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Preface

The *International Energy Annual 2001* presents an overview of key international energy trends for production, consumption, imports, and exports of primary energy commodities in over 220 countries, dependencies, and areas of special sovereignty. Also included are population and gross domestic product data, as well as prices for crude oil and petroleum products in selected countries. Renewable energy sources reported in the *International Energy Annual 2001* include hydroelectric power and geothermal, solar, wind, and wood and waste electric power. Also included for the United States are geothermal, solar, and wood and waste energy not used for electricity generation.

This report is published to keep the public and other interested parties fully informed of primary energy supplies on a global basis. The data presented have been largely derived from published sources. The data have been converted to units of measurement and thermal values (Appendices E and F) familiar to the American public.

Important Notes: (1) The Energy Information Administration (EIA) reviews its databases each year and important revisions are made to the time series of individual countries during this review. Therefore, data in the *International Energy Annual 2001* may have been substantially revised with respect to previous editions. (2) The methodologies used to impute the gross heat content of hydroelectric, nuclear electric, geothermal electric, and solar, wind, and wood and waste electric power are discussed in the "Note" section at the bottom of Tables C7, C8, C9, and C10, respectively.

Although EIA has mandatory data collection authority for collecting energy information within the United States, it has no authority to require reporting of data from foreign countries. Data for the *International Energy Annual* must be researched and collected from the most authoritative available sources outside EIA. Because EIA does not have access to the statistical surveys of other countries, it is not able to develop error estimates or revision errors such as might be developed in EIA's domestic surveys.

EIA attempts to identify and collect the best data available for foreign countries. The most authoritative sources are usually the official national statistical reports of a country. However, data from official sources are not always available. Therefore, EIA also uses data from reputable secondary sources such as the Asia-Pacific Economic Cooperation forum, the International Energy Agency, the International Monetary Fund, the Latin American Energy Organization, the United Nations, the World Bank, and others. In addition, EIA uses industry reports, academic studies, trade publications, and other sources. Typically these sources are less timely and complete than mandatory survey data for the United States collected by EIA. As a result, it usually takes EIA about two years to prepare complete energy information for all foreign countries.

Electronic Access and Related International (Energy) Web Page

The *International Energy Annual 2001* (*IEA2001*) is also available on EIA's Internet site at:
http://www.eia.doe.gov/iea
The *IEA2001* on EIA's Internet site includes text and tables in HTML and PDF formats and most of the tables are also available there as downloadable spreadsheets, many with data for all countries for all of the years 1980-2001. The entire *IEA2001* publication is also available in PDF format on the EIA Internet site at:
http://www.eia.doe.gov/pub/pdf/international/021901.pdf

Important Note: All of the data contained in the *IEA2001*, as well as additional international energy data, forecasts, and analyses, are available on the **International (Energy) Channel** on EIA's Internet site at: **http://www.eia.doe.gov/international** (If you would like to be notified immediately by Email of any updates to the annual data, go to **http://www.eia.doe.gov/listserv_signup.html** and select **Annual Statistics** in the **International** section. Then enter your Email address and select **Save**.)

Many factors beyond EIA's control affect the reliability and integrity of foreign country data. These include a country's level of economic development, commitment to statistical programs, openness with information, and other considerations.

Publication of this report is in keeping with responsibilities given the Energy Information Administration (EIA) in Public Law 95-91/Section 205(a) that states:

The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze, and disseminate data and information....

Contents

Page

WORLD ENERGY OVERVIEW

The *International Energy Annual* presents information and trends on world energy production and consumption for petroleum, natural gas, coal, and electricity. Production and consumption data are reported in standard units as well as British thermal units (Btu). Trade and reserves are shown for petroleum, natural gas, and coal. Data are provided on crude oil refining capacity and electricity installed capacity by type. Prices are included for selected crude oils and for refined petroleum products in selected countries. Population and Gross Domestic Product data are also provided.

(**Note:** In the discussion that follows, the data for total **production** of primary energy in 1992 and 2001 both include production in the United States of 2.3 quadrillion Btu of renewable energy not used for electricity generation. This renewable energy production includes ethanol blended into motor gasoline and geothermal, solar, and wood and waste energy not used for electricity generation. Likewise, the data for total **consumption** of primary energy in 1992 and 2001 include consumption in the United States of 2.3 and 2.2 quadrillion Btu, respectively, of renewable energy not used for electricity generation and selected electricity imports. Included are geothermal, solar, and wood and waste energy not used for electricity generation, electricity imports from Mexico that are derived from geothermal energy, and net imports of electricity from nonrenewable sources.)

World Primary Energy Production Trends

Between 1992 and 2001, the world's total output of primary energy--petroleum, natural gas, coal, and electric power (hydro, nuclear, geothermal, solar, wind, and wood and waste)--increased at an average annual rate of 1.6 percent (Table 2.9). World production increased from 351 quadrillion Btu in 1992 to 403 quadrillion Btu in 2001.

In 2001, petroleum (crude oil and natural gas plant liquids) continued to be the world's most important primary energy source, accounting for 38.5 percent, or 155 quadrillion Btu, of world primary energy production (Table 2.9). Between 1992 and 2001, petroleum production increased by 9.5 million barrels per day, or 14.5 percent, rising from 65.2 to 74.7 million barrels per day (Tables 2.2 and 2.3). The Middle East had the largest production gain, followed by Central and South America, and Western Europe. Their combined gains over the period from 1992 to 2001 were 7.6 million barrels per day.

Coal ranked second as a primary energy source in 2001, accounting for 23.8 percent of world primary energy production (Table 2.9). World coal production totaled 5.3 billion short tons--96 quadrillion Btu--in 2001, and it increased by 4.3 percent from the 1992 level of 5.0 billion short tons (Tables 2.1 and 2.9).

Dry natural gas ranked third as a primary energy source, accounting for 23.2 percent of world primary energy production in 2001 (Table 2.9). Production of dry natural gas was 90.7 trillion cubic feet, or 94 quadrillion Btu, in 2001 (Tables 2.1 and 2.9). Production increased by 15.9 trillion cubic feet from 74.8 trillion cubic feet in 1992, a gain of 21.2 percent.

Hydro, nuclear, and other (geothermal, solar, wind, and wood and waste) electric power generation ranked fourth, fifth, and sixth, respectively, as primary energy sources in 2001, accounting for 6.62, 6.56, and 0.8 percent, respectively, of world primary energy production (Table 2.9). Together they accounted for a combined total of 5.3 trillion kilowatthours--56 quadrillion Btu--in 2001 (Tables 2.1 and 2.9). Nuclear electric power generation increased significantly between 1992 and 2001, rising from 2.0 trillion kilowatthours to 2.5 trillion kilowatthours, a 25.3-percent increase. Geothermal, solar, wind, and wood and waste electric power generation also increased significantly over the same period, rising from 156 billion kilowatthours to 251 billion kilowatthours, a 60.7-percent increase. Hydroelectric power continued to represent the largest share of primary electric power generation contributing 2.6 trillion kilowatthours in 2001, up 16.6 percent from 2.2 trillion kilowatthours in 1992.

In 2001, United States production of 2.3 quadrillion Btu of renewable energy not used for electricity generation ranked seventh as a primary energy source, accounting for 0.6 percent of world primary energy production.

Major Energy Producers and Consumers

In 2001, three countries--the United States, Russia, and China--were the leading producers and consumers of world energy (Tables F1 and E1). These three countries produced 38 percent and consumed 41 percent of the world's total energy.

The United States, Russia, China, Saudi Arabia, and Canada were the world's five largest producers of energy in 2001, supplying 47.9 percent of the world's total energy (Table F1). The next five leading producers of primary energy were the United Kingdom, Iran, Norway, Australia, and Mexico, and together they supplied an additional 12.8 percent of the world's total energy. The United States supplied 71.6 quadrillion Btu of primary energy, significantly more than the 44.9 quadrillion Btu produced by Russia or the 36.3 quadrillion Btu produced by China.

The United States, China, Russia, Japan, and Germany were the world's five largest consumers of primary energy in 2001, accounting for 49.8 percent of world energy consumption (Table E1). They were followed by India, Canada, France, the United Kingdom, and Brazil, which together accounted for an additional 13.5 percent of world energy consumption. The United States consumed 97.1 quadrillion Btu, almost two and one-half times as much as the 39.7 quadrillion Btu consumed by China, while Russia consumed 28.2 quadrillion Btu.

Regional Energy Production and Consumption

Comparisons of energy production and consumption by region help to highlight key energy trends since 1992. In **North America**, the overall production of energy rose by 6.9 quadrillion Btu between 1992 and 2001 (Table F1). The supply of natural gas increased significantly, by 4.0 quadrillion Btu, while the production of coal and nuclear electric power increased by 2.1 quadrillion Btu and 1.5 quadrillion Btu, respectively (Tables F4, F5, and F7). These increases more than offset a 1.0-quadrillion-Btu decrease in crude oil production (Table F2). Energy consumption in North America increased by 13.4 quadrillion Btu between 1992 and 2001, the second largest increase for any region (Table E1). The largest North American increases occurred in the consumption of petroleum, 5.6 quadrillion Btu, coal, 3.5 quadrillion Btu, natural gas, 3.1 quadrillion Btu, and nuclear electric power, 1.5 quadrillion Btu (Tables E2, E4, E3 and E6).

Overall production of energy in the **Central and South America** region increased by 7.7 quadrillion Btu between 1992 and 2001, led by increases in crude oil production, 3.7 quadrillion Btu, natural gas production, 1.6 quadrillion Btu, and hydroelectric power generation, 1.2 quadrillion Btu (Tables F1, F2, F4, and F6). Energy consumption in the Central and South America region increased by 5.6 quadrillion Btu over the same period (Table E1). The largest increases occurred in the consumption of petroleum, 2.5 quadrillion Btu, natural gas, 1.5 quadrillion Btu, and hydroelectric power, 1.2 quadrillion Btu (Tables E2, E3, and E5).

In 2001, total energy production in **Western Europe** was 5.8 quadrillion Btu higher than in 1992 (Table F1). Gains between 1992 and 2001 were greatest for crude oil, 2.8 quadrillion Btu, natural gas, 2.6 quadrillion Btu, and nuclear electric power generation, 1.3 quadrillion Btu (Tables F2, F4, and F7). These increases more than offset a 2.8-quadrillion-Btu, drop in coal production (Table F5). Western European energy consumption increased by 8.5 quadrillion Btu between 1992 and 2001 (Table E1). The increase was led by natural gas, 4.9 quadrillion Btu, petroleum, 2.0 quadrillion Btu, and nuclear electric power, 1.3 quadrillion Btu, which together more than offset a 1.3 quadrillion Btu decrease in coal consumption (Tables E3, E2, E6, and E4).

Between 1992 and 2001, both energy production and energy consumption in the **Eastern Europe and Former U.S.S.R.** region declined by more than 6 quadrillion Btu (Tables F1 and E1). As a result, this was the only region to experience declines in either total energy production or consumption over the period. The 6.8-quadrillion-Btu decline in energy production was concentrated in coal, 4.9 quadrillion Btu, and natural gas, 2.1 quadrillion Btu (Tables F1, F5, and F4). The 13.6-quadrillion-Btu decline in energy consumption included declines in petroleum, 6.2 quadrillion Btu, coal, 4.9 quadrillion Btu, and natural gas, 2.8 quadrillion Btu (Tables E1, E2, E4, and E3).

Since 1992, energy production in the **Middle East** increased by 12.7 quadrillion Btu, the second largest increase for any region (Table F1). The increase was concentrated in crude oil, 7.9 quadrillion Btu, and natural gas, 4.3 quadrillion Btu (Tables F2 and F4). The increase in energy consumption in the Middle East between 1992 and 2001 was much smaller, only 5.9 quadrillion Btu (Table E1). The largest consumption increases were in natural gas, 3.4 quadrillion Btu, and petroleum, 2.3 quadrillion Btu (Tables E3 and E2).

Energy production in **Africa** increased by 5.1 quadrillion Btu between 1992 and 2001, led by increases in the production of natural gas, 1.9 quadrillion Btu, crude oil, 1.5 quadrillion Btu, and coal, 1.2 quadrillion Btu (Tables F1, F4, F2, and F5). Energy consumption in Africa grew more slowly over the same period, rising by only 2.5 quadrillion Btu, with petroleum consumption accounting for 0.84 quadrillion Btu of the increase, natural gas for 0.80 quadrillion Btu, and coal for 0.7 quadrillion Btu (Tables E1, E2, E3, and E4).

The largest regional increase in primary energy production between 1992 and 2001 occurred in the **Asia and Oceania** region, where production increased by 20.9 quadrillion Btu (Table F1). Coal production accounted for 10.4 quadrillion Btu, natural gas for 4.4 quadrillion Btu, nuclear electric power generation for 1.86 quadrillion Btu, crude oil for 1.85 quadrillion Btu, and hydroelectric power generation for 1.76 quadrillion Btu (Tables F5, F4, F7, F2, and F6). Consumption in this region increased by 31.2 quadrillion Btu over the same period, also the largest increase for any region (Table E1). 40 percent, or 12.4 quadrillion Btu, of this increase occurred in the consumption of petroleum (Table E2). At the same time, the consumption of coal of increased by 9.5 quadrillion Btu, natural gas by 5.4 quadrillion Btu, nuclear electric power by 1.9 quadrillion Btu, and hydroelectric power by 1.8 quadrillion Btu (Tables E4, E3, E6, and E5).

Petroleum

Global production of petroleum (crude oil and natural gas plant liquids) increased by 9.5 million barrels per day between 1992 and 2001, an average annual rate of growth of 1.5 percent (Tables 2.2 and 2.3). Saudi Arabia, the United States, and Russia were the three largest producers of petroleum in 2001. Together, they produced 31.7 percent of the world's petroleum. Production from Iran and Mexico accounted for an additional 9.9 percent.

In 2001, the United States consumed 19.6 million barrels per day of petroleum—25 percent of world consumption (Table 1.2). Japan ranked a distant second in consumption, with 5.4 million barrels per day, followed by China, Germany, and Russia.

Natural Gas

World production of dry natural gas increased by 15.9 trillion cubic feet, or at an average annual rate of 2.2 percent, over the period from 1992 to 2001 (Table 2.4). Russia was the leading producer in 2001 at 20.5 trillion cubic feet, followed by the United States at 19.4 trillion cubic feet. Together these two countries produced 44 percent of the world total. Canada ranked a distant third in production at 6.6 trillion cubic feet, followed by the United Kingdom and Algeria, with 3.7 and 2.8 trillion cubic feet, respectively. These three countries accounted for 15 percent of the world total.

In 2001, the United States, which was the leading consumer of dry natural gas at 22.6 trillion cubic feet, and Russia, which ranked second at 14.4 trillion cubic feet, together accounted for 41 percent of world consumption (Table 1.3). Germany ranked a distant third in consumption, with 3.33 trillion cubic feet, followed by the United Kingdom and Canada, at 3.28 and 2.9 trillion cubic feet, respectively.

Coal

Coal production increased by 218 million short tons between 1992 and 2001, or at an average annual rate of 0.5 percent (Table 2.5). China was the leading producer in 2001 at 1.5 billion short tons--equivalent to 27.0 quadrillion Btu (Tables 2.5 and F5). The United States was the second leading producer in 2001 with 1.1 billion short tons--equivalent to 23.4 quadrillion Btu. Australia ranked a distant third at 357 million short tons--equivalent to 7.1 quadrillion Btu, followed by India, at 339 million short tons--equivalent to 6.0 quadrillion Btu, and Russia at 300 million short tons--equivalent to 5.5 quadrillion Btu. Together, these five countries accounted for 68 percent of world coal production in 2001 (Table 2.5).

China was also the largest consumer of coal in 2001, using 1.4 billion short tons, followed by the United States, which consumed 1.1 billion short tons, India, Russia, and Germany (Table 1.4). These five countries together accounted for 64 percent of world coal consumption.

Hydroelectric Power

The generation of hydroelectric power increased by 366 billion kilowatthours between 1992 and 2001, or at an average annual rate of 1.7 percent (Table 2.6). Canada, Brazil, China, the United States, and Russia, were the five largest producers of hydroelectric power in 2001. Their combined hydroelectric power generation accounted for 48 percent of the world total. Canada led the world with 328 billion kilowatthours or 3.4 quadrillion Btu (Tables 2.6 and F6). Brazil ranked second with 266 billion kilowatthours or 2.8 quadrillion

Btu and China was third with 263 billion kilowatthours or 2.7 quadrillion Btu. The United States was fourth with 209 billion kilowatthours or 2.1 quadrillion Btu, followed by Russia with 174 billion kilowatthours or 1.8 quadrillion Btu.

Nuclear Electric Power

The generation of nuclear electric power increased by 509 billion kilowatthours between 1992 and 2001, or at an average annual rate of 2.5 percent (Table 2.7). The United States led the world in nuclear electric power generation in 2001 with 769 billion kilowatthours or 8.0 quadrillion Btu (Tables 2.7 and F7). France was second with 401 billion kilowatthours or 4.1 quadrillion Btu and Japan ranked third with 309 billion kilowatthours or 3.2 quadrillion Btu. In 2001, these three countries generated 59 percent of the world's nuclear electric power (Table 2.7).

Geothermal, Solar, Wind, and Wood and Waste Electric Power

The generation of geothermal, solar, wind, and wood and waste electric power increased by 95 billion kilowatthours between 1992 and 2001, or at an average annual rate of 5.4 percent (Table 2.8). The United States led the world in geothermal, solar, wind, and wood and waste electric power generation in 2001 with 85 billion kilowatthours. Germany was second with 23 billion kilowatthours, followed by the Japan with 19 billion kilowatthours, Brazil with 15 billion kilowatthours, and the Philippines with 12 billion kilowatthours. These five countries accounted for 61 percent of the world geothermal, solar, wind, and wood and waste electric power generation in 2001.

Carbon Dioxide Emissions from the Consumption and Flaring of Fossil Fuels

Total world carbon dioxide emissions from the consumption of petroleum, natural gas, and coal, and the flaring of natural gas increased from 5.894 billion metric tons carbon equivalent in 1992 to 6.568 billion metric tons in 2001, or by 11.4 percent (Table H1). The average annual growth rate of carbon dioxide emissions over the period was 1.2 percent. (**Note: Carbon dioxide emissions are measured here in metric tons carbon equivalent. Tons of carbon equivalent can be converted to tons of carbon dioxide gas by multiplying by 44/12.)** The United States, China, Russia, Japan, and India were the world's five largest sources of carbon dioxide emissions from the consumption and flaring of fossil fuels in 2001, producing 52 percent of the world total. The next five leading producers of carbon dioxide emissions from the consumption and flaring of fossil fuels were Germany, Canada, the United Kingdom, Italy, and South Korea, and together they produced an additional 12 percent of the world total. In 2001, total United States carbon dioxide emissions from the consumption and flaring of fossil fuels were 1.565 billion metric tons carbon equivalent, more than one and three-fourths times as much as the 832 million metric tons produced by China, while Russia produced 440 million metric tons.

In 2001, the consumption of petroleum was the world's primary source of carbon dioxide emissions from the consumption and flaring of fossil fuels, accounting for 42 percent of the total (Tables H2 and H1). Between 1992 and 2001 emissions from the consumption of petroleum increased by 262 million metric tons carbon equivalent, or 10.5 percent, rising from 2.499 to 2.761 billion metric tons. The United States was the largest producer of carbon dioxide from the consumption of petroleum in 2001 and accounted for 24 percent of the world total. Japan was the second largest producer, followed by China, Russia, and Germany, and together these four countries accounted for an additional 20 percent.

Coal ranked second as a source of carbon dioxide emissions from the consumption and flaring of fossil fuels in 2001, accounting for 37 percent of the total (Tables H4 and H1). World carbon dioxide emissions from the consumption of coal totaled 2.427 billion metric tons carbon equivalent in 2001, up 8.7 percent from the 1992 level of 2.233 billion metric tons. China and the United States were the two largest producers of carbon dioxide from the consumption of coal in 2001 and together they accounted for 49 percent of the world total. India, Russia, and Japan accounted for an additional 16 percent.

Carbon dioxide emissions from the consumption and flaring of natural gas accounted for the remaining 21 percent of carbon dioxide emissions from the consumption and flaring of fossil fuels in 2001 (Tables H3 and H1). Emissions from the consumption and flaring of natural gas increased from 1.162 billion metric tons carbon equivalent in 1992 to 1.379 billion metric tons in 2001, or by 18.7 percent. The United States and Russia were the two largest producers of carbon dioxide from the consumption and flaring of natural gas in 2001 and together they accounted for 40 percent of the world total. The United Kingdom Germany, and Canada accounted for an additional 10 percent.

Section 1

World Energy Consumption, 1992-2001

Table 1.1 World Consumption of Primary Energy by Selected Country Groups, 1992 - 2001

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Petroleum (thousand barrels per day)										
World Total	**66,933**	**67,123**	**68,420**	**69,993**	**71,581**	**73,099**	**73,859**	**75,610**	**76,896**	**77,125**
OECD	42,637	43,043	44,230	44,982	46,109	46,682	46,912	47,714	47,952	47,711
Non OECD	24,296	24,080	24,189	25,010	25,472	26,417	26,947	27,896	28,944	29,414
Other Groups:										
OECD Europe	14,285	14,201	14,289	14,822	15,030	15,077	15,406	15,237	15,221	15,367
OPEC	4,654	4,892	5,041	5,218	5,276	5,494	5,505	5,638	5,926	6,051
EU.	12,631	12,481	12,577	13,052	13,129	13,137	13,447	13,286	13,244	13,407
IEA	40,392	40,954	42,048	42,859	43,898	44,352	44,463	45,217	45,425	45,249
Natural Gas (trillion cubic feet)										
World Total	**75.05**	**77.15**	**76.93**	**78.66**	**82.20**	**82.10**	**82.91**	**85.07**	**88.69**	**90.27**
OECD	38.91	40.27	41.29	43.35	45.41	45.52	45.61	47.00	49.11	48.52
Non OECD	36.14	36.88	35.63	35.31	36.79	36.58	37.30	38.07	39.58	41.75
Other Groups:										
OECD Europe	12.14	12.72	12.91	13.90	15.05	14.84	15.34	16.05	16.55	16.95
OPEC	6.09	6.43	6.88	7.31	7.97	8.47	8.73	9.01	9.26	10.20
EU.	10.63	11.12	11.32	12.08	13.07	12.79	13.27	13.88	14.31	14.54
IEA	37.17	38.68	39.67	41.62	43.60	43.64	43.62	45.05	47.01	46.38
Coal (million short tons)										
World Total	**4,995**	**5,039**	**5,089**	**5,197**	**5,279**	**5,189**	**5,079**	**5,009**	**5,115**	**5,263**
OECD	2,346	2,335	2,318	2,319	2,352	2,389	2,373	2,340	2,437	2,438
Non OECD	2,650	2,704	2,771	2,878	2,927	2,800	2,706	2,668	2,678	2,825
Other Groups:										
OECD Europe	1,090	1,032	996	971	948	945	915	874	894	901
OPEC	11	12	14	14	19	17	21	24	28	42
EU.	708	654	636	606	603	573	560	538	556	571
IEA	2,043	2,116	2,109	2,109	2,165	2,180	2,179	2,155	2,254	2,262
Hydroelectric Power (billion kilowatthours)										
World Total	**2,224.1**	**2,359.4**	**2,377.2**	**2,491.9**	**2,538.1**	**2,586.6**	**2,588.2**	**2,613.5**	**2,651.8**	**2,586.5**
OECD	1,195.1	1,269.4	1,231.0	1,313.9	1,353.4	1,371.0	1,333.7	1,347.1	1,352.6	1,241.7
Non OECD	1,029.0	1,090.0	1,146.2	1,178.0	1,184.6	1,215.7	1,254.5	1,266.5	1,299.2	1,344.8
Other Groups:										
OECD Europe	467.2	486.0	487.3	493.1	473.4	489.8	504.5	509.4	537.5	533.9
OPEC	72.8	71.9	71.3	71.8	74.8	74.8	80.2	80.5	81.3	80.2
EU.	281.4	285.6	293.5	287.2	287.5	292.6	301.7	300.8	315.4	334.5
IEA	1,157.8	1,231.6	1,198.4	1,273.0	1,309.2	1,331.6	1,297.2	1,302.0	1,306.8	1,200.1
Nuclear Electric Power (billion kilowatthours)										
World Total	**2,011.8**	**2,077.7**	**2,121.3**	**2,206.0**	**2,286.5**	**2,266.1**	**2,316.9**	**2,391.0**	**2,434.2**	**2,520.7**
OECD	1,741.7	1,806.6	1,866.6	1,939.1	1,990.5	1,967.1	2,023.8	2,090.6	2,112.0	2,179.5
Non OECD	270.0	271.1	254.6	266.9	295.9	299.0	293.1	300.4	322.2	341.2
Other Groups:										
OECD Europe	776.9	809.6	808.3	824.3	862.9	871.3	872.6	884.3	884.3	914.0
OPEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EU.	718.1	750.7	748.0	764.9	802.1	811.1	811.5	822.1	821.2	844.9
IEA	1,714.7	1,790.3	1,851.1	1,920.2	1,971.8	1,946.7	2,004.2	2,068.6	2,091.1	2,155.0

See footnotes at end of table.

Table 1.1 World Consumption of Primary Energy by Selected Country Groups, 1992 - 2001 (Continued)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Geothermal, Solar, Wind, Wood and Waste Electric Power (billion kilowatthours)										
World Total	**156.3**	**163.7**	**171.2**	**179.3**	**182.8**	**199.1**	**204.1**	**219.9**	**238.7**	**251.1**
OECD	137.4	145.1	150.5	155.0	157.3	169.5	172.9	183.9	200.1	206.7
Non OECD	18.8	18.5	20.7	24.3	25.6	29.6	31.2	36.0	38.6	44.4
Other Groups:										
OECD Europe	28.6	33.7	36.6	41.1	40.2	48.8	57.6	63.3	76.1	83.6
OPEC	1.0	1.0	1.5	2.1	2.1	2.5	2.5	2.6	2.5	2.4
EU.	27.1	31.9	34.3	38.5	37.4	45.7	54.0	58.8	71.3	78.7
IEA	131.3	138.9	144.6	149.0	151.1	163.4	166.0	176.5	192.2	199.0

[1] Preliminary.
[2] The Organization for Economic Cooperation and Development (OECD) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, South, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). Refer to Appendix A for a listing of OECD Europe.
[3] The Organization of Petroleum Exporting Countries (OPEC) includes Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.
[4] European Union (EU) includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.
[5] International Energy Agency (IEA) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, South, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). No Czech Republic data for 1992.
Notes: For consistency data reflect 2001 membership (as of December 31, 2001) for all years. The country groups OECD, OECD Europe, EU, and IEA include unified Germany. Data for the Czech Republic are included in the country group IEA beginning in 1993, the year that the country came into existence.
Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Sections 3, 4, 5, and 6.

Table 1.2 World Petroleum Consumption, 1992 - 2001

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	1,643	1,688	1,727	1,755	1,797	1,923	1,947	2,029	2,073	1,910
Mexico	1,723	1,710	1,795	1,724	1,763	1,855	1,948	2,000	1,992	1,939
United States	17,033	17,237	17,718	17,725	18,309	18,620	18,917	19,519	19,701	19,649
Other	8	8	8	8	8	8	8	8	8	8
Total	**20,407**	**20,642**	**21,248**	**21,212**	**21,876**	**22,406**	**22,820**	**23,556**	**23,774**	**23,506**
Central & South America										
Argentina	445	468	458	453	479	476	492	518	511	486
Bolivia	26	27	30	33	35	36	40	43	48	49
Brazil	1,521	1,580	1,674	1,788	1,904	2,031	2,096	2,130	2,166	2,199
Chile	151	168	179	197	217	228	239	244	236	241
Colombia	230	240	244	251	278	287	289	282	279	252
Costa Rica	25	27	28	31	30	31	35	36	36	37
Cuba	180	179	183	187	192	164	159	162	161	163
Dominican Republic	64	59	68	72	78	84	86	99	125	129
Ecuador	119	112	120	123	129	135	137	128	131	129
El Salvador	22	22	25	31	30	32	38	38	38	39
Guatemala	31	34	38	41	44	48	58	59	59	61
Honduras	18	18	20	23	25	25	29	31	28	29
Jamaica	51	52	55	60	62	66	67	69	66	66
Netherlands Antilles	63	63	66	69	69	74	74	71	71	72
Panama	41	40	44	43	47	49	52	53	53	52
Peru	119	126	132	143	153	171	172	177	177	161
Puerto Rico	156	162	165	170	175	180	185	190	201	190
Trinidad and Tobago	22	21	24	22	20	22	22	23	25	24
Uruguay	32	35	33	31	34	37	44	48	43	42
Venezuela	414	427	440	448	444	455	457	461	500	505
Virgin Islands, U.S.	55	53	56	56	57	58	59	62	66	66
Other	115	124	129	142	141	152	163	167	171	174
Total	**3,900**	**4,038**	**4,213**	**4,416**	**4,645**	**4,842**	**4,993**	**5,093**	**5,191**	**5,166**
Western Europe										
Austria	228	231	235	234	232	243	248	284	262	262
Belgium	511	499	510	499	564	591	601	568	586	595
Denmark	193	198	210	225	238	235	229	223	215	218
Finland	222	212	220	175	193	219	209	215	202	211
France	1,926	1,875	1,833	1,896	1,935	1,957	2,030	2,027	2,021	2,033
Germany	2,843	2,900	2,879	2,875	2,911	2,915	2,921	2,836	2,775	2,813
Greece	331	339	349	350	368	374	392	384	399	406
Ireland	104	104	113	126	126	133	149	167	169	174
Italy	1,937	1,852	1,841	2,048	2,058	1,908	1,945	1,841	1,867	1,866
Luxembourg	39	39	39	37	38	40	42	46	47	51
Netherlands	766	760	760	790	771	810	813	835	852	895
Norway	183	186	183	196	216	230	230	224	197	203
Portugal	277	268	270	290	277	299	330	333	333	340
Spain	1,109	1,056	1,127	1,256	1,175	1,280	1,377	1,429	1,461	1,497
Sweden	342	332	353	406	398	328	371	360	334	329
Switzerland	287	277	281	257	275	284	272	272	273	290
Turkey	492	564	540	601	633	634	627	625	663	619
United Kingdom	1,803	1,815	1,837	1,845	1,845	1,805	1,789	1,739	1,721	1,716
Bosnia and Herzegovina	35	23	20	19	18	18	21	21	19	20
Croatia	65	63	79	88	78	81	90	91	86	89
Macedonia, TFYR	19	21	18	18	23	21	22	20	23	20
Slovenia	35	41	42	47	54	56	54	54	52	53
Yugoslavia	56	33	32	27	49	67	63	58	62	64
Other	46	50	51	53	55	58	61	63	82	83
Total	**13,851**	**13,739**	**13,825**	**14,358**	**14,531**	**14,587**	**14,887**	**14,712**	**14,702**	**14,849**

See footnotes at end of table.

Table 1.2 World Petroleum Consumption, 1992 - 2001 (Continued)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	21	17	13	15	12	10	10	19	21	22
Bulgaria	130	117	126	131	119	107	103	97	103	94
Former Czechoslovakia	213	--	--	--	--	--	--	--	--	--
Czech Republic	--	147	152	158	182	164	171	179	164	176
Slovakia	--	61	63	65	66	68	71	69	75	82
Hungary	171	166	168	160	148	153	159	154	145	149
Poland	297	304	309	318	365	389	412	409	441	424
Romania	250	248	221	244	257	270	250	210	213	215
Armenia	48	25	8	6	3	3	3	4	5	6
Azerbaijan	203	194	187	179	134	129	146	149	137	140
Belarus	375	289	241	228	206	186	190	188	227	230
Estonia	25	28	25	26	27	27	27	24	22	24
Georgia	27	16	7	8	19	21	26	26	30	32
Kazakhstan	404	341	304	281	256	210	201	195	189	195
Kyrgyzstan	33	19	16	18	18	18	18	18	18	20
Latvia	52	41	40	42	47	44	43	42	41	44
Lithuania	84	76	78	73	68	67	73	64	70	72
Moldova	57	40	22	22	22	22	22	22	22	24
Russia	4,423	3,750	3,179	2,976	2,619	2,562	2,489	2,538	2,578	2,595
Tajikistan	20	17	7	10	27	27	28	29	20	20
Turkmenistan	76	66	63	64	62	66	58	54	62	63
Ukraine	813	570	495	484	388	363	384	374	264	290
Uzbekistan	190	177	168	180	139	140	140	143	139	142
Total	**7,910**	**6,710**	**5,892**	**5,687**	**5,184**	**5,046**	**5,025**	**5,008**	**4,986**	**5,058**
Middle East										
Bahrain	21	20	21	23	24	25	26	24	30	31
Cyprus	38	38	43	43	42	43	46	49	47	49
Iran	1,083	1,108	1,130	1,140	1,119	1,222	1,240	1,250	1,263	1,277
Iraq	341	409	457	474	469	443	447	451	451	460
Israel	201	198	200	210	214	237	247	254	272	260
Jordan	73	72	82	85	92	88	96	96	101	103
Kuwait	120	131	166	173	189	212	238	286	264	273
Lebanon	55	67	76	82	85	97	100	104	106	107
Oman	40	39	40	42	47	49	51	53	53	53
Qatar	21	17	21	23	23	24	25	26	28	29
Saudi Arabia	1,039	1,088	1,109	1,168	1,197	1,204	1,216	1,261	1,421	1,452
Syria	185	209	224	226	229	240	248	256	261	265
United Arab Emirates	305	310	318	316	306	317	322	297	300	310
Yemen	83	69	66	68	68	70	73	74	73	74
Total	**3,605**	**3,775**	**3,953**	**4,076**	**4,104**	**4,272**	**4,376**	**4,481**	**4,670**	**4,743**

See footnotes at end of table.

Table 1.2 World Petroleum Consumption, 1992 - 2001 (Continued)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Africa										
Algeria	210	207	204	205	198	199	206	198	206	209
Angola	26	25	25	27	25	29	26	31	29	31
Cameroon	25	21	23	23	23	23	23	22	23	22
Congo (Brazzaville)	6	5	5	5	5	5	5	4	4	5
Congo (Kinshasa)	24	25	20	21	21	21	20	17	14	14
Cote d'Ivoire (Ivory Coast)	25	28	29	29	30	28	27	30	33	32
Egypt	444	450	448	458	501	531	555	550	561	562
Ethiopia	23	22	14	15	12	12	17	21	23	23
Gabon	16	15	15	14	15	16	17	13	12	13
Ghana	22	23	26	27	27	26	27	31	37	38
Kenya	41	42	44	46	48	44	51	52	57	57
Libya	150	160	166	179	187	199	187	192	210	216
Morocco	130	135	148	142	137	146	144	158	158	167
Nigeria	265	271	252	284	286	277	260	252	246	275
Senegal	19	19	23	25	25	23	25	28	30	31
South Africa	412	402	410	421	428	439	451	466	458	460
Sudan	33	32	28	26	26	27	27	30	43	50
Tunisia	71	74	75	70	73	78	81	79	85	87
Zimbabwe	21	22	23	25	28	30	31	31	25	23
Other	192	195	204	206	210	218	225	232	255	266
Total	**2,155**	**2,174**	**2,180**	**2,248**	**2,306**	**2,373**	**2,405**	**2,436**	**2,509**	**2,581**
Asia & Oceania										
Australia	712	756	790	834	801	827	839	860	859	870
Bangladesh	37	40	46	51	52	56	58	67	69	71
Brunei	7	9	11	11	12	13	12	12	12	13
Burma	16	17	19	18	20	25	30	36	37	38
China	2,662	2,959	3,161	3,363	3,610	3,916	4,106	4,364	4,796	4,975
Guam	17	23	32	24	22	25	20	22	19	20
Hong Kong	152	158	180	186	183	185	192	264	245	257
India	1,275	1,311	1,413	1,575	1,681	1,765	1,844	2,031	2,127	2,130
Indonesia	707	765	778	807	859	942	906	964	1,037	1,045
Japan	5,446	5,401	5,674	5,711	5,867	5,728	5,528	5,587	5,528	5,421
Korea, North	74	72	70	63	48	49	70	77	86	85
Korea, South	1,456	1,690	1,856	2,007	2,155	2,260	1,930	2,075	2,146	2,140
Malaysia	302	336	378	399	435	469	449	454	465	472
Mongolia	13	13	13	11	12	8	8	9	8	9
New Zealand	111	123	128	154	134	129	133	133	146	140
Pakistan	227	256	282	298	327	333	347	351	365	365
Papua New Guinea	15	15	15	15	15	15	15	15	15	15
Philippines	260	285	303	328	346	365	381	370	353	343
Singapore	420	469	503	512	586	648	668	675	682	700
Sri Lanka	37	41	45	48	53	60	61	66	75	75
Taiwan	557	616	659	737	780	775	808	853	938	988
Thailand	476	545	603	679	749	775	735	800	803	785
Vietnam	61	77	85	94	116	129	135	159	176	185
Other	66	67	68	69	72	74	78	80	79	81
Total	**15,105**	**16,044**	**17,108**	**17,997**	**18,935**	**19,574**	**19,353**	**20,324**	**21,064**	**21,222**
World Total	**66,933**	**67,123**	**68,420**	**69,993**	**71,581**	**73,099**	**73,859**	**75,610**	**76,896**	**77,125**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table 1.3 World Dry Natural Gas Consumption, 1992 - 2001

(Billion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	2,596	2,736	2,824	2,791	2,917	2,887	2,794	3,105	3,283	2,905
Mexico	959	977	1,026	1,043	1,103	1,178	1,284	1,262	1,380	1,372
United States	20,228	20,790	21,247	22,206	22,609	22,736	22,245	22,403	23,455	22,635
Total	**23,783**	**24,502**	**25,098**	**26,039**	**26,629**	**26,802**	**26,322**	**26,770**	**28,117**	**26,911**
Central & South America										
Argentina	787	833	856	953	1,010	1,008	1,077	1,143	1,173	1,098
Barbados	1	1	1	1	1	1	1	1	1	1
Bolivia	32	30	35	43	37	47	31	32	44	41
Brazil	130	146	152	159	178	195	205	231	333	339
Chile	54	62	69	67	64	99	114	162	184	228
Colombia	151	157	162	161	167	211	221	183	201	201
Cuba	1	1	1	1	2	26	14	18	21	21
Ecuador	4	4	4	4	4	4	4	4	5	6
Peru	18	34	35	33	34	8	14	14	12	13
Puerto Rico	0	0	0	0	0	0	0	0	12	22
Trinidad and Tobago	194	218	250	268	303	328	328	337	354	408
Uruguay	0	0	0	0	0	0	0	1	1	1
Venezuela	763	815	876	890	961	994	1,110	1,016	961	1,120
Total	**2,136**	**2,301**	**2,440**	**2,581**	**2,761**	**2,922**	**3,120**	**3,141**	**3,304**	**3,499**
Western Europe										
Austria	224	235	242	262	281	271	279	285	272	276
Belgium	374	392	401	443	493	470	518	552	554	547
Denmark	87	98	108	127	148	168	172	179	182	186
Finland	104	108	119	123	129	127	145	145	148	161
France	1,146	1,158	1,157	1,183	1,314	1,300	1,313	1,382	1,420	1,484
Germany	2,739	2,830	2,965	3,172	3,163	3,012	3,130	3,151	3,195	3,332
Greece	4	3	1	1	1	7	30	53	72	71
Ireland	83	94	96	102	114	118	118	125	142	148
Italy	1,760	1,801	1,748	1,921	1,984	2,048	2,205	2,396	2,498	2,514
Luxembourg	19	20	20	22	25	25	25	26	27	31
Netherlands	1,669	1,714	1,654	1,701	1,874	1,763	1,752	1,705	1,725	1,756
Norway	131	90	93	101	102	128	127	155	140	145
Portugal	0	0	0	0	0	4	28	79	81	90
Spain	228	224	239	299	334	437	449	514	588	634
Sweden	27	30	30	30	31	31	30	33	30	34
Switzerland	83	87	86	95	102	99	102	106	105	109
Turkey	164	182	192	248	290	346	366	442	524	563
United Kingdom	2,170	2,412	2,542	2,690	3,182	3,013	3,072	3,259	3,373	3,279
Bosnia and Herzegovina	18	14	15	87	5	5	7	7	11	11
Croatia	96	104	91	82	88	99	94	94	98	100
Macedonia, TFYR	9	10	0	0	0	0	1	1	0	0
Slovenia	24	30	29	35	45	32	34	35	36	37
Yugoslavia	72	34	58	39	98	97	104	61	19	21
Total	**11,231**	**11,671**	**11,886**	**12,761**	**13,805**	**13,600**	**14,099**	**14,785**	**15,241**	**15,528**

See footnotes at end of table.

Table 1.3 World Dry Natural Gas Consumption, 1992 - 2001 (Continued)

(Billion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	4	1	1	1	1	1	1	1	1	1
Bulgaria	186	172	168	208	219	182	135	119	193	205
Former Czechoslovakia	411	--	--	--	--	--	--	--	--	--
Czech Republic	--	259	238	285	328	333	333	336	326	349
Slovakia	--	220	208	273	241	245	249	251	252	280
Hungary	349	372	375	407	453	431	433	437	425	472
Poland	373	393	393	416	463	463	462	439	470	489
Romania	936	908	851	901	894	830	650	622	600	696
Armenia	66	49	57	57	64	46	49	46	50	49
Azerbaijan	523	388	332	318	328	323	197	212	200	237
Belarus	646	600	498	452	494	533	545	608	692	636
Estonia	53	21	23	26	29	37	57	35	40	45
Georgia	177	85	57	74	64	67	66	41	43	41
Kazakhstan	710	523	530	383	510	494	473	480	491	505
Kyrgyzstan	85	79	64	31	64	68	68	67	68	71
Latvia	57	28	25	39	35	46	46	46	57	60
Lithuania	141	85	81	99	92	102	113	76	92	97
Moldova	78	64	49	49	71	85	82	74	75	72
Russia	16,482	16,185	15,214	14,507	14,504	13,434	14,045	14,013	14,130	14,412
Tajikistan	67	49	57	29	43	40	40	41	44	46
Turkmenistan	141	145	148	170	170	162	155	198	261	339
Ukraine	3,503	3,871	3,327	2,970	2,935	2,832	2,606	2,755	2,779	2,617
Uzbekistan	1,095	1,541	1,229	1,349	1,434	1,455	1,409	1,423	1,511	1,596
Total	**26,080**	**26,039**	**23,923**	**23,043**	**23,434**	**22,210**	**22,213**	**22,318**	**22,800**	**23,317**
Middle East										
Bahrain	188	234	229	229	232	281	293	297	303	314
Iran	883	938	1,123	1,243	1,416	1,663	1,828	2,112	2,221	2,316
Iraq	101	90	112	112	114	108	104	112	111	97
Israel	1	1	1	1	1	1	1	(s)	(s)	(s)
Jordan	5	7	10	10	10	10	10	10	10	10
Kuwait	93	191	211	211	328	327	318	305	339	335
Oman	117	140	147	130	128	159	232	182	221	224
Qatar	401	477	477	477	484	513	522	493	532	560
Saudi Arabia	1,201	1,268	1,331	1,343	1,460	1,601	1,653	1,632	1,759	1,896
Syria	127	131	134	104	142	161	203	213	215	206
United Arab Emirates	902	798	765	875	959	1,024	1,073	1,094	1,110	1,337
Total	**4,018**	**4,274**	**4,540**	**4,735**	**5,274**	**5,849**	**6,237**	**6,449**	**6,822**	**7,297**
Africa										
Algeria	730	655	690	742	762	712	736	753	726	788
Angola	20	20	18	20	20	20	20	20	20	19
Cote d'Ivoire (Ivory Coast)	0	0	0	1	19	21	28	47	48	48
Egypt	349	399	423	439	473	477	485	518	646	749
Equatorial Guinea	0	0	0	0	0	0	1	1	1	1
Gabon	4	4	4	4	4	4	4	4	3	3
Libya	174	168	173	171	184	192	192	150	184	191
Morocco	1	1	1	1	1	2	2	2	2	2
Mozambique	0	0	0	0	0	0	2	2	2	2
Nigeria	173	178	161	183	193	207	208	219	238	277
Senegal	0	1	1	2	2	1	1	1	2	2
South Africa	1	64	69	69	65	62	51	49	58	64
Tunisia	31	53	69	58	67	91	104	106	109	135
Total	**1,483**	**1,542**	**1,610**	**1,689**	**1,790**	**1,788**	**1,836**	**1,872**	**2,038**	**2,280**

See footnotes at end of table.

Table 1.3 World Dry Natural Gas Consumption, 1992 - 2001 (Continued)

(Billion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	11	11	11	7	8	8	8	8	8	8
Australia	604	630	661	710	719	718	752	751	796	824
Bangladesh	206	216	235	260	269	269	290	320	343	350
Brunei	35	29	25	34	28	31	27	37	39	48
Burma	36	39	51	58	57	53	62	58	66	76
China	533	558	589	601	663	749	784	854	957	1,070
Hong Kong	16	17	19	20	21	22	22	23	24	24
India	477	532	594	628	696	717	761	752	795	803
Indonesia	673	850	965	1,061	1,108	1,125	983	1,124	1,081	1,278
Japan	2,023	2,034	2,180	2,207	2,390	2,439	2,535	2,646	2,753	2,840
Korea, South	163	203	270	327	432	525	491	598	669	739
Malaysia	388	458	482	485	563	589	615	653	722	1,104
New Zealand	195	175	175	166	186	199	175	187	214	230
Pakistan	551	583	627	646	696	699	710	784	856	826
Papua New Guinea	2	3	2	4	5	4	4	4	4	4
Philippines	0	0	0	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Singapore	39	53	53	53	53	53	53	53	53	88
Taiwan	115	111	141	151	157	187	219	220	243	234
Thailand	249	310	342	368	428	538	569	629	705	845
Vietnam	7	9	9	25	29	8	25	35	41	46
Total	**6,323**	**6,820**	**7,428**	**7,810**	**8,509**	**8,934**	**9,082**	**9,736**	**10,367**	**11,437**
World Total	**75,053**	**77,148**	**76,926**	**78,660**	**82,201**	**82,104**	**82,909**	**85,071**	**88,688**	**90,270**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 500 million cubic feet.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 4.

Table 1.4 World Coal Consumption, 1992 - 2001

(Million Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	49.04	54.84	57.68	58.28	59.11	63.18	61.33	63.50	68.61	72.59
Mexico	8.85	9.20	11.30	12.30	13.64	14.07	14.70	13.72	14.81	14.81
United States [2]	907.65	944.08	951.29	962.10	1,006.32	1,029.54	1,037.10	1,038.65	1,084.09	1,060.30
Total	**965.55**	**1,008.13**	**1,020.26**	**1,032.69**	**1,079.07**	**1,106.79**	**1,113.13**	**1,115.87**	**1,167.51**	**1,147.70**
Central & South America										
Argentina	1.41	1.36	2.14	1.85	1.64	1.52	1.49	1.12	0.75	0.63
Brazil	18.76	18.98	18.91	19.57	20.13	20.11	20.05	21.01	21.48	20.75
Chile	2.94	2.97	3.54	3.89	5.34	6.88	6.51	6.78	5.10	3.53
Colombia	6.18	6.35	6.07	5.05	5.27	5.56	5.68	4.38	4.59	4.55
Costa Rica	0.00	0.00	0.00	(s)	0.01	(s)	(s)	(s)	(s)	(s)
Cuba	0.07	0.09	0.12	0.11	0.04	0.03	0.04	0.04	0.04	0.03
Dominican Republic	0.20	0.24	0.07	0.09	0.11	0.12	0.16	0.26	0.10	0.22
Guatemala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.24	0.22
Haiti	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Honduras	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.06	0.15	0.14
Jamaica	0.07	0.07	0.06	0.06	0.09	0.07	0.06	0.03	0.06	0.06
Panama	0.05	0.06	0.06	0.06	0.11	0.06	0.06	0.07	0.07	0.07
Paraguay	0.08	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.00
Peru	0.53	0.65	0.58	0.61	0.63	0.66	0.72	0.65	1.19	0.92
Puerto Rico	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.18	0.18	0.18
Uruguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Venezuela	0.01	0.04	0.08	0.01	0.23	0.05	1.46	0.06	0.20	0.07
Virgin Islands, U.S.	0.23	0.25	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Other	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**30.72**	**31.30**	**32.14**	**31.81**	**34.16**	**35.60**	**36.78**	**35.00**	**34.48**	**31.65**
Western Europe										
Austria	6.23	5.59	5.67	6.76	6.62	6.85	5.80	6.08	6.67	6.46
Belgium	15.46	14.08	15.08	14.42	13.93	13.53	13.60	11.90	13.33	13.79
Denmark	12.22	13.16	14.47	12.08	16.59	12.32	10.41	8.51	7.42	7.58
Finland	6.08	7.20	8.98	7.51	8.81	8.20	6.22	6.22	6.24	7.31
France	32.39	25.47	25.20	27.32	28.41	24.65	29.48	25.59	24.61	20.89
Germany	362.20	334.98	314.28	297.52	295.81	280.01	268.77	257.41	263.88	265.09
Greece	62.20	62.45	65.51	64.43	65.72	66.15	68.24	68.32	72.41	75.90
Iceland	0.07	0.07	0.11	0.09	0.11	0.09	0.11	0.10	0.16	0.16
Ireland	3.25	3.25	3.03	3.02	3.34	3.23	3.22	2.77	3.14	3.24
Italy	20.37	17.73	18.71	19.97	18.32	18.43	19.26	19.21	20.48	22.14
Luxembourg	1.62	1.67	1.45	0.82	0.77	0.49	0.17	0.17	0.19	0.17
Malta	0.33	0.33	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.35
Netherlands	13.36	13.79	15.02	15.63	15.73	15.68	15.81	13.11	14.16	23.35
Norway	1.25	1.39	1.61	1.67	1.64	1.68	1.75	1.74	1.76	2.57
Portugal	5.20	5.49	5.78	6.25	5.99	6.05	5.50	6.71	6.73	5.15
Spain	52.30	49.08	47.62	47.73	41.55	45.23	43.67	47.79	49.72	45.19
Sweden	3.87	3.96	4.33	4.02	4.56	3.85	3.83	3.70	3.75	3.71
Switzerland	0.33	0.28	0.28	0.31	0.23	0.17	0.14	0.15	0.41	0.24
Turkey	66.20	60.57	65.57	67.34	73.28	80.10	86.27	83.69	79.87	81.14
United Kingdom	110.74	96.14	90.66	78.79	76.94	68.61	65.64	60.66	63.72	70.76
Bosnia and Herzegovina	2.20	1.65	1.54	1.81	1.86	1.92	1.98	8.00	9.79	10.03
Croatia	0.79	0.85	0.57	0.30	0.43	0.49	0.40	0.31	0.91	0.88
Macedonia, TFYR	7.48	7.62	7.98	8.20	8.08	8.31	9.15	8.50	8.66	8.44
Slovenia	6.51	6.18	5.59	5.81	5.54	6.20	5.95	5.50	5.51	5.13
Yugoslavia	44.62	41.82	42.88	44.83	43.11	44.87	48.70	36.90	38.01	39.62
Total	**837.30**	**774.80**	**762.26**	**736.96**	**737.71**	**717.48**	**714.42**	**683.41**	**701.88**	**719.28**

See footnotes at end of table.

