



INTERNATIONAL ENERGY AGENCY

KEY WORLD ENERGY STATISTICS

2003

KEY WORLD ENERGY STATISTICS

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**IEA participating
countries are**

**Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Japan
Korea
Luxembourg
Netherlands
New Zealand
Norway
Portugal
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States**

The International Energy Agency

The IEA, which was established in November 1974, has over the years gained recognition as one of the worlds most authoritative sources for energy statistics. Its massive annual studies of oil, natural gas, coal and electricity 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 over the last five years. **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 fingertips the annual American production of coal, the electricity consumption in Thailand, the price of diesel oil in South Africa and thousands of other useful energy facts.

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

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

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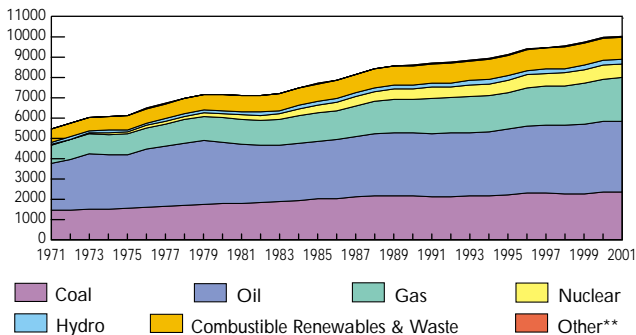
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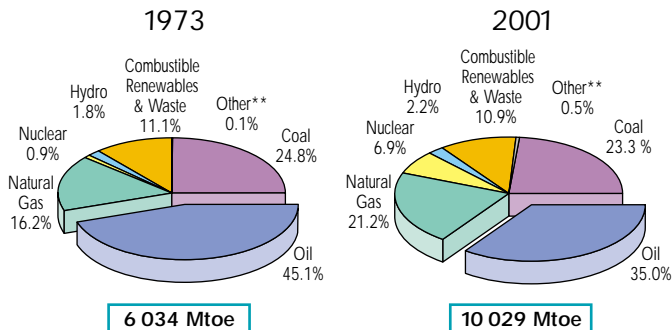
TOTAL PRIMARY ENERGY SUPPLY

The World

Evolution from 1971 to 2001 of World Total Primary Energy Supply* by Fuel (Mtoe)



1973 and 2001 Fuel Shares of TPES*



*Excludes international marine bunkers and electricity trade.

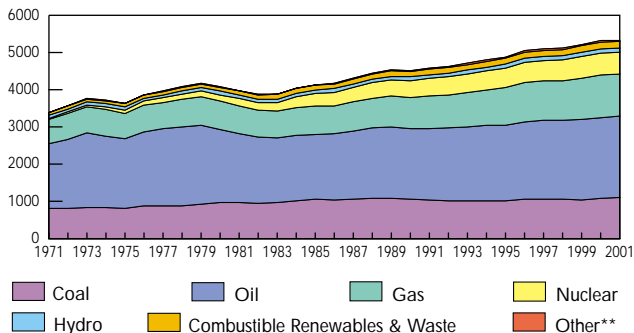
**Other includes geothermal, solar, wind, heat, etc.

BY FUEL

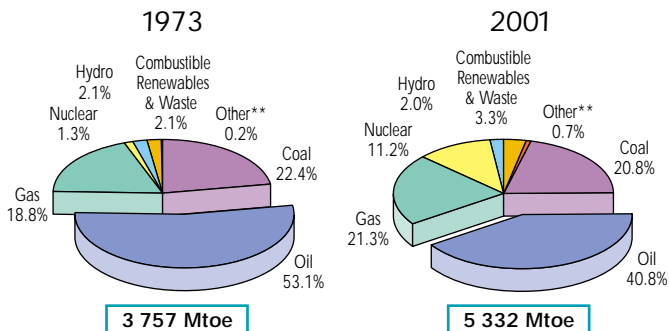
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The OECD

Evolution from 1971 to 2001 of OECD Total Primary Energy Supply* by Fuel (Mtoe)



1973 and 2001 Fuel Shares of TPES*



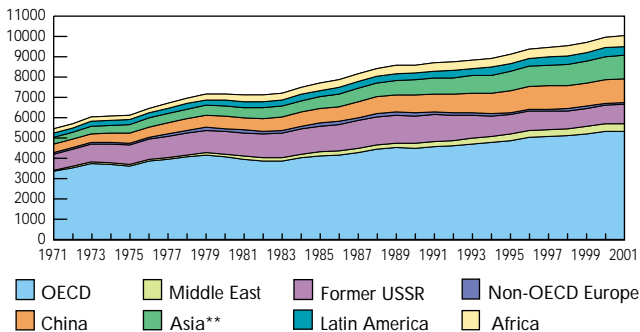
*Excludes electricity trade.

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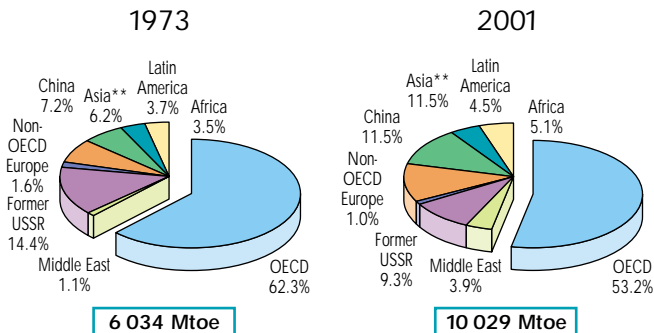
TOTAL PRIMARY ENERGY SUPPLY

The World

Evolution from 1971 to 2001 of World Total Primary Energy Supply* by Region (Mtoe)



1973 and 2001 Regional Shares of TPES*



*Excludes international marine bunkers and electricity trade.

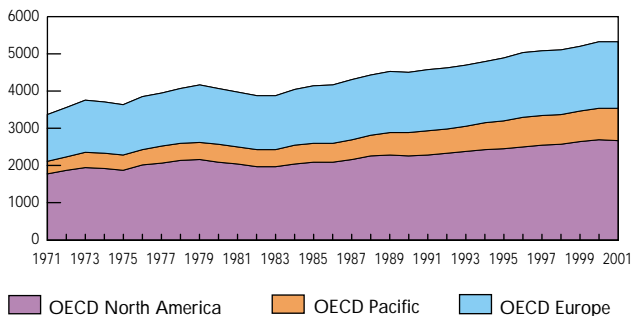
**Asia excludes China.

BY REGION

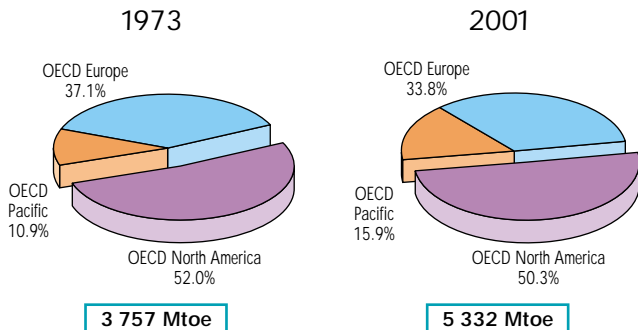
1

The OECD

Evolution from 1971 to 2001 of OECD Total Primary Energy Supply* by Region (Mtoe)



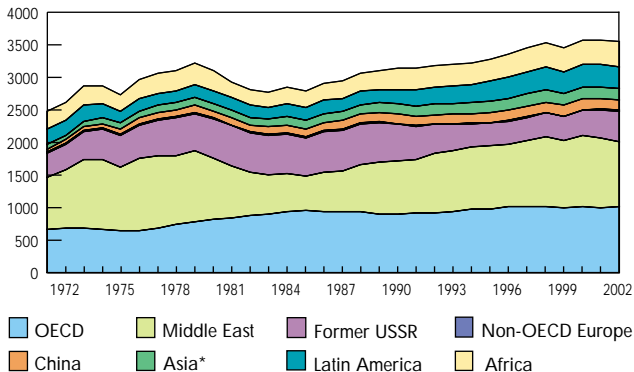
1973 and 2001 Regional Shares of TPES*



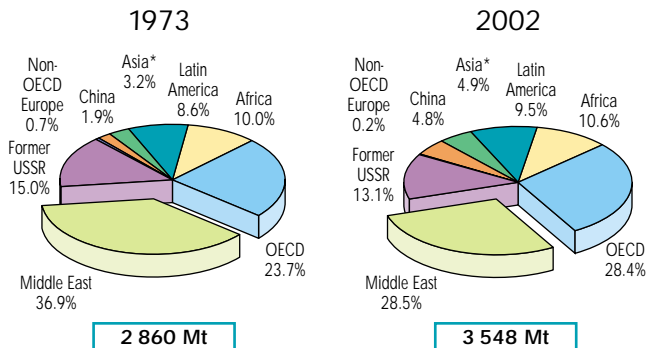
*Excludes electricity trade.

Crude Oil Production

Evolution from 1971 to 2002 of Crude Oil Production by Region (Mt)



1973 and 2002 Regional Shares of Crude Oil Production



*Asia excludes China.

Producers, Exporters and Importers of Crude Oil

1



Producers	Mt	% of World total
Saudi Arabia	409	11.5
Russia	378	10.7
United States	350	9.9
Mexico	178	5.0
Islamic Rep. of Iran	176	5.0
Peoples Rep. of China	169	4.8
Norway	156	4.4
Venezuela	153	4.3
Canada	133	3.7
United Kingdom	115	3.2
Rest of the World	1 331	37.5
World	3 548	100.0

2002 data

Exporters	Mt
Saudi Arabia	303
Russia	162
Norway	151
Islamic Rep. of Iran	119
Venezuela	109
Nigeria	105
Mexico	93
Iraq	90
United Kingdom	87
United Arab Emirates	79
Rest of the World	663
World	1 961

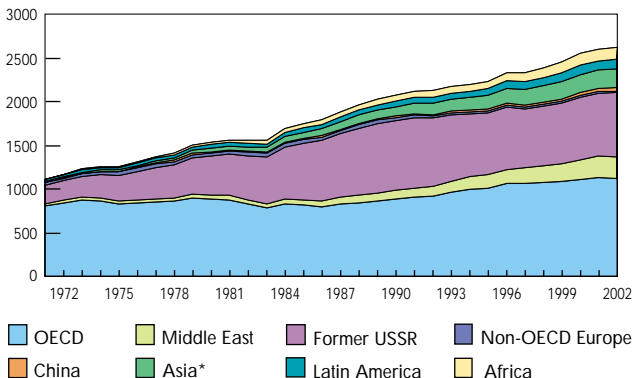
2001 data

Importers	Mt
United States	526
Japan	209
Korea	119
Germany	105
Italy	91
France	86
India	79
Netherlands	61
Peoples Rep. of China	60
Spain	58
Rest of the World	663
World	2 057

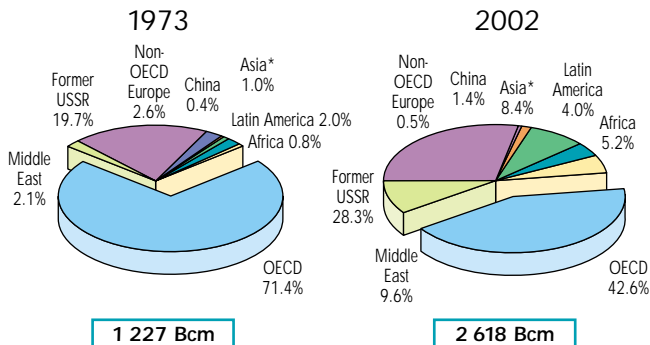
2001 data

Natural Gas Production

Evolution from 1971 to 2002 of Natural Gas Production by Region
(Billion Cubic Metres)



1973 and 2002 Regional Shares of Natural Gas Production



*Asia excludes China.

Producers, Exporters and Importers* of Natural Gas

1



Producers	Mm ³	% of World total
Russia	595 000	22.7
United States	539 349	20.6
Canada	182 075	7.0
United Kingdom	108 204	4.1
Algeria	82 554	3.2
Netherlands	75 315	2.9
Indonesia	70 816	2.7
Norway	67 627	2.6
Islamic Rep. of Iran	66 320	2.5
Saudi Arabia	60 570	2.3
Rest of the World	770 023	29.4
World	2 617 853	100.0

2002 data

Exporters	Mm ³
Russia	190 000
Canada	106 232
Algeria	59 980
Norway	56 260
Netherlands	52 529
Turkmenistan	39 391
Indonesia	35 147
Malaysia	18 574
Qatar	18 429
United States	14 618
Rest of the World	104 297
World**	695 457

2002 data

Importers	Mm ³
United States	113 480
Germany	81 341
Japan	72 637
Italy	59 291
Ukraine	55 519
France	45 271
Netherlands	26 771
Korea	23 280
Spain	20 725
Turkey	17 113
Rest of the World	188 338
World**	703 766

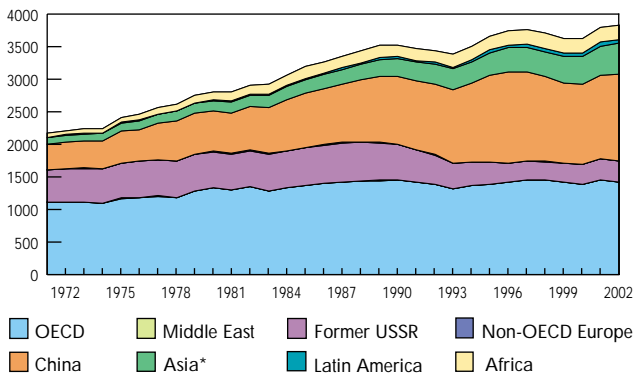
2002 data

*Exports and Imports include pipeline gas and LNG.

