	1.61	0.60	2.21	5.11	7.40
Kuwait	3.75	136.19	256.96	166.36	-131.14	33.88	57.54	86.08
Kyrgyzstan	5.83	5.83	18.12	1.91	2.15	3.80	11.33	8.36
Latvia[5]	1.99	27.66	42.54	2.38	1.90	4.34	6.99	6.72
Lebanon	4.55	40.78	74.21	0.16	7.61	7.49	16.21	22.37
Libya	6.26	38.10	91.25	36.27	-16.39	17.87	11.52	47.90
Lithuania	2.93	43.62	73.08	1.75	5.35	7.00	11.21	10.31
Luxembourg	0.56	57.81	47.36	0.15	4.08	3.82	7.74	9.25
Malaysia	29.90	314.34	716.60	94.64	-1.18	89.70	138.94	220.52

1. Gross production + imports – exports – losses.

2. CO_2 emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

Selected indicators for 2014 (continued)

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2010 USD)	TPES/ GDP (PPP) (toe/000 2010 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/ 2010 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2010 USD)	Region/ Country/ Economy
0.34	0.20	0.09	357	1.45	0.49	0.29	0.13	Ghana
5.94	0.17	0.20	5818	2.74	16.25	0.47	0.55	Gibraltar
2.12	0.09	0.09	5047	2.85	6.03	0.27	0.25	Greece
0.83	0.28	0.12	575	1.22	1.01	0.34	0.14	Guatemala
0.39	0.54	0.24	39	0.67	0.26	0.36	0.16	Haiti
0.67	0.30	0.15	697	1.63	1.10	0.48	0.24	Honduras
1.97	0.06	0.04	6073	3.37	6.62	0.19	0.13	Hong Kong, China
2.31	0.17	0.10	3966	1.76	4.08	0.29	0.18	Hungary
17.94	0.41	0.44	53896	0.35	6.25	0.14	0.15	Iceland
0.64	0.38	0.12	805	2.45	1.56	0.92	0.29	India
0.89	0.24	0.09	814	1.94	1.72	0.46	0.17	Indonesia
3.03	0.51	0.19	2996	2.35	7.12	1.20	0.44	Islamic Rep. of Iran
1.42	0.28	0.10	1313	2.85	4.05	0.80	0.29	Iraq
2.77	0.05	0.06	5725	2.65	7.34	0.14	0.16	Ireland
2.76	0.08	0.09	6604	2.85	7.88	0.24	0.26	Israel
2.41	0.07	0.07	5002	2.18	5.26	0.16	0.16	Italy
1.03	0.21	0.12	1110	2.55	2.64	0.53	0.32	Jamaica
3.48	0.08	0.10	7829	2.69	9.35	0.21	0.27	Japan
1.24	0.28	0.11	2517	2.95	3.65	0.82	0.32	Jordan
4.43	0.41	0.20	5600	2.92	12.94	1.21	0.57	Kazakhstan
0.53	0.48	0.19	171	0.52	0.28	0.25	0.10	Kenya
5.32	0.22	0.16	10564	2.12	11.26	0.46	0.33	Korea
1.21	0.34	0.14	2803	3.35	4.06	1.13	0.48	Kosovo
9.03	0.25	0.13	15333	2.54	22.94	0.63	0.33	Kuwait
0.65	0.65	0.21	1942	2.20	1.43	1.43	0.46	Kyrgyzstan
2.18	0.16	0.10	3514	1.55	3.38	0.24	0.16	Latvia[5]
1.65	0.18	0.10	3565	2.99	4.92	0.55	0.30	Lebanon
2.85	0.47	0.20	1841	2.68	7.65	1.26	0.52	Libya
2.39	0.16	0.10	3826	1.47	3.52	0.24	0.14	Lithuania
6.84	0.07	0.08	13873	2.42	16.57	0.16	0.20	Luxembourg
3.00	0.29	0.13	4646	2.46	7.37	0.70	0.31	Malaysia

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

Selected indicators for 2014 (continued)

