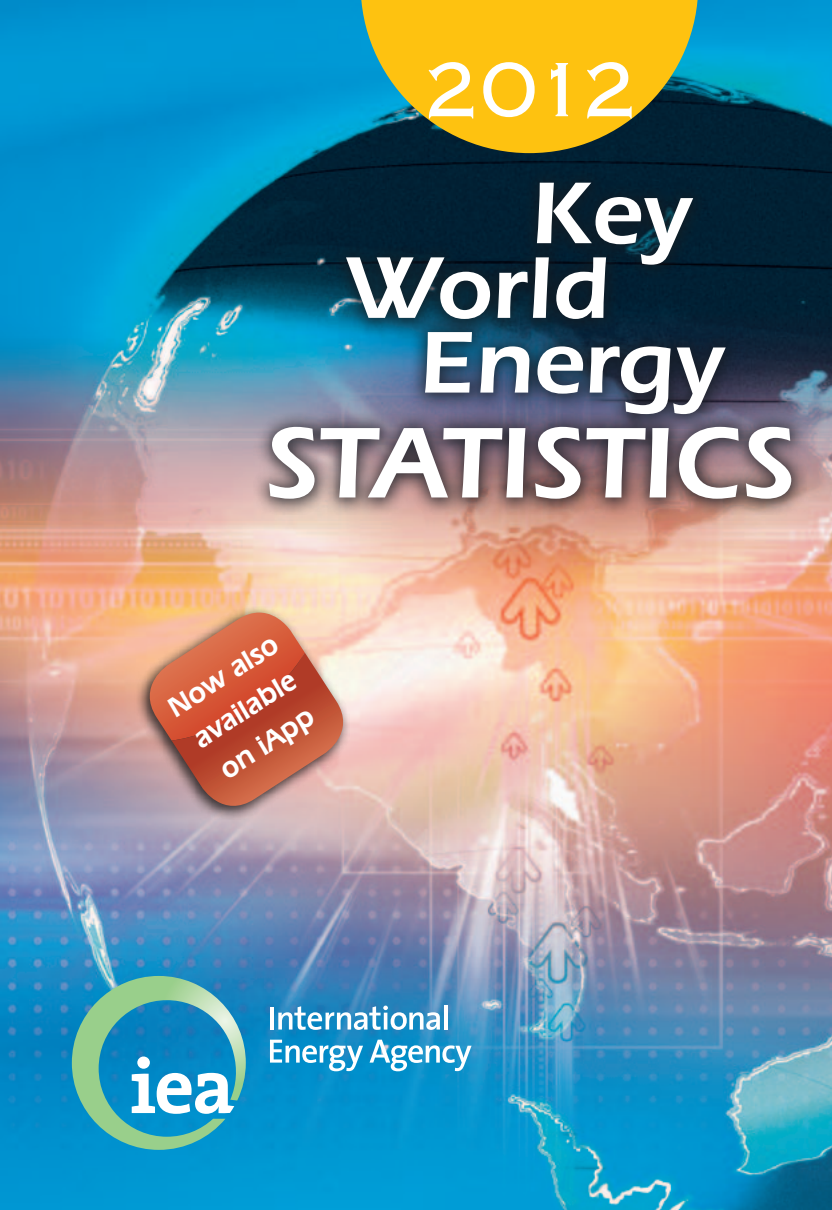
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The International Energy Agency

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

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

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

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

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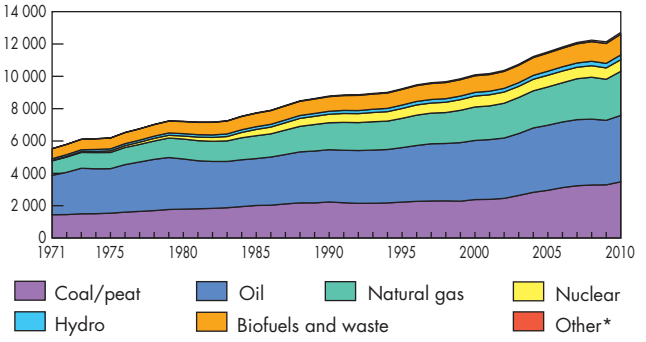
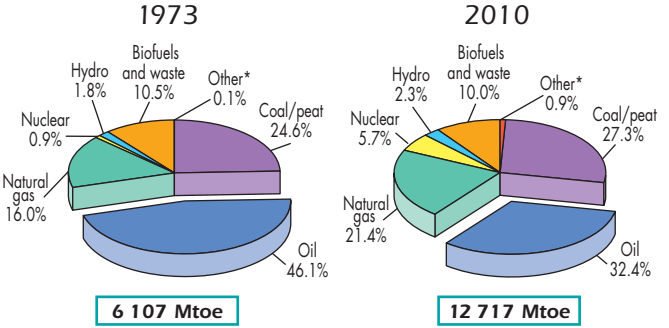
TOTAL PRIMARY ENERGY SUPPLY

World

World total primary energy supply from 1971 to 2010
by fuel (Mtoe)



1973 and 2010 fuel shares of TPES

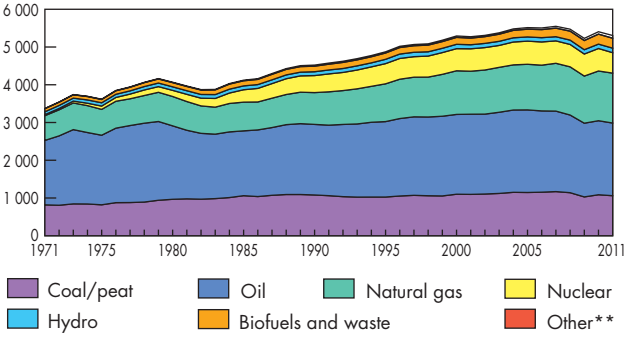


*Other incl des geothermal, solar, ind, heat, etc.

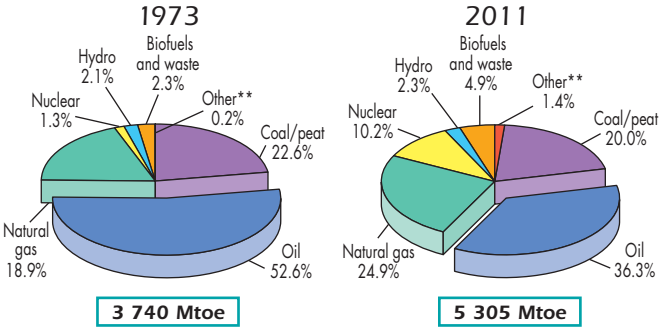
BY FUEL

OECD

OECD total primary energy supply* from 1971 to 2011
by fuel (Mtoe)



1973 and 2011 fuel shares of TPES*

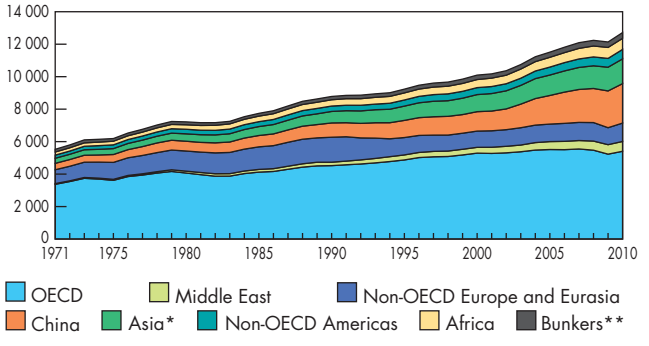


*E cl des electrici , rade.
**O her incl des geo hermal, solar, , ind, hea , e.c.

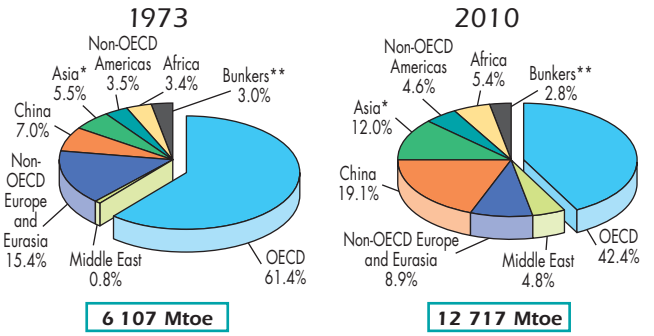
TOTAL PRIMARY ENERGY SUPPLY

World

World total primary energy supply from 1971 to 2010
by region (Mtoe)



1973 and 2010 regional shares of TPES

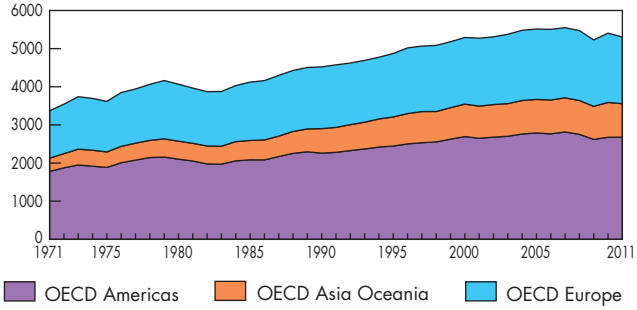


*Asia e cl des China.
**Incl des in ernational a ia ion and in ernational marine b nkers.

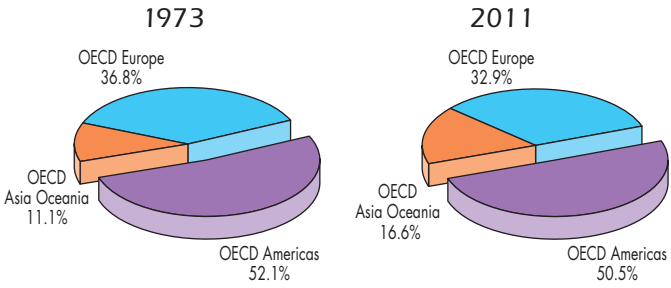
BY REGION

OECD

OECD total primary energy supply* from 1971 to 2011
by region (Mtoe)



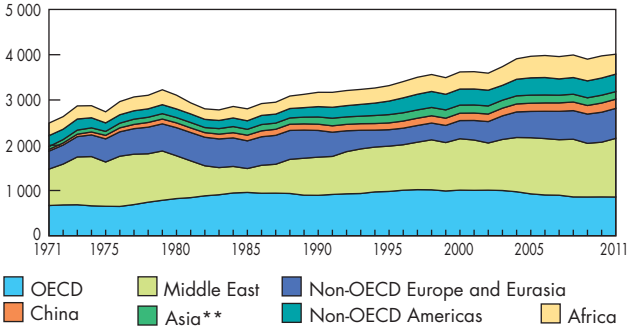
1973 and 2011 regional shares of TPES*



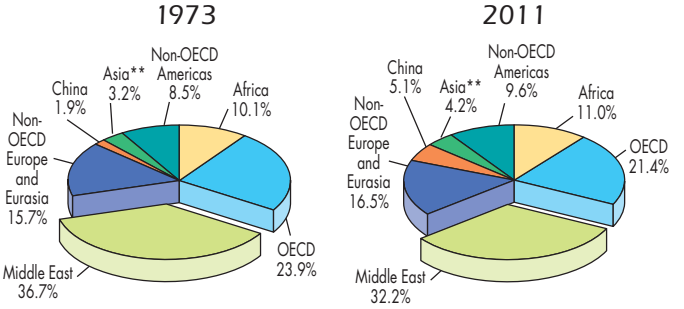
*E cl des elec rici rade.

Crude Oil Production

Crude oil* production from 1971 to 2011
by region (Mt)



1973 and 2011 regional shares of crude oil* production



*Incl des cr de oil, NGL, feeds ocks, addi i es and o her h drocarbons.
**Asia e cl des China.

Producers, net exporters and net importers of crude oil*

Producers	Mt	% of world total
Saudi Arabia	517	12.9
Russian Federation	510	12.7
United States	346	8.6
Islamic Rep. of Iran	215	5.4
People's Rep. of China	203	5.1
Canada	169	4.2
United Arab Emirates	149	3.7
Venezuela	148	3.7
Mexico	144	3.6
Nigeria	139	3.5
Rest of the world	1 471	36.6
World	**4 011**	**100.0**

2011 data

Net exporters	Mt
Saudi Arabia	333
Russian Federation	246
Nigeria	129
Islamic Rep. of Iran	126
United Arab Emirates	105
Iraq	94
Venezuela	87
Angola	84
Norway	78
Mexico	71
Others	609
Total	**1 962**

2010 data

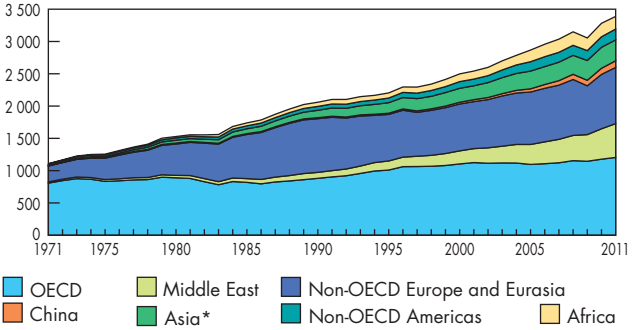
Net importers	Mt
United States	513
People's Rep. of China	235
Japan	181
India	164
Korea	119
Germany	93
Italy	84
France	64
Netherlands	60
Singapore	57
Others	483
Total	**2 053**

2010 data

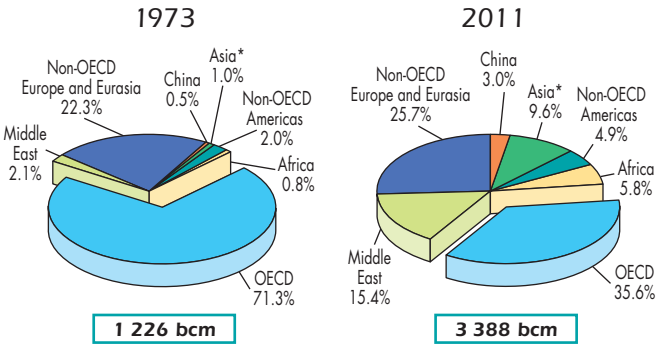
**Incl des cr de oil, NGL, feeds ocks, addi i es and o her h drocarbons.*

Natural Gas Production

Natural gas production from 1971 to 2011 by region
(billion cubic metres)



1973 and 2011 regional shares of natural gas production



*Asia e cl des China.