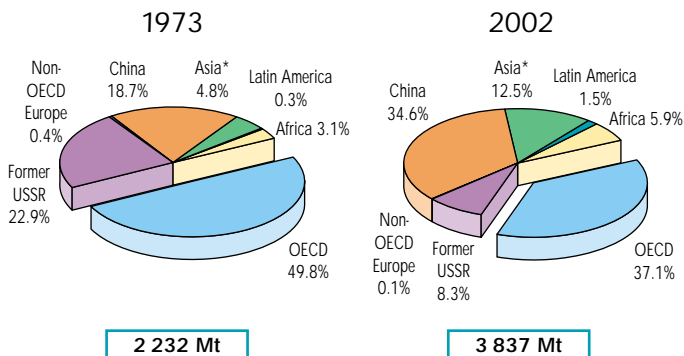
**World trade includes intra trade of Former USSR.

Hard Coal Production

Evolution from 1971 to 2002 of Hard Coal Production by Region (Mt)



1973 and 2002 Regional Shares of Hard Coal Production



*Asia excludes China.

Producers, Exporters and Importers of Coal

1



Producers	Hard Coal (Mt)	Brown Coal (Mt)
Peoples Rep. of China	1 326	*
United States	917	75
India	334	22
Australia	276	67
South Africa	223	0
Russia	164	71
Poland	103	59
Indonesia	101	0
Ukraine	83	1
Kazakhstan	71	3
Rest of the World	239	578
World	3 837	876

2002 data

Exporters	Hard Coal (Mt)
Australia	198
Peoples Rep. of China	86
Indonesia	73
South Africa	69
Russia	45
United States	35
Colombia	34
Canada	27
Poland	23
Kazakhstan	14
Rest of the World	36
World	640

2002 data

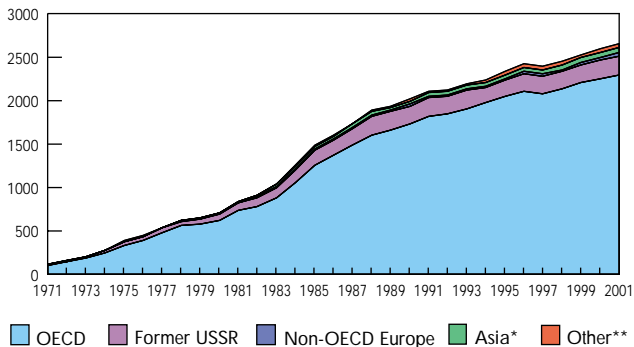
Importers	Hard Coal (Mt)
Japan	159
Korea	70
Chinese Taipei	52
Germany	31
United Kingdom	29
India	25
Spain	25
Netherlands	22
Russia	21
Canada	19
Rest of the World	206
World	659

2002 data

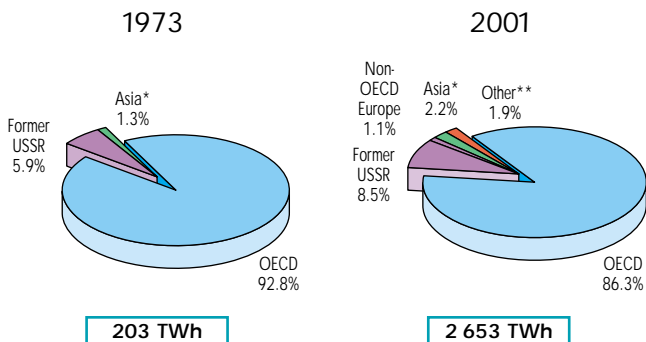
*Included in Hard Coal.

Nuclear Production

Evolution from 1971 to 2001 of Nuclear Production by Region (TWh)



1973 and 2001 Regional Shares of Nuclear Production



*Asia excludes China.

** Other Includes Africa, Latin America & China.

Producers of Nuclear Electricity

1



Producers	TWh	% of World total
United States	808	30.5
France	421	15.9
Japan	320	12.1
Germany	171	6.4
Russia	137	5.2
Korea	112	4.2
United Kingdom	90	3.4
Canada	77	2.9
Ukraine	76	2.9
Sweden	72	2.7
Rest of the World	369	13.8
World	2 653	100.0

2001 data

Installed Capacity	GW
United States	95
France	63
Japan	44
Germany	21
Russia	21
Canada	14
Korea	13
United Kingdom	12
Ukraine	11
Sweden	9
Rest of the World	53
World	356

2001 data
Source: Commissariat à l'Énergie Atomique (France).

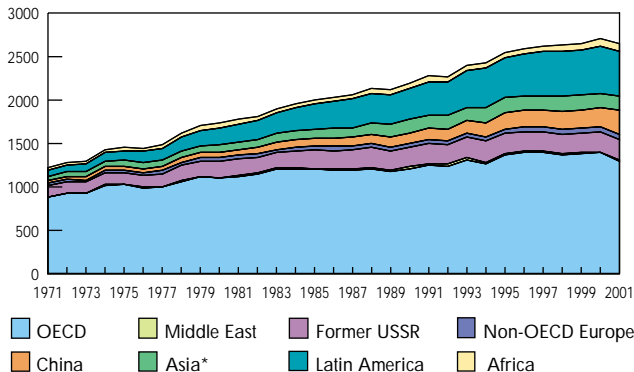
Country (based on first 10 producers)	% of nuclear in total domestic electricity generation
France	77
Sweden	45
Ukraine	44
Korea	40
Japan	31
Germany	30
United Kingdom	23
United States	21
Russia	15
Canada	13
Rest of the World*	9
World	17

2001 data

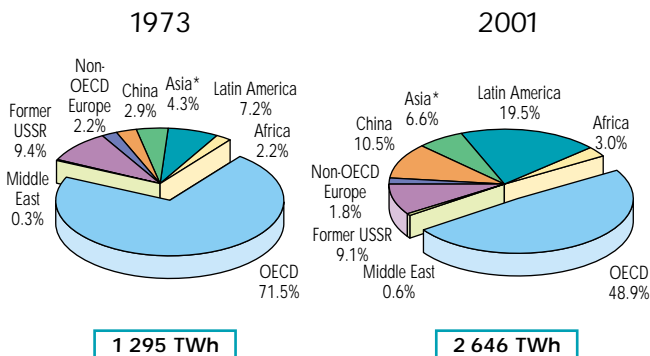
*Countries with nuclear production only.

Hydro Production

Evolution from 1971 to 2001 of Hydro Production by Region (TWh)



1973 and 2001 Regional Shares of Hydro Production



*Asia excludes China.

Producers of Hydro Electricity

1



Producers	TWh	% of World total
Canada	333	12.6
People's Rep. of China	277	10.5
Brazil	268	10.1
United States	223	8.4
Russia	176	6.7
Norway	124	4.7
Japan	94	3.6
Sweden	79	3.0
France	79	3.0
India	74	2.8
Rest of the World	919	34.6
World	2 646	100.0

2001 data

Installed Capacity (based on production)	GW
United States	98
Canada	67
Brazil	61
People's Rep. of China	55
Japan	45
Russia	44
Norway	30
France	25
India	24
Italy	22
Rest of the World	284
World	755

2000 data

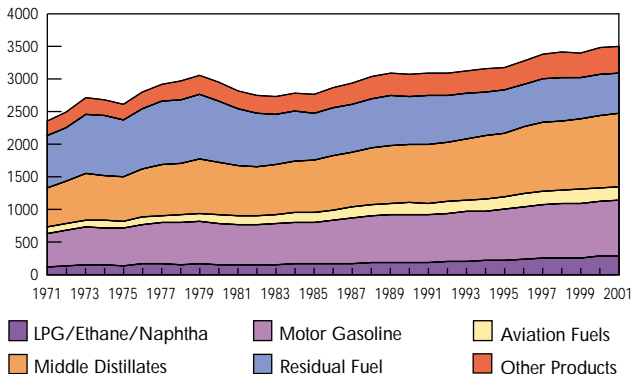
Sources: United Nations, IEA.

Country (based on first 10 producers)	% of hydro in total domestic electricity generation
Norway	99.3
Brazil	81.7
Canada	56.7
Sweden	49.0
Russia	19.7
People's Rep. of China	18.9
France	14.3
India	12.8
Japan	9.0
United States	5.7
Rest of the World*	16.5
World	17.0

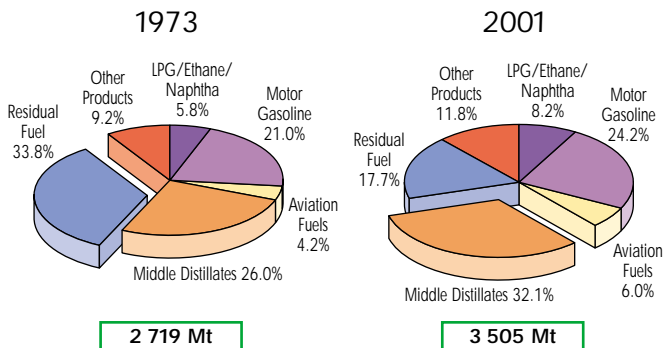
2001 data

Refining by Product

Evolution from 1971 to 2001 of World Refinery Production by Product (Mt)



1973 and 2001 Shares of Refinery Production by Product



Producers, Exporters and Importers of Petroleum Products

2



Producers	Mt	% of World total
United States	820	23.4
Japan	200	5.7
Peoples Rep. of China	198	5.6
Russia	178	5.1
Korea	119	3.4
Germany	114	3.3
India	107	3.1
Canada	96	2.7
Italy	96	2.7
France	89	2.5
Rest of the World	1 488	42.5
World	3 505	100.0

2001 data

Exporters	Mt
Netherlands	66
Russia	56
Saudi Arabia	54
United States	50
Singapore	40
Korea	39
Venezuela	34
Kuwait	28
Algeria	22
Italy	22
Rest of the World	368
World	779

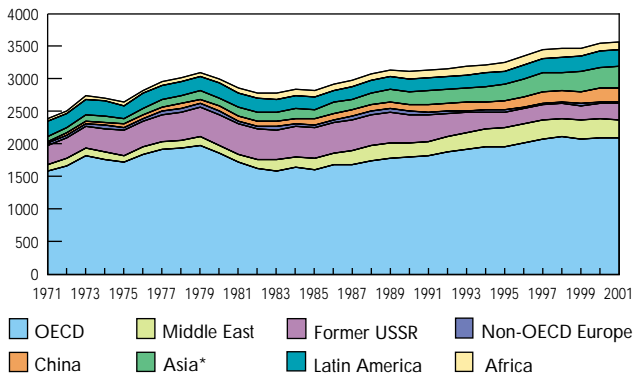
2001 data

Importers	Mt
United States	80
Netherlands	47
Japan	47
Germany	44
Singapore	43
France	28
Peoples Rep. of China	27
Korea	24
Spain	21
United Kingdom	17
Rest of the World	320
World	698

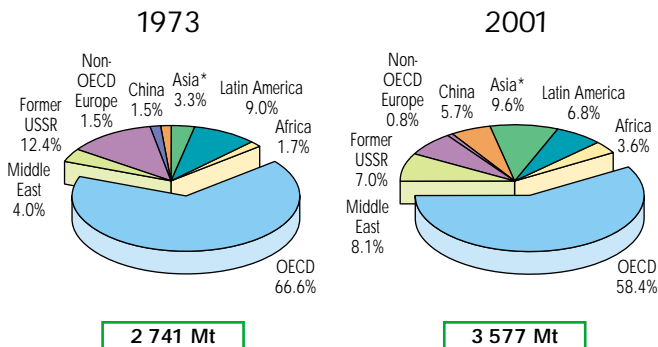
2001 data

Refining by Region

Evolution from 1971 to 2001 of World Refinery Throughput by Region (Mt)



1973 and 2001 Regional Shares of Refinery Throughput



*Asia excludes China.

Refinery Capacity, Net Exporters and Net Importers of Oil*

2



Crude Distillation Capacity	kb/cd	% of World total
United States	16 560	20.6
Former USSR	8 400	10.4
People's Rep. of China	4 530	5.6
Japan	4 310	5.4
Korea	2 560	3.2
Italy	2 280	2.8
Germany	2 260	2.8
Canada	1 940	2.4
France	1 900	2.4
United Kingdom	1 780	2.2
Rest of the World	33 900	42.2
World	80 420	100.0

2001 data

Net Exporters	Mt
Saudi Arabia	357
Russia	213
Norway	156
Venezuela	143
Islamic Rep. of Iran	128
Nigeria	102
United Arab Emirates	96
Iraq	93
Kuwait	90
Mexico	81
Rest of the World	544

2001 data

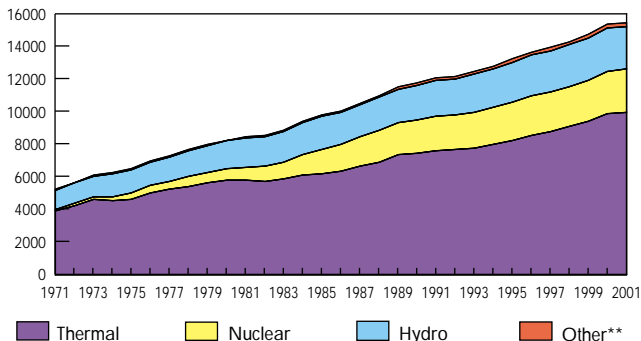
Net Importers	Mt
United States	553
Japan	251
Germany	129
Korea	103
France	94
Italy	85
India	76
Spain	73
People's Rep. of China	69
Singapore	44
Rest of the World	564

2001 data

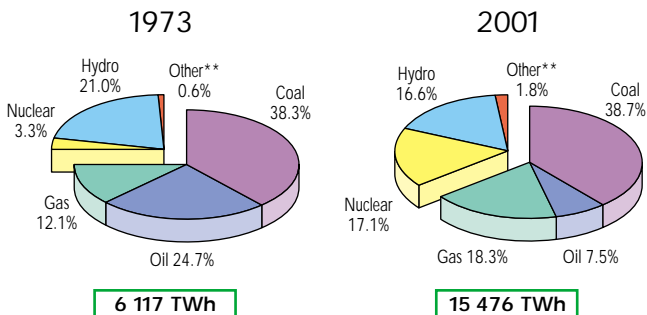
*Crude oil and petroleum products.