Region/ Country/ Economy	Popu-lation (million)	GDP (billion 2010 USD)	GDP (PPP) (billion 2010 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[1] (TWh)	CO_2 emissions[2] (Mt of CO_2)
Malta	0.43	8.60	11.65	0.01	2.05	0.77	2.14	2.34
Mauritius	1.26	11.14	21.91	0.22	1.69	1.40	2.75	3.96
Mexico	119.71	1176.66	1939.05	208.27	-15.09	187.98	259.65	430.92
Moldova	3.56	7.03	16.56	0.33	2.98	3.30	4.93	7.25
Mongolia	2.91	11.40	32.49	14.41	-9.32	5.37	5.90	18.16
Montenegro	0.62	4.38	8.81	0.69	0.29	0.96	2.87	2.22
Morocco	33.92	108.39	241.44	1.76	19.53	18.98	30.93	53.11
Mozambique	27.22	13.40	28.73	17.99	-5.35	11.64	12.59	3.87
Myanmar	53.44	66.24	230.57	25.68	-7.26	19.31	11.26	19.56
Namibia	2.40	14.00	22.36	0.46	1.39	1.81	3.76	3.59
Nepal	28.18	19.03	62.53	9.74	2.07	11.69	3.94	5.93
Netherlands	16.86	845.61	752.14	58.53	30.51	72.95	113.21	148.34
New Zealand	4.46	162.07	150.43	17.05	4.56	20.56	40.71	31.24
Nicaragua	6.01	10.68	27.65	2.17	1.49	3.66	3.49	4.54
Niger	19.11	7.31	16.75	3.05	-0.11	2.89	0.99	1.96
Nigeria	177.48	452.29	980.62	260.02	-125.23	134.71	25.50	60.16
Norway	5.14	458.96	307.97	196.31	-167.40	28.75	118.16	35.31
Oman	4.24	67.48	152.96	74.49	-48.54	24.33	25.96	59.90
Pakistan	185.04	206.25	832.20	68.20	22.05	89.89	87.40	137.43
Panama	3.87	40.48	75.54	0.80	6.71	4.21	8.05	10.59
Paraguay	6.55	24.65	54.58	7.08	-1.85	5.17	10.25	5.19
Peru	30.97	181.34	347.10	27.32	-1.73	23.78	40.50	47.79
Philippines	99.14	250.79	645.80	25.85	22.29	47.67	69.99	95.71
Poland	38.48	534.56	886.15	67.33	27.90	94.02	150.98	279.04
Portugal	10.40	224.00	267.77	6.00	16.38	21.16	48.50	42.81
Qatar	2.17	161.79	285.56	219.93	-173.81	44.08	36.35	77.61
Romania	19.91	181.81	363.28	26.37	5.36	31.69	51.45	68.16
Russian Federation	143.82	1676.80	3219.77	1305.68	-570.84	710.88	949.59	1467.55
Saudi Arabia	30.89	649.57	1501.55	622.42	-405.45	213.51	290.66	506.59
Senegal	14.67	14.90	32.00	1.87	2.42	3.96	3.25	6.28
Serbia	7.13	4.38	9.57	9.44	3.72	13.26	30.46	38.11

1. Gross production + imports – exports – losses.

2. CO_2 emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

Selected indicators for 2014 (continued)

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2010 USD)	TPES/ GDP (PPP) (toe/000 2010 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/ 2010 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2010 USD)	Region/ Country/ Economy
1.81	0.09	0.07	5012	3.03	5.49	0.27	0.20	Malta
1.11	0.13	0.06	2182	2.82	3.14	0.36	0.18	Mauritius
1.57	0.16	0.10	2169	2.29	3.60	0.37	0.22	Mexico
0.93	0.47	0.20	1386	2.19	2.04	1.03	0.44	Moldova
1.85	0.47	0.17	2027	3.38	6.24	1.59	0.56	Mongolia
1.54	0.22	0.11	4611	2.32	3.57	0.51	0.25	Montenegro
0.56	0.18	0.08	912	2.80	1.57	0.49	0.22	Morocco
0.43	0.87	0.41	463	0.33	0.14	0.29	0.13	Mozambique
0.36	0.29	0.08	211	1.01	0.37	0.30	0.08	Myanmar
0.75	0.13	0.08	1563	1.99	1.50	0.26	0.16	Namibia
0.41	0.61	0.19	140	0.51	0.21	0.31	0.09	Nepal
4.33	0.09	0.10	6713	2.03	8.80	0.18	0.20	Netherlands
4.61	0.13	0.14	9131	1.52	7.01	0.19	0.21	New Zealand
0.61	0.34	0.13	580	1.24	0.76	0.43	0.16	Nicaragua
0.15	0.39	0.17	52	0.68	0.10	0.27	0.12	Niger
0.76	0.30	0.14	144	0.45	0.34	0.13	0.06	Nigeria
5.60	0.06	0.09	23001	1.23	6.87	0.08	0.11	Norway
5.74	0.36	0.16	6128	2.46	14.14	0.89	0.39	Oman
0.49	0.44	0.11	472	1.53	0.74	0.67	0.17	Pakistan
1.09	0.10	0.06	2082	2.51	2.74	0.26	0.14	Panama
0.79	0.21	0.09	1563	1.00	0.79	0.21	0.10	Paraguay
0.77	0.13	0.07	1308	2.01	1.54	0.26	0.14	Peru
0.48	0.19	0.07	706	2.01	0.97	0.38	0.15	Philippines
2.44	0.18	0.11	3923	2.97	7.25	0.52	0.31	Poland
2.03	0.09	0.08	4663	2.02	4.12	0.19	0.16	Portugal
20.29	0.27	0.15	16736	1.76	35.73	0.48	0.27	Qatar
1.59	0.17	0.09	2584	2.15	3.42	0.37	0.19	Romania
4.94	0.42	0.22	6603	2.06	10.20	0.88	0.46	Russian Federation
6.91	0.33	0.14	9410	2.37	16.40	0.78	0.34	Saudi Arabia
0.27	0.27	0.12	222	1.59	0.43	0.42	0.20	Senegal
1.86	3.02	1.39	4273	2.87	5.35	8.69	3.98	Serbia