Producers, net exporters and net importers* of natural gas

Producers	bcm	% of world total
Russian Federation	677	20.0
United States	651	19.2
Canada	160	4.7
Qatar	151	4.5
Islamic Rep. of Iran	149	4.4
Norway	106	3.1
People's Rep. of China	103	3.0
Saudi Arabia	92	2.7
Indonesia	92	2.7
Netherlands	81	2.4
Rest of the world	1 126	33.3
World	**3 388**	**100.0**

2011 data

Net exporters	bcm
Russian Federation	196
Qatar	119
Norway	99
Canada	63
Algeria	49
Indonesia	46
Netherlands	33
Turkmenistan	29
Nigeria	26
Malaysia	22
Others	152
Total	**834**

2011 data

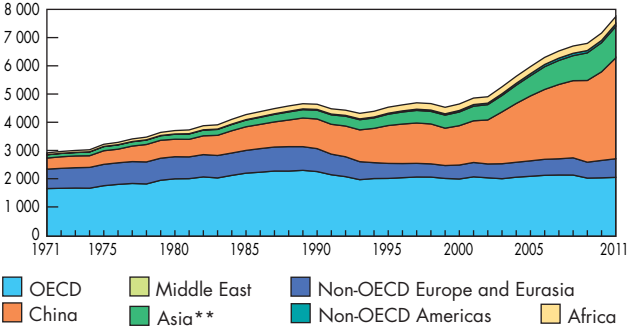
Net importers	bcm
Japan	116
Italy	70
Germany	68
United States	55
Korea	47
Ukraine	44
Turkey	43
France	41
United Kingdom	37
Spain	34
Others	279
Total	**834**

2011 data

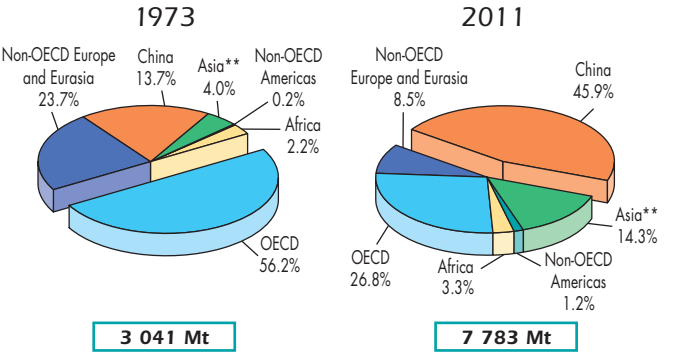
*Net exporters and net importers incl de pipeline gas and LNG.

Coal Production

Coal* production from 1971 to 2011
by region (Mt)



1973 and 2011 regional shares of coal* production



*Incl des s eam coal, coking coal, ligni e and reco ered coal.
**Asia e cl des China.

Producers, net exporters and net importers of coal*

Producers	Mt	% of world total
People's Rep. of China	3 576	45.9
United States	1 004	12.9
India	586	7.5
Australia	414	5.3
Indonesia	376	4.8
Russian Federation	334	4.3
South Africa	253	3.3
Germany	189	2.4
Poland	139	1.8
Kazakhstan	117	1.5
Rest of the world	795	10.3
World	**7 783**	**100.0**

2011 data

Net exporters	Mt
Indonesia	309
Australia	285
Russian Federation	99
United States	85
Colombia	76
South Africa	70
Kazakhstan	34
Canada	24
Vietnam	23
Mongolia	22
Others	14
Total	**1 041**

2011 data

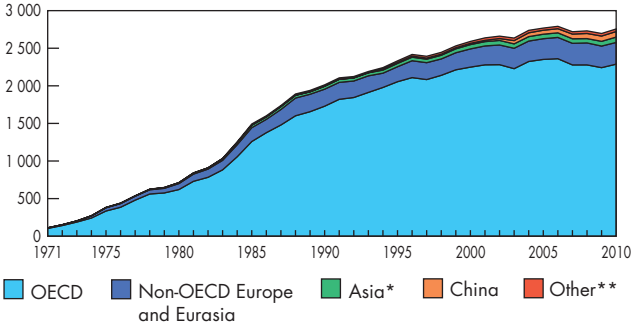
Net importers	Mt
People's Rep. of China	177
Japan	175
Korea	129
India	101
Chinese Taipei	66
Germany	41
United Kingdom	32
Turkey	24
Italy	23
Malaysia	21
Others	213
Total	**1 002**

2011 data

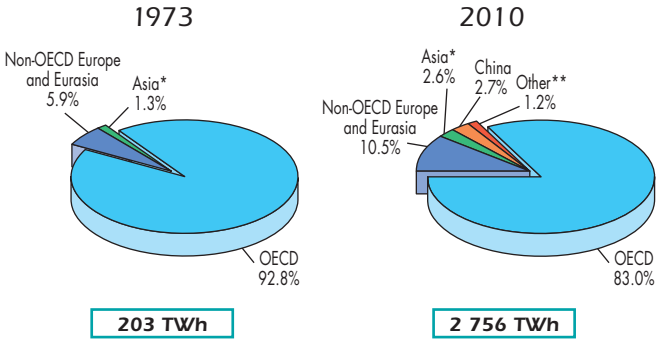
*Incl des s eam coal, coking coal, ligni e nd reco ered coal.

Nuclear Production

Nuclear production from 1971 to 2010
by region (TWh)



1973 and 2010 regional shares of nuclear production



*Asia e cl des China.
**O her incl des Africa, Non-OECD Americas and he Middle Eas

Producers of nuclear electricity

Producers	TWh	% of world total
United States	839	30.4
France	429	15.6
Japan	288	10.4
Russian Federation	170	6.2
Korea	149	5.4
Germany	141	5.1
Canada	91	3.3
Ukraine	89	3.2
People's Rep. of China	74	2.7
United Kingdom	62	2.2
Rest of the world	424	15.5
World	**2 756**	**100.0**

2010 data

Installed capacity	GW
United States	101
France	63
Japan	49
Russian Federation	24
Germany	20
Korea	18
Ukraine	14
Canada	13
United Kingdom	11
Sweden	9
Rest of the world	53
World	**375**

2010 data

Sources: IEA, Commissariat à l'Énergie Atomique et aux Energies Alternatives (France).

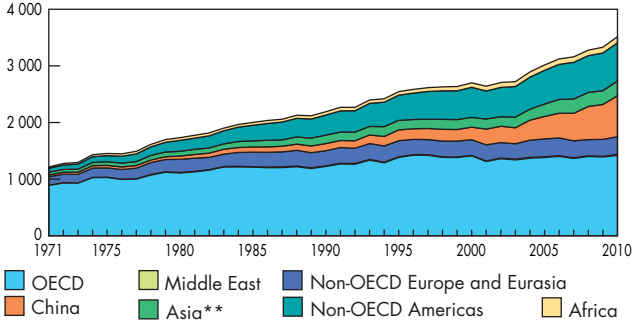
Country (top-ten producers)	% of nuclear in total domestic electricity generation
France	75.9
Ukraine	47.3
Korea	29.9
Japan	26.0
Germany	22.6
United States	19.3
Russian Federation	16.5
United Kingdom	16.4
Canada	14.9
People's Rep. of China	1.8
Rest of the world*	12.2
World	**12.9**

2010 data

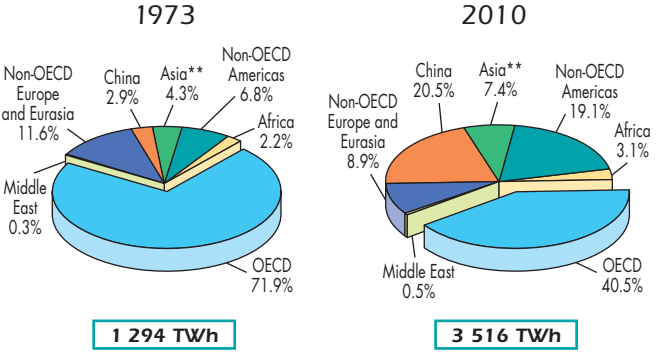
*E cl des co n ries
i h no n clea prod c ion.

Hydro Production

Hydro* production from 1971 to 2010
by region (TWh)



1973 and 2010 regional shares of hydro* production



*Incl des p mped s orage.
**Asia e cl des China.

Producers of hydro* electricity

Producers	TWh	% of world total
People's Rep. of China	722	20.5
Brazil	403	11.5
Canada	352	10.0
United States	286	8.1
Russian Federation	168	4.8
Norway	118	3.4
India	114	3.3
Japan	91	2.6
Venezuela	77	2.2
France	67	1.9
Rest of the world	1 118	31.7
World	**3 516**	**100.0**

2010 data

Installed capacity	GW
People's Rep. of China	171
United States	100
Brazil	79
Canada	75
Japan	47
Russian Federation	47
India	37
Norway	30
France	25
Italy	21
Rest of the world	331
World	**963**

2009 data
Sources: IEA, United Nations.

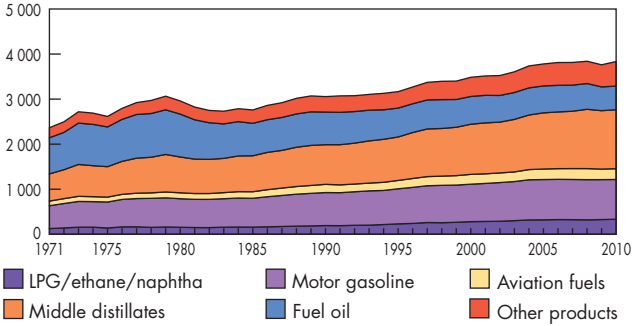
Country (top-ten producers)	% of hydro in total domestic electricity generation
Norway	94.7
Brazil	78.2
Venezuela	64.9
Canada	57.8
People's Rep. of China	17.2
Russian Federation	16.2
India	11.9
France	11.7
Japan	8.1
United States	6.5
Rest of the world**	15.4
World	**16.3**

2010 data

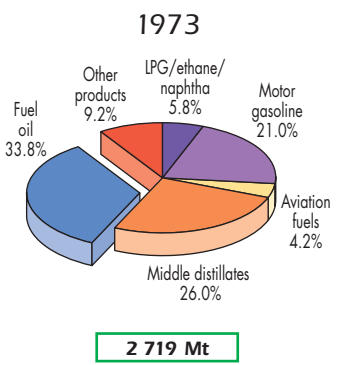
*Incl des p mped s orage.
**E cl des co ries
i h no h dro pro c ion.

Refining by Product

World refinery production from 1971 to 2010
by product (Mt)



1973 and 2010 shares of refinery production by product



Producers, net exporters and net importers of oil products

Producers	Mt	% of world total
United States	802	20.9
People's Rep. of China	403	10.5
Russian Federation	240	6.3
India	206	5.4
Japan	178	4.6
Korea	120	3.1
Germany	101	2.6
Canada	100	2.6
Brazil	97	2.5
Saudi Arabia	94	2.5
Rest of the world	1 493	39.0
World	**3 834**	**100.0**

2010 data

Net exporters	Mt
Russian Federation	111
Saudi Arabia	50
India	42
United States	30
Kuwait	29
Venezuela	25
Algeria	19
Italy	16
Netherlands	15
Korea	13
Others	122
Total*	**472**

2010 data

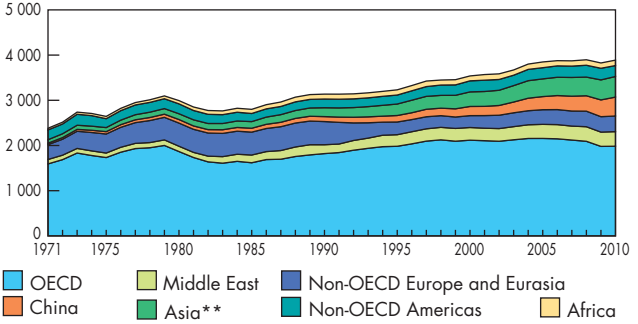
Net importers	Mt
Japan	26
Hong Kong (China)	21
People's Rep. of China	20
Mexico	19
France	19
Germany	18
Indonesia	16
Brazil	15
Singapore	15
Australia	13
Others	228
Total*	**410**

2010 data

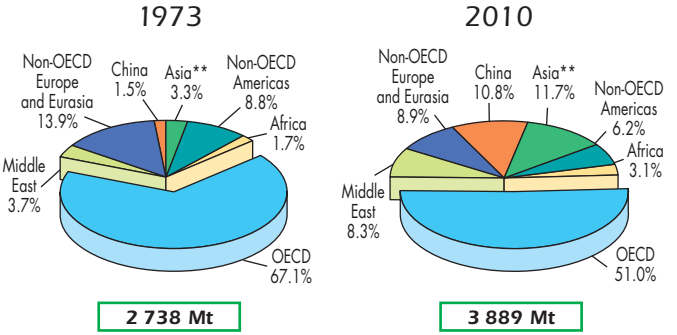
**The discrepanc be een o al ne e por s and o al ne impor s arises from differe da a/so rce and possible misalloca ion of b nkers in e ports for some co ries.*

Refining by Region

World refinery throughput* from 1971 to 2010
by region (Mt)



1973 and 2010 regional shares of refinery throughput*



*Incl des cr de oil, NGL, refiner feeds ocks, addi i es and o her h drocarbons.
**Asia e d des Chin .