Electricity Generation* by Fuel

Evolution from 1971 to 2001 of World Electricity Generation* by Fuel (TWh)



1973 and 2001 Fuel Shares of Electricity Generation*



*Excludes pumped storage.

**Other includes geothermal, solar, wind, combustible renewables & waste.

Electricity Production from Fossil Fuels

2



Coal	TWh
United States	1 983
People's Rep. of China	1 122
India	452
Germany	301
Japan	239
South Africa	199
Australia	170
Russia	169
Poland	137
United Kingdom	134
Rest of the World	1 086
World	5 992

2001 data

Oil	TWh
United States	134
Japan	117
Mexico	93
Saudi Arabia	87
Italy	75
People's Rep. of China	47
Iraq	34
Russia	30
Chinese Taipei	30
Islamic Rep. of Iran	28
Rest of the World	493
World	1 168

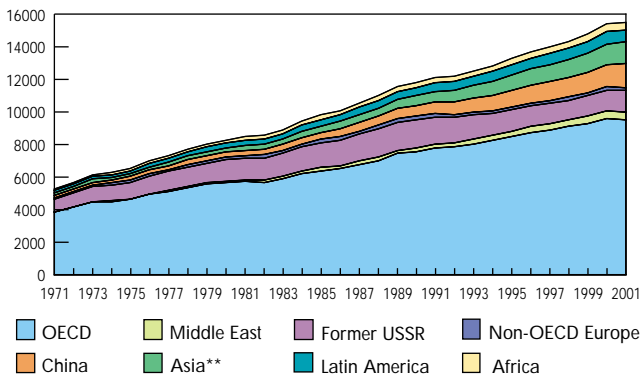
2001 data

Gas	TWh
United States	646
Russia	377
Japan	257
United Kingdom	143
Italy	104
Islamic Rep. of Iran	97
Thailand	72
Germany	57
Egypt	56
Malaysia	56
Rest of the World	963
World	2 828

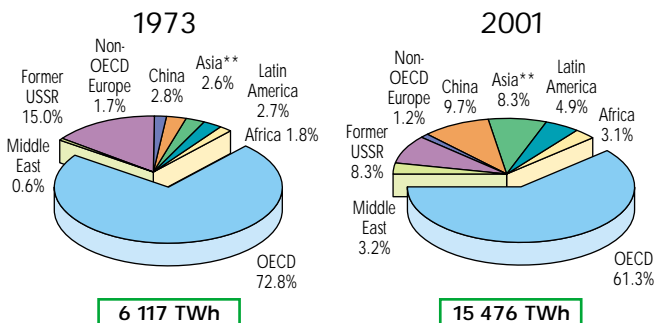
2001 data

Electricity Generation* by Region

Evolution from 1971 to 2001 of World Electricity Generation* by Region (TWh)



1973 and 2001 Regional Shares of Electricity Generation*



* Excludes pumped storage.

**Asia excludes China.

Producers, Exporters and Importers of Electricity

2



Producers*	TWh	% of World total
United States	3 864	25.0
Peoples Rep. of China	1 472	9.5
Japan	1 033	6.7
Russia	889	5.7
Canada	588	3.8
Germany	580	3.7
India	577	3.7
France	546	3.5
United Kingdom	383	2.5
Brazil	328	2.1
Rest of the World	5 216	33.8
World	15 476	100.0

2001 data

Exporters**	TWh
France	73
Germany	42
Canada	39
Paraguay	39
Switzerland	35
Russia	26
Czech Republic	19
Sweden	18
United States	18
Austria	14
Rest of the World	164
World	487

2001 data

Importers**	TWh
Italy	49
Germany	46
United States	38
Brazil	38
Switzerland	24
Netherlands	21
Canada	16
Belgium	16
Austria	14
Finland	12
Rest of the World	221
World	495

2001 data

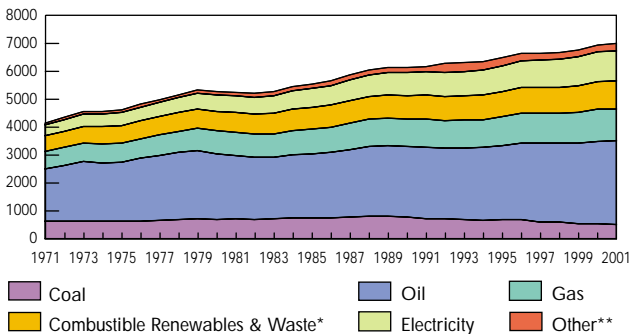
* Gross production less production from pumped storage plants.

** Total exports and total imports (including transit).

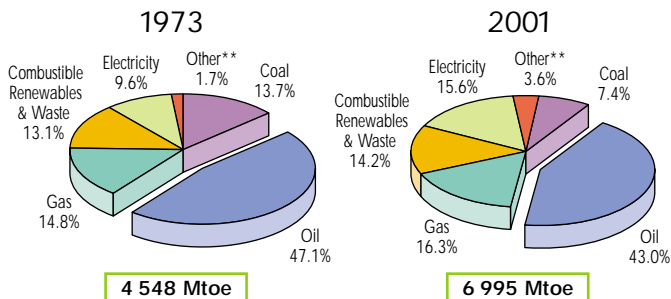
TOTAL FINAL CONSUMPTION

The World

Evolution from 1971 to 2001 of World Total Final Consumption by Fuel (Mtoe)



1973 and 2001 Fuel Shares of Total Final Consumption

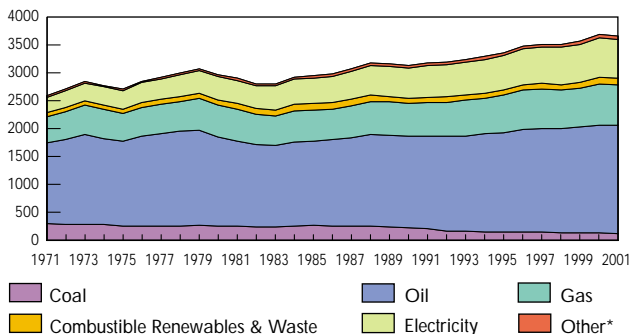


* Prior to 1994 Combustible Renewables & Waste final consumption has been estimated based on TPES. **Other includes geothermal, solar, wind, heat, etc.

BY FUEL

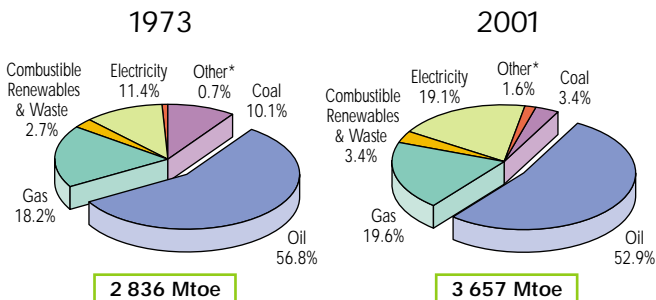
The OECD

Evolution from 1971 to 2001 of OECD Total Final Consumption by Fuel (Mtoe)



3

1973 and 2001 Fuel Shares of Total Final Consumption

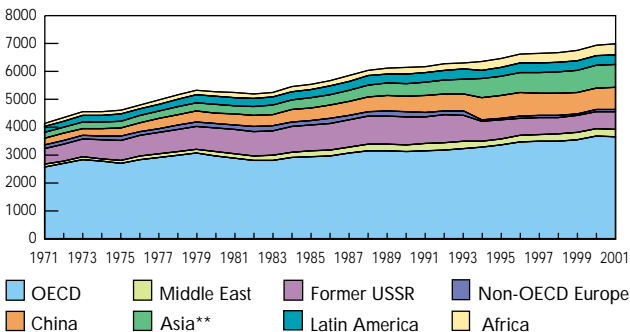


*Other includes geothermal, solar, wind, heat, etc.

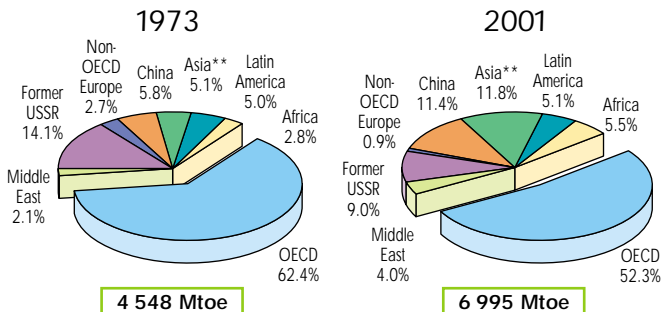
TOTAL FINAL CONSUMPTION

The World

Evolution from 1971 to 2001 of World Total Final Consumption* by Region (Mtoe)



1973 and 2001 Regional Shares of Total Final Consumption*

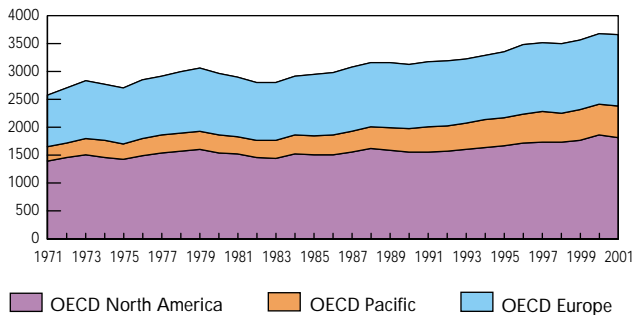


* Prior to 1994 Combustible Renewables & Waste final consumption has been estimated based on TPES. **Asia excludes China.

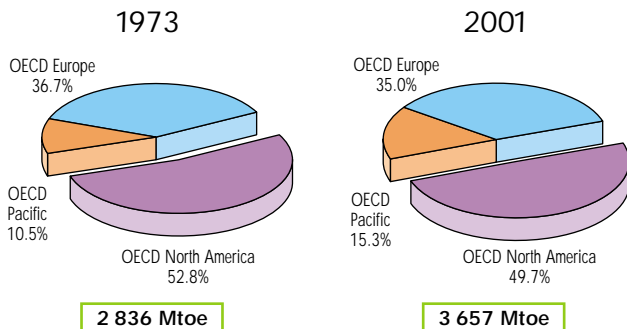
BY REGION

The OECD

Evolution from 1971 to 2001 of OECD Total Final Consumption by Region (Mtoe)



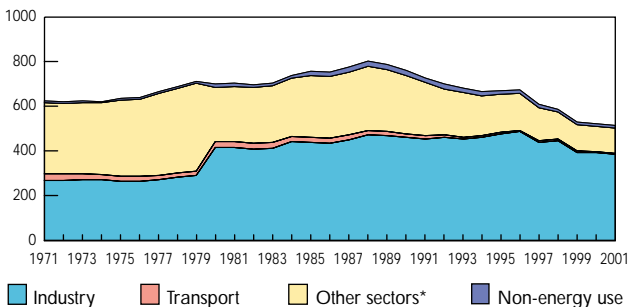
1973 and 2001 Regional Shares of Total Final Consumption



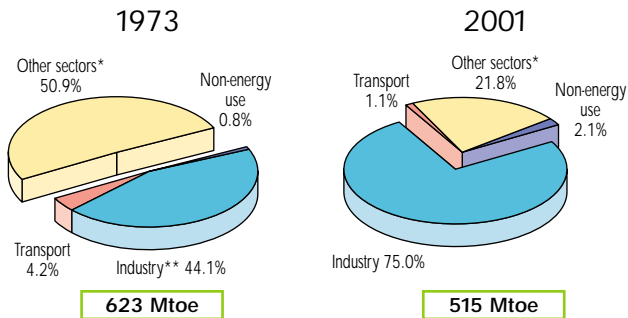
TOTAL FINAL CONSUMPTION

Coal

Evolution from 1971 to 2001 of Total Final Consumption by Sector (Mtoe)



1973 and 2001 Shares of World Coal Consumption



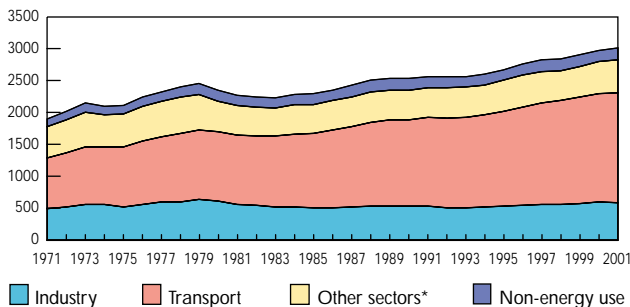
*Other sectors (agriculture, commercial & public service, residential and non-specified) includes industry for China prior to 1980.

**1973 share for industry should be much higher due to the reason explained in the above note.

BY SECTOR

Oil

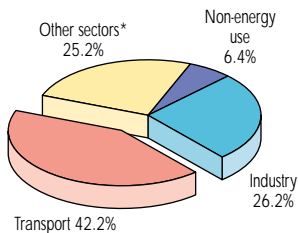
Evolution from 1971 to 2001 of Total Final Consumption by Sector (Mtoe)



3

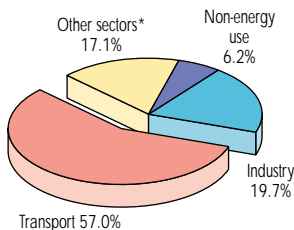
1973 and 2001 Shares of World Oil Consumption

1973



2 142 Mtoe

2001



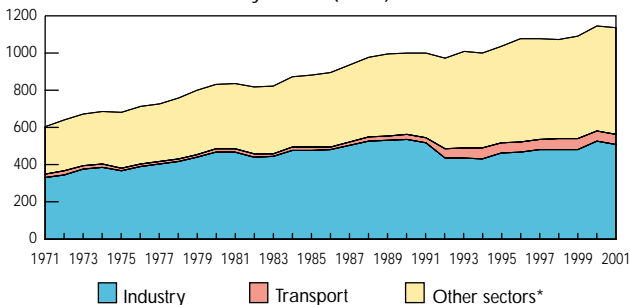
3 008 Mtoe

*Other sectors comprises agriculture, commercial & public service, residential and non-specified.