Selected indicators for 2014 (continued)

Region/ Country/ Economy	Popu-lation (million)	GDP (billion 2010 USD)	GDP (PPP) (billion 2010 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[1] (TWh)	CO_2 emissions[2] (Mt of CO_2)
Singapore	5.47	279.12	423.14	0.65	75.75	28.01	48.38	45.32
Slovak Republic	5.42	96.90	143.50	6.57	9.77	15.95	27.84	29.33
Slovenia	2.06	47.93	56.46	3.70	3.01	6.67	13.87	12.76
South Africa	54.00	411.04	658.69	168.32	-18.03	147.02	228.98	437.37
South Sudan	11.91	6.08	22.48	8.11	-7.37	0.70	0.46	1.52
Spain	46.46	1375.52	1448.78	35.10	91.94	114.56	248.95	231.99
Sri Lanka	20.64	72.49	215.71	5.33	5.93	10.71	11.04	16.74
Sudan	39.35	67.01	149.68	16.34	-1.07	14.99	9.75	13.34
Suriname[5]	0.54	4.96	8.37	0.99	-0.25	0.69	1.99	1.99
Sweden	9.70	517.63	415.05	34.54	16.30	48.16	130.71	37.42
Switzerland	8.19	620.44	428.99	13.27	13.36	25.06	61.58	37.74
Syrian Arab Republic	22.16	54.60	120.54	5.64	5.43	10.80	18.24	27.57
Chinese Taipei	23.38	478.34	932.76	13.64	101.70	110.23	251.07	249.66
Tajikistan	8.30	7.47	20.87	1.79	1.08	2.80	12.38	4.66
Tanzania	51.82	40.88	119.36	22.17	2.87	24.83	5.18	10.37
Thailand	67.73	382.59	996.11	78.74	59.58	134.76	173.75	243.52
Togo	7.12	3.92	9.50	2.64	0.71	3.30	1.10	1.72
Trinidad and Tobago	1.35	21.88	40.47	39.66	-19.55	19.57	9.66	23.21
Tunisia	11.00	47.52	117.54	6.71	4.15	10.52	16.09	25.01
Turkey	76.62	870.92	1392.43	31.35	93.72	121.54	219.89	307.11
Turkmenistan	5.31	34.31	76.76	77.98	-50.74	26.75	14.64	67.00
Ukraine	45.36	134.02	346.35	76.93	27.47	105.68	154.77	236.54
United Arab Emirates	9.09	350.93	574.76	200.04	-109.55	70.47	102.17	175.43
United Kingdom	64.60	2605.73	2441.45	108.24	87.40	179.42	331.44	407.84
United States	319.17	16156.62	16156.62	2011.98	258.11	2216.19	4137.10	5176.21
Uruguay	3.42	47.61	66.75	2.62	2.33	4.71	10.49	6.27
Uzbekistan	30.76	53.81	160.23	55.84	-12.17	43.68	50.61	97.90
Venezuela	30.69	421.58	503.75	185.71	-117.48	67.50	81.69	154.99
Viet Nam	90.73	144.84	477.38	71.20	-2.69	66.62	130.57	143.31
Yemen	26.18	28.54	93.39	16.05	-8.44	7.42	5.68	21.34
Zambia	15.72	26.02	57.37	9.13	0.83	10.06	11.05	3.19
Zimbabwe	15.25	12.65	25.53	11.52	1.15	11.05	8.28	11.49