Refinery capacity, net exporters and net importers of oil*

Crude distillation capacity	kb/cd	% of world total
United States	17 565	18.8
People's Rep. of China**	10 137	10.9
Russian Federation	5 371	5.8
Japan	4 594	4.9
India	4 163	4.5
Korea	3 003	3.2
Germany	2 183	2.3
Italy	2 132	2.3
Saudi Arabia	2 116	2.3
Brazil	1 981	2.1
Rest of the world	40 144	42.9
World	**93 389**	**100.0**

2011 data

Net exporters	Mt
Saudi Arabia	382
Russian Federation	357
Islamic Rep. of Iran	134
Nigeria	123
Venezuela	112
United Arab Emirates	101
Kuwait	99
Iraq	86
Norway	86
Angola	81
Others	611
Total	**2 172**

2010 data

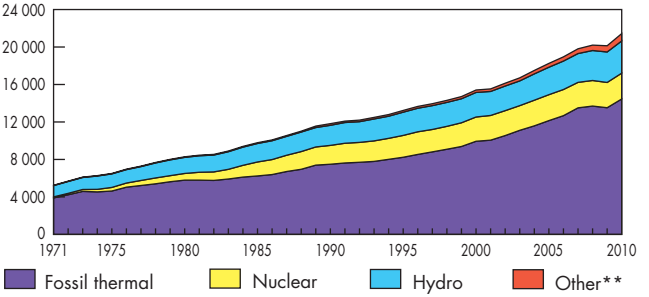
Net importers	Mt
United States	483
People's Rep. of China	254
Japan	207
India	122
Germany	110
Korea	106
France	83
Singapore	72
Spain	69
Italy	68
Others	627
Total	**2 201**

2010 data

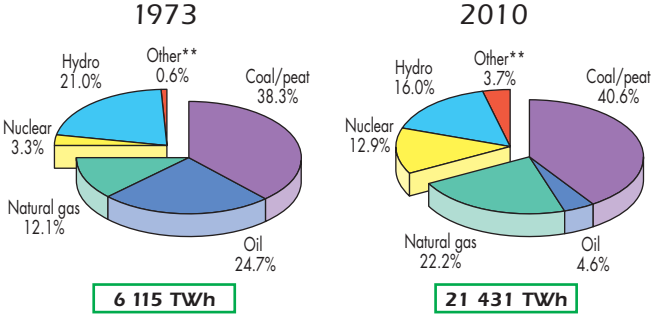
**Cr de oil and oil prod c.s.*
***Incl des nlis.ed small eapo. refineries, hich are es.ima.ed a. 500 kb/cd (i.e. calendar da).*

Electricity Generation by Fuel

World electricity generation* from 1971 to 2010
by fuel (TWh)



1973 and 2010 fuel shares of electricity generation*



*Electricity pumped storage.
**Other includes geothermal, solar, wind, biofuels and waste, and heat.

Electricity production from fossil fuels

Coal/peat	TWh
People's Rep. of China	3 273
United States	1 994
India	653
Japan	304
Germany	274
South Africa	242
Korea	219
Australia	181
Russian Federation	166
Poland	138
Rest of the world	1 254
World	**8 698**

2010 data

Oil	TWh
Saudi Arabia	129
Japan	97
United States	48
Islamic Rep. of Iran	46
Mexico	44
Kuwait	43
Indonesia	35
Pakistan	33
Egypt	31
India	26
Rest of the world	457
World	**989**

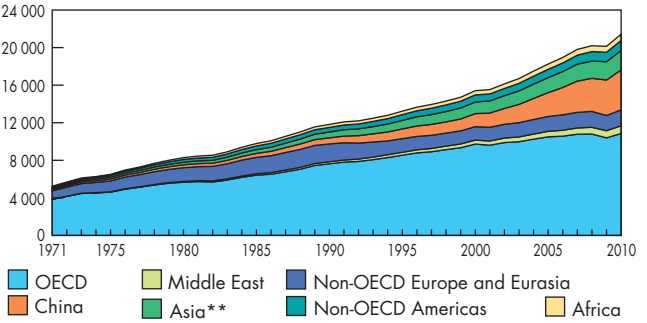
2010 data

Natural gas	TWh
United States	1 018
Russian Federation	521
Japan	305
Islamic Rep. of Iran	177
United Kingdom	175
Italy	153
Mexico	141
Thailand	119
India	118
Saudi Arabia	111
Rest of the world	1 930
World	**4 768**

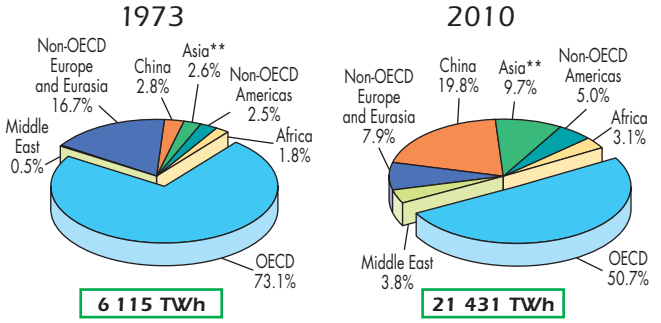
2010 data

Electricity Generation by Region

World electricity generation* from 1971 to 2010
by region (TWh)



1973 and 2010 regional shares of electricity generation*



*Excludes pumped storage.

**Asia excludes China.

Producers, net exporters and net importers of electricity

Producers*	TWh	% of world total
United States	4 354	20.3
People's Rep. of China	4 208	19.6
Japan	1 111	5.2
Russian Federation	1 036	4.8
India	960	4.5
Germany	622	2.9
Canada	608	2.8
France	564	2.6
Brazil	516	2.4
Korea	497	2.3
Rest of the world	6 955	32.6
World	**21 431**	**100.0**

2010 data

Net exporters	TWh
Paraguay	43
France	31
Canada	26
Russian Federation	17
Germany	15
Czech Republic	15
People's Rep. of China	14
Bulgaria	8
Spain	8
United Arab Emirates	8
Others	50
Total	**235**

2010 data

Net importers	TWh
Italy	44
Brazil	35
United States	26
Finland	11
Argentina	9
Hong Kong (China)	8
Norway	8
Iraq	6
Lithuania	6
Greece	6
Others	83
Total	**242**

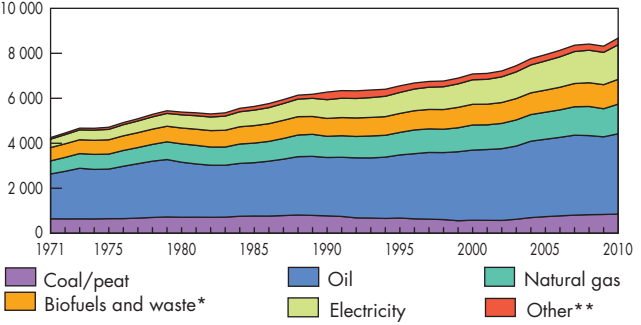
2010 data

**Gross production minus production from pumped storage plants.*

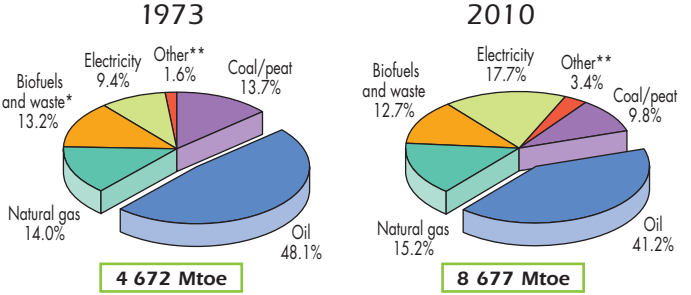
TOTAL FINAL CONSUMPTION

World

World total final consumption from 1971 to 2010
by fuel (Mtoe)



1973 and 2010 fuel shares of total final consumption

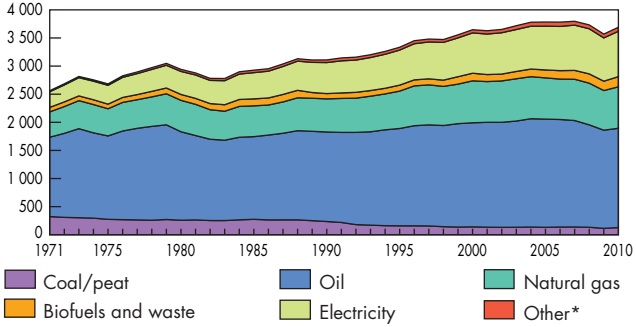


*Data prior to 1994 for biofuels and waste final consumption have been estimated.
**Other includes geothermal, solar, industrial heat, etc.

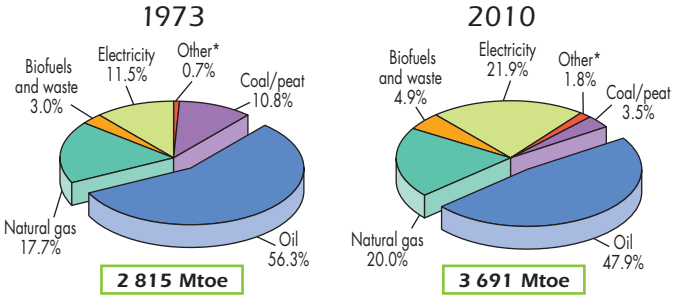
BY FUEL

OECD

OECD total final consumption from 1971 to 2010
by fuel (Mtoe)



1973 and 2010 fuel shares of total final consumption

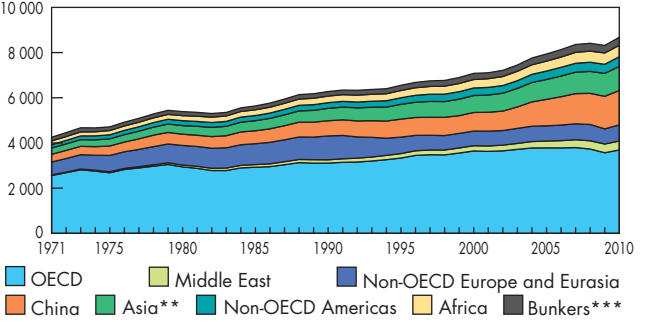


*Other incl des geothermal, solar, ind, heat, etc.

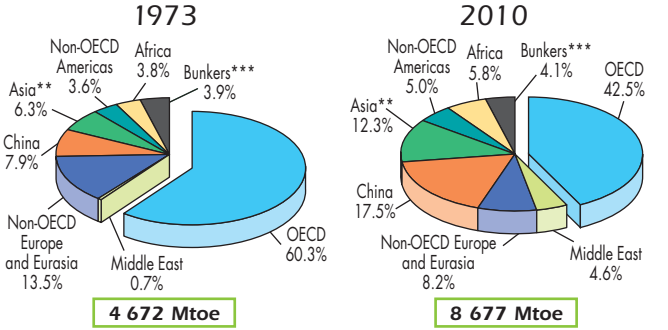
TOTAL FINAL CONSUMPTION

World

World total final consumption* from 1971 to 2010
by region (Mtoe)



1973 and 2010 regional shares of total final consumption*

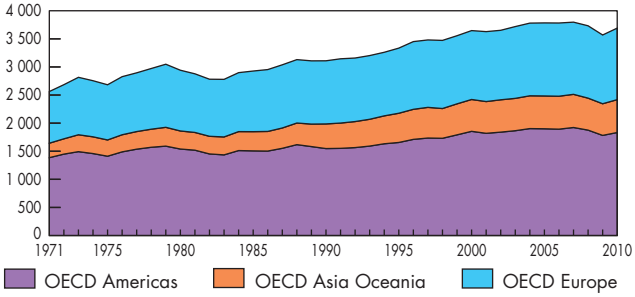


*Data prior to 1994 for biofuels and waste final consumption have been estimated.
**Asia excludes China.
***Includes international aviation and international marine bunkers.

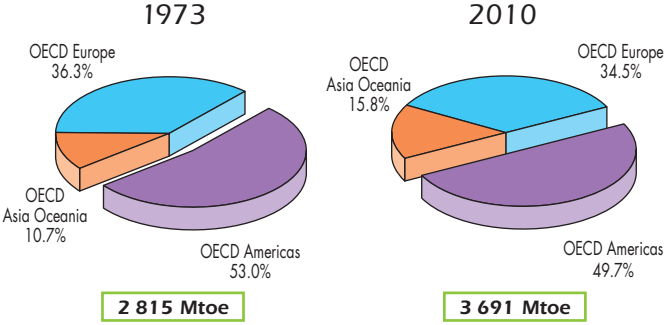
BY REGION

OECD

OECD total final consumption from 1971 to 2010
by region (Mtoe)



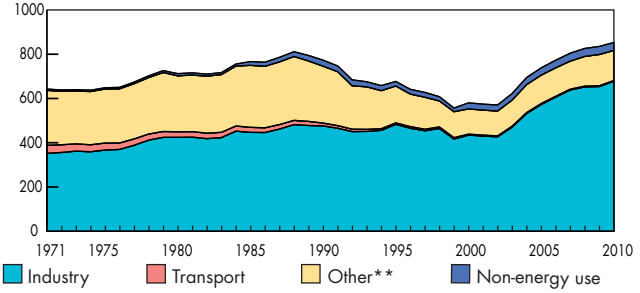
1973 and 2010 regional shares of total final consumption



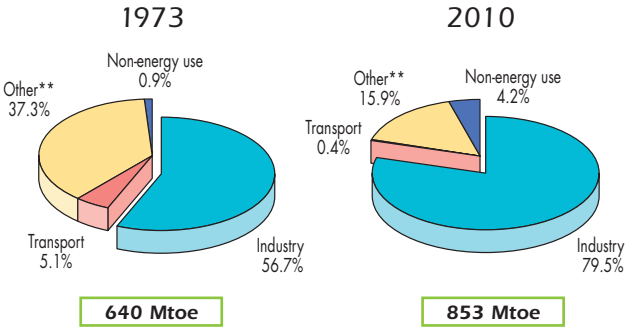
TOTAL FINAL CONSUMPTION

Coal*

Total final consumption from 1971 to 2010
by sector (Mtoe)



1973 and 2010 shares of world coal* consumption

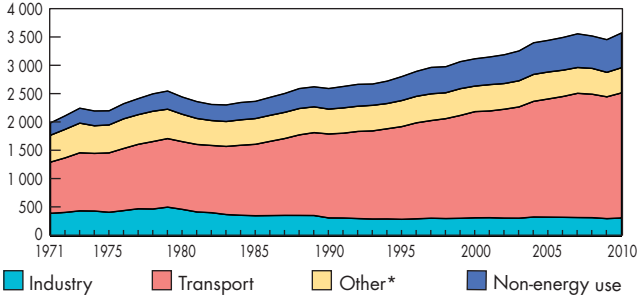


*Coal refers to coal/peat. **Includes agriculture, commercial and public services, residential, and non-specified other.