Table 1.4 World Coal Consumption, 1992 - 2001 (Continued)

(Million Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.85	0.67	0.19	0.18	0.11	0.08	0.05	0.04	0.04	0.04
Bulgaria	37.03	35.77	34.11	36.07	35.66	37.55	37.81	35.23	35.79	35.24
Former Czechoslovakia	101.38	--	--	--	--	--	--	--	--	--
Czech Republic	--	85.80	76.38	78.60	77.30	75.37	69.05	59.61	70.10	67.78
Slovakia	--	15.93	13.71	13.95	13.56	12.38	11.53	10.88	9.90	10.24
Hungary	21.04	19.86	18.53	18.61	18.80	19.28	18.97	19.10	17.91	17.54
Poland	191.77	193.60	184.10	183.82	159.82	182.24	167.77	161.01	157.51	150.66
Romania	48.62	48.85	49.35	49.85	50.12	42.07	34.57	30.79	35.65	36.40
Armenia	0.16	(s)	0.04	(s)	0.01	0.01	0.01	(s)	(s)	(s)
Azerbaijan	0.03	0.01	0.01	0.01	0.01	0.01	(s)	0.00	0.00	0.00
Belarus	2.05	1.77	1.32	1.24	1.23	0.89	0.93	0.66	0.65	0.75
Estonia	2.80	2.28	2.02	1.05	1.51	1.79	1.62	2.27	1.73	1.56
Georgia	0.48	0.35	0.31	0.28	0.20	0.15	0.02	0.03	0.03	0.01
Kazakhstan	94.16	87.16	88.69	79.71	62.60	54.27	52.85	50.19	53.10	61.02
Kyrgyzstan	2.73	2.44	2.35	1.30	1.12	0.79	1.35	1.34	1.29	1.37
Latvia	0.74	0.67	0.47	0.29	0.27	0.23	0.17	0.15	0.12	0.11
Lithuania	0.73	0.73	0.53	0.41	0.37	0.30	0.26	0.21	0.16	0.16
Moldova	2.96	2.57	2.52	1.50	1.30	0.70	0.61	0.26	0.21	0.21
Russia	374.59	361.09	316.46	295.51	317.36	258.19	238.25	247.10	266.78	283.85
Tajikistan	0.25	0.39	0.23	0.10	0.13	0.13	0.13	0.14	0.14	0.14
Turkmenistan	0.55	0.44	0.44	0.22	0.11	0.06	0.00	0.00	0.00	0.00
Ukraine	151.26	135.33	108.84	109.60	94.78	91.77	91.99	93.53	93.80	93.71
Uzbekistan	6.44	4.80	4.89	3.80	3.69	3.08	3.22	3.19	2.76	2.94
Total	**1,040.60**	**1,000.53**	**905.50**	**876.10**	**840.09**	**781.33**	**731.17**	**715.73**	**747.67**	**763.74**
Middle East										
Cyprus	0.03	0.03	0.03	0.02	0.01	0.02	0.03	0.03	0.05	0.06
Iran	1.45	1.28	1.76	1.55	1.98	1.98	2.05	2.28	2.31	2.31
Israel	5.52	6.24	6.61	7.24	8.64	9.53	10.25	10.00	11.67	10.93
Lebanon	0.00	0.12	0.12	0.20	0.23	0.23	0.22	0.22	0.22	0.22
Other	(s)	(s)	(s)	0.01	0.01	(s)	(s)	(s)	(s)	(s)
Total	**6.99**	**7.67**	**8.53**	**9.03**	**10.86**	**11.76**	**12.55**	**12.54**	**14.26**	**13.52**
Africa										
Algeria	1.00	0.96	0.84	1.06	0.66	0.61	0.92	0.97	0.88	0.78
Botswana	1.00	0.99	1.01	1.01	0.86	0.88	1.05	1.07	1.09	1.09
Cameroon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.26	0.26
Egypt	1.25	1.63	1.72	1.18	1.64	1.37	1.35	1.11	1.24	1.24
Ghana	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kenya	0.18	0.15	0.12	0.15	0.15	0.16	0.10	0.08	0.07	0.07
Libya	0.01	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Madagascar	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Malawi	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Mauritania	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mauritius	0.08	0.07	0.04	0.07	0.05	0.05	0.08	0.13	0.07	0.07
Morocco	1.93	2.21	2.45	2.90	3.62	3.42	4.07	3.93	4.36	4.44
Mozambique	0.07	0.07	0.07	0.06	0.04	0.04	0.04	0.04	0.04	0.04
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	(s)	0.00
Niger	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.17	0.17	0.17
Nigeria	0.12	0.14	0.15	0.16	0.16	0.16	0.07	0.07	0.07	0.07
South Africa	147.39	146.39	160.75	162.26	163.94	171.67	160.84	170.22	173.35	176.64
Swaziland	0.11	0.06	0.20	0.19	0.14	0.16	0.30	0.32	0.32	0.32
Tanzania	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tunisia	0.13	0.13	0.12	0.11	0.12	0.12	0.10	0.14	0.13	0.13
Zambia	0.45	0.35	0.16	0.16	0.18	0.20	0.21	0.20	0.21	0.21
Zimbabwe	6.09	5.66	6.00	5.94	5.09	4.29	4.26	4.89	4.67	4.97
Total	**160.28**	**159.31**	**174.13**	**175.77**	**177.15**	**183.64**	**173.98**	**183.68**	**186.97**	**190.54**

See footnotes at end of table.

Table 1.4 World Coal Consumption, 1992 - 2001 (Continued)

(Million Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Australia	111.21	109.06	109.75	112.24	120.43	127.40	137.69	140.66	141.00	144.38
Bangladesh	0.19	0.07	0.06	0.07	0.38	0.70	0.21	0.10	0.73	0.55
Bhutan	0.08	0.07	0.09	0.10	0.09	0.08	0.07	0.07	0.07	0.07
Burma	0.10	0.08	0.07	0.08	0.07	0.07	0.04	0.20	0.46	0.52
China	1,199.48	1,275.60	1,389.84	1,497.51	1,516.66	1,450.43	1,392.01	1,342.70	1,282.25	1,382.63
Fiji	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00
Hong Kong	11.55	13.33	9.60	10.33	8.24	7.07	8.60	7.05	6.68	8.86
India	273.67	286.12	291.40	311.86	332.50	342.61	339.78	343.37	359.00	360.33
Indonesia	8.24	9.51	11.56	11.53	16.27	14.59	16.19	20.74	24.50	39.01
Japan	126.01	128.42	133.41	139.89	143.42	147.45	143.48	148.68	159.83	165.87
Korea, North	107.31	111.61	110.45	109.32	108.27	107.31	101.68	100.42	105.60	105.19
Korea, South	50.28	54.89	55.75	61.10	58.45	59.46	60.93	58.35	71.67	75.82
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	2.76	2.25	2.62	2.67	3.27	2.58	2.61	2.16	3.63	3.11
Mongolia	6.66	6.01	5.52	5.36	5.44	5.21	5.29	5.24	5.49	5.78
Nepal	0.12	0.08	0.14	0.14	0.14	0.14	0.37	0.45	0.47	0.49
New Caledonia	0.19	0.19	0.18	0.18	0.19	0.19	0.18	0.18	0.18	0.18
New Zealand	2.52	2.33	2.16	2.31	2.45	2.49	1.97	1.95	1.99	2.21
Pakistan	4.57	4.48	4.75	4.56	5.01	4.78	4.52	4.78	4.54	4.57
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	2.99	3.05	3.39	3.87	5.12	5.93	5.53	7.16	9.55	9.32
Singapore	0.03	0.03	0.06	0.05	(s)	(s)	(s)	0.00	0.00	0.00
Sri Lanka	(s)	(s)	(s)	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Taiwan	24.12	26.65	30.40	31.66	38.63	38.31	44.98	47.39	52.88	52.87
Thailand	17.82	18.52	20.64	23.10	27.82	28.71	24.41	24.48	24.17	27.13
Vietnam	3.79	4.39	4.35	6.94	7.52	6.83	6.04	6.36	7.12	7.28
Total	**1,953.72**	**2,056.78**	**2,186.22**	**2,334.91**	**2,400.42**	**2,352.38**	**2,296.62**	**2,262.53**	**2,261.86**	**2,396.18**
World Total	**4,995.18**	**5,038.52**	**5,089.03**	**5,197.26**	**5,279.47**	**5,188.98**	**5,078.65**	**5,008.76**	**5,114.64**	**5,262.62**

[1] Preliminary.
[2] United States coal consumption is from Energy Information Administration, Annual Energy Review 2001, table 7.1.
- -= Not applicable.
(s) = Value less than 5 thousand short tons.
Notes: Sum of components may not equal total due to independent rounding.
See Glossary for definition of apparent coal consumption.
Sources: See sources at the end of Section 5.

Table 1.5 World Net Hydroelectric Power Consumption, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	313.2	320.3	326.4	332.0	352.4	347.2	328.6	342.1	354.7	327.9
Mexico	25.9	26.0	19.8	27.3	31.1	26.2	24.4	32.5	32.8	28.2
United States [2]	268.3	298.5	286.7	334.7	373.1	375.9	340.5	333.5	296.1	224.1
Total	**607.4**	**644.8**	**633.0**	**694.0**	**756.6**	**749.3**	**693.4**	**708.0**	**683.6**	**580.2**
Central & South America										
Argentina	24.3	29.9	26.6	26.7	22.8	27.9	26.3	21.5	28.6	39.7
Bolivia	1.3	1.4	1.4	1.4	1.5	1.4	1.5	1.8	2.0	2.1
Brazil	221.1	232.7	240.3	251.4	263.1	276.2	288.6	290.0	301.7	265.5
Chile	16.6	17.0	16.8	19.6	18.6	18.8	15.8	13.4	18.9	21.5
Colombia	22.2	27.7	32.0	31.8	35.1	31.4	30.5	33.4	31.8	31.3
Costa Rica	3.5	3.9	3.9	3.5	3.8	4.8	4.3	5.1	5.6	5.6
Dominican Republic	0.5	1.1	0.5	0.6	0.9	0.7	0.7	1.1	0.8	0.7
Ecuador	4.9	5.8	6.6	5.1	6.3	6.5	6.5	7.1	7.3	7.0
El Salvador	1.0	1.2	1.2	1.5	1.9	1.4	1.6	1.7	1.2	1.2
Guatemala	1.8	1.9	2.0	1.7	2.1	2.4	1.6	2.1	2.3	2.2
Haiti	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.2
Honduras	2.2	2.2	1.8	1.7	2.0	2.1	1.9	2.1	2.2	1.9
Jamaica	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nicaragua	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.2	0.2
Panama	1.9	2.3	2.4	2.4	3.0	2.9	2.9	2.8	3.1	2.5
Paraguay	26.8	31.1	36.0	41.7	47.6	50.1	50.3	51.4	52.9	44.9
Peru	9.7	11.7	12.6	13.6	13.2	13.1	13.7	14.4	16.0	17.4
Puerto Rico	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Suriname	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5
Uruguay	7.8	7.2	7.4	5.8	5.7	6.4	9.1	5.3	6.0	7.9
Venezuela	46.8	47.0	50.8	50.9	53.3	56.7	57.4	59.9	62.2	59.8
Other	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	**394.8**	**426.6**	**444.6**	**461.9**	**483.3**	**505.0**	**515.1**	**515.8**	**545.0**	**513.4**
Western Europe										
Austria	34.5	36.3	35.3	36.7	33.9	35.6	37.0	40.1	41.6	39.5
Belgium	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.5	0.4
Finland	15.0	13.3	11.7	12.8	11.7	12.1	14.9	12.7	14.5	13.3
France	67.2	63.1	76.5	70.6	64.5	61.6	61.4	71.6	66.2	72.7
Germany	17.2	17.7	19.7	21.6	21.7	17.2	17.0	19.5	21.5	22.9
Greece	2.2	2.3	2.6	3.5	4.3	3.8	3.7	4.5	3.7	1.9
Iceland	4.3	4.4	4.5	4.6	4.7	5.2	5.6	6.0	6.3	6.5
Ireland	0.8	0.8	0.9	0.7	0.7	0.7	0.9	0.8	0.8	0.6
Italy	41.8	41.0	44.2	37.4	41.6	41.2	40.8	44.9	43.8	47.7
Luxembourg	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Norway	115.5	118.0	110.4	120.1	102.6	108.9	114.2	120.2	140.2	119.2
Portugal	4.6	8.5	10.6	8.3	14.6	13.0	12.9	7.2	11.2	13.9
Spain	18.7	24.1	27.9	22.9	39.4	34.4	33.7	22.6	28.1	40.6
Sweden	73.6	73.9	58.5	67.4	51.2	68.4	73.6	71.0	78.2	77.6
Switzerland	32.4	35.4	38.7	34.8	28.1	33.7	33.1	39.6	36.5	40.9
Turkey	26.3	33.6	30.3	35.2	40.1	39.4	41.8	34.3	30.6	23.8
United Kingdom	5.3	4.2	5.0	4.8	3.3	4.1	5.2	5.3	5.1	3.2
Bosnia and Herzegovina	3.4	2.3	3.4	3.6	5.1	4.6	4.5	5.5	5.0	4.6
Croatia	4.3	4.3	4.9	5.2	7.2	5.2	5.1	5.8	6.7	8.0
Macedonia, TFYR	0.8	0.5	0.7	0.8	0.8	0.9	1.1	1.4	1.2	1.1
Slovenia	3.4	3.0	3.3	3.2	3.6	3.0	3.4	3.7	3.8	3.7
Yugoslavia	11.2	10.0	11.0	11.1	11.4	12.0	12.8	13.2	11.9	11.8
Other	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	**483.0**	**497.3**	**500.8**	**505.9**	**491.1**	**505.7**	**523.4**	**530.6**	**557.5**	**554.1**

See footnotes at end of table.

Table 1.5 World Net Hydroelectric Power Consumption, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	3.2	3.3	3.7	4.2	5.5	5.3	4.9	5.2	4.5	5.1
Bulgaria	2.0	1.9	1.5	2.3	2.9	2.9	3.3	2.9	3.1	3.3
Former Czechoslovakia	3.6	--	--	--	--	--	--	--	--	--
Czech Republic	--	1.4	1.4	2.0	1.9	1.7	1.4	1.7	1.7	2.0
Slovakia	--	3.9	4.6	5.2	4.5	4.3	4.3	4.5	4.7	4.9
Hungary	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Poland	3.5	3.5	3.7	3.8	3.9	3.8	2.3	2.1	2.1	2.0
Romania	11.6	12.6	12.9	16.5	15.6	17.3	18.7	18.1	14.6	14.0
Armenia	3.0	4.2	3.5	1.9	1.6	1.4	1.5	1.9	1.8	1.8
Azerbaijan	1.7	2.4	1.8	1.5	1.5	1.7	1.9	1.5	1.5	1.9
Georgia	6.5	7.0	4.7	5.3	6.0	6.0	6.3	6.4	5.8	5.8
Kazakhstan	6.8	7.6	9.1	8.2	7.3	6.4	6.1	6.1	7.5	8.2
Kyrgyzstan	9.2	9.0	11.6	11.0	12.1	10.8	9.8	12.0	13.5	12.4
Latvia	2.5	2.8	3.3	2.9	1.8	2.9	4.3	2.7	2.8	3.1
Lithuania	0.3	0.4	0.4	0.7	0.9	0.8	0.9	0.9	0.6	0.8
Moldova	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
Russia	170.9	172.1	175.2	175.5	153.8	156.8	157.9	159.4	157.8	173.5
Tajikistan	15.8	16.9	16.5	14.5	14.7	13.6	14.0	15.3	13.7	13.9
Ukraine	8.0	11.1	12.2	10.0	8.7	9.9	15.8	14.4	11.3	13.0
Uzbekistan	6.2	7.3	7.1	6.1	6.5	5.7	5.7	5.6	5.8	5.2
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**255.3**	**267.9**	**273.6**	**272.2**	**249.6**	**252.0**	**259.5**	**261.2**	**253.5**	**271.5**
Middle East										
Iran	9.4	9.7	7.4	7.2	7.3	6.8	7.0	4.9	3.6	3.6
Iraq	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Lebanon	0.5	0.7	0.8	0.7	0.8	0.9	0.8	0.3	0.3	0.2
Syria	7.3	6.6	6.7	6.9	6.9	7.3	7.9	8.6	9.2	9.9
Total	**18.0**	**17.7**	**15.5**	**15.4**	**15.6**	**15.7**	**16.3**	**14.5**	**13.8**	**14.3**
Africa										
Algeria	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1
Angola	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9
Cameroon	2.6	2.6	2.7	2.7	2.8	3.1	3.1	3.3	3.4	3.5
Congo (Brazzaville)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4
Congo (Kinshasa)	6.0	5.7	5.4	5.3	5.3	5.4	5.4	5.6	5.4	5.2
Cote d'Ivoire (Ivory Coast)	1.0	1.1	1.0	1.7	1.8	1.8	1.4	1.7	1.7	1.8
Egypt	8.5	10.4	10.6	10.7	11.4	11.9	12.1	15.1	13.8	14.3
Ethiopia	1.1	1.3	1.3	1.4	1.5	1.6	1.6	1.6	1.6	1.7
Gabon	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5
Ghana	6.0	6.1	6.0	6.1	6.6	6.8	3.8	5.1	6.5	8.4
Guinea	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4
Kenya	2.8	3.0	3.0	3.1	3.3	3.2	3.2	2.4	1.3	0.7
Madagascar	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5
Malawi	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7
Mali	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Morocco	1.0	0.4	0.8	0.6	1.9	2.1	1.8	0.8	0.7	0.6
Mozambique	0.3	0.3	0.4	0.4	0.4	1.0	1.5	6.8	6.9	7.0
Nigeria	6.0	5.5	5.5	5.4	5.4	5.5	5.5	5.5	5.7	6.0
Reunion	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
South Africa	0.8	0.1	1.1	0.5	1.3	2.1	1.6	0.7	1.3	2.1
Sudan	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.2	1.2	1.1
Swaziland	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Tanzania	1.6	1.7	1.5	1.5	1.7	1.6	2.1	2.1	2.2	2.4
Uganda	1.0	1.0	1.0	1.0	1.1	1.2	1.2	1.3	1.6	1.9
Zambia	7.7	7.7	7.7	7.8	7.0	7.6	7.5	7.6	7.7	7.7
Zimbabwe	2.9	1.8	1.6	1.8	2.1	2.1	1.9	2.9	3.2	3.6
Other	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Total	**55.2**	**54.8**	**55.7**	**56.3**	**60.4**	**63.4**	**60.2**	**69.6**	**69.8**	**73.1**

See footnotes at end of table.

Table 1.5 World Net Hydroelectric Power Consumption, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2
Australia	15.2	16.5	16.2	15.7	15.4	16.6	15.6	16.5	16.6	16.5
Bangladesh	0.8	0.6	0.8	0.6	0.7	0.7	0.9	0.8	1.0	1.0
Bhutan	1.6	1.6	1.7	1.7	2.0	1.8	1.8	1.9	1.9	1.9
Burma	1.5	1.7	1.6	1.6	1.6	1.7	0.9	1.0	1.9	3.4
Cambodia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	(s)
China	130.2	149.2	165.4	184.4	184.9	193.1	202.9	201.8	220.2	263.4
Fiji	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
French Polynesia	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
India	69.2	69.8	81.9	72.0	68.4	73.9	82.2	79.9	73.7	77.4
Indonesia	9.7	8.8	7.0	7.4	8.1	5.1	9.6	9.3	9.0	10.1
Japan	81.7	94.6	66.6	81.3	79.7	88.9	91.6	85.6	86.4	87.0
Korea, North	23.8	23.8	23.3	22.8	22.3	21.8	20.7	20.9	21.1	21.3
Korea, South	3.1	4.2	2.3	2.7	2.4	2.8	4.2	4.1	4.0	2.3
Laos	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.8	1.0	1.3
Malaysia	4.3	4.8	6.5	6.2	5.1	3.8	4.8	7.4	6.9	7.2
Nepal	0.8	0.9	0.9	1.1	1.2	1.1	1.1	1.4	1.6	1.6
New Caledonia	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.4
New Zealand	20.4	23.1	25.6	27.0	25.7	23.6	24.2	23.3	24.4	21.7
Pakistan	18.5	20.9	19.2	22.6	23.0	20.6	21.8	19.1	17.0	18.9
Papua New Guinea	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.7
Philippines	4.2	4.9	5.9	6.1	6.9	6.0	5.0	7.8	7.7	7.9
Samoa	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Sri Lanka	2.9	3.8	4.0	4.4	3.2	3.4	3.9	4.1	3.2	3.1
Taiwan	8.3	6.8	8.8	8.3	8.6	8.9	9.9	8.8	8.7	9.1
Thailand	4.2	3.7	4.5	6.6	7.3	7.1	5.1	3.5	6.0	6.2
U.S. Pacific Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Vietnam	7.2	7.9	9.1	10.5	11.9	11.6	11.0	13.6	14.4	16.8
Total	**410.3**	**450.2**	**454.0**	**486.2**	**481.4**	**495.5**	**520.3**	**513.8**	**528.7**	**579.8**
World Total	**2,224.1**	**2,359.4**	**2,377.2**	**2,491.9**	**2,538.1**	**2,586.6**	**2,588.2**	**2,613.5**	**2,651.8**	**2,586.5**

[1] Preliminary.
[2] Includes hydroelectric pumped storage.
- - = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Consumption does not account for thermal equivalent conversion losses.
Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.
Sources: See sources at the end of Section 6.

Table 1.6 World Net Nuclear Electric Power Consumption, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	76.6	90.1	102.4	93.0	88.1	77.9	67.7	69.8	68.7	72.9
Mexico	3.7	4.7	4.0	8.0	7.5	9.9	8.8	9.5	7.8	8.3
United States	618.8	610.3	640.4	673.4	674.7	628.6	673.7	728.3	753.9	768.8
Total	**699.1**	**705.1**	**746.9**	**774.4**	**770.3**	**716.4**	**750.2**	**807.6**	**830.4**	**850.0**
Central & South America										
Argentina	6.7	7.3	7.8	7.1	6.9	7.5	7.1	6.7	6.0	6.5
Brazil	1.7	0.4	0.1	2.4	2.3	3.0	3.1	3.8	4.9	14.3
Total	**8.4**	**7.7**	**7.9**	**9.5**	**9.2**	**10.5**	**10.3**	**10.5**	**10.9**	**20.8**
Western Europe										
Belgium	41.3	39.8	38.6	39.3	41.2	45.0	43.9	46.6	45.7	44.0
Finland	18.3	18.9	18.5	18.3	18.5	19.0	20.8	21.8	21.3	21.7
France	321.5	349.8	342.0	358.4	377.5	374.3	368.6	375.1	394.4	400.9
Germany	150.9	145.8	143.2	145.4	152.0	161.8	153.6	161.0	161.2	162.6
Netherlands	3.6	3.8	3.8	3.8	4.0	2.3	3.6	3.6	3.7	3.8
Spain	53.0	53.3	52.5	52.7	53.5	52.5	56.0	55.9	58.9	60.5
Sweden	60.4	58.3	69.5	66.4	69.6	66.7	69.9	66.6	54.1	65.8
Switzerland	22.3	22.2	23.1	23.7	23.9	24.0	24.5	23.7	23.7	25.5
United Kingdom	69.1	81.0	80.0	80.6	85.8	89.3	95.1	91.5	81.7	85.6
Slovenia	3.8	3.8	4.3	4.5	4.4	4.8	5.0	4.5	4.5	5.0
Total	**744.1**	**776.6**	**775.4**	**793.0**	**830.3**	**839.9**	**841.0**	**850.2**	**849.4**	**875.4**
Eastern Europe & Former U.S.S.R.										
Bulgaria	11.0	13.3	14.6	16.4	17.8	16.4	16.1	15.0	17.3	18.2
Former Czechoslovakia	23.3	--	--	--	--	--	--	--	--	--
Czech Republic	--	12.0	12.3	11.6	12.2	12.5	12.5	12.7	12.9	14.0
Slovakia	--	11.6	11.5	10.9	11.3	10.5	10.8	12.5	13.1	16.2
Hungary	13.3	13.1	13.3	13.3	13.5	13.3	13.3	13.4	13.5	13.4
Romania	0.0	0.0	0.0	0.0	0.9	5.1	4.9	4.8	5.2	5.0
Armenia	0.0	0.0	0.0	0.0	2.1	1.4	1.4	2.1	1.8	2.0
Kazakhstan	0.5	0.4	0.4	0.1	0.1	0.3	0.1	(s)	0.0	0.0
Lithuania	13.9	12.3	7.3	10.6	12.7	10.9	12.9	9.9	8.4	11.4
Russia	113.6	113.2	92.9	94.3	103.3	104.5	98.3	110.9	122.5	125.4
Ukraine	70.1	71.4	65.4	67.0	76.0	75.4	70.6	67.3	71.1	71.7
Total	**245.6**	**247.3**	**217.7**	**224.3**	**249.8**	**250.3**	**240.9**	**248.6**	**265.7**	**277.3**
Africa										
South Africa	9.3	7.3	9.7	11.3	11.8	12.6	13.6	12.8	13.0	10.7
Total	**9.3**	**7.3**	**9.7**	**11.3**	**11.8**	**12.6**	**13.6**	**12.8**	**13.0**	**10.7**
Asia & Oceania										
China	0.5	2.5	13.5	12.4	13.6	11.4	13.5	14.1	16.0	16.7
India	6.0	5.9	4.7	6.5	7.4	10.5	10.6	11.5	14.1	18.2
Japan	212.1	236.8	255.7	276.7	287.1	306.1	315.7	300.8	293.8	309.0
Korea, South	53.7	55.2	55.7	63.7	70.2	73.2	85.2	97.9	103.5	106.5
Pakistan	0.5	0.4	0.6	0.5	0.3	0.4	0.4	0.1	0.4	2.0
Taiwan	32.5	33.0	33.5	33.9	36.3	34.8	35.4	36.9	37.0	34.1
Total	**305.3**	**333.8**	**363.6**	**393.6**	**415.0**	**436.4**	**460.8**	**461.2**	**464.7**	**486.5**
World Total	**2,011.8**	**2,077.7**	**2,121.3**	**2,206.0**	**2,286.5**	**2,266.1**	**2,316.9**	**2,391.0**	**2,434.2**	**2,520.7**

[1] Preliminary.

-- = Not applicable.

(s) = Value less than 50 million kilowatthours.

Notes: Sum of components may not equal total due to independent rounding.

Consumption does not account for thermal equivalent conversion losses.

Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.

No consumption is reported for Middle East.

Sources: See sources at the end of Section 6.

Table 1.7 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Consumption, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	4.1	4.5	5.4	5.3	5.5	5.9	6.3	7.3	7.2	7.2
Mexico	5.5	5.6	5.3	5.4	5.4	5.2	5.7	5.9	6.1	5.8
United States	77.5	79.7	80.2	78.1	79.4	80.8	80.7	83.4	85.7	84.8
Total	**87.1**	**89.8**	**90.9**	**88.7**	**90.3**	**91.9**	**92.6**	**96.6**	**99.0**	**97.7**
Central & South America										
Argentina	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Bolivia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Brazil	6.6	6.7	7.2	7.4	8.5	9.5	9.8	11.4	12.0	14.8
Chile	0.5	0.5	0.5	0.7	0.9	0.8	0.8	1.0	0.8	0.6
Colombia	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.5	0.6
Costa Rica	(s)	(s)	0.3	0.5	0.5	0.5	0.6	0.8	0.9	1.1
Cuba	1.0	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.7	0.8
Dominican Republic	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
El Salvador	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9
Guatemala	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.8	0.8
Jamaica	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nicaragua	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Panama	(s)	(s)	(s)	(s)	(s)	0.1	0.1	0.1	0.1	0.1
Paraguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Peru	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Trinidad and Tobago	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Uruguay	0.1	0.1	0.1	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**10.2**	**10.0**	**10.8**	**11.3**	**12.9**	**14.1**	**14.3**	**16.6**	**17.4**	**20.6**
Western Europe										
Austria	1.2	1.2	1.1	1.8	1.5	1.6	1.6	1.7	1.7	2.0
Belgium	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.2	1.2	1.3
Croatia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Denmark	1.4	1.7	1.8	2.0	2.3	3.1	4.1	4.6	6.0	6.1
Faroe Islands	0.0	0.0	(s)	(s)	(s)	(s)	0.0	0.0	0.0	0.0
Finland	4.7	5.7	6.1	6.3	5.8	7.8	9.3	8.3	8.5	8.4
France	2.1	2.1	2.4	2.5	2.5	2.9	2.9	3.3	3.7	3.9
Germany	5.7	6.1	7.6	8.3	9.2	9.9	12.6	13.1	18.6	22.6
Greece	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.9
Iceland	0.2	0.2	0.2	0.3	0.3	0.4	0.6	1.1	1.3	1.4
Ireland	(s)	(s)	(s)	(s)	(s)	0.1	0.2	0.3	0.3	0.4
Italy	3.8	4.0	3.8	4.0	4.5	5.3	6.1	6.9	7.6	7.8
Luxembourg	(s)	(s)	(s)	0.1	(s)	(s)	(s)	0.1	0.1	0.1
Netherlands	1.4	1.6	1.6	2.0	2.6	4.0	4.4	4.5	5.0	5.0
Norway	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Portugal	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.4	1.7	1.8
Slovenia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(s)	0.1	0.1
Spain	0.7	0.8	1.0	1.5	1.9	2.8	3.5	5.4	7.1	9.2
Sweden	2.0	2.2	2.2	2.4	2.2	2.9	3.2	3.1	4.2	3.5
Switzerland	0.6	0.5	1.0	1.0	1.1	1.1	1.1	1.5	1.5	1.4
Turkey	0.1	0.1	0.1	0.3	0.2	0.4	0.3	0.3	0.3	0.4
United Kingdom	2.1	4.5	4.6	5.4	2.6	3.1	3.7	4.6	5.0	5.7
Total	**28.2**	**33.1**	**35.9**	**40.3**	**39.4**	**47.8**	**56.4**	**61.9**	**74.8**	**82.4**
Eastern Europe & Former U.S.S.R.										
Belarus	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Bulgaria	0.0	0.0	0.0	0.0	0.0	0.0	(s)	(s)	(s)	(s)
Czech Republic	--	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.7	0.7
Hungary	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Poland	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.5	0.5	0.6
Romania	0.1	0.1	0.0	(s)	0.0	(s)	(s)	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	1.8	1.7	1.6	1.5	1.5	1.5	1.5	2.0	2.5	3.0
Total	**2.2**	**2.4**	**2.3**	**2.3**	**2.3**	**2.6**	**2.8**	**3.5**	**3.9**	**4.5**

See footnotes at end of table.

Table 1.7 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Consumption, 1992 - 2001 (Cont.)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Jordan	(s)	(s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**(s)**	**(s)**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Africa										
Ethiopia	0.1	0.1	0.1	0.1	(s)	0.0	0.0	(s)	(s)	(s)
Kenya	0.3	0.3	0.2	0.4	0.4	0.3	0.4	0.4	0.4	0.5
Total	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.3**	**0.4**	**0.4**	**0.4**	**0.5**
Asia & Oceania										
Australia	0.6	0.6	0.6	0.7	1.0	1.0	1.1	1.1	1.7	1.8
China	0.0	0.0	0.3	2.8	1.3	2.5	2.2	1.9	1.6	1.3
India	(s)	0.1	0.2	0.1	0.8	1.0	1.1	1.4	1.6	1.8
Indonesia	1.0	1.0	1.5	2.1	2.1	2.5	2.5	2.6	2.5	2.4
Japan	18.4	18.5	19.7	21.8	22.7	24.4	17.8	18.7	19.0	19.1
Korea, South	0.0	0.0	(s)	0.3	0.4	0.4	0.4	0.4	0.5	0.5
New Zealand	2.6	2.5	2.6	2.5	2.7	3.0	3.4	3.8	3.9	4.0
Philippines	5.4	5.4	6.0	5.8	6.2	6.9	8.5	10.1	11.0	12.2
Thailand	0.0	0.0	0.0	0.2	0.2	0.9	0.7	0.9	1.4	2.3
Total	**28.2**	**28.2**	**31.0**	**36.3**	**37.5**	**42.5**	**37.6**	**40.9**	**43.1**	**45.4**
World Total	**156.3**	**163.7**	**171.2**	**179.3**	**182.8**	**199.1**	**204.1**	**219.9**	**238.7**	**251.1**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Consumption does not account for thermal equivalent conversion losses.
Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.
Sources: See sources at the end of Section 6.

Table 1.8 World Consumption of Primary Energy by Selected Country Groups (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Petroleum										
World Total	**136.98**	**136.93**	**139.41**	**142.58**	**145.76**	**148.42**	**150.20**	**153.42**	**155.89**	**156.48**
OECD	86.16	86.69	88.99	90.38	92.65	93.58	94.09	95.48	95.99	95.60
Non OECD	50.82	50.25	50.41	52.20	53.11	54.85	56.11	57.94	59.91	60.88
Other Groups:										
OECD Europe	29.60	29.34	29.49	30.59	31.00	31.12	31.81	31.46	31.41	31.73
OPEC	9.59	10.07	10.36	10.86	11.00	11.32	11.46	11.71	12.16	12.42
EU	26.18	25.79	25.96	26.95	27.11	27.16	27.82	27.50	27.40	27.76
IEA	81.59	82.46	84.57	86.09	88.17	88.97	89.24	90.56	90.99	90.77
Natural Gas										
World Total	**76.86**	**79.02**	**78.93**	**80.96**	**84.55**	**84.54**	**85.50**	**87.70**	**91.39**	**93.11**
OECD	39.57	40.96	42.10	44.37	46.52	46.68	46.91	48.30	50.44	49.85
Non OECD	37.29	38.06	36.83	36.59	38.03	37.86	38.60	39.41	40.95	43.26
Other Groups:										
OECD Europe	11.91	12.55	12.74	13.99	15.19	15.05	15.58	16.34	16.88	17.29
OPEC	6.63	6.98	7.48	7.94	8.60	9.13	9.42	9.71	9.96	10.98
EU	10.43	10.97	11.17	12.17	13.20	12.99	13.50	14.16	14.62	14.86
IEA	37.77	39.30	40.38	42.55	44.61	44.74	44.86	46.29	48.29	47.66
Coal										
World Total	**88.18**	**88.82**	**89.32**	**91.23**	**92.69**	**93.84**	**91.70**	**91.52**	**93.65**	**95.94**
OECD	41.66	41.57	41.13	41.19	41.81	43.66	43.12	42.60	44.52	44.23
Non OECD	46.52	47.25	48.19	50.04	50.89	50.18	48.58	48.92	49.13	51.71
Other Groups:										
OECD Europe	15.92	14.76	14.10	13.62	13.26	13.82	13.17	12.43	12.72	12.68
OPEC	0.26	0.30	0.36	0.36	0.47	0.40	0.49	0.56	0.65	0.98
EU	10.02	9.72	9.41	9.03	8.86	8.82	8.57	8.13	8.35	8.54
IEA	36.49	38.15	37.91	38.12	38.99	40.36	40.09	39.70	41.67	41.52
Hydroelectric Power										
World Total	**23.11**	**24.51**	**24.70**	**25.89**	**26.37**	**26.83**	**26.85**	**27.12**	**27.52**	**26.85**
OECD	12.41	13.17	12.78	13.64	14.05	14.19	13.80	13.95	14.01	12.87
Non OECD	10.70	11.34	11.92	12.25	12.32	12.64	13.05	13.17	13.51	13.98
Other Groups:										
OECD Europe	4.86	5.05	5.07	5.13	4.92	5.09	5.25	5.30	5.59	5.55
OPEC	0.76	0.75	0.74	0.75	0.78	0.78	0.83	0.84	0.85	0.83
EU	2.93	2.97	3.05	2.99	2.99	3.04	3.14	3.13	3.28	3.48
IEA	12.03	12.78	12.44	13.21	13.59	13.78	13.42	13.48	13.53	12.44
Nuclear Electric Power										
World Total	**21.23**	**21.96**	**22.36**	**23.21**	**24.05**	**23.82**	**24.34**	**25.08**	**25.52**	**26.45**
OECD	18.31	19.02	19.61	20.34	20.86	20.59	21.17	21.83	22.03	22.75
Non OECD	2.92	2.94	2.74	2.87	3.19	3.24	3.17	3.25	3.49	3.70
Other Groups:										
OECD Europe	8.20	8.56	8.54	8.65	9.06	9.15	9.17	9.29	9.27	9.59
OPEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EU	7.55	7.91	7.87	8.01	8.41	8.50	8.51	8.62	8.59	8.84
IEA	17.98	18.83	19.43	20.13	20.65	20.36	20.95	21.59	21.79	22.47

See footnotes at end of table.

Table 1.8 World Consumption of Primary Energy by Selected Country Groups (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Geothermal, Solar, Wind, and Wood and Waste Electric Power										
World Total	**2.01**	**2.09**	**2.17**	**2.25**	**2.31**	**2.49**	**2.57**	**2.76**	**2.97**	**3.11**
OECD	1.73	1.82	1.86	1.90	1.94	2.07	2.11	2.24	2.40	2.46
Non OECD	0.28	0.27	0.31	0.35	0.37	0.42	0.46	0.53	0.57	0.64
Other Groups:										
OECD Europe	0.34	0.39	0.42	0.47	0.46	0.55	0.65	0.72	0.85	0.93
OPEC	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05
EU.	0.32	0.37	0.39	0.43	0.43	0.52	0.60	0.66	0.79	0.86
IEA	1.61	1.69	1.74	1.77	1.82	1.94	1.97	2.09	2.24	2.31
Total Energy										
World Total	**350.43**	**355.28**	**358.84**	**368.25**	**377.93**	**382.04**	**383.09**	**389.58**	**398.88**	**403.92**
OECD	201.91	205.25	208.52	213.98	220.12	222.96	223.25	226.43	231.38	229.86
Non OECD	148.52	150.04	150.32	154.26	157.81	159.07	159.84	163.15	167.51	174.07
Other Groups:										
OECD Europe	70.84	70.72	70.43	72.49	73.99	74.89	75.75	75.60	76.76	77.88
OPEC	17.25	18.10	18.96	19.95	20.90	21.68	22.25	22.87	23.67	25.26
EU.	57.60	57.95	58.03	59.77	60.97	61.12	62.29	62.44	63.47	64.65
IEA	189.61	195.24	198.53	204.07	210.12	212.32	212.58	215.79	220.59	219.35

[1] Preliminary.

[2] The Organization for Economic Cooperation and Development (OECD) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, South, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). Refer to Appendix A for a listing of OECD Europe.

[3] The Organization of Petroleum Exporting Countries (OPEC) includes Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

[4] European Union (EU) includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

[5] International Energy Agency (IEA) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, South, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). No Czech Republic data for 1992.

[6] Total primary energy consumption, as reported here, includes all of the fuel types reported in this table. It also includes for the United States: (1) the consumption of geothermal, solar, and wood and waste energy not used for electricity generation; (2) electricity imports from Mexico that are derived from geothermal energy; and (3) net imports of electricity derived from nonrenewable sources. It has also been adjusted to include total electricity imports and to exclude total electricity exports for all countries, except the United States. This adjustment is necessary because the consumption data for electric power by type, as reported in this table, are not adjusted for electricity imports and exports, except for hydroelectric power in the United States. As a result of these adjustments, total primary energy consumption reported in this table might not be equal to sum of the individual fuel types reported in this table.

(s) = Value less than 5 trillion Btu.

Notes: For consistency data reflect 2001 membership (as of December 31, 2001) for all years. The country groups OECD, OECD Europe, EU, and IEA include unified Germany. Data for the Czech Republic are included in the country group IEA beginning in 1993, the year that the country came into existence.

Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of Sections 3, 4, 5, and 6.

Section 2

World Energy Production, 1992-2001

Table 2.1 World Production of Primary Energy by Selected Country Groups, 1992 - 2001

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Petroleum (thousand barrels per day) [2]										
World Total	**66,941**	**67,340**	**68,253**	**69,876**	**71,405**	**73,665**	**75,133**	**74,142**	**77,002**	**77,031**
OECD	21,042	21,193	21,894	22,360	23,075	23,442	23,326	22,855	23,162	23,321
Non OECD	45,899	46,147	46,359	47,515	48,330	50,224	51,808	51,287	53,840	53,709
Other Groups:										
OECD Europe	5,274	5,488	6,216	6,632	7,048	7,030	6,998	7,047	6,893	6,979
OPEC	25,818	26,610	27,031	27,566	28,018	29,355	30,492	29,283	31,116	30,306
EU.	2,806	2,900	3,453	3,597	3,678	3,611	3,721	3,787	3,454	3,448
IEA	17,885	18,027	18,713	19,262	19,762	19,996	19,794	19,472	19,670	19,685
Natural Gas (trillion cubic feet)										
World Total	**74.84**	**76.36**	**76.93**	**77.96**	**81.65**	**81.52**	**83.03**	**84.91**	**88.09**	**90.72**
OECD	32.48	33.67	34.96	35.47	37.33	37.15	37.50	37.90	38.65	39.29
Non OECD	42.37	42.69	41.97	42.49	44.32	44.37	45.53	47.01	49.45	51.43
Other Groups:										
OECD Europe	8.16	8.60	8.71	9.04	10.37	9.98	9.88	10.16	10.42	10.55
OPEC	8.64	9.01	9.44	10.08	10.93	11.83	12.26	12.97	13.63	14.40
EU.	6.78	7.25	7.30	7.58	8.55	8.00	7.90	8.06	8.22	8.29
IEA	31.44	32.53	33.80	34.33	36.07	35.79	36.05	36.43	37.14	37.79
Coal (million short tons)										
World Total	**5,048**	**4,947**	**5,026**	**5,157**	**5,193**	**5,196**	**5,093**	**4,988**	**4,995**	**5,266**
OECD	2,301	2,186	2,231	2,227	2,234	2,291	2,290	2,241	2,214	2,290
Non OECD	2,747	2,761	2,795	2,930	2,960	2,905	2,803	2,747	2,782	2,976
Other Groups:										
OECD Europe	950	888	839	818	787	798	748	716	702	710
OPEC	29	36	40	52	61	67	76	89	95	110
EU.	555	501	454	435	427	408	382	368	361	364
IEA	1,973	1,956	1,996	1,993	2,025	2,054	2,077	2,038	2,019	2,095
Hydroelectric Power (billion kilowatthours)										
World Total	**2,204.7**	**2,337.4**	**2,347.3**	**2,465.3**	**2,509.1**	**2,563.1**	**2,566.5**	**2,593.5**	**2,625.8**	**2,571.1**
OECD	1,175.7	1,247.4	1,201.1	1,287.3	1,324.5	1,347.4	1,312.1	1,327.0	1,326.6	1,226.3
Non OECD	1,029.0	1,090.0	1,146.2	1,178.0	1,184.6	1,215.7	1,254.5	1,266.5	1,299.2	1,344.8
Other Groups:										
OECD Europe	467.2	486.0	487.3	493.1	473.4	489.8	504.5	509.4	537.5	533.9
OPEC	72.8	71.9	71.3	71.8	74.8	74.8	80.2	80.5	81.3	80.2
EU.	281.4	285.6	293.5	287.2	287.5	292.6	301.7	300.8	315.4	334.5
IEA	1,138.4	1,209.6	1,168.4	1,246.4	1,280.2	1,308.0	1,275.6	1,282.0	1,280.7	1,184.7
Nuclear Electric Power (billion kilowatthours)										
World Total	**2,011.8**	**2,077.7**	**2,121.3**	**2,206.0**	**2,286.5**	**2,266.1**	**2,316.9**	**2,391.0**	**2,434.2**	**2,520.7**
OECD	1,741.7	1,806.6	1,866.6	1,939.1	1,990.5	1,967.1	2,023.8	2,090.6	2,112.0	2,179.5
Non OECD	270.0	271.1	254.6	266.9	295.9	299.0	293.1	300.4	322.2	341.2
Other Groups:										
OECD Europe	776.9	809.6	808.3	824.3	862.9	871.3	872.6	884.3	884.3	914.0
OPEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EU.	718.1	750.7	748.0	764.9	802.1	811.1	811.5	822.1	821.2	844.9
IEA	1,714.7	1,790.3	1,851.1	1,920.2	1,971.8	1,946.7	2,004.2	2,068.6	2,091.1	2,155.0

See footnotes at end of table.

Table 2.1 World Production of Primary Energy by Selected Country Groups, 1992 - 2001 (Continued)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Geothermal, Solar, Wind, Wood and Waste Electric Power (billion kilowatthours)										
World Total	**156.3**	**163.7**	**171.2**	**179.3**	**182.8**	**199.1**	**204.1**	**219.9**	**238.7**	**251.1**
OECD	137.4	145.1	150.5	155.0	157.3	169.5	172.9	183.9	200.1	206.7
Non OECD	18.8	18.5	20.7	24.3	25.6	29.6	31.2	36.0	38.6	44.4
Other Groups:										
OECD Europe	28.6	33.7	36.6	41.1	40.2	48.8	57.6	63.3	76.1	83.6
OPEC	1.0	1.0	1.5	2.1	2.1	2.5	2.5	2.6	2.5	2.4
EU.	27.1	31.9	34.3	38.5	37.4	45.7	54.0	58.8	71.3	78.7
IEA	131.3	138.9	144.6	149.0	151.1	163.4	166.0	176.5	192.2	199.0

[1] Preliminary.
[2] Data include the production of crude oil, natural gas plant liquids, refinery gain, and other liquid fuels.
[3] The Organization for Economic Cooperation and Development (OECD) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, South, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). Refer to Appendix A for a listing of OECD Europe.
[4] The Organization of Petroleum Exporting Countries (OPEC) includes Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.
[5] European Union (EU) includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.
[6] International Energy Agency (IEA) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, South, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). No Czech Republic data for 1992.
Notes: For consistency data reflect 2001 membership (as of December 31, 2001) for all years. The country groups OECD, OECD Europe, EU, and IEA include unified Germany. Data for the Czech Republic are included in the country group IEA beginning in 1993, the year that the country came into existence.
Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Sections 3, 4, 5, and 6.

Table 2.2 World Crude Oil Production, 1992 - 2001

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada [2]	1,605	1,679	1,746	1,805	1,837	1,922	1,981	1,907	1,977	2,029
Mexico	2,669	2,673	2,685	2,618	2,855	3,023	3,070	2,906	3,012	3,157
United States	7,171	6,847	6,662	6,560	6,465	6,452	6,252	5,881	5,822	5,801
Total	**11,446**	**11,199**	**11,093**	**10,982**	**11,156**	**11,396**	**11,303**	**10,694**	**10,811**	**10,988**
Central & South America										
Argentina	553	594	650	715	756	834	847	802	761	781
Bolivia	21	22	23	28	30	29	35	32	30	34
Brazil	626	643	671	695	795	841	969	1,132	1,269	1,295
Chile	15	14	12	11	9	7	8	8	7	7
Colombia	433	456	450	585	623	652	733	816	691	602
Cuba	16	20	24	26	30	30	31	38	41	50
Ecuador	321	344	365	392	396	388	375	373	395	412
Peru	116	126	128	130	120	118	116	106	99	93
Trinidad and Tobago	137	135	132	131	130	124	123	125	122	113
Venezuela	2,371	2,450	2,588	2,750	2,938	3,280	3,167	2,826	3,155	2,880
Other	11	13	16	18	21	21	32	35	32	32
Total	**4,621**	**4,817**	**5,059**	**5,481**	**5,848**	**6,326**	**6,435**	**6,293**	**6,602**	**6,300**
Western Europe										
Austria	23	22	21	23	21	19	21	18	19	19
Denmark	163	174	185	186	208	230	238	300	363	346
France	58	55	56	50	43	36	34	30	29	28
Germany	63	61	58	59	60	56	59	55	64	65
Greece	13	11	10	9	8	9	6	(s)	5	5
Italy	83	83	86	93	101	112	107	82	90	78
Netherlands	53	50	78	66	56	53	52	32	29	26
Norway	2,229	2,350	2,521	2,768	3,104	3,143	3,017	3,018	3,197	3,117
Spain	22	18	17	13	11	8	11	6	5	7
Sweden	(s)	(s)	(s)	(s)	0	0	0	0	0	0
Turkey	84	76	72	67	67	68	65	59	53	48
United Kingdom	1,825	1,915	2,375	2,489	2,568	2,518	2,616	2,684	2,275	2,282
Croatia	36	36	39	32	30	29	31	25	24	23
Slovenia	0	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Yugoslavia	23	23	24	22	22	20	18	18	16	15
Total	**4,676**	**4,873**	**5,543**	**5,878**	**6,299**	**6,300**	**6,275**	**6,328**	**6,168**	**6,060**
Eastern Europe & Former U.S.S.R.										
Albania	11	11	12	10	10	9	6	6	6	6
Bulgaria	1	1	1	1	1	1	1	1	1	1
Former Czechoslovakia	2	--	--	--	--	--	--	--	--	--
Czech Republic	--	2	2	3	4	3	4	4	6	7
Slovakia	--	1	1	1	2	2	1	1	1	1
Hungary	33	34	39	35	32	35	26	24	27	27
Poland	3	5	5	5	5	6	7	9	13	17
Romania	136	133	138	135	135	134	132	125	120	119
Azerbaijan	213	200	184	175	176	173	230	276	280	301
Belarus	40	40	40	38	36	36	36	37	37	37
Georgia	3	2	2	1	1	3	2	2	2	2
Kazakhstan	444	408	352	362	403	466	476	530	610	704
Kyrgyzstan	2	2	2	2	2	2	2	2	2	2
Lithuania	0	2	3	3	3	4	5	5	6	5
Russia	7,632	6,730	6,135	5,995	5,850	5,920	5,854	6,079	6,479	7,049
Tajikistan	1	1	(s)	1	(s)	1	(s)	(s)	(s)	(s)
Turkmenistan	98	79	77	70	76	89	110	139	142	150
Ukraine	72	66	64	65	66	58	57	76	74	76
Uzbekistan	36	47	75	115	115	112	116	102	91	74
Total	**8,727**	**7,764**	**7,131**	**7,017**	**6,917**	**7,054**	**7,066**	**7,416**	**7,898**	**8,580**

See footnotes at end of table.