1. Gross production + imports – exports – losses.

2. CO_2 emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

Selected indicators for 2014 (continued)

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2010 USD)	TPES/ GDP (PPP) (toe/000 2010 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/ 2010 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2010 USD)	Region/ Country/ Economy
5.12	0.10	0.07	8844	1.62	8.29	0.16	0.11	Singapore
2.94	0.16	0.11	5137	1.84	5.41	0.30	0.20	Slovak Republic
3.24	0.14	0.12	6728	1.91	6.19	0.27	0.23	Slovenia
2.72	0.36	0.22	4240	2.97	8.10	1.06	0.66	South Africa
0.06	0.12	0.03	39	2.17	0.13	0.25	0.07	South Sudan
2.47	0.08	0.08	5358	2.03	4.99	0.17	0.16	Spain
0.52	0.15	0.05	535	1.56	0.81	0.23	0.08	Sri Lanka
0.38	0.22	0.10	248	0.89	0.34	0.20	0.09	Sudan
1.28	0.14	0.08	3699	2.89	3.70	0.40	0.24	Suriname[5]
4.97	0.09	0.12	13480	0.78	3.86	0.07	0.09	Sweden
3.06	0.04	0.06	7520	1.51	4.61	0.06	0.09	Switzerland
0.49	0.20	0.09	823	2.55	1.24	0.50	0.23	Syrian Arab Republic
4.71	0.23	0.12	10738	2.26	10.68	0.52	0.27	Chinese Taipei
0.34	0.38	0.13	1492	1.66	0.56	0.62	0.22	Tajikistan
0.48	0.61	0.21	100	0.42	0.20	0.25	0.09	Tanzania
1.99	0.35	0.14	2566	1.81	3.60	0.64	0.24	Thailand
0.46	0.84	0.35	155	0.52	0.24	0.44	0.18	Togo
14.45	0.89	0.48	7137	1.19	17.15	1.06	0.57	Trinidad and Tobago
0.96	0.22	0.09	1463	2.38	2.27	0.53	0.21	Tunisia
1.59	0.14	0.09	2870	2.53	4.01	0.35	0.22	Turkey
5.04	0.78	0.35	2759	2.50	12.62	1.95	0.87	Turkmenistan
2.33	0.79	0.31	3412	2.24	5.21	1.76	0.68	Ukraine
7.76	0.20	0.12	11245	2.49	19.31	0.50	0.31	United Arab Emirates
2.78	0.07	0.07	5131	2.27	6.31	0.16	0.17	United Kingdom
6.94	0.14	0.14	12962	2.34	16.22	0.32	0.32	United States
1.38	0.10	0.07	3068	1.33	1.83	0.13	0.09	Uruguay
1.42	0.81	0.27	1645	2.24	3.18	1.82	0.61	Uzbekistan
2.20	0.16	0.13	2661	2.30	5.05	0.37	0.31	Venezuela
0.73	0.46	0.14	1439	2.15	1.58	0.99	0.30	Viet Nam
0.28	0.26	0.08	217	2.87	0.81	0.75	0.23	Yemen
0.64	0.39	0.18	703	0.32	0.20	0.12	0.06	Zambia
0.72	0.87	0.43	543	1.04	0.75	0.91	0.45	Zimbabwe

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

Sources: Energy data: IEA.
Population: OECD/World Bank.
GDP and GDP(PPP) (in 2010 USD): OECD/World Bank/CEPII (Paris).

General conversion factors for energy

To: / From:	TJ	Gcal	Mtoe	MBtu	GWh
	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: / From:	kg	t	lt	st	lb
	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: / From:	gal U.S.	gal U.K.	bbl	ft^3	l	m^3
	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 2015	toe/tonne
People's Rep. of China	0.479
United States	0.527
India	0.395
Indonesia	0.570
South Africa	0.598
Australia	0.564
Russian Federation	0.601
Kazakhstan	0.650
Colombia	0.444
Poland	0.546

Crude oil[1]

Top-ten producers in 2015	toe/tonne
Saudi Arabia	1.016
Russian Federation	1.005
United States	1.033
People's Rep. of China	1.000
Iraq	1.023
Canada	1.022
Kuwait	1.016
Islamic Republic of Iran	1.019
United Arab Emirates	1.018
Venezuela	1.069

[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 2015	kJ/m³
United States	38 267
Russian Federation	38 230
Islamic Republic of Iran	39 356
Qatar	41 400
Canada	39 000
People's Rep. of China	38 931
Norway	39 237
Saudi Arabia	38 000
Turkmenistan	37 889
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 ÷ 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.