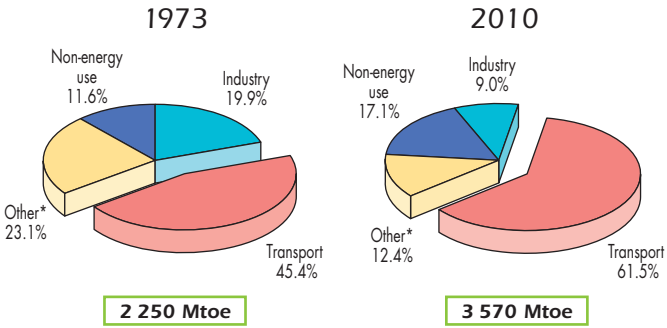
BY SECTOR

Oil

Total final consumption from 1971 to 2010
by sector (Mtoe)



1973 and 2010 shares of world oil consumption

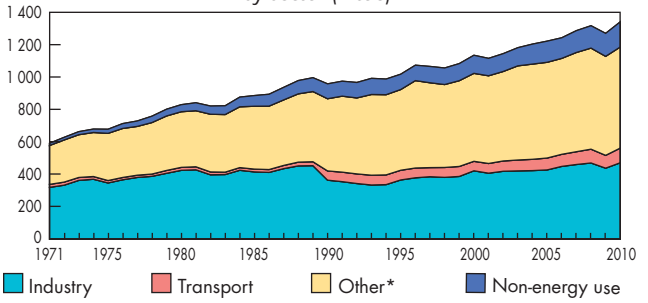


**Incl des agric l re, commercial and p blic ser ices, residen al, and non-specified o her.*

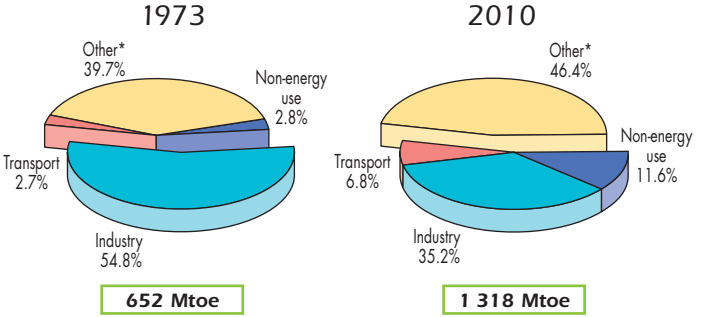
TOTAL FINAL CONSUMPTION

Natural gas

Total final consumption from 1971 to 2010
by sector (Mtoe)



1973 and 2010 shares of world natural gas consumption

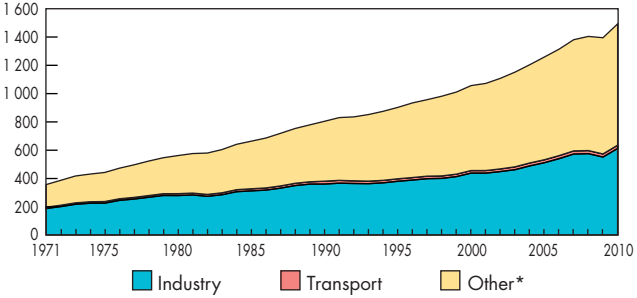


*Incl des agric l re, commercial and p blic ser ices, residen ial, and non-specified o her.

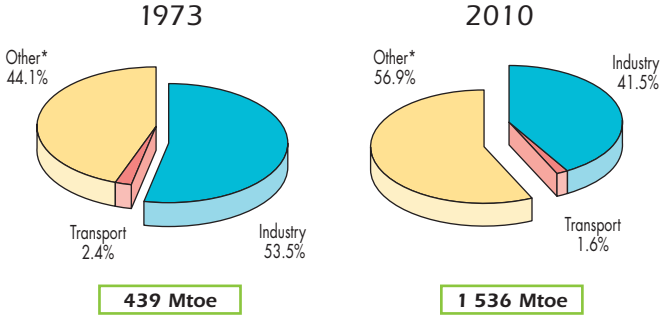
BY SECTOR

Electricity

Total final consumption from 1971 to 2010
by sector (Mtoe)



1973 and 2010 shares of world electricity consumption



*Incl des agric l re, commercial and p blic ser ices, residen ial, and non-specified o her.

SIMPLIFIED ENERGY

World

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal/ peat	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste[a]	Other[b]	Total
Production	1 477.06	2 938.38	-	993.10	53.05	110.19	643.78	6.13	6 221.69
Imports	140.01	1 561.28	407.65	73.40	-	-	0.12	8.14	2 190.61
Exports	-129.98	-1 612.99	-442.73	-72.56	-	-	-0.19	-8.27	-2 266.72
Stock changes	12.30	-19.68	-16.40	-15.09	-	-	0.06	-	-38.82
TPES	**1 499.40**	**2 866.99**	**-51.49**	**978.85**	**53.05**	**110.19**	**643.76**	**6.00**	**6 106.76**
Transfers	-	-46.76	48.78	-	-	-	-	-	2.02
Statistical diff.	8.61	12.00	-6.77	4.78	-	-	-0.17	-0.03	18.43
Electricity plants	-559.66	-22.91	-318.28	-160.52	-52.95	-110.19	-2.61	502.64	-724.47
CHP plants	-86.32	-	-28.26	-50.84	-0.10	-	-0.75	100.70	-65.57
Heat plants	-7.81	-	-0.90	-0.68	-	-	-0.80	7.11	-3.08
Blast furnaces	-81.68	-	-2.72	-	-	-	-0.06	-	-84.45
Gas works	9.87	-0.60	-9.07	-6.21	-	-	-	-	-6.01
Coke ovens[c]	-98.10	-	-0.68	-0.19	-	-	-0.02	-	-98.99
Oil refineries	-	-2 782.24	2 761.32	-	-	-	-	-	-20.92
Petchem. plants	-	5.09	-5.37	-	-	-	-	-	-0.28
Liquefaction plants	-0.73	0.23	-	-	-	-	-	-	-0.50
Other transf.	-	-	-0.12	-0.03	-	-	-23.74	-	-23.89
Energy ind. own use	-35.06	-2.59	-158.81	-106.83	-	-	-0.20	-57.68	-361.16
Losses	-8.86	-7.07	-0.27	-6.03	-	-	-0.25	-43.14	-65.62
TFC	**639.67**	**22.15**	**2 227.36**	**652.29**	**-**	**-**	**615.18**	**515.61**	**4 672.26**
Industry	362.08	16.42	431.56	356.95	-	-	91.51	286.35	1 544.86
Transport[d]	32.93	-	1 019.05	17.72	-	-	0.24	10.60	1 080.54
Other	238.65	0.00	520.70	259.26	-	-	523.42	218.67	1 760.70
Non-energy use	6.01	5.73	256.05	18.37	-	-	-	-	286.16

(a) Biofuels and waste final consumption has been estimated.
(b) Other includes geothermal, solar, wind, electricity and heat, etc.
(c) Also includes patent fuel and BKB plants.
(d) Includes international aviation and international marine bunkers.

BALANCE TABLE

World

2010

(Mtoe)

SUPPLY AND CONSUMPTION	Coal/ peat	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste	Other[a]	Total
Production	3 596.04	4 069.38	-	2 719.10	718.96	295.62	1 277.08	113.07	12 789.25
Imports	640.82	2 295.06	1 053.71	817.02	-	-	10.78	51.38	4 868.77
Exports	-681.28	-2 211.55	-1 111.80	-826.35	-	-	-9.29	-50.74	-4 891.01
Stock changes	-79.80	6.49	6.16	17.84	-	-	-0.54	-	-49.86
TPES	**3 475.77**	**4 159.37**	**-51.93**	**2 727.61**	**718.96**	**295.62**	**1 278.03**	**113.71**	**12 717.16**
Transfers	0.00	-156.64	179.33	-	-	-	-	-	22.69
Statistical diff.	-49.50	11.30	-27.05	-1.68	-	-	-0.40	0.19	-67.14
Electricity plants	-1 974.84	-34.63	-201.57	-705.47	-715.67	-295.62	-63.40	1 582.73	-2 408.47
CHP plants	-161.19	-0.01	-22.50	-304.76	-3.13	-	-35.21	321.34	-205.45
Heat plants	-103.61	-0.81	-12.92	-90.14	-0.15	-	-10.42	188.67	-29.38
Blast furnaces	-168.50	-	-0.79	-0.11	-	-	-	-	-169.40
Gas works	-8.80	-	-3.53	2.81	-	-	-0.02	-	-9.54
Coke ovens[b]	-51.08	-	-2.40	-0.00	-	-	-0.01	-	-53.49
Oil refineries	-	-3 964.42	3 921.30	-0.80	-	-	-	-	-43.92
Petchem. plants	-	30.51	-31.35	-	-	-	-	-	-0.84
Liquefaction plants	-16.20	7.85	-	-7.10	-	-	-	-	-15.45
Other transf.	0.01	0.13	-0.17	-2.22	-	-	-53.14	-0.39	-55.77
Energy ind. own use	-86.22	-10.10	-210.37	-275.36	-	-	-13.27	-196.78	-792.10
Losses	-2.70	-8.23	-0.58	-24.63	-	-	-0.15	-175.98	-212.27
TFC	**853.14**	**34.34**	**3 535.48**	**1 318.16**	**-**	**-**	**1 102.01**	**1 833.49**	**8 676.63**
Industry	677.86	12.51	310.02	463.87	-	-	195.83	762.85	2 422.94
Transport[c]	3.36	0.04	2 195.89	89.06	-	-	57.56	23.91	2 369.81
Other	135.96	6.75	435.64	612.83	-	-	848.62	1 046.73	3 086.53
Non-energy use	35.97	15.05	593.93	152.40	-	-	-	-	797.35

(a) Other incl. des geothermal, solar, ... ind, electrici... and hea... e.c.
(b) Also incl. des pa... f el and BKB plan.s.
(c) Incl. des in...ernational a...ia...ion and in...ernational marine b...kers.

SIMPLIFIED ENERGY

OECD

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal/ peat	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste	Other[a]	Total
Production	819.25	710.51	-	706.22	49.22	78.94	87.29	6.13	2 457.55
Imports	121.92	1 277.47	336.20	62.55	-	-	0.03	7.55	1 805.73
Exports	-111.10	-63.58	-172.72	-50.38	-	-	-0.01	-7.01	-404.80
Intl. marine bunkers	-	-	-73.65	-	-	-	-	-	-73.65
Intl. aviation bunkers	-	-	-24.64	-	-	-	-	-	-24.64
Stock changes	14.52	-10.78	-11.36	-12.07	-	-	0.06	-	-19.64
TPES	**844.60**	**1 913.62**	**53.83**	**706.32**	**49.22**	**78.94**	**87.36**	**6.66**	**3 740.55**
Transfers	-	-41.28	42.49	-	-	-	-	-	1.22
Statistical diff.	14.82	11.29	2.56	-5.61	-	-	-0.00	0.00	23.06
Electricity plants	-387.69	-20.61	-228.38	-108.33	-49.12	-78.94	-1.43	364.70	-509.81
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	-65.64	-	-2.72	-	-	-	-	-	-68.36
Gas works	11.02	-0.60	-8.72	-6.37	-	-	-	-	-4.68
Coke ovens[b]	-25.71	-	-0.68	-0.19	-	-	-0.02	-	-26.60
Oil refineries	-	-1 865.94	1 868.42	-	-	-	-	-	2.48
Petchem. 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	**303.19**	**0.39**	**1 583.63**	**498.48**	**-**	**-**	**84.30**	**345.49**	**2 815.48**
Industry	182.69	0.39	312.91	250.44	-	-	42.26	169.41	958.08
Transport	7.34	-	665.68	17.00	-	-	0.00	5.30	695.32
Other	110.07	-	393.09	225.47	-	-	42.04	170.78	941.45
Non-energy use	3.10	-	211.95	5.58	-	-	-	-	220.63

(a) Other incl. des geothermal, solar, etc. ind. electricity and heat, etc.
(b) Also incl. des patent fuel and BKB plants.