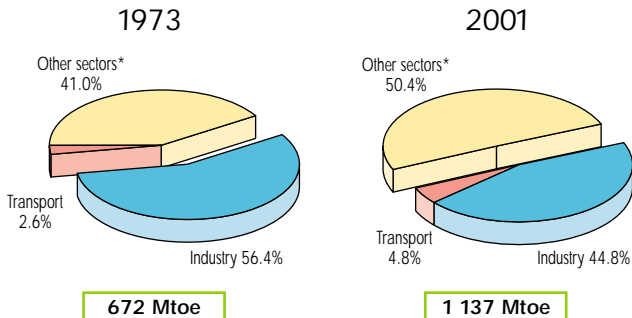
TOTAL FINAL CONSUMPTION

Gas

Evolution from 1971 to 2001 of Total Final Consumption by Sector (Mtoe)



1973 and 2001 Shares of World Gas Consumption

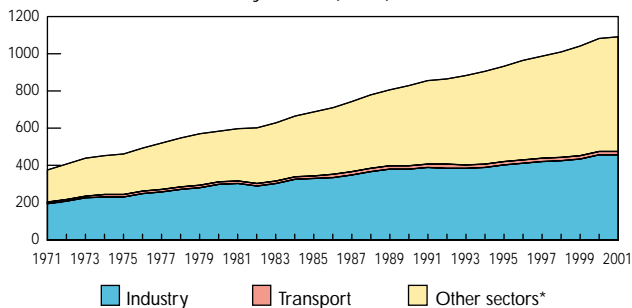


*Other sectors comprises agriculture, commercial & public service, residential and non-specified.

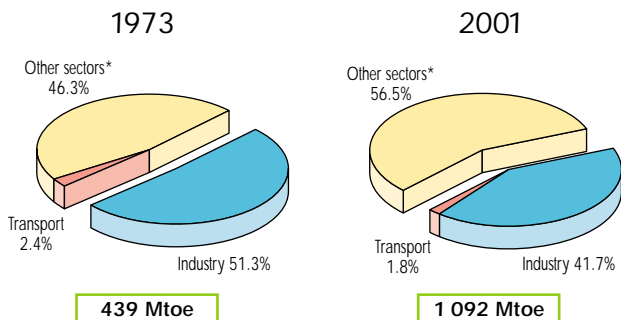
BY SECTOR

Electricity

Evolution from 1971 to 2001 of Total Final Consumption by Sector (Mtoe)



1973 and 2001 Shares of World Electricity Consumption



*Other sectors comprises agriculture, commercial & public service, residential and non-specified.

SIMPLIFIED ENERGY

The World

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Combustible Renewables & Waste*	Other**	Total
Indigenous Prod.	1477.41	2929.03	-	993.94	53.05	110.23	669.70	6.13	6239.49
Imports	140.01	1583.20	409.94	73.41	-	-	0.11	8.15	2214.82
Exports	-130.35	-1611.07	-440.28	-72.80	-	-	-0.19	-8.27	-2262.96
Stock Changes	13.30	-21.83	-16.33	-15.00	-	-	-0.23	-	-40.08
TPES	1500.37	2879.34	-46.66	979.55	53.05	110.23	669.39	6.00	6151.27
Intl. Marine Bunkers	-	-	-117.62	-	-	-	-	-	-117.62
Transfers	-	-42.20	47.91	-	-	-	-	-	5.72
Statistical Diff.	-1.13	13.30	-8.78	4.75	-	-	-62.57	-0.16	-54.59
Electricity Plants	-557.73	-22.65	-316.85	-159.43	-52.95	-110.23	-2.53	502.76	-719.61
CHP Plants	-87.77	-	-28.39	-50.85	-0.10	-	-0.63	100.76	-66.98
Heat Plants	-8.46	-	-0.91	-0.69	-	-	-0.24	6.85	-3.46
Gas Works	-8.96	-0.60	-9.29	13.52	-	-	-	-	-5.33
Pet. Refineries	-	-2802.15	2772.49	-	-	-	-	-	-29.67
Coal Transf.	-169.72	1.48	-3.38	-0.19	-	-	-0.08	-	-171.89
Liquefaction Plants	-1.60	0.21	-	-0.08	-	-	-	-	-1.47
Other Transf.	-	3.67	-5.27	-0.03	-	-	-7.61	-	-9.24
Own Use	-34.16	-2.62	-161.30	-107.57	-	-	-0.07	-57.73	-363.45
Distribution Losses	-7.41	-7.07	-0.27	-7.49	-	-	-	-43.04	-65.29
TFC	623.43	20.70	2121.66	671.50	-	-	595.66	515.44	4548.39
Industry Sector	274.30	16.38	544.76	378.35	-	-	-	277.12	1490.90
Transport Sector	26.40	-	903.54	17.70	-	-	-	10.47	958.10
Other Sectors	317.49	-	541.53	275.45	-	-	-	227.85	1362.33
Non-Energy Use	5.24	4.32	131.84	-	-	-	-	-	141.40

*Combustible Renewables & Waste final consumption has been estimated based on TPES.

**Other includes geothermal, solar, electricity and heat, wind, etc.

BALANCE TABLE

The World

2001

(Mtoe)

SUPPLY AND CONSUMPTION	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Combustible Renewables & Waste	Other*	Total
Indigenous Prod.	2360.82	3651.33	-	2139.12	691.90	221.50	1093.62	50.86	10209.14
Imports	435.81	2089.71	715.22	549.84	-	-	0.76	42.58	3833.91
Exports	-445.34	-1999.25	-793.98	-547.69	-	-	-1.12	-41.92	-3829.30
Stock Changes	-9.65	-9.40	-10.67	-19.25	-	-	0.25	-	-48.72
TPES	2341.64	3732.38	-89.43	2122.02	691.90	221.50	1093.50	51.53	10165.03
Intl. Marine Bunkers	-	-	-135.93	-	-	-	-	-	-135.93
Transfers	-	-80.68	91.68	-	-	-	-0.02	-	10.98
Statistical Diff.	17.25	-4.64	6.77	-2.89	-	-	0.13	0.54	17.16
Electricity Plants	-1367.50	-22.10	-216.47	-418.09	-680.30	-221.50	-25.30	1137.51	-1813.75
CHP Plants	-179.66	-0.74	-29.29	-240.17	-11.59	-	-25.33	283.63	-203.14
Heat Plants	-64.54	-1.15	-18.09	-85.97	-	-	-8.14	152.38	-25.52
Gas Works	-11.11	-	-2.03	5.57	-	-	-	-	-7.57
Pet. Refineries	-	-3638.92	3605.51	-	-	-	-1.39	-	-34.81
Coal Transf.	-157.81	0.04	-2.54	-0.19	-	-	-	-	-160.50
Liquefaction Plants	-15.64	11.85	13.61	-28.58	-	-	-	-	-18.76
Other Transf.	-	27.63	-27.19	-0.56	-	-	-39.76	-	-39.88
Own Use	-46.11	-9.07	-198.64	-194.94	-	-	-0.23	-148.68	-597.67
Distribution Losses	-1.67	-4.05	-0.39	-19.13	-	-	-0.01	-135.78	-161.03
TFC	514.85	10.55	2997.57	1137.07	-	-	993.45	1341.12	6994.61
Industry Sector	386.37	9.59	579.96	509.87	-	-	160.33	554.75	2200.87
Transport Sector	5.44	0.01	1715.71	54.16	-	-	7.78	19.34	1802.45
Other Sectors	112.43	0.96	514.04	573.05	-	-	825.34	767.02	2792.83
Non-Energy Use	10.61	-	187.85	-	-	-	-	-	198.46

* Other includes geothermal, solar, electricity and heat, wind, etc.

SIMPLIFIED ENERGY

The OECD

1973

(Mtoe)

SUPPLY AND CONSUMPTION	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Combustible Renewables & Waste	Other*	Total
Indigenous Prod.	818.28	701.75	-	705.65	49.22	78.46	79.86	6.13	2439.34
Imports	121.72	1286.57	337.43	62.56	-	-	0.03	7.55	1815.85
Exports	-111.07	-63.46	-173.84	-50.39	-	-	-0.01	-7.00	-405.78
Intl. Marine Bunkers	-	-	-71.62	-	-	-	-	-	-71.62
Stock Changes	14.41	-11.04	-11.51	-11.98	-	-	0.06	-	-20.07
TPES	843.34	1913.81	80.47	705.83	49.22	78.46	79.93	6.67	3757.73
Transfers	-	-37.99	42.12	-	-	-	-	-	4.13
Statistical Diff.	3.89	13.22	2.28	-5.62	-	-	-0.00	-	13.76
Electricity Plants	-387.36	-20.67	-223.37	-108.33	-49.12	-78.46	-1.35	363.19	-505.46
CHP Plants	-53.52	-	-7.93	-11.65	-0.10	-	-0.50	30.94	-42.75
Heat Plants	-8.46	-	-0.91	-0.69	-	-	-0.24	6.85	-3.46
Gas Works	-7.49	-0.60	-8.81	13.02	-	-	-	-	-3.88
Pet. Refineries	-	-1871.71	1864.06	-	-	-	-	-	-7.66
Coal Transf.	-76.41	1.48	-3.38	-0.19	-	-	-0.02	-	-78.52
Liquefaction Plants	-0.87	-	-	-	-	-	-	-	-0.87
Other Transf.	-	3.67	-5.27	-0.03	-	-	-	-	-1.63
Own Use	-23.64	-1.00	-127.38	-72.86	-	-	-0.07	-33.37	-258.31
Distribution Losses	-2.32	-	-0.24	-3.95	-	-	-	-30.33	-36.83
TFC	287.16	0.21	1611.62	515.54	-	-	77.76	343.95	2836.24
Industry Sector	179.92	0.21	426.97	259.26	-	-	40.92	168.80	1076.07
Transport Sector	7.23	-	692.29	17.00	-	-	0.00	5.29	721.80
Other Sectors	96.91	-	396.27	239.28	-	-	36.84	169.87	939.17
Non-Energy Use	3.10	-	96.11	-	-	-	-	-	99.20

*Other includes geothermal, solar, electricity and heat, wind, etc.

BALANCE TABLE

The OECD

2001

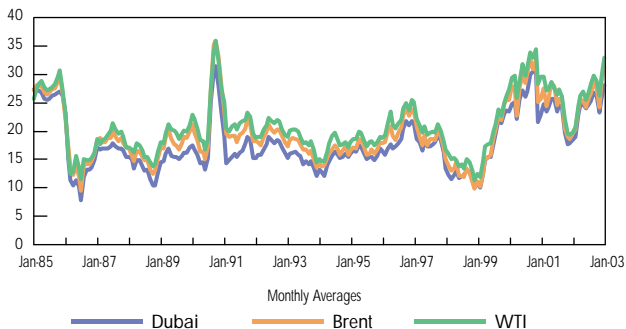
(Mtoe)

SUPPLY AND CONSUMPTION	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Combustible Renewables & Waste	Other*	Total
Indigenous Prod.	1014.97	1030.68	-	927.83	596.80	105.71	172.98	35.85	3884.83
Imports	318.08	1589.70	447.48	430.84	-	-	0.55	29.34	2815.99
Exports	-217.22	-461.91	-339.79	-205.29	-	-	-0.21	-28.31	-1252.72
Intl. Marine Bunkers	-	-	-78.01	-	-	-	-	-	-78.01
Stock Changes	-8.57	-5.83	-4.86	-18.02	-	-	-0.00	-	-37.28
TPES	1107.25	2152.65	24.82	1135.36	596.80	105.71	173.33	36.89	5332.81
Transfers	-	-35.28	40.62	-	-	-	-0.02	-	5.32
Statistical Diff.	0.12	-6.56	0.23	-3.29	-	-	-	-	-9.50
Electricity Plants	-803.36	-4.92	-104.28	-230.30	-588.58	-105.71	-20.70	708.17	-1149.67
CHP Plants	-85.87	-0.72	-11.87	-81.15	-8.23	-	-22.05	117.81	-92.07
Heat Plants	-9.80	-	-2.14	-11.72	-	-	-4.85	22.68	-5.84
Gas Works	-2.53	-	-0.53	0.37	-	-	-	-	-2.69
Pet. Refineries	-	-2130.78	2137.15	-	-	-	-1.39	-	4.99
Coal Transf.	-66.13	0.04	-1.92	-0.19	-	-	-0.00	-	-68.20
Liquefaction Plants	-	-	-	-	-	-	-	-	-
Other Transf.	0.00	26.92	-27.19	-0.54	-	-	-0.16	-	-0.96
Own Use	-13.64	-0.33	-121.56	-89.99	-	-	-0.02	-70.33	-295.88
Distribution Losses	-0.48	-	-0.05	-3.22	-	-	-0.00	-57.60	-61.35
TFC	125.57	1.02	1933.29	715.33	-	-	124.15	757.61	3656.97
Industry Sector	107.27	1.02	337.37	299.44	-	-	66.28	287.53	1098.93
Transport Sector	0.14	-	1190.72	20.95	-	-	2.37	9.27	1223.46
Other Sectors	17.47	-	280.30	394.94	-	-	55.50	460.81	1209.01
Non-Energy Use	0.68	-	124.89	-	-	-	-	-	125.57

*Other includes geothermal, solar, electricity and heat, wind, etc.