Table 2.2 World Crude Oil Production, 1992 - 2001 (Continued)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	37	41	41	41	35	40	38	37	38	35
Iran	3,429	3,540	3,618	3,643	3,686	3,664	3,634	3,557	3,696	3,724
Iraq	425	512	553	560	579	1,155	2,150	2,508	2,571	2,432
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kuwait	1,058	1,852	2,025	2,057	2,062	2,007	2,085	1,898	2,079	1,998
Oman	740	776	810	851	883	904	900	910	970	960
Qatar	423	413	415	442	510	550	696	665	737	714
Saudi Arabia	8,332	8,198	8,120	8,231	8,218	8,362	8,389	7,833	8,404	8,031
Syria	481	554	560	575	582	561	553	538	523	518
United Arab Emirates	2,266	2,159	2,193	2,233	2,278	2,316	2,345	2,169	2,368	2,276
Yemen	182	220	335	345	340	362	388	409	440	438
Total	**17,373**	**18,265**	**18,669**	**18,979**	**19,174**	**19,923**	**21,178**	**20,525**	**21,825**	**21,126**
Africa										
Algeria	1,214	1,162	1,180	1,202	1,242	1,277	1,246	1,202	1,254	1,270
Angola	526	509	536	646	709	714	735	745	746	742
Benin	6	6	6	3	2	1	1	1	1	1
Cameroon	140	127	108	111	108	124	121	100	85	77
Congo (Brazzaville)	174	181	180	188	201	253	265	270	280	275
Congo (Kinshasa)	26	25	26	30	30	28	26	22	26	24
Cote d'Ivoire (Ivory Coast)	2	1	7	8	16	19	20	15	11	11
Egypt	881	890	896	920	922	856	834	852	748	698
Equatorial Guinea	2	5	5	5	17	52	83	102	168	181
Gabon	298	313	329	365	368	370	352	331	315	301
Ghana	1	2	1	4	6	5	5	6	7	7
Libya	1,433	1,361	1,378	1,390	1,401	1,446	1,390	1,319	1,410	1,367
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nigeria	1,943	1,960	1,931	1,993	2,001	2,132	2,153	2,130	2,165	2,256
South Africa	0	0	0	0	0	0	18	25	26	26
Sudan	(s)	(s)	(s)	(s)	2	5	10	69	186	209
Tunisia	109	98	92	89	87	84	80	83	79	70
Total	**6,755**	**6,638**	**6,674**	**6,954**	**7,112**	**7,368**	**7,340**	**7,272**	**7,507**	**7,516**
Asia & Oceania										
Australia	535	503	536	562	570	588	544	539	722	657
Bangladesh	1	1	1	1	1	2	2	1	3	3
Brunei	165	165	167	163	155	160	157	182	193	195
Burma	14	14	14	10	8	9	11	9	12	14
China	2,845	2,890	2,939	2,990	3,131	3,200	3,198	3,195	3,249	3,300
India	561	534	590	703	651	675	661	653	646	642
Indonesia	1,504	1,511	1,510	1,503	1,547	1,520	1,518	1,472	1,423	1,369
Japan	17	12	11	11	12	10	9	8	7	6
Malaysia	653	640	645	682	695	700	720	693	690	659
New Zealand	38	41	39	32	37	58	47	42	36	33
Pakistan	61	60	55	57	55	57	55	53	54	60
Papua New Guinea	53	126	110	100	103	80	79	97	70	68
Philippines	8	9	6	3	2	1	1	1	1	8
Taiwan	2	1	1	1	1	1	1	1	1	1
Thailand	51	52	56	51	61	72	75	84	110	114
Vietnam	106	120	141	173	175	191	246	290	316	357
Total	**6,615**	**6,680**	**6,822**	**7,043**	**7,205**	**7,323**	**7,324**	**7,319**	**7,533**	**7,487**
World Total	**60,213**	**60,236**	**60,991**	**62,335**	**63,711**	**65,690**	**66,921**	**65,848**	**68,342**	**68,057**

[1] Preliminary.
[2] Includes oil processed from Athabasca Tar Sands.
- - = Not applicable.
(s) = Value less than 500 barrels per day.
Notes: Sum of components may not equal total due to independent rounding. Crude oil includes lease condensate.
Sources: See sources at the end of Section 3.

Table 2.3 World Natural Gas Plant Liquids Production, 1992 - 2001

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	460	506	529	581	596	636	651	653	699	709
Mexico	454	459	461	447	423	388	424	439	438	433
United States	1,697	1,736	1,727	1,762	1,830	1,817	1,759	1,850	1,911	1,868
Total	**2,611**	**2,701**	**2,717**	**2,789**	**2,849**	**2,841**	**2,834**	**2,942**	**3,048**	**3,011**
Central & South America										
Argentina	30	35	44	42	44	48	50	48	48	48
Bolivia	7	7	7	6	7	8	9	10	10	10
Brazil	25	25	35	40	35	30	35	33	36	41
Chile	11	12	12	13	12	7	7	7	7	7
Colombia	6	5	5	8	8	9	10	12	12	12
Cuba	2	2	2	2	2	3	3	2	1	0
Ecuador	3	9	9	9	9	5	4	4	3	9
Peru	1	1	1	1	1	1	1	1	2	2
Trinidad and Tobago	5	6	7	8	9	8	8	10	11	12
Venezuela	113	143	146	149	150	143	145	170	175	200
Total	**203**	**245**	**268**	**277**	**276**	**262**	**271**	**297**	**305**	**341**
Western Europe										
Austria	1	1	1	1	1	1	1	1	1	2
France	13	13	13	12	12	10	5	7	7	7
Greece	1	1	1	1	1	1	1	1	1	1
Italy	1	1	1	1	1	1	1	1	1	0
Netherlands	13	16	25	21	25	24	27	27	26	20
Norway	95	100	103	137	138	139	131	121	120	291
Spain	9	6	4	4	0	0	0	0	0	0
United Kingdom	160	169	218	267	259	233	241	238	233	258
Croatia	6	7	7	8	6	7	7	7	6	6
Total	**299**	**313**	**373**	**450**	**443**	**415**	**414**	**402**	**394**	**585**
Eastern Europe & Former U.S.S.R.										
Former Czechoslovakia	(s)	--	--	--	--	--	--	--	--	--
Czech Republic	--	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0
Hungary	13	11	11	11	10	15	17	15	15	14
Poland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0	0
Romania	7	4	4	6	7	6	7	7	8	8
Azerbaijan	9	8	8	7	6	7	7	7	6	6
Kazakhstan	86	82	63	52	54	55	50	74	108	94
Kyrgyzstan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0	0
Russia	230	220	200	180	185	195	220	231	232	237
Tajikistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0
Turkmenistan	12	11	8	11	12	17	17	16	16	12
Ukraine	23	21	21	20	15	26	25	23	14	10
Uzbekistan	30	38	40	45	50	45	45	45	60	69
Total	**411**	**395**	**355**	**332**	**339**	**367**	**388**	**418**	**459**	**450**
Middle East										
Bahrain	7	12	13	10	10	11	10	11	10	8
Iran	50	55	55	60	60	70	75	75	75	80
Iraq	(s)	15	20	25	20	20	15	15	15	20
Kuwait	34	53	85	95	85	109	115	115	115	120
Oman	6	5	6	10	10	6	6	6	4	4
Qatar	55	55	50	55	50	70	85	111	133	150
Saudi Arabia	713	704	698	701	697	712	755	666	705	680
Syria	2	8	8	9	8	10	8	8	5	5
United Arab Emirates	144	146	150	160	160	160	170	160	200	290
Total	**1,011**	**1,053**	**1,085**	**1,125**	**1,100**	**1,168**	**1,239**	**1,167**	**1,262**	**1,356**

See footnotes at end of table.

Table 2.3 World Natural Gas Plant Liquids Production, 1992 - 2001 (Continued)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Africa										
Algeria	140	145	140	145	150	160	155	190	230	250
Egypt	45	55	58	60	65	71	75	75	102	118
Libya	40	41	41	40	49	60	60	60	60	62
South Africa	2	11	11	11	11	11	11	10	8	7
Tunisia	5	4	4	1	1	1	1	1	3	3
Total	**232**	**256**	**254**	**257**	**276**	**303**	**302**	**336**	**403**	**440**
Asia & Oceania										
Australia	56	55	56	52	62	71	70	72	70	74
Bangladesh	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Brunei	12	13	13	13	11	15	22	22	22	22
Burma	1	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
India	28	30	45	47	80	85	90	90	90	90
Indonesia	75	78	80	76	80	85	87	87	90	82
Japan	(s)	4	4	4	4	5	5	5	8	9
Malaysia	13	17	17	20	20	50	90	85	65	70
New Zealand	5	5	5	5	5	7	7	7	8	8
Pakistan	3	2	3	5	3	3	3	4	4	3
Taiwan	1	1	1	1	1	1	1	1	(s)	(s)
Thailand	14	15	22	37	35	50	60	61	60	60
Total	**208**	**221**	**246**	**261**	**301**	**372**	**435**	**434**	**417**	**418**
World Total	**4,974**	**5,186**	**5,299**	**5,492**	**5,585**	**5,729**	**5,883**	**5,995**	**6,289**	**6,601**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table 2.4 World Dry Natural Gas Production, 1992 - 2001

(Trillion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	4.52	4.91	5.27	5.60	5.71	5.76	5.98	6.26	6.47	6.60
Mexico	0.88	0.95	0.97	0.96	1.06	1.17	1.27	1.29	1.31	1.30
United States	17.84	18.10	18.82	18.60	18.85	18.90	19.02	18.83	18.99	19.36
Total	**23.24**	**23.95**	**25.06**	**25.16**	**25.63**	**25.83**	**26.27**	**26.38**	**26.77**	**27.25**
Central & South America										
Argentina	0.71	0.76	0.79	0.88	0.94	0.97	1.04	1.22	1.32	1.31
Barbados	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bolivia	0.11	0.10	0.10	0.11	0.11	0.11	0.11	0.09	0.12	0.14
Brazil	0.13	0.15	0.15	0.16	0.18	0.19	0.20	0.22	0.26	0.21
Chile	0.06	0.06	0.07	0.07	0.06	0.08	0.07	0.04	0.04	0.04
Colombia	0.15	0.16	0.16	0.16	0.17	0.21	0.22	0.18	0.20	0.20
Cuba	(s)	(s)	(s)	(s)	(s)	0.03	0.01	0.02	0.02	0.02
Ecuador	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01
Peru	0.02	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01
Trinidad and Tobago	0.19	0.22	0.25	0.27	0.30	0.33	0.33	0.41	0.49	0.54
Venezuela	0.76	0.81	0.88	0.89	0.96	0.99	1.11	0.95	0.96	1.12
Total	**2.14**	**2.30**	**2.44**	**2.58**	**2.76**	**2.92**	**3.12**	**3.15**	**3.43**	**3.61**
Western Europe										
Austria	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Belgium	(s)	(s)	(s)	0.00	(s)	0.00	0.00	0.00	(s)	0.00
Denmark	0.15	0.16	0.17	0.19	0.23	0.27	0.27	0.27	0.29	0.30
France	0.11	0.12	0.12	0.12	0.10	0.09	0.08	0.07	0.07	0.07
Germany	0.68	0.68	0.70	0.74	0.80	0.79	0.77	0.82	0.78	0.78
Greece	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Ireland	0.08	0.09	0.10	0.10	0.09	0.08	0.06	0.05	0.04	0.03
Italy	0.64	0.69	0.73	0.72	0.71	0.68	0.67	0.62	0.59	0.55
Netherlands	3.06	3.11	2.95	2.98	3.37	2.99	2.84	2.67	2.56	2.75
Norway	1.04	0.97	1.04	1.08	1.45	1.62	1.63	1.76	1.87	1.93
Spain	0.04	0.02	0.01	0.01	0.02	0.01	(s)	0.01	0.01	0.02
Switzerland	(s)	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.01
United Kingdom	1.96	2.31	2.47	2.67	3.18	3.03	3.14	3.49	3.83	3.74
Bosnia and Herzegovina	(s)	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Croatia	0.06	0.07	0.06	0.07	0.06	0.06	0.06	0.05	0.06	0.06
Slovenia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Yugoslavia	0.03	0.03	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.02
Total	**7.92**	**8.33**	**8.44**	**8.80**	**10.09**	**9.71**	**9.64**	**9.92**	**10.19**	**10.31**

See footnotes at end of table.

Table 2.4 World Dry Natural Gas Production, 1992 - 2001 (Continued)

(Trillion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bulgaria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Former Czechoslovakia	0.01	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Slovakia	--	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hungary	0.18	0.18	0.17	0.17	0.16	0.15	0.14	0.12	0.11	0.11
Poland	0.15	0.18	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.19
Romania	0.78	0.75	0.69	0.68	0.63	0.61	0.52	0.50	0.48	0.51
Azerbaijan	0.28	0.24	0.23	0.23	0.24	0.21	0.20	0.21	0.20	0.20
Belarus	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Georgia	(s)	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)
Kazakhstan	0.29	0.24	0.16	0.17	0.15	0.22	0.19	0.16	0.31	0.36
Kyrgyzstan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	22.62	21.81	21.45	21.01	21.23	20.17	20.87	20.83	20.63	20.51
Tajikistan	(s)	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Turkmenistan	2.02	2.29	1.26	1.14	1.31	0.90	0.47	0.79	1.64	1.70
Ukraine	0.74	0.68	0.64	0.62	0.64	0.64	0.64	0.63	0.64	0.64
Uzbekistan	1.51	1.59	1.67	1.70	1.70	1.74	1.94	1.96	1.99	2.23
Total	**28.58**	**27.99**	**26.47**	**25.93**	**26.28**	**24.85**	**25.17**	**25.41**	**26.22**	**26.48**
Middle East										
Bahrain	0.19	0.23	0.23	0.23	0.23	0.28	0.29	0.30	0.30	0.31
Iran	0.88	0.96	1.12	1.25	1.42	1.66	1.77	2.04	2.13	2.17
Iraq	0.10	0.09	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.10
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Kuwait	0.09	0.19	0.21	0.21	0.33	0.33	0.32	0.31	0.34	0.34
Oman	0.12	0.14	0.15	0.15	0.15	0.18	0.25	0.20	0.32	0.49
Qatar	0.40	0.48	0.48	0.48	0.48	0.61	0.69	0.78	1.03	1.14
Saudi Arabia	1.20	1.27	1.33	1.34	1.46	1.60	1.65	1.63	1.76	1.90
Syria	0.13	0.13	0.13	0.10	0.14	0.16	0.20	0.21	0.22	0.21
United Arab Emirates	1.02	0.94	0.91	1.11	1.19	1.28	1.31	1.34	1.36	1.59
Total	**4.14**	**4.43**	**4.69**	**4.99**	**5.53**	**6.22**	**6.60**	**6.93**	**7.57**	**8.25**
Africa										
Algeria	1.97	1.90	1.81	2.05	2.19	2.43	2.60	2.88	2.94	2.84
Angola	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Cote d'Ivoire (Ivory Coast)	0.00	0.00	0.00	(s)	0.02	0.02	0.03	0.05	0.05	0.05
Egypt	0.35	0.40	0.42	0.44	0.47	0.48	0.49	0.52	0.65	0.75
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Gabon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Libya	0.24	0.22	0.23	0.22	0.23	0.23	0.22	0.18	0.21	0.22
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Nigeria	0.17	0.18	0.16	0.18	0.19	0.21	0.21	0.25	0.44	0.55
Senegal	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
South Africa	(s)	0.06	0.07	0.07	0.07	0.06	0.05	0.05	0.06	0.06
Tunisia	0.01	0.01	0.01	0.01	0.03	0.06	0.07	0.07	0.07	0.08
Total	**2.77**	**2.81**	**2.72**	**3.01**	**3.23**	**3.52**	**3.70**	**4.02**	**4.44**	**4.58**

See footnotes at end of table.

Table 2.4 World Dry Natural Gas Production, 1992 - 2001 (Continued)

(Trillion Cubic Feet)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Australia	0.80	0.86	0.93	1.03	1.06	1.06	1.10	1.10	1.16	1.17
Bangladesh	0.21	0.22	0.23	0.26	0.27	0.27	0.29	0.32	0.34	0.35
Brunei	0.29	0.29	0.30	0.33	0.33	0.32	0.32	0.33	0.35	0.37
Burma	0.04	0.04	0.05	0.06	0.06	0.05	0.06	0.06	0.12	0.26
China	0.53	0.56	0.59	0.60	0.67	0.75	0.78	0.85	0.96	1.07
India	0.48	0.53	0.59	0.63	0.70	0.72	0.76	0.75	0.79	0.80
Indonesia	1.79	1.97	2.21	2.24	2.35	2.37	2.27	2.51	2.36	2.44
Japan	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
Malaysia	0.80	0.88	0.92	1.02	1.23	1.36	1.37	1.42	1.50	1.90
New Zealand	0.20	0.18	0.18	0.17	0.19	0.20	0.17	0.19	0.21	0.23
Pakistan	0.55	0.58	0.63	0.65	0.70	0.70	0.71	0.78	0.86	0.83
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Taiwan	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Thailand	0.25	0.31	0.34	0.37	0.43	0.54	0.57	0.63	0.66	0.66
Vietnam	0.01	0.01	0.01	0.03	0.03	0.01	0.02	0.04	0.04	0.05
Total	**6.06**	**6.55**	**7.11**	**7.50**	**8.13**	**8.47**	**8.55**	**9.10**	**9.48**	**10.24**
World Total	**74.84**	**76.36**	**76.93**	**77.96**	**81.65**	**81.52**	**83.03**	**84.91**	**88.09**	**90.72**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5 billion cubic feet.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 4.

Table 2.5 World Coal Production, 1992 - 2001

(Million Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	72.32	76.09	80.28	82.57	83.47	86.82	82.90	79.91	76.24	77.68
Mexico	7.24	7.84	10.07	10.26	11.14	11.48	12.38	11.38	12.50	12.81
United States [2]	997.54	945.42	1,033.50	1,032.97	1,063.86	1,089.93	1,117.53	1,100.43	1,073.61	1,121.33
Total	**1,077.11**	**1,029.35**	**1,123.85**	**1,125.80**	**1,158.47**	**1,188.23**	**1,212.81**	**1,191.73**	**1,162.36**	**1,211.82**
Central & South America										
Argentina	0.22	0.18	0.38	0.34	0.34	0.28	0.32	0.37	0.29	0.21
Brazil	5.22	5.07	4.91	4.58	4.23	4.88	4.68	4.73	5.45	4.53
Chile	1.79	1.49	1.30	1.14	1.11	1.15	1.04	0.53	0.40	0.63
Colombia	24.15	23.39	24.98	28.37	33.14	35.93	37.20	36.11	42.04	47.89
Peru	0.20	0.13	0.10	0.08	0.05	0.05	0.05	0.05	0.07	0.05
Venezuela	2.70	4.21	4.72	4.48	4.01	5.67	8.22	7.69	8.69	8.36
Total	**34.27**	**34.48**	**36.39**	**38.99**	**42.88**	**47.96**	**51.51**	**49.48**	**56.95**	**61.67**
Western Europe										
Austria	1.95	1.86	1.51	1.43	1.22	1.25	1.26	1.25	1.38	1.33
Belgium	1.32	1.07	0.83	0.70	0.62	0.47	0.34	0.40	0.41	0.24
France	13.04	11.75	10.59	10.91	9.43	8.06	6.74	5.58	3.85	2.53
Germany	346.09	315.23	291.78	274.15	264.99	251.74	233.00	225.97	225.26	225.66
Greece	60.68	60.43	62.47	63.56	65.90	64.86	67.11	68.40	70.42	74.49
Ireland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Italy	0.91	0.69	0.30	0.19	0.15	0.24	0.21	0.13	0.02	0.02
Norway	0.40	0.30	0.33	0.32	0.25	0.43	0.36	0.45	0.70	1.66
Portugal	0.24	0.22	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spain	36.90	34.81	32.67	31.28	30.75	29.16	28.74	26.77	25.87	25.00
Sweden	0.04	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	56.93	53.62	59.93	60.71	62.13	66.06	74.28	73.90	69.59	72.57
United Kingdom	93.58	75.18	53.92	52.48	53.50	51.79	44.14	39.86	33.73	34.74
Bosnia and Herzegovina	2.20	1.65	1.54	1.81	1.86	1.92	1.98	8.00	9.79	10.03
Croatia	0.13	0.13	0.11	0.09	0.07	0.05	0.06	0.02	0.00	0.00
Macedonia, TFYR	7.69	7.62	7.56	7.99	7.88	8.20	9.01	8.13	8.28	8.27
Slovenia	6.12	5.64	5.35	5.38	5.25	5.64	5.39	5.03	4.94	4.56
Yugoslavia	44.21	41.26	42.27	44.10	42.38	44.82	48.59	36.72	37.85	39.46
Total	**672.44**	**611.49**	**571.35**	**555.11**	**546.39**	**534.69**	**521.21**	**500.60**	**492.10**	**500.55**
Eastern Europe & Former U.S.S.R.										
Albania	0.88	0.66	0.19	0.18	0.11	0.08	0.05	0.04	0.04	0.04
Bulgaria	33.25	31.79	31.60	33.89	33.72	32.75	34.14	31.22	32.69	31.47
Former Czechoslovakia	101.90	--	--	--	--	--	--	--	--	--
Czech Republic	--	93.90	84.82	81.94	84.02	81.04	74.44	65.18	71.83	72.87
Slovakia	--	3.91	4.01	4.14	4.22	4.32	4.36	4.13	4.02	3.77
Hungary	17.45	16.11	15.55	16.08	16.74	17.18	17.05	16.82	16.16	15.95
Poland	218.44	218.43	220.35	220.17	193.08	221.52	196.17	187.57	178.27	178.94
Romania	42.30	43.82	44.70	45.33	46.15	37.27	28.91	25.22	32.28	33.08
Georgia	0.22	0.13	0.05	0.05	0.03	0.01	0.02	0.02	0.01	0.01
Kazakhstan	139.49	123.32	115.33	91.88	84.69	80.08	76.91	64.35	79.65	88.52
Kyrgyzstan	2.37	1.90	1.04	0.51	0.44	0.58	0.48	0.46	0.47	0.47
Moldova	0.29	0.20	0.12	0.04	0.04	0.02	0.00	0.00	0.00	0.00
Russia	405.85	364.03	312.72	296.35	304.04	257.89	241.03	259.22	279.18	299.50
Tajikistan	0.24	0.19	0.12	0.04	0.02	0.02	0.01	0.02	0.02	0.02
Ukraine	147.33	127.59	104.06	94.60	83.47	84.82	85.07	90.86	90.24	90.06
Uzbekistan	5.14	4.21	4.24	3.41	3.13	3.25	3.22	3.27	2.83	2.94
Total	**1,115.14**	**1,030.18**	**938.89**	**888.61**	**853.90**	**820.79**	**761.87**	**748.39**	**787.69**	**817.65**

See footnotes at end of table.

Table 2.5 World Coal Production, 1992 - 2001 (Continued)

(Million Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Iran	1.07	1.07	1.43	1.25	1.33	1.33	1.29	1.47	1.54	1.54
Total	**1.07**	**1.07**	**1.43**	**1.25**	**1.33**	**1.33**	**1.29**	**1.47**	**1.54**	**1.54**
Africa										
Algeria	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03	0.03
Botswana	0.99	0.98	0.99	0.99	0.84	0.86	1.02	1.04	1.06	1.06
Cameroon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
Morocco	0.63	0.67	0.72	0.72	0.56	0.41	0.30	0.14	0.03	0.03
Mozambique	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02
Niger	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.17	0.17	0.17
Nigeria	0.11	0.13	0.14	0.15	0.15	0.15	0.07	0.07	0.07	0.07
South Africa	201.20	203.04	215.84	227.30	227.48	244.32	246.92	242.99	248.43	250.28
Swaziland	0.11	0.06	0.20	0.19	0.14	0.16	0.30	0.32	0.32	0.32
Tanzania	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Zambia	0.47	0.37	0.18	0.17	0.19	0.20	0.21	0.21	0.21	0.21
Zimbabwe	6.12	5.83	6.03	6.09	5.15	4.41	4.59	5.10	4.85	4.96
Total	**209.98**	**211.43**	**224.46**	**235.98**	**234.86**	**250.86**	**253.75**	**250.20**	**255.30**	**257.26**
Asia & Oceania										
Afghanistan	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Australia	248.96	247.58	248.46	266.55	272.44	292.08	316.75	320.77	338.19	356.85
Bhutan	0.06	0.05	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06
Burma	0.08	0.06	0.06	0.06	0.06	0.07	0.03	0.21	0.46	0.52
China	1,228.58	1,303.53	1,403.50	1,536.97	1,545.25	1,507.13	1,428.99	1,364.94	1,314.43	1,459.02
India	270.25	281.23	279.69	297.77	314.85	326.06	322.17	326.83	342.65	338.62
Indonesia	25.49	30.39	34.19	45.66	55.48	60.20	66.49	79.37	84.44	99.64
Japan	8.62	7.94	8.05	6.96	6.80	4.38	4.08	4.07	3.28	3.53
Korea, North	104.72	109.13	108.03	106.92	105.71	104.72	99.48	100.48	105.68	105.27
Korea, South	13.19	10.41	8.20	6.31	5.46	4.97	4.81	4.63	4.57	4.21
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	0.19	0.42	0.15	0.12	0.24	0.24	0.35	0.27	0.38	0.39
Mongolia	6.89	6.18	5.69	5.53	5.63	5.43	5.57	5.47	5.72	5.68
Nepal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New Zealand	3.05	3.22	3.03	3.59	3.68	3.46	3.35	3.63	3.70	4.09
Pakistan	3.39	3.39	3.54	3.35	3.82	3.85	3.47	3.72	3.49	3.53
Philippines	1.83	1.74	1.60	1.47	1.22	1.20	1.28	1.34	1.49	1.49
Taiwan	0.37	0.36	0.31	0.26	0.16	0.11	0.09	0.10	0.09	0.00
Thailand	16.99	17.15	18.86	20.31	23.92	25.84	22.04	20.13	19.61	21.61
Vietnam	5.28	6.50	6.27	9.20	10.83	12.55	11.80	10.03	10.98	11.02
Total	**1,937.96**	**2,029.31**	**2,129.72**	**2,311.13**	**2,355.63**	**2,352.36**	**2,290.83**	**2,246.06**	**2,239.23**	**2,415.53**
World Total	**5,047.97**	**4,947.30**	**5,026.08**	**5,156.89**	**5,193.46**	**5,196.23**	**5,093.28**	**4,987.93**	**4,995.16**	**5,266.01**

[1] Preliminary.
[2] United States coal production is from Energy Information Administration, Annual Energy Review 2001, table 7.1.
- - = Not applicable.
(s) = Value less than 5 thousand short tons.
Notes: Sum of components may not equal total due to independent rounding.
Coal includes anthracite, subanthracite, bituminous, subbituminous, lignite, and brown coal.
Sources: See sources at the end of Section 5.

Table 2.6 World Net Hydroelectric Power Generation, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	313.2	320.3	326.4	332.0	352.4	347.2	328.6	342.1	354.7	327.9
Mexico	25.9	26.0	19.8	27.3	31.1	26.2	24.4	32.5	32.8	28.2
United States [2]	248.9	276.5	256.7	308.1	344.1	352.4	318.9	313.4	270.0	208.7
Total	**588.0**	**622.8**	**603.0**	**667.4**	**727.6**	**725.8**	**671.8**	**688.0**	**657.6**	**564.8**
Central & South America										
Argentina	24.3	29.9	26.6	26.7	22.8	27.9	26.3	21.5	28.6	39.7
Bolivia	1.3	1.4	1.4	1.4	1.5	1.4	1.5	1.8	2.0	2.1
Brazil	221.1	232.7	240.3	251.4	263.1	276.2	288.6	290.0	301.7	265.5
Chile	16.6	17.0	16.8	19.6	18.6	18.8	15.8	13.4	18.9	21.5
Colombia	22.2	27.7	32.0	31.8	35.1	31.4	30.5	33.4	31.8	31.3
Costa Rica	3.5	3.9	3.9	3.5	3.8	4.8	4.3	5.1	5.6	5.6
Dominican Republic	0.5	1.1	0.5	0.6	0.9	0.7	0.7	1.1	0.8	0.7
Ecuador	4.9	5.8	6.6	5.1	6.3	6.5	6.5	7.1	7.3	7.0
El Salvador	1.0	1.2	1.2	1.5	1.9	1.4	1.6	1.7	1.2	1.2
Guatemala	1.8	1.9	2.0	1.7	2.1	2.4	1.6	2.1	2.3	2.2
Haiti	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.2
Honduras	2.2	2.2	1.8	1.7	2.0	2.1	1.9	2.1	2.2	1.9
Jamaica	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nicaragua	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.2	0.2
Panama	1.9	2.3	2.4	2.4	3.0	2.9	2.9	2.8	3.1	2.5
Paraguay	26.8	31.1	36.0	41.7	47.6	50.1	50.3	51.4	52.9	44.9
Peru	9.7	11.7	12.6	13.6	13.2	13.1	13.7	14.4	16.0	17.4
Puerto Rico	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Suriname	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5
Uruguay	7.8	7.2	7.4	5.8	5.7	6.4	9.1	5.3	6.0	7.9
Venezuela	46.8	47.0	50.8	50.9	53.3	56.7	57.4	59.9	62.2	59.8
Other	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	**394.8**	**426.6**	**444.6**	**461.9**	**483.3**	**505.0**	**515.1**	**515.8**	**545.0**	**513.4**
Western Europe										
Austria	34.5	36.3	35.3	36.7	33.9	35.6	37.0	40.1	41.6	39.5
Belgium	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.5	0.4
Finland	15.0	13.3	11.7	12.8	11.7	12.1	14.9	12.7	14.5	13.3
France	67.2	63.1	76.5	70.6	64.5	61.6	61.4	71.6	66.2	72.7
Germany	17.2	17.7	19.7	21.6	21.7	17.2	17.0	19.5	21.5	22.9
Greece	2.2	2.3	2.6	3.5	4.3	3.8	3.7	4.5	3.7	1.9
Iceland	4.3	4.4	4.5	4.6	4.7	5.2	5.6	6.0	6.3	6.5
Ireland	0.8	0.8	0.9	0.7	0.7	0.7	0.9	0.8	0.8	0.6
Italy	41.8	41.0	44.2	37.4	41.6	41.2	40.8	44.9	43.8	47.7
Luxembourg	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Norway	115.5	118.0	110.4	120.1	102.6	108.9	114.2	120.2	140.2	119.2
Portugal	4.6	8.5	10.6	8.3	14.6	13.0	12.9	7.2	11.2	13.9
Spain	18.7	24.1	27.9	22.9	39.4	34.4	33.7	22.6	28.1	40.6
Sweden	73.6	73.9	58.5	67.4	51.2	68.4	73.6	71.0	78.2	77.6
Switzerland	32.4	35.4	38.7	34.8	28.1	33.7	33.1	39.6	36.5	40.9
Turkey	26.3	33.6	30.3	35.2	40.1	39.4	41.8	34.3	30.6	23.8
United Kingdom	5.3	4.2	5.0	4.8	3.3	4.1	5.2	5.3	5.1	3.2
Bosnia and Herzegovina	3.4	2.3	3.4	3.6	5.1	4.6	4.5	5.5	5.0	4.6
Croatia	4.3	4.3	4.9	5.2	7.2	5.2	5.1	5.8	6.7	8.0
Macedonia, TFYR	0.8	0.5	0.7	0.8	0.8	0.9	1.1	1.4	1.2	1.1
Slovenia	3.4	3.0	3.3	3.2	3.6	3.0	3.4	3.7	3.8	3.7
Yugoslavia	11.2	10.0	11.0	11.1	11.4	12.0	12.8	13.2	11.9	11.8
Other	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	**483.0**	**497.3**	**500.8**	**505.9**	**491.1**	**505.7**	**523.4**	**530.6**	**557.5**	**554.1**

See footnotes at end of table.

Table 2.6 World Net Hydroelectric Power Generation, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	3.2	3.3	3.7	4.2	5.5	5.3	4.9	5.2	4.5	5.1
Bulgaria	2.0	1.9	1.5	2.3	2.9	2.9	3.3	2.9	3.1	3.3
Former Czechoslovakia	3.6	--	--	--	--	--	--	--	--	--
Czech Republic	--	1.4	1.4	2.0	1.9	1.7	1.4	1.7	1.7	2.0
Slovakia	--	3.9	4.6	5.2	4.5	4.3	4.3	4.5	4.7	4.9
Hungary	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Poland	3.5	3.5	3.7	3.8	3.9	3.8	2.3	2.1	2.1	2.0
Romania	11.6	12.6	12.9	16.5	15.6	17.3	18.7	18.1	14.6	14.0
Armenia	3.0	4.2	3.5	1.9	1.6	1.4	1.5	1.9	1.8	1.8
Azerbaijan	1.7	2.4	1.8	1.5	1.5	1.7	1.9	1.5	1.5	1.9
Georgia	6.5	7.0	4.7	5.3	6.0	6.0	6.3	6.4	5.8	5.8
Kazakhstan	6.8	7.6	9.1	8.2	7.3	6.4	6.1	6.1	7.5	8.2
Kyrgyzstan	9.2	9.0	11.6	11.0	12.1	10.8	9.8	12.0	13.5	12.4
Latvia	2.5	2.8	3.3	2.9	1.8	2.9	4.3	2.7	2.8	3.1
Lithuania	0.3	0.4	0.4	0.7	0.9	0.8	0.9	0.9	0.6	0.8
Moldova	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3
Russia	170.9	172.1	175.2	175.5	153.8	156.8	157.9	159.4	157.8	173.5
Tajikistan	15.8	16.9	16.5	14.5	14.7	13.6	14.0	15.3	13.7	13.9
Ukraine	8.0	11.1	12.2	10.0	8.7	9.9	15.8	14.4	11.3	13.0
Uzbekistan	6.2	7.3	7.1	6.1	6.5	5.7	5.7	5.6	5.8	5.2
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**255.3**	**267.9**	**273.6**	**272.2**	**249.6**	**252.0**	**259.5**	**261.2**	**253.5**	**271.5**
Middle East										
Iran	9.4	9.7	7.4	7.2	7.3	6.8	7.0	4.9	3.6	3.6
Iraq	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Lebanon	0.5	0.7	0.8	0.7	0.8	0.9	0.8	0.3	0.3	0.2
Syria	7.3	6.6	6.7	6.9	6.9	7.3	7.9	8.6	9.2	9.9
Total	**18.0**	**17.7**	**15.5**	**15.4**	**15.6**	**15.7**	**16.3**	**14.5**	**13.8**	**14.3**
Africa										
Algeria	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1
Angola	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9
Cameroon	2.6	2.6	2.7	2.7	2.8	3.1	3.1	3.3	3.4	3.5
Congo (Brazzaville)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4
Congo (Kinshasa)	6.0	5.7	5.4	5.3	5.3	5.4	5.4	5.6	5.4	5.2
Cote d'Ivoire (Ivory Coast)	1.0	1.1	1.0	1.7	1.8	1.8	1.4	1.7	1.7	1.8
Egypt	8.5	10.4	10.6	10.7	11.4	11.9	12.1	15.1	13.8	14.3
Ethiopia	1.1	1.3	1.3	1.4	1.5	1.6	1.6	1.6	1.6	1.7
Gabon	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5
Ghana	6.0	6.1	6.0	6.1	6.6	6.8	3.8	5.1	6.5	8.4
Guinea	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4
Kenya	2.8	3.0	3.0	3.1	3.3	3.2	3.2	2.4	1.3	0.7
Madagascar	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5
Malawi	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7
Mali	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Morocco	1.0	0.4	0.8	0.6	1.9	2.1	1.8	0.8	0.7	0.6
Mozambique	0.3	0.3	0.4	0.4	0.4	1.0	1.5	6.8	6.9	7.0
Nigeria	6.0	5.5	5.5	5.4	5.4	5.5	5.5	5.5	5.7	6.0
Reunion	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
South Africa	0.8	0.1	1.1	0.5	1.3	2.1	1.6	0.7	1.3	2.1
Sudan	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.2	1.2	1.1
Swaziland	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Tanzania	1.6	1.7	1.5	1.5	1.7	1.6	2.1	2.1	2.2	2.4
Uganda	1.0	1.0	1.0	1.0	1.1	1.2	1.2	1.3	1.6	1.9
Zambia	7.7	7.7	7.7	7.8	7.0	7.6	7.5	7.6	7.7	7.7
Zimbabwe	2.9	1.8	1.6	1.8	2.1	2.1	1.9	2.9	3.2	3.6
Other	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Total	**55.2**	**54.8**	**55.7**	**56.3**	**60.4**	**63.4**	**60.2**	**69.6**	**69.8**	**73.1**

See footnotes at end of table.

Table 2.6 World Net Hydroelectric Power Generation, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2
Australia	15.2	16.5	16.2	15.7	15.4	16.6	15.6	16.5	16.6	16.5
Bangladesh	0.8	0.6	0.8	0.6	0.7	0.7	0.9	0.8	1.0	1.0
Bhutan	1.6	1.6	1.7	1.7	2.0	1.8	1.8	1.9	1.9	1.9
Burma	1.5	1.7	1.6	1.6	1.6	1.7	0.9	1.0	1.9	3.4
Cambodia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	(s)
China	130.2	149.2	165.4	184.4	184.9	193.1	202.9	201.8	220.2	263.4
Fiji	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
French Polynesia	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
India	69.2	69.8	81.9	72.0	68.4	73.9	82.2	79.9	73.7	77.4
Indonesia	9.7	8.8	7.0	7.4	8.1	5.1	9.6	9.3	9.0	10.1
Japan	81.7	94.6	66.6	81.3	79.7	88.9	91.6	85.6	86.4	87.0
Korea, North	23.8	23.8	23.3	22.8	22.3	21.8	20.7	20.9	21.1	21.3
Korea, South	3.1	4.2	2.3	2.7	2.4	2.8	4.2	4.1	4.0	2.3
Laos	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.8	1.0	1.3
Malaysia	4.3	4.8	6.5	6.2	5.1	3.8	4.8	7.4	6.9	7.2
Nepal	0.8	0.9	0.9	1.1	1.2	1.1	1.1	1.4	1.6	1.6
New Caledonia	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.4
New Zealand	20.4	23.1	25.6	27.0	25.7	23.6	24.2	23.3	24.4	21.7
Pakistan	18.5	20.9	19.2	22.6	23.0	20.6	21.8	19.1	17.0	18.9
Papua New Guinea	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.7
Philippines	4.2	4.9	5.9	6.1	6.9	6.0	5.0	7.8	7.7	7.9
Samoa	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Sri Lanka	2.9	3.8	4.0	4.4	3.2	3.4	3.9	4.1	3.2	3.1
Taiwan	8.3	6.8	8.8	8.3	8.6	8.9	9.9	8.8	8.7	9.1
Thailand	4.2	3.7	4.5	6.6	7.3	7.1	5.1	3.5	6.0	6.2
U.S. Pacific Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Vietnam	7.2	7.9	9.1	10.5	11.9	11.6	11.0	13.6	14.4	16.8
Total	**410.3**	**450.2**	**454.0**	**486.2**	**481.4**	**495.5**	**520.3**	**513.8**	**528.7**	**579.8**
World Total	**2,204.7**	**2,337.4**	**2,347.3**	**2,465.3**	**2,509.1**	**2,563.1**	**2,566.5**	**2,593.5**	**2,625.8**	**2,571.1**

[1] Preliminary.
[2] Includes hydroelectric pumped storage.
- - = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit and excludes generation from pumped storage.
Sources: See sources at the end of Section 6.

Table 2.7 World Net Nuclear Electric Power Generation, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	76.6	90.1	102.4	93.0	88.1	77.9	67.7	69.8	68.7	72.9
Mexico	3.7	4.7	4.0	8.0	7.5	9.9	8.8	9.5	7.8	8.3
United States	618.8	610.3	640.4	673.4	674.7	628.6	673.7	728.3	753.9	768.8
Total	**699.1**	**705.1**	**746.9**	**774.4**	**770.3**	**716.4**	**750.2**	**807.6**	**830.4**	**850.0**
Central & South America										
Argentina	6.7	7.3	7.8	7.1	6.9	7.5	7.1	6.7	6.0	6.5
Brazil	1.7	0.4	0.1	2.4	2.3	3.0	3.1	3.8	4.9	14.3
Total	**8.4**	**7.7**	**7.9**	**9.5**	**9.2**	**10.5**	**10.3**	**10.5**	**10.9**	**20.8**
Western Europe										
Belgium	41.3	39.8	38.6	39.3	41.2	45.0	43.9	46.6	45.7	44.0
Finland	18.3	18.9	18.5	18.3	18.5	19.0	20.8	21.8	21.3	21.7
France	321.5	349.8	342.0	358.4	377.5	374.3	368.6	375.1	394.4	400.9
Germany	150.9	145.8	143.2	145.4	152.0	161.8	153.6	161.0	161.2	162.6
Netherlands	3.6	3.8	3.8	3.8	4.0	2.3	3.6	3.6	3.7	3.8
Spain	53.0	53.3	52.5	52.7	53.5	52.5	56.0	55.9	58.9	60.5
Sweden	60.4	58.3	69.5	66.4	69.6	66.7	69.9	66.6	54.1	65.8
Switzerland	22.3	22.2	23.1	23.7	23.9	24.0	24.5	23.7	23.7	25.5
United Kingdom	69.1	81.0	80.0	80.6	85.8	89.3	95.1	91.5	81.7	85.6
Slovenia	3.8	3.8	4.3	4.5	4.4	4.8	5.0	4.5	4.5	5.0
Total	**744.1**	**776.6**	**775.4**	**793.0**	**830.3**	**839.9**	**841.0**	**850.2**	**849.4**	**875.4**
Eastern Europe & Former U.S.S.R.										
Bulgaria	11.0	13.3	14.6	16.4	17.8	16.4	16.1	15.0	17.3	18.2
Former Czechoslovakia	23.3	--	--	--	--	--	--	--	--	--
Czech Republic	--	12.0	12.3	11.6	12.2	12.5	12.5	12.7	12.9	14.0
Slovakia	--	11.6	11.5	10.9	11.3	10.5	10.8	12.5	13.1	16.2
Hungary	13.3	13.1	13.3	13.3	13.5	13.3	13.3	13.4	13.5	13.4
Romania	0.0	0.0	0.0	0.0	0.9	5.1	4.9	4.8	5.2	5.0
Armenia	0.0	0.0	0.0	0.0	2.1	1.4	1.4	2.1	1.8	2.0
Kazakhstan	0.5	0.4	0.4	0.1	0.1	0.3	0.1	(s)	0.0	0.0
Lithuania	13.9	12.3	7.3	10.6	12.7	10.9	12.9	9.9	8.4	11.4
Russia	113.6	113.2	92.9	94.3	103.3	104.5	98.3	110.9	122.5	125.4
Ukraine	70.1	71.4	65.4	67.0	76.0	75.4	70.6	67.3	71.1	71.7
Total	**245.6**	**247.3**	**217.7**	**224.3**	**249.8**	**250.3**	**240.9**	**248.6**	**265.7**	**277.3**
Africa										
South Africa	9.3	7.3	9.7	11.3	11.8	12.6	13.6	12.8	13.0	10.7
Total	**9.3**	**7.3**	**9.7**	**11.3**	**11.8**	**12.6**	**13.6**	**12.8**	**13.0**	**10.7**
Asia & Oceania										
China	0.5	2.5	13.5	12.4	13.6	11.4	13.5	14.1	16.0	16.7
India	6.0	5.9	4.7	6.5	7.4	10.5	10.6	11.5	14.1	18.2
Japan	212.1	236.8	255.7	276.7	287.1	306.1	315.7	300.8	293.8	309.0
Korea, South	53.7	55.2	55.7	63.7	70.2	73.2	85.2	97.9	103.5	106.5
Pakistan	0.5	0.4	0.6	0.5	0.3	0.4	0.4	0.1	0.4	2.0
Taiwan	32.5	33.0	33.5	33.9	36.3	34.8	35.4	36.9	37.0	34.1
Total	**305.3**	**333.8**	**363.6**	**393.6**	**415.0**	**436.4**	**460.8**	**461.2**	**464.7**	**486.5**
World Total	**2,011.8**	**2,077.7**	**2,121.3**	**2,206.0**	**2,286.5**	**2,266.1**	**2,316.9**	**2,391.0**	**2,434.2**	**2,520.7**

[1] Preliminary.
-- = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit.
No generation is reported for Middle East.
Sources: See sources at the end of Section 6.

Table 2.8 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Generation, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	4.1	4.5	5.4	5.3	5.5	5.9	6.3	7.3	7.2	7.2
Mexico	5.5	5.6	5.3	5.4	5.4	5.2	5.7	5.9	6.1	5.8
United States	77.5	79.7	80.2	78.1	79.4	80.8	80.7	83.4	85.7	84.8
Total	**87.1**	**89.8**	**90.9**	**88.7**	**90.3**	**91.9**	**92.6**	**96.6**	**99.0**	**97.7**
Central & South America										
Argentina	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Bolivia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Brazil	6.6	6.7	7.2	7.4	8.5	9.5	9.8	11.4	12.0	14.8
Chile	0.5	0.5	0.5	0.7	0.9	0.8	0.8	1.0	0.8	0.6
Colombia	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.5	0.6
Costa Rica	(s)	(s)	0.3	0.5	0.5	0.5	0.6	0.8	0.9	1.1
Cuba	1.0	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.7	0.8
Dominican Republic	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
El Salvador	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9
Guatemala	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.8	0.8
Jamaica	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nicaragua	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Panama	(s)	(s)	(s)	(s)	(s)	0.1	0.1	0.1	0.1	0.1
Paraguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Peru	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Trinidad and Tobago	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Uruguay	0.1	0.1	0.1	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**10.2**	**10.0**	**10.8**	**11.3**	**12.9**	**14.1**	**14.3**	**16.6**	**17.4**	**20.6**
Western Europe										
Austria	1.2	1.2	1.1	1.8	1.5	1.6	1.6	1.7	1.7	2.0
Belgium	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.2	1.2	1.3
Croatia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Denmark	1.4	1.7	1.8	2.0	2.3	3.1	4.1	4.6	6.0	6.1
Faroe Islands	0.0	0.0	(s)	(s)	(s)	(s)	0.0	0.0	0.0	0.0
Finland	4.7	5.7	6.1	6.3	5.8	7.8	9.3	8.3	8.5	8.4
France	2.1	2.1	2.4	2.5	2.5	2.9	2.9	3.3	3.7	3.9
Germany	5.7	6.1	7.6	8.3	9.2	9.9	12.6	13.1	18.6	22.6
Greece	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.9
Iceland	0.2	0.2	0.2	0.3	0.3	0.4	0.6	1.1	1.3	1.4
Ireland	(s)	(s)	(s)	(s)	(s)	0.1	0.2	0.3	0.3	0.4
Italy	3.8	4.0	3.8	4.0	4.5	5.3	6.1	6.9	7.6	7.8
Luxembourg	(s)	(s)	(s)	0.1	(s)	(s)	(s)	0.1	0.1	0.1
Netherlands	1.4	1.6	1.6	2.0	2.6	4.0	4.4	4.5	5.0	5.0
Norway	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Portugal	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.4	1.7	1.8
Slovenia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(s)	0.1	0.1
Spain	0.7	0.8	1.0	1.5	1.9	2.8	3.5	5.4	7.1	9.2
Sweden	2.0	2.2	2.2	2.4	2.2	2.9	3.2	3.1	4.2	3.5
Switzerland	0.6	0.5	1.0	1.0	1.1	1.1	1.1	1.5	1.5	1.4
Turkey	0.1	0.1	0.1	0.3	0.2	0.4	0.3	0.3	0.3	0.4
United Kingdom	2.1	4.5	4.6	5.4	2.6	3.1	3.7	4.6	5.0	5.7
Total	**28.2**	**33.1**	**35.9**	**40.3**	**39.4**	**47.8**	**56.4**	**61.9**	**74.8**	**82.4**
Eastern Europe & Former U.S.S.R.										
Belarus	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Bulgaria	0.0	0.0	0.0	0.0	0.0	0.0	(s)	(s)	(s)	(s)
Czech Republic	--	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.7	0.7
Hungary	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Poland	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.5	0.5	0.6
Romania	0.1	0.1	0.0	(s)	0.0	(s)	(s)	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	1.8	1.7	1.6	1.5	1.5	1.5	1.5	2.0	2.5	3.0
Total	**2.2**	**2.4**	**2.3**	**2.3**	**2.3**	**2.6**	**2.8**	**3.5**	**3.9**	**4.5**

See footnotes at end of table.

Table 2.8 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Generation, 1992 - 2001 (Cont.)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Jordan	(s)	(s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**(s)**	**(s)**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Africa										
Ethiopia	0.1	0.1	0.1	0.1	(s)	0.0	0.0	(s)	(s)	(s)
Kenya	0.3	0.3	0.2	0.4	0.4	0.3	0.4	0.4	0.4	0.5
Total	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.3**	**0.4**	**0.4**	**0.4**	**0.5**
Asia & Oceania										
Australia	0.6	0.6	0.6	0.7	1.0	1.0	1.1	1.1	1.7	1.8
China	0.0	0.0	0.3	2.8	1.3	2.5	2.2	1.9	1.6	1.3
India	(s)	0.1	0.2	0.1	0.8	1.0	1.1	1.4	1.6	1.8
Indonesia	1.0	1.0	1.5	2.1	2.1	2.5	2.5	2.6	2.5	2.4
Japan	18.4	18.5	19.7	21.8	22.7	24.4	17.8	18.7	19.0	19.1
Korea, South	0.0	0.0	(s)	0.3	0.4	0.4	0.4	0.4	0.5	0.5
New Zealand	2.6	2.5	2.6	2.5	2.7	3.0	3.4	3.8	3.9	4.0
Philippines	5.4	5.4	6.0	5.8	6.2	6.9	8.5	10.1	11.0	12.2
Thailand	0.0	0.0	0.0	0.2	0.2	0.9	0.7	0.9	1.4	2.3
Total	**28.2**	**28.2**	**31.0**	**36.3**	**37.5**	**42.5**	**37.6**	**40.9**	**43.1**	**45.4**
World Total	**156.3**	**163.7**	**171.2**	**179.3**	**182.8**	**199.1**	**204.1**	**219.9**	**238.7**	**251.1**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit.
Sources: See sources at the end of Section 6.