BALANCE TABLE

OECD

2010

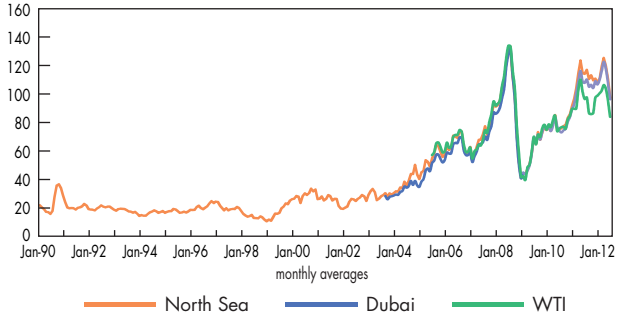
(Mtoe)

SUPPLY AND CONSUMPTION	Coal/ peat	Crude oil	Oil products	Natural gas	Nuclear	Hydro	Biofuels and waste	Other[a]	Total
Production	984.22	894.85	-	965.11	596.49	116.21	258.50	63.83	3 879.21
Imports	369.05	1 536.81	563.98	636.80	-	-	10.12	33.19	3 149.95
Exports	-285.96	-354.29	-501.46	-299.24	-	-	-5.18	-32.25	-1 478.38
Intl. marine bunkers	-	-	-90.21	-	-	-	-	-	-90.21
Intl. aviation bunkers	-	-	-85.88	-	-	-	-	-	-85.88
Stock changes	19.06	-3.63	1.29	14.30	-	-	0.16	-	31.17
TPES	**1 086.37**	**2 073.74**	**-112.28**	**1 316.96**	**596.49**	**116.21**	**263.60**	**64.77**	**5 405.87**
Transfers	-	-49.66	63.27	-	-	-	-	-	13.61
Statistical diff.	-8.20	-5.59	-6.55	1.43	-	-	-0.03	-0.19	-19.14
Electricity plants	-785.14	-4.13	-50.42	-349.41	-593.73	-116.21	-43.97	787.54	-1 155.47
CHP plants	-85.22	-	-15.40	-112.85	-2.76	-	-32.56	152.09	-96.70
Heat plants	-5.14	-	-1.46	-8.35	-	-	-5.79	16.34	-4.40
Blast furnaces	-49.07	-	-0.79	-0.11	-	-	-	-	-49.97
Gas works	-2.04	-	-2.99	3.47	-	-	-0.02	-	-1.59
Coke ovens[b]	-7.76	-	-1.19	-0.00	-	-	-0.00	-	-8.95
Oil refineries	-	-2 033.89	2 030.82	-0.80	-	-	-	-	-3.87
Petchem. plants	-	26.84	-27.33	-	-	-	-	-	-0.49
Liquefaction plants	-0.79	1.30	-	-1.93	-	-	-	-	-1.43
Other transf.	0.02	0.13	-0.08	-0.49	-	-	-0.30	-0.39	-1.12
Energy ind. own use	-14.09	-0.10	-117.47	-107.12	-	-	-0.26	-76.89	-315.93
Losses	-0.94	-	-0.01	-3.84	-	-	-0.03	-64.48	-69.31
TFC	**128.00**	**8.65**	**1 758.12**	**736.95**	**-**	**-**	**180.62**	**878.77**	**3 691.11**
Industry	102.11	2.21	113.47	255.25	-	-	72.09	283.67	828.80
Transport	0.14	0.03	1 107.23	22.67	-	-	40.28	9.33	1 179.69
Other	23.57	0.73	210.10	429.06	-	-	68.25	585.77	1 317.48
Non-energy use	2.19	5.67	327.31	29.97	-	-	-	-	365.14

(a) Other incl. des geothermal, solar, etc., ind. electricity and heat, e.c.
(b) Also incl. des patent fuel and BKB plants.

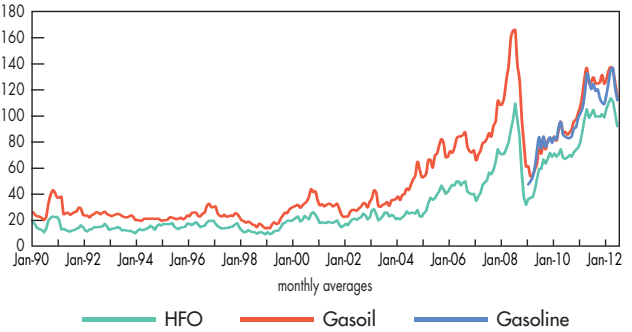
Crude Oil

Key crude oil spot prices in USD/barrel



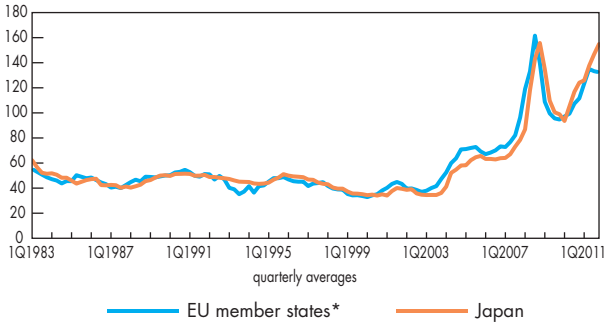
Oil Products

Rotterdam oil product spot prices in USD/barrel



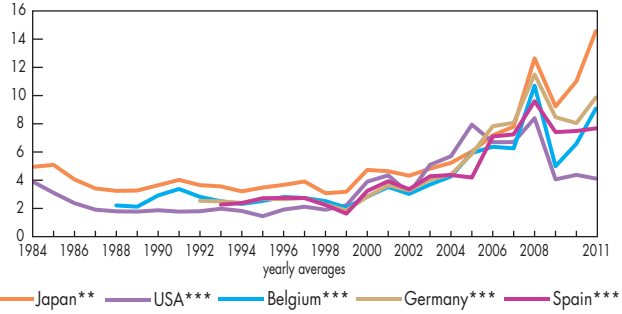
Coal

Steam coal import costs in USD/tonne



Natural Gas

Natural gas import prices in USD/MBtu



**The eighted a erage for EU member s o es is based onl on impor s for hich prices are a ailable and ma incl de differen components in differen ime periods. **LNG ***Pipeline*

RETAIL PRICES[a] IN SELECTED

	Heavy fuel oil for industry[b] (tonne)	Light fuel oil for households (1 000 litres)	Automotive diesel oil[c] (litre)	Unleaded premium[d] (litre)
Australia	..	..	..	1.666
Austria	863.65	1 326.57	1.079	1.872
Belgium	794.23	1 186.29	1.665	2.226
Canada	848.70	1 176.27	1.295	1.371
Chile	..	1 263.99	..	1.594
Czech Republic	508.43	1 284.86	1.601	1.897
Denmark	972.81	1 961.68	1.573	2.219
Estonia	..	1 370.45	1.527	1.778
Finland	..	1 489.18	1.667	2.125
France	817.85	1 302.60	1.561	2.081
Germany	781.81	1 178.72	1.65	2.144
Greece	895.06	1 319.72	1.639	2.266
Hungary	815.40	x	1.534	1.879
Ireland	1 175.16	1 440.01	1.605	1.987
Israel	c	..	c	..
Italy	875.96	1 914.96	1.839	2.29
Japan	1 057.05	1 158.87	1.328	1.848
Korea	1 056.32	1 232.35	..	1.967
Luxembourg	..	1 089.67	1.436	1.82
Mexico	624.96	..	0.679	0.819
Netherlands	760.84	..	1.583	2.268
New Zealand	684.43	..	1.082	1.804
Norway	..	1 795.55	1.869	2.542
Poland	811.71	1 324.77	1.443	1.745
Portugal	1 136.30	1 682.62	1.731	2.136
Slovak Republic	680.61	..	1.569	1.993
Slovenia	..	1 319.27	1.446	1.865
Spain	792.10	1 243.79	1.507	1.847
Sweden	1 493.97	2 044.11	1.763	2.212
Switzerland	..	1 148.66	1.761	1.93
Turkey	1 209.59	1 812.76	2.201	2.48
United Kingdom	c	1 129.09	1.871	2.12
United States	730.10	1 054.47	1.048	0.987

(a) Prices are for 1st quarter 2012 for oil products, and annual 2011 for other products. (b) Low sulphur fuel oil; high sulphur fuel oil for Canada, Ireland, Mexico, New Zealand, Turkey and the United States.
(c) For commercial purposes.

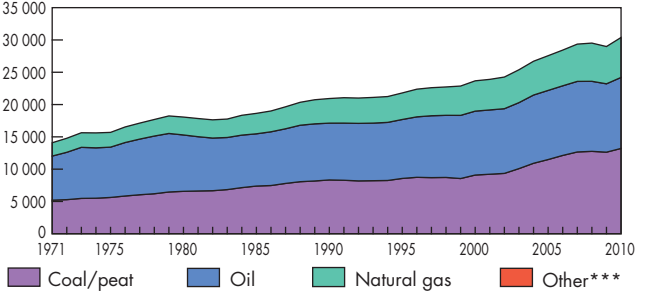
OECD COUNTRIES in USD/unit

Nat. gas for industry (MWh GCV[e])	Nat. gas for households (MWh GCV[e])	Steam coal for industry[f] (tonne)	Electricity for industry (MWh)	Electricity for households (MWh)	
..	..	..	..	..	Australia
..	93.11	243.11	..	272.85	Austria
36.41	90.58	..	138.51	264.37	Belgium
15.41	37.10	..	..	..	Canada
..	137.84	..	154.31	210.74	Chile
50.82	82.97	c	159.94	210.71	Czech Republic
..	..	..	115.17	409.17	Denmark
..	..	..	..	..	Estonia
45.19	62.18	315.32	113.64	213.61	Finland
51.52	84.65	..	121.54	187.09	France
54.37	92.63	..	157.23	351.95	Germany
56.00	108.06	..	125.57	173.09	Greece
43.63	63.73	..	134.21	233.07	Hungary
43.91	80.65	..	152.39	259.47	Ireland
c	..	x	97.06	148.79	Israel
..	..	140.26	279.31	278.88	Italy
..	..	153.61	179.03	260.93	Japan
60.21	64.98	..	..	88.64	Korea
50.03	73.53	..	117.30	220.26	Luxembourg
..	36.54	x	117.06	95.20	Mexico
38.53	96.84	..	120.56	237.90	Netherlands
23.76	102.43	c	73.72	212.10	New Zealand
x	x	..	71.17	170.70	Norway
42.57	72.20	109.65	121.77	198.50	Poland
50.19	96.32	234.86	139.14	245.67	Portugal
50.22	68.90	..	178.48	241.72	Slovak Republic
58.34	98.83	..	126.38	201.85	Slovenia
37.72	89.27	..	148.77	295.31	Spain
69.56	163.93	..	104.20	248.18	Sweden
72.37	107.21	200.25	131.62	222.24	Switzerland
33.83	42.40	86.55	138.64	169.35	Turkey
35.51	64.84	144.27	127.39	204.92	United Kingdom
16.96	35.94	68.71	69.57	117.84	United States

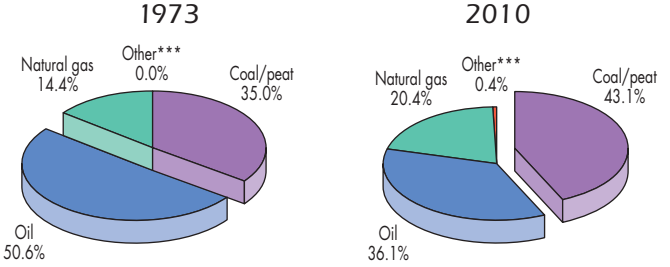
(d) Unleaded premi m gasoline (95 RON); nleaded reg lar for Japan. (e) Gross calorific al e. (f) Bro n coal for T rke .
.. no a ailable no applicable c confiden ial

CO_2 Emissions by Fuel

World* CO_2 emissions** from 1971 to 2010 by fuel (Mt of CO_2)



1973 and 2010 fuel shares of CO_2 emissions**



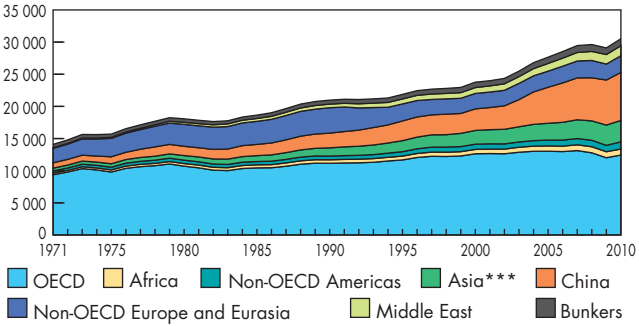
15 637 Mt of CO_2

30 326 Mt of CO_2

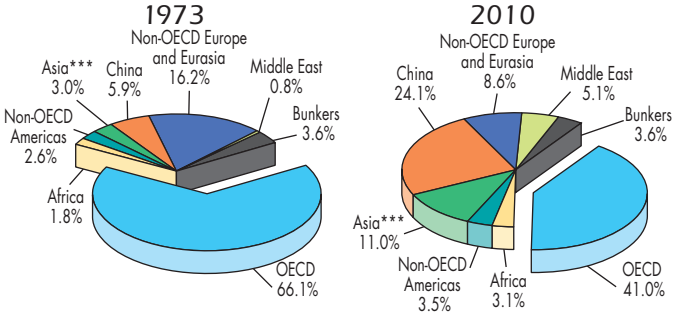
**World incl des in ern a ional a ia ion and in ern a ional marine b nkers.*
***Calc la ed sing he IEA's e erg balances and he Re ised 1996 IPCC G idelines. CO_2 emissions are from f e comb s ion onl . ***Other incl des ind s rial as e and non-rene able m nicipal was e.*

CO_2 Emissions by Region

World* CO_2 emissions** from 1971 to 2010 by region (Mt of CO_2)



1973 and 2010 regional shares of CO_2 emissions**



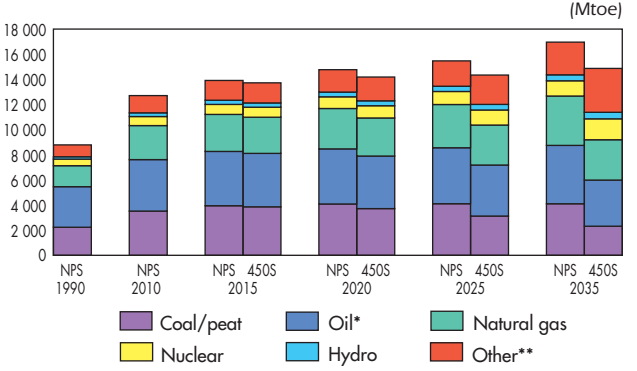
15 637 Mt of CO_2

30 326 Mt of CO_2

**World incl des in ernaional a ia ion and in ernaional marine b nkers, hich are sho n oge her as B nkers. **Calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines. CO_2 emissions are from f el comb s ion onl . ***Asia e cl des China.*