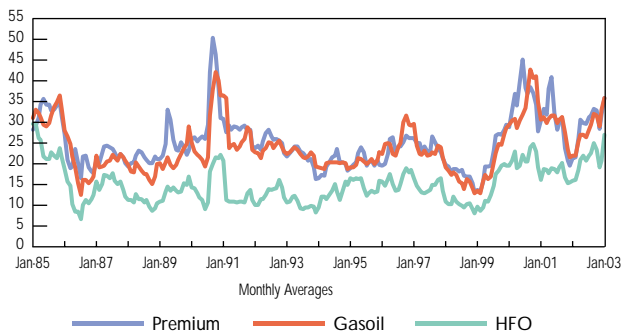
Crude Oil

Key Crude Oil Spot Prices in US Dollars/barrel



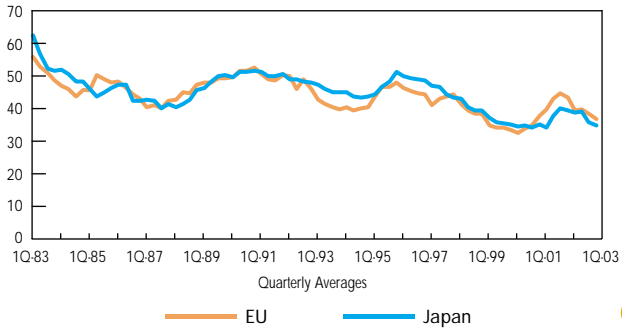
Petroleum Products

Rotterdam Oil Product Spot Prices in US Dollars/barrel



Coal

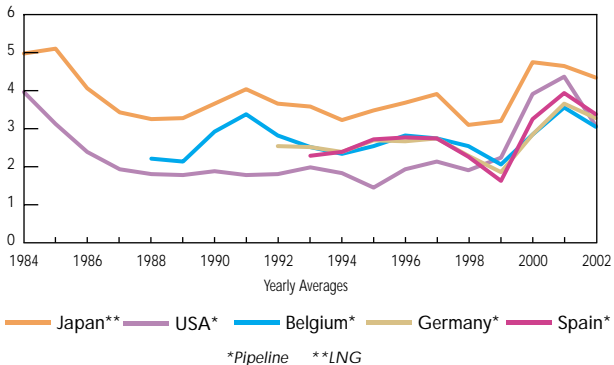
Steam Coal Import Costs in US Dollars/tonne



5

Natural Gas

Natural Gas Import Prices in US Dollars/MBtu



*Pipeline **LNG

RETAIL PRICES^(a)

	Heavy Fuel Oil for Industry ^(b) (tonne)	Light Fuel Oil for Households (1000 litres)	Automotive Diesel Oil ^(c) (litre)	Unleaded Premium ^(d) (litre)
Australia	0.333 L	0.489
Austria	97.76 L	396.12	0.607	0.888
Belgium	184.79	300.60	0.618	0.984
Canada	202.80	346.51	0.431	0.468
Chinese Taipei	228.84	x	0.433	0.569
Czech Republic	146.76	306.19	0.580	0.811
Denmark	259.39	768.89	0.750	1.109
Finland	243.37	380.05	0.648	1.068
France	189.70	390.25	0.665	1.033
Germany	200.03	360.83	0.733	1.046
Greece	232.63	569.41	0.532	0.731
Hungary	179.86	300.35 L	0.695	0.962
India	309.58 L	185.43 L	0.416 L	0.613 L
Ireland	271.60	444.69	0.649	0.879
Italy	222.93 L	850.29	0.724	1.056
Japan	219.42	373.66	0.518	0.829
Korea	292.54	497.34	0.606	..
Luxembourg	205.04	314.89	0.566	0.779
Mexico	130.72 L	..	0.358 L	0.584 L
Netherlands	244.22	597.39	0.677	1.144
New Zealand	307.31	..	0.294	0.512
Norway	497.88	741.70	0.878	1.198
Poland	143.68	379.06	0.541	0.820
Portugal	246.17	x	0.641	0.957
Slovak Republic	153.28	296.93	0.549	0.707
South Africa	184.01 L	..	0.381	0.419
Spain	213.28	385.91	0.597	0.815
Sweden	x	710.75	0.720	1.020
Switzerland	212.14	288.61	0.767	0.892
Turkey	278.47	752.29	0.763	1.003
United Kingdom	219.53 L	265.52	1.011	1.165
United States	174.48	335.77	0.380	0.381

(a) Prices are for 4th Quarter 2002, or latest available (I). (b) Low Sulphur Fuel Oil for Belgium, Chinese Taipei, Denmark, Finland, France, Germany, Greece, Luxembourg, Netherlands, Norway, Slovak Republic and Switzerland; High Sulphur Fuel Oil for all other countries. (c) For commercial purposes. (d) Unleaded Regular for Australia, Canada, Japan, Mexico, New Zealand

IN SELECTED COUNTRIES in US Dollars/Unit

Nat Gas for Industry ^(e) (10 ⁷ kcal GCV*)	Nat Gas for Households ^(e) (10 ⁷ kcal GCV*)	Steam Coal for Industry ^(f) (tonne)	Electricity for Industry ^(g) (kWh)	Electricity for Households ^(g) (kWh)	
135.76 L	332.34 L	..	0.0357 L	0.0619 L	Australia
154.92 L	391.83	67.46 L	0.0921 L	0.1357	Austria
111.65 L	419.41 L	..	0.0477 L	0.1323 L	Belgium
142.93 L	232.52 L	..	0.0386 L	0.0601 L	Canada
275.93	356.87	74.16 L	0.0535	0.0746	Chinese Taipei
165.10	268.66	19.67	0.0554	0.0807	Czech Republic
c	794.34	78.75 L	0.0739	0.2217	Denmark
137.81	218.35	85.90	0.0460	0.0908	Finland
187.27	461.64	67.85 L	0.0368	0.1045	France
187.93 L	373.41 L	227.01 L	0.079 L	0.1666 L	Germany
199.82 L	302.89 L	..	0.0493	0.0832	Greece
204.73	231.47	45.58 L	0.0641	0.0857	Hungary
..	..	19.36 L	0.0801 L	0.0388 L	India
199.10	351.34	..	0.0770	0.1110	Ireland
141.56 L	639.03 L	37.13	0.093 L	0.1342 L	Italy
406.4 L	1168.18 L	36.69	0.1426 L	0.2144 L	Japan
..	..	50.99	0.0656 L	0.0853 L	Korea
..	272.69 L	0.1117	Luxembourg
113.24 L	..	x	0.0584 L	0.0906 L	Mexico
208.35	488.55	..	0.0575 L	0.1674	Netherlands
200.74	365.92	c	0.0354	0.0705	New Zealand
x	x	55.51 L	0.0349 L	0.0863	Norway
175.24	320.20	41.75	0.0525	0.0900	Poland
250.74	712.87	35.76	0.0726	0.1346	Portugal
150.49	137.06	25.25 L	0.0526	0.0730	Slovak Republic
233.37 L	x	12.25 L	0.0122	0.0317	South Africa
189.64	540.24	..	0.0411 L	0.1086 L	Spain
..	..	102.44 L	0.0342 L	0.1026 L	Sweden
290.38	514.80	53.21	0.0777	0.1235	Switzerland
212.75	257.23	39.96	0.0937	0.0909	Turkey
154.73	333.49	64.50	0.0542	0.1105	United Kingdom
176.27	311.01	36.88	0.0470	0.0830	United States

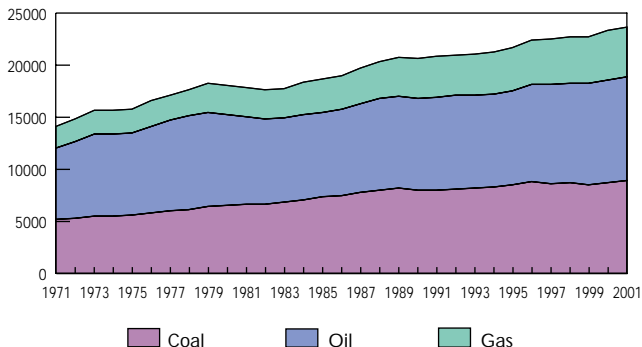
and the United States; Leaded Regular for India. (e) Gross calorific value. (f) Brown coal for the Czech Republic and Turkey.

(g) Price excluding tax for Australia and the United States. (l) Latest data available.

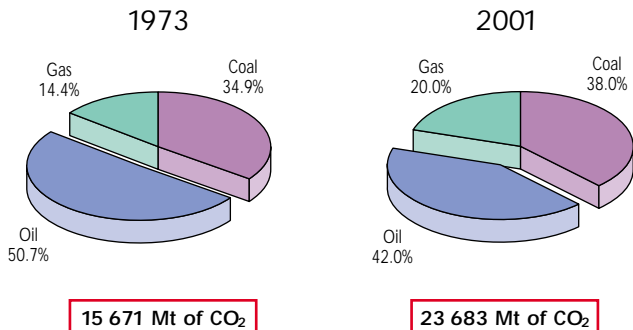
.. not available x not applicable c confidential

CO₂ Emissions by Fuel

Evolution from 1971 to 2001 of World CO₂ Emissions*
by Fuel (Mt of CO₂)



1973 and 2001 Fuel Shares of CO₂ Emissions*



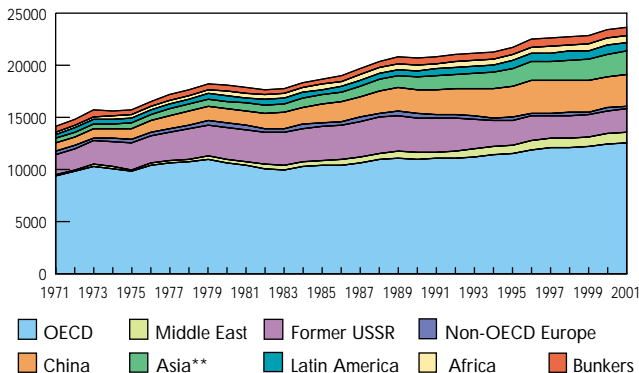
15 671 Mt of CO₂

23 683 Mt of CO₂

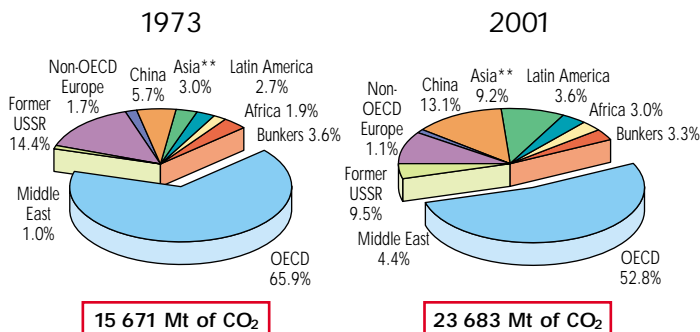
* Calculated using IEA's Energy Balance Tables and the Revised 1996 IPCC Guidelines.
CO₂ emissions are from fuel combustion only.

CO₂ Emissions by Region

Evolution from 1971 to 2001 of World CO₂ Emissions*
by Region (Mt of CO₂)



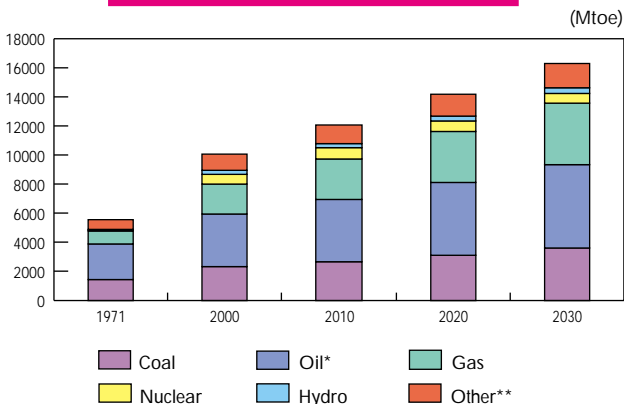
1973 and 2001 Regional Shares of CO₂ Emissions*



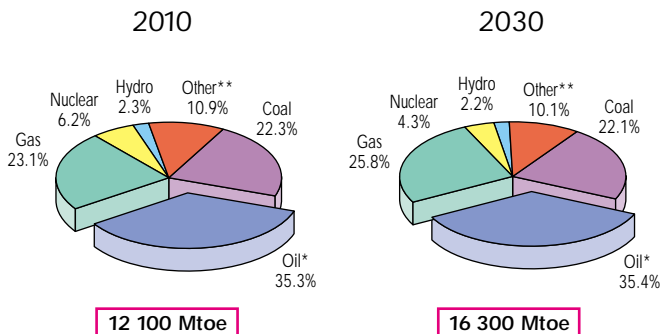
* Calculated using IEA's Energy Balance Tables and the Revised 1996 IPCC Guidelines. CO₂ emissions are from fuel combustion only. ** Asia excludes China.

OUTLOOK FOR WORLD TPES

TPES* Outlook by Fuel



Fuel Shares of TPES* in 2010 and 2030

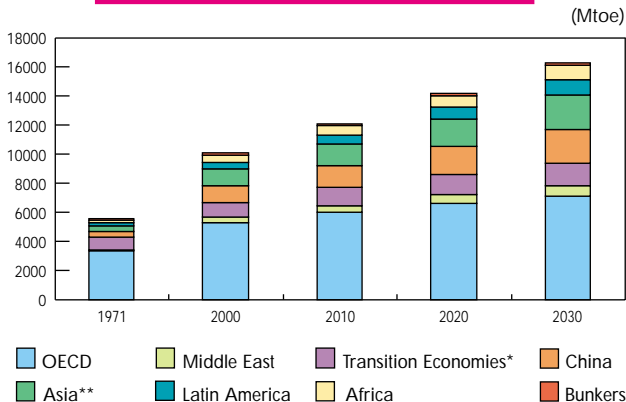


* Includes bunkers.