Table 2.9 World Production of Primary Energy by Selected Country Groups (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Petroleum [2]										
World Total	**136.50**	**136.53**	**138.31**	**141.48**	**144.95**	**149.02**	**151.90**	**149.68**	**155.86**	**155.34**
OECD	39.70	39.57	40.94	41.66	43.14	43.60	43.22	42.12	42.66	42.84
Non OECD	96.80	96.96	97.37	99.82	101.80	105.43	108.68	107.56	113.21	112.50
Other Groups:										
OECD Europe	10.26	10.67	12.18	13.00	13.90	13.84	13.78	13.87	13.57	13.63
OPEC	54.64	56.17	57.07	58.21	59.35	62.02	64.38	61.77	65.82	63.82
EU.	5.23	5.41	6.56	6.85	7.04	6.89	7.12	7.25	6.56	6.52
IEA	33.22	33.09	34.43	35.32	36.29	36.44	35.91	35.15	35.42	35.31
Natural Gas										
World Total	**76.90**	**78.41**	**79.18**	**80.26**	**83.96**	**83.89**	**85.58**	**87.51**	**90.82**	**93.53**
OECD	33.03	34.19	35.68	36.15	38.07	37.88	38.37	38.74	39.48	40.09
Non OECD	43.88	44.22	43.50	44.12	45.88	46.01	47.22	48.77	51.33	53.44
Other Groups:										
OECD Europe	7.94	8.37	8.54	8.90	10.26	9.92	9.85	10.15	10.46	10.55
OPEC	9.52	9.90	10.36	11.06	11.87	12.84	13.32	14.07	14.77	15.59
EU.	6.51	6.97	7.05	7.36	8.33	7.81	7.76	7.95	8.14	8.19
IEA	31.93	32.98	34.45	34.93	36.72	36.49	36.87	37.23	37.94	38.55
Coal										
World Total	**89.25**	**86.60**	**88.23**	**90.59**	**91.14**	**94.03**	**92.36**	**91.23**	**91.17**	**96.02**
OECD	41.23	38.17	39.55	39.42	39.66	41.67	41.67	40.51	39.84	41.10
Non OECD	48.02	48.43	48.67	51.17	51.48	52.36	50.69	50.72	51.33	54.92
Other Groups:										
OECD Europe	13.01	11.25	10.54	10.09	9.57	10.22	9.21	8.72	8.30	8.25
OPEC	0.72	0.87	0.99	1.29	1.49	1.59	1.80	2.09	2.24	2.58
EU.	6.72	6.01	5.34	5.09	4.83	4.90	4.43	4.20	3.90	3.78
IEA	35.45	34.48	35.79	35.81	36.38	37.76	38.25	37.25	36.74	37.98
Hydroelectric Power										
World Total	**22.91**	**24.28**	**24.39**	**25.61**	**26.07**	**26.59**	**26.63**	**26.92**	**27.25**	**26.70**
OECD	12.21	12.95	12.47	13.36	13.75	13.95	13.58	13.75	13.74	12.71
Non OECD	10.70	11.34	11.92	12.25	12.32	12.64	13.05	13.17	13.51	13.98
Other Groups:										
OECD Europe	4.86	5.05	5.07	5.13	4.92	5.09	5.25	5.30	5.59	5.55
OPEC	0.76	0.75	0.74	0.75	0.78	0.78	0.83	0.84	0.85	0.83
EU.	2.93	2.97	3.05	2.99	2.99	3.04	3.14	3.13	3.28	3.48
IEA	11.82	12.55	12.13	12.94	13.29	13.54	13.20	13.28	13.27	12.28
Nuclear Electric Power										
World Total	**21.23**	**21.96**	**22.36**	**23.21**	**24.05**	**23.82**	**24.34**	**25.08**	**25.52**	**26.45**
OECD	18.31	19.02	19.61	20.34	20.86	20.59	21.17	21.83	22.03	22.75
Non OECD	2.92	2.94	2.74	2.87	3.19	3.24	3.17	3.25	3.49	3.70
Other Groups:										
OECD Europe	8.20	8.56	8.54	8.65	9.06	9.15	9.17	9.29	9.27	9.59
OPEC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EU.	7.55	7.91	7.87	8.01	8.41	8.50	8.51	8.62	8.59	8.84
IEA	17.98	18.83	19.43	20.13	20.65	20.36	20.95	21.59	21.79	22.47

See footnotes at end of table.

Table 2.9 World Production of Primary Energy by Selected Country Groups (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Geothermal, Solar, Wind, and Wood and Waste Electric Power										
World Total	**2.01**	**2.09**	**2.17**	**2.25**	**2.31**	**2.49**	**2.57**	**2.76**	**2.97**	**3.11**
OECD	1.73	1.82	1.86	1.90	1.94	2.07	2.11	2.24	2.40	2.46
Non OECD	0.28	0.27	0.31	0.35	0.37	0.42	0.46	0.53	0.57	0.64
Other Groups:										
OECD Europe	0.34	0.39	0.42	0.47	0.46	0.55	0.65	0.72	0.85	0.93
OPEC	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05
EU.	0.32	0.37	0.39	0.43	0.43	0.52	0.60	0.66	0.79	0.86
IEA	1.61	1.69	1.74	1.77	1.82	1.94	1.97	2.09	2.24	2.31
Total Energy										
World Total	**351.13**	**352.14**	**357.02**	**365.93**	**375.06**	**382.30**	**385.65**	**385.48**	**395.95**	**403.44**
OECD	148.53	147.99	152.51	155.34	160.01	162.20	162.40	161.49	162.51	164.24
Non OECD	202.60	204.15	204.51	210.58	215.05	220.10	223.25	224.00	233.44	239.19
Other Groups:										
OECD Europe	44.60	44.30	45.28	46.25	48.18	48.78	47.90	48.04	48.04	48.50
OPEC	65.65	67.72	69.19	71.36	73.53	77.28	80.39	78.82	83.73	82.87
EU.	29.24	29.63	30.26	30.74	32.02	31.66	31.57	31.80	31.26	31.68
IEA	134.33	135.89	140.36	143.42	147.72	148.98	149.44	148.89	149.76	151.18

[1] Preliminary.
[2] Data include the production of crude oil and natural gas plant liquids.
[3] The Organization for Economic Cooperation and Development (OECD) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, South, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). Refer to Appendix A for a listing of OECD Europe.
[4] The Organization of Petroleum Exporting Countries (OPEC) includes Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.
[5] European Union (EU) includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.
[6] International Energy Agency (IEA) includes Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, South, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States (including data for Guam, Hawaiian Trade Zone, Puerto Rico, and Virgin Islands, U.S.). No Czech Republic data for 1992.
[7] Total primary energy production, as reported here, includes all of the fuel types reported in this table. It also includes for the United States the production of geothermal, solar, and wood and waste energy not used for electricity generation. As a result, total primary energy production might not be equal to sum of the individual fuel types reported in this table.

Notes: For consistency data reflect 2001 membership (as of December 31, 2001) for all years. The country groups OECD, OECD Europe, EU, and IEA include unified Germany. Data for the Czech Republic are included in the country group IEA beginning in 1993, the year that the country came into existence. Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of Sections 3, 4, 5, and 6.

Section 3

Petroleum

Table 3.1 World Petroleum Supply and Disposition, 2000

(Thousand Barrels per Day)

Region Country	Primary Supply			Disposition			Bunkers	
	Oil Production [1]	Crude Oil Imports	Total Imports of Refined Petroleum Products	Crude Oil Exports	Total Exports of Refined Petroleum Products	Apparent [2] Consumption (Including Bunkers)	Residual Fuel Oil	Distillate Fuel Oil and Other Products
North America								
Canada	2,742	933	167	1,185	754	2,073	16	4
Mexico	3,478	0	448	1,742	110	1,992	2	22
United States	9,058	9,071	2,389	50	991	19,701	193	394
Other	0	0	8	0	(s)	8	0	(s)
Total	**15,278**	**10,003**	**3,012**	**2,977**	**1,854**	**23,774**	**212**	**419**
Central & South America								
Argentina	814	26	25	277	150	511	5	4
Bahamas, The	0	0	61	0	39	22	3	1
Bolivia	40	0	6	0	0	48	0	0
Brazil	1,543	399	370	20	149	2,166	43	13
Chile	15	194	45	0	19	236	12	0
Colombia	705	4	6	384	74	279	(s)	3
Costa Rica	0	1	38	0	3	36	0	0
Cuba	42	15	119	0	7	161	2	(s)
Dominican Republic	1	39	92	0	0	125	0	0
Ecuador	399	0	25	241	43	131	5	0
El Salvador	0	20	24	0	5	38	0	0
Guatemala	21	17	42	20	0	59	0	2
Honduras	0	0	30	0	(s)	28	0	0
Jamaica	0	21	54	0	4	66	(s)	(s)
Netherlands Antilles	6	221	42	0	208	71	28	6
Nicaragua	0	17	8	0	1	24	0	0
Panama	1	44	15	0	4	53	18	1
Paraguay	0	2	23	0	0	25	0	0
Peru	103	71	36	14	27	177	0	7
Puerto Rico	0	48	132	0	10	201	2	1
Trinidad and Tobago	136	98	(s)	52	142	25	1	1
Uruguay	0	39	6	0	3	43	4	2
Venezuela	3,347	0	0	2,094	793	500	10	1
Virgin Islands, U.S.	(s)	418	23	0	376	66	2	2
Other	12	244	84	4	231	100	1	11
Total	**7,184**	**1,939**	**1,304**	**3,106**	**2,289**	**5,191**	**136**	**58**
Western Europe								
Austria	22	144	103	1	30	262	0	0
Belgium	12	690	369	0	480	586	76	14
Bosnia and Herzegovina	0	0	19	0	0	19	0	0
Croatia	30	77	5	1	40	86	(s)	(s)
Denmark	367	87	135	288	94	215	14	10
Finland	0	221	95	0	93	202	0	0
France	79	1,734	555	0	422	2,021	45	11
Germany	144	2,106	907	64	387	2,775	30	11
Greece	9	386	85	0	90	399	51	16
Iceland	0	0	19	0	0	19	0	0
Ireland	1	63	106	0	25	169	(s)	1
Italy	155	1,689	491	0	435	1,867	33	31
Luxembourg	0	0	49	0	(s)	47	0	0
Macedonia, TFYR	0	16	8	0	4	23	0	0
Netherlands	89	1,109	1,117	3	1,364	852	205	45
Norway	3,320	18	74	3,026	268	197	7	9
Portugal	2	235	119	0	28	333	7	2
Slovenia	(s)	3	52	0	5	52	0	(s)
Spain	19	1,146	425	0	158	1,461	92	20
Sweden	4	433	132	0	217	334	22	3
Switzerland	1	94	167	0	12	273	0	(s)
Turkey	57	435	220	0	26	663	4	4
United Kingdom	2,553	886	401	1,753	602	1,721	17	23
Yugoslavia	16	10	36	0	1	62	0	0
Other	0	0	64	0	0	64	36	6
Total	**6,877**	**11,584**	**5,752**	**5,137**	**4,780**	**14,702**	**640**	**207**

See footnotes at end of table.

Table 3.1 World Petroleum Supply and Disposition, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Primary Supply			Disposition			Bunkers	
	Oil Production [1]	Crude Oil Imports	Total Imports of Refined Petroleum Products	Crude Oil Exports	Total Exports of Refined Petroleum Products	Apparent [2] Consumption (Including Bunkers)	Residual Fuel Oil	Distillate Fuel Oil and Other Products
Eastern Europe & Former U.S.S.R.								
Albania	6	(s)	15	0	0	21	0	0
Bulgaria	1	105	27	0	39	103	0	1
Czech Republic	6	113	62	2	19	164	0	0
Hungary	42	114	26	0	39	145	0	0
Poland	13	355	65	0	37	441	4	1
Romania	128	96	29	0	60	213	1	1
Slovakia	1	106	6	(s)	59	75	0	0
Armenia	0	0	5	0	0	5	0	0
Azerbaijan	286	0	2	108	44	137	0	11
Belarus	37	235	18	2	63	227	0	0
Estonia	5	0	19	2	(s)	22	1	1
Georgia	2	1	27	1	(s)	30	0	0
Kazakhstan	718	20	29	521	20	189	0	0
Kyrgyzstan	2	1	16	1	(s)	18	0	0
Latvia	0	0	42	0	1	41	0	0
Lithuania	6	118	11	6	50	70	1	(s)
Moldova	0	0	22	0	0	22	0	0
Russia	6,711	115	6	3,150	1,067	2,578	230	65
Tajikistan	(s)	0	20	(s)	(s)	20	0	0
Turkmenistan	157	12	3	29	77	62	0	0
Ukraine	88	119	99	5	40	264	0	0
Uzbekistan	151	(s)	0	0	8	139	0	0
Total	**8,361**	**1,510**	**549**	**3,829**	**1,621**	**4,986**	**238**	**81**
Middle East								
Bahrain	49	238	0	0	255	30	1	1
Cyprus	0	23	27	0	0	47	3	1
Iran	3,783	0	62	2,309	322	1,263	40	2
Iraq	2,587	0	26	2,072	41	451	0	0
Israel	(s)	237	94	0	67	272	2	1
Jordan	(s)	75	20	0	0	101	1	(s)
Kuwait	2,198	0	10	1,317	619	264	9	3
Lebanon	0	0	106	0	0	106	0	0
Oman	974	0	4	905	27	53	1	0
Qatar	871	0	0	680	92	28	0	0
Saudi Arabia	9,124	0	0	6,444	1,255	1,421	39	0
Syria	528	30	34	306	28	261	0	2
United Arab Emirates	2,571	0	99	1,870	491	300	120	2
Yemen	440	0	2	340	33	73	1	1
Total	**23,125**	**603**	**484**	**16,243**	**3,229**	**4,670**	**216**	**14**

See footnotes at end of table.

Table 3.1 World Petroleum Supply and Disposition, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Primary Supply			Disposition			Bunkers	
	Oil Production [1]	Crude Oil Imports	Total Imports of Refined Petroleum Products	Crude Oil Exports	Total Exports of Refined Petroleum Products	Apparent [2] Consumption (Including Bunkers)	Residual Fuel Oil	Distillate Fuel Oil and Other Products
Africa								
Algeria	1,485	6	(s)	809	524	206	3	1
Angola	746	0	3	695	12	29	0	0
Cameroon	85	0	4	55	14	23	0	(s)
Congo (Brazzaville)	280	0	(s)	272	3	4	0	0
Congo (Kinshasa)	26	1	13	26	(s)	14	(s)	0
Cote d'Ivoire (Ivory Coast)	12	59	8	8	39	33	1	(s)
Egypt	851	0	75	220	86	561	46	4
Ethiopia	0	0	22	0	0	23	0	0
Gabon	316	0	3	300	7	12	1	0
Ghana	7	15	20	0	6	37	0	0
Kenya	1	41	21	0	5	57	1	(s)
Libya	1,470	0	1	1,110	143	210	2	0
Morocco	1	134	40	0	21	158	0	(s)
Nigeria	2,170	0	143	2,069	0	246	3	6
Senegal	0	18	13	0	2	30	0	2
South Africa	189	365	10	4	117	458	43	6
Sudan	186	0	14	142	14	43	0	(s)
Tunisia	82	24	55	65	11	85	(s)	0
Zimbabwe	0	0	26	0	0	25	0	0
Other	168	33	223	167	2	255	8	15
Total	**8,076**	**696**	**693**	**5,942**	**1,006**	**2,509**	**109**	**36**
Asia & Oceania								
Australia	805	378	118	408	151	859	12	2
Bangladesh	3	26	37	0	0	69	1	0
Brunei	215	0	(s)	189	(s)	12	0	0
Burma	12	13	15	0	0	37	0	(s)
China	3,249	1,401	565	206	219	4,796	65	11
Guam	0	0	19	0	0	19	1	1
Hong Kong	0	0	282	0	34	245	37	27
India	740	1,337	136	0	148	2,127	7	19
Indonesia	1,510	217	214	627	213	1,037	1	17
Japan	81	4,241	1,333	0	88	5,528	83	5
Korea, North	0	55	31	0	(s)	86	0	0
Korea, South	59	2,455	592	0	823	2,146	95	27
Malaysia	756	149	138	400	173	465	3	1
Mongolia	0	0	8	0	0	8	0	0
New Zealand	46	91	30	26	5	146	3	1
Pakistan	59	140	193	9	7	365	(s)	(s)
Papua New Guinea	70	0	14	69	(s)	15	0	(s)
Philippines	2	311	71	0	37	353	2	9
Singapore	4	820	755	0	844	682	257	77
Sri Lanka	0	46	31	0	3	75	2	1
Taiwan	3	767	198	0	48	938	60	5
Thailand	171	649	35	0	105	803	13	30
Vietnam	316	0	171	315	0	176	0	0
Other	0	0	83	0	4	79	(s)	13
Total	**8,101**	**13,095**	**5,070**	**2,249**	**2,901**	**21,064**	**642**	**249**
World Total	**77,002**	**39,430**	**16,864**	**39,482**	**17,682**	**76,896**	**2,193**	**1,063**

[1] Oil production includes crude oil, natural gas plant liquids, other liquids, and refinery processing gains.
[2] Apparent consumption includes internal consumption, refinery fuel and loss, and bunkering. Also included, where available, are liquefied petroleum gases sold directly from natural gas processing plants for fuel or chemical uses.
(s)=Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

Table 3.2 World Output of Refined Petroleum Products, 2000

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Output of Refined Petroleum Products	Refinery [3] Fuel and Loss
North America									
Canada	722	96	31	575	120	64	414	2,023	116
Mexico	353	54	1	266	426	31	164	1,295	90
United States	8,186	1,606	65	3,580	696	705	2,640	17,478	942
Other	0	0	0	0	0	0	0	0	0
Total	**9,261**	**1,757**	**98**	**4,420**	**1,242**	**800**	**3,218**	**20,796**	**1,148**
Central & South America									
Argentina	156	35	2	215	47	36	122	613	24
Bahamas, The	0	0	0	0	0	0	0	0	0
Bolivia	11	3	1	8	(s)	1	12	36	1
Brazil	479	64	3	558	312	124	323	1,862	72
Chile	51	12	3	76	32	15	16	206	8
Colombia	114	19	4	62	57	23	54	334	13
Costa Rica	0	0	0	(s)	(s)	(s)	(s)	(s)	(s)
Cuba	14	0	5	8	15	3	7	52	2
Dominican Republic	6	1	7	8	11	1	1	35	1
Ecuador	36	5	(s)	33	70	8	9	162	6
El Salvador	3	1	(s)	3	10	(s)	1	19	1
Guatemala	3	(s)	(s)	6	6	(s)	1	18	1
Honduras	0	0	0	0	0	0	0	0	0
Jamaica	3	1	(s)	4	10	(s)	1	20	1
Netherlands Antilles	43	19	2	46	88	4	41	244	9
Nicaragua	2	1	(s)	4	8	1	2	17	1
Panama	6	0	2	10	22	1	2	44	2
Paraguay	(s)	0	(s)	1	1	(s)	(s)	2	(s)
Peru	32	7	14	34	57	7	7	159	6
Puerto Rico	19	13	1	4	16	(s)	26	79	10
Trinidad and Tobago	31	16	(s)	35	62	4	10	158	6
Uruguay	7	2	1	13	12	3	4	41	2
Venezuela	384	88	1	297	265	26	132	1,193	46
Virgin Islands, U.S.	180	50	(s)	104	66	5	14	419	31
Other	4	42	3	131	31	1	43	255	10
Total	**1,587**	**380**	**49**	**1,660**	**1,196**	**264**	**831**	**5,967**	**252**
Western Europe									
Austria	42	12	0	76	17	1	42	190	13
Belgium	123	48	2	255	141	24	193	786	29
Bosnia and Herzegovina	0	0	0	0	0	0	0	0	0
Croatia	35	2	(s)	34	22	9	16	118	5
Denmark	53	11	0	68	31	6	6	174	8
Finland	91	16	0	108	24	7	13	259	15
France	360	132	2	692	179	88	346	1,800	104
Germany	623	93	(s)	947	233	97	472	2,465	136
Greece	87	45	(s)	115	132	24	52	456	18
Iceland	0	0	0	0	0	0	0	0	0
Ireland	12	(s)	5	23	20	1	4	67	2
Italy	476	68	33	723	314	77	297	1,990	136
Luxembourg	0	0	0	0	0	0	0	0	0
Macedonia, TFYR	3	0	0	5	7	(s)	4	20	1
Netherlands	329	153	8	448	198	117	493	1,746	65
Norway	78	16	2	141	30	11	46	325	15
Portugal	55	17	(s)	80	59	9	39	258	15
Slovenia	1	0	0	1	1	(s)	1	4	(s)
Spain	222	83	6	409	231	48	233	1,232	78
Sweden	103	3	0	158	112	10	58	444	9
Switzerland	25	10	0	38	13	6	7	98	5
Turkey	63	22	1	135	141	22	95	481	29
United Kingdom	552	143	68	589	209	78	237	1,874	107
Yugoslavia	4	(s)	1	5	9	1	8	27	1
Other	0	0	0	0	0	0	0	0	0
Total	**3,336**	**873**	**128**	**5,051**	**2,124**	**637**	**2,663**	**14,812**	**790**

See footnotes at end of table.

Table 3.2 World Output of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Output of Refined Petroleum Products	Refinery [3] Fuel and Loss
Eastern Europe & Former U.S.S.R.									
Albania	1	0	1	1	1	(s)	2	6	(s)
Bulgaria	24	3	0	39	29	3	21	119	5
Czech Republic	24	4	0	43	16	5	35	126	3
Hungary	34	4	0	53	24	2	50	168	7
Poland	102	15	(s)	157	47	9	64	394	10
Romania	61	3	1	78	29	11	53	237	9
Slovakia	32	1	(s)	43	11	(s)	38	126	5
Armenia	0	0	0	0	0	0	0	0	0
Azerbaijan	20	13	4	68	48	2	25	179	7
Belarus	62	15	3	78	88	8	24	278	11
Estonia	0	0	0	(s)	(s)	(s)	3	3	(s)
Georgia	1	0	(s)	1	1	(s)	(s)	3	(s)
Kazakhstan	38	5	1	56	57	1	21	180	7
Kyrgyzstan	1	0	0	1	1	(s)	(s)	3	(s)
Latvia	0	0	0	0	0	0	0	0	0
Lithuania	29	10	0	35	19	5	9	107	4
Moldova	0	0	0	0	0	0	0	0	0
Russia	633	189	2	1,005	1,018	237	611	3,694	142
Tajikistan	0	0	0	(s)	(s)	(s)	(s)	(s)	(s)
Turkmenistan	26	7	2	46	45	(s)	10	136	5
Ukraine	48	14	(s)	54	61	4	23	204	8
Uzbekistan	40	6	2	39	33	1	25	146	6
Total	**1,176**	**289**	**18**	**1,798**	**1,527**	**288**	**1,014**	**6,111**	**229**
Middle East									
Bahrain	19	42	8	88	61	1	53	273	10
Cyprus	4	(s)	(s)	8	9	1	2	24	1
Iran	231	15	183	400	433	55	131	1,448	58
Iraq	55	11	18	139	146	33	44	445	17
Israel	51	13	17	59	58	15	34	248	10
Jordan	14	5	5	18	28	5	5	81	3
Kuwait	36	38	74	190	163	114	235	850	33
Lebanon	0	0	0	0	0	0	0	0	0
Oman	14	5	(s)	17	37	2	2	78	3
Qatar	13	9	(s)	14	18	3	2	59	2
Saudi Arabia	293	98	85	488	470	43	231	1,707	66
Syria	37	4	4	83	98	9	20	255	10
United Arab Emirates	53	105	0	100	78	15	117	467	18
Yemen	25	3	3	19	29	1	13	93	4
Total	**844**	**347**	**398**	**1,624**	**1,629**	**297**	**889**	**6,027**	**234**

See footnotes at end of table.

Table 3.2 World Output of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Output of Refined Petroleum Products	Refinery [3] Fuel and Loss
Africa									
Algeria	49	34	(s)	123	106	18	105	434	17
Angola	3	6	1	11	11	1	4	38	1
Cameroon	8	1	5	9	7	1	1	33	1
Congo (Brazzaville)	1	1	(s)	1	4	(s)	(s)	8	(s)
Congo (Kinshasa)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	1	(s)
Cote d'Ivoire (Ivory Coast)	13	2	11	22	9	1	5	64	2
Egypt	53	21	21	117	210	16	108	546	21
Ethiopia	0	0	0	0	0	0	0	0	0
Gabon	1	1	(s)	4	5	(s)	3	16	1
Ghana	6	2	1	7	5	(s)	1	23	1
Kenya	8	6	3	10	12	1	3	42	2
Libya	47	31	6	95	83	9	45	317	12
Morocco	9	6	2	47	45	8	22	139	5
Nigeria	24	4	14	22	27	(s)	12	103	4
Senegal	3	1	(s)	8	5	(s)	1	19	1
South Africa	186	38	32	141	95	11	50	553	21
Sudan	14	0	1	17	6	5	1	45	2
Tunisia	9	0	4	11	12	(s)	4	41	2
Zimbabwe	0	0	0	0	0	0	0	0	0
Other	9	(s)	3	6	10	2	4	33	1
Total	**443**	**156**	**105**	**654**	**652**	**74**	**370**	**2,454**	**94**
Asia & Oceania									
Australia	309	97	4	218	37	29	91	785	43
Bangladesh	3	(s)	6	6	2	(s)	14	30	1
Brunei	5	2	(s)	3	(s)	(s)	1	11	(s)
Burma	6	1	(s)	9	1	(s)	2	20	1
China	998	119	76	1,503	449	309	1,039	4,492	173
Guam	0	0	0	0	0	0	0	0	0
Hong Kong	0	0	0	0	0	0	0	0	0
India	179	54	176	835	243	129	508	2,125	82
Indonesia	207	25	165	295	207	27	86	1,011	40
Japan	974	180	480	1,224	649	156	682	4,346	246
Korea, North	21	0	4	20	11	(s)	1	58	2
Korea, South	206	161	245	634	600	93	589	2,529	90
Malaysia	86	56	5	162	52	25	72	458	18
Mongolia	0	0	0	0	0	0	0	0	0
New Zealand	33	18	(s)	40	7	0	9	108	6
Pakistan	27	16	9	51	57	6	21	186	7
Papua New Guinea	0	(s)	0	1	(s)	(s)	(s)	1	(s)
Philippines	47	15	11	96	104	13	36	323	12
Singapore	96	127	17	237	92	29	176	773	30
Sri Lanka	5	2	4	15	14	1	5	47	2
Taiwan	124	41	3	136	289	31	249	873	35
Thailand	138	70	8	282	130	42	131	801	31
Vietnam	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
Total	**3,463**	**985**	**1,214**	**5,765**	**2,944**	**893**	**3,713**	**18,977**	**819**
World Total	**20,110**	**4,787**	**2,010**	**20,972**	**11,314**	**3,252**	**12,699**	**75,144**	**3,566**

[1] Jet Fuel includes naphtha-type jet fuel and kerosene-type jet fuel.
[2] Includes asphalt, coke, aviation gasoline, naphthas, paraffin wax, petrochemical feedstocks, unfinished oils, white spirits, and blending components.
[3] Refinery fuel and loss reported in this column as a memo item has been included in the output of the individual petroleum products and should not be added to "Total Output of Refined Petroleum Products".

(s)=Value less than 500 barrels per day.

Note: Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of this Section.

Table 3.3 World Imports of Refined Petroleum Products, 2000

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Imports of Refined Petroleum Products
North America								
Canada	23	23	1	17	50	11	43	167
Mexico	140	0	0	42	116	134	16	448
United States	427	162	2	295	352	256	895	2,389
Other	1	1	(s)	5	(s)	(s)	(s)	8
Total	**591**	**185**	**3**	**359**	**518**	**401**	**954**	**3,012**
Central & South America								
Argentina	1	2	(s)	12	3	1	6	25
Bahamas, The	2	1	1	7	44	(s)	6	61
Bolivia	0	0	0	6	0	0	0	6
Brazil	62	17	0	100	2	89	100	370
Chile	7	1	1	13	2	21	0	45
Colombia	4	(s)	(s)	(s)	1	0	0	6
Costa Rica	13	3	0	12	6	2	1	38
Cuba	1	8	0	28	79	1	1	119
Dominican Republic	23	(s)	2	34	14	18	0	92
Ecuador	4	(s)	0	8	0	13	(s)	25
El Salvador	5	1	(s)	10	4	4	0	24
Guatemala	13	1	1	14	8	6	0	42
Honduras	7	1	1	13	7	2	0	30
Jamaica	10	3	1	4	34	2	(s)	54
Netherlands Antilles	7	1	0	7	13	1	13	42
Nicaragua	1	0	0	3	2	1	(s)	8
Panama	3	0	2	2	4	2	(s)	15
Paraguay	4	(s)	0	15	1	3	(s)	23
Peru	1	1	0	27	0	6	2	36
Puerto Rico	44	(s)	0	10	31	(s)	46	132
Trinidad and Tobago	0	0	0	0	0	0	(s)	(s)
Uruguay	0	(s)	0	5	0	1	(s)	6
Venezuela	0	0	0	0	0	0	0	0
Virgin Islands, U.S.	0	0	10	10	1	0	2	23
Other	20	12	4	27	15	4	3	84
Total	**232**	**52**	**24**	**366**	**272**	**177**	**181**	**1,304**
Western Europe								
Austria	15	1	(s)	53	5	5	23	103
Belgium	35	10	1	127	41	11	143	369
Bosnia and Herzegovina	6	1	0	8	3	0	2	19
Croatia	(s)	1	0	1	1	(s)	2	5
Denmark	23	15	0	44	13	(s)	40	135
Finland	9	0	5	29	12	25	15	95
France	44	39	2	217	78	56	118	555
Germany	201	67	(s)	327	51	21	239	907
Greece	10	2	0	41	3	0	29	85
Iceland	3	3	0	9	1	(s)	2	19
Ireland	19	13	7	35	29	3	1	106
Italy	14	(s)	7	16	176	60	217	491
Luxembourg	14	7	(s)	27	(s)	1	(s)	49
Macedonia, TFYR	2	1	0	2	0	1	2	8
Netherlands	174	12	16	164	228	220	303	1,117
Norway	14	4	1	13	18	9	15	74
Portugal	3	2	(s)	26	22	24	42	119
Slovenia	20	1	0	26	2	3	2	52
Spain	21	12	0	148	49	39	156	425
Sweden	37	16	0	26	9	23	21	132
Switzerland	63	25	(s)	71	(s)	1	7	167
Turkey	19	4	0	50	12	123	12	220
United Kingdom	54	97	1	77	11	10	151	401
Yugoslavia	15	1	0	18	2	(s)	(s)	36
Other	3	4	(s)	12	44	1	1	64
Total	**820**	**335**	**40**	**1,567**	**810**	**636**	**1,543**	**5,752**

See footnotes at end of table.

Table 3.3 World Imports of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Imports of Refined Petroleum Products
Eastern Europe & Former U.S.S.R.								
Albania	2	(s)	(s)	7	3	1	1	15
Bulgaria	5	4	0	4	7	4	4	27
Czech Republic	21	1	(s)	23	3	4	10	62
Hungary	4	0	0	7	5	3	7	26
Poland	21	1	0	18	2	18	5	65
Romania	(s)	1	0	(s)	24	1	3	29
Slovakia	2	0	0	2	1	1	(s)	6
Armenia	1	1	(s)	1	1	(s)	1	5
Azerbaijan	0	0	0	(s)	1	1	(s)	2
Belarus	1	0	(s)	5	8	4	1	18
Estonia	7	(s)	0	8	3	(s)	1	19
Georgia	10	1	4	6	3	3	1	27
Kazakhstan	10	3	0	4	2	2	7	29
Kyrgyzstan	4	1	0	7	4	(s)	(s)	16
Latvia	14	1	(s)	13	8	2	4	42
Lithuania	(s)	(s)	0	1	6	3	(s)	11
Moldova	6	(s)	(s)	9	5	1	(s)	22
Russia	3	0	0	2	(s)	(s)	0	6
Tajikistan	16	(s)	0	1	(s)	(s)	2	20
Turkmenistan	0	0	0	0	0	3	0	3
Ukraine	9	(s)	0	31	17	36	7	99
Uzbekistan	0	0	0	0	0	0	0	0
Total	**138**	**14**	**5**	**148**	**104**	**87**	**53**	**549**
Middle East								
Bahrain	0	0	0	0	0	0	0	0
Cyprus	1	6	(s)	4	12	(s)	4	27
Iran	36	0	0	26	0	0	0	62
Iraq	21	2	4	0	0	0	0	26
Israel	11	2	4	12	52	1	13	94
Jordan	0	0	0	5	11	4	0	20
Kuwait	10	0	0	0	0	0	(s)	10
Lebanon	32	3	(s)	36	27	5	2	106
Oman	3	0	0	(s)	0	(s)	(s)	4
Qatar	0	0	0	0	0	0	0	0
Saudi Arabia	0	0	0	0	0	0	0	0
Syria	0	2	4	22	0	6	0	34
United Arab Emirates	0	5	0	5	85	0	4	99
Yemen	0	2	0	0	0	0	(s)	2
Total	**115**	**21**	**11**	**110**	**187**	**17**	**23**	**484**

See footnotes at end of table.

Table 3.3 World Imports of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Imports of Refined Petroleum Products
Africa								
Algeria	0	0	0	0	0	0	(s)	(s)
Angola	(s)	(s)	0	1	0	1	1	3
Cameroon	1	0	1	2	(s)	(s)	0	4
Congo (Brazzaville)	0	0	0	0	0	0	(s)	(s)
Congo (Kinshasa)	3	3	(s)	5	(s)	(s)	1	13
Cote d'Ivoire (Ivory Coast)	1	0	(s)	2	2	1	2	8
Egypt	1	1	0	46	0	26	2	75
Ethiopia	3	2	3	11	2	(s)	1	22
Gabon	(s)	1	(s)	1	0	(s)	1	3
Ghana	9	0	1	7	0	1	1	20
Kenya	4	4	7	4	1	0	1	21
Libya	0	0	0	0	0	0	1	1
Morocco	(s)	0	0	11	0	27	(s)	40
Nigeria	94	0	13	27	7	1	2	143
Senegal	0	3	0	3	3	3	(s)	13
South Africa	3	0	1	3	(s)	0	3	10
Sudan	3	1	0	5	1	1	3	14
Tunisia	3	6	1	21	12	9	4	55
Zimbabwe	10	2	2	11	0	(s)	1	26
Other	57	21	16	78	29	6	17	223
Total	**193**	**43**	**45**	**238**	**58**	**75**	**41**	**693**
Asia & Oceania								
Australia	18	5	0	24	13	10	48	118
Bangladesh	2	2	5	21	5	0	2	37
Brunei	(s)	0	0	0	0	0	(s)	(s)
Burma	2	0	0	13	0	0	0	15
China	0	0	54	6	269	153	83	565
Guam	3	5	0	6	4	(s)	(s)	19
Hong Kong	10	59	1	122	64	6	20	282
India	0	0	64	35	10	20	8	136
Indonesia	0	0	51	129	35	0	0	214
Japan	28	32	49	48	24	541	612	1,333
Korea, North	19	0	1	5	6	0	0	31
Korea, South	2	5	16	8	66	161	333	592
Malaysia	56	2	(s)	43	26	8	3	138
Mongolia	4	0	(s)	3	(s)	0	0	8
New Zealand	17	2	0	3	0	0	7	30
Pakistan	0	0	(s)	96	96	(s)	0	193
Papua New Guinea	2	1	(s)	6	5	(s)	(s)	14
Philippines	14	3	1	20	8	21	4	71
Singapore	97	20	8	77	511	0	42	755
Sri Lanka	(s)	4	1	21	1	4	(s)	31
Taiwan	39	6	0	(s)	41	27	84	198
Thailand	(s)	(s)	0	11	11	(s)	12	35
Vietnam	34	8	6	82	29	6	6	171
Other	11	17	9	27	14	3	2	83
Total	**357**	**173**	**266**	**808**	**1,238**	**961**	**1,267**	**5,070**
World Total	**2,445**	**824**	**394**	**3,597**	**3,186**	**2,355**	**4,062**	**16,864**

[1] Jet fuel includes naphtha-type jet fuel and kerosene-type jet fuel.
[2] Includes asphalt, coke, aviation gasoline, naphthas, paraffin wax, petrochemical feedstocks, unfinished oils, white spirits, and blending components.
(s)=Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

Table 3.4 World Exports of Refined Petroleum Products, 2000

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Exports of Refined Petroleum Products [3]
North America								
Canada	105	4	2	109	27	359	147	754
Mexico	8	4	0	4	(s)	6	87	110
United States	144	32	2	173	139	79	423	991
Other	0	(s)	0	(s)	0	0	0	(s)
Total	**256**	**39**	**4**	**287**	**166**	**443**	**658**	**1,854**
Central & South America								
Argentina	67	(s)	0	21	13	25	22	150
Bahamas, The	0	0	0	(s)	38	0	0	39
Bolivia	0	0	0	0	0	0	0	0
Brazil	37	14	(s)	30	59	(s)	8	149
Chile	3	0	0	6	4	4	2	19
Colombia	14	7	1	6	47	0	0	74
Costa Rica	1	1	0	(s)	2	(s)	0	3
Cuba	3	3	0	0	0	0	0	7
Dominican Republic	0	0	0	0	0	0	0	0
Ecuador	6	(s)	0	(s)	37	0	0	43
El Salvador	(s)	(s)	0	(s)	5	(s)	0	5
Guatemala	0	0	0	0	0	0	0	0
Honduras	0	0	0	(s)	(s)	(s)	0	(s)
Jamaica	0	0	0	(s)	4	0	0	4
Netherlands Antilles	48	19	0	42	64	3	32	208
Nicaragua	(s)	0	0	0	1	0	1	1
Panama	(s)	0	4	0	0	0	(s)	4
Paraguay	0	0	0	0	0	0	0	0
Peru	6	1	0	1	20	0	(s)	27
Puerto Rico	(s)	4	(s)	(s)	2	(s)	3	10
Trinidad and Tobago	24	15	0	28	59	15	1	142
Uruguay	(s)	1	(s)	(s)	(s)	0	1	3
Venezuela	174	81	0	214	221	78	25	793
Virgin Islands, U.S.	150	37	11	105	58	0	15	376
Other	1	42	1	128	21	1	37	231
Total	**535**	**226**	**17**	**584**	**654**	**126**	**148**	**2,289**
Western Europe								
Austria	11	(s)	0	8	3	1	7	30
Belgium	107	25	(s)	152	69	15	112	480
Bosnia and Herzegovina	0	0	0	0	0	0	0	0
Croatia	14	1	(s)	7	4	8	6	40
Denmark	32	7	0	24	25	3	2	94
Finland	50	5	0	28	2	0	6	93
France	107	25	(s)	45	79	42	123	422
Germany	106	6	(s)	111	77	24	62	387
Greece	23	16	0	12	4	10	25	90
Iceland	0	0	0	0	0	0	0	0
Ireland	(s)	0	1	1	20	(s)	3	25
Italy	91	13	4	175	83	12	57	435
Luxembourg	0	0	0	(s)	0	(s)	0	(s)
Macedonia, TFYR	1	(s)	0	1	1	(s)	1	4
Netherlands	293	89	6	397	178	45	355	1.364
Norway	48	5	0	71	26	84	34	268
Portugal	9	2	0	3	9	1	5	28
Slovenia	2	0	0	3	(s)	0	1	5
Spain	55	3	1	17	19	4	59	158
Sweden	47	1	0	79	62	8	21	217
Switzerland	(s)	0	0	0	11	1	(s)	12
Turkey	0	(s)	0	1	10	0	16	26
United Kingdom	109	10	4	131	94	143	110	602
Yugoslavia	0	0	0	0	(s)	(s)	0	1
Other	0	0	0	0	0	0	0	0
Total	**1,105**	**211**	**17**	**1,265**	**775**	**401**	**1,005**	**4,780**

See footnotes at end of table.

Table 3.4 World Exports of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Exports of Refined Petroleum Products [3]
Eastern Europe & Former U.S.S.R.								
Albania	0	0	0	0	0	0	0	0
Bulgaria	13	1	0	17	5	(s)	2	39
Czech Republic	2	(s)	0	10	3	1	4	19
Hungary	7	(s)	0	16	3	3	10	39
Poland	2	6	0	1	25	(s)	3	37
Romania	26	1	(s)	24	1	2	4	60
Slovakia	20	(s)	(s)	29	8	0	1	59
Armenia	0	0	0	0	0	0	0	0
Azerbaijan	2	10	0	25	5	0	1	44
Belarus	19	0	3	24	11	2	4	63
Estonia	0	(s)	0	0	(s)	(s)	(s)	(s)
Georgia	(s)	0	0	(s)	(s)	0	0	(s)
Kazakhstan	2	(s)	0	3	14	1	(s)	20
Kyrgyzstan	0	(s)	0	(s)	0	0	0	(s)
Latvia	(s)	0	0	(s)	0	0	0	1
Lithuania	15	8	0	14	8	4	1	50
Moldova	0	0	0	0	0	0	0	0
Russia	98	0	0	502	428	39	0	1,067
Tajikistan	0	0	0	0	0	0	(s)	(s)
Turkmenistan	15	0	0	32	30	0	0	77
Ukraine	0	(s)	0	7	33	0	(s)	40
Uzbekistan	1	0	0	5	0	0	2	8
Total	**222**	**28**	**3**	**710**	**574**	**52**	**32**	**1,621**
Middle East								
Bahrain	11	34	8	85	57	9	51	255
Cyprus	0	0	0	0	0	0	0	0
Iran	0	0	33	0	231	50	8	322
Iraq	0	0	0	17	14	11	0	41
Israel	15	4	6	13	22	3	2	67
Jordan	0	0	0	0	0	0	0	0
Kuwait	1	30	74	176	60	94	183	619
Lebanon	0	0	0	0	0	0	0	0
Oman	0	0	0	1	27	0	0	27
Qatar	2	4	0	6	17	62	0	92
Saudi Arabia	65	47	81	122	248	509	183	1,255
Syria	8	0	0	0	17	0	3	28
United Arab Emirates	2	94	0	45	0	202	148	491
Yemen	3	0	0	3	18	0	9	33
Total	**108**	**213**	**202**	**468**	**711**	**940**	**587**	**3,229**

See footnotes at end of table.

Table 3.4 World Exports of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Exports of Refined Petroleum Products [3]
Africa								
Algeria	7	27	0	48	103	250	89	524
Angola	0	1	0	0	9	0	2	12
Cameroon	2	0	2	3	7	0	0	14
Congo (Brazzaville)	0	0	0	0	3	(s)	0	3
Congo (Kinshasa)	0	0	0	0	(s)	0	0	(s)
Cote d'Ivoire (Ivory Coast)	10	0	10	12	4	(s)	2	39
Egypt	0	(s)	0	0	23	0	62	86
Ethiopia	0	0	0	0	0	0	0	0
Gabon	(s)	0	0	0	5	0	1	7
Ghana	2	0	0	(s)	3	(s)	0	6
Kenya	1	1	0	1	2	(s)	(s)	5
Libya	3	20	2	49	26	8	35	143
Morocco	0	0	0	0	10	0	11	21
Nigeria	0	0	0	0	0	0	0	0
Senegal	1	(s)	(s)	(s)	1	(s)	(s)	2
South Africa	14	4	18	32	45	0	5	117
Sudan	11	0	0	3	0	(s)	0	14
Tunisia	0	0	0	0	9	0	2	11
Zimbabwe	0	0	0	0	0	0	0	0
Other	(s)	(s)	1	(s)	1	0	(s)	2
Total	**52**	**53**	**33**	**148**	**251**	**259**	**210**	**1,006**
Asia & Oceania								
Australia	22	12	(s)	19	11	50	38	151
Bangladesh	0	0	0	0	0	0	0	0
Brunei	0	(s)	0	0	0	0	0	(s)
Burma	0	0	0	0	0	0	0	0
China	106	0	42	11	6	(s)	53	219
Guam	0	0	0	0	0	0	0	0
Hong Kong	1	2	(s)	2	25	(s)	4	34
India	13	1	0	44	2	0	88	148
Indonesia	0	10	0	0	108	41	53	213
Japan	4	13	2	36	15	1	15	88
Korea, North	0	0	0	0	(s)	0	0	(s)
Korea, South	40	94	55	262	190	22	159	823
Malaysia	1	19	6	49	26	35	37	173
Mongolia	0	0	0	0	0	0	0	0
New Zealand	(s)	0	0	(s)	2	3	0	5
Pakistan	0	0	0	0	0	0	7	7
Papua New Guinea	0	0	0	(s)	0	0	0	(s)
Philippines	(s)	(s)	0	2	17	(s)	18	37
Singapore	174	98	24	234	171	21	124	844
Sri Lanka	0	0	0	0	0	0	3	3
Taiwan	1	2	2	22	1	6	13	48
Thailand	21	13	7	29	13	21	0	105
Vietnam	0	0	0	0	0	0	0	0
Other	(s)	2	1	1	0	0	(s)	4
Total	**383**	**267**	**139**	**711**	**587**	**201**	**612**	**2,901**
World Total	**2,661**	**1,038**	**416**	**4,172**	**3,718**	**2,424**	**3,253**	**17,682**

[1] Jet Fuel includes naphtha-type jet fuel and kerosene-type jet fuel.
[2] Includes asphalt, coke, aviation gasoline, naphthas, paraffin wax, petrochemical feedstocks, unfinished oils, white spirits, and blending components.
[3] Exports of refined products do not include bunker fuels where identifiable.
(s)=Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

Table 3.5 World Apparent Consumption of Refined Petroleum Products, 2000

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Apparent Consumption [3]
North America								
Canada	640	116	30	479	123	335	351	2,073
Mexico	548	54	5	308	568	428	80	1,992
United States	8,472	1,725	67	3,722	909	2,434	2,372	19,701
Other	1	1	(s)	5	(s)	(s)	(s)	8
Total	**9,661**	**1,896**	**103**	**4,515**	**1,599**	**3,197**	**2,803**	**23,774**
Central & South America								
Argentina	97	38	2	211	37	50	74	511
Bolivia	10	3	1	13	(s)	9	12	48
Brazil	579	65	2	625	248	224	423	2,166
Chile	56	12	4	82	35	33	14	236
Colombia	104	13	3	60	11	25	64	279
Costa Rica	13	2	(s)	12	4	3	1	36
Cuba	11	4	5	35	93	4	9	161
Dominican Republic	27	2	9	41	25	20	1	125
Ecuador	34	5	(s)	40	21	21	9	131
El Salvador	8	1	1	13	9	5	1	38
Guatemala	18	1	1	18	14	6	1	59
Honduras	7	1	1	11	7	1	0	28
Jamaica	11	4	1	6	40	2	1	66
Netherlands Antilles	2	1	2	10	38	2	14	71
Panama	9	0	(s)	12	25	3	3	53
Paraguay	5	(s)	(s)	15	2	3	(s)	25
Peru	26	7	14	58	41	22	8	177
Puerto Rico	63	9	1	14	45	(s)	69	201
Trinidad and Tobago	8	1	(s)	6	3	2	4	25
Uruguay	7	(s)	(s)	17	11	4	4	43
Venezuela	210	6	1	68	41	68	106	500
Virgin Islands, U.S.	30	13	(s)	9	8	5	(s)	66
Other	28	13	7	44	38	6	10	146
Total	**1,365**	**202**	**57**	**1,422**	**797**	**517**	**831**	**5,191**
Western Europe								
Austria	46	12	(s)	120	24	5	54	262
Belgium	52	32	3	231	113	18	138	586
Bosnia and Herzegovina	6	1	0	8	3	0	2	19
Croatia	18	2	(s)	28	20	3	15	86
Denmark	46	18	(s)	87	23	2	40	215
Finland	41	12	0	80	33	6	29	202
France	283	140	2	930	127	124	415	2,021
Germany	588	154	(s)	1,169	169	86	609	2,775
Greece	76	28	(s)	144	107	14	30	399
Iceland	3	3	0	9	1	(s)	3	19
Ireland	35	11	14	65	32	4	8	169
Italy	364	80	-2	566	436	141	283	1,867
Luxembourg	13	6	(s)	26	(s)	1	(s)	47
Macedonia, TFYR	3	1	0	6	6	1	5	23
Netherlands	93	70	2	178	210	67	233	852
Norway	37	13	3	80	8	25	31	197
Portugal	49	17	(s)	101	68	33	64	333
Slovenia	19	1	0	24	2	3	4	52
Spain	189	90	5	539	262	83	293	1,461
Sweden	91	18	0	130	47	19	28	334
Switzerland	92	34	(s)	124	4	6	13	273
Turkey	83	26	1	185	143	142	84	663
United Kingdom	492	232	80	495	84	127	212	1,721
Yugoslavia	19	1	1	23	10	(s)	8	62
Other	3	4	(s)	12	44	1	1	64
Total	**2,740**	**1,004**	**109**	**5,358**	**1,977**	**912**	**2,603**	**14,702**

See footnotes at end of table.

Table 3.5 World Apparent Consumption of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Apparent Consumption [3]
Eastern Europe & Former U.S.S.R.								
Albania	3	(s)	2	8	4	1	2	21
Bulgaria	15	2	0	19	36	7	23	103
Czech Republic	43	4	(s)	56	16	8	36	164
Hungary	31	4	(s)	42	29	9	29	145
Poland	145	9	5	165	42	25	49	441
Romania	36	3	1	59	51	9	53	213
Slovakia	14	1	(s)	17	5	1	37	75
Armenia	1	1	(s)	1	1	(s)	1	5
Azerbaijan	18	3	4	43	43	3	24	137
Belarus	44	15	(s)	59	78	9	21	227
Estonia	7	(s)	0	8	3	(s)	4	22
Georgia	11	1	4	6	4	3	1	30
Kazakhstan	46	7	1	58	46	3	27	189
Kyrgyzstan	4	1	0	7	5	(s)	(s)	18
Latvia	14	1	(s)	13	8	1	4	41
Lithuania	15	1	0	22	16	6	9	70
Moldova	6	(s)	(s)	9	6	1	(s)	22
Russia	542	189	2	510	577	129	629	2,578
Tajikistan	16	(s)	0	1	(s)	(s)	2	20
Turkmenistan	11	7	2	14	15	3	10	62
Ukraine	57	14	(s)	78	45	40	30	264
Uzbekistan	39	6	2	34	33	2	23	139
Total	**1,119**	**270**	**25**	**1,229**	**1,066**	**261**	**1,017**	**4,986**
Middle East								
Bahrain	8	8	1	3	3	(s)	7	30
Cyprus	5	6	1	11	18	2	5	47
Iran	263	15	150	426	182	67	161	1,263
Iraq	76	12	21	122	109	22	89	451
Israel	49	11	14	56	87	15	40	272
Jordan	14	5	5	23	39	9	5	101
Kuwait	39	9	1	12	119	32	52	264
Lebanon	32	3	(s)	36	27	5	2	106
Oman	17	4	(s)	17	10	1	3	53
Qatar	11	4	(s)	7	1	1	3	28
Saudi Arabia	228	51	4	366	183	226	363	1,421
Syria	29	6	8	105	81	15	17	261
United Arab Emirates	51	21	0	54	133	26	16	300
Yemen	22	4	3	16	11	14	3	73
Total	**844**	**159**	**207**	**1,255**	**1,003**	**435**	**768**	**4,670**

See footnotes at end of table.