OUTLOOK FOR WORLD TPES

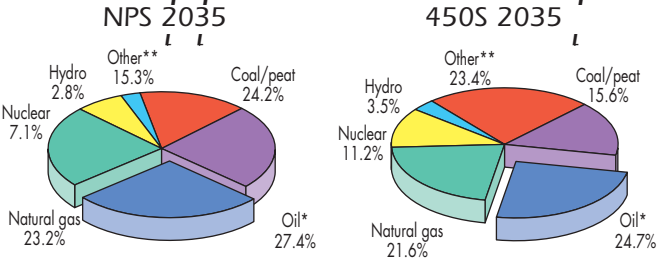
TPES Outlook by Fuel



NPS: New Policies Scenario (based on announced policy commitments and plans)

*450S: 450 Scenario*** (based on policies under consideration)*

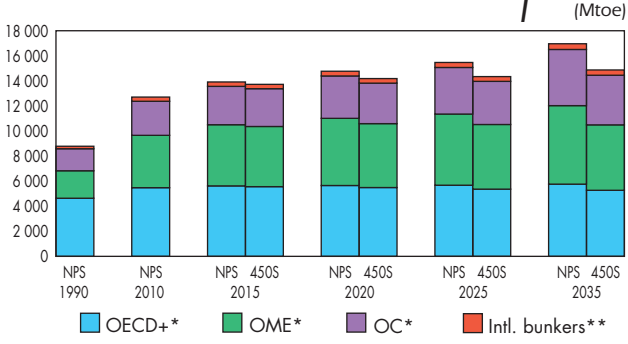
Fuel shares of TPES in 2035 for New Policies Scenario and 450 Scenario



**Incl des in ern a ional a ia ion and in ern a ional marine b nkers.*
***O her incl des bio f els and , as e, ge hermal, solar, , ind, ide, e c.*
****Based on a pa sible pos 2012 clima polic frame ork o abilise he concen ra ion of global greenho se gases a 450 ppm CO ed i alen*

(Source: IEA, *World Energy Outlook 2011*)

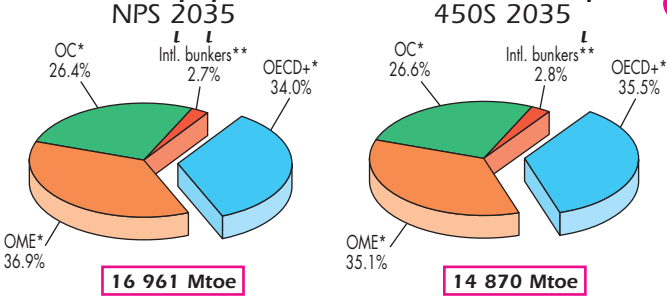
TPES Outlook by Region



NPS: New Policies Scenario (based on announced policy commitments and plans)

*450S: 450 Scenario*** (based on policies under consideration)*

Regional shares of TPES in 2035 for New Policies Scenario and 450 Scenario



*Please refer to the geographical coverage section for definitions of the regions.
**Includes international aviation and international marine bunkers.
***Based on a plausible post-2012 climate policy framework to stabilise the concentration of global greenhouse gases at 450 ppm CO_2-equivalent.

Selected Indicators for 2010

Region/ Country/ Economy	Population (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[a] (TWh)	CO_2 emissions[b] (Mt of CO_2)
World	6 825	50 942	68 431	12 789	-	12 717[c]	19 738	30 326[d]
OECD	1 232	37 494	37 113	3 879	1 672	5 406	10 246	12 440
Middle East	205	1 196	2 346	1 635	-1 024	606	715	1 547
Non-OECD Europe and Eurasia	338	1 533	3 514	1 769	-629	1 132	1 492	2 606
China	1 345	4 053	9 417	2 209	367	2 431	3 980	7 311
Asia	2 229	3 217	9 072	1 360	231	1 524	1 796	3 331
Non-OECD Americas	455	2 197	4 200	769	-172	583	907	1 065
Africa	1 022	1 252	2 769	1 168	-468	682	603	930
Albania	3.20	10.73	24.57	1.62	0.56	2.08	5.67	3.76
Algeria	35.47	115.79	266.75	150.52	-109.00	40.37	36.40	98.57
Angola	19.08	54.05	105.89	98.92	-82.90	13.67	4.73	16.62
Argentina	40.41	253.74	580.43	78.85	-2.01	74.63	117.38	170.24
Armenia	3.09	5.91	15.15	0.87	1.70	2.45	4.97	4.04
Australia	22.55	874.48	824.79	310.62	-185.63	124.73	226.96	383.48
Austria	8.39	327.21	296.83	11.76	21.37	33.84	70.11	69.34
Azerbaijan	9.05	28.33	80.70	65.44	-52.67	11.84	14.52	24.67
Bahrain	1.26	17.73	26.79	17.72	-6.80	9.78	12.38	23.62
Bangladesh	148.69	81.47	221.30	25.81	5.69	31.05	41.47	52.98
Belarus	9.49	42.90	118.57	4.19	23.39	27.73	33.82	65.33
Belgium	10.88	399.92	357.48	16.04	54.27	60.86	91.39	106.43
Benin	8.85	5.25	12.60	2.05	1.76	3.65	0.88	4.50
Bolivia	9.93	11.95	43.19	16.74	-9.37	7.32	6.12	14.06
Bosnia and Herzegovina	3.76	12.60	27.62	4.37	1.95	6.40	11.69	19.91
Botswana	2.01	11.85	25.01	1.10	1.18	2.26	3.18	4.60
Brazil	194.95	1 092.73	1 960.36	246.37	24.84	265.62	464.70	387.66
Brunei Darrussalam	0.40	9.99	18.41	18.56	-15.30	3.31	3.49	8.21

(a) Gross prod cion + impors e pors losses.
(b) CO_2 emissions from f el comb sion onl . Emissions are calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO_2/ TPES (t CO_2/ toe)	CO_2/ pop. (t CO_2/ capita)	CO_2/ GDP (kg CO_2/ 2005 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2005 USD)	Region/ Country/ Economy
1.86	0.25	0.19	2 892	2.38	4.44	0.60	0.44	World
4.39	0.14	0.15	8 315	2.30	10.10	0.33	0.34	OECD
2.96	0.51	0.26	3 493	2.55	7.56	1.29	0.66	Middle East
3.35	0.74	0.32	4 414	2.30	7.71	1.70	0.74	Non-OECD Europe and Eurasia
1.81	0.60	0.26	2 958	3.01	5.43	1.80	0.78	China
0.68	0.47	0.17	806	2.19	1.49	1.04	0.37	Asia
1.28	0.27	0.14	1 992	1.83	2.34	0.48	0.25	Non-OECD Americas
0.67	0.54	0.25	591	1.36	0.91	0.74	0.34	Africa
0.65	0.19	0.08	1 771	1.81	1.17	0.35	0.15	Albania
1.14	0.35	0.15	1 026	2.44	2.78	0.85	0.37	Algeria
0.72	0.25	0.13	248	1.22	0.87	0.31	0.16	Angola
1.85	0.29	0.13	2 904	2.28	4.21	0.67	0.29	Argentina
0.79	0.41	0.16	1 606	1.65	1.31	0.68	0.27	Armenia
5.53	0.14	0.15	10 063	3.07	17.00	0.44	0.46	Australia
4.03	0.10	0.11	8 358	2.05	8.27	0.21	0.23	Austria
1.31	0.42	0.15	1 605	2.08	2.73	0.87	0.31	Azerbaijan
7.75	0.55	0.37	9 813	2.41	18.71	1.33	0.88	Bahrain
0.21	0.38	0.14	279	1.71	0.36	0.65	0.24	Bangladesh
2.92	0.65	0.23	3 563	2.36	6.88	1.52	0.55	Belarus
5.59	0.15	0.17	8 397	1.75	9.78	0.27	0.30	Belgium
0.41	0.70	0.29	99	1.23	0.51	0.86	0.36	Benin
0.74	0.61	0.17	616	1.92	1.42	1.18	0.33	Bolivia
1.70	0.51	0.23	3 110	3.11	5.29	1.58	0.72	Bosnia and Herzegovina
1.13	0.19	0.09	1 586	2.03	2.29	0.39	0.18	Botswana
1.36	0.24	0.14	2 384	1.46	1.99	0.35	0.20	Brazil
8.31	0.33	0.18	8 757	2.48	20.58	0.82	0.45	Brunei Darrussalam

(c) TPES for world includes international aviation and international marine bunkers as well as electricity and heat trade.
(d) CO_2 emissions for world include emissions from international aviation and international marine bunkers.

Region/ Country/ Economy	Population (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[a] (TWh)	CO_2 emissions[b] (Mt of CO_2)
Bulgaria	7.54	32.95	86.65	10.57	7.27	17.86	33.73	43.83
Cambodia	14.14	8.69	27.83	3.62	1.44	5.02	2.07	3.76
Cameroon	19.60	19.20	40.34	8.41	-1.48	7.11	5.32	5.03
Canada	34.11	1 203.89	1 202.02	397.83	-149.72	251.84	516.59	536.63
Chile	17.09	138.70	232.68	9.21	22.27	30.92	56.43	69.71
People's Rep. of China	1 338.30	3 837.73	9 122.24	2 208.96	335.74	2 417.13	3 937.92	7 269.85
Chinese Taipei	23.18	446.36	742.34	12.96	100.42	109.28	237.33	270.22
Colombia	46.30	183.19	392.93	105.46	-71.75	32.24	46.87	60.67
Congo	4.04	7.85	15.40	17.32	-15.64	1.47	0.59	1.66
Dem. Rep. of Congo	65.97	9.28	20.53	24.08	-0.17	23.76	6.28	3.07
Costa Rica	4.66	24.77	48.35	2.44	2.39	4.65	8.64	6.54
Cote d'Ivoire	19.74	18.33	33.63	10.45	-0.90	9.57	4.14	5.81
Croatia	4.42	46.90	71.32	4.22	4.49	8.54	16.85	19.03
Cuba	11.26	54.98	62.31	5.28	5.87	10.98	14.63	30.03
Cyprus	0.80	19.18	20.87	0.09	2.93	2.44	5.16	7.22
Czech Republic	10.52	148.58	248.64	31.62	11.41	44.11	66.50	114.48
Denmark	5.55	256.13	178.81	23.33	-3.65	19.25	35.10	47.02
Dominican Republic	9.93	47.90	83.26	1.94	6.48	8.34	14.32	18.55
Ecuador	14.47	44.02	104.16	27.37	-14.18	12.10	15.26	30.10
Egypt	81.12	121.04	449.70	88.38	-14.06	73.26	130.44	177.60
El Salvador	6.19	18.35	37.04	2.26	2.02	4.19	5.30	5.87
Eritrea	5.25	1.06	2.57	0.58	0.16	0.74	0.27	0.49
Estonia	1.34	13.90	22.27	4.93	0.85	5.57	8.66	18.47
Ethiopia	82.95	20.15	77.46	31.43	2.12	33.20	4.50	5.37
Finland	5.36	205.30	168.93	17.31	18.03	36.40	88.40	62.92
France	64.85	2 208.62	1 923.46	135.57	132.09	262.29	502.94	357.81
Gabon	1.51	9.87	20.32	14.30	-12.55	2.13	1.51	2.65
Georgia	4.45	8.25	20.26	1.31	1.85	3.12	7.76	4.94
Germany	81.76	2 945.78	2 732.53	131.35	203.11	327.37	590.06	761.58
Ghana	24.39	14.75	35.97	6.73	2.82	9.32	7.26	9.49

(a) Gross prod cion + impors e pors losses.
(b) CO_2 emissions from f el comb s ion onl . Emissions are calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO_2/ TPES (t CO_2/ toe)	CO_2/ pop. (t CO_2/ capita)	CO_2/ GDP (kg CO_2/ 2005 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2005 USD)	Region/ Country/ Economy
2.37	0.54	0.21	4 471	2.45	5.81	1.33	0.51	Bulgaria
0.36	0.58	0.18	146	0.75	0.27	0.43	0.13	Cambodia
0.36	0.37	0.18	271	0.71	0.26	0.26	0.12	Cameroon
7.38	0.21	0.21	15 145	2.13	15.73	0.45	0.45	Canada
1.81	0.22	0.13	3 301	2.25	4.08	0.50	0.30	Chile
1.81	0.63	0.26	2 942	3.01	5.43	1.89	0.80	People's Rep. of China
4.71	0.24	0.15	10 237	2.47	11.66	0.61	0.36	Chinese Taipei
0.70	0.18	0.08	1 012	1.88	1.31	0.33	0.15	Colombia
0.36	0.19	0.10	145	1.13	0.41	0.21	0.11	Congo
0.36	2.56	1.16	95	0.13	0.05	0.33	0.15	Dem. Rep. of Congo
1.00	0.19	0.10	1 855	1.41	1.40	0.26	0.14	Costa Rica
0.48	0.52	0.28	210	0.61	0.29	0.32	0.17	Cote d'Ivoire
1.93	0.18	0.12	3 808	2.23	4.30	0.41	0.27	Croatia
0.98	0.20	0.18	1 299	2.73	2.67	0.55	0.48	Cuba
3.04	0.13	0.12	6 426	2.95	8.99	0.38	0.35	Cyprus
4.19	0.30	0.18	6 323	2.60	10.89	0.77	0.46	Czech Republic
3.47	0.08	0.11	6 329	2.44	8.48	0.18	0.26	Denmark
0.84	0.17	0.10	1 442	2.22	1.87	0.39	0.22	Dominican Republic
0.84	0.27	0.12	1 055	2.49	2.08	0.68	0.29	Ecuador
0.90	0.61	0.16	1 608	2.42	2.19	1.47	0.39	Egypt
0.68	0.23	0.11	855	1.40	0.95	0.32	0.16	El Salvador
0.14	0.70	0.29	52	0.66	0.09	0.47	0.19	Eritrea
4.16	0.40	0.25	6 465	3.32	13.79	1.33	0.83	Estonia
0.40	1.65	0.43	54	0.16	0.06	0.27	0.07	Ethiopia
6.79	0.18	0.22	16 484	1.73	11.73	0.31	0.37	Finland
4.04	0.12	0.14	7 756	1.36	5.52	0.16	0.19	France
1.42	0.22	0.11	1 005	1.24	1.76	0.27	0.13	Gabon
0.70	0.38	0.15	1 743	1.58	1.11	0.60	0.24	Georgia
4.00	0.11	0.12	7 217	2.33	9.32	0.26	0.28	Germany
0.38	0.63	0.26	298	1.02	0.39	0.64	0.26	Ghana