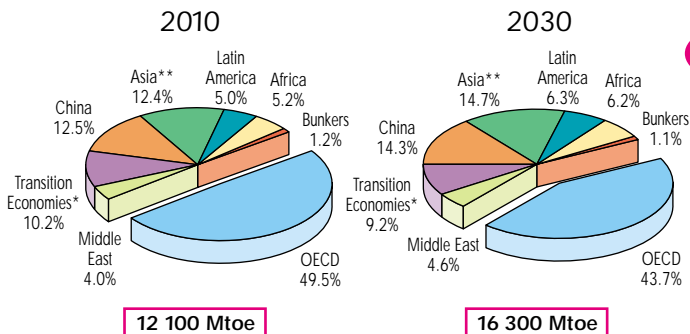
** Other includes combustible renewables & waste, geothermal, solar, wind, tide, etc.

TO 2030

TPES Outlook by Region



Regional Shares of TPES in 2010 and 2030



*Includes Former USSR and Non-OECD Europe.

** Asia excludes China.

Selected Energy Indicators for 2001

Region/ Country	Popul- ation (million)	GDP (billion 95 US\$)	GDP (PPP) (billion 95 US\$)	Energy Prod. (Mtoe)	Net Imports (Mtoe)	TPES (Mtoe)	Elec. Cons.* (TWh)	CO ₂ ** Emissions (Mt of CO ₂)
World	6102.56	34399.76	42374.34	10209.14	-	10029.10	14196.98	23683.25
OECD	1138.52	27880.92	24803.26	3884.83	1563.27	5332.81	8970.06	12511.02
Middle East	168.85	588.24	1005.48	1293.55	-895.95	389.65	446.03	1044.57
Former USSR	289.09	526.97	1489.34	1305.93	-363.14	935.34	1110.66	2239.29
Non-OECD Europe	57.90	138.58	348.14	61.77	38.70	99.16	154.05	253.52
China	1278.58	1282.03	4863.13	1138.67	22.84	1155.65	1397.26	3112.64
Asia	1935.20	1765.51	5530.79	1009.83	164.82	1152.25	1062.92	2179.32
Latin America	421.91	1605.23	2636.04	616.90	-153.84	449.92	637.53	841.82
Africa	812.51	612.29	1698.16	897.68	-372.09	514.33	418.47	720.23
Albania	3.16	3.27	10.84	0.67	1.04	1.71	3.55	3.34
Algeria	30.84	49.84	176.97	144.33	-115.50	29.44	22.30	68.22
Angola	13.51	7.10	28.78	43.56	-34.98	8.45	1.36	5.70
Argentina	37.49	279.98	385.96	82.86	-24.70	57.60	79.68	117.66
Armenia	3.81	4.07	9.60	0.60	1.70	2.30	3.87	4.23
Australia	19.47	468.04	490.57	250.44	-134.09	115.63	201.23	369.64
Austria	8.13	271.17	199.07	9.72	20.00	30.72	60.97	66.63
Azerbaijan	8.12	3.74	21.74	19.58	-7.89	11.58	17.09	26.17
Bahrain	0.65	7.21	9.32	7.49	-1.55	6.46	6.19	14.78
Bangladesh	133.35	51.49	196.23	16.20	4.28	20.41	13.26	31.00
Belarus	9.97	14.89	70.07	3.53	20.86	24.42	29.86	56.38
Belgium	10.28	319.13	256.05	13.08	52.06	59.00	85.04	119.60
Benin	6.44	2.73	5.89	1.48	0.55	2.03	0.42	1.59
Bolivia	8.52	8.04	18.13	6.94	-2.67	4.27	3.50	8.31
Bosnia and Herzegovina	4.06	6.43	26.86	3.28	1.08	4.36	7.62	15.37
Brazil	172.39	798.75	1140.30	145.93	41.06	185.08	309.18	311.87

TPES/ Pop (toe/capita)	TPES/ GDP (toe/000 95 US\$)	TPES/ GDP (PPP) (toe/000 95 US\$ PPP)	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 / 95 US\$)	CO ₂ / GDP (PPP) (kg CO ₂ / 95 US\$ PPP)	Region/ Country
1.64	0.29	0.24	2326	2.36	3.88	0.69	0.56	World
4.68	0.19	0.22	7879	2.35	10.99	0.45	0.50	OECD
2.31	0.66	0.39	2642	2.68	6.19	1.78	1.04	Middle East
3.24	1.77	0.63	3842	2.39	7.75	4.25	1.50	Former USSR
1.71	0.72	0.28	2660	2.56	4.38	1.83	0.73	Non-OECD Europe
0.90	0.90	0.24	1093	2.69	2.43	2.43	0.64	China
0.60	0.65	0.21	549	1.89	1.13	1.23	0.39	Asia
1.07	0.28	0.17	1511	1.87	2.00	0.52	0.32	Latin America
0.63	0.84	0.30	515	1.40	0.89	1.18	0.42	Africa
0.54	0.52	0.16	1123	1.95	1.06	1.02	0.31	Albania
0.95	0.59	0.17	723	2.32	2.21	1.37	0.39	Algeria
0.63	1.19	0.29	101	0.67	0.42	0.80	0.20	Angola
1.54	0.21	0.15	2126	2.04	3.14	0.42	0.30	Argentina
0.60	0.56	0.24	1017	1.84	1.11	1.04	0.44	Armenia
5.94	0.25	0.24	10335	3.20	18.99	0.79	0.75	Australia
3.78	0.11	0.15	7498	2.17	8.20	0.25	0.33	Austria
1.43	3.10	0.53	2105	2.26	3.22	7.00	1.20	Azerbaijan
9.92	0.90	0.69	9508	2.29	22.74	2.05	1.59	Bahrain
0.15	0.40	0.10	99	1.52	0.23	0.60	0.16	Bangladesh
2.45	1.64	0.35	2995	2.31	5.65	3.79	0.80	Belarus
5.74	0.18	0.23	8272	2.03	11.63	0.37	0.47	Belgium
0.32	0.74	0.34	65	0.78	0.25	0.58	0.27	Benin
0.50	0.53	0.24	411	1.95	0.98	1.03	0.46	Bolivia
1.07	0.68	0.16	1876	3.53	3.79	2.39	0.57	Bosnia and Herzegovina
1.07	0.23	0.16	1794	1.69	1.81	0.39	0.27	Brazil

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Region/ Country	Popul- ation (million)	GDP (billion 95 US\$)	GDP (PPP (billion 95 US\$)	Energy Prod. (Mtoe)	Net Imports (Mtoe)	TPES (Mtoe)	Elec. Cons.* (TWh)	CO ₂ ** Emissions (Mt of CO ₂)
Brunei	0.34	5.93	6.37	19.67	-17.46	2.17	2.46	5.12
Bulgaria	8.02	13.07	51.42	10.33	9.06	19.48	30.91	44.85
Cameroon	15.20	10.58	23.75	12.49	-6.05	6.44	2.63	2.76
Canada	31.08	717.39	832.57	379.21	-131.55	248.18	520.50	519.51
Chile	15.40	82.95	130.83	8.67	15.74	23.80	40.79	45.91
People's Rep. of China	1271.85	1117.23	4707.82	1138.62	2.86	1139.37	1360.00	3074.66
Chinese Taipei	22.28	337.02	394.51	10.77	82.25	88.95	188.95	222.66
Colombia	43.04	98.00	277.98	73.92	-44.31	29.25	33.62	56.05
Congo	3.10	2.46	2.39	13.67	-12.74	0.93	0.42	0.76
Dem. Rep. of Congo	52.35	4.46	35.13	15.71	-0.67	15.04	4.31	2.06
Costa Rica	3.87	15.10	33.68	1.73	1.76	3.48	6.19	4.81
Cote d'Ivoire	16.41	11.73	23.45	6.18	0.41	6.50	3.18	5.19
Croatia	4.38	23.46	36.06	3.72	4.12	7.90	12.87	18.61
Cuba	11.23	27.68	71.03	6.66	7.47	13.65	12.95	31.08
Cyprus	0.76	11.10	14.63	0.04	2.54	2.45	3.32	6.18
Czech Republic	10.26	57.09	140.14	30.49	10.67	41.40	60.20	118.71
Denmark	5.36	207.45	138.08	27.17	-6.12	19.78	35.15	50.45
Dominican Republic	8.51	17.66	55.70	1.49	6.33	7.81	7.63	17.08
Ecuador	12.88	19.03	37.00	22.87	-13.45	8.73	8.43	18.40
Egypt	65.18	80.09	213.13	59.30	-7.46	48.01	72.61	113.82
El Salvador	6.40	11.24	30.71	2.33	1.92	4.27	3.71	5.39
Eritrea	4.20	0.66	3.93	0.53	0.24	0.77	0.19	0.67
Estonia	1.36	6.42	12.12	2.99	1.70	4.70	6.50	14.26
Ethiopia	65.82	7.93	49.15	18.00	1.17	19.16	1.63	3.26
Finland	5.19	167.39	124.70	15.16	19.17	33.82	81.38	60.23
France	60.91	1804.85	1394.53	133.19	133.51	265.57	450.83	384.85
Gabon	1.26	5.52	7.04	14.79	-13.07	1.70	1.14	1.65
Georgia	5.28	2.64	13.10	1.26	1.17	2.41	6.36	3.74
Germany	82.34	2703.25	1922.03	133.74	217.17	351.09	560.42	850.16
Ghana	19.71	8.30	40.27	6.00	2.19	8.18	6.87	5.70

TPES/ Pop (toe/capita)	TPES/ GDP (toe/000 95 US\$)	TPES/ GDP (PPP) (toe/000 95 US\$ PPP)	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 / 95 US\$)	CO ₂ / GDP (PPP) (kg CO ₂ / 95 US\$ PPP)	Region/ Country
6.30	0.37	0.34	7142	2.36	15.06	0.86	0.80	Brunei
2.43	1.49	0.38	3854	2.30	5.59	3.43	0.87	Bulgaria
0.42	0.61	0.27	173	0.43	0.18	0.26	0.12	Cameroon
7.98	0.35	0.30	16746	2.09	16.72	0.72	0.62	Canada
1.55	0.29	0.18	2648	1.93	2.98	0.55	0.35	Chile
0.90	1.02	0.24	1069	2.70	2.42	2.75	0.65	People's Rep. of China
3.99	0.26	0.23	8482	2.50	9.99	0.66	0.56	Chinese Taipei
0.68	0.30	0.11	781	1.92	1.30	0.57	0.20	Colombia
0.30	0.38	0.39	134	0.82	0.25	0.31	0.32	Congo
0.29	3.37	0.43	82	0.14	0.04	0.46	0.06	Dem. Rep. of Congo
0.90	0.23	0.10	1598	1.38	1.24	0.32	0.14	Costa Rica
0.40	0.55	0.28	194	0.80	0.32	0.44	0.22	Cote d'Ivoire
1.80	0.34	0.22	2938	2.36	4.25	0.79	0.52	Croatia
1.22	0.49	0.19	1153	2.28	2.77	1.12	0.44	Cuba
3.22	0.22	0.17	4360	2.52	8.13	0.56	0.42	Cyprus
4.03	0.73	0.30	5867	2.87	11.57	2.08	0.85	Czech Republic
3.69	0.10	0.14	6561	2.55	9.41	0.24	0.37	Denmark
0.92	0.44	0.14	897	2.19	2.01	0.97	0.31	Dominican Republic
0.68	0.46	0.24	654	2.11	1.43	0.97	0.50	Ecuador
0.74	0.60	0.23	1114	2.37	1.75	1.42	0.53	Egypt
0.67	0.38	0.14	579	1.26	0.84	0.48	0.18	El Salvador
0.18	1.18	0.20	46	0.87	0.16	1.02	0.17	Eritrea
3.44	0.73	0.39	4766	3.03	10.49	2.22	1.18	Estonia
0.29	2.42	0.39	25	0.17	0.05	0.41	0.07	Ethiopia
6.52	0.20	0.27	15687	1.78	11.61	0.36	0.48	Finland
4.36	0.15	0.19	7402	1.45	6.32	0.21	0.28	France
1.35	0.31	0.24	907	0.97	1.31	0.30	0.23	Gabon
0.46	0.92	0.18	1204	1.55	0.71	1.42	0.29	Georgia
4.26	0.13	0.18	6806	2.42	10.32	0.31	0.44	Germany
0.42	0.99	0.20	348	0.70	0.29	0.69	0.14	Ghana

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Region/ Country	Popul- ation (million)	GDP (billion 95 US\$)	GDP (PPP) (billion 95 US\$)	Energy Prod. (Mtoe)	Net Imports (Mtoe)	TPES (Mtoe)	Elec. Cons.* (TWh)	CO ₂ ** Emissions (Mt of CO ₂)
Gibraltar	0.03	0.54	0.49	0.00	1.18	0.17	0.11	0.50
Greece	10.96	144.84	165.23	9.97	22.08	28.70	51.25	90.15
Guatemala	11.68	18.16	47.70	5.23	2.13	7.31	4.27	9.31
Haiti	8.13	2.88	14.03	1.54	0.55	2.09	0.26	1.51
Honduras	6.59	4.68	17.95	1.53	1.86	3.24	3.45	5.09
Hong Kong, China	6.73	164.80	155.31	0.05	19.98	16.28	37.26	37.97
Hungary	10.19	56.47	117.20	10.82	13.78	25.34	34.91	56.34
Iceland	0.29	9.04	7.71	2.45	0.96	3.36	7.68	2.10
India	1032.36	492.50	2707.16	438.10	90.98	531.45	421.36	1013.45
Indonesia	208.98	216.18	560.89	234.31	-80.94	152.30	88.39	283.50
Islamic Rep. of Iran	64.53	110.61	354.91	246.64	-126.02	120.00	108.98	323.25
Iraq	23.75	76.42	30.02	123.30	-94.82	28.48	34.93	79.29
Ireland	3.85	112.01	110.08	1.73	13.77	14.98	22.80	43.11
Israel	6.36	105.48	117.06	0.69	20.75	21.19	41.10	63.82
Italy	57.93	1225.27	1287.40	26.26	146.74	172.00	308.03	425.27
Jamaica	2.59	5.62	8.69	0.49	3.56	4.01	6.09	9.75
Japan	127.21	5647.68	3125.88	104.09	417.09	520.73	1005.86	1132.31
Jordan	5.03	8.24	18.73	0.28	4.94	5.12	6.91	14.17
Kazakhstan	14.90	25.50	85.09	83.75	-43.38	40.32	49.34	119.46
Kenya	30.74	9.99	28.50	12.64	2.82	15.38	3.63	8.70
Korea	47.34	639.24	674.91	34.21	164.44	194.78	265.48	435.78
DPR of Korea	22.38	8.06	28.36	19.25	1.29	20.44	17.01	71.13
Kuwait	2.04	27.28	34.23	108.85	-91.99	16.37	32.33	63.45
Kyrgyzstan	4.96	2.06	12.28	1.35	0.83	2.23	7.13	3.82
Latvia	2.36	6.64	16.78	1.72	2.55	4.30	5.17	7.22
Lebanon	4.39	12.67	17.03	0.16	5.25	5.43	8.00	15.44
Libya	5.41	35.01	27.53	74.36	-58.29	15.99	21.47	40.15
Lithuania	3.48	8.04	26.82	4.15	3.76	8.02	9.36	12.04
Luxembourg	0.44	25.34	19.22	0.06	3.75	3.83	6.72	8.41
FYR of Macedonia	2.04	4.94	11.46	1.57	1.02	2.61	5.72	8.58