Table 3.5 World Apparent Consumption of Refined Petroleum Products, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Motor Gasoline	Jet Fuel [1]	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Liquefied Petroleum Gases	Other [2]	Total Apparent Consumption [3]
Africa								
Algeria	44	7	(s)	75	9	51	20	206
Angola	3	5	1	13	2	2	3	29
Cameroon	6	1	4	7	2	1	1	23
Congo (Brazzaville)	1	1	(s)	1	(s)	(s)	(s)	4
Congo (Kinshasa)	4	3	(s)	5	(s)	(s)	2	14
Cote d'Ivoire (Ivory Coast)	4	2	1	12	7	2	5	33
Egypt	54	10	21	163	187	74	51	561
Ethiopia	3	2	3	11	2	(s)	1	23
Gabon	1	1	(s)	4	3	1	2	12
Ghana	13	2	2	15	2	1	3	37
Kenya	11	8	10	14	10	1	3	57
Libya	45	12	5	46	56	16	31	210
Morocco	9	6	2	59	35	36	11	158
Nigeria	118	4	27	49	33	1	14	246
Senegal	2	4	(s)	11	7	3	1	30
South Africa	175	34	14	113	51	11	61	458
Sudan	6	3	1	22	6	1	4	43
Tunisia	9	6	4	33	14	12	6	85
Zimbabwe	8	2	2	13	0	(s)	1	25
Other	65	21	19	83	38	7	21	255
Total	**582**	**135**	**117**	**750**	**465**	**218**	**241**	**2,509**
Asia & Oceania								
Australia	309	89	2	223	38	88	110	859
Bangladesh	6	3	11	27	6	(s)	15	69
Brunei	5	2	(s)	3	(s)	1	2	12
Burma	8	1	(s)	22	3	(s)	2	37
China	891	119	87	1,495	713	461	1,030	4,796
Guam	3	5	0	6	4	(s)	(s)	19
Hong Kong	9	57	1	118	38	6	16	245
India	151	53	239	816	252	212	403	2,127
Indonesia	214	13	209	407	134	31	29	1,037
Japan	1,010	204	513	1,245	652	635	1,268	5,528
Korea, North	40	0	5	26	15	(s)	1	86
Korea, South	169	69	192	378	473	221	644	2,146
Malaysia	142	33	3	157	49	40	41	465
Mongolia	4	0	(s)	3	(s)	0	0	8
New Zealand	53	19	(s)	48	1	12	13	146
Pakistan	27	16	9	148	148	2	14	365
Papua New Guinea	2	1	(s)	6	5	(s)	(s)	15
Philippines	62	18	12	113	92	34	23	353
Singapore	17	49	1	80	432	8	95	682
Sri Lanka	5	6	5	36	15	5	3	75
Taiwan	163	48	1	111	333	51	232	938
Thailand	117	57	1	263	120	73	173	803
Vietnam	34	8	6	82	29	11	6	176
Other	10	15	8	26	14	3	2	79
Total	**3,450**	**884**	**1,306**	**5,840**	**3,566**	**1,896**	**4,122**	**21,064**
World Total	**19,760**	**4,550**	**1,924**	**20,369**	**10,473**	**7,437**	**12,384**	**76,896**

[1] Jet Fuel includes naphtha-type jet fuel and kerosene-type jet fuel.
[2] Includes asphalt, coke, aviation gasoline, naphthas, paraffin wax, petrochemical feedstocks, unfinished oils, white spirits, and blending components.
[3] Apparent consumption includes internal consumption, refinery fuel and loss, and bunkering. Also included, where available, are liquefied petroleum gases sold directly from natural gas processing plants for fuel or chemical uses.
(s)=Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

Table 3.6 World Crude Oil Refining Capacity, January 1, 2002

Region Country	Number of Refineries	Thousand Barrels per Day [1]			
		Crude Oil Distillation	Catalytic Cracking	Thermal Cracking	Reforming
North America					
Canada	21	1,944	488	139	350
Mexico	6	1,525	368	100	226
United States.[2]	153	16,785	5,763	2,211	3,564
Total	**180**	**20,254**	**6,619**	**2,450**	**4,140**
Central & South America					
Argentina	10	639	169	38	59
Aruba	1	280	0	48	0
Bolivia	3	63	0	0	15
Brazil	13	1,786	424	12	24
Chile	3	205	46	21	16
Colombia	5	286	90	52	0
Costa Rica	1	15	0	7	1
Cuba	4	301	15	0	20
Dominican Republic	2	49	0	0	8
Ecuador	3	176	18	32	13
El Salvador	1	22	0	0	3
Guatemala	1	16	0	0	3
Jamaica	1	34	0	0	3
Martinique	1	17	0	0	3
Netherlands Antilles	1	320	50	80	20
Nicaragua	1	20	0	0	3
Panama	1	60	0	27	11
Paraguay	1	8	0	0	0
Peru	5	182	23	0	0
Puerto Rico	3	87	13	0	65
Suriname	1	7	0	3	0
Trinidad and Tobago	1	160	27	29	19
Uruguay	1	37	9	7	3
Venezuela	5	1,282	232	0	50
Virgin Islands, U.S.	1	495	137	80	108
Total	**70**	**6,547**	**1,252**	**435**	**447**
Western Europe					
Austria	1	209	26	17	33
Belgium	5	791	114	63	98
Croatia	3	293	51	24	50
Denmark	2	176	0	53	22
Finland	2	239	51	31	44
France	13	1,896	373	154	271
Germany	17	2,259	344	238	386
Greece	4	407	72	49	53
Ireland	1	71	0	0	11
Italy	17	2,283	305	423	269
Macedonia, TFYR	1	51	0	0	11
Netherlands	6	1,206	101	121	171
Norway	2	310	54	32	38
Portugal	2	304	32	23	50
Slovenia	1	14	0	0	0
Spain	9	1,294	180	156	195
Sweden	5	424	30	60	70
Switzerland	2	132	0	20	28
Turkey	6	719	29	24	65
United Kingdom	11	1,784	432	95	329
Yugoslavia	2	158	19	20	20
Total	**112**	**15,019**	**2,212**	**1,603**	**2,214**

See footnotes at end of table.

Table 3.6 World Crude Oil Refining Capacity, January 1, 2002 (Continued)

Region Country	Number of Refineries	Thousand Barrels per Day [1]			
		Crude Oil Distillation	Catalytic Cracking	Thermal Cracking	Reforming
Eastern Europe & Former U.S.S.R.					
Albania	2	26	0	0	4
Bulgaria	1	115	23	21	4
Czech Republic	4	198	26	16	28
Hungary	2	161	24	14	30
Poland	4	382	46	0	39
Romania	10	504	103	32	63
Slovakia	1	115	0	0	22
Azerbaijan	2	442	58	0	24
Belarus	2	493	0	0	92
Georgia	1	106	0	0	10
Kazakhstan	3	427	38	30	59
Kyrgyzstan	1	10	0	0	0
Lithuania	1	263	44	30	26
Russia	42	5,435	331	347	775
Turkmenistan	2	237	15	0	53
Ukraine	6	1,026	69	17	100
Uzbekistan	3	222	0	10	23
Total	**87**	**10,165**	**778**	**516**	**1,353**
Middle East					
Bahrain	1	249	41	20	15
Cyprus	1	27	0	0	5
Iran	9	1,484	30	157	161
Iraq	8	418	0	0	44
Israel	2	220	50	66	27
Jordan	1	90	4	0	11
Kuwait	3	773	41	0	14
Lebanon	2	38	7	0	7
Oman	1	85	0	0	16
Qatar	1	58	0	0	12
Saudi Arabia	8	1,745	104	138	193
Syria	2	242	0	25	26
United Arab Emirates	5	515	34	0	26
Yemen	2	130	0	0	15
Total	**46**	**6,073**	**312**	**406**	**570**

See footnotes at end of table.

Table 3.6 World Crude Oil Refining Capacity, January 1, 2002 (Continued)

Region Country	Number of Refineries	Thousand Barrels per Day [1]			
		Crude Oil Distillation	Catalytic Cracking	Thermal Cracking	Reforming
Africa					
Algeria	4	450	0	0	89
Angola	1	39	0	0	2
Cameroon	1	42	0	0	7
Congo (Brazzaville)	1	21	0	0	2
Congo (Kinshasa)	1	15	0	0	4
Cote d'Ivoire (Ivory Coast)	1	65	0	0	13
Egypt	9	726	0	0	41
Eritrea	1	15	0	0	1
Gabon	1	17	0	7	1
Ghana	1	45	0	0	6
Kenya	1	90	0	0	9
Liberia	1	15	0	0	2
Libya	3	343	0	0	20
Madagascar	1	15	0	6	2
Morocco	2	155	5	0	24
Nigeria	4	439	83	0	70
Senegal	1	27	0	0	2
Sierra Leone	1	10	0	0	0
Somalia	1	10	0	0	0
South Africa	4	469	107	73	79
Sudan	3	122	0	0	2
Tanzania	1	15	0	3	3
Tunisia	1	34	0	0	3
Zambia	1	24	0	0	5
Total	**46**	**3,202**	**195**	**88**	**387**
Asia & Oceania					
Australia	10	848	234	0	199
Bangladesh	1	33	0	10	2
Brunei	1	9	0	0	6
Burma	2	32	0	0	0
China	95	4,528	892	0	157
India	17	2,135	167	93	43
Indonesia	8	993	101	59	93
Japan	35	4,786	819	0	743
Korea, North	2	71	0	0	7
Korea, South	6	2,560	168	0	231
Malaysia	6	515	0	0	77
New Zealand	1	106	0	0	28
Pakistan	3	239	0	0	12
Philippines	4	420	25	22	62
Singapore	3	1,259	65	206	147
Sri Lanka	1	50	0	13	5
Taiwan	4	920	123	0	115
Thailand	4	682	79	17	82
Total	**203**	**20,184**	**2,673**	**421**	**2,008**
World Total	**744**	**81,444**	**14,040**	**5,918**	**11,119**

[1] Calendar day basis.

[2] United States data are as of January 1, 2002. Refinery cracking and reforming data for the United States are available only on a stream day basis. These figures have been converted to calendar days by reducing the stream day data by 5.2 percent. Thus, the United States cracking and reforming data are estimated.

- - = Not applicable.

Note: Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of this Section.

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Section 4

Natural Gas

Table 4.1 World Natural Gas Production, 2000

(Billion Cubic Feet)

Region Country	Gross Production	Vented, Flared	Reinjected	Marketed Production	Dry Gas Production
North America					
Canada	7,679	87	471	7,121	6,469
Mexico	1,511	196	0	1,315	1,315
United States	24,153	100	3,434	20,002	18,987
Total	**33,343**	**383**	**3,905**	**28,437**	**26,771**
Central & South America					
Argentina	1,585	22	91	1,472	1,321
Barbados	1	0	0	1	1
Bolivia	198	9	64	124	117
Brazil	469	74	82	314	257
Chile	101	3	55	43	40
Colombia	513	18	283	213	201
Cuba	28	4	0	25	21
Ecuador	40	28	7	5	5
Peru	29	6	11	12	12
Trinidad and Tobago	577	84	0	493	493
Venezuela	2,137	159	752	1,225	961
Total	**5,678**	**406**	**1,344**	**3,927**	**3,430**
Western Europe					
Austria	64	0	0	64	64
Belgium	(s)	0	0	(s)	(s)
Croatia	59	0	0	59	59
Denmark	422	9	124	289	289
France	66	0	0	66	66
Germany	794	16	0	779	779
Greece	1	0	0	1	1
Ireland	42	0	0	42	42
Italy	587	0	0	587	587
Netherlands	2,564	5	0	2,559	2,559
Norway	3,188	24	1,250	1,914	1,867
Spain	6	0	0	6	6
Turkey	27	5	0	23	23
United Kingdom	4,124	61	95	3,967	3,826
Yugoslavia	19	0	0	19	19
Total	**11,963**	**120**	**1,469**	**10,374**	**10,186**
Eastern Europe & Former U.S.S.R.					
Albania	2	0	1	1	1
Bulgaria	2	0	0	2	2
Czech Republic	8	0	0	8	8
Hungary	113	0	0	113	113
Poland	184	0	0	184	184
Romania	488	0	0	488	480
Slovakia	6	0	0	6	6
Azerbaijan	487	244	32	211	200
Belarus	7	0	0	7	7
Georgia	2	0	0	2	2
Kazakhstan	314	0	0	314	314
Kyrgyzstan	(s)	0	0	(s)	(s)
Russia	20,631	0	0	20.631	20,631
Tajikistan	1	0	0	1	1
Turkmenistan	1,642	0	0	1,642	1,642
Ukraine	636	0	0	636	636
Uzbekistan	1,992	0	0	1,992	1,992
Total	**26,516**	**244**	**32**	**26,239**	**26,220**

See footnotes at end of table.

Table 4.1 World Natural Gas Production, 2000 (Continued)

(Billion Cubic Feet)

Region Country	Gross Production	Vented, Flared	Reinjected	Marketed Production	Dry Gas Production
Middle East					
Bahrain	412	0	101	311	303
Iran	3,871	371	1,201	2,299	2,127
Iraq	154	34	0	120	111
Israel	(s)	0	0	(s)	(s)
Jordan	10	0	0	10	10
Kuwait	396	18	0	378	339
Oman	484	32	60	392	322
Qatar	1,312	0	150	1,162	1,028
Saudi Arabia	1,888	20	4	1,864	1,759
Syria	280	14	17	249	215
United Arab Emirates	1,784	46	265	1,474	1,355
Yemen	667	0	655	13	0
Total	**11,258**	**534**	**2,451**	**8,273**	**7,570**
Africa					
Algeria	5,757	239	2,382	3.136	2,940
Angola	254	148	81	25	20
Cameroon	69	69	0	0	0
Congo (Brazzaville)	127	46	78	4	0
Cote d'Ivoire (Ivory Coast)	48	0	0	48	48
Egypt	860	30	28	802	646
Equatorial Guinea	44	34	(s)	9	1
Gabon	88	61	21	6	3
Libya	358	37	88	233	212
Morocco	2	0	0	2	2
Mozambique	2	0	0	2	2
Nigeria	1,231	607	141	482	440
Senegal	2	0	0	2	2
South Africa	64	6	0	58	58
Tunisia	83	12	0	71	66
Total	**8,990**	**1,291**	**2,820**	**4,879**	**4,440**
Asia & Oceania					
Afghanistan	8	0	0	8	8
Australia	1,164	8	0	1,155	1,155
Bangladesh	343	0	0	343	343
Brunei	416	0	60	356	349
Burma	124	4	0	120	120
China	957	0	0	957	957
India	910	86	4	821	795
Indonesia	2,935	159	245	2,530	2,359
Japan	87	0	0	87	87
Malaysia	1,521	0	0	1,521	1,498
New Zealand	216	1	0	214	214
Pakistan	856	0	0	856	856
Papua New Guinea	4	0	(s)	4	4
Philippines	(s)	0	0	(s)	(s)
Taiwan	31	0	0	31	31
Thailand	713	0	0	713	658
Vietnam	55	14	0	41	41
Total	**10,340**	**272**	**309**	**9,758**	**9,475**
World Total	**108,088**	**3,250**	**12,331**	**91,889**	**88,093**

(s) = Value less than 500 million cubic feet.

Note: Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of this Section.

Table 4.2 World Dry Natural Gas Supply and Disposition, 2000

(Billion Cubic Feet)

Region Country	Dry Gas Production	Imports [1]	Exports [1]	Apparent Consumption [2]
North America				
Canada	6,469	57	3,576	3,283
Mexico	1,315	83	9	1,380
United States	18,987	3,782	244	23,455
Total	**26,771**	**3,923**	**3,828**	**28,117**
Central & South America				
Argentina	1,321	0	148	1,173
Barbados	1	0	0	1
Bolivia	117	0	73	44
Brazil	257	76	0	333
Chile	40	144	0	184
Colombia	201	0	0	201
Cuba	21	0	0	21
Ecuador	5	0	0	5
Peru	12	0	0	12
Puerto Rico	0	12	0	12
Trinidad and Tobago	493	0	139	354
Uruguay	0	1	0	1
Venezuela	961	0	0	961
Total	**3,430**	**233**	**360**	**3,304**
Western Europe				
Austria	64	220	1	272
Belgium	(s)	550	0	554
Bosnia and Herzegovina	0	11	0	11
Croatia	59	39	0	98
Denmark	289	0	107	182
Finland	0	149	0	148
France	66	1,475	46	1,420
Germany	779	2,676	190	3,195
Greece	1	72	0	72
Ireland	42	100	0	142
Italy	587	2,029	2	2,498
Luxembourg	0	27	0	27
Netherlands	2,559	615	1,463	1,725
Norway	1,867	0	1,727	140
Portugal	0	81	0	81
Slovenia	0	36	0	36
Spain	6	598	0	588
Sweden	0	31	0	30
Switzerland	0	105	0	105
Turkey	23	508	0	524
United Kingdom	3,826	78	530	3,373
Yugoslavia	19	0	0	19
Total	**10,186**	**9,397**	**4,065**	**15,241**

See footnotes at end of table.

Table 4.2 World Dry Natural Gas Supply and Disposition, 2000 (Continued)

(Billion Cubic Feet)

Region Country	Dry Gas Production	Imports [1]	Exports [1]	Apparent Consumption [2]
Eastern Europe & Former U.S.S.R.				
Albania	1	0	0	1
Bulgaria	2	191	0	193
Czech Republic	8	325	(s)	326
Hungary	113	319	3	425
Poland	184	286	1	470
Romania	480	120	0	600
Slovakia	6	248	0	252
Armenia	0	50	0	50
Azerbaijan	200	0	0	200
Belarus	7	685	0	692
Estonia	0	40	0	40
Georgia	2	41	0	43
Kazakhstan	314	297	120	491
Kyrgyzstan	(s)	67	0	68
Latvia	0	57	0	57
Lithuania	0	92	0	92
Moldova	0	75	0	75
Russia	20,631	1,056	7,557	14,130
Tajikistan	1	43	0	44
Turkmenistan	1,642	0	1,381	261
Ukraine	636	2,144	0	2,779
Uzbekistan	1,992	0	480	1,511
Total	**26,220**	**6,135**	**9,543**	**22,800**
Middle East				
Bahrain	303	0	0	303
Iran	2,127	94	0	2,221
Iraq	111	0	0	111
Israel	(s)	0	0	(s)
Jordan	10	0	0	10
Kuwait	339	0	0	339
Oman	322	0	100	221
Qatar	1,028	0	496	532
Saudi Arabia	1,759	0	0	1,759
Syria	215	0	0	215
United Arab Emirates	1,355	0	245	1,110
Total	**7,570**	**94**	**842**	**6,822**
Africa				
Algeria	2,940	0	2,214	726
Angola	20	0	0	20
Cote d'Ivoire (Ivory Coast)	48	0	0	48
Egypt	646	0	0	646
Equatorial Guinea	1	0	0	1
Gabon	3	0	0	3
Libya	212	0	28	184
Morocco	2	0	0	2
Mozambique	2	0	0	2
Nigeria	440	0	202	238
Senegal	2	0	0	2
South Africa	58	0	0	58
Tunisia	66	42	0	109
Total	**4,440**	**42**	**2,444**	**2,038**

See footnotes at end of table.

Table 4.2 World Dry Natural Gas Supply and Disposition, 2000 (Continued)

(Billion Cubic Feet)

Region Country	Dry Gas Production	Imports [1]	Exports [1]	Apparent Consumption [2]
Asia & Oceania				
Afghanistan	8	0	0	8
Australia	1,155	0	360	796
Bangladesh	343	0	0	343
Brunei	349	0	310	39
Burma	120	0	55	66
China	957	0	0	957
Hong Kong	0	24	0	24
India	795	0	0	795
Indonesia	2,359	0	1,278	1,081
Japan	87	2,649	0	2,753
Korea, South	0	672	0	669
Malaysia	1,498	0	776	722
New Zealand	214	0	0	214
Pakistan	856	0	0	856
Papua New Guinea	4	0	0	4
Philippines	(s)	0	0	(s)
Singapore	0	53	0	53
Taiwan	31	211	0	243
Thailand	658	47	0	705
Vietnam	41	0	0	41
Total	**9,475**	**3,656**	**2,779**	**10,367**
World Total	**88,093**	**23,480**	**23,861**	**88,688**

[1] Includes liquefied natural gas.
[2] Includes stock changes.
(s) = Value less than 500 million cubic feet.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

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Section 5

Coal

Table 5.1 World Coal Production, 2000

(Thousand Short Tons)

Region Country	Primary [1]			Secondary [2]		
	Anthracite	Bituminous	Lignite	Metallurgical Coke	Anthracite and Bituminous Briquets	Lignite Briquets
North America						
Canada	0	63,908	12,335	3,574	0	0
Mexico	0	12,505	0	2,504	0	0
United States	4,572	983.479	85,561	20.808	0	0
Total	**4,572**	**1,059,891**	**97,895**	**26,886**	**0**	**0**
Central & South America						
Argentina	0	286	0	392	0	0
Brazil	0	5,450	0	8,792	0	0
Chile	0	403	0	774	0	0
Colombia	0	42.044	0	600	0	0
Cuba	0	0	0	23	0	0
Peru	42	29	0	31	0	0
Venezuela	0	8.691	0	0	0	0
Total	**42**	**56,904**	**0**	**10,613**	**0**	**0**
Western Europe						
Austria	0	0	1,377	1.527	0	0
Belgium	0	413	0	3,422	6	0
Bosnia and Herzegovina	0	3,917	5,875	0	0	0
Finland	0	0	0	1.003	0	0
France	290	3,237	326	5,769	134	0
Germany	3,708	36.702	184,848	10.048	186	5,749
Greece	0	0	70,423	0	0	155
Ireland	0	0	0	0	0	354
Italy	0	0	15	4.965	0	0
Macedonia, TFYR	0	0	8,285	0	0	0
Netherlands	0	0	0	2,345	0	0
Norway	0	697	0	0	0	0
Portugal	0	0	0	409	0	0
Slovenia	0	812	4,126	0	0	0
Spain	4,915	11,561	9,396	2,723	0	0
Sweden	0	0	0	1,263	0	0
Turkey	0	2,490	67,104	3,224	0	2
United Kingdom	2,927	30,804	0	7,029	700	0
Yugoslavia	0	101	37,746	0	0	0
Total	**11,840**	**90,735**	**389,523**	**43,726**	**1,026**	**6,260**
Eastern Europe & Former U.S.S.R.						
Albania	0	0	35	0	0	0
Belarus	0	0	0	0	0	1,381
Bulgaria	17	3,663	29,006	990	0	881
Czech Republic	0	71,329	499	3,760	0	279
Hungary	0	689	15,469	1.033	0	99
Poland	294	112,403	65,573	9,996	0	23
Romania	0	310	31,971	1,778	0	0
Slovakia	0	0	4,021	1,881	0	0
Estonia	0	0	0	25	0	95
Georgia	0	8	0	0	0	0
Kazakhstan	0	76,960	2,693	1,261	0	0
Kyrgyzstan	0	115	354	0	0	0
Latvia	0	0	0	0	0	2
Lithuania	0	0	0	0	0	11
Russia	16,885	165.529	96,768	25.261	0	110
Tajikistan	0	22	0	0	0	0
Ukraine	19,566	69,501	1,176	17,775	2,670	551
Uzbekistan	0	76	2,756	0	18	0
Total	**36,762**	**500,605**	**250,322**	**63,759**	**2,687**	**3,433**

See footnotes at end of table.

Table 5.1 World Coal Production, 2000 (Continued)

(Thousand Short Tons)

Region Country	Primary [1]			Secondary [2]		
	Anthracite	Bituminous	Lignite	Metallurgical Coke	Anthracite and Bituminous Briquets	Lignite Briquets
Middle East						
Iran	0	1,537	0	340	0	0
Total	**0**	**1,537**	**0**	**340**	**0**	**0**
Africa						
Algeria	0	26	0	520	0	0
Botswana	0	1,058	0	0	0	0
Cameroon	0	1	0	0	0	0
Congo (Kinshasa)	0	106	0	0	0	0
Egypt	0	0	0	518	0	0
Morocco	32	0	0	0	0	0
Mozambique	0	21	0	0	0	0
Niger	0	166	0	0	0	0
Nigeria	0	67	0	0	0	0
South Africa	1,784	246,647	0	2,079	0	0
Swaziland	21	298	0	0	0	0
Tanzania	0	6	0	0	0	0
Zambia	0	214	0	36	0	0
Zimbabwe	0	4,850	0	719	0	0
Total	**1,836**	**253,460**	**0**	**3,872**	**0**	**0**
Asia & Oceania						
Afghanistan	0	1	0	0	0	0
Australia	0	263,925	74,263	4,122	0	410
Bhutan	0	55	0	0	0	0
Burma	0	337	123	0	0	0
China	236,598	1,025,260	52,577	134,306	8,239	0
India	0	317,359	25,294	12,974	0	980
Indonesia	0	84,441	0	0	0	35
Japan	54	3,223	0	42,451	55	0
Korea, North	46,297	59,385	0	3,527	0	0
Korea, South	4,575	0	0	13,545	1,314	0
Laos	0	1	0	0	0	0
Malaysia	0	380	0	0	0	0
Mongolia	0	193	5,523	0	0	0
Nepal	0	0	11	0	0	0
New Zealand	517	2,946	235	0	0	0
Pakistan	0	3,488	0	733	0	0
Philippines	0	1,488	3	0	0	0
Taiwan	0	92	0	4,794	0	0
Thailand	1	0	19,605	0	0	0
Vietnam	10,983	0	0	0	0	0
Total	**299,025**	**1,762,575**	**177,634**	**216,452**	**9,608**	**1,425**
World Total	**354,077**	**3,725,706**	**915,374**	**365,649**	**13,321**	**11,118**

[1] Primary coal includes all coal mined and, when necessary, washed and sorted.
[2] Secondary coal (e.g. coke, briquets), is derived from primary coal.
(s) = Value less than 500 Short tons.

Note: Sum of components may not equal total due to independent rounding.

Sources: United States primary coal production is from Energy Information Administration, Annual Energy Review 2001, table 7.2. Bituminous production is the sum of bituminous coal and subbituminous coal from table 7.2. Sources for other countries are listed at the end of this Section.

Table 5.2 World Anthracite Coal Production, 1992 - 2001

(Thousand Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
United States [2]	3,483	4,322	4,646	4,711	4,768	4,692	5,251	4,768	4,572	3,857
Total	**3,483**	**4,322**	**4,646**	**4,711**	**4,768**	**4,692**	**5,251**	**4,768**	**4,572**	**3,857**
Central & South America										
Peru	89	34	24	19	23	24	23	28	42	21
Total	**89**	**34**	**24**	**19**	**23**	**24**	**23**	**28**	**42**	**21**
Western Europe										
France	1,358	842	735	770	703	570	487	408	290	179
Germany	7,546	6,650	6,028	5,551	5,274	5,081	4,497	4,351	3,708	3,042
Spain	8,009	7,846	7,862	7,571	7,099	7,361	6,263	5,084	4,915	4,751
United Kingdom	1,714	1,111	1,049	1,169	1,832	1,951	2,414	2,428	2,927	2,870
Total	**18,628**	**16,448**	**15,674**	**15,061**	**14,908**	**14,963**	**13,662**	**12,271**	**11,840**	**10,842**
Eastern Europe & Former U.S.S.R.										
Bulgaria	84	79	90	121	25	17	29	28	17	9
Poland	0	174	243	304	309	320	320	317	294	295
Russia	27,836	25,207	22,384	21,667	21,104	20,217	14,462	15,554	16,885	17,510
Ukraine	31,010	26,466	22,141	15,543	17,968	18,188	18,409	19,676	19,566	19,511
Total	**58,930**	**51,927**	**44,857**	**37,635**	**39,405**	**38,742**	**33,219**	**35,576**	**36,762**	**37,325**
Africa										
Morocco	635	666	717	717	558	414	297	142	32	28
South Africa	3,687	3,406	2,514	2,355	2,718	2,932	1,961	1,744	1,784	1,579
Swaziland	41	21	75	71	53	22	20	21	21	20
Total	**4,363**	**4,093**	**3,305**	**3,142**	**3,329**	**3,369**	**2,277**	**1,907**	**1,836**	**1,626**
Asia & Oceania										
China	243,567	251,048	270,516	296,878	321,227	274,719	266,965	237,786	236,598	262,623
Japan	239	219	187	179	183	87	65	69	54	58
Korea, North	46,826	47,179	47,536	47,177	46,821	46,467	46,117	45,769	46,297	46,848
Korea, South	13,195	10,409	8,199	6,305	5,458	4,974	4,807	4,626	4,575	4,208
New Zealand	188	101	195	228	265	290	463	529	517	571
Thailand	24	18	13	6	6	1	1	1	1	1
Vietnam	5,282	6,503	6,272	9,204	10,828	12,553	11,804	10,034	10,983	11,023
Total	**309,322**	**315,477**	**332,918**	**359,977**	**384,786**	**339,091**	**330,222**	**298,815**	**299,025**	**325,332**
World Total	**394,815**	**392,301**	**401,425**	**420,545**	**447,219**	**400,882**	**384,656**	**353,364**	**354,077**	**379,004**

[1] Preliminary.
[2] United States anthracite coal production is from Energy Information Administration, Annual Energy Review 2001, table 7.2.
- - = Not applicable.
Notes: Sum of components may not equal total due to independent rounding.
No production is reported for Middle East.
Sources: See sources at the end of this Section.

Table 5.3 World Bituminous Coal Production, 1992 - 2001

(Thousand Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	61,270	65,015	68,497	70,732	71,507	73,975	69,900	67,061	63,908	65,127
Mexico	7,242	7,840	10,071	10,257	11,141	11,475	12,381	11,382	12,505	12,813
United States [2]	904,000	851,553	940,777	941,763	971,032	998,899	1,026,517	1,008,446	983,479	1,033,556
Total	**972,512**	**924,408**	**1,019,344**	**1,022,752**	**1,053,680**	**1,084,349**	**1,108,798**	**1,086,890**	**1,059,891**	**1,111,496**
Central & South America										
Argentina	223	184	384	336	343	276	319	370	286	205
Brazil	5,215	5,065	4,905	4,579	4,226	4,879	4,682	4,726	5,450	4,529
Chile	1,792	1,494	1,303	1,144	1,107	1,151	1,036	535	403	635
Colombia	24,146	23,394	24,984	28,373	33,141	35,927	37,204	36,105	42,044	47,886
Peru	108	100	75	62	27	28	28	24	29	30
Venezuela	2,700	4,205	4,715	4,480	4,011	5,673	8,219	7,693	8,691	8,361
Total	**34,184**	**34,442**	**36,366**	**38,975**	**42,855**	**47,932**	**51,487**	**49,452**	**56,904**	**61,645**
Western Europe										
Belgium	1,319	1,070	830	702	617	471	344	401	413	240
France	9,939	9,068	8,204	8,594	7,845	6,359	5,438	4,553	3,237	1,994
Germany	71,989	64,091	57,491	56,126	53,322	51,371	45,479	43,836	36,702	29,308
Ireland	1	1	(s)	1	1	1	1	0	0	0
Italy	122	11	6	0	0	0	0	0	0	0
Norway	396	295	332	322	254	425	362	445	697	1,662
Portugal	244	217	162	0	0	0	0	0	0	0
Spain	12,595	12,256	12,281	11,827	13,063	12,473	11,732	11,948	11,561	11,173
Sweden	41	4	1	0	0	0	0	0	0	0
Turkey	3,354	3,169	3,128	2,478	2,691	2,770	2,377	2,194	2,490	2,598
United Kingdom	91,870	74,066	52,873	51,313	51,672	49,837	41,729	37,434	30,804	31,867
Bosnia and Herzegovina	0	0	0	0	0	0	0	3,201	3,917	3,968
Croatia	132	115	106	83	71	54	62	17	0	0
Slovenia	1,458	1,324	1,189	1,066	915	895	913	836	812	755
Yugoslavia	112	80	90	78	86	103	116	54	101	44
Total	**193,574**	**165,769**	**136,692**	**132,589**	**130,537**	**124,758**	**108,551**	**104,919**	**90,735**	**83,610**
Eastern Europe & Former U.S.S.R.										
Bulgaria	3,695	3,769	3,478	3,513	3,373	3,929	4,080	3,439	3,663	3,440
Former Czechoslovakia	99,912	--	--	--	--	--	--	--	--	--
Czech Republic	--	92,504	83,811	81,073	83,027	80,213	73,719	64,619	71,329	72,370
Hungary	1,426	1,048	1,136	944	972	941	896	789	689	678
Moldova	287	197	122	35	40	17	0	0	0	0
Poland	144,748	143,178	146,505	149,820	122,392	151,566	126,606	120,189	112,403	112,999
Romania	4,517	1,349	1,505	1,265	1,458	1,931	1,550	1,209	310	342
Georgia	220	132	49	47	25	6	15	18	8	8
Kazakhstan	134,913	118,172	110,023	87,761	80,733	77,354	75,021	62,410	76,960	85,539
Kyrgyzstan	1,146	811	439	202	142	183	120	107	115	115
Russia	238,209	214,510	185,299	179,897	183,535	146,542	140,447	152,462	165,529	171,653
Tajikistan	236	192	117	37	22	15	11	22	22	24
Ukraine	109,946	96,551	78,500	76,531	63,749	65,052	65,110	69,882	69,501	69,446
Uzbekistan	198	177	159	130	82	65	75	76	76	77
Total	**739,456**	**672,592**	**611,141**	**581,255**	**539,551**	**527,814**	**487,651**	**475,221**	**500,605**	**516,690**

See footnotes at end of table.

Table 5.3 World Bituminous Coal Production, 1992 - 2001 (Continued)

(Thousand Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Iran	1,070	1,068	1,425	1,254	1,335	1,334	1,289	1,474	1,537	1,543
Total	**1,070**	**1,068**	**1,425**	**1,254**	**1,335**	**1,334**	**1,289**	**1,474**	**1,537**	**1,543**
Africa										
Algeria	17	22	22	24	24	25	24	26	26	26
Botswana	994	981	992	990	841	856	1,023	1,042	1,058	1,064
Cameroon	1	1	1	1	1	1	1	1	1	1
Congo (Kinshasa)	94	101	104	105	105	103	106	106	106	106
Mozambique	44	44	44	42	22	20	20	20	21	21
Niger	187	190	190	191	191	192	192	170	166	165
Nigeria	110	132	143	154	154	154	65	66	67	68
South Africa	197,512	199,639	213,325	224,948	224,757	241,384	244,959	241,250	246,647	248,702
Swaziland	69	34	125	118	89	139	280	298	298	298
Tanzania	4	4	4	6	6	6	6	6	6	6
Zambia	465	367	180	167	186	198	214	208	214	214
Zimbabwe	6,116	5,826	6,029	6,095	5,152	4,415	4,588	5,099	4,850	4,960
Total	**205,613**	**207,342**	**221,159**	**232,840**	**231,528**	**247,493**	**251,477**	**248,292**	**253,460**	**255,632**
Asia & Oceania										
Afghanistan	9	8	7	6	3	2	2	1	1	1
Australia	193,048	195,060	194,723	210,602	213,228	227,975	243,712	246,610	263,925	283,642
Bhutan	62	51	71	75	71	60	55	55	55	55
Burma	37	36	34	39	34	34	11	115	337	386
China	932,908	989,315	1,066,032	1,169,920	1,162,695	1,167,390	1,102,754	1,067,559	1,025,260	1,138,038
India	252,820	262,910	258,371	273,362	290,007	300,655	296,632	302,441	317,359	314,079
Indonesia	25,487	30,390	34,185	45,660	55,482	60,195	66,493	79,370	84,441	99,636
Japan	8,379	7,717	7,867	6,785	6,614	4,289	4,011	3,998	3,223	3,467
Korea, North	57,894	61,949	60,491	59,747	58,891	58,252	53,367	54,710	59,385	58,423
Laos	1	1	1	1	1	1	1	1	1	1
Malaysia	194	415	148	123	241	240	347	273	380	386
Mongolia	572	514	473	460	468	451	464	455	193	165
New Zealand	2,666	2,929	2,554	3,146	3,175	2,913	2,571	2,868	2,946	3,293
Pakistan	3,388	3,389	3,543	3,354	3,820	3,854	3,466	3,724	3,488	3,527
Philippines	1,828	1,741	1,594	1,465	1,218	1,199	1,275	1,335	1,488	1,489
Taiwan	369	362	314	259	163	109	87	101	92	0
Total	**1,479,660**	**1,556,786**	**1,630,408**	**1,775,003**	**1,796,110**	**1,827,620**	**1,775,250**	**1,763,617**	**1,762,575**	**1,906,589**
World Total	**3,626,069**	**3,562,407**	**3,656,535**	**3,784,670**	**3,795,596**	**3,861,300**	**3,784,502**	**3,729,864**	**3,725,706**	**3,937,205**

[1] Preliminary.
[2] United States bituminous coal production is from Energy Information Administration, Annual Energy Review 2001, table 7.2. It is the sum of data from the bituminous coal and subbituminous coal columns.
- - = Not applicable.
(s) = Value less than 500 short tons.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

Table 5.4 World Lignite Coal Production, 1992 - 2001

(Thousand Short Tons)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	11,053	11,074	11,779	11,838	11,964	12,845	12,997	12,852	12,335	12,555
United States [2]	90,062	89,549	88,081	86,500	88,056	86,341	85,767	87,218	85,561	83,915
Total	**101,115**	**100,623**	**99,860**	**98,337**	**100,020**	**99,186**	**98,764**	**100,070**	**97,895**	**96,470**
Western Europe										
Austria	1,952	1,864	1,509	1,431	1,222	1,247	1,258	1,254	1,377	1,329
France	1,739	1,843	1,655	1,544	880	1,135	812	617	326	357
Germany	266,552	244,494	228,263	212,477	206,396	195,285	183,022	177,783	184,848	193,306
Greece	60,683	60,425	62,470	63,561	65,897	64,864	67,113	68,400	70,423	74,489
Italy	787	683	294	190	151	238	208	127	15	15
Spain	16,291	14,713	12,524	11,879	10,587	9,329	10,748	9,736	9,396	9,081
Turkey	53,573	50,454	56,805	58,230	59,439	63,290	71,900	71,703	67,104	69,970
Bosnia and Herzegovina	2,205	1,653	1,543	1,808	1,863	1,919	1,978	4,803	5,875	6,063
Croatia	0	12	8	8	2	0	0	0	0	0
Macedonia, TFYR	7,692	7,625	7,562	7,991	7,876	8,205	9,012	8,130	8,285	8,267
Slovenia	4,666	4,321	4,161	4,318	4,340	4,745	4,480	4,193	4,126	3,801
Yugoslavia	44,096	41,182	42,184	44,025	42,292	44,713	48,470	36,664	37,746	39,415
Total	**460,237**	**429,269**	**418,980**	**407,461**	**400,945**	**394,971**	**399,001**	**383,409**	**389,523**	**406,094**
Eastern Europe & Former U.S.S.R.										
Albania	882	661	186	180	111	77	54	36	35	36
Bulgaria	29,470	27,944	28,031	30,257	30,317	28,801	30,033	27,752	29,006	28,025
Former Czechoslovakia	1,987	--	--	--	--	--	--	--	--	--
Czech Republic	--	1,392	1,005	864	994	823	719	564	499	499
Slovakia	--	3,910	4,006	4,144	4,221	4,316	4,355	4,131	4,021	3,774
Hungary	16,024	15,063	14,418	15,137	15,772	16,243	16,149	16,035	15,469	15,270
Poland	73,692	75,073	73,601	70,049	70,377	69,632	69,247	67,064	65,573	65,645
Romania	37,778	42,469	43,191	44,063	44,694	35,335	27,365	24,014	31,971	32,739
Kazakhstan	4,577	5,147	5,307	4,123	3,958	2,726	1,890	1,940	2,693	2,976
Kyrgyzstan	1,225	1,086	606	309	301	392	363	353	354	358
Russia	139,808	124,316	105,041	94,781	99,405	91,126	86,126	91,203	96,768	110,341
Ukraine	6,370	4,572	3,417	2,531	1,749	1,583	1,553	1,305	1,176	1,102
Uzbekistan	4,939	4,029	4,080	3,285	3,046	3,183	3,147	3,198	2,756	2,866
Total	**316,754**	**305,662**	**282,890**	**269,721**	**274,946**	**254,237**	**241,001**	**237,595**	**250,322**	**263,633**
Asia & Oceania										
Australia	55,913	52,523	53,740	55,945	59,207	64,106	73,038	74,165	74,263	73,211
Burma	43	28	24	25	24	31	23	91	123	132
China	52,106	63,167	66,957	70,171	61,332	65,018	59,273	59,593	52,577	58,361
India	17,429	18,318	21,319	24,405	24,846	25,408	25,541	24,389	25,294	24,537
Indonesia	0	0	3	(s)	(s)	1	1	0	0	0
Mongolia	6,314	5,669	5,213	5,074	5,165	4,977	5,110	5,017	5,523	5,512
Nepal	11	12	13	13	13	13	11	10	11	11
New Zealand	197	194	278	213	236	256	312	234	235	224
Philippines	3	3	3	3	3	3	3	3	3	3
Thailand	16,963	17,128	18,844	20,305	23,910	25,837	22,042	20,130	19,605	21,613
Total	**148,980**	**157,042**	**166,393**	**176,154**	**174,737**	**185,650**	**185,355**	**183,631**	**177,634**	**183,604**
World Total	**1,027,085**	**992,596**	**968,122**	**951,673**	**950,648**	**934,044**	**924,121**	**904,706**	**915,374**	**949,801**

[1] Preliminary.
[2] United States lignite coal production is from Energy Information Administration, Annual Energy Review 2001, table 7.2.
- - = Not applicable.
(s) = Value less than 500 short tons.
Notes: Sum of components may not equal total due to independent rounding.
No production is reprted for Central & South America. No production is reported for Middle East. No production is reported for Africa.
Sources: See sources at the end of this Section.

Table 5.5 World Coal Supply and Disposition, 2000

(Trillion Btu)

Region Country	Production	Imports [1]	Exports [1]	Apparent Consumption [2]
North America				
Canada	1,819	626	927	1,593
Mexico	213	70	(s)	270
United States [3]	22,623	407	1,556	22,657
Total	**24,655**	**1,102**	**2,483**	**24,520**
Central & South America				
Argentina	6	24	9	20
Brazil	78	457	0	529
Chile	10	125	1	131
Colombia	1,033	0	969	115
Peru	2	24	0	31
Venezuela	240	0	241	5
Other	0	28	0	28
Total	**1,370**	**658**	**1,221**	**858**
Western Europe				
Austria	14	121	(s)	147
Belgium	8	368	50	343
Bosnia and Herzegovina	130	0	0	130
Croatia	0	25	(s)	23
Denmark	0	162	3	168
Finland	0	143	0	146
France	90	523	22	568
Germany	2,374	758	7	3,236
Greece	355	34	2	390
Italy	(s)	521	4	495
Luxembourg	0	5	0	5
Macedonia, TFYR	66	4	(s)	73
Netherlands	0	563	245	311
Norway	18	41	16	45
Portugal	0	164	2	157
Slovenia	50	10	(s)	60
Spain	294	477	22	752
Sweden	0	92	1	91
Turkey	518	261	0	781
United Kingdom	767	616	30	1,464
Yugoslavia	305	3	0	308
Other	0	92	(s)	97
Total	**4,990**	**4,983**	**405**	**9,791**
Eastern Europe & Former U.S.S.R.				
Bulgaria	264	106	5	358
Czech Republic	847	44	190	799
Hungary	126	36	5	156
Poland	2,846	39	626	2,410
Romania	234	59	1	293
Slovakia	45	129	2	164
Belarus	0	16	(s)	15
Estonia	0	14	1	14
Kazakhstan	1,054	24	475	612
Kyrgyzstan	6	14	(s)	20
Latvia	0	2	0	2
Lithuania	0	4	0	4
Moldova	0	3	0	4
Russia	5,147	584	905	4,880
Tajikistan	(s)	2	0	2
Ukraine	1,751	168	77	1,843
Uzbekistan	38	(s)	(s)	37
Other	(s)	(s)	(s)	1
Total	**12,359**	**1,244**	**2,287**	**11,613**

See footnotes at end of table.

Table 5.5 World Coal Supply and Disposition, 2000 (Continued)

(Trillion Btu)

Region Country	Production	Imports [1]	Exports [1]	Apparent Consumption [2]
Middle East				
Iran	36	18	0	54
Israel	0	259	0	276
Other	0	7	0	7
Total	**36**	**284**	**0**	**337**
Africa				
Algeria	1	17	0	21
Botswana	25	1	0	25
Congo (Kinshasa)	2	4	0	6
Egypt	0	45	15	30
Kenya	0	2	0	2
Malawi	0	(s)	0	(s)
Mauritius	0	2	0	2
Morocco	1	107	0	109
Mozambique	(s)	(s)	0	1
Niger	4	0	0	4
Nigeria	2	(s)	0	2
South Africa	5,292	55	1,945	3,396
Swaziland	7	0	0	7
Tunisia	0	3	0	3
Zambia	5	0	(s)	5
Zimbabwe	118	2	6	114
Other	(s)	1	0	1
Total	**5,457**	**239**	**1,967**	**3,726**
Asia & Oceania				
Afghanistan	(s)	0	0	(s)
Australia	6,664	0	4,522	2,098
Bangladesh	0	14	0	14
Bhutan	1	1	1	1
Burma	9	0	0	9
China	24,333	47	1,598	23,606
Hong Kong	0	156	1	155
India	6,065	536	26	6,483
Indonesia	1,963	0	1,420	570
Japan	68	3,559	74	3,543
Korea, North	2,457	8	9	2,455
Korea, South	78	1,541	0	1,604
Malaysia	10	81	1	96
Mongolia	46	2	2	46
Nepal	(s)	10	0	11
New Caledonia	0	4	0	4
New Zealand	73	0	44	28
Pakistan	59	26	0	85
Philippines	27	183	0	210
Taiwan	2	1,326	0	1,309
Thailand	215	112	0	325
Vietnam	232	0	80	151
Other	(s)	1	0	1
Total	**42,302**	**7,608**	**7,779**	**42,805**
World Total	**91,168**	**16,117**	**16,142**	**93,649**

[1] Includes coke.

[2] Sum of production plus imports minus exports (from this Table) minus stock change.

[3] United States coal production and apparent coal consumption are from Energy Information Administration, Annual Energy Review 2001. Production is from table 1.2. Consumption is from table 1.3. It is the sum of data from the coal and coal coke net imports columns.

(s) = Value less than 0.5 trillion btu.

Note: Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of this Section.

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Section 6

Electricity

Table 6.1 World Net Conventional Thermal Electricity Generation, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	111.7	103.2	105.5	113.3	111.5	126.0	142.4	142.8	156.4	158.4
Mexico	88.7	93.1	110.5	104.2	110.4	124.8	133.4	134.7	147.2	156.3
United States	2,138.7	2,230.7	2,270.1	2,293.9	2,346.0	2,430.3	2,547.1	2,569.7	2,692.5	2,657.2
Other	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Total	**2,339.8**	**2,427.8**	**2,486.8**	**2,512.2**	**2,568.7**	**2,681.9**	**2,823.7**	**2,848.0**	**2,997.1**	**2,972.8**
Central & South America										
Argentina	27.6	28.1	25.5	31.0	36.8	34.0	37.5	48.6	50.5	50.8
Bahamas, The	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6
Bolivia	0.9	1.0	1.3	1.6	1.6	1.7	2.0	1.9	1.8	1.7
Brazil	9.1	8.8	9.1	10.6	13.1	14.7	15.6	21.9	20.8	26.6
Chile	3.3	3.8	5.4	7.1	10.4	12.7	17.6	22.4	20.1	19.6
Colombia	10.2	9.5	8.4	10.4	8.1	13.1	13.7	9.3	10.6	11.2
Costa Rica	0.6	0.5	0.8	0.8	0.4	0.2	0.4	0.1	0.1	0.1
Cuba	9.8	9.6	10.5	11.1	11.7	12.5	12.5	12.9	13.3	13.5
Dominican Republic	3.4	4.0	4.2	4.5	5.4	6.1	6.5	7.4	8.2	8.4
Ecuador	2.1	1.5	1.5	3.1	2.8	3.6	4.1	2.9	3.0	3.7
Guadeloupe	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.1	1.2	1.2
Guatemala	0.6	0.7	0.7	1.1	1.0	1.0	2.0	2.1	2.7	3.2
Jamaica	3.6	3.4	4.3	5.3	5.5	5.7	5.9	6.0	6.0	6.1
Martinique	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.2
Nicaragua	0.8	0.7	0.9	1.0	1.1	1.1	1.6	1.5	1.8	2.1
Panama	0.9	0.8	0.9	1.1	1.1	1.3	1.5	1.6	1.4	1.5
Peru	3.0	2.7	1.8	3.6	3.6	4.3	4.4	4.1	3.4	3.0
Puerto Rico	15.3	16.1	16.8	17.3	17.7	18.6	19.1	19.9	20.3	20.7
Trinidad and Tobago	3.7	3.6	3.8	4.0	4.3	4.7	4.8	5.0	5.2	5.3
Venezuela	19.0	20.6	18.7	20.7	20.4	19.6	21.6	18.8	21.0	27.7
Virgin Islands, U.S.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Other	5.3	5.4	5.7	6.7	7.5	8.3	9.2	9.1	9.0	9.2
Total	**122.7**	**124.4**	**124.2**	**145.1**	**156.8**	**167.7**	**184.7**	**200.5**	**204.1**	**219.5**
Western Europe										
Austria	13.9	12.5	14.3	15.3	16.6	16.8	16.0	15.9	15.5	17.2
Belgium	25.1	25.4	27.7	28.9	28.7	27.5	32.4	30.8	30.8	28.5
Denmark	27.5	30.2	35.9	32.5	48.1	38.5	34.6	32.0	28.1	29.3
Finland	17.3	20.4	26.3	23.6	30.0	26.2	22.1	23.4	22.5	27.8
France	47.2	32.3	31.4	35.8	40.3	36.2	50.7	46.3	46.8	42.7
Germany	330.4	324.1	325.3	328.0	337.5	328.9	338.6	326.1	334.9	336.7
Greece	32.8	33.6	35.4	35.4	35.6	36.9	39.7	41.8	46.2	47.0
Ireland	14.1	14.4	14.9	15.9	17.1	17.7	18.5	19.4	21.1	22.6
Italy	166.9	163.6	169.3	183.6	181.0	187.4	193.7	194.2	204.7	203.4
Malta	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.8	1.8	1.8
Netherlands	67.6	67.0	69.4	70.3	73.4	75.1	77.6	73.3	75.5	79.4
Portugal	22.7	20.3	18.5	22.3	17.5	18.7	23.3	32.2	28.4	28.6
Spain	76.3	69.7	71.8	80.3	70.8	90.5	91.1	111.8	116.2	112.3
Sweden	5.6	6.5	7.6	7.3	11.5	6.9	6.6	6.6	4.9	6.1
Switzerland	0.9	0.7	1.1	1.1	0.9	1.0	1.1	1.1	1.0	0.9
Turkey	38.2	37.3	44.7	47.4	50.9	59.3	64.3	76.6	88.1	92.4
United Kingdom	220.8	209.8	211.8	216.6	233.3	226.9	237.4	244.5	260.1	266.5
Bosnia and Herzegovina	2.9	0.9	0.7	0.7	2.1	3.9	4.8	4.7	5.0	5.3
Croatia	4.3	4.7	3.1	3.4	3.1	4.1	5.1	5.3	4.5	4.1
Macedonia, TFYR	4.9	4.4	4.8	5.0	5.4	5.5	5.6	5.1	5.3	5.4
Slovenia	4.4	4.2	4.1	4.3	4.0	4.5	4.7	4.3	4.5	4.8
Yugoslavia	23.6	22.0	22.0	24.4	25.0	26.5	23.4	18.8	18.7	19.9
Other	0.9	0.9	1.0	0.9	1.0	0.9	0.8	0.9	0.8	0.9
Total	**1,149.8**	**1,106.5**	**1,142.7**	**1,184.4**	**1,235.3**	**1,241.4**	**1,293.7**	**1,316.9**	**1,365.4**	**1,383.6**

See footnotes at end of table.