Region/ Country/ Economy	Population (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[a] (TWh)	CO_2 emissions[b] (Mt of CO_2)
Gibraltar	0.03	1.05	0.91	0.00	2.61	0.17	0.18	0.52
Greece	11.31	243.23	273.92	9.45	21.30	27.62	59.32	84.28
Guatemala	14.39	32.54	61.76	7.54	3.05	10.26	8.16	10.31
Haiti	9.99	4.32	9.96	1.61	0.70	2.29	0.24	2.13
Honduras	7.60	11.58	26.74	2.22	2.40	4.57	5.10	7.30
Hong Kong (China)	7.07	215.62	294.83	0.05	31.68	13.79	41.87	41.47
Hungary	10.00	109.27	169.58	11.05	15.11	25.67	38.77	48.95
Iceland	0.32	16.40	10.42	4.43	1.09	5.37	16.36	1.92
India	1 170.94	1 246.73	3 762.86	518.67	181.44	692.69	754.61	1 625.79
Indonesia	239.87	377.28	930.65	381.45	-172.61	207.85	153.83	410.94
Islamic Rep. of Iran	73.97	230.67	773.05	349.12	-135.38	208.37	196.20	509.00
Iraq	32.32	38.84	102.34	126.05	-87.48	37.80	37.90	104.50
Ireland	4.48	202.33	161.05	1.98	13.04	14.40	26.96	38.66
Israel	7.62	164.14	198.17	3.85	20.18	22.91	52.27	68.06
Italy	60.48	1 765.29	1 637.93	29.79	148.21	170.24	325.65	398.47
Jamaica	2.70	11.14	18.60	0.46	2.81	3.05	3.30	7.96
Japan	127.38	4 578.55	3 895.26	96.79	409.22	496.85	1 069.84	1 143.07
Jordan	6.05	16.74	31.19	0.27	7.43	7.20	13.46	18.63
Kazakhstan	16.32	77.25	178.18	156.75	-79.79	75.01	77.17	232.12
Kenya	40.51	23.45	60.01	15.78	4.28	19.56	6.32	10.89
Korea	48.88	1 017.57	1 320.93	44.92	221.05	250.01	481.47	563.08
DPR of Korea	24.35	27.56	103.45	20.70	-2.17	18.53	18.25	62.99
Kosovo	1.82	4.83	12.12	1.86	0.54	2.44	4.71	8.47
Kuwait	2.74	90.04	123.07	133.93	-99.66	33.40	50.14	87.39
Kyrgyzstan	5.37	3.03	10.94	1.18	2.15	2.92	7.49	6.98
Latvia	2.24	15.50	29.02	2.11	1.99	4.41	6.78	8.08
Lebanon	4.23	29.99	53.35	0.21	6.51	6.45	15.09	18.62
Libya	6.36	54.52	100.19	88.55	-69.05	19.15	27.14	51.61
Lithuania	3.32	27.35	51.11	1.52	5.64	6.93	10.75	13.35
Luxembourg	0.51	41.30	34.85	0.13	4.51	4.23	8.53	10.61

(a) Gross prod cion + impors e pors losses.
(b) CO_2 emissions from f el comb sion onl . Emissions are calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO_2/ TPES (t CO_2/ toe)	CO_2/ pop. (t CO_2/ capita)	CO_2/ GDP (kg CO_2/ 2005 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2005 USD)	Region/ Country/ Economy
5.51	0.16	0.19	5 710	3.06	16.86	0.50	0.58	Gibraltar
2.44	0.11	0.10	5 245	3.05	7.45	0.35	0.31	Greece
0.71	0.32	0.17	567	1.01	0.72	0.32	0.17	Guatemala
0.23	0.53	0.23	24	0.93	0.21	0.49	0.21	Haiti
0.60	0.39	0.17	671	1.60	0.96	0.63	0.27	Honduras
1.95	0.06	0.05	5 923	3.01	5.87	0.19	0.14	Hong Kong (China)
2.57	0.23	0.15	3 877	1.91	4.89	0.45	0.29	Hungary
16.88	0.33	0.52	51 447	0.36	6.04	0.12	0.18	Iceland
0.59	0.56	0.18	644	2.35	1.39	1.30	0.43	India
0.87	0.55	0.22	641	1.98	1.71	1.09	0.44	Indonesia
2.82	0.90	0.27	2 652	2.44	6.88	2.21	0.66	Islamic Rep. of Iran
1.17	0.97	0.37	1 172	2.76	3.23	2.69	1.02	Iraq
3.22	0.07	0.09	6 023	2.69	8.64	0.19	0.24	Ireland
3.01	0.14	0.12	6 858	2.97	8.93	0.41	0.34	Israel
2.81	0.10	0.10	5 384	2.34	6.59	0.23	0.24	Italy
1.13	0.27	0.16	1 222	2.60	2.94	0.71	0.43	Jamaica
3.90	0.11	0.13	8 399	2.30	8.97	0.25	0.29	Japan
1.19	0.43	0.23	2 226	2.59	3.08	1.11	0.60	Jordan
4.60	0.97	0.42	4 730	3.09	14.23	3.00	1.30	Kazakhstan
0.48	0.83	0.33	156	0.56	0.27	0.46	0.18	Kenya
5.12	0.25	0.19	9 851	2.25	11.52	0.55	0.43	Korea
0.76	0.67	0.18	749	3.40	2.59	2.29	0.61	DPR of Korea
1.34	0.50	0.20	2 592	3.47	4.66	1.75	0.70	Kosovo
12.20	0.37	0.27	18 318	2.62	31.93	0.97	0.71	Kuwait
0.54	0.96	0.27	1 396	2.39	1.30	2.31	0.64	Kyrgyzstan
1.97	0.28	0.15	3 021	1.83	3.60	0.52	0.28	Latvia
1.53	0.22	0.12	3 569	2.89	4.40	0.62	0.35	Lebanon
3.01	0.35	0.19	4 270	2.70	8.12	0.95	0.52	Libya
2.09	0.25	0.14	3 237	1.93	4.02	0.49	0.26	Lithuania
8.36	0.10	0.12	16 866	2.51	20.98	0.26	0.30	Luxembourg

Region/ Country/ Economy	Population (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[a] (TWh)	CO_2 emissions[b] (Mt of CO_2)
FYR of Macedonia	2.06	7.06	18.95	1.62	1.27	2.89	7.40	8.21
Malaysia	28.40	171.82	375.29	85.88	-11.11	72.65	116.94	185.00
Malta	0.41	6.67	9.48	0.00	2.39	0.84	1.73	2.47
Mexico	108.29	920.02	1 406.83	226.36	-43.70	178.11	225.76	416.91
Republic of Moldova	3.56	3.50	9.94	0.10	2.48	2.60	3.74	6.11
Mongolia	2.76	3.45	9.98	14.97	-11.14	3.28	4.22	11.87
Montenegro	0.63	2.80	6.42	0.70	0.12	0.82	3.50	2.09
Morocco	31.95	75.55	137.29	0.89	16.43	16.51	24.96	45.95
Mozambique	23.39	9.35	19.77	12.49	-2.22	10.20	10.38	2.50
Myanmar	47.96	20.53	839.06	22.53	-8.64	14.00	6.29	8.00
Namibia	2.28	8.89	13.26	0.32	1.33	1.60	3.38	3.33
Nepal	29.96	10.07	32.22	8.98	1.32	10.22	2.78	3.65
Netherlands	16.61	685.08	614.73	69.76	31.16	83.43	116.47	187.00
Netherlands Antilles	0.20	2.68	2.40	0.00	3.56	1.68	1.08	3.82
New Zealand	4.38	121.30	112.23	16.86	2.85	18.20	41.78	30.86
Nicaragua	5.79	5.82	15.13	1.73	1.33	3.14	2.74	4.46
Nigeria	158.42	155.22	338.31	258.36	-145.39	113.05	21.62	45.90
Norway	4.89	316.69	229.33	205.51	-172.31	32.45	123.09	39.17
Oman	2.78	41.41	68.52	72.14	-53.08	20.00	16.51	40.27
Pakistan	173.59	134.80	418.51	64.30	20.30	84.59	79.27	134.64
Panama	3.52	22.37	42.93	0.84	5.60	3.77	6.44	8.40
Paraguay	6.46	9.74	30.00	7.10	-2.38	4.79	7.32	4.69
Peru	29.08	112.19	248.76	19.40	-2.39	19.40	32.15	41.94
Philippines	93.26	131.13	332.06	23.42	18.52	40.48	59.94	76.43
Poland	38.19	382.76	662.57	67.39	32.09	101.45	144.45	305.10
Portugal	10.64	196.13	230.46	5.58	18.83	23.54	52.43	48.15
Qatar	1.76	102.56	135.99	174.10	-150.29	22.51	26.38	66.09
Romania	21.44	114.35	234.35	27.44	7.49	34.99	51.29	75.56
Russian Federation	141.75	905.23	2 010.38	1 293.05	-579.10	701.52	915.65	1 581.37
Saudi Arabia	27.45	359.75	559.24	538.05	-391.35	169.30	218.68	445.95

(a) Gross prod c ion + impor s e por s losses.
(b) CO_2 emissions from f el comb s ion onl . Emissions are calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO_2/ TPES (t CO_2/ toe)	CO_2/ pop. (t CO_2/ capita)	CO_2/ GDP (kg CO_2/ 2005 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2005 USD)	Region/ Country/ Economy
1.40	0.41	0.15	3 590	2.84	3.99	1.16	0.43	FYR of Macedonia
2.56	0.42	0.19	4 117	2.55	6.51	1.08	0.49	Malaysia
2.03	0.13	0.09	4 182	2.95	5.99	0.37	0.26	Malta
1.64	0.19	0.13	2 085	2.34	3.85	0.45	0.30	Mexico
0.73	0.74	0.26	1 049	2.35	1.72	1.75	0.62	Republic of Moldova
1.19	0.95	0.33	1 530	3.62	4.31	3.44	1.19	Mongolia
1.30	0.29	0.13	5 552	2.54	3.31	0.75	0.33	Montenegro
0.52	0.22	0.12	781	2.78	1.44	0.61	0.33	Morocco
0.44	1.09	0.52	444	0.25	0.11	0.27	0.13	Mozambique
0.29	0.68	0.02	131	0.57	0.17	0.39	0.01	Myanmar
0.70	0.18	0.12	1 479	2.07	1.46	0.37	0.25	Namibia
0.34	1.02	0.32	93	0.36	0.12	0.36	0.11	Nepal
5.02	0.12	0.14	7 011	2.24	11.26	0.27	0.30	Netherlands
8.36	0.63	0.70	5 388	2.27	18.99	1.43	1.59	Netherlands Antilles
4.15	0.15	0.16	9 531	1.70	7.04	0.25	0.27	New Zealand
0.54	0.54	0.21	473	1.42	0.77	0.77	0.29	Nicaragua
0.71	0.73	0.33	136	0.41	0.29	0.30	0.14	Nigeria
6.64	0.10	0.14	25 177	1.21	8.01	0.12	0.17	Norway
7.19	0.48	0.29	5 934	2.01	14.47	0.97	0.59	Oman
0.49	0.63	0.20	457	1.59	0.78	1.00	0.32	Pakistan
1.07	0.17	0.09	1 832	2.23	2.39	0.38	0.20	Panama
0.74	0.49	0.16	1 134	0.98	0.73	0.48	0.16	Paraguay
0.67	0.17	0.08	1 106	2.16	1.44	0.37	0.17	Peru
0.43	0.31	0.12	643	1.89	0.82	0.58	0.23	Philippines
2.66	0.27	0.15	3 783	3.01	7.99	0.80	0.46	Poland
2.21	0.12	0.10	4 929	2.05	4.53	0.25	0.21	Portugal
12.80	0.22	0.17	14 995	2.94	37.57	0.64	0.49	Qatar
1.63	0.31	0.15	2 392	2.16	3.52	0.66	0.32	Romania
4.95	0.77	0.35	6 460	2.25	11.16	1.75	0.79	Russian Federation
6.17	0.47	0.30	7 967	2.63	16.25	1.24	0.80	Saudi Arabia