Glossary

Coal — *Coal* 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 — *Steam coal* comprises anthracite, other bituminous coal and sub-bituminous coal.

Crude oil — *Crude oil* comprises crude oil, natural gas liquids, refinery feedstocks and additives as well as other hydrocarbons.

Oil products — *Oil products* 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 — *Natural gas* includes both "associated" and "non-associated" gas.

Nuclear — *Nuclear* shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33%.

Hydro — *Hydro* shows the energy content of the electricity produced in hydro power plants. Hydro output excludes output from pumped storage plants.

Biofuels and waste — *Biofuels and waste* 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 — *Other* 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.

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

International aviation bunkers 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

Stock changes 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.

Transfers

Transfers includes both interproduct transfers, products transferred and recycled products.

Total primary energy supply (TPES)

Total primary energy supply (TPES) 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.

Statistical differences

Statistical differences 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

Electricity plants 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

Oil refineries 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

Other transformation 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];

Industry (ctd.)

- *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

OECD[1]	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[4], 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[5], Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Suriname, 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. Latvia was not an OECD Member at the time of the preparation of this publication. Accordingly, Latvia does not appear in the list of OECD Members and is still included in the non-OECD aggregate.

5. 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.

Eight annual publications

World Energy Statistics 2016

A new publication from the IEA presenting comprehensive world energy statistics, previously presented in *Energy Statistics of OECD Countries* and *Energy Statistics of Non-OECD Countries*, *World Energy Statistics* contains detailed data on all energy sources – coal, gas, oil, electricity, renewables and waste. It covers energy supply and consumption for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world and regional totals. The book includes detailed tables by country in original units for the year 2014, and summary time series on production, trade, and final consumption by sector. It also presents provisional 2015 supply data for OECD countries, and initial 2015 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

Published August 2016 - Price: Print €120; PDF €96

World Energy Balances 2016

A new release from the IEA presenting comprehensive energy balances for all the world's largest energy producing and consuming countries, *World Energy Balances* is formed by merging *Energy Balances of OECD Countries* and *Energy Balances of Non-OECD Countries*, previously published separately. The volume contains detailed data on the supply and consumption of energy for all OECD countries, over 100 other key energy producing and consuming countries, as well as world and regional totals. The book includes graphs and detailed data by country for all energy sources – coal, gas, oil, electricity, renewables and waste - expressed in balance format, for the year 2014. Alongside this, there are summary time series on production, trade, final consumption by sector, as well as key energy and economic indicators. The volume also presents provisional 2015 supply data for OECD countries, and initial 2015 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

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Electricity Information 2016

Electricity Information provides a comprehensive review of historical and current market trends in the OECD electricity sector, including 2015 provisional data. It provides an overview of the world electricity developments in 2014 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. 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 2016 - Price: Print €150; PDF €120

Coal Information 2016

Coal Information provides a comprehensive review of historical and current market trends in the world coal sector, including 2015 provisional data. It provides a review of the world coal market in 2015, 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 2016 - Price: Print €165; PDF €132

Natural Gas Information 2016

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 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 2016 - Price: Print €165; PDF €132

Oil Information 2016

Oil Information is a comprehensive reference book on current developments in oil supply and demand. 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.

Its core consists of a 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 2016 - Price: Print €165; PDF €132

Renewables Information 2016

Renewables Information provides a comprehensive review of historical and current market trends in OECD countries, including 2015 provisional data. It provides an overview of the development of renewables and waste in the world over the 1990 to 2014 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 2016 - Price: Print €110; PDF €88

CO_2 Emissions from Fuel Combustion 2016

In recognition of the fundamental importance of understanding energy related environmental issues, the IEA *CO_2 Emissions from Fuel Combustion* provides a full analysis of emissions stemming from energy use. This annual publication 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 Marrakesh, Morocco, from 7 to 18 November 2016.

The data in this book are designed to assist in understanding the evolution of the emissions of CO2 from 1971 to 2014 for 150 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 2016 - Price: Print €165; PDF €132

Two quarterlies

Oil, Gas, Coal and Electricity

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.