TPES/ Pop (toe/capita)	TPES/ GDP (toe/000 95 US\$)	TPES/ GDP (PPP) (toe/000 95 US\$ PPP)	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 / 95 US\$)	CO ₂ / GDP (PPP) (kg CO ₂ / 95 US\$ PPP)	Region/ Country
5.92	0.31	0.35	3893	2.94	16.67	0.93	1.02	Gibraltar
2.62	0.20	0.17	4679	3.14	8.23	0.62	0.55	Greece
0.63	0.40	0.15	365	1.27	0.80	0.51	0.20	Guatemala
0.26	0.73	0.15	31	0.72	0.19	0.52	0.11	Haiti
0.49	0.69	0.18	524	1.57	0.77	1.09	0.28	Honduras
2.42	0.10	0.10	5541	2.33	5.64	0.23	0.24	Hong Kong, China
2.49	0.45	0.22	3427	2.22	5.53	1.00	0.48	Hungary
11.80	0.37	0.44	26947	0.63	7.24	0.23	0.27	Iceland
0.51	1.08	0.20	408	1.91	0.98	2.06	0.37	India
0.73	0.70	0.27	423	1.86	1.36	1.31	0.51	Indonesia
1.86	1.08	0.34	1689	2.69	5.01	2.92	0.91	Islamic Rep. of Iran
1.20	0.37	0.95	1471	2.78	3.34	1.04	2.64	Iraq
3.89	0.13	0.14	5917	2.88	11.20	0.38	0.39	Ireland
3.33	0.20	0.18	6459	3.01	10.03	0.61	0.55	Israel
2.97	0.14	0.13	5318	2.47	7.34	0.35	0.33	Italy
1.55	0.71	0.46	2352	2.43	3.76	1.73	1.12	Jamaica
4.09	0.09	0.17	7907	2.17	8.90	0.20	0.36	Japan
1.02	0.62	0.27	1373	2.77	2.82	1.72	0.76	Jordan
2.71	1.58	0.47	3312	2.96	8.02	4.68	1.40	Kazakhstan
0.50	1.54	0.54	118	0.57	0.28	0.87	0.31	Kenya
4.11	0.30	0.29	5607	2.24	9.21	0.68	0.65	Korea
0.91	2.54	0.72	760	3.48	3.18	8.83	2.51	DPR of Korea
8.01	0.60	0.48	15818	3.88	31.10	2.33	1.85	Kuwait
0.45	1.08	0.18	1439	1.71	0.77	1.85	0.31	Kyrgyzstan
1.82	0.65	0.26	2193	1.68	3.06	1.09	0.43	Latvia
1.24	0.43	0.32	1824	2.84	3.52	1.22	0.91	Lebanon
2.96	0.46	0.58	3968	2.51	7.42	1.15	1.46	Libya
2.30	1.00	0.30	2687	1.50	3.46	1.50	0.45	Lithuania
8.66	0.15	0.20	15158	2.20	19.11	0.33	0.44	Luxembourg
1.28	0.53	0.23	2799	3.29	4.21	1.74	0.75	FYR of Macedonia

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Region/ Country	Popul- ation (million)	GDP (billion 95 US\$)	GDP (PPP) (billion 95 US\$)	Energy Prod. (Mtoe)	Net Imports (Mtoe)	TPES (Mtoe)	Elec. Cons.* (TWh)	CO ₂ ** Emissions (Mt of CO ₂)
Malaysia	23.80	112.06	181.96	77.62	-25.74	51.61	67.21	108.77
Malta	0.40	3.99	4.73	0.00	0.76	0.74	1.69	2.12
Mexico	99.11	371.86	807.18	230.24	-76.81	152.27	179.39	358.97
Republic of Moldova	4.27	2.89	9.12	0.06	3.09	3.14	4.01	6.96
Morocco	29.17	41.88	97.95	0.58	10.78	11.01	16.62	31.67
Mozambique	18.07	3.85	18.95	7.56	0.16	7.69	4.92	1.25
Myanmar	48.32	15.53	191.24	15.28	-3.11	12.16	4.53	6.74
Namibia	1.79	4.27	11.69	0.29	0.87	1.16	2.39	2.26
Nepal	23.59	5.85	28.91	7.34	1.08	8.42	1.57	3.30
Netherlands	16.04	503.86	399.05	60.44	31.55	77.21	106.83	177.48
Netherlands Antilles	0.21	2.55	2.45	0.00	3.11	1.42	0.93	3.24
New Zealand	3.85	71.11	73.86	14.93	3.31	18.29	35.67	32.86
Nicaragua	5.21	2.43	14.53	1.54	1.27	2.79	1.75	3.69
Nigeria	129.88	33.44	102.14	207.02	-110.30	95.44	11.23	47.91
Norway	4.51	178.39	123.59	226.57	-201.25	26.61	119.57	37.93
Oman	2.48	15.28	25.99	64.53	-55.80	9.98	8.05	23.97
Pakistan	141.45	73.16	240.08	48.61	16.33	64.51	53.55	98.53
Panama	2.90	9.40	15.21	0.68	2.65	3.18	3.93	4.96
Paraguay	5.64	9.60	26.58	6.08	-2.30	3.76	4.74	3.15
Peru	26.35	60.89	112.04	9.36	2.68	12.11	18.54	24.36
Philippines	78.32	91.23	285.88	20.01	21.94	42.15	40.52	67.62
Poland	38.64	164.91	351.68	80.73	9.57	90.57	124.69	292.53
Portugal	10.06	131.40	166.75	3.40	22.03	24.73	42.69	59.05
Qatar	0.60	13.19	17.40	63.14	-47.84	15.89	9.15	34.58
Romania	22.41	31.21	120.13	28.22	9.13	36.84	45.74	91.73
Russia	144.75	377.61	932.57	996.16	-367.34	621.35	769.93	1519.47
Saudi Arabia	21.41	141.59	256.34	476.83	-364.19	110.59	126.01	276.26
Senegal	9.77	6.14	13.77	1.76	1.45	3.18	1.34	3.65
Serbia and Montenegro	10.65	16.69	40.50	10.77	5.29	16.06	30.56	47.18
Singapore	4.13	112.03	84.36	0.06	47.48	29.16	31.71	45.93

TPES/ Pop (toe/capita)	TPES/ GDP (toe/000 95 US\$)	TPES/ GDP (PPP) (toe/000 95 US\$ PPP)	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 / 95 US\$)	CO ₂ / GDP (PPP) (kg CO ₂ / 95 US\$ PPP)	Region/ Country
2.17	0.46	0.28	2824	2.11	4.57	0.97	0.60	Malaysia
1.87	0.19	0.16	4271	2.86	5.30	0.53	0.45	Malta
1.54	0.41	0.19	1810	2.36	3.62	0.97	0.44	Mexico
0.74	1.08	0.34	940	2.22	1.63	2.41	0.76	Republic of Moldova
0.38	0.26	0.11	570	2.88	1.09	0.76	0.32	Morocco
0.43	2.00	0.41	272	0.16	0.07	0.32	0.07	Mozambique
0.25	0.78	0.06	94	0.55	0.14	0.43	0.04	Myanmar
0.65	0.27	0.10	1334	1.95	1.26	0.53	0.19	Namibia
0.36	1.44	0.29	67	0.39	0.14	0.56	0.11	Nepal
4.81	0.15	0.19	6659	2.30	11.06	0.35	0.44	Netherlands
6.71	0.56	0.58	4401	2.28	15.43	1.27	1.32	Netherlands Antilles
4.75	0.26	0.25	9264	1.80	8.54	0.46	0.44	New Zealand
0.54	1.15	0.19	335	1.32	0.71	1.52	0.25	Nicaragua
0.73	2.85	0.93	86	0.50	0.37	1.43	0.47	Nigeria
5.90	0.15	0.22	26494	1.43	8.41	0.21	0.31	Norway
4.03	0.65	0.38	3247	2.40	9.67	1.57	0.92	Oman
0.46	0.88	0.27	379	1.53	0.70	1.35	0.41	Pakistan
1.10	0.34	0.21	1358	1.56	1.71	0.53	0.33	Panama
0.67	0.39	0.14	841	0.84	0.56	0.33	0.12	Paraguay
0.46	0.20	0.11	704	2.01	0.92	0.40	0.22	Peru
0.54	0.46	0.15	517	1.60	0.86	0.74	0.24	Philippines
2.34	0.55	0.26	3227	3.23	7.57	1.77	0.83	Poland
2.46	0.19	0.15	4243	2.39	5.87	0.45	0.35	Portugal
26.57	1.20	0.91	15308	2.18	57.63	2.62	1.99	Qatar
1.64	1.18	0.31	2041	2.49	4.09	2.94	0.76	Romania
4.29	1.65	0.67	5319	2.45	10.50	4.02	1.63	Russia
5.17	0.78	0.43	5886	2.50	12.90	1.95	1.08	Saudi Arabia
0.33	0.52	0.23	137	1.15	0.37	0.59	0.27	Senegal
1.51	0.96	0.40	2869	2.94	4.43	2.83	1.16	Serbia and Montenegro
7.06	0.26	0.35	7677	1.58	11.12	0.41	0.54	Singapore

** CO₂ emissions from fuel combustion only. Emissions are calculated using IEA's energy balances and the Revised 1996 IPCC Guidelines.

Region/ Country	Popul- ation (million)	GDP (billion 95 US\$)	GDP (PPP) (billion 95 US\$)	Energy Prod. (Mtoe)	Net Imports (Mtoe)	TPES (Mtoe)	Elec. Cons.* (TWh)	CO ₂ ** Emissions (Mt of CO ₂)
Slovak Republic	5.38	23.81	59.46	6.82	11.54	18.72	27.04	39.37
Slovenia	1.99	23.87	31.01	3.16	3.47	6.84	11.97	15.06
South Africa	43.24	175.90	442.72	145.29	-32.76	107.74	196.59	309.37
Spain	40.27	724.01	739.50	33.02	100.62	127.38	220.72	285.60
Sri Lanka	18.73	16.42	56.75	4.46	3.57	7.92	5.40	10.61
Sudan	31.70	10.41	58.61	21.55	-8.02	13.52	2.17	6.48
Sweden	8.90	293.95	215.55	34.38	17.85	51.05	142.45	48.05
Switzerland	7.23	339.10	199.40	12.37	15.48	28.02	58.05	43.82
Syria	16.59	13.21	47.41	34.38	-20.42	13.95	25.54	50.75
Tajikistan	6.25	2.62	6.93	1.27	1.77	3.04	13.57	4.84
United Rep. of Tanzania	34.45	6.78	16.90	13.00	0.94	13.92	2.11	2.76
Thailand	61.18	174.57	356.88	40.06	36.01	75.54	95.61	156.40
Togo	4.65	1.50	7.20	1.06	0.37	1.42	0.51	0.91
Trinidad and Tobago	1.31	7.27	11.39	18.38	-9.18	8.69	5.22	15.63
Tunisia	9.67	24.78	57.06	6.89	1.65	8.24	10.12	18.85
Turkey	68.61	190.29	390.61	26.15	45.97	72.46	103.55	188.01
Turkmenistan	5.44	8.62	21.13	50.44	-35.13	15.31	7.61	38.32
Ukraine	49.09	48.39	196.12	83.43	58.15	141.58	135.85	306.23
United Arab Emirates	2.98	51.35	63.00	144.57	-105.23	32.62	36.54	75.43
United Kingdom	58.79	1334.80	1293.48	262.19	-21.71	235.16	364.01	540.84
United States	285.91	8977.80	8977.80	1711.81	641.68	2281.41	3686.97	5673.25
Uruguay	3.36	19.73	25.95	1.21	1.85	2.70	6.52	4.66
Uzbekistan	25.07	12.84	55.85	55.63	-4.96	50.65	45.01	116.16
Venezuela	24.63	81.92	130.17	216.02	-155.76	54.86	67.23	128.51
Vietnam	79.53	31.00	153.12	50.35	-11.16	39.36	26.40	47.75
Yemen	18.05	5.71	14.04	22.69	-19.03	3.56	2.30	9.39
Former Yugoslavia	23.13	75.39	145.89	22.50	14.98	37.77	68.73	104.81
Zambia	10.28	4.17	7.61	6.05	0.41	6.42	6.08	1.81
Zimbabwe	12.82	7.17	28.04	8.53	1.25	9.88	10.43	12.34

* Gross production + imports – exports – transmission/distribution losses.

** CO₂ emissions from fuel combustion only. Emissions are calculated using IEA's energy balances and the Revised 1996 IPCC Guidelines.