Region/ Country/ Economy	Population (million)	GDP (billion 2005 USD)	GDP (PPP) (billion 2005 USD)	Energy prod. (Mtoe)	Net imports (Mtoe)	TPES (Mtoe)	Elec. cons.[a] (TWh)	CO_2 emissions[b] (Mt of CO_2)
Senegal	12.43	10.32	21.58	1.62	2.06	3.38	2.43	5.47
Serbia	7.29	27.86	70.04	10.60	5.23	15.61	31.78	46.05
Singapore	5.08	168.35	263.83	0.40	77.77	32.77	42.17	62.93
Slovak Republic	5.43	60.06	109.26	6.20	11.36	17.81	28.04	35.00
Slovenia	2.05	39.03	51.32	3.71	3.58	7.21	13.36	15.32
South Africa	49.99	288.46	473.77	162.41	-17.07	136.87	240.09	346.84
Spain	46.07	1 181.88	1 242.46	34.24	106.84	127.74	283.56	268.32
Sri Lanka	20.86	33.25	95.02	5.54	4.10	9.87	9.28	13.34
Sudan	43.55	38.96	88.13	34.94	-17.19	16.15	6.13	13.70
Sweden	9.38	400.03	318.76	33.50	19.68	51.28	140.10	47.57
Switzerland	7.79	411.66	294.12	12.64	14.95	26.21	63.97	43.83
Syrian Arab Republic	20.45	36.61	96.93	27.67	-4.38	21.73	38.96	57.76
Tajikistan	6.88	3.19	13.35	1.51	0.83	2.31	13.79	2.73
United Rep. of Tanzania	44.84	19.71	56.24	18.68	1.52	20.08	3.49	5.98
Thailand	69.12	210.09	530.37	70.56	51.45	117.43	155.07	248.45
Togo	6.03	2.46	5.40	2.23	0.53	2.69	0.68	1.17
Trinidad and Tobago	1.34	18.76	30.96	44.96	-23.58	21.35	7.91	42.79
Tunisia	10.55	40.50	90.37	8.08	1.70	9.63	14.24	21.95
Turkey	72.85	564.32	912.80	32.23	73.91	105.13	180.21	265.88
Turkmenistan	5.04	13.41	37.42	46.29	-24.66	21.31	12.12	52.68
Ukraine	45.87	90.58	276.55	76.00	42.17	130.50	162.83	266.59
United Arab Emirates	7.51	211.22	318.14	176.29	-97.09	62.13	82.96	154.00
United Kingdom	62.18	2337.59	2020.94	148.77	60.63	202.51	356.96	483.52
United States	310.11	13 017.00	13 017.00	1 724.51	533.57	2 216.32	4 143.40	5 368.63
Uruguay	3.36	23.49	43.31	2.04	2.56	4.17	9.28	6.45
Uzbekistan	28.16	21.49	78.65	55.15	-11.36	43.79	47.08	100.22
Venezuela	28.83	174.55	316.40	192.71	-116.30	76.95	94.77	183.04
Vietnam	86.94	74.29	249.92	65.87	-7.28	59.23	89.94	130.46
Yemen	24.05	20.73	57.12	19.77	-11.98	7.17	5.98	21.65
Zambia	12.93	9.80	18.11	7.48	0.64	8.12	8.06	1.94
Zimbabwe	12.57	4.95	3.35	8.60	1.00	9.60	12.85	9.07

(a) Gross prod c ion + impor s e por s losses.
(b) CO_2 emissions from f el comb s ion onl . Emissions are calc la ed sing he IEA's energ balances and he Re ised 1996 IPCC G idelines.

TPES/ pop. (toe/capita)	TPES/ GDP (toe/000 2005 USD)	TPES/ GDP (PPP) (toe/000 2005 USD)	Elec. cons./pop. (kWh/ capita)	CO_2/ TPES (t CO_2/ toe)	CO_2/ pop. (t CO_2/ capita)	CO_2/ GDP (kg CO_2/ 2005 USD)	CO_2/ GDP (PPP) (kg CO_2/ 2005 USD)	Region/ Country/ Economy
0.27	0.33	0.16	195	1.62	0.44	0.53	0.25	Senegal
2.14	0.56	0.22	4 358	2.95	6.31	1.65	0.66	Serbia
6.46	0.19	0.12	8 306	1.92	12.39	0.37	0.24	Singapore
3.28	0.30	0.16	5 164	1.97	6.45	0.58	0.32	Slovak Republic
3.52	0.18	0.14	6 520	2.12	7.48	0.39	0.30	Slovenia
2.74	0.47	0.29	4 803	2.53	6.94	1.20	0.73	South Africa
2.77	0.11	0.10	6 155	2.10	5.82	0.23	0.22	Spain
0.47	0.30	0.10	445	1.35	0.64	0.40	0.14	Sri Lanka
0.37	0.41	0.18	141	0.85	0.31	0.35	0.16	Sudan
5.47	0.13	0.16	14 939	0.93	5.07	0.12	0.15	Sweden
3.37	0.06	0.09	8 216	1.67	5.63	0.11	0.15	Switzerland
1.06	0.59	0.22	1 905	2.66	2.82	1.58	0.60	Syrian Arab Republic
0.34	0.72	0.17	2 004	1.18	0.40	0.86	0.20	Tajikistan
0.45	1.02	0.36	78	0.30	0.13	0.30	0.11	United Rep. of Tanzania
1.70	0.56	0.22	2 243	2.12	3.59	1.18	0.47	Thailand
0.45	1.09	0.50	113	0.44	0.19	0.48	0.22	Togo
15.92	1.14	0.69	5 896	2.00	31.91	2.28	1.38	Trinidad and Tobago
0.91	0.24	0.11	1 350	2.28	2.08	0.54	0.24	Tunisia
1.44	0.19	0.12	2 474	2.53	3.65	0.47	0.29	Turkey
4.23	1.59	0.57	2 403	2.47	10.45	3.93	1.41	Turkmenistan
2.84	1.44	0.47	3 550	2.04	5.81	2.94	0.96	Ukraine
8.27	0.29	0.20	11 044	2.48	20.50	0.73	0.48	United Arab Emirates
3.26	0.09	0.10	5 741	2.39	7.78	0.21	0.24	United Kingdom
7.15	0.17	0.17	13 361	2.42	17.31	0.41	0.41	United States
1.24	0.18	0.10	2 763	1.55	1.92	0.27	0.15	Uruguay
1.55	2.04	0.56	1 672	2.29	3.56	4.66	1.27	Uzbekistan
2.67	0.44	0.24	3 287	2.38	6.35	1.05	0.58	Venezuela
0.68	0.80	0.24	1 035	2.20	1.50	1.76	0.52	Vietnam
0.30	0.35	0.13	249	3.02	0.90	1.04	0.38	Yemen
0.63	0.83	0.45	623	0.24	0.15	0.20	0.11	Zambia
0.76	1.94	2.87	1 022	0.94	0.72	1.83	2.71	Zimbabwe

Sources: Energy data: IEA.
Population: OECD/World Bank.
GDP and GDP(PPP) (in 2005 USD): OECD/World Bank/CEPII (Paris).

General conversion factors for energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	multiply by:				
TJ	1	238.8	2.388×10^{-5}	947.8	0.2778
Gcal	4.1868×10^{-3}	1	10^{-7}	3.968	1.163×10^{-3}
Mtoe	4.1868×10^{4}	10^{7}	1	3.968×10^{7}	11630
MBtu	1.0551×10^{-3}	0.252	2.52×10^{-8}	1	2.931×10^{-4}
GWh	3.6	860	8.6×10^{-5}	3412	1

Conversion factors for mass

To:	kg	t	lt	st	lb
From:	multiply by:				
kilogramme (kg)	1	0.001	9.84×10^{-4}	1.102×10^{-3}	2.2046
tonne (t)	1 000	1	0.984	1.1023	2 204.6
long ton (lt)	1 016	1.016	1	1.120	2 240.0
short ton (st)	907.2	0.9072	0.893	1	2 000.0
pound (lb)	0.454	4.54×10^{-4}	4.46×10^{-4}	5.0×10^{-4}	1

Conversion factors for volume

To:	gal U.S.	gal U.K.	bbl	ft^3	l	m^3
From:	multiply by:					
U.S. gallon (gal)	1	0.8327	0.02381	0.1337	3.785	0.0038
U.K. gallon (gal)	1.201	1	0.02859	0.1605	4.546	0.0045
barrel (bbl)	42.0	34.97	1	5.615	159.0	0.159
cubic foot (ft^3)	7.48	6.229	0.1781	1	28.3	0.0283
litre (l)	0.2642	0.220	0.0063	0.0353	1	0.001
cubic metre (m^3)	264.2	220.0	6.289	35.3147	1000.0	1

Selected country-specific net calorific values

Steam Coal*

	toe/tonne
People's Rep. of China	0.522
United States	0.541
India	0.563
Indonesia	0.573
South Africa	0.563
Australia	0.552
Russian Federation	0.600
Kazakhstan	0.444
Colombia	0.650
Poland	0.547

*steam coal for the top-ten producers in 2011.

Crude oil**

	toe/tonne
Saudi Arabia	1.016
Russian Federation	1.005
United States	1.033
Islamic Rep. of Iran	1.019
People's Rep. of China	1.000
Canada	1.022
United Arab Emirates	1.018
Venezuela	1.069
Mexico	1.117
Nigeria	1.021

**crude oil for the top-ten producers in 2011.

Default net calorific values

Oil products

	OECD Europe*	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	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	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

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

Selected country-specific gross calorific values

Natural gas*

	kJ/m³
Russian Federation	38 232
United States	38 192
Canada	38 520
Qatar	41 400
Islamic Rep. of Iran	39 356
Norway	39 620
People's Rep. of China	38 931
Saudi Arabia	38 000
Indonesia	40 600
Netherlands	33 339

*for the top-ten producers in 2011.
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. In the case of electricity produced from geothermal heat, if the actual geothermal efficiency is not known, then the primary equivalent is calculated assuming an efficiency of 10%, so 1 TWh = (0.086 ÷ 0.1) Mtoe.

Coal/peat — *Coal/peat* includes all coal, both primary (including hard 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). Peat is also included in this category.

Hard coal — *Hard coal* comprises anthracite, coking coal and other bituminous coal.

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 the geothermal process is known, the quantity of geothermal energy entering electricity generation is inferred from the electricity production at geothermal plants assuming an average thermal efficiency of 10%. For solar, 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.* hard coal, lignite, peat, 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/peat

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.

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.

Transfers

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

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/peat 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.

Combined heat and power plants

Combined heat and power plants refers to plants which are designed to produce both heat and electricity, sometimes referred as co-generation power stations. If possible, fuel inputs and electricity/heat outputs are on a unit basis rather than on a plant basis. However, if data are not available on a unit basis, the convention for defining a CHP plant noted above is adopted. Both main activity producers and autoproducer plants are included here.

Heat plants

Heat plants refers to plants (including heat pumps and electric boilers) designed to produce heat only, which is sold to a third party under the provisions of a contract. Both main activity producers and autoproducer plants are included here.

Blast furnaces

Blast furnaces contains inputs to and outputs of fuels from blast furnaces.

Gas works

Gas works is treated similarly to electricity generation, with the quantity produced appearing as a positive figure in the coal/peat column or the natural gas column after blending with natural gas, inputs as negative entries in the coal/peat and oil products columns, and conversion losses appearing in the total column.

Coke ovens *Coke ovens* contains losses in transformation of coal from primary to secondary fuels and from secondary to tertiary fuels (hard coal to coke and patent fuel, lignite to BKB, etc.).

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.

Petrochemical plants *Petrochemical plants* covers backflows returned from the petrochemical industry. Note that backflows from oil products that are used for non-energy purposes (*i.e.* white spirit and lubricants) are not included here, but in non-energy use.

Liquefaction plants *Liquefaction plants* includes diverse liquefaction processes, such as coal liquefaction plants and gas-to-liquid plants.

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	**kWh**	kilowatt hour
Gcal	gigacalorie	**MBtu**	million British thermal units
GCV	gross calorific value	**Mt**	million tonnes
GW	gigawatt	**Mtoe**	million tonnes of oil equivalent
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

GEOGRAPHICAL COVERAGE

OECD*	Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the 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, Georgia, Gibraltar, Kazakhstan, Kosovo**, Kyrgyzstan, Latvia, Lithuania, the Former Yugoslav Republic of Macedonia, Malta, Republic of Moldova, Montenegro**, Romania, Russian Federation, Serbia**, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.
China	People's Republic of China and Hong Kong (China).
Asia	Bangladesh, Brunei Darussalam, Cambodia, Chinese Taipei, India, Indonesia, Democratic People's Republic of Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam and Other Asia.
Non-OECD Americas	Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela and Other Non-OECD Americas.
Africa	Algeria, Angola, Benin, Botswana, Cameroon, Congo, Democratic Republic of Congo, Côte d'Ivoire, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Kenya, Libya, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Sudan, United Republic of Tanzania, Togo, Tunisia, Zambia, Zimbabwe and Other Africa.
OECD +	OECD countries and those EU countries that are not members of the OECD (*i.e.* Bulgaria, Cyprus, Latvia, Lithuania, Malta and Romania).
OME (Other Major Economies)	Brazil, China, India, Indonesia, Russian Federation and Middle East.
OC (Other Countries)	World excluding OECD+ and OME.

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

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

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

Ten Annual Publications

Energy Statistics of OECD Countries, 2012 Edition

No other publication offers such in-depth statistical coverage. It is intended for anyone involved in analytical or policy work related to energy issues. It contains data on energy supply and consumption in original units for coal, oil, natural gas, biofuels/waste and products derived from these primary fuels, as well as for electricity and heat. Complete data are available for 2009 and 2010 and supply estimates are available for the most recent year (*i.e.* 2011). Historical tables summarise data on production, trade and final consumption. Each issue includes definitions of products and flows and explanatory notes on the individual country data.

Published July 2012 - Price €120

Energy Balances of OECD Countries, 2012 Edition

A companion volume to *Energy Statistics of OECD Countries*, this publication presents standardised energy balances expressed in million tonnes of oil equivalent. Energy supply and consumption data are divided by main fuel: coal, oil, natural gas, nuclear, hydro, geothermal/solar, biofuels/waste, electricity and heat. This allows for easy comparison of the contributions each fuel makes to the economy and their interrelationships through the conversion of one fuel to another. All of this is essential for estimating total energy supply, forecasting, energy conservation, and analysing the potential for interfuel substitution. Complete data are available for 2009 and 2010 and supply estimates are available for the most recent year (*i.e.* 2011). Historical tables summarise key energy and economic indicators as well as data on production, trade and final consumption. Each issue includes definitions of products and flows and explanatory notes on the individual country data as well as conversion factors from original units to tonnes of oil equivalent.

Published July 2012 - Price €120

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Published August 2012 - Price €120

Energy Balances of Non-OECD Countries, 2012 Edition

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Published August 2012 - Price €165

Oil Information 2012

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

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Renewables Information 2012

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Published November 2012 - Price €165

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