Table 6.1 World Net Conventional Thermal Electricity Generation, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2
Bulgaria	20.7	20.8	20.1	20.9	20.4	20.8	20.2	18.3	18.6	19.8
Former Czechoslovakia	51.2	--	--	--	--	--	--	--	--	--
Czech Republic	--	42.0	41.3	43.6	45.8	46.6	47.0	46.2	54.1	53.3
Slovakia	--	8.0	7.6	9.1	8.9	8.8	8.9	9.3	8.7	9.2
Hungary	16.5	17.8	18.1	18.6	19.5	19.9	21.7	21.5	19.7	20.7
Poland	121.4	122.5	123.7	127.0	130.9	130.6	130.2	129.6	132.6	132.4
Romania	39.9	40.1	39.6	40.0	41.6	32.2	27.5	25.6	29.8	31.8
Armenia	5.6	1.9	2.0	3.1	2.2	2.9	2.9	2.3	2.5	2.7
Azerbaijan	16.9	15.7	14.8	14.6	14.6	14.2	15.1	15.7	16.1	16.3
Belarus	35.3	31.3	29.5	23.4	22.3	24.5	22.0	24.8	24.5	24.3
Estonia	11.1	8.6	8.6	8.2	8.6	8.7	8.0	7.8	8.0	7.9
Georgia	4.7	2.9	2.0	1.5	1.1	1.1	1.6	1.5	1.4	1.4
Kazakhstan	71.3	65.6	53.8	54.8	48.6	42.8	40.4	38.9	41.4	44.2
Kyrgyzstan	2.5	2.1	1.1	1.2	1.4	1.6	1.6	1.0	1.2	1.0
Latvia	1.2	1.0	1.1	1.0	1.2	1.5	1.4	1.3	1.2	1.3
Lithuania	3.5	1.4	1.5	1.3	1.9	1.9	3.0	2.6	2.2	2.4
Moldova	10.3	9.3	7.5	5.4	5.4	4.6	4.2	3.8	3.1	3.1
Russia	679.6	627.9	540.4	546.0	547.8	533.2	530.1	528.8	552.6	544.6
Tajikistan	0.8	0.6	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3
Turkmenistan	12.4	11.9	9.9	9.2	9.5	8.9	8.8	8.3	9.3	10.2
Ukraine	160.5	134.9	114.4	106.5	88.9	83.2	76.8	80.4	77.7	80.1
Uzbekistan	42.0	39.3	38.2	38.8	36.6	37.9	37.7	37.2	38.5	39.2
Total	**1,307.6**	**1,205.6**	**1,075.4**	**1,074.5**	**1,057.4**	**1,026.2**	**1,009.5**	**1,005.2**	**1,043.7**	**1,046.4**
Middle East										
Bahrain	3.7	4.0	4.3	4.3	4.7	4.7	5.4	5.6	5.9	6.3
Cyprus	2.3	2.4	2.5	2.3	2.4	2.5	2.8	3.0	3.2	3.4
Iran	55.5	62.2	70.1	73.0	78.5	85.4	90.6	101.2	110.7	121.0
Iraq	23.1	24.2	25.8	26.7	26.9	27.2	28.0	27.4	31.1	35.4
Israel	23.2	24.4	26.6	28.5	30.5	33.0	35.7	36.8	40.4	42.2
Jordan	4.1	4.5	4.8	5.3	5.7	5.9	6.3	6.6	6.9	7.0
Kuwait	15.8	19.0	21.4	22.3	23.9	25.1	28.2	29.7	30.6	31.5
Lebanon	2.9	3.8	4.1	4.5	5.8	7.2	7.1	7.4	6.9	6.5
Oman	4.8	5.5	5.8	6.1	6.4	6.9	7.7	7.9	8.6	9.3
Qatar	4.8	5.2	5.5	5.6	6.2	6.5	7.6	8.4	8.8	9.3
Saudi Arabia	74.0	82.2	91.0	97.8	101.1	107.5	114.6	119.0	120.7	122.4
Syria	4.9	5.6	7.9	7.9	9.3	9.9	10.8	11.7	12.5	13.4
United Arab Emirates	16.4	16.5	17.7	23.5	25.0	26.8	31.4	34.9	36.3	37.7
Yemen	1.8	1.9	2.0	2.2	2.2	2.4	2.4	2.6	2.8	3.0
Total	**237.3**	**261.3**	**289.5**	**310.1**	**328.6**	**351.0**	**378.6**	**402.2**	**425.3**	**448.4**
Africa										
Algeria	17.0	17.9	18.5	17.9	19.0	19.7	21.2	22.8	23.5	24.6
Angola	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Botswana	1.1	1.0	1.0	1.0	0.8	0.9	0.7	0.6	0.5	0.4
Cote d'Ivoire (Ivory Coast)	0.6	1.0	1.2	1.2	1.4	2.0	2.5	2.9	2.9	2.8
Egypt	35.0	37.4	39.4	41.4	40.3	43.7	47.7	50.0	57.9	61.0
Libya	15.9	16.0	16.7	16.9	17.2	17.8	18.3	18.8	19.5	20.2
Mauritius	0.8	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.2	1.2
Morocco	8.2	8.9	9.5	11.5	10.4	11.1	11.6	12.3	12.5	12.7
Nigeria	8.2	8.4	9.4	8.4	8.9	9.2	9.0	9.0	9.4	9.7
Reunion	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Senegal	1.0	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5
South Africa	147.1	155.9	160.0	164.2	173.9	181.1	176.5	175.6	181.8	182.9
Tunisia	5.7	5.9	6.3	6.8	7.4	7.9	8.5	9.3	9.9	10.4
Zimbabwe	4.8	5.6	4.7	5.6	4.9	4.9	4.4	3.9	3.5	3.2
Other	4.4	4.9	5.0	5.6	5.7	6.3	7.1	8.2	8.8	9.6
Total	**250.9**	**265.6**	**274.7**	**283.6**	**293.0**	**307.9**	**311.0**	**317.0**	**333.7**	**341.4**

See footnotes at end of table.

Table 6.1 World Net Conventional Thermal Electricity Generation, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
American Samoa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Australia	135.2	137.9	141.8	147.7	151.8	156.0	169.0	175.1	182.0	180.0
Bangladesh	8.2	8.7	9.2	9.8	10.1	10.5	11.3	12.8	14.0	14.4
Bhutan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Brunei	1.3	1.5	1.6	1.8	2.0	2.3	2.4	2.3	2.4	2.5
Burma	1.4	1.6	1.9	2.3	2.2	2.6	3.0	3.4	3.0	2.7
Cambodia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	585.3	644.0	701.2	756.1	805.3	863.4	885.2	957.5	1,050.0	1,139.0
Cook Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Fiji	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
French Polynesia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Guam	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Hong Kong	32.8	33.8	25.1	26.2	26.7	27.2	29.5	27.7	29.5	30.5
India	240.7	263.6	279.3	317.2	336.1	355.8	376.8	410.8	422.6	435.8
Indonesia	38.7	34.5	40.9	46.6	52.9	64.7	61.7	67.9	76.0	83.3
Japan	545.8	517.2	580.4	568.0	577.2	577.7	571.3	611.4	615.9	621.7
Kiribati	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Korea, North	13.2	13.2	12.7	12.2	11.8	11.3	10.7	10.8	9.7	8.7
Korea, South	65.4	75.5	113.3	123.2	138.4	154.3	136.1	148.2	165.7	181.4
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	23.4	28.1	30.6	36.9	43.4	50.7	52.5	54.2	58.5	61.2
Macau	0.9	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4
Maldives	(s)	(s)	(s)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Mongolia	2.8	2.4	2.6	2.5	2.5	2.5	2.5	2.7	2.8	2.2
Nauru	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nepal	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
New Caledonia	0.8	0.8	0.8	1.2	1.0	1.1	1.2	1.2	1.2	1.2
New Zealand	8.5	7.8	6.8	5.8	8.2	10.2	10.2	11.3	9.5	11.8
Niue	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Pakistan	24.8	25.5	28.9	28.4	31.3	35.6	37.3	40.1	46.0	46.1
Papua New Guinea	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.0	0.9	0.8
Philippines	13.2	13.2	17.1	19.9	21.8	25.0	25.9	21.5	24.3	25.2
Samoa	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.1	0.1	0.1
Singapore	16.6	17.8	19.6	20.9	22.1	24.6	26.0	27.0	28.7	30.5
Solomon Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Sri Lanka	0.3	0.2	0.3	0.3	1.2	1.6	1.7	1.9	3.4	3.3
Taiwan	56.1	65.9	72.0	71.0	75.1	83.1	91.7	93.9	104.1	107.9
Thailand	49.7	56.1	62.7	68.7	75.1	78.9	76.8	81.5	84.1	89.1
Tonga	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
U.S. Pacific Islands	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Vanuatu	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Vietnam	2.3	2.6	2.9	3.8	4.6	7.0	9.9	9.2	11.3	13.0
Total	**1,870.6**	**1,956.1**	**2,156.0**	**2,275.0**	**2,405.2**	**2,550.6**	**2,597.5**	**2,777.0**	**2,949.2**	**3,096.0**
World Total	**7,278.7**	**7,347.2**	**7,549.4**	**7,784.9**	**8,045.2**	**8,326.7**	**8,598.6**	**8,866.8**	**9,318.4**	**9,508.1**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Thermal generation consist of electricity generated from coal, oil, and gas.
Generation data consist of both utility and nonutility sources.
Sources: See sources at the end of this Section.

Table 6.2 World Total Net Electricity Consumption, 1992 - 2001

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	445.8	455.1	458.1	467.4	478.2	482.4	479.1	492.7	509.9	504.4
Mexico	114.1	119.2	128.9	133.7	143.7	156.0	161.3	170.8	182.4	186.7
United States	2,885.6	2,989.0	3,068.7	3,157.3	3,247.0	3,294.0	3,425.1	3,494.6	3,604.8	3,602.1
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9
Total	**3,446.2**	**3,564.0**	**3,656.4**	**3,759.1**	**3,869.6**	**3,933.2**	**4,066.2**	**4,158.9**	**4,297.9**	**4,294.0**
Central & South America										
Argentina	57.8	62.8	57.0	62.5	65.4	69.6	74.1	77.0	81.5	92.1
Bolivia	2.2	2.3	2.6	2.8	2.9	2.9	3.3	3.5	3.6	3.6
Brazil	246.3	259.4	271.7	288.2	307.2	322.7	334.3	344.0	358.7	335.9
Chile	18.9	19.8	21.2	25.4	27.8	30.0	31.8	34.3	38.2	40.1
Colombia	30.8	35.1	38.2	39.9	40.8	41.9	41.6	40.2	40.0	39.8
Costa Rica	3.8	4.1	4.7	4.3	4.5	5.1	4.8	5.4	5.7	6.1
Cuba	10.1	9.6	10.5	10.9	11.6	12.4	12.4	12.7	13.2	13.4
Dominican Republic	3.7	4.8	4.5	4.8	5.8	6.4	6.8	8.0	8.4	8.5
Ecuador	6.5	6.8	7.5	7.6	8.5	9.4	9.9	9.4	9.6	10.0
El Salvador	1.9	2.3	2.7	3.0	3.1	3.3	3.5	3.7	4.2	3.8
Guatemala	2.7	2.8	3.0	3.1	3.3	3.6	3.9	4.4	4.7	5.6
Honduras	2.2	2.3	2.0	2.1	2.8	3.0	3.1	3.0	3.6	3.8
Jamaica	3.5	3.3	4.2	5.1	5.3	5.5	5.7	5.8	5.8	5.8
Nicaragua	1.4	1.4	1.5	1.6	1.7	1.9	1.9	2.0	2.1	2.4
Panama	2.8	3.0	3.1	3.4	3.9	3.9	4.2	4.1	4.4	3.7
Peru	11.9	13.5	13.5	16.2	15.7	16.3	16.9	17.3	18.2	19.1
Puerto Rico	14.4	15.0	15.7	16.2	16.6	17.4	17.9	18.7	19.1	19.4
Suriname	1.6	1.6	1.6	1.7	1.7	1.9	1.9	1.8	1.8	1.8
Trinidad and Tobago	3.5	3.3	3.6	3.8	4.0	4.4	4.5	4.6	4.8	4.9
Uruguay	4.8	5.1	5.4	5.8	6.0	6.4	7.1	6.9	6.5	6.2
Venezuela	60.8	62.5	64.3	66.5	68.4	70.9	73.4	73.3	77.4	81.5
Virgin Islands, U.S.	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0
Other	6.3	7.0	7.2	7.9	8.0	8.8	9.8	10.2	10.5	11.4
Total	**498.6**	**528.9**	**546.4**	**583.7**	**615.9**	**648.5**	**673.6**	**691.4**	**722.8**	**719.9**
Western Europe										
Austria	46.6	45.8	46.4	47.5	49.3	49.5	50.6	51.8	53.3	54.8
Belgium	63.0	63.9	66.9	68.8	70.3	71.9	73.7	74.2	77.1	78.2
Denmark	30.6	30.9	30.3	31.3	31.5	31.5	31.7	31.7	32.4	32.4
Finland	59.8	61.8	64.7	63.7	65.1	68.2	71.6	72.7	74.0	76.2
France	353.3	354.5	357.5	364.8	382.1	376.3	392.2	398.4	405.9	415.3
Germany	463.4	460.1	463.5	472.9	478.7	479.2	484.7	484.3	501.7	506.8
Greece	33.2	34.3	35.8	37.1	38.6	40.3	42.2	43.6	46.9	48.8
Iceland	4.2	4.3	4.4	4.6	4.7	5.1	5.8	6.6	7.0	7.3
Ireland	13.8	14.2	14.8	15.4	16.4	17.2	18.4	19.3	20.8	21.6
Italy	232.8	233.5	239.7	246.8	248.7	256.3	264.4	270.8	282.5	289.1
Luxembourg	4.5	4.6	5.0	5.4	5.3	5.5	5.7	5.9	6.1	6.1
Netherlands	76.3	77.7	80.3	82.3	85.0	88.5	91.6	94.3	97.4	99.4
Norway	99.1	102.4	103.1	105.7	105.1	105.8	110.5	110.7	112.0	115.3
Portugal	27.5	27.7	28.8	30.3	31.9	33.4	34.9	37.0	39.4	41.5
Spain	139.0	138.8	144.3	150.9	155.1	164.6	174.7	187.7	200.0	210.4
Sweden	129.5	130.4	128.5	131.8	131.3	132.0	131.9	129.3	136.1	134.9
Switzerland	47.9	47.5	47.6	49.1	49.3	48.8	49.8	51.0	51.2	53.4
Turkey	60.0	65.7	69.4	76.4	84.7	94.4	102.0	105.5	114.0	112.6
United Kingdom	293.3	295.3	297.2	302.2	319.0	317.4	330.0	335.9	341.5	346.1
Bosnia and Herzegovina	6.0	3.6	4.1	4.2	6.9	8.1	8.9	9.7	8.6	8.1
Croatia	10.9	10.7	11.1	11.5	12.1	12.7	13.8	12.7	14.4	14.3
Macedonia, TFYR	5.6	5.2	5.3	5.4	5.8	5.9	6.2	6.0	6.1	6.1
Slovenia	8.9	8.8	9.5	9.4	9.5	9.8	10.4	10.3	10.7	13.8
Yugoslavia	33.6	29.7	30.7	33.0	33.7	35.8	33.6	31.6	32.4	32.4
Other	1.6	1.5	1.6	1.7	1.7	1.7	1.7	2.0	1.9	1.9
Total	**2,244.3**	**2,253.0**	**2,290.5**	**2,352.2**	**2,421.6**	**2,460.0**	**2,540.9**	**2,583.0**	**2,673.5**	**2,726.8**

See footnotes at end of table.

Table 6.2 World Total Net Electricity Consumption, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	2.6	3.1	3.6	4.1	5.5	5.4	5.1	5.4	5.4	5.9
Bulgaria	33.9	33.6	33.5	36.7	37.7	33.8	33.1	31.8	31.7	32.5
Former Czechoslovakia	70.9	--	--	--	--	--	--	--	--	--
Czech Republic	--	49.6	51.2	54.0	56.1	55.8	54.8	53.7	54.6	55.6
Slovakia	--	23.9	24.3	24.8	26.5	26.0	25.7	24.6	21.9	24.4
Hungary	31.2	31.4	31.5	32.3	33.0	33.2	33.5	33.8	34.5	35.1
Poland	112.3	115.1	116.2	119.3	122.6	123.4	120.2	118.0	119.4	118.8
Romania	52.1	51.0	49.6	52.9	54.8	51.0	48.0	44.4	45.5	46.1
Armenia	8.3	5.7	5.1	4.7	5.4	5.3	5.4	5.6	5.3	5.8
Azerbaijan	16.7	16.9	15.7	15.4	15.2	15.8	16.1	16.7	17.0	16.6
Belarus	39.3	35.2	31.4	29.4	28.9	30.6	28.1	30.3	30.2	26.7
Estonia	7.1	6.6	6.9	6.8	7.1	7.1	7.1	6.6	6.6	6.2
Georgia	11.3	9.9	7.1	7.0	6.7	6.7	7.3	7.4	7.0	7.6
Kazakhstan	86.2	83.4	64.9	64.3	57.2	49.5	47.2	44.8	48.5	48.4
Kyrgyzstan	8.8	9.3	9.4	12.6	10.6	9.9	10.0	10.0	10.9	10.5
Latvia	7.5	6.1	5.9	5.9	6.0	5.9	5.8	5.5	5.6	6.0
Lithuania	11.2	10.3	9.8	10.1	8.5	9.1	9.6	9.7	9.3	8.7
Moldova	9.8	6.9	7.8	7.2	6.9	6.6	6.2	5.3	4.9	3.2
Russia	881.5	832.2	732.9	740.5	730.5	720.6	714.6	730.8	762.8	773.0
Tajikistan	16.3	15.1	14.8	14.3	14.1	13.9	13.9	14.2	14.5	14.5
Turkmenistan	8.6	7.9	6.6	6.5	6.0	6.6	5.2	6.3	7.6	8.5
Ukraine	216.7	200.6	178.1	168.8	159.5	156.7	151.2	147.2	145.1	152.4
Uzbekistan	44.2	40.4	43.7	40.5	44.0	41.5	41.6	41.9	43.0	47.1
Total	**1,676.4**	**1,594.1**	**1,450.0**	**1,457.9**	**1,442.8**	**1,414.3**	**1,389.8**	**1,394.0**	**1,431.4**	**1,453.7**
Middle East										
Bahrain	3.4	3.7	4.0	4.0	4.4	4.4	5.0	5.2	5.5	5.8
Cyprus	2.1	2.3	2.3	2.2	2.3	2.4	2.6	2.7	2.9	3.2
Iran	60.4	66.9	72.0	74.6	79.8	85.8	90.8	98.7	106.3	115.9
Iraq	22.1	23.0	24.5	25.4	25.5	25.9	26.6	26.0	29.5	33.5
Israel	21.2	22.4	24.4	25.7	27.4	29.6	32.1	33.0	36.1	37.8
Jordan	4.0	4.3	4.6	5.5	5.6	5.9	6.3	6.8	6.5	6.9
Kuwait	14.7	17.6	19.9	20.7	22.3	23.4	26.2	27.6	28.4	29.3
Lebanon	3.3	4.2	4.7	5.1	6.8	8.1	8.0	8.4	8.1	7.4
Oman	4.5	5.1	5.4	5.6	5.9	6.4	7.2	7.4	8.0	8.6
Qatar	4.5	4.8	5.1	5.2	5.7	6.0	7.1	7.8	8.2	8.6
Saudi Arabia	68.8	76.4	84.6	91.0	94.0	100.0	106.6	110.7	112.2	113.8
Syria	11.4	11.4	13.7	13.7	15.1	16.0	17.4	18.2	20.2	21.6
United Arab Emirates	15.3	15.4	16.5	21.8	23.2	24.9	29.2	32.5	33.8	35.1
Yemen	1.7	1.8	1.9	2.1	2.0	2.2	2.2	2.4	2.6	2.8
Total	**237.5**	**259.5**	**283.7**	**302.7**	**320.2**	**341.0**	**367.2**	**387.5**	**408.4**	**430.3**
Africa										
Algeria	15.1	15.8	16.3	16.5	17.6	18.4	19.9	21.3	21.8	22.9
Angola	1.2	1.2	1.2	1.3	1.3	1.2	1.4	1.3	1.3	1.3
Cameroon	2.5	2.5	2.5	2.6	2.7	2.9	2.9	3.2	3.3	3.4
Congo (Kinshasa)	5.4	4.1	4.1	4.9	5.2	5.2	4.7	4.9	3.1	3.8
Cote d'Ivoire (Ivory Coast)	1.5	2.0	2.0	2.7	2.9	3.1	3.0	3.1	2.7	3.0
Egypt	40.5	44.4	46.6	48.4	48.1	51.6	55.6	60.6	66.6	70.0
Ghana	5.4	5.4	5.3	5.3	5.7	6.0	4.7	5.4	6.8	8.8
Kenya	3.1	3.4	3.5	3.8	3.9	4.1	4.2	4.0	3.7	4.0
Libya	14.8	14.9	15.6	15.7	16.0	16.6	17.0	17.5	18.1	18.8
Morocco	9.5	10.0	10.8	11.5	11.7	12.4	13.2	13.2	14.3	14.6
Nigeria	13.1	12.8	13.7	12.9	13.4	13.7	13.5	13.5	14.0	14.6
South Africa	144.6	149.4	156.2	160.9	168.3	175.6	175.8	178.1	183.8	181.2
Tunisia	5.4	5.5	5.9	6.5	7.1	7.6	7.9	8.7	9.2	9.7
Zambia	5.7	5.7	5.7	5.8	5.3	6.0	5.9	5.3	5.0	5.5
Zimbabwe	8.6	8.8	7.6	7.9	8.8	9.9	7.4	10.6	10.4	9.8
Other	18.0	19.4	19.7	20.3	21.7	22.6	21.9	22.9	23.7	24.6
Total	**294.4**	**305.2**	**316.6**	**327.0**	**339.9**	**356.8**	**359.2**	**373.5**	**387.8**	**396.0**

See footnotes at end of table.

Table 6.2 World Total Net Electricity Consumption, 1992 - 2001 (Continued)

(Billion Kilowatthours)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.8	0.7	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.5
American Samoa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Australia	140.5	144.2	147.5	152.6	156.5	161.4	172.7	179.2	186.3	184.4
Bangladesh	8.4	8.7	9.3	9.7	10.1	10.4	11.3	12.7	14.0	14.3
Bhutan	0.1	0.1	0.1	0.1	0.3	0.4	0.2	0.4	0.3	0.4
Brunei	1.2	1.4	1.5	1.7	1.9	2.1	2.2	2.1	2.2	2.3
Burma	2.7	3.0	3.2	3.6	3.5	4.0	3.7	4.1	4.6	5.7
Cambodia	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
China	670.6	744.1	816.5	883.4	927.2	987.5	1,019.5	1,083.7	1,188.8	1,312.2
Fiji	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
French Polynesia	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Guam	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Hong Kong	25.6	27.3	25.4	28.8	31.9	32.6	33.9	34.1	36.4	37.1
India	295.1	316.9	341.9	369.7	385.4	411.7	439.1	469.4	477.5	497.2
Indonesia	46.0	41.2	45.9	52.2	58.7	67.2	68.6	74.1	81.4	89.1
Japan	797.9	806.4	857.9	881.4	899.0	927.3	926.7	945.3	943.9	964.2
Korea, North	34.3	34.3	33.4	32.5	31.6	30.7	29.2	29.5	28.6	27.9
Korea, South	113.6	125.4	159.4	176.6	196.6	214.5	210.2	233.1	254.4	270.3
Laos	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.5	0.6	0.8
Malaysia	25.8	30.6	34.5	40.1	45.1	50.8	53.2	57.3	60.8	63.5
Macau	1.0	1.1	1.2	1.5	1.4	1.4	1.4	1.4	1.4	1.4
Mongolia	2.7	2.3	2.5	2.7	2.7	2.7	2.6	2.6	2.7	2.2
Nepal	0.9	0.9	1.0	1.2	1.2	1.1	1.3	1.6	1.7	1.8
New Caledonia	1.0	1.0	1.1	1.5	1.4	1.5	1.5	1.4	1.5	1.5
New Zealand	29.4	31.2	32.5	32.8	34.1	34.2	35.1	35.8	35.1	34.9
Pakistan	40.7	43.5	45.3	47.9	50.8	52.7	55.4	55.1	59.0	62.3
Papua New Guinea	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.5	1.4
Philippines	21.2	21.9	27.0	29.6	32.5	35.2	36.7	36.6	40.1	42.0
Samoa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Singapore	15.5	16.5	18.1	19.4	20.5	22.9	24.2	25.1	26.7	28.3
Sri Lanka	2.9	3.7	4.0	4.4	4.1	4.7	5.2	5.6	6.1	5.9
Taiwan	90.2	98.3	106.2	105.3	111.6	118.0	127.4	129.9	139.3	140.5
Thailand	50.7	56.1	63.0	70.9	77.4	81.5	77.6	80.9	85.2	90.9
U.S. Pacific Islands	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Vietnam	8.8	9.7	11.2	13.3	15.4	17.3	19.5	21.2	23.9	27.7
Other	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Total	**2,431.4**	**2,574.4**	**2,794.3**	**2,967.8**	**3,105.5**	**3,278.3**	**3,363.1**	**3,527.5**	**3,706.9**	**3,913.2**
World Total	**10,828.8**	**11,079.0**	**11,338.0**	**11,750.5**	**12,115.5**	**12,432.0**	**12,760.0**	**13,115.8**	**13,628.6**	**13,934.1**

[1] Preliminary.
- -= Not applicable.
(s) = Value less than 50 million kilowatthours.
Notes: Sum of components may not equal total due to independent rounding.
Consumption equals generation plus imports minus exports minus distribution losses.
Sources: See sources at the end of this Section.

Table 6.3 World Net Electricity Generation by Type, 2000

(Billion Kilowatthours)

Region Country	Thermal [1]	Hydro	Nuclear	Geothermal and Other [2]	Total
North America					
Canada	156.4	354.7	68.7	7.2	587.1
Mexico	147.2	32.8	7.8	6.1	193.9
United States	2,692.5	270.0	753.9	85.7	3,802.1
Other	0.9	0.0	0.0	0.0	0.9
Total	**2,997.1**	**657.6**	**830.4**	**99.0**	**4,584.0**
Central & South America					
Argentina	50.5	28.6	6.0	0.2	85.2
Bolivia	1.8	2.0	0.0	0.1	3.8
Brazil	20.8	301.7	4.9	12.0	339.5
Chile	20.1	18.9	0.0	0.8	39.8
Colombia	10.6	31.8	0.0	0.5	42.9
Costa Rica	0.1	5.6	0.0	0.9	6.6
Cuba	13.3	0.1	0.0	0.7	14.1
Dominican Republic	8.2	0.8	0.0	(s)	9.0
Ecuador	3.0	7.3	0.0	0.0	10.3
El Salvador	1.8	1.2	0.0	0.8	3.7
Guadeloupe	1.2	0.0	0.0	0.0	1.2
Guatemala	2.7	2.3	0.0	0.8	5.8
Honduras	1.3	2.2	0.0	0.0	3.5
Jamaica	6.0	0.1	0.0	0.1	6.2
Nicaragua	1.8	0.2	0.0	0.2	2.2
Panama	1.4	3.1	0.0	0.1	4.6
Paraguay	(s)	52.9	0.0	(s)	53.0
Peru	3.4	16.0	0.0	0.2	19.5
Puerto Rico	20.3	0.2	0.0	0.0	20.5
Suriname	0.5	1.5	0.0	0.0	2.0
Trinidad and Tobago	5.2	0.0	0.0	(s)	5.2
Uruguay	0.5	6.0	0.0	(s)	6.5
Venezuela	21.0	62.2	0.0	0.0	83.2
Virgin Islands, U.S.	1.0	0.0	0.0	0.0	1.0
Other	7.6	0.4	0.0	0.0	8.0
Total	**204.1**	**545.0**	**10.9**	**17.4**	**777.4**
Western Europe					
Austria	15.5	41.6	0.0	1.7	58.8
Belgium	30.8	0.5	45.7	1.2	78.2
Bosnia and Herzegovina	5.0	5.0	0.0	0.0	10.1
Croatia	4.5	6.7	0.0	(s)	11.2
Denmark	28.1	(s)	0.0	6.0	34.1
Finland	22.5	14.5	21.3	8.5	66.8
France	46.8	66.2	394.4	3.7	511.1
Germany	334.9	21.5	161.2	18.6	536.2
Greece	46.2	3.7	0.0	0.6	50.4
Iceland	(s)	6.3	0.0	1.3	7.6
Ireland	21.1	0.8	0.0	0.3	22.3
Italy	204.7	43.8	0.0	7.6	256.0
Macedonia, TFYR	5.3	1.2	0.0	0.0	6.5
Malta	1.8	0.0	0.0	0.0	1.8
Netherlands	75.5	0.1	3.7	5.0	84.3
Norway	0.4	140.2	0.0	0.4	140.9
Portugal	28.4	11.2	0.0	1.7	41.4
Slovenia	4.5	3.8	4.5	0.1	12.9
Spain	116.2	28.1	58.9	7.1	210.3
Sweden	4.9	78.2	54.1	4.2	141.4
Switzerland	1.0	36.5	23.7	1.5	62.7
Turkey	88.1	30.6	0.0	0.3	119.0
United Kingdom	260.1	5.1	81.7	5.0	351.9
Yugoslavia	18.7	11.9	0.0	0.0	30.6
Other	0.4	0.2	0.0	0.1	0.7
Total	**1,365.4**	**557.5**	**849.4**	**74.8**	**2,847.1**

See footnotes at end of table.

Table 6.3 World Net Electricity Generation by Type, 2000 (Continued)

(Billion Kilowatthours)

Region Country	Thermal [1]	Hydro	Nuclear	Geothermal and Other [2]	Total
Eastern Europe & Former U.S.S.R.					
Albania	0.1	4.5	0.0	0.0	4.7
Bulgaria	18.6	3.1	17.3	(s)	39.0
Czech Republic	54.1	1.7	12.9	0.7	69.4
Hungary	19.7	0.2	13.5	0.1	33.4
Poland	132.6	2.1	0.0	0.5	135.2
Romania	29.8	14.6	5.2	0.0	49.6
Slovakia	8.7	4.7	13.1	0.0	26.4
Armenia	2.5	1.8	1.8	0.0	6.2
Azerbaijan	16.1	1.5	0.0	0.0	17.7
Belarus	24.5	(s)	0.0	0.1	24.6
Estonia	8.0	(s)	0.0	(s)	8.0
Georgia	1.4	5.8	0.0	0.0	7.2
Kazakhstan	41.4	7.5	0.0	0.0	48.9
Kyrgyzstan	1.2	13.5	0.0	0.0	14.7
Latvia	1.2	2.8	0.0	0.0	4.0
Lithuania	2.2	0.6	8.4	0.0	11.3
Moldova	3.1	0.3	0.0	0.0	3.4
Russia	552.6	157.8	122.5	2.5	835.4
Tajikistan	0.3	13.7	0.0	0.0	14.0
Turkmenistan	9.3	(s)	0.0	0.0	9.3
Ukraine	77.7	11.3	71.1	0.0	160.1
Uzbekistan	38.5	5.8	0.0	0.0	44.3
Total	**1,043.7**	**253.5**	**265.7**	**3.9**	**1,566.9**
Middle East					
Bahrain	5.9	0.0	0.0	0.0	5.9
Cyprus	3.2	0.0	0.0	0.0	3.2
Iran	110.7	3.6	0.0	0.0	114.3
Iraq	31.1	0.6	0.0	0.0	31.7
Israel	40.4	(s)	0.0	0.0	40.4
Jordan	6.9	(s)	0.0	0.0	6.9
Kuwait	30.6	0.0	0.0	0.0	30.6
Lebanon	6.9	0.3	0.0	0.0	7.2
Oman	8.6	0.0	0.0	0.0	8.6
Qatar	8.8	0.0	0.0	0.0	8.8
Saudi Arabia	120.7	0.0	0.0	0.0	120.7
Syria	12.5	9.2	0.0	0.0	21.7
United Arab Emirates	36.3	0.0	0.0	0.0	36.3
Yemen	2.8	0.0	0.0	0.0	2.8
Total	**425.3**	**13.8**	**0.0**	**0.0**	**439.1**
Africa					
Algeria	23.5	0.1	0.0	0.0	23.5
Angola	0.5	0.9	0.0	0.0	1.4
Botswana	0.5	0.0	0.0	0.0	0.5
Cameroon	0.1	3.4	0.0	0.0	3.5
Congo (Kinshasa)	0.1	5.4	0.0	0.0	5.5
Cote d'Ivoire (Ivory Coast)	2.9	1.7	0.0	0.0	4.6
Egypt	57.9	13.8	0.0	0.0	71.7
Ethiopia	(s)	1.6	0.0	(s)	1.7
Ghana	0.6	6.5	0.0	0.0	7.1
Kenya	2.0	1.3	0.0	0.4	3.7
Libya	19.5	0.0	0.0	0.0	19.5
Morocco	12.5	0.7	0.0	0.0	13.2
Nigeria	9.4	5.7	0.0	0.0	15.1
Reunion	0.6	0.5	0.0	0.0	1.1
South Africa	181.8	1.3	13.0	0.0	196.2
Sudan	1.2	1.2	0.0	0.0	2.4
Tunisia	9.9	0.1	0.0	0.0	9.9
Zambia	(s)	7.7	0.0	0.0	7.7
Zimbabwe	3.5	3.2	0.0	0.0	6.7
Other	7.3	14.6	0.0	0.0	21.9
Total	**333.7**	**69.8**	**13.0**	**0.4**	**416.9**

See footnotes at end of table.

Table 6.3 World Net Electricity Generation by Type, 2000 (Continued)

(Billion Kilowatthours)

Region Country	Thermal [1]	Hydro	Nuclear	Geothermal and Other [2]	Total
Asia & Oceania					
Afghanistan	0.1	0.2	0.0	0.0	0.4
American Samoa	0.1	0.0	0.0	0.0	0.1
Australia	182.0	16.6	0.0	1.7	200.3
Bangladesh	14.0	1.0	0.0	0.0	15.0
Bhutan	(s)	1.9	0.0	0.0	1.9
Brunei	2.4	0.0	0.0	0.0	2.4
Burma	3.0	1.9	0.0	0.0	4.9
Cambodia	0.1	0.1	0.0	0.0	0.1
China	1,050.0	220.2	16.0	1.6	1,287.7
Cook Islands	(s)	0.0	0.0	0.0	(s)
Fiji	0.1	0.4	0.0	0.0	0.5
French Polynesia	0.3	0.2	0.0	0.0	0.4
Guam	0.8	0.0	0.0	0.0	0.8
Hong Kong	29.5	0.0	0.0	0.0	29.5
India	422.6	73.7	14.1	1.6	512.0
Indonesia	76.0	9.0	0.0	2.5	87.6
Japan	615.9	86.4	293.8	19.0	1,015.0
Kiribati	(s)	0.0	0.0	0.0	(s)
Korea, North	9.7	21.1	0.0	0.0	30.8
Korea, South	165.7	4.0	103.5	0.5	273.6
Laos	(s)	1.0	0.0	0.0	1.0
Macau	1.4	0.0	0.0	0.0	1.4
Malaysia	58.5	6.9	0.0	0.0	65.4
Maldives	0.1	0.0	0.0	0.0	0.1
Mongolia	2.8	0.0	0.0	0.0	2.8
Nauru	(s)	0.0	0.0	0.0	(s)
Nepal	0.1	1.6	0.0	0.0	1.7
New Caledonia	1.2	0.4	0.0	0.0	1.6
New Zealand	9.5	24.4	0.0	3.9	37.8
Niue	(s)	0.0	0.0	0.0	(s)
Pakistan	46.0	17.0	0.4	0.0	63.4
Papua New Guinea	0.9	0.8	0.0	0.0	1.7
Philippines	24.3	7.7	0.0	11.0	43.1
Samoa	0.1	(s)	0.0	0.0	0.1
Singapore	28.7	0.0	0.0	0.0	28.7
Solomon Islands	(s)	0.0	0.0	0.0	(s)
Sri Lanka	3.4	3.2	0.0	0.0	6.6
Taiwan	104.1	8.7	37.0	0.0	149.8
Thailand	84.1	6.0	0.0	1.4	91.5
Tonga	(s)	0.0	0.0	0.0	(s)
U.S. Pacific Islands	0.2	(s)	0.0	0.0	0.2
Vanuatu	(s)	0.0	0.0	0.0	(s)
Vietnam	11.3	14.4	0.0	0.0	25.7
Total	**2,949.2**	**528.7**	**464.7**	**43.1**	**3,985.7**
World Total	**9,318.4**	**2,625.8**	**2,434.2**	**238.7**	**14,617.0**

[1] Thermal generation consists of electricity generated from coal, oil, and gas.

[2] Geothermal and Other consists of geothermal, solar, wind, and wood and waste generation.

(s)=Value less than 50 million kilowatthours.

Notes: Generation data consist of both utility and nonutility sources. Sum of components may not equal total due to independent rounding.

Sources: See sources at the end of this Section.

Table 6.4 World Electricity Installed Capacity by Type, January 1, 2001

(Million Kilowatts)

Region Country	Thermal [1]	Hydro	Nuclear	Geothermal and Other [2]	Total
North America					
Canada	33	67	11	(s)	111
Mexico	29	10	1	1	41
United States	600	99	98	16	813
Other	(s)	0	0	0	(s)
Total	**662**	**176**	**110**	**17**	**965**
Central & South America					
Argentina	15	10	1	0	26
Brazil	7	62	2	3	73
Chile	6	4	0	0	10
Colombia	5	8	0	0	13
Cuba	4	(s)	0	0	4
Paraguay	(s)	7	0	0	7
Peru	3	3	0	0	6
Puerto Rico	5	(s)	0	0	5
Venezuela	8	13	0	0	21
Other	15	8	0	(s)	23
Total	**68**	**115**	**3**	**3**	**189**
Western Europe					
Austria	6	8	0	(s)	14
Belgium	9	(s)	6	(s)	14
Croatia	2	2	0	0	4
Denmark	10	(s)	0	2	13
Finland	11	3	3	(s)	16
France	27	21	63	(s)	111
Germany	81	4	22	6	114
Greece	8	2	0	(s)	10
Ireland	4	(s)	0	(s)	4
Italy	54	13	0	1	69
Netherlands	20	(s)	(s)	1	21
Norway	(s)	28	0	(s)	28
Portugal	6	4	0	(s)	10
Spain	25	13	8	2	48
Sweden	7	16	9	(s)	33
Switzerland	1	12	3	(s)	16
Turkey	16	11	0	(s)	27
United Kingdom	62	1	12	(s)	76
Yugoslavia	7	3	0	0	10
Other	5	4	1	(s)	10
Total	**360**	**147**	**128**	**14**	**648**
Eastern Europe & Former U.S.S.R.					
Bulgaria	6	2	4	0	12
Czech Republic	11	1	3	(s)	15
Hungary	6	(s)	2	0	8
Poland	28	2	0	(s)	31
Romania	16	6	1	0	23
Slovakia	2	2	3	0	7
Armenia	1	1	(s)	0	3
Azerbaijan	4	1	0	0	5
Belarus	7	(s)	0	0	7
Estonia	3	(s)	0	0	3
Georgia	2	3	0	0	4
Kazakhstan	15	2	0	0	17
Kyrgyzstan	1	3	0	0	4
Lithuania	3	(s)	3	0	6
Russia	140	43	21	(s)	204
Tajikistan	(s)	4	0	0	4
Turkmenistan	4	(s)	0	0	4
Ukraine	36	5	13	0	54
Uzbekistan	10	2	0	0	12
Other	2	3	0	0	5
Total	**299**	**80**	**49**	**(s)**	**429**

See footnotes at end of table.

Table 6.4 World Electricity Installed Capacity by Type, January 1, 2001 (Continued)

(Million Kilowatts)

Region Country	Thermal [1]	Hydro	Nuclear	Geothermal and Other [2]	Total
Middle East					
Bahrain	1	0	0	0	1
Cyprus	1	0	0	0	1
Iran	29	2	0	0	31
Iraq	9	1	0	0	10
Israel	9	(s)	0	0	9
Jordan	1	(s)	0	0	1
Kuwait	8	0	0	0	8
Lebanon	1	(s)	0	0	1
Oman	2	0	0	0	2
Qatar	1	0	0	0	1
Saudi Arabia	24	0	0	0	24
Syria	4	1	0	0	5
United Arab Emirates	6	0	0	0	6
Yemen	1	0	0	0	1
Total	**97**	**4**	**0**	**0**	**101**
Africa					
Algeria	6	(s)	0	0	6
Angola	(s)	(s)	0	0	1
Cameroon	(s)	1	0	0	1
Congo (Kinshasa)	(s)	2	0	0	2
Cote d'Ivoire (Ivory Coast)	(s)	1	0	0	1
Egypt	15	3	0	0	18
Ghana	(s)	1	0	0	1
Kenya	(s)	1	0	(s)	1
Libya	5	0	0	0	5
Morocco	3	1	0	0	4
Mozambique	(s)	2	0	0	2
Nigeria	4	2	0	0	6
South Africa	42	1	2	0	45
Sudan	(s)	(s)	0	0	1
Tanzania	(s)	(s)	0	0	1
Tunisia	2	(s)	0	0	2
Zambia	(s)	2	0	0	2
Zimbabwe	1	1	0	0	2
Other	3	2	0	0	5
Total	**82**	**20**	**2**	**(s)**	**104**
Asia & Oceania					
Australia	37	6	0	(s)	43
Bangladesh	3	(s)	0	0	4
Burma	1	(s)	0	0	1
China	237	79	2	0	318
Hong Kong	12	0	0	0	12
India	83	25	3	1	112
Indonesia	17	3	0	1	21
Japan	167	22	45	1	235
Korea, North	5	5	0	0	10
Korea, South	37	2	14	(s)	52
Malaysia	12	2	0	0	14
New Zealand	3	5	0	1	9
Pakistan	12	5	(s)	0	18
Philippines	9	2	0	2	13
Singapore	7	0	0	0	7
Sri Lanka	(s)	1	0	0	2
Taiwan	20	4	5	0	30
Thailand	18	3	0	(s)	21
Vietnam	2	3	0	0	5
Other	4	2	0	0	5
Total	**684**	**171**	**70**	**5**	**929**
World Total	**2,252**	**713**	**361**	**39**	**3,365**

[1] Thermal capacity consists of coal, oil, and gas.
[2] Geothermal and Other Capacity consists of geothermal, solar, wind, and wood and waste sources.
(s)=Value less than 500 thousand kilowatts.
Notes: Capacity data consist of both utility and nonutlilty sources. Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of this Section.

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Section 7

Prices

Table 7.1 Selected Crude Oil Prices, 1992 -2002

(U.S. Dollars per Barrel)

Region / Country	Crude (API Gravity)	Sulfur Weight[1]	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
North America													
Canada	Lloydminster (22)	2.2	11.38	15.95	11.58	16.44	18.24	24.44	13.36	7.90	28.13	23.62	17.34
Mexico	Isthmus (33)	1.3	15.80	17.25	11.86	15.92	18.53	23.82	15.80	9.37	24.75	22.03	17.72
Mexico	Maya (22)	3.4	10.75	12.50	9.01	13.77	15.79	19.33	10.81	6.38	20.20	15.82	14.30
United States	West Texas Inter. (39)	0.3	18.70	19.75	14.20	17.60	19.80	25.50	17.80	11.50	26.30	26.15	20.36
United States	U S Refiner Acquisition Cost of Imported Crude Oil	--	16.10	16.80	12.93	16.56	17.48	23.02	14.33	10.16	25.29	24.49	16.93
Central & South America													
Colombia	Cano Limon (31)	0.5	15.73	16.58	11.72	16.02	18.49	23.94	15.65	9.05	25.08	22.71	17.71
Ecuador	Oriente (30)	0.9	13.94	15.62	11.60	16.17	18.20	22.85	14.90	8.50	28.58	19.38	15.15
Venezuela	Tia Juana Light(31)	1.2	19.67	17.97	12.97	16.57	18.52	26.62	15.93	9.45	24.85	22.13	17.78
Venezuela	Bachaquero (24)	1.6	13.94	14.88	11.12	15.25	17.64	24.74	--	--	--	--	--
Venezuela	Bachaquero (17)	2.4	10.45	12.75	9.25	14.10	15.70	20.45	--	--	--	--	--
Western Europe													
Norway	Ekofisk Blend (42)	0.2	18.00	18.15	13.20	15.95	19.45	24.30	16.50	10.60	25.60	21.95	19.62
United Kingdom	Brent Blend (38)	0.4	17.75	17.90	13.15	16.15	19.37	24.05	15.89	10.44	25.10	22.50	21.20
Eastern Europe & Former U.S.S.R.													
Russia	Urals (33)	1.3	16.55	16.30	12.35	16.40	19.47	22.85	15.79	10.09	24.71	21.40	20.85
Middle East													
Iran	Iranian Light (34)	1.4	15.50	16.70	12.40	16.18	17.73	22.63	14.93	9.83	24.63	20.20	18.90
Iraq	Kirkuk Blend (35)	2.0	--	--	--	--	--	--	--	8.79	20.72	22.70	19.08 [2]
Kuwait	Kuwait Blend (31)	2.5	--	15.30	11.10	15.58	17.40	21.83	14.90	9.38	23.98	19.25	18.25
Oman	Oman (34)	1.2	15.20	16.65	12.70	16.35	17.80	22.30	15.35	9.95	24.00	20.60	18.76
Qatar	Dukhan (42)	1.3	16.05	17.35	13.53	16.93	18.22	23.24	15.78	10.50	24.39	21.60	19.40
Saudi Arabia	Arabian Light (33)	1.8	15.90	16.80	12.40	16.63	18.20	22.98	15.50	10.03	24.78	20.30	17.68
Saudi Arabia	Arabian Medium (29)	2.9	14.25	15.40	11.20	15.73	17.40	21.93	14.90	9.63	24.13	19.45	17.33
Saudi Arabia	Arabian Heavy (27)	2.8	13.15	14.40	10.10	15.13	17.05	21.08	14.00	9.28	23.48	18.45	17.03
United Arab Emirates	Murban (41)	0.8	16.80	18.15	14.09	17.31	18.81	24.06	16.27	10.50	25.04	21.29	19.87
Africa													
Algeria	Saharan Blend (44)	0.1	18.80	18.60	13.80	16.30	19.79	24.75	16.90	10.78	25.90	22.60	19.67
Angola	Cabinda (32)	0.1	16.65	17.35	12.28	15.42	18.67	23.70	16.05	9.90	24.80	22.00	18.43
Egypt	Suez Blend (32)	1.5	15.20	14.75	10.55	14.60	17.65	21.80	15.05	9.00	23.45	18.65	17.78
Gabon	Mandji (31)	1.1	14.55	15.60	11.10	14.75	17.80	22.30	14.45	9.13	24.20	--	--
Libya	Es Sider (37)	0.5	17.20	17.55	12.55	16.05	19.20	24.10	16.72	10.65	25.85	22.40	19.63
Nigeria	Bonny Light (36)	0.1	18.20	18.50	13.50	16.15	19.70	24.65	16.50	10.60	25.55	22.00	19.88
Nigeria	Forcados (31)	0.2	18.10	17.95	13.60	16.15	19.70	24.75	16.50	10.40	25.50	21.95	19.81
Asia & Oceania													
Australia	Gippsland (42)	--	21.35	18.60	14.40	16.90	19.40	24.95	16.95	10.60	24.80	25.15	20.14
Brunei	Seria Light (37)	0.1	21.15	19.40	15.60	18.05	20.85	24.80	--	--	--	--	--
China	Daqing (33)	0.1	18.50	19.00	13.20	16.90	19.95	25.00	16.60	9.85	24.05	22.60	18.81
Indonesia	Minas (34)	0.1	18.65	19.10	14.15	16.95	20.05	24.95	16.50	9.95	24.15	22.80	18.89
Malaysia	Tapis Blend (44)	0.1	21.45	19.50	15.70	17.60	20.89	25.70	16.00	12.40	24.36	26.18	20.31

[1] Percentage of sulfur contained by gross weight.

[2] Netback price at U.S. Gulf.

--=Not applicable.

(s)=No significant volume of exports.

Note: Most crude oil prices are for the available date that is closest to January 1 of the year. The prices for crude oils from Brunei, Malaysia, and the United States refiner acquisition cost of imported crude oil (IRAC) are averages for the month of January. The foreign crude oils are free on board (f.o.b.) at the port of lading. The United States IRAC includes all charges associated with the acquisition, transportation, and storage of imported crude oil up to the time that the oil is booked into the U.S. refineries.

Sources: Bloomberg L.P., Bloomberg Oil Buyers' Guide, various issues. Dow Jones & Co., The Wall Street Journal, various issues. Energy Information Administration, Weekly Petroleum Status Report, DOE/EIA-0208, various issues. The McGraw-Hill Companies, Inc., Platt's Oilgram Price Report, various issues. PennWell Publishing Co., Oil & Gas Journal, various issues. Petroleum and Energy Intelligence Weekly, Inc., Petroleum Intelligence Weekly and Oil Market Intelligence, various issues. Petroleum Intelligence Group, Petroleum Market Intelligence, various issues.