Published Quarterly - Price: single edition Print €120;
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The Monthly Oil Data Service

The IEA *Monthly Oil Data Service* provides the detailed databases of historical and projected information which is used in preparing the IEA monthly *Oil Market Report* (*OMR*). The IEA *Monthly Oil Data Service* comprises three packages available separately or combined as a subscriber service on the Internet. The data are available at the same time as the official release of the *Oil Market Report*.

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- Trade — Price: €2 050
- Field-by-Field Supply — Price: €3 150
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The Monthly Gas Data Service

The *Monthly Gas Data Service* provides monthly natural gas data for OECD countries:

- Supply balances in terajoules and cubic metres;
- Production, trade, stock changes and levels where available, gross inland deliveries, own use and losses;
- Highly detailed trade data with about 50 import origins and export destinations;
- LNG trade detail available from January 2002;
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The IEA statistics site can be accessed at:
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The *OMR* provides the most extensive, up-to-date statistical data available on current world oil market trends. It is the first and exclusive source to present official government statistics from all OECD countries, as well as selected data from non-OECD countries.

The main market movements of the month are highlighted in a convenient summary, while detailed analysis explains recent market developments and provides an insight into the months ahead. It is the *only* regular short-term analysis of the oil industry available based on information obtained from the extensive IEA network of contacts with government and industry.

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World Energy Outlook 2016

The successful outcome of COP21 has raised hopes and expectations of concerted global efforts to tackle climate change, but how will this affect the efficiency and carbon footprint of the energy sector? When and how will market dynamics change for oil, natural gas and coal – or might lower prices for some fuels be here to stay? How can governments address the impact of local pollution, often energy-related, on air quality?

The *World Energy Outlook 2016 (WEO-2016)* series – including a special report in June and the full Outlook in November – will seek to shed light on these questions and more, all with the customary mix of rigorous quantitative modelling and insightful analysis. The *WEO-2016* series will include a particular focus on the following topical issues:

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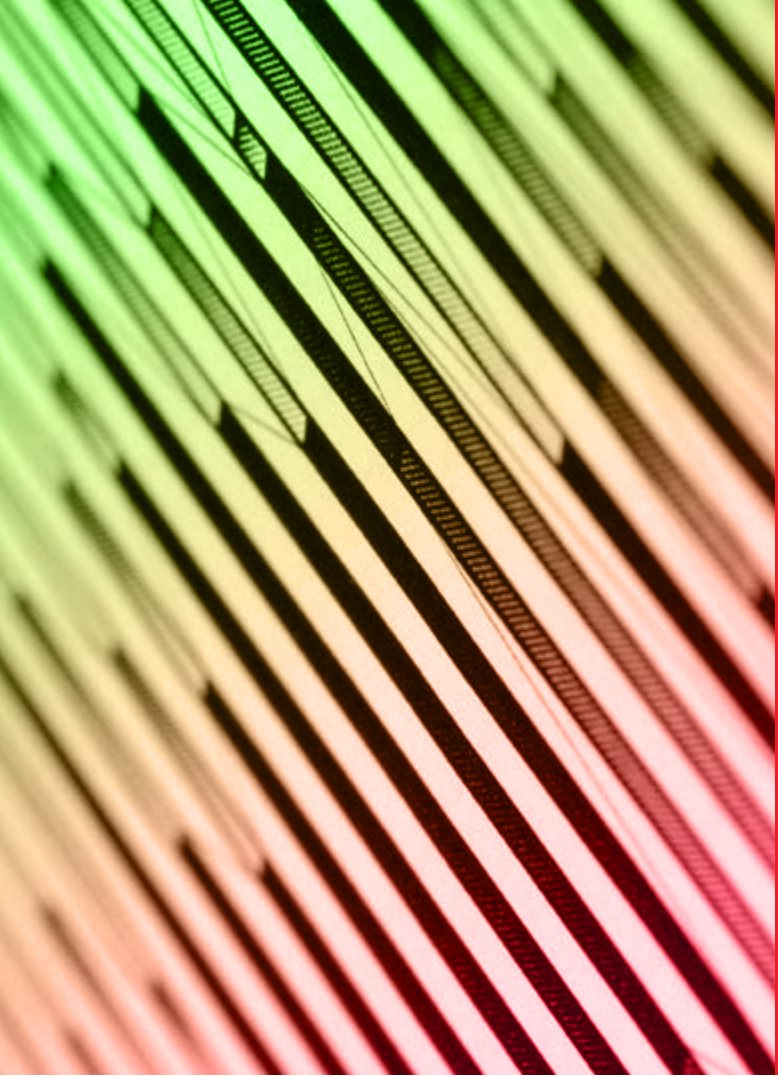

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