TPES/ Pop (toe/capita)	TPES/ GDP (toe/000 95 US\$)	TPES/ GDP (PPP) (toe/000 95 US\$ PPP)	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 / 95 US\$)	CO ₂ / GDP (PPP) (kg CO ₂ / 95 US\$ PPP)	Region/ Country
3.48	0.79	0.31	5027	2.10	7.32	1.65	0.66	Slovak Republic
3.43	0.29	0.22	6007	2.20	7.57	0.63	0.49	Slovenia
2.49	0.61	0.24	4546	2.87	7.15	1.76	0.70	South Africa
3.16	0.18	0.17	5482	2.24	7.09	0.39	0.39	Spain
0.42	0.48	0.14	288	1.34	0.57	0.65	0.19	Sri Lanka
0.43	1.30	0.23	68	0.48	0.20	0.62	0.11	Sudan
5.74	0.17	0.24	16013	0.94	5.40	0.16	0.22	Sweden
3.87	0.08	0.14	8028	1.56	6.06	0.13	0.22	Switzerland
0.84	1.06	0.29	1539	3.64	3.06	3.84	1.07	Syria
0.49	1.16	0.44	2172	1.59	0.77	1.85	0.70	Tajikistan
0.40	2.05	0.82	61	0.20	0.08	0.41	0.16	United Rep. of Tanzania
1.23	0.43	0.21	1563	2.07	2.56	0.90	0.44	Thailand
0.31	0.95	0.20	109	0.64	0.20	0.61	0.13	Togo
6.64	1.20	0.76	3982	1.80	11.93	2.15	1.37	Trinidad and Tobago
0.85	0.33	0.14	1046	2.29	1.95	0.76	0.33	Tunisia
1.06	0.38	0.19	1509	2.59	2.74	0.99	0.48	Turkey
2.82	1.78	0.72	1400	2.50	7.04	4.45	1.81	Turkmenistan
2.88	2.93	0.72	2767	2.16	6.24	6.33	1.56	Ukraine
10.96	0.64	0.52	12279	2.31	25.31	1.47	1.20	United Arab Emirates
4.00	0.18	0.18	6192	2.30	9.20	0.41	0.42	United Kingdom
7.98	0.25	0.25	12896	2.49	19.84	0.63	0.63	United States
0.80	0.14	0.10	1940	1.73	1.39	0.24	0.18	Uruguay
2.02	3.94	0.91	1796	2.29	4.63	9.05	2.08	Uzbekistan
2.23	0.67	0.42	2729	2.34	5.22	1.57	0.99	Venezuela
0.49	1.27	0.26	332	1.21	0.60	1.54	0.31	Vietnam
0.20	0.62	0.25	127	2.64	0.52	1.64	0.67	Yemen
1.63	0.50	0.26	2972	2.77	4.53	1.39	0.72	Former Yugoslavia
0.62	1.54	0.84	591	0.28	0.18	0.43	0.24	Zambia
0.77	1.38	0.35	813	1.25	0.96	1.72	0.44	Zimbabwe

Sources: Energy data: IEA

Population: OECD/World Bank

GDP and GDP(PPP): OECD/World Bank/CEPII (Paris)

General Conversion Factors for Energy

To:	TJ	Gcal	Mtoe	MBtu	GWh
From:	<i>multiply by:</i>				
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:	<i>multiply by:</i>				
kilogram (kg)	1	0.001	9.84×10^{-4}	1.102×10^{-3}	2.2046
tonne (t)	1000	1	0.984	1.1023	2204.6
long ton (lt)	1016	1.016	1	1.120	2240.0
short ton (st)	907.2	0.9072	0.893	1	2000.0
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:	<i>multiply by:</i>					
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

Specific Net Calorific Values

Crude Oil*

	toe/tonne
Saudi Arabia	1.016
United States	1.033
Russia	1.005
Iran	1.019
Venezuela	1.069
Mexico	0.998
Norway	1.012
China	1.000
United Kingdom	1.037
UAE	1.018

* for selected countries.

Petroleum Products*

	toe/tonne
Refinery gas	1.150
LPG	1.130
Ethane	1.130
Motor Gasoline	1.070
Jet Fuel	1.065
Kerosene	1.045
Naphtha	1.075
Gas/Diesel Oil	1.035
Fuel Oil	0.960
Other Products	0.960

* selected products - average values.

Coal*

	toe/tonne
China	0.541
United States	0.646
India	0.477
South Africa	0.564
Australia	0.611
Russia	0.545
Poland	0.543
Kazakhstan	0.444
Ukraine	0.516
Germany	0.579

* steam coal production for selected countries.

Gross Calorific Values

Natural Gas*

	kJ/m ³
Russia	37579
United States	38304
Canada	38090
Netherlands	33320
United Kingdom	39819
Indonesia	40600
Algeria	42000
Uzbekistan	37889
Saudi Arabia	38000
Norway	40178

*for selected countries (production).

Note: to calculate the net heat content, the gross heat content 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, 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.

Glossary

Coal	<i>Coal</i> includes all coal, both primary (including hard coal and lignite) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, coke oven gas and blast furnace gas). Peat is also included in this category.
Crude Oil	<i>Crude Oil</i> comprises crude oil, natural gas liquids, refinery feedstocks and additives as well as other hydrocarbons.
Petroleum Products	<i>Petroleum products</i> comprise refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, heavy fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other petroleum products.
Gas	<i>Gas</i> includes natural gas (excluding natural gas liquids) and gas works gas. The latter appears as a positive figure in the "gas works" row but is not part of indigenous production.
Nuclear	<i>Nuclear</i> shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33 per cent.
Hydro	<i>Hydro</i> shows the energy content of the electricity produced in hydro power plants. Hydro output <i>excludes</i> output from pumped storage plants.
Combustible Renewables & Waste	<i>Combustible Renewables & Waste</i> comprises biomass and animal products (wood, vegetal waste, ethanol, animal materials/ wastes and sulphite lyes), municipal waste (wastes produced by the residential, commercial and public service sectors that are collected by local authorities for disposal in a central location for the production of heat and/or power) and industrial waste.
Other	<i>Other</i> includes geothermal, solar, wind, tide, wave 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 per cent. For solar, wind, tide and wave 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.

Indigenous production

Indigenous production is the production of primary energy, i.e. hard coal, lignite, peat, crude oil, NGLs, natural gas, combustible renewables & 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.

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 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 cover those quantities delivered to sea-going ships of all flags, including warships. Consumption by ships engaged in transport in inland and coastal waters is not included.

Stock changes

Stock changes reflect the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.

Total Primary Energy Supply (TPES)	<i>Total primary energy supply (TPES)</i> is made up of indigenous production + imports - exports - international marine bunkers ± stock changes. For the World Total, TPES excludes international marine bunkers.
Transfers	<i>Transfers</i> include both interproduct transfers and products transferred.
Statistical differences	<i>Statistical differences</i> is a category which 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 column.
Electricity plants	<i>Electricity plants</i> refers to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both public and autoproducer plants are included here.
Combined heat and power plants	<i>Combined heat and power plants</i> , refers to plants which are designed to produce both heat and electricity. UNIPED refers to these 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 public and autoproducer plants are included here.
Heat plants	<i>Heat plants</i> 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 public and autoproducer plants are included here.
Gas works	Where there is production of gas at <i>Gas works</i> the treatment is similar to that for electricity generation, with the quantity produced appearing as a positive figure in column "natural gas", inputs as negative entries in columns "coal", "petroleum products" and "natural gas inputs" and conversion losses appearing under the "Total" column.
Petroleum refineries	The row <i>Petroleum refineries</i> shows the use of primary energy for the manufacture of finished petroleum 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 is using standardized net calorific values for the petroleum products.

Coal transformation	<i>Coal transformation</i> contains losses in transformation of coal from primary to secondary fuels and from secondary to tertiary fuels (hard coal to coke, coke to blast furnace gas, lignite to BKB, etc.).
Liquefaction	<i>Liquefaction</i> includes diverse liquefaction processes, such as coal liquefaction into oil in Germany, and natural gas to gasoline in New Zealand.
Other transformation	<i>Other transformation</i> covers non-specified transformation not shown elsewhere. It also includes backflows from the petrochemical sector.
Own use	<i>Own use</i> contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes International Standard Industrial Classification [ISIC Divisions 10, 11, 12, 23 and 40]. These are shown as negative figures. Included here are, for example, coal mines' own use of energy, power plants' own consumption (which includes net electricity consumed for pumped storage), and energy used for oil and gas extraction.
Distribution and transmission losses	<i>Distribution and transmission losses</i> includes losses in gas distribution, electricity transmission and coal transport.
Total Final Consumption (TFC)	<i>Total final consumption (TFC)</i> is the sum of consumption by the different end-use sectors. In final consumption, petrochemical feedstocks are shown under <i>industry</i> , while non-energy use of such oil products as white spirit, lubricants, bitumen, paraffin waxes and other products are shown under <i>non-energy use</i> , and are included in Total final consumption only. Backflows from the petrochemical industry are not included in final consumption.
Industry sector	Consumption in the <i>Industry sector</i> includes the following sub-sectors (energy used for transport by industry is not included here but reported under transport): <ul style="list-style-type: none"> • <i>Iron and steel industry</i> [ISIC Group 271 and Class 2731]; • <i>Chemical industry</i> [ISIC Division 24]; <i>of which: petrochemical feedstocks.</i> The petrochemical industry includes cracking and reforming processes for the purpose of producing ethylene, propylene, butylene, synthesis gas, aromatics, butadiene and other hydrocarbon-based raw materials in processes such as steam cracking, aromatics plants and steam reforming. • <i>Non-ferrous metals basic industries</i> [ISIC Group 272 and Class 2732];

Industry sector (ctd.)

- *Non-metallic mineral products* such as glass, ceramic, cement, etc. [ISIC Division 26];
- *Transport equipment* [ISIC Divisions 34 and 35];
- *Machinery*. Fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 28, 29, 30, 31 and 32];
- *Mining (excluding fuels) and quarrying* [ISIC Divisions 13 and 14];
- *Food and tobacco* [ISIC Divisions 15 and 16];
- *Paper, pulp and print* [ISIC Divisions 21 and 22];
- *Wood and wood products* (other than pulp and paper) [ISIC Division 20];
- *Construction* [ISIC Division 45];
- *Textile and leather* [ISIC Divisions 17, 18 and 19];
- *Non-specified* (any manufacturing industry not included above) [ISIC Divisions 25, 33, 36 and 37].

Transport sector

The *Transport sector* includes all fuels for transport except international marine bunkers [ISIC Divisions 60, 61 and 62]. It includes transport in the industry sector and covers road, railway, air, internal navigation (including small craft and coastal shipping not included under marine bunkers), fuels used for transport of materials by pipeline and non-specified transport. Fuel used for ocean, coastal and inland fishing should be included in agriculture (other sectors).

Other sectors

Other sectors cover agriculture (including ocean, coastal and inland fishing) [ISIC Divisions 01, 02 and 05], residential, commercial and public services [ISIC Divisions 41, 50, 51, 52, 55, 63, 64, 65, 66, 70, 71, 72, 73, 74, 75, 80, 85, 90, 91, 92, 93, 95 and 99], and non-specified consumption.

Non-energy use

Non-energy use covers use of *other petroleum products* such as white spirit, paraffin waxes, lubricants, bitumen and other products. They are shown separately under the heading *non-energy use* and are included in total final consumption. It is assumed that the use of these products is exclusively *non-energy use*. An exception to this treatment is the petroleum coke which is shown as *non-energy use* only when there is evidence of such use; otherwise it is shown under energy use in industry or in other sectors. Non-energy use of coal includes carbon blacks, graphite electrodes, etc. and is also shown separately by sector.

GEOGRAPHICAL COVERAGE

OECD	Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.
Middle East	Bahrain, Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen.
Former USSR	Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.
Non-OECD Europe	Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Gibraltar, the Former Yugoslav Republic of Macedonia (FYROM), Malta, Romania, Serbia & Montenegro and Slovenia.
China	People's Republic of China and Hong Kong (China).
Asia	Afghanistan, Bangladesh, Bhutan, Brunei, Chinese Taipei, Fiji, French Polynesia, Kiribati, DPR of Korea, India, Indonesia, Malaysia, Maldives, Myanmar, Nepal, New Caledonia, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Vanuatu, Vietnam and other Asia.
Latin America	Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guyana, Guatemala, Grenada, Guadeloupe, Guyana, Haiti, Honduras, Jamaica, Martinique, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, St. Kitts-Nevis-Anguilla, Saint Lucia, St. Vincent-Grenadines, Surinam, Trinidad and Tobago, Uruguay, Venezuela and other Latin America.
Africa	Algeria, Angola/Cabinda, Benin, Botswana, Burkina-Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Dem. Rep. of Congo, Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, Sao Tome-Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, United Republic of Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe and other Africa.

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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, gas, nuclear, hydro, geothermal/solar, combustible renewables/wastes, 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 energy balances are presented for the two most recent years available. 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.

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Energy Statistics of Non-OECD Countries

This publication offers the same in-depth statistical coverage as the homonymous publication covering OECD countries. It includes data in original units for more than 100 individual countries and nine main regions. The consistency of OECD and non-OECD countries' detailed statistics provides an accurate picture of the global energy situation. For a description of the content, please see *Energy Statistics of OECD Countries* above.

Price: €110

Energy Balances of Non-OECD Countries

A companion volume to the publication *Energy Statistics of Non OECD Countries*, this publication presents energy balances in million tonnes of oil equivalent and key economic and energy indicators for more than 100 individual countries and nine main regions. It offers the same statistical coverage as the homonymous publication covering OECD Countries, and thus provides an accurate picture of the global energy situation. For a description of the content, please see *Energy Balances of OECD Countries* above.

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This publication brings together in one volume the IEAs data on electricity and heat supply and demand in the OECD. The report presents a comprehensive picture of electricity capacity and production, consumption, trade and prices for the OECD regions and individual countries in over 20 separate tables for each OECD country. Detailed data on the fuels used for electricity and heat production are also presented.

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For more information, please feel free to contact the Energy Statistics Division of the IEA by

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