Table 7.2 World Survey of Recent Selected Petroleum Product Prices (Including Taxes)

Region / Country	Date[1]	Automotive Fuels		Residential Fuels			Industrial Fuels	
		Premium Gasoline	Diesel Fuel	Light Fuel Oil	Kerosene	LPG[2]	Light Fuel Oil	Heavy Fuel Oil
		U.S. Dollars per Gallon					U.S. Dollars per Barrel	
North America								
Canada	1Q/2002	1.73	1.43	1.10	--	--	28.48	23.41
Mexico	1Q/2002	2.63	1.53	--	--	--	29.35	13.77
United States	1/2002	1.29	1.15	1.10	0.98	0.38	26.71	18.65
Central & South America								
Argentina	6/2002	1.62	1.14	0.68	0.77	0.57	--	--
Barbados	6/2002	2.50	2.02	0.59	1.19	2.57	--	--
Bolivia	6/2002	2.68	1.65	1.35	1.03	0.60	--	--
Brazil	6/2002	2.39	1.30	0.50	0.72	1.83	--	--
Chile	6/2002	2.09	1.26	0.84	1.14	1.35	--	--
Colombia	6/2002	1.80	1.03	0.62	0.93	0.70	--	--
Costa Rica	6/2002	2.25	1.57	0.59	1.54	1.48	--	--
Cuba	6/2002	1.89	1.03	0.61	0.32	0.49	--	--
Dominican Republic	6/2002	2.32	1.21	0.96	1.26	0.88	--	--
Ecuador	6/2002	1.46	0.90	0.53	--	0.23	--	--
El Salvador	6/2002	2.31	1.78	1.23	1.48	0.80	--	--
Grenada	6/2002	2.03	1.54	--	1.14	2.01	--	--
Guatemala	6/2002	1.82	1.22	0.89	1.36	0.96	--	--
Guyana	6/2002	0.03	0.02	0.02	0.02	2.11	--	--
Haiti	6/2002	2.05	1.12	0.44	0.95	1.03	--	--
Honduras	6/2002	2.45	1.57	0.97	1.31	1.15	--	--
Jamaica	6/2002	1.97	1.67	0.63	1.55	1.33	--	--
Nicaragua	6/2002	2.06	1.56	0.35	1.57	1.23	--	--
Panama	6/2002	1.70	1.25	0.75	0.99	1.29	--	--
Paraguay	6/2002	1.83	1.14	0.48	0.57	0.47	--	--
Peru	6/2002	2.85	1.83	0.85	1.66	1.58	--	--
Suriname	6/2002	2.11	1.55	0.25	1.36	1.48	--	--
Trinidad and Tobago	6/2002	1.52	0.79	0.53	0.71	0.64	--	--
Uruguay	6/2002	3.78	1.59	0.56	1.79	1.38	--	--
Venezuela	6/2002	0.23	0.14	0.14	0.33	0.35	--	--
Western Europe								
Austria	1Q/2002	3.04	2.33	1.22	--	--	--	--
Belgium	1Q/2002	3.36	2.34	0.89	--	--	31.07	18.58
Denmark	1Q/2002	3.60	2.94	2.38	--	--	50.48	31.21
Finland	1Q/2002	3.46	2.60	1.16	--	--	39.99	29.02
France	1Q/2002	3.31	2.47	1.13	--	--	39.88	24.30
Germany	1Q/2002	3.49	2.73	1.08	--	--	39.03	22.05
Greece	1Q/2002	2.30	2.01	0.98	--	--	34.71	26.92
Ireland	1Q/2002	2.69	2.49	1.35	--	--	43.23	20.69
Italy	1Q/2002	3.34	2.78	2.72	--	--	95.10	26.10
Luxembourg	1Q/2002	2.62	2.02	0.88	--	--	33.01	19.92
Netherlands	1Q/2002	3.87	2.55	1.72	--	--	--	25.89
Norway	1Q/2002	3.85	3.42	2.05	--	--	65.33	61.81
Portugal	1Q/2002	2.99	2.15	--	--	--	--	29.76
Spain	1Q/2002	2.57	2.15	1.16	--	--	41.93	28.56
Sweden	1Q/2002	3.41	3.02	2.18	--	--	36.63	--
Switzerland	1Q/2002	2.93	2.96	0.89	--	--	29.56	21.84
Turkey	1Q/2002	3.59	2.73	2.65	--	--	--	35.87
United Kingdom	1Q/2002	4.16	3.94	0.78	--	--	34.84	24.77

See footnotes at end of table.

Table 7.2 World Survey of Recent Selected Petroleum Product Prices (Including Taxes) (Continued)

Region / Country	Date[1]	Automotive Fuels		Residential Fuels			Industrial Fuels	
		Premium Gasoline	Diesel Fuel	Light Fuel Oil	Kerosene	LPG[2]	Light Fuel Oil	Heavy Fuel Oil
		U.S. Dollars per Gallon					U.S. Dollars per Barrel	
Eastern Europe & Former U.S.S.R.								
Czech	1Q/2002	2.91	2.22	1.12	--	--	32.07	21.15
Hungary	1Q/2002	2.98	2.66	--	--	--	103.92	23.87
Kazakhstan	2001	1.06 [3]	--	0.76	--	--	28.80	11.15
Poland	1Q/2002	3.01	2.31	1.31	--	--	37.76	15.62
Romania	2001	1.98	1.72	--	--	--	--	--
Russia	2000	1.06	0.78	--	--	--	--	--
Slovakia	1Q/2002	2.47	2.17	0.89	--	--	34.01	16.75
Middle East								
Iran	2001	1.31 [3]	0.26	0.14	0.26	--	--	--
Kuwait	2001	0.77 [3]	0.67	0.22	0.67	--	--	--
Qatar	2001	0.70 [3]	0.62	--	0.42	--	--	--
Saudi Arabia	2001	0.91 [3]	0.37	0.15	0.44	--	--	--
United Arab Emirates	2001	0.90 [3]	0.83	0.58	0.85	--	--	--
Africa								
Algeria	2001	1.04 [3]	0.61	0.48	0.23	--	--	--
Libya	2001	0.78 [3]	0.70	0.08	0.46	--	--	--
Nigeria	2001	0.75 [3]	0.71	0.41	0.58	--	--	--
South Africa	2001	1.59	1.37	--	--	--	--	--
Zimbabwe	8/2000	3.07	2.74	--	--	--	--	--
Far East & Oceania								
Australia	1Q/2002	1.65	1.72	--	--	--	--	--
China	2001	1.19	1.20	--	--	--	--	--
Hong Kong	1Q/2002	5.12	2.74	1.06	1.91	2.34	81.35	44.44
India	2001	2.54 [3]	1.66	0.61	--	--	--	--
Indonesia	2001	0.48	0.28	0.24	0.14	--	--	--
Japan	1Q/2002	2.94 [3]	2.39	1.29	--	--	35.70	26.46
Korea, South	1Q/2002	3.52	1.73	1.46	--	--	61.01	38.40
New Zealand	1Q/2002	1.64	0.98	--	--	--	39.27	42.76
Taiwan	2001	2.13	1.43	--	--	--	36.37	30.77
Thailand	2001	1.32	1.15	1.33	--	--	--	31.73

[1]Data are for the available time period that is closest to January 1, 2002. Monthly, quarterly, and annual data are averages. (1Q=first Quarter)

[2]Liquefied petroleum gas (LPG) prices refer to residential propane or a mixture of propane and butane.

[3]Price is for regular gasoline.

--=Not available.

Note: Comparisons between prices and price trends in different countries require care. They are of limited validity because of fluctuations in exchange rates; differences in product quality, marketing practices, and market structures; and the extent to which the standard categories of sales are representative of total national sales for a given period.

Sources: Energy Information Administration, *Monthly Energy Review,* December 2002, and *Petroleum Marketing Monthly,* December 2002. International Energy Agency, *Energy Prices and Taxes,* 3rd Quarter 2002. Latin American Energy Organization (OLADE), *Energy-Economic Information System* , various versions. Organization of Petroleum Exporting Countries (OPEC), *Annual Statistical Bulletin 2001* . Census and Statistics Department, *Hong Kong Energy Statistics* , Third Quarter, 2002.

Section 8

Energy Reserves

Table 8.1 World Crude Oil and Natural Gas Reserves, January 1, 2002

Region Country	Crude Oil (Billion Barrels)		Natural Gas (Trillion Cubic Feet)	
	Oil and Gas Journal	World Oil	Oil and Gas Journal	World Oil
North America				
Canada	4.9	5.4	59.7	59.7
Mexico	26.9	23.1	29.5	39.0
United States [1]	22.4	22.4	183.5	183.5
Total	**54.2**	**50.9**	**272.7**	**282.1**
Central & South America				
Argentina	3.0	2.9	27.5	26.8
Barbados	(s)	NA	(s)	NA
Bolivia	0.4	0.5	24.0	27.4
Brazil	8.5	8.6	7.8	7.9
Chile	0.2	(s)	3.5	1.3
Colombia	1.8	1.9	4.3	5.0
Cuba	0.8	0.3	2.5	0.5
Ecuador	2.1	2.6	3.7	3.9
Guatemala	0.5	NA	0.1	NA
Peru	0.3	0.9	8.7	8.7
Suriname	0.1	NA	0.0	NA
Trinidad and Tobago	0.7	0.7	23.5	19.7
Venezuela	77.7	50.2	147.6	149.2
Other	0.0	0.6	0.0	(s)
Total	**96.0**	**69.1**	**253.0**	**250.2**
Western Europe				
Austria	0.1	0.1	0.9	0.8
Croatia	0.1	0.1	1.2	1.2
Denmark	1.1	1.3	2.7	3.1
France	0.1	0.1	0.4	0.5
Germany	0.4	0.3	12.1	9.0
Greece	(s)	NA	(s)	NA
Ireland	0.0	NA	0.7	NA
Italy	0.6	0.6	8.1	6.7
Netherlands	0.1	0.1	62.5	57.0
Norway	9.4	10.3	44.0	77.2
Spain	(s)	NA	(s)	NA
Turkey	0.3	0.3	0.3	0.3
United Kingdom	4.9	4.6	26.0	24.5
Yugoslavia	0.1	NA	1.7	NA
Other	0.0	0.1	0.0	2.0
Total	**17.3**	**17.7**	**160.7**	**182.4**
Eastern Europe & Former U.S.S.R.				
Albania	0.2	0.2	0.1	0.1
Bulgaria	(s)	(s)	0.2	0.1
Czech Republic	(s)	(s)	0.1	0.1
Slovakia	(s)	NA	0.5	NA
Hungary	0.1	0.1	1.3	2.3
Poland	0.1	0.1	5.1	5.8
Romania	1.0	1.2	3.6	4.3
Azerbaijan	1.2	NA	4.4	NA
Kazakhstan	5.4	NA	65.0	NA
Russia	48.6	53.9	1,680.0	1,700.0
Turkmenistan	0.5	NA	101.0	NA
Ukraine	0.4	NA	39.6	NA
Uzbekistan	0.6	NA	66.2	NA
Other	0.3	11.7	0.8	237.9
Total	**58.4**	**67.1**	**1,967.9**	**1,950.5**

See footnotes at end of table.

Table 8.1 World Crude Oil and Natural Gas Reserves, January 1, 2002 (Continued)

Region Country	Crude Oil (Billion Barrels)		Natural Gas (Trillion Cubic Feet)	
	Oil and Gas Journal	World Oil	Oil and Gas Journal	World Oil
Middle East				
Bahrain	0.1	NA	3.2	NA
Iran	89.7	99.1	812.3	939.4
Iraq	112.5	115.0	109.8	112.6
Israel	(s)	NA	1.5	NA
Jordan	(s)	NA	0.2	NA
Kuwait [2]	96.5	98.8	52.7	56.6
Oman	5.5	5.9	29.3	30.5
Qatar	15.2	13.8	508.5	757.7
Saudi Arabia [2]	261.8	261.7	219.5	228.2
Syria	2.5	2.3	8.5	8.5
United Arab Emirates	97.8	62.8	212.1	204.1
Yemen	4.0	2.4	16.9	17.0
Other	0.0	0.7	0.0	13.4
Total	**685.6**	**662.5**	**1,974.6**	**2,367.9**
Africa				
Algeria	9.2	17.0	159.7	175.0
Angola	5.4	6.0	1.6	4.0
Benin	(s)	NA	(s)	NA
Cameroon	0.4	NA	3.9	NA
Congo (Brazzaville)	1.5	1.6	3.2	4.2
Congo (Kinshasa)	0.2	NA	(s)	NA
Cote d'Ivoire (Ivory Coast)	0.1	NA	1.1	NA
Egypt	2.9	3.7	35.2	54.1
Equatorial Guinea	(s)	1.1	1.3	3.5
Ethiopia	(s)	NA	0.9	NA
Gabon	2.5	2.4	1.2	3.5
Ghana	(s)	NA	0.8	NA
Libya	29.5	30.0	46.4	46.9
Madagascar	0.0	NA	0.0	NA
Morocco	(s)	NA	(s)	NA
Mozambique	0.0	NA	4.5	NA
Namibia	0.0	NA	2.2	NA
Nigeria	24.0	30.0	124.0	159.0
Rwanda	0.0	NA	2.0	NA
Somalia	0.0	NA	0.2	NA
South Africa	(s)	NA	(s)	NA
Sudan	0.6	0.7	3.0	4.0
Tanzania	0.0	NA	0.8	NA
Tunisia	0.3	0.5	2.8	2.7
Other	0.0	1.9	0.0	20.1
Total	**76.7**	**94.9**	**394.8**	**477.1**

See footnotes at end of table.

Table 8.1 World Crude Oil and Natural Gas Reserves, January 1, 2002 (Continued)

Region Country	Crude Oil (Billion Barrels) Oil and Gas Journal	Crude Oil (Billion Barrels) World Oil	Natural Gas (Trillion Cubic Feet) Oil and Gas Journal	Natural Gas (Trillion Cubic Feet) World Oil
Asia & Oceania				
Afghanistan	0.0	NA	3.5	NA
Australia	3.5	3.8	90.0	80.0
Bangladesh	0.1	NA	10.6	NA
Brunei	1.4	1.2	13.8	8.4
Burma	0.1	0.2	10.0	12.2
China	24.0	29.5	48.3	42.8
India	4.8	3.8	22.9	15.4
Indonesia	5.0	9.2	92.5	87.5
Japan	0.1	NA	1.4	NA
Malaysia	3.0	4.5	75.0	82.5
New Zealand	0.1	0.1	2.1	2.1
Pakistan	0.3	0.3	25.1	24.1
Papua New Guinea	0.2	0.5	12.2	15.0
Philippines	0.2	0.2	3.7	3.7
Taiwan	(s)	NA	2.7	NA
Thailand	0.5	0.6	12.7	13.3
Vietnam	0.6	2.2	6.8	6.8
Other	0.0	0.6	0.0	26.1
Total	**43.8**	**56.5**	**433.3**	**419.9**
World Total	**1,032.0**	**1,018.7**	**5,457.1**	**5,930.2**

[1] Data for the United States are from the Energy Information Administration.

[2] Includes one-half of the reserves in the Neutral Zone.

NA = Not Available

(s) = Value less than 50 million barrels of crude oil or less than 50 billion cubic feet of natural gas.

Notes: Sum of components may not equal total due to independent rounding. All reserve data except those for the Former U.S.S.R. and natural gas reserves in Canada are proved reserves. Former U.S.S.R. data are "explored reserves," which are understood to be proved, and some probable. World Oil only reported disaggregated data for the Former U.S.S.R. Republic of Russia. Aggregated data for the other Republics of the Former U.S.S.R. were reported as 11.5 billion barrels of crude oil and 235.2 trillion cubic feet of natural gas.

Sources: PennWell Publishing Co., Oil and Gas Journal. Vol 99, No. 52, (December 2001). Gulf Publishing Co., World Oil. Vol 223, No. 8, (August 2002). Energy Information Administration, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2001 Annual Report, DOE/EIA-0216(2001) (November 2002).

Table 8.2 World Estimated Recoverable Coal

(Million Short Tons)

Region Country	Recoverable Anthracite and Bituminous [1]	Recoverable Lignite and Subbituminous [1]	Total Recoverable Coal [1]
North America			
Canada	3,826	3,425	7,251
Greenland	0	202	202
Mexico	948	387	1,335
United States [2]	126,804	146,852	273,656
Total	**131,579**	**150,866**	**282,444**
Central & South America			
Argentina	0	474	474
Bolivia	1	0	1
Brazil	0	13,149	13,149
Chile	34	1,268	1,302
Colombia	6,908	420	7,328
Ecuador	0	26	26
Peru	1,058	110	1,168
Venezuela	528	0	528
Total	**8,530**	**15,448**	**23,977**
Western Europe			
Austria	0	28	28
Croatia	7	36	43
France	24	15	40
Germany	25,353	47,399	72,753
Greece	0	3,168	3,168
Ireland	15	0	15
Italy	0	37	37
Netherlands	548	0	548
Norway	0	1	1
Portugal	3	36	40
Slovenia	0	303	303
Spain	220	507	728
Sweden	0	1	1
Turkey	306	3,760	4,066
United Kingdom	1,102	551	1,653
Yugoslavia	71	17,849	17,919
Total	**27,650**	**73,693**	**101,343**
Eastern Europe & Former U.S.S.R.			
Bulgaria	14	2,974	2,988
Czech Republic	2,330	3,929	6,259
Hungary	0	1,209	1,209
Kazakhstan	34,172	3,307	37,479
Kyrgyzstan	0	895	895
Poland	22,377	2,050	24,427
Romania	1	1,605	1,606
Russia	54,110	118,964	173,074
Slovakia	0	190	190
Ukraine	17,939	19,708	37,647
Uzbekistan	1,102	3,307	4,409
Total	**132,046**	**158,138**	**290,183**
Middle East			
Iran	1,885	0	1,885
Total	**1,885**	**0**	**1,885**

See footnotes at end of table.

Table 8.2 World Estimated Recoverable Coal (Continued)

(Million Short Tons)

Region Country	Recoverable Anthracite and Bituminous [1]	Recoverable Lignite and Subbituminous [1]	Total Recoverable Coal [1]
Africa			
Algeria	44	0	44
Botswana	4,740	0	4,740
Central African Republic	0	3	3
Congo (Kinshasa)	97	0	97
Egypt	0	24	24
Malawi	0	2	2
Mozambique	234	0	234
Niger	77	0	77
Nigeria	23	186	209
South Africa	54,586	0	54,586
Swaziland	229	0	229
Tanzania	220	0	220
Zambia	11	0	11
Zimbabwe	553	0	553
Total	**60,816**	**216**	**61,032**
Asia & Oceania			
Afghanistan	73	0	73
Australia	46,903	43,585	90,489
Burma	2	0	2
China	68,564	57,651	126,215
India	90,826	2,205	93,031
Indonesia	871	5,049	5,919
Japan	852	0	852
Korea, North	331	331	661
Korea, South	86	0	86
Malaysia	4	0	4
Nepal	2	0	2
New Caledonia	2	0	2
New Zealand	36	594	631
Pakistan	0	2,497	2,497
Philippines	0	366	366
Taiwan	1	0	1
Thailand	0	1,398	1,398
Vietnam	165	0	165
Total	**208,719**	**113,675**	**322,394**
World Total	**571,224**	**512,035**	**1,083,259**

[1] World Energy Council definition of "Proved Recoverable Reserves": Proved Recoverable Reserves are the tonnage within the Proved Amount in Place that can be recovered (extracted from the earth in raw form) under present and expected local economic conditions with existing available technology.

[2] Data represent both measured and indicated tonnage, as of January 1, 2001 (equated to December 31, 2000). The U.S. term "measured" approximates the term "proved" used by the World Energy Council. The U.S. "measured and indicated" data have been combined prior to depletion adjustments and cannot be recaptured as "measured alone."

- - = Not applicable

Notes: Formerly entitled "World Estimated Recoverable Reserves of Coal." The estimates in this table are dependent on the judgment of each reporting country to interpret local economic conditions and its own mineral assessment criteria in terms of specified standards of the World Energy Council. Consequently, the data may not all meet the same standards of reliability and some data, including the Energy Information Administration's (EIA)'s, may not represent reserves of coal that are known to be recoverable under current economic conditions and regulations. Some data, including the EIA's, represent estimated recovery rates for highly reliable estimates of coal quantities in the ground that have physical characteristics like those of coals currently being profitably mined. U.S. coal rank approximations are based partly on Btu and may not match precisely borderline geologic ranks. Further, data in this table may represent different base years. Data for the U.S. represent recoverable coal estimates as of December 31, 2000. Data for other countries are as of December 31, 1999, the most recent period for which they are available. The Energy Information Administration does not certify the international reserves data but reproduces the information as a matter of convenience for the reader. Sum of components may not equal total due to independent rounding.

Sources: World Energy Council, Survey of Energy Resources 2001, October 2001. United States: Energy Information Administration. Unpublished file data of the Coal Reserves Data Base (February 2002).

Appendix A

Geographical and Organizational Definitions

Appendix A

Geographical and Organizational Definitions

North America

Bermuda
Canada
Greenland
Mexico
Saint Pierre and Miquelon
United States

Central and South America

Antarctica
Antigua and Barbuda
Argentina
Aruba
Bahamas, The
Barbados
Belize
Bolivia
Brazil
Cayman Islands
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Falkland Islands
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique
Montserrat
Netherlands Antilles
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Saint Kitts and Nevis
Saint Lucia
Saint Vincent/Grenadines
Suriname
Trinidad and Tobago
Turks and Caicos Islands
Uruguay
Venezuela
Virgin Islands, British
Virgin Islands, U.S.

Western Europe

Austria
Belgium
Bosnia and Herzegovina
Croatia
Denmark
Faroe Islands
Finland
France (includes Monaco)
Germany
Gibraltar
Greece
Iceland
Ireland
Italy[1]
Luxembourg
Macedonia, The Former Yugoslav Republic of (TFYR)
Malta
Netherlands
Norway
Portugal[2]
Slovenia
Spain[3]
Sweden
Switzerland[4]
Turkey
United Kingdom
Yugoslavia

[1]Includes the Holy See (also known as the Vatican) and San Marino.
[2]Includes the Azores and Madeira.
[3]Includes the Canary Islands.
[4]Includes Liechtenstein.

Eastern Europe and Former U.S.S.R.

Albania
Armenia
Azerbaijan
Belarus
Bulgaria
Former Czechoslovakia[1]
Czech Republic
Slovakia
Estonia
Georgia
Hungary
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Moldova
Poland
Romania
Russia
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

Middle East

Bahrain
Cyprus
Iran
Iraq
Israel
Jordan
Kuwait
Lebanon
Oman
Qatar
Saudi Arabia
Syria
United Arab Emirates
Yemen

Africa

Algeria
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo (Brazzaville)
Congo (Kinshasa)
Cote d'Ivoire (Ivory Coast)
Djibouti
Egypt
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia, The
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Libya
Madagascar
Malawi
Mali
Mauritania
Mauritius
Morocco
Mozambique
Namibia
Niger
Nigeria
Reunion
Rwanda
Saint Helena
Sao Tome and Principe
Senegal
Seychelles
Sierra Leone
Somalia
South Africa
Sudan
Swaziland
Tanzania
Togo
Tunisia
Uganda
Western Sahara
Zambia
Zimbabwe

[1]1992 data are reported for the country of Czechoslovakia. Data for the two successor countries, the Czech Republic and Slovakia, are reported beginning in 1993.

Asia and Oceania

Afghanistan
American Samoa
Australia
Bangladesh
Bhutan
Brunei
Burma
Cambodia
China
Cook Islands
Fiji
French Polynesia
Guam
Hong Kong[1]
India
Indonesia
Japan (includes Okinawa)
Kiribati
Korea, North
Korea, South
Laos
Macau[2]
Malaysia
Maldives
Mongolia
Nauru
Nepal
New Caledonia
New Zealand
Niue
Pakistan
Papua New Guinea
Philippines
Samoa
Singapore
Solomon Islands
Sri Lanka
Taiwan
Thailand
Tonga
U.S. Pacific Islands[3]
Vanuatu
Vietnam
Wake Island

Organization for Economic Cooperation and Development (OECD)[4]

Australia
Austria
Belgium
Canada
Czech Republic[5]
Denmark
Finland
France
Germany
Greece
Guam[6]
Hungary
Iceland
Ireland
Italy
Japan
Korea, South
Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Puerto Rico[6]
Slovakia[5]
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States
Virgin Islands, U.S.[6]

OECD Europe

Austria
Belgium
Czech Republic[5]
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Luxembourg
Netherlands
Norway
Poland
Portugal
Slovakia[5]
Spain
Sweden
Switzerland
Turkey
United Kingdom

[1]Under a Sino-British declaration of September 1984, Hong Kong reverted to Chinese control on July 1, 1997. It is now a semi-autonomous entity that exists pursuant to international agreement and maintains its own government apart from the People's Republic of China.
[2]Under the Sino-Portuguese Joint Declaration on the Question of Macau signed in 1987, Macau reverted to Chinese control on December 20, 1999. It is now a semi-autonomous entity that exists pursuant to international agreement and maintains its own government apart from the People's Republic of China.
[3]Includes data for three independent countries - Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau - and a United States territory, Commonwealth of the Northern Mariana Islands.
[4]Membership is as of December 31, 2001.
[5]1992 data for (Former) Czechoslovakia, that separated into the Czech Republic and Slovakia in 1993, are included in the OECD and OECD Europe totals reported in Tables 1.1, 1.8, 2.1, and 2.9.
[6]Data reported separately in this publication for this United States territory are included with the United States by the OECD. These data are included in the OECD totals reported in Tables 1.1, 1.8, 2.1, and 2.9.

International Energy Agency (IEA)[1]

Australia
Austria
Belgium
Canada
Czech Republic[2]
Denmark
Finland
France
Germany
Greece
Guam[3]
Hungary
Ireland
Italy
Japan
Korea, South
Luxembourg
Netherlands
New Zealand
Norway
Portugal
Puerto Rico[3]
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States
Virgin Islands, U.S.[3]

European Union (EU)[1]

Austria
Belgium
Denmark
Finland
France
Germany
Greece
Ireland
Italy
Luxembourg
Netherlands
Portugal
Spain
Sweden
United Kingdom

Former U.S.S.R.

Armenia
Azerbaijan
Belarus
Estonia
Georgia
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Moldova
Russia
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

Organization of Petroleum Exporting Countries (OPEC)[1]

Algeria
Indonesia
Iran
Iraq
Kuwait
Libya
Nigeria
Qatar
Saudi Arabia
United Arab Emirates
Venezuela

[1]Membership is as of December 31, 2001.
[2]The Czech Republic came into existence as a country in 1993. Data are not available for 1992.
[3]Data reported separately in this publication for this United States territory are included with the United States by the IEA. These data are included in the IEA totals reported in Tables 1.1, 1.8, 2.1, and 2.9.

Appendix B

World Population and Gross Domestic Product, 1992-2001

Table B1 World Population, 1992 - 2001

(Millions)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Bermuda	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Canada	28.38	28.70	29.04	29.35	29.67	29.99	30.25	30.50	30.77	31.08
Greenland	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Mexico	87.11	88.74	90.39	91.99	93.57	95.13	96.65	98.13	100.25	101.75
Saint Pierre and Miquelon	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
United States	255.03	257.78	260.33	262.77	265.19	267.74	270.30	272.82	281.42	283.97
Total	**370.65**	**375.35**	**379.88**	**384.23**	**388.56**	**392.99**	**397.33**	**401.57**	**412.56**	**416.93**
Central & South America										
Antigua and Barbuda	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Argentina	33.42	33.87	34.32	34.77	35.22	35.67	36.12	36.58	37.03	37.52
Aruba	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.09
Bahamas, The	0.26	0.27	0.27	0.28	0.28	0.29	0.30	0.30	0.30	0.31
Barbados	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27
Belize	0.20	0.21	0.21	0.22	0.22	0.23	0.24	0.24	0.25	0.23
Bolivia	6.90	7.07	7.24	7.41	7.59	7.77	7.95	8.14	8.33	8.47
Brazil	149.36	151.57	153.73	155.82	157.87	159.64	161.79	165.37	167.72	172.39
Cayman Islands	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.35	0.35	0.36
Chile	13.54	13.77	13.99	14.20	14.42	14.62	14.82	15.02	15.21	15.40
Colombia	36.41	37.13	37.85	38.54	39.30	40.06	40.83	41.59	42.32	42.80
Costa Rica	3.14	3.20	3.27	3.33	3.40	3.46	3.53	3.59	3.83	3.87
Cuba	10.83	10.90	10.95	10.98	11.02	11.07	11.12	11.14	11.18	11.22
Dominica	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Dominican Republic	7.47	7.62	7.77	7.83	7.97	8.10	8.21	8.32	8.40	8.53
Ecuador	10.74	10.98	11.22	11.46	11.70	11.94	12.17	12.41	12.65	12.88
El Salvador	5.43	5.52	5.64	5.73	5.82	5.91	6.03	6.15	6.28	6.40
Falkland Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
French Guiana	0.13	0.13	0.14	0.15	0.15	0.16	0.17	0.17	0.17	0.18
Grenada	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.09	0.09	0.09
Guadeloupe	0.41	0.41	0.42	0.42	0.43	0.44	0.44	0.44	0.44	0.44
Guatemala	9.22	9.47	9.72	9.98	10.24	10.52	10.80	11.09	11.39	11.68
Guyana	0.73	0.73	0.75	0.76	0.77	0.78	0.77	0.77	0.77	0.76
Haiti	6.76	6.90	7.04	7.18	7.34	7.49	7.65	7.80	7.96	8.13
Honduras	5.08	5.25	5.42	5.60	5.79	5.98	6.18	6.39	6.42	6.58
Jamaica	2.42	2.43	2.46	2.49	2.52	2.54	2.56	2.59	2.63	2.60
Martinique	0.38	0.39	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42
Montserrat	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Netherlands Antilles	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.21	0.22	0.22
Nicaragua	4.13	4.26	4.40	4.43	4.55	4.67	4.80	4.94	5.07	5.21
Panama	2.49	2.53	2.58	2.63	2.67	2.72	2.76	2.79	2.82	2.86
Paraguay	4.45	4.57	4.70	4.83	4.96	5.09	5.22	5.36	5.50	5.64
Peru	22.45	22.74	23.13	23.53	23.95	24.37	24.80	25.23	25.66	26.35
Puerto Rico	3.58	3.62	3.65	3.69	3.73	3.77	3.81	3.92	3.94	3.96
Saint Kitts and Nevis	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Saint Lucia	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.16
Saint Vincent/Grenadines	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12
Suriname	0.40	0.40	0.40	0.41	0.41	0.42	0.41	0.43	0.44	0.42
Trinidad and Tobago	1.24	1.25	1.25	1.26	1.26	1.27	1.28	1.29	1.29	1.30
Turks and Caicos Islands	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Uruguay	3.15	3.17	3.20	3.22	3.24	3.27	3.29	3.31	3.34	3.36
Venezuela	20.44	20.91	21.38	21.84	22.31	22.78	23.24	23.71	24.17	24.63
Virgin Islands, British	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Virgin Islands, U.S.	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12
Total	**366.63**	**372.76**	**379.02**	**384.93**	**391.13**	**397.05**	**403.33**	**411.11**	**417.58**	**426.20**

See footnotes at end of table.

Table B1 World Population, 1992 - 2001 (Continued)

(Millions)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Western Europe										
Austria	7.91	7.99	8.03	8.05	8.06	8.07	8.08	8.09	8.10	8.08
Belgium	10.06	10.08	10.12	10.14	10.16	10.18	10.21	10.23	10.25	10.26
Denmark	5.17	5.19	5.20	5.23	5.26	5.28	5.30	5.33	5.34	5.33
Faroe Islands	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Finland	5.04	5.07	5.09	5.11	5.12	5.14	5.15	5.17	5.18	5.19
France	57.37	57.65	57.90	58.14	58.37	58.61	58.85	59.10	58.89	59.19
Germany	80.57	81.19	81.42	81.66	81.90	82.06	82.02	82.09	82.18	82.36
Gibraltar	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Greece	10.32	10.38	10.43	10.45	10.48	10.50	10.52	10.55	10.58	10.60
Iceland	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.28
Ireland	3.55	3.57	3.59	3.60	3.63	3.66	3.70	3.75	3.79	3.84
Italy	56.86	57.05	57.20	57.30	57.40	57.52	57.59	57.65	57.76	57.95
Luxembourg	0.39	0.40	0.40	0.41	0.42	0.42	0.43	0.43	0.44	0.44
Malta	0.36	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.39
Netherlands	15.18	15.29	15.38	15.46	15.53	15.61	15.71	15.81	15.91	16.04
Norway	4.29	4.31	4.33	4.36	4.38	4.41	4.43	4.46	4.49	4.51
Portugal	9.86	9.88	9.90	9.92	9.93	9.94	9.97	9.98	10.01	10.02
Spain	39.01	39.09	39.15	39.21	39.27	39.32	39.37	39.42	39.47	40.27
Sweden	8.67	8.72	8.78	8.83	8.84	8.85	8.85	8.86	8.87	8.83
Switzerland	6.88	6.94	6.99	7.04	7.07	7.09	7.11	7.13	7.17	7.23
Turkey	57.93	58.51	59.71	60.61	61.53	62.46	63.39	64.34	67.38	68.61
United Kingdom	58.01	58.19	58.39	58.61	58.80	59.01	59.24	59.37	59.50	59.54
Bosnia and Herzegovina	4.41	4.28	4.22	4.18	4.17	3.70	3.80	3.84	3.98	4.07
Croatia	4.47	4.64	4.65	4.67	4.49	4.57	4.50	4.55	4.65	4.66
Macedonia, TFYR	2.06	2.07	1.95	1.97	1.98	2.00	2.01	2.00	2.00	2.00
Slovenia	2.00	1.99	1.99	1.99	1.99	1.99	1.98	1.99	1.99	1.99
Yugoslavia	10.45	10.48	10.52	10.55	10.58	10.60	10.62	10.64	10.66	10.67
Total	**461.16**	**463.66**	**466.05**	**468.20**	**470.07**	**471.71**	**473.55**	**475.52**	**479.33**	**482.42**
Eastern Europe & Former U.S.S.R.										
Albania	3.36	3.49	3.55	3.61	3.65	3.73	3.79	3.13	3.13	3.15
Bulgaria	8.54	8.47	8.44	8.41	8.36	8.31	8.26	8.21	7.95	7.87
Former Czechoslovakia	15.67	--	--	--	--	--	--	--	--	--
Czech Republic	--	10.33	10.34	10.33	10.32	10.30	10.29	10.28	10.27	10.29
Slovakia	--	5.32	5.35	5.36	5.37	5.38	5.39	5.40	5.40	5.40
Hungary	10.32	10.29	10.26	10.23	10.19	10.15	10.11	10.07	10.02	9.92
Poland	38.37	38.46	38.54	38.59	38.62	38.65	38.67	38.65	38.65	38.64
Romania	22.79	22.76	22.73	22.68	22.61	22.55	22.50	22.46	22.44	22.41
Armenia	3.69	3.73	3.75	3.76	3.77	3.79	3.79	3.80	3.80	3.46
Azerbaijan	7.38	7.49	7.60	7.68	7.76	7.84	7.91	7.98	8.05	8.11
Belarus	10.31	10.36	10.31	10.28	10.25	10.22	10.19	10.04	10.00	9.97
Estonia	1.54	1.52	1.50	1.48	1.47	1.46	1.43	1.41	1.39	1.38
Georgia	5.45	5.44	5.43	5.42	5.42	5.31	5.30	5.29	5.27	5.24
Kazakhstan	16.52	16.48	16.30	16.07	15.92	15.75	15.07	14.93	14.90	14.83
Kyrgyzstan	4.55	4.54	4.54	4.59	4.66	4.72	4.76	4.83	4.90	4.95
Latvia	2.63	2.59	2.55	2.51	2.49	2.47	2.45	2.43	2.43	2.36
Lithuania	3.74	3.73	3.72	3.71	3.71	3.71	3.70	3.66	3.70	3.49
Moldova	4.36	4.35	4.35	4.35	4.33	4.36	4.36	4.37	4.38	4.29
Russia	148.31	148.15	147.97	148.14	147.74	147.10	146.54	145.56	145.49	144.40
Tajikistan	5.57	5.64	5.74	5.84	5.92	6.05	6.16	6.28	6.41	6.54
Turkmenistan	4.03	4.31	4.41	4.51	4.57	4.64	4.70	4.76	4.82	4.88
Ukraine	52.06	52.24	52.11	51.73	51.33	50.89	50.50	50.11	49.57	49.11
Uzbekistan	21.21	21.70	22.19	22.56	23.01	23.56	24.05	24.76	25.16	25.56
Total	**390.40**	**391.39**	**391.68**	**391.84**	**391.47**	**390.94**	**389.92**	**388.41**	**388.13**	**386.25**

See footnotes at end of table.

Table B1 World Population, 1992 - 2001 (Continued)

(Millions)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.67	0.69	0.65
Cyprus	0.71	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.76	0.79
Iran	56.66	57.49	58.33	59.19	60.06	60.94	61.84	62.75	63.66	64.53
Iraq	18.31	18.89	19.47	20.04	20.62	21.18	21.75	22.34	22.95	23.58
Israel	5.12	5.26	5.40	5.54	5.70	5.83	5.97	6.10	6.29	6.45
Jordan	5.02	5.26	5.51	5.73	5.94	6.13	6.30	6.48	6.66	6.85
Kuwait	1.42	1.46	1.62	1.80	1.89	1.98	2.03	2.11	2.19	1.97
Lebanon	2.87	2.97	3.08	3.17	3.25	3.33	3.38	3.44	3.50	3.56
Oman	1.88	2.00	2.05	2.13	2.21	2.26	2.36	2.46	2.54	2.62
Qatar	0.53	0.56	0.59	0.61	0.62	0.63	0.64	0.66	0.67	0.70
Saudi Arabia	16.11	16.38	16.89	17.09	17.61	18.24	18.93	19.90	20.85	21.03
Syria	12.96	13.39	13.84	14.15	14.62	15.10	15.60	16.11	16.32	16.72
United Arab Emirates	2.16	2.10	2.29	2.31	2.44	2.62	2.78	2.94	2.61	2.65
Yemen	11.95	12.30	14.86	15.37	15.92	16.48	17.07	17.68	18.30	19.11
Total	**136.22**	**139.32**	**145.22**	**148.44**	**152.22**	**156.08**	**160.04**	**164.39**	**167.99**	**171.21**
Africa										
Algeria	26.27	26.89	27.50	28.06	28.57	29.05	29.51	29.95	30.99	31.84
Angola	10.61	10.80	10.97	11.34	11.70	12.05	12.40	12.76	13.13	13.53
Benin	4.92	5.08	5.24	5.41	5.59	5.64	5.82	5.99	6.17	6.42
Botswana	1.36	1.39	1.42	1.46	1.50	1.53	1.57	1.61	1.65	1.55
Burkina Faso	9.43	9.68	9.89	10.10	10.31	10.52	10.75	11.25	11.54	11.86
Burundi	5.74	5.81	5.87	5.93	6.02	6.11	6.20	6.30	6.40	6.50
Cameroon	12.18	12.52	12.87	13.28	13.56	14.30	14.44	14.69	14.88	15.20
Cape Verde	0.37	0.38	0.40	0.41	0.42	0.42	0.43	0.43	0.42	0.41
Central African Republic	3.08	3.15	3.22	3.29	3.35	3.41	3.56	3.65	3.72	3.78
Chad	5.96	6.10	6.21	6.74	6.95	7.17	7.40	7.64	7.89	8.14
Comoros	0.56	0.57	0.59	0.61	0.63	0.65	0.67	0.69	0.71	0.73
Congo (Brazzaville)	2.37	2.44	2.52	2.60	2.68	2.76	2.85	2.93	3.02	3.11
Congo (Kinshasa)	38.94	41.77	43.37	44.83	46.12	47.33	48.39	49.58	50.95	52.52
Cote d'Ivoire (Ivory Coast)	12.67	13.18	13.70	14.23	14.78	15.04	15.37	15.69	16.40	16.94
Djibouti	0.53	0.53	0.54	0.55	0.56	0.58	0.60	0.62	0.63	0.64
Egypt	54.08	55.20	56.34	57.51	58.76	60.08	61.34	62.65	63.98	67.89
Equatorial Guinea	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.46	0.47
Eritrea	--	--	3.22	3.32	3.43	3.59	3.71	3.90	4.30	4.47
Ethiopia	51.57	53.24	53.48	54.65	56.37	58.12	59.88	61.67	63.49	65.37
Gabon	0.99	1.02	1.05	1.08	1.11	1.14	1.15	1.18	1.21	1.24
Gambia, The	0.99	1.04	1.08	1.12	1.15	1.19	1.23	1.38	1.39	1.42
Ghana	16.00	16.44	16.88	17.30	17.71	18.10	18.49	18.89	19.41	19.73
Guinea	6.60	6.86	7.11	7.33	7.53	7.71	7.88	8.02	8.15	8.27
Guinea-Bissau	1.01	1.03	1.05	1.08	1.10	1.13	1.15	1.17	1.19	1.23
Kenya	26.98	28.11	29.29	30.52	31.80	28.41	29.34	30.03	30.67	31.29
Lesotho	1.76	1.79	1.83	1.87	1.97	2.01	2.06	2.10	2.14	2.19
Liberia	2.58	2.64	2.70	2.76	2.81	2.88	2.93	2.97	3.01	3.11
Libya	4.51	4.70	4.90	4.76	4.85	4.96	5.06	5.18	5.29	5.41
Madagascar	12.65	13.02	13.40	13.79	14.20	14.62	15.06	15.51	15.97	16.44
Malawi	8.82	9.13	9.46	9.79	10.14	10.44	10.74	11.03	11.31	11.40
Mali	9.22	9.45	9.68	9.93	10.19	10.46	10.74	11.04	11.35	11.50
Mauritania	2.10	2.15	2.21	2.28	2.35	2.42	2.50	2.58	2.67	2.75
Mauritius	1.08	1.10	1.11	1.12	1.13	1.15	1.16	1.17	1.19	1.20
Morocco	25.12	25.58	26.07	26.39	26.85	27.31	27.78	28.24	28.71	29.17
Mozambique	14.80	15.13	15.47	15.82	16.18	16.54	16.92	17.30	17.69	17.96
Namibia	1.47	1.50	1.55	1.59	1.62	1.66	1.69	1.72	1.76	1.79
Niger	8.23	8.36	8.81	9.11	9.43	9.75	10.10	10.46	10.83	11.23
Nigeria	91.13	93.79	96.51	99.21	102.10	104.96	107.88	110.85	115.22	116.93
Reunion	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.70	0.72	0.74
Rwanda	5.99	5.46	5.08	4.98	5.21	5.73	6.42	7.09	7.61	7.95
Saint Helena	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sao Tome and Principe	0.12	0.12	0.12	0.13	0.14	0.14	0.14	0.14	0.14	0.14
Senegal	7.70	7.91	8.13	8.57	8.80	9.04	9.28	9.40	9.52	9.66
Seychelles	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Sierra Leone	4.10	4.09	4.08	4.08	4.10	4.13	4.18	4.27	4.46	4.59
Somalia	8.86	8.95	9.08	9.25	9.00	8.82	8.50	8.20	7.96	7.75
South Africa	38.82	39.63	39.48	40.24	40.34	41.23	42.13	43.05	43.69	44.33
Sudan	27.32	28.13	28.45	28.75	29.17	29.48	29.79	30.42	31.10	31.81

Table B1 World Population, 1992 - 2001 (Continued)

(Millions)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Swaziland	0.83	0.85	0.88	0.91	0.94	0.97	0.99	1.01	1.03	1.04
Tanzania	25.99	26.73	27.49	28.28	29.09	29.98	33.46	34.29	35.12	35.97
Togo	3.73	3.84	3.93	4.06	4.17	4.28	4.40	4.51	4.53	4.66
Tunisia	8.48	8.66	8.81	8.96	9.09	9.21	9.33	9.46	9.56	9.67
Uganda	17.34	17.88	18.41	19.26	19.85	20.44	21.03	21.62	22.21	22.79
Western Sahara	0.25	0.26	0.27	0.28	0.28	0.28	0.29	0.28	0.27	0.26
Zambia	8.19	8.46	8.76	9.11	9.45	9.78	10.10	10.41	10.52	10.65
Zimbabwe	10.41	10.78	11.15	11.53	11.91	12.29	12.68	13.08	13.63	13.96
Total	**645.88**	**664.41**	**682.74**	**700.69**	**718.22**	**732.17**	**752.67**	**771.28**	**792.05**	**811.69**
Asia & Oceania										
Afghanistan	16.79	17.32	18.47	19.66	20.88	22.13	23.11	24.50	26.81	27.76
American Samoa	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07
Australia	17.49	17.67	17.85	18.07	18.31	18.52	18.73	18.97	19.16	19.49
Bangladesh	115.42	116.84	117.70	119.90	122.10	124.30	131.80	134.58	137.44	140.37
Bhutan	1.58	1.60	1.61	1.64	1.81	1.86	2.00	2.06	2.09	2.15
Brunei	0.27	0.28	0.28	0.29	0.30	0.31	0.31	0.34	0.34	0.35
Burma	42.33	43.12	43.92	44.35	45.08	45.78	46.46	47.11	47.75	48.36
Cambodia	9.06	9.31	9.87	10.20	10.34	10.37	12.34	12.66	12.99	13.31
China	1,183.60	1,196.40	1,208.80	1,220.52	1,232.46	1,242.80	1,253.90	1,264.80	1,275.10	1,285.00
Cook Islands	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Fiji	0.75	0.77	0.78	0.80	0.78	0.79	0.80	0.81	0.81	0.83
French Polynesia	0.21	0.21	0.21	0.22	0.22	0.23	0.23	0.25	0.25	0.26
Guam	0.14	0.14	0.15	0.15	0.15	0.16	0.15	0.15	0.16	0.16
Hong Kong	5.80	5.90	6.04	6.16	6.44	6.49	6.54	6.61	6.67	6.72
India	868.90	886.25	903.94	921.99	939.54	955.22	970.93	986.61	1,002.14	1,017.54
Indonesia	186.04	189.13	192.22	195.28	198.34	201.39	204.42	207.44	210.49	214.84
Japan	124.42	124.83	125.18	125.47	125.76	126.07	126.41	126.65	126.87	127.34
Kiribati	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
Korea, North	21.15	21.51	21.87	22.24	22.61	22.88	22.98	22.69	22.45	22.30
Korea, South	43.75	44.19	44.64	45.09	45.54	45.99	46.43	46.86	47.27	47.34
Laos	4.35	4.46	4.57	4.69	4.80	4.92	5.03	5.16	5.28	5.40
Macau	0.37	0.38	0.40	0.41	0.42	0.42	0.43	0.43	0.44	0.45
Malaysia	19.04	19.56	20.11	20.67	21.17	21.66	22.18	22.71	23.27	23.63
Maldives	0.23	0.24	0.25	0.25	0.26	0.27	0.27	0.28	0.27	0.28
Mongolia	2.20	2.23	2.27	2.30	2.27	2.30	2.33	2.36	2.39	2.42
Nauru	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nepal	19.06	19.39	19.86	20.34	20.83	21.33	21.84	22.37	22.90	23.59
New Caledonia	0.18	0.18	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20
New Zealand	3.51	3.55	3.60	3.66	3.71	3.76	3.79	3.81	3.83	3.85
Niue	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Pakistan	119.23	122.79	126.47	130.25	134.15	138.16	139.58	141.51	143.50	144.97
Papua New Guinea	3.85	3.92	4.00	4.07	4.40	4.50	4.60	4.70	4.81	4.92
Philippines	65.34	66.98	68.62	70.27	71.90	73.53	74.15	74.75	76.32	77.13
Samoa	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07
Singapore	3.23	3.32	3.42	3.53	3.67	3.79	3.92	3.95	4.02	4.13
Solomon Islands	0.34	0.35	0.37	0.38	0.39	0.40	0.42	0.43	0.45	0.46
Sri Lanka	17.43	17.65	17.89	18.14	18.32	18.55	18.77	19.04	19.36	19.50
Taiwan	20.80	21.00	21.18	21.36	21.53	21.74	21.93	22.09	22.28	22.41
Thailand	57.29	58.01	58.72	59.40	60.00	60.60	61.16	61.56	62.32	62.91
Tonga	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
U.S. Pacific Islands	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Vanuatu	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.20	0.20
Vietnam	69.41	71.03	72.51	73.96	74.36	75.08	76.11	77.12	77.69	79.18
Total	**3,044.03**	**3,091.00**	**3,138.45**	**3,186.42**	**3,233.56**	**3,277.03**	**3,324.78**	**3,366.13**	**3,408.71**	**3,450.11**
World Total	**5,414.96**	**5,497.88**	**5,583.04**	**5,664.75**	**5,745.22**	**5,817.97**	**5,901.62**	**5,978.41**	**6,066.34**	**6,144.81**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5000.
Notes: Sum of components may not equal total due to independent rounding.
Sources: The United Nations, Monthly Bulletin of Statistics, various issues. U.S. Department of Commerce, Bureau of the Census, International Data Base. International Monetary Fund, International Financial Statistics, various issues. Central Intelligence Agency, The World Factbook, various issues.

Table B2 World Gross Domestic Product at Market Exchange Rates, 1992 - 2001

(Billions of 1995 U.S. Dollars)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Bermuda	--	--	--	--	--	--	--	--	--	--
Canada	537.7	550.0	576.0	592.0	602.0	625.8	648.1	677.6	707.6	718.1
Greenland	--	--	--	--	--	--	--	--	--	--
Mexico	286.9	292.5	305.6	286.7	301.4	321.9	337.5	350.0	373.3	372.4
Saint Pierre and Miquelon	--	--	--	--	--	--	--	--	--	--
United States	6,749.3	6,928.4	7,208.1	7,400.5	7,664.8	8,004.5	8,347.3	8,690.7	9,016.8	9,039.5
Central & South America										
Antigua and Barbuda	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	--	--
Argentina	237.4	251.0	265.7	258.1	272.4	294.5	305.8	295.4	293.1	280.0
Aruba	--	--	--	--	--	--	--	--	--	--
Bahamas, The	3.0	3.0	3.0	3.1	--	--	--	--	--	--
Barbados	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.1	--	--
Belize	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	--
Bolivia	5.9	6.1	6.4	6.7	7.0	7.4	7.7	7.8	7.9	8.0
Brazil	608.4	638.3	675.6	704.2	722.9	746.5	748.2	754.1	760.1	771.5
Cayman Islands	--	--	--	--	--	--	--	--	--	--
Chile	52.1	55.8	59.0	65.2	70.0	74.7	77.1	76.3	79.7	81.9
Colombia	78.8	83.1	87.9	92.5	94.4	97.6	98.2	94.1	96.6	98.0
Costa Rica	10.0	10.8	11.3	11.7	11.8	12.5	13.5	14.6	15.0	15.1
Cuba	24.7	21.1	21.2	21.7	23.4	24.0	24.3	25.8	27.3	--
Dominica	0.2	0.2	0.2	0.2	0.2	0.2	--	--	--	--
Dominican Republic	10.6	10.9	11.4	11.9	12.8	13.9	14.9	16.0	17.3	--
Ecuador	16.5	16.8	17.5	17.9	18.3	18.9	19.0	17.6	18.0	--
El Salvador	7.8	8.4	8.9	9.5	9.7	10.1	10.4	10.8	11.0	11.2
French Guiana	--	--	--	--	--	--	--	--	--	--
Grenada	--	--	--	0.3	--	--	--	--	--	--
Guadeloupe	--	--	--	--	--	--	--	--	--	--
Guatemala	12.9	13.4	14.0	14.7	15.1	15.7	16.5	17.2	17.8	18.2
Guyana	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	--
Haiti	2.5	2.4	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.6
Honduras	3.6	3.9	3.8	4.0	4.1	4.3	4.4	4.3	4.6	4.7
Jamaica	5.5	5.6	5.6	5.7	5.6	5.5	5.5	5.5	5.5	5.6
Martinique	--	--	--	--	--	--	--	--	--	--
Montserrat	--	--	--	--	--	--	--	--	--	--
Netherlands Antilles	2.7	2.7	2.7	2.8	2.7	2.7	2.6	2.6	2.7	--
Nicaragua	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.3	2.3	2.4
Panama	7.2	7.6	7.8	7.9	8.1	8.5	8.9	9.1	9.4	9.4
Paraguay	8.0	8.4	8.6	9.0	9.1	9.4	9.3	9.4	9.3	9.6
Peru	41.8	43.8	49.4	53.6	55.0	58.7	58.4	58.9	60.8	60.9
Puerto Rico	37.4	39.1	40.8	42.6	43.8	45.8	48.9	52.4	54.3	--
Saint Kitts and Nevis	--	--	--	0.2	0.2	0.3	0.3	0.3	--	--
Saint Lucia	0.5	0.5	0.6	0.6	0.6	0.6	--	--	--	--
Saint Vincent/Grenadines	0.2	0.3	0.2	0.3	0.3	0.3	0.3	--	--	--
Suriname	--	--	--	0.5	--	--	--	--	--	--
Trinidad and Tobago	5.0	5.0	5.1	5.3	5.5	5.7	6.0	6.3	6.5	--
Turks and Caicos Islands	--	--	--	--	--	--	--	--	--	--
Uruguay	17.8	18.3	19.6	19.3	20.4	21.4	22.4	21.8	21.5	20.8
Venezuela	76.0	76.2	74.4	77.4	77.2	82.2	82.3	77.3	79.8	82.1
Virgin Islands, British	--	--	--	--	--	--	--	--	--	--
Virgin Islands, U.S.	--	--	--	--	--	--	--	--	--	--

See footnotes at end of table.

Table B2 World Gross Domestic Product at Market Exchange Rates, 1992 - 2001 (Continued)

(Billions of 1995 U.S. Dollars)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Western Europe										
Austria	224.7	225.9	231.3	235.2	239.9	243.1	251.0	257.1	265.7	268.7
Belgium	264.4	261.8	270.3	276.9	280.2	290.2	296.7	305.1	317.5	321.6
Denmark	166.3	166.3	175.4	180.3	184.8	190.3	195.0	199.5	205.5	207.4
Finland	121.2	119.8	124.5	129.3	134.5	142.9	150.6	163.2	172.3	173.6
France	1,512.2	1,498.7	1,525.7	1,554.4	1,571.0	1,600.8	1,656.4	1,709.3	1,780.5	1,812.3
Germany	2,387.1	2,361.2	2,416.6	2,458.3	2,476.9	2,512.8	2,558.4	2,608.4	2,686.8	2,701.9
Gibraltar	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	--
Greece	114.7	113.7	115.4	117.6	120.3	124.7	128.9	133.6	139.1	144.8
Iceland	6.6	6.7	7.0	7.0	7.3	7.7	8.0	8.3	8.7	9.0
Ireland	55.7	57.2	60.5	66.4	71.5	79.2	86.0	95.7	106.7	112.9
Italy	1,052.3	1,043.0	1,066.1	1,097.2	1,109.2	1,131.7	1,152.2	1,170.9	1,204.2	1,225.6
Luxembourg	--	--	--	18.3	18.7	20.4	21.7	22.9	24.6	25.5
Malta	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.8	4.0	4.0
Netherlands	374.9	377.3	389.2	398.4	410.8	425.8	441.5	479.8	497.0	502.6
Norway	130.3	133.8	141.2	146.6	153.8	161.0	164.2	165.7	170.1	172.9
Portugal	100.7	99.3	101.6	104.6	107.9	111.6	115.5	124.4	128.5	131.9
Spain	564.9	558.3	570.9	586.4	600.6	621.8	645.3	669.5	702.4	723.2
Sweden	229.2	224.2	231.6	240.2	242.8	247.8	256.7	268.3	277.9	281.3
Switzerland	305.6	304.1	305.7	307.2	308.2	313.5	320.9	326.1	335.8	340.3
Turkey	154.1	167.1	158.7	169.3	181.8	195.7	201.9	191.7	206.2	191.2
United Kingdom	1,028.5	1,054.1	1,103.2	1,135.2	1,165.0	1,205.1	1,240.4	1,267.6	1,309.4	1,334.9
Bosnia and Herzegovina	2.0	1.5	1.5	1.9	3.5	4.7	5.2	5.7	6.1	--
Croatia	18.2	16.7	17.6	18.8	19.9	21.3	21.8	21.7	22.4	23.4
Macedonia, TFYR	5.0	4.6	4.5	4.5	4.5	4.6	4.7	4.8	5.0	--
Slovenia	16.6	17.1	18.0	18.7	19.4	20.3	21.1	22.2	23.2	23.9
Yugoslavia	16.4	11.3	11.6	12.3	13.3	14.6	14.9	12.6	13.2	--
Eastern Europe & Former U.S.S.R.										
Albania	1.9	2.0	2.2	2.4	2.6	2.5	2.7	2.8	3.1	--
Bulgaria	12.9	12.6	12.9	13.1	11.7	10.9	11.2	11.5	12.1	12.6
Former Czechoslovakia	--	--	--	--	--	--	--	--	--	--
Czech Republic	--	48.1	49.1	52.0	54.3	53.9	53.3	53.5	55.3	57.1
Slovakia	--	17.1	17.9	19.1	20.3	21.4	22.3	22.5	23.0	23.8
Hungary	43.0	42.8	44.0	44.7	45.3	47.3	49.6	51.7	54.4	56.5
Poland	79.3	82.3	119.0	127.3	135.0	144.2	151.2	157.4	163.7	165.3
Romania	31.4	31.9	33.1	35.5	36.9	34.6	33.0	32.6	33.2	34.9
Armenia	1.3	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8
Azerbaijan	4.4	3.4	2.7	2.4	2.5	2.6	2.9	3.1	3.4	3.8
Belarus	14.4	13.3	11.8	10.5	10.8	12.1	13.1	13.5	14.3	14.9
Estonia	3.8	3.5	3.4	3.6	3.7	4.1	4.3	4.3	4.6	4.8
Georgia	5.1	3.3	2.9	3.0	3.3	3.7	3.8	3.9	4.0	4.2
Kazakhstan	23.6	21.4	18.8	17.2	17.3	17.6	17.3	17.5	19.3	21.8
Kyrgyzstan	2.3	2.0	1.6	1.5	1.6	1.8	1.8	1.9	2.0	2.1
Latvia	5.2	4.5	4.5	4.4	4.6	5.0	5.2	5.2	5.6	6.0
Lithuania	7.6	6.4	5.7	6.0	6.3	6.8	7.1	6.8	7.1	7.5
Moldova	2.1	2.1	1.5	1.4	1.4	1.4	1.3	1.2	1.3	1.3
Russia	441.8	403.2	352.0	337.9	325.9	328.6	312.9	322.7	349.4	366.9
Tajikistan	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.7
Turkmenistan	8.8	7.9	6.4	5.9	5.5	4.0	4.2	4.9	5.8	7.0
Ukraine	63.7	54.7	42.1	37.0	33.3	32.3	31.7	31.6	33.4	36.4
Uzbekistan	11.0	10.8	10.2	10.1	10.3	10.8	11.3	11.8	12.3	12.8

See footnotes at end of table.

Table B2 World Gross Domestic Product at Market Exchange Rates, 1992 - 2001 (Continued)

(Billions of 1995 U.S. Dollars)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	5.0	5.6	5.6	5.8	6.1	6.3	6.6	6.9	7.2	7.5
Cyprus	7.8	7.9	8.4	8.9	9.0	9.3	9.7	10.2	10.6	--
Iran	94.2	95.7	96.4	100.5	107.3	111.2	113.2	116.1	121.9	127.1
Iraq	66.0	46.0	46.4	44.6	45.5	56.9	65.4	71.9	81.3	--
Israel	76.1	78.5	83.8	89.8	93.8	96.5	99.1	102.1	109.1	107.3
Jordan	5.9	6.2	6.5	6.8	7.1	7.3	7.5	7.7	7.7	8.0
Kuwait	18.0	24.1	26.2	26.6	25.8	26.1	27.0	26.5	27.6	27.3
Lebanon	9.0	9.7	10.4	11.1	11.6	12.0	12.4	12.5	12.5	--
Oman	11.9	12.7	13.2	13.8	14.2	15.1	15.5	15.5	16.2	16.9
Qatar	7.6	7.2	7.5	8.1	8.9	9.0	9.0	9.4	10.5	11.0
Saudi Arabia	127.4	126.6	127.2	127.8	129.6	133.0	136.7	135.6	142.2	143.9
Syria	42.5	44.7	48.1	50.9	54.6	56.0	60.2	59.0	59.4	61.0
United Arab Emirates	37.4	37.5	38.6	40.0	44.0	44.5	42.2	44.1	47.6	49.4
Yemen	11.5	11.5	11.1	12.0	12.3	13.3	14.0	14.5	15.4	--
Africa										
Algeria	41.8	40.9	40.5	42.1	43.7	46.2	48.0	49.5	51.3	53.0
Angola	5.9	4.5	4.6	5.0	5.5	5.9	6.3	6.5	6.6	--
Benin	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.5	2.6	--
Botswana	4.1	4.1	4.3	4.4	4.7	4.9	5.3	5.5	6.0	6.3
Burkina Faso	2.2	2.1	2.2	2.3	2.4	2.6	2.7	2.9	3.0	3.1
Burundi	1.2	1.1	1.1	1.0	0.9	0.9	1.0	--	--	--
Cameroon	9.0	8.7	8.5	8.7	9.2	9.6	10.2	10.6	11.0	11.5
Cape Verde	--	--	--	--	--	--	--	--	--	--
Central African Republic	0.7	0.7	1.0	1.1	1.1	1.1	1.3	--	--	--
Chad	1.0	0.8	1.3	1.4	1.6	--	--	--	--	--
Comoros	--	--	--	0.2	--	--	--	--	--	--
Congo (Brazzaville)	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.4	--
Congo (Kinshasa)	6.7	5.8	5.6	5.6	5.6	5.3	5.4	4.9	4.7	--
Cote d'Ivoire (Ivory Coast)	9.3	9.3	9.5	10.0	10.9	11.5	12.1	12.3	12.1	12.0
Djibouti	--	--	--	--	--	--	--	--	--	--
Egypt	54.0	55.6	57.8	60.5	63.5	67.0	70.7	75.0	78.8	80.8
Equatorial Guinea	0.1	0.1	0.1	0.2	0.2	--	--	--	--	--
Eritrea	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	--
Ethiopia	4.6	5.1	5.2	5.5	6.1	6.4	6.4	6.4	6.7	6.9
Gabon	5.3	5.6	4.8	5.0	5.1	5.1	5.2	4.7	4.7	4.7
Gambia, The	0.3	0.3	0.3	0.3	--	--	--	--	--	--
Ghana	5.7	6.0	6.2	6.5	6.8	7.0	7.4	7.7	8.0	8.3
Guinea	--	--	--	--	--	--	--	--	--	--
Guinea-Bissau	0.4	0.4	0.4	0.5	0.5	0.5	--	--	--	--
Kenya	8.4	8.4	8.7	9.1	9.4	9.7	9.8	9.9	9.9	10.0
Lesotho	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.1
Liberia	--	--	--	--	--	--	--	--	--	--
Libya	43.3	34.8	30.8	30.2	31.6	31.1	30.6	31.1	32.7	34.1
Madagascar	3.0	3.1	3.1	3.2	3.2	3.3	3.5	3.6	3.8	4.0
Malawi	1.3	1.4	1.3	1.4	1.6	1.7	1.7	1.8	1.8	--
Mali	--	--	--	2.4	--	--	--	--	--	--
Mauritania	--	--	--	1.1	--	--	--	--	--	--
Mauritius	3.5	3.7	3.8	4.0	4.2	4.4	4.7	4.9	5.2	5.5
Morocco	32.2	31.9	35.2	33.0	36.9	36.1	38.8	38.8	39.2	41.7
Mozambique	1.9	2.0	2.2	2.2	2.4	2.7	3.0	3.3	3.4	--
Namibia	3.2	3.1	3.4	3.5	3.6	3.8	3.9	4.0	4.2	4.3
Niger	1.6	1.6	1.6	1.7	1.7	1.8	1.9	--	--	--
Nigeria	85.1	86.9	88.1	90.3	93.9	96.8	99.1	101.9	105.8	110.2
Reunion	--	--	--	--	--	--	--	--	--	--
Rwanda	2.1	1.9	1.0	1.3	1.5	1.7	1.8	2.0	2.1	2.2
Sao Tome and Principe	--	--	--	--	--	--	--	--	--	--
Senegal	4.2	4.1	4.3	4.5	4.7	4.9	5.2	5.5	5.8	--
Seychelles	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Sierra Leone	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	--
Somalia	--	--	--	--	--	--	--	--	--	--
South Africa	140.2	142.0	146.5	151.1	157.4	161.8	163.0	166.5	172.1	175.9
Sudan	6.1	6.4	6.6	8.3	8.7	9.5	10.1	10.6	11.4	--
Swaziland	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6

Table B2 World Gross Domestic Product at Market Exchange Rates, 1992 - 2001 (Continued)

(Billions of 1995 U.S. Dollars)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Tanzania	4.9	5.0	5.1	5.3	5.5	5.7	5.9	6.1	6.4	6.8
Togo	1.1	0.9	1.0	1.1	1.2	1.3	1.2	1.3	1.3	--
Tunisia	16.7	17.1	17.6	18.0	19.3	20.4	21.3	22.6	23.7	24.9
Uganda	4.8	5.1	5.6	6.2	6.5	6.9	7.4	7.8	8.1	8.5
Western Sahara	--	--	--	--	--	--	--	--	--	--
Zambia	3.4	3.7	3.6	3.5	3.7	3.8	3.7	3.8	3.9	4.1
Zimbabwe	6.6	6.7	7.2	7.1	7.7	8.0	8.2	8.1	7.7	7.1
Asia & Oceania										
Afghanistan	--	--	--	--	--	--	--	--	--	--
Australia	319.4	331.5	347.5	359.5	375.0	388.7	409.1	428.6	442.0	453.3
Bangladesh	25.5	26.7	27.8	29.1	30.6	32.4	34.2	36.0	38.2	40.2
Bhutan	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	--
Brunei	4.9	5.0	5.1	5.2	5.4	5.6	5.7	5.7	5.9	--
Burma	87.5	92.8	99.8	106.7	113.6	120.1	127.0	140.9	149.7	--
Cambodia	--	--	--	--	--	--	--	--	--	--
China	495.9	562.7	634.0	700.6	767.8	835.4	900.6	964.6	1,041.8	1,113.6
Fiji	1.8	1.8	1.9	2.0	2.1	2.0	1.2	2.2	--	--
French Polynesia	--	--	--	--	--	--	--	--	--	--
Guam	--	--	--	--	--	--	--	--	--	--
Hong Kong	119.7	127.1	134.1	139.2	145.5	152.7	144.6	149.0	164.5	164.6
India	300.0	314.6	338.5	364.5	390.9	408.2	432.8	463.4	481.6	505.7
Indonesia	163.1	173.7	186.8	202.1	217.9	228.2	198.2	199.9	209.4	215.9
Japan	5,131.4	5,158.3	5,211.2	5,292.9	5,469.6	5,574.8	5,515.9	5,559.3	5,644.9	5,651.5
Korea, North	10.4	10.0	9.8	9.4	9.0	8.4	8.3	8.3	8.3	--
Korea, South	393.4	415.0	449.2	489.3	522.3	548.5	511.8	567.5	620.4	639.2
Laos	1.4	1.5	1.6	1.8	1.9	2.0	2.1	2.2	2.4	2.5
Macau	6.2	6.5	6.7	7.0	6.9	6.9	6.6	6.4	6.7	6.8
Malaysia	67.4	74.1	80.9	88.8	97.7	104.9	97.2	103.1	111.7	112.2
Maldives	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Mongolia	0.9	0.9	0.9	1.0	1.0	1.0	1.1	--	--	--
Nepal	3.8	3.9	4.2	4.2	4.5	4.7	4.8	5.1	5.4	5.7
New Caledonia	--	--	--	--	--	--	--	--	--	--
New Zealand	52.5	55.8	58.7	60.8	62.7	64.3	64.0	66.7	68.0	71.0
Pakistan	53.2	54.2	56.4	59.2	62.2	62.1	63.7	65.5	69.0	71.3
Papua New Guinea	3.8	4.5	4.8	4.6	5.0	4.8	4.7	4.9	--	--
Philippines	66.4	67.8	70.8	74.1	78.5	82.5	82.1	84.8	88.2	91.2
Samoa	0.2	0.2	0.2	0.2	0.2	0.2	--	--	--	--
Singapore	61.3	69.0	76.9	83.1	89.4	97.1	97.0	103.7	114.4	112.0
Sri Lanka	10.9	11.7	12.4	13.0	13.5	14.4	15.1	15.7	16.6	16.4
Taiwan	211.0	225.8	241.9	257.4	273.1	291.3	304.7	321.2	340.0	332.6
Thailand	130.6	141.3	154.1	168.3	178.2	175.8	157.3	164.3	171.9	175.0
Tonga	--	--	--	--	--	--	--	--	--	--
Vanuatu	0.2	0.2	0.2	0.2	--	--	--	--	--	--
Vietnam	16.1	17.4	18.9	20.7	22.7	24.5	25.9	27.2	29.0	31.0

[1] Preliminary.

-- = Not applicable.

Notes: The data presented in this table are obtained by converting the gross domestic product (GDP) for each country measured in 1995 foreign currency units to U.S. dollars using 1995 annual average foreign currency market exchange rates. GDP figures theoretically should be converted by using purchasing power parity (PPP) rates to avoid the problem that the market exchange rate for a foreign currency is not a precise reflection of the purchasing power of that currency. In practice, it is often difficult to find generally agreeable PPP rates for some countries.

Sources: International Monetary Fund, International Financial Statistics, various issues. U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, various issues. International Energy Agency, Energy Balances of OECD Countries, various issues, and Energy Balances of Non-OECD Countries, various issues. DRI-WEFA, Asia Economic Outlook, First-Quarter 2002; Middle East and Africa Economic Outlook, First-Quarter 2002; Latin America Economic Outlook, First-Quarter 2002; Emerging Europe Quarterly Review and Outlook, Fourth-Quarter 2002; Global Insight, PlanEcon Review and Outlook for the Former Soviet Republic, September 30, 2002.

Appendix C

Conversion Factors and Heat Contents

Table C1 General Conversion Factors

Product	Barrels per Metric Ton
Refined Petroleum Products	
Asphalt	6.06
Distillate Fuel Oil	7.46
Gasoline, Aviation	8.90
Gasoline, Motor	8.53
Greases	6.30
Jet Fuel, Kerosene-Type	7.93
Jet Fuel, Naphtha-Type	8.27
Kerosene	7.73
Liquefied Petroleum Gas (LPG)	11.60
Lubricants	7.00
Miscellaneous Products	8.04
Naphthas	8.22
Natural Gas Liquids (NGL)	10.40
Natural Gasoline	10.00
Paraffin Oil	7.14
Paraffin Wax	7.87
Petrolatum	7.87
Petroleum Coke	5.51
Residual Fuel Oil	6.66
White Spirits	8.50
Crude Oil	See Table C2 on next page.

Product Unit	Equivalent
Liquid Fuels	
42 U.S. gallons	1 barrel
1 cubic meter	6.289 barrels
159 liters	1 barrel
Gaseous Fuels	
35.315 cubic feet	1 cubic meter
Liquefied Natural Gas (LNG)	
1 metric ton	48,700 cubic feet of natural gas
Solid Fuels	
1 long ton	1.120 short tons
1 metric ton	1.10231136 short tons
Heat	
1 quadrillion (10^{15}) British thermal units (Btu)	1.055056 exa (10^{18}) joules
1 exa (10^{18}) joule	0.9478 quadrillion (10^{15}) Btu

Table C2 Barrels of Crude Oil Per Metric Ton, 1992 - 2001

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	7.186	7.186	7.186	7.186	7.186	7.186	7.186	7.186	7.186	7.186
Mexico	6.965	6.965	6.965	6.965	6.965	6.965	6.965	6.965	6.965	6.965
United States	7.333	7.333	7.333	7.333	7.333	7.333	7.333	7.333	7.333	7.333
Central & South America										
Argentina	7.120	7.120	7.120	7.120	7.120	7.120	7.120	7.120	7.120	7.120
Bolivia	7.881	7.881	7.881	7.881	7.881	7.881	7.881	7.881	7.881	7.881
Brazil	7.056	7.056	7.056	7.056	7.056	7.056	7.056	7.056	7.056	7.056
Chile	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506
Colombia	7.080	7.080	7.080	7.080	7.080	7.080	7.080	7.080	7.080	7.080
Cuba	6.449	6.449	6.449	6.449	6.449	6.449	6.449	6.449	6.449	6.449
Ecuador	7.130	7.130	7.130	7.130	7.130	7.130	7.130	7.130	7.130	7.130
Peru	7.407	7.407	7.407	7.407	7.407	7.407	7.407	7.407	7.407	7.407
Trinidad and Tobago	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084
Venezuela	6.890	6.890	6.890	6.890	6.890	6.890	7.310	7.121	7.127	7.127
Western Europe										
Austria	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200
Denmark	7.405	7.405	7.405	7.405	7.405	7.405	7.405	7.405	7.405	7.405
France	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332
Germany	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330
Greece	7.231	7.231	7.231	7.231	7.231	7.231	7.231	7.231	7.231	7.231
Italy	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300
Netherlands	7.239	7.239	7.239	7.239	7.239	7.239	7.239	7.239	7.239	7.239
Norway	7.644	7.644	7.644	7.644	7.644	7.644	7.644	7.644	7.644	7.644
Spain	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506
Sweden	6.623	6.623	6.623	6.623	6.623	6.623	6.623	6.623	6.623	6.623
Turkey	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200	7.200
United Kingdom	7.523	7.523	7.523	7.523	7.523	7.523	7.523	7.523	7.523	7.523
Croatia	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418
Slovenia	--	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418
Yugoslavia	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418
Eastern Europe & Former U.S.S.R.										
Albania	6.594	6.594	6.594	6.594	6.594	6.594	6.594	6.594	6.594	6.594
Bulgaria	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332	7.332
Former Czechoslovakia	6.780	--	--	--	--	--	--	--	--	--
Czech Republic	--	6.780	6.780	6.780	6.780	6.780	6.780	6.780	6.780	6.780
Slovakia	--	6.780	6.780	6.780	6.780	6.780	6.780	6.780	6.780	6.780
Hungary	6.690	6.690	6.690	6.690	6.690	6.690	6.690	6.690	6.690	6.690
Poland	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418	7.418
Romania	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506
Azerbaijan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Belarus	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Georgia	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Lithuania	--	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Kazakhstan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Kyrgyzstan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Russia	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Tajikistan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Turkmenistan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Ukraine	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270
Uzbekistan	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270	7.270

See footnotes at end of table.

Table C2 Barrels of Crude Oil Per Metric Ton, 1992 - 2001 (Continued)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Middle East										
Bahrain	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320
Iran	7.350	7.350	7.350	7.350	7.350	7.350	7.296	7.284	7.284	7.284
Iraq	7.430	7.430	7.430	7.430	7.430	7.430	7.413	7.413	7.413	7.413
Israel	7.247	7.247	7.247	7.247	7.247	7.247	7.247	7.247	7.247	7.247
Jordan	7.190	7.190	7.190	7.190	7.190	7.190	7.190	7.190	7.190	7.190
Kuwait	7.250	7.250	7.250	7.250	7.250	7.250	7.246	7.258	7.258	7.258
Oman	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330	7.330
Qatar	7.500	7.500	7.500	7.500	7.500	7.500	7.590	7.618	7.618	7.618
Saudi Arabia	7.323	7.323	7.323	7.323	7.323	7.323	7.284	7.285	7.285	7.285
Syria	7.290	7.290	7.290	7.290	7.290	7.290	7.290	7.290	7.290	7.290
United Arab Emirates	7.596	7.596	7.596	7.596	7.596	7.596	7.588	7.553	7.553	7.553
Yemen	7.631	7.631	7.631	7.631	7.631	7.631	7.631	7.631	7.631	7.631
Africa										
Algeria	8.130	8.130	8.130	8.130	8.130	8.130	7.945	7.945	7.945	7.945
Angola	7.409	7.409	7.409	7.409	7.409	7.410	7.410	7.410	7.410	7.410
Benin	6.870	6.870	6.870	6.870	6.870	6.870	6.870	6.870	6.870	6.870
Cameroon	7.205	7.205	7.205	7.205	7.205	7.205	7.205	7.205	7.205	7.205
Congo (Brazzaville)	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506	7.506
Congo (Kinshasa)	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320
Cote d'Ivoire (Ivory Coast)	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285
Egypt	7.256	7.256	7.256	7.256	7.256	7.260	7.260	7.260	7.260	7.260
Equatorial Guinea	7.275	7.275	7.275	7.275	7.275	7.275	7.275	7.275	7.275	7.275
Gabon	7.305	7.305	7.305	7.305	7.305	7.305	7.305	7.305	7.305	7.305
Ghana	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285
Libya	7.580	7.580	7.580	7.580	7.580	7.580	7.558	7.558	7.681	7.681
Morocco	7.600	7.600	7.600	7.600	7.600	7.600	7.600	7.600	7.600	7.600
Nigeria	7.315	7.315	7.315	7.315	7.315	7.500	7.411	7.411	7.411	7.411
South Africa	--	--	--	--	--	--	7.720	7.720	7.720	7.720
Sudan	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452
Tunisia	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689	7.689
Asia & Oceania										
Australia	7.868	7.868	7.868	7.868	7.868	7.868	7.868	7.868	7.868	7.868
Bangladesh	7.453	7.453	7.453	7.453	7.453	7.453	7.453	7.453	7.453	7.453
Brunei	7.340	7.340	7.340	7.340	7.340	7.340	7.340	7.340	7.340	7.340
Burma	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084	7.084
China	7.320	7.320	7.320	7.320	7.320	7.300	7.300	7.300	7.300	7.300
India	7.440	7.440	7.440	7.440	7.440	7.330	7.330	7.330	7.330	7.330
Indonesia	7.360	7.360	7.360	7.360	7.360	7.360	7.234	7.234	7.234	7.234
Japan	7.357	7.357	7.357	7.357	7.357	7.357	7.357	7.357	7.357	7.357
Malaysia	7.641	7.641	7.641	7.641	7.641	7.641	7.641	7.641	7.641	7.641
New Zealand	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321
Pakistan	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500
Papua New Guinea	7.809	7.809	7.809	7.809	7.809	7.809	7.809	7.809	7.809	7.809
Philippines	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285	7.285
Taiwan	6.568	6.568	6.568	6.568	6.568	6.568	6.568	6.568	6.568	6.568
Thailand	6.758	6.758	6.758	6.758	6.758	6.758	6.758	6.758	6.758	6.758
Vietnam	7.082	7.082	7.082	7.082	7.082	7.082	7.082	7.082	7.082	7.082

-- = Not applicable.
Sources: See sources at the end of Section 3.

Table C3 Gross Heat Content of Crude Oil, 1992 - 2001

(Thousand Btu per Barrel)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810
Mexico	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010
United States	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800
Central & South America										
Argentina	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993
Bolivia	5,574	5,574	5,574	5,574	5,574	5,574	5,574	5,574	5,574	5,574
Brazil	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910
Chile	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780
Colombia	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023
Cuba	6,393	6,393	6,393	6,393	6,393	6,393	6,393	6,393	6,393	6,393
Ecuador	5,986	5,986	5,986	5,986	5,986	5,986	5,986	5,986	5,986	5,986
Peru	5,831	5,831	5,831	5,831	5,831	5,831	5,831	5,831	5,831	5,831
Trinidad and Tobago	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023	6,023
Venezuela	6,135	6,135	6,135	6,135	6,135	6,135	6,135	6,135	6,135	6,135
Western Europe										
Austria	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020
Denmark	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677
France	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869
Germany	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926
Greece	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926
Italy	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158
Netherlands	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158
Norway	5,620	5,620	5,620	5,620	5,620	5,620	5,620	5,620	5,620	5,620
Spain	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780
Sweden	6,148	6,148	6,148	6,148	6,148	6,148	6,148	6,148	6,148	6,148
Turkey	5,976	5,976	5,976	5,976	5,976	5,976	5,976	5,976	5,976	5,976
United Kingdom	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803
Croatia	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823
Slovenia	--	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823
Yugoslavia	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823
Eastern Europe & Former U.S.S.R.										
Albania	6,305	6,305	6,305	6,305	6,305	6,305	6,305	6,305	6,305	6,305
Bulgaria	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879
Former Czechoslovakia	6,211	--	--	--	--	--	--	--	--	--
Czech Republic	--	6,211	6,211	6,211	6,211	6,211	6,211	6,211	6,211	6,211
Slovakia	--	6,211	6,211	6,211	6,211	6,211	6,211	6,211	6,211	6,211
Hungary	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249
Poland	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820
Romania	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780
Azerbaijan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Belarus	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Georgia	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Kazakhstan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Kyrgyzstan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Lithuania	--	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Russia	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Tajikistan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Turkmenistan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Ukraine	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
Uzbekistan	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880

See footnotes at end of table.

Table C3 Gross Heat Content of Crude Oil, 1992 - 2001 (Continued)

(Thousand Btu per Barrel)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Middle East										
Bahrain	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879
Iran	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888
Iraq	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820	5,820
Israel	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920	5,920
Jordan	5,956	5,956	5,956	5,956	5,956	5,956	5,956	5,956	5,956	5,956
Kuwait	5,921	5,921	5,921	5,921	5,921	5,921	5,921	5,921	5,921	5,921
Oman	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869	5,869
Qatar	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777
Saudi Arabia	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910	5,910
Syria	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158	6,158
United Arab Emirates	5,788	5,788	5,788	5,788	5,788	5,788	5,788	5,788	5,788	5,788
Yemen	5,725	5,725	5,725	5,725	5,725	5,725	5,725	5,725	5,725	5,725
Africa										
Algeria	5,555	5,555	5,555	5,555	5,555	5,555	5,555	5,555	5,555	5,555
Angola	5,828	5,828	5,828	5,828	5,828	5,828	5,828	5,828	5,828	5,828
Benin	6,142	6,142	6,142	6,142	6,142	6,142	6,142	6,142	6,142	6,142
Cameroon	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948
Congo (Brazzaville)	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780	5,780
Congo (Kinshasa)	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879
Cote d'Ivoire (Ivory Coast)	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899
Egypt	5,922	5,922	5,922	5,922	5,922	5,922	5,922	5,922	5,922	5,922
Equatorial Guinea	5,464	5,464	5,464	5,464	5,464	5,464	5,464	5,464	5,464	5,464
Gabon	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888
Ghana	5,936	5,936	5,936	5,936	5,936	5,936	5,936	5,936	5,936	5,936
Libya	5,775	5,775	5,775	5,775	5,775	5,775	5,775	5,775	5,775	5,775
Morocco	5,738	5,738	5,738	5,738	5,738	5,738	5,738	5,738	5,738	5,738
Nigeria	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880	5,880
South Africa	--	--	--	--	--	--	5,657	5,657	5,657	5,657
Sudan	5,084	5,084	5,084	5,084	5,084	5,084	5,084	5,084	5,084	5,084
Tunisia	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677	5,677
Asia & Oceania										
Australia	5,578	5,578	5,578	5,578	5,578	5,578	5,578	5,578	5,578	5,578
Bangladesh	5,792	5,792	5,792	5,792	5,792	5,792	5,792	5,792	5,792	5,792
Brunei	5,865	5,865	5,865	5,865	5,865	5,865	5,865	5,865	5,865	5,865
Burma	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020
China	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879	5,879
India	5,729	5,729	5,729	5,729	5,729	5,729	5,729	5,729	5,729	5,729
Indonesia	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740
Japan	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899	5,899
Malaysia	5,697	5,697	5,697	5,697	5,697	5,697	5,697	5,697	5,697	5,697
New Zealand	5,441	5,441	5,441	5,441	5,441	5,441	5,441	5,441	5,441	5,441
Pakistan	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777	5,777
Papua New Guinea	5,607	5,607	5,607	5,607	5,607	5,607	5,607	5,607	5,607	5,607
Philippines	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902
Taiwan	6,321	6,321	6,321	6,321	6,321	6,321	6,321	6,321	6,321	6,321
Thailand	6,317	6,317	6,317	6,317	6,317	6,317	6,317	6,317	6,317	6,317
Vietnam	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022

-- = Not applicable.

Sources: See sources at the end of Section 3.

Table C4 Gross Heat Content of Natural Gas Plant Liquids, 1992 - 2001

(Thousand Btu per Barrel)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	3,980	3,980	3,980	3,980	3,980	3,980	3,980	3,980	3,980	3,980
Mexico	3,620	3,620	3,620	3,620	3,620	3,620	3,620	3,620	3,620	3,620
United States	3,804	3,801	3,794	3,796	3,777	3,762	3,769	3,744	3,733	3,735
Central & South America										
Argentina	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820	3,820
Bolivia	4,130	4,130	4,130	4,130	4,130	4,130	4,130	4,130	4,130	4,130
Brazil	4,250	4,250	4,250	4,250	4,250	4,250	4,250	4,250	4,250	4,250
Chile	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Colombia	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286
Cuba	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344
Ecuador	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235
Peru	4,617	4,617	4,617	4,617	4,617	4,617	4,617	4,617	4,617	4,617
Trinidad and Tobago	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344	4,344
Venezuela	4,195	4,195	4,195	4,195	4,195	4,195	4,195	4,195	4,195	4,195
Western Europe										
Austria	4,262	4,262	4,262	4,262	4,262	4,262	4,262	4,262	4,262	4,262
France	4,385	4,385	4,385	4,385	4,385	4,385	4,385	4,385	4,385	4,385
Greece	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050
Italy	4,259	4,259	4,259	4,259	4,259	4,259	4,259	4,259	4,259	4,259
Netherlands	4,347	4,347	4,347	4,347	4,347	4,347	4,347	4,347	4,347	4,347
Norway	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348
Spain	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348
United Kingdom	4,490	4,490	4,490	4,490	4,490	4,490	4,490	4,490	4,490	4,490
Croatia	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349
Eastern Europe & Former U.S.S.R.										
Former Czechoslovakia	4,645	--	--	--	--	--	--	--	--	--
Czech Republic	--	4,645	4,645	4,645	4,645	4,645	4,645	4,645	4,645	4,645
Hungary	4,386	4,386	4,386	4,386	4,386	4,386	4,386	4,386	4,386	4,386
Poland	4,454	4,454	4,454	4,454	4,454	4,454	4,454	4,454	4,454	4,454
Romania	4,619	4,619	4,619	4,619	4,619	4,619	4,619	4,619	4,619	4,619
Azerbaijan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Kazakhstan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Kyrgyzstan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Russia	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Tajikistan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Turkmenistan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Ukraine	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Uzbekistan	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
Middle East										
Bahrain	4,287	4,287	4,287	4,287	4,287	4,287	4,287	4,287	4,287	4,287
Iran	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348
Iraq	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348
Kuwait	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190
Oman	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581	4,581
Qatar	3,790	3,790	3,790	3,790	3,790	3,790	3,790	3,790	3,790	3,790
Saudi Arabia	4,265	4,265	4,265	4,265	4,265	4,265	4,265	4,265	4,265	4,265
Syria	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
United Arab Emirates	4,532	4,532	4,532	4,532	4,532	4,532	4,532	4,532	4,532	4,532

See footnotes at end of table.

Table C4 Gross Heat Content of Natural Gas Plant Liquids, 1992 - 2001 (Continued)

(Thousand Btu per Barrel)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Africa										
Algeria	5,080	5,080	5,080	5,080	5,080	5,080	5,080	5,080	5,080	5,080
Egypt	4,940	4,940	4,940	4,940	4,940	4,940	4,940	4,940	4,940	4,940
Libya	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350
South Africa	4,649	4,649	4,649	4,649	4,649	4,649	4,649	4,649	4,649	4,649
Tunisia	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
Asia & Oceania										
Australia	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290
Bangladesh	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050
Brunei	4,506	4,506	4,506	4,506	4,506	4,506	4,506	4,506	4,506	4,506
Burma	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348	4,348
India	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600
Indonesia	4,060	4,060	4,060	4,060	4,060	4,060	4,060	4,060	4,060	4,060
Japan	4,327	4,327	4,327	4,327	4,327	4,327	4,327	4,327	4,327	4,327
Malaysia	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410
New Zealand	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075
Pakistan	4,372	4,372	4,372	4,372	4,372	4,372	4,372	4,372	4,372	4,372
Taiwan	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825
Thailand	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349	4,349

- -= Not applicable.

Sources: See sources at the end of Section 3.

Table C5 Gross Heat Content of Dry Natural Gas, 1992 - 2001

(Btu per Cubic Foot)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	1,017	1,017	1,035	1,021	1,021	1,023	1,024	1,023	1,020	1,017
Mexico	1,110	1,110	1,111	1,111	1,135	1,068	1,062	1,059	1,059	1,059
United States	1,030	1,027	1,028	1,027	1,027	1,026	1,031	1,027	1,025	1,025
Central & South America										
Argentina	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045
Barbados	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Bolivia	1,000	1,000	1,000	1,036	1,043	1,043	1,043	1,043	1,043	1,043
Brazil	1,174	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040
Chile	1,000	1,000	1,000	1,000	1,050	1,050	1,050	1,050	1,050	1,050
Colombia	929	929	929	929	929	929	929	929	929	929
Cuba	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Ecuador	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Peru	929	929	929	929	929	929	929	929	929	929
Trinidad and Tobago	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045
Venezuela	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191
Western Europe										
Austria	1,060	1,063	1,063	1,063	1,063	1,063	1,063	1,060	1,060	1,063
Belgium	989	1,194	1,154	--	1,065	--	--	--	859	--
Denmark	1,102	1,111	1,111	1,111	1,111	1,119	1,128	1,130	1,135	1,130
France	1,102	1,052	1,052	1,040	1,032	1,027	1,014	1,008	1,008	1,008
Germany	893	895	895	895	895	895	895	895	895	895
Greece	1,444	1,433	1,563	1,535	1,521	1,522	1,524	1,570	1,467	1,434
Ireland	1,010	1,009	1,009	1,011	1,011	1,008	1,008	1,009	1,009	1,009
Italy	1,013	1,001	1,001	1,001	1,020	1,023	1,023	1,023	1,023	1,023
Netherlands	894	894	894	894	894	894	894	894	894	894
Norway	1,093	1,099	1,113	1,121	1,111	1,106	1,086	1,081	1,083	1,078
Spain	1,140	1,157	1,156	1,141	1,141	1,142	1,140	1,142	1,140	1,139
Switzerland	984	1,207	1,074	--	--	--	--	--	--	--
Turkey	1,028	1,028	1,028	1,028	1,028	1,029	1,028	1,028	1,028	1,028
United Kingdom	1,040	1,038	1,043	1,053	1,053	1,053	1,061	1,059	1,057	1,057
Bosnia and Herzegovina	992	--	--	992	--	--	--	--	--	--
Croatia	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Slovenia	959	959	959	959	1,057	1,057	1,057	1,057	1,057	1,057
Yugoslavia	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061

See footnotes at end of table.

Table C5 Gross Heat Content of Dry Natural Gas, 1992 - 2001 (Continued)

(Btu per Cubic Foot)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Eastern Europe & Former U.S.S.R.										
Albania	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044
Bulgaria	990	990	990	989	989	989	989	989	989	989
Former Czechoslovakia	974	--	--	--	--	--	--	--	--	--
Czech Republic	--	987	954	973	963	944	927	951	965	956
Slovakia	--	971	971	970	960	960	960	960	960	960
Hungary	948	962	966	968	963	960	955	963	968	957
Poland	760	791	791	781	782	784	792	779	793	797
Romania	1,009	999	999	996	996	996	996	996	996	996
Azerbaijan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Belarus	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037
Georgia	1,047	--	--	--	--	1,047	1,047	1,047	1,047	1,047
Kazakhstan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Kyrgyzstan	1,033	1,035	1,035	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Russia	1,008	1,008	1,008	1,008	1,009	1,009	1,009	1,009	1,009	1,009
Tajikistan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Turkmenistan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Ukraine	1,033	1,033	1,033	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Uzbekistan	1,015	1,015	1,015	1,017	1,017	1,017	1,017	1,017	1,017	1,017
Middle East										
Bahrain	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Iran	1,056	1,056	1,056	1,056	1,056	1,056	1,056	1,056	1,056	1,056
Iraq	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Israel	1,039	1,039	1,039	1,039	1,039	1,039	1,039	1,039	1,039	1,039
Jordan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Kuwait	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Oman	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Qatar	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Saudi Arabia	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Syria	962	962	962	962	962	962	962	962	962	962
United Arab Emirates	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Africa										
Algeria	1,180	1,180	1,180	1,180	1,127	1,127	1,127	1,127	1,127	1,127
Angola	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Cote d'Ivoire (Ivory Coast)	--	--	--	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Egypt	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Equatorial Guinea	--	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Gabon	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Libya	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Morocco	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Mozambique	--	--	--	--	--	--	1,047	1,047	1,047	1,047
Nigeria	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Senegal	--	899	899	899	899	899	899	899	899	899
South Africa	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Tunisia	1,236	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174

See footnotes at end of table.

Table C5 Gross Heat Content of Dry Natural Gas, 1992 - 2001 (Continued)

(Btu per Cubic Foot)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Asia & Oceania										
Afghanistan	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Australia	1,063	1,065	1,063	1,067	1,062	1,067	1,069	1,088	1,088	1,090
Bangladesh	941	989	989	979	979	979	979	979	979	979
Brunei	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154
Burma	1,014	1,054	1,054	1,054	1,054	1,054	1,054	1,054	1,054	1,054
China	1,151	1,151	1,151	1,162	1,162	1,162	1,162	1,162	1,162	1,162
India	1,151	1,151	1,151	1,151	1,034	1,034	1,034	1,034	1,034	1,034
Indonesia	1,100	1,090	1,090	1,090	1,090	1,090	1,090	1,090	1,090	1,090
Japan	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101
Malaysia	1,043	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053
New Zealand	1,017	1,024	1,031	1,036	1,043	1,051	1,051	1,051	1,040	1,032
Pakistan	934	934	934	934	934	934	934	934	934	934
Papua New Guinea	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
Philippines	--	--	--	977	977	977	977	977	977	977
Taiwan	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Thailand	1,000	1,000	1,000	1,000	977	977	977	977	977	977
Vietnam	1,026	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036

-- = Not applicable.

Sources: See sources at the end of Section 4.

Table C6 Gross Heat Content of Coal, 1992 - 2001

(Thousand Btu per Short Ton)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	22,414	22,485	22,747	22,957	22,957	24,044	23,928	23,875	23,863	23,865
Mexico	19,352	19,352	15,644	15,958	16,321	17,492	17,012	17,012	17,012	17,012
United States	21,682	21,418	21,394	21,326	21,322	21,296	21,418	21,070	21,072	20,905
Central & South America										
Argentina	22,300	22,300	22,300	22,300	22,300	22,300	22,300	22,300	22,300	22,300
Brazil	16,000	16,000	16,000	14,746	14,746	14,287	14,287	14,363	14,363	14,363
Chile	24,847	24,847	24,847	24,442	24,442	25,664	25,664	25,664	25,664	25,664
Colombia	23,405	23,405	21,296	21,296	21,296	24,568	24,568	24,568	24,568	24,568
Peru	19,435	19,435	19,435	19,435	19,435	26,458	26,458	26,458	26,458	26,458
Venezuela	23,917	23,917	23,917	23,917	23,917	27,592	27,592	27,592	27,592	27,592
Western Europe										
Austria	9,372	9,373	9,370	9,370	9,370	9,839	9,929	9,929	9,929	9,929
Belgium	17,054	17,054	15,184	17,257	15,997	19,428	22,417	19,908	19,908	19,908
France	22,535	22,273	22,109	22,714	23,163	22,897	23,057	23,144	23,372	22,876
Germany	10,544	10,690	10,992	11,006	10,532	11,208	11,096	11,041	10,541	10,009
Greece	4,479	4,940	4,705	4,686	4,330	4,951	5,046	5,046	5,046	5,046
Ireland	23,414	23,604	22,469	22,469	22,469	24,564	24,564	--	--	--
Italy	10,819	9,216	8,608	8,348	4,172	4,381	4,381	4,381	4,381	4,381
Norway	24,168	24,168	24,161	24,161	24,161	25,369	25,369	25,369	25,369	25,369
Portugal	12,477	12,477	12,477	--	--	--	--	--	--	--
Spain	13,429	13,393	13,704	11,539	11,640	12,181	11,651	11,375	11,378	11,378
Sweden	23,404	23,404	23,404	--	--	--	--	--	--	--
Turkey	8,555	8,746	7,848	7,658	7,620	8,101	7,698	7,383	7,437	7,437
United Kingdom	20,860	20,849	20,828	21,728	21,645	22,984	22,470	22,727	22,727	22,727
Bosnia and Herzegovina	7,958	7,958	7,958	7,646	7,646	8,013	8,013	13,310	13,310	13,252
Croatia	29,308	27,664	28,085	22,675	23,522	22,678	22,678	22,678	--	--
Macedonia, TFYR	7,936	7,936	7,936	7,936	7,936	8,013	8,013	8,013	8,013	8,013
Slovenia	9,995	9,923	9,679	11,054	10,846	10,115	10,255	10,195	10,183	10,192
Yugoslavia	7,989	7,981	7,984	5,275	8,452	8,043	8,045	8,032	8,048	8,028
Eastern Europe & Former U.S.S.R.										
Albania	8,463	8,463	8,463	8,463	8,463	8,886	8,886	8,882	8,882	8,882
Bulgaria	8,086	8,214	8,073	7,755	8,093	8,185	8,182	8,062	8,087	8,038
Former Czechoslovakia	20,783	--	--	--	--	--	--	--	--	--
Czech Republic	--	11,666	11,722	11,737	12,270	11,519	11,521	11,788	11,795	11,796
Slovakia	--	10,712	10,712	10,540	10,540	11,067	11,067	11,067	11,067	11,067
Hungary	8,877	7,816	7,808	7,528	7,604	7,998	7,845	7,797	7,785	7,784
Poland	16,111	16,036	16,166	15,462	15,833	16,526	16,110	16,097	15,964	15,976
Romania	6,737	6,901	6,944	6,882	7,137	6,964	6,979	7,543	7,254	7,259
Georgia	16,840	16,840	16,840	15,976	15,976	13,229	13,229	13,229	13,229	13,229
Kazakhstan	16,561	16,663	12,602	12,603	13,888	13,229	13,229	13,229	13,229	13,229
Kyrgyzstan	12,451	11,977	11,910	12,523	13,888	13,229	13,229	13,229	13,229	13,229
Moldova	16,840	16,840	16,840	16,840	13,888	13,229	--	--	--	--
Russia	15,670	15,686	15,719	15,794	16,393	15,521	15,507	18,381	18,438	18,302
Tajikistan	15,976	15,976	15,976	15,976	15,976	16,774	16,774	16,774	16,774	16,774
Ukraine	17,489	17,517	17,556	20,846	20,321	19,371	19,374	19,398	19,406	19,411
Uzbekistan	12,729	12,741	12,725	12,728	12,687	13,300	13,311	13,311	13,324	13,322

See footnotes at end of table.

Table C6 Gross Heat Content of Coal, 1992 - 2001 (Continued)

(Thousand Btu per Short Ton)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Middle East										
Iran	26,232	26,232	26,232	25,200	24,403	23,245	23,245	23,245	23,245	23,245
Africa										
Algeria	24,403	24,403	24,403	25,200	25,200	23,245	23,245	23,245	23,245	23,245
Botswana	22,000	22,000	22,000	25,200	24,403	23,245	23,245	23,245	23,245	23,245
Cameroon	18,000	18,000	18,000	18,000	18,000	23,245	23,245	23,245	23,245	23,245
Congo (Kinshasa)	23,927	23,927	23,927	25,200	24,403	22,776	22,776	22,776	22,776	22,776
Morocco	30,103	30,103	30,103	25,200	22,221	21,166	21,166	21,166	21,166	21,166
Mozambique	24,403	24,403	24,403	25,200	24,403	22,565	22,565	22,565	22,565	22,565
Niger	25,200	25,200	25,200	25,200	24,403	23,245	23,245	23,245	23,245	23,245
Nigeria	24,403	24,403	24,403	25,200	24,403	23,245	23,245	23,245	23,245	23,245
South Africa	20,421	20,412	20,379	20,371	20,381	21,302	21,302	21,302	21,302	21,302
Swaziland	23,386	23,386	23,386	23,387	24,403	23,245	23,245	23,245	23,245	23,245
Tanzania	24,403	24,403	24,403	25,200	23,245	23,245	23,245	23,245	23,245	23,245
Zambia	24,244	25,308	25,308	21,246	23,415	22,304	22,304	22,304	22,304	22,304
Zimbabwe	24,403	24,403	24,403	24,403	24,403	24,371	24,371	24,371	24,371	24,371
Asia & Oceania										
Afghanistan	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
Australia	17,540	17,782	18,374	18,485	18,386	19,542	19,265	19,533	19,704	19,916
Bhutan	17,500	18,500	18,500	25,200	24,403	23,245	23,245	23,245	23,245	23,245
Burma	15,606	17,531	17,800	18,354	18,033	15,801	12,619	16,283	19,042	19,240
China	18,100	17,973	17,978	17,103	17,103	18,409	18,428	18,469	18,512	18,512
India	17,050	17,042	16,907	19,855	18,177	17,680	17,674	17,695	17,699	17,705
Indonesia	24,403	24,403	24,402	25,199	24,403	23,245	23,245	23,245	23,245	23,245
Japan	21,102	21,102	19,834	19,834	19,834	20,826	20,826	20,826	20,826	20,826
Korea, North	24,403	24,403	24,403	24,403	24,403	23,245	23,245	23,245	23,245	23,245
Korea, South	16,200	16,200	16,200	16,199	16,199	17,009	17,009	17,009	17,009	17,009
Laos	22,500	22,500	22,500	25,200	24,403	24,403	24,403	24,403	24,403	24,403
Malaysia	24,403	24,403	24,403	25,200	27,776	26,458	26,458	26,458	26,458	26,458
Mongolia	9,237	9,237	9,238	9,720	9,305	8,862	8,865	8,864	8,088	8,016
Nepal	8,000	8,000	8,000	8,000	7,936	7,559	7,559	7,559	7,559	7,559
New Zealand	22,558	22,556	21,459	20,548	20,703	19,580	19,675	19,701	19,667	19,723
Pakistan	19,443	19,443	19,443	19,124	17,753	16,910	16,910	16,910	16,910	16,910
Philippines	20,206	20,206	20,205	17,003	19,016	18,113	18,116	18,117	18,120	18,120
Taiwan	23,500	22,324	22,324	25,200	24,403	23,434	23,434	23,434	23,434	--
Thailand	9,415	9,418	9,412	15,843	11,510	10,962	10,962	10,961	10,961	10,961
Vietnam	24,403	29,308	29,308	25,200	19,816	21,166	21,166	21,166	21,166	21,166

-- = Not applicable.

Note: Heat contents are calculated based on individual heat contents for production of anthracite, bituminous, and lignite.

Sources: See sources at the end of Section 5.

Table C7 Gross Heat Content of Hydroelectric Power, 1992 - 2001

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Mexico	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
United States	10,342	10,309	10,316	10,312	10,340	10,213	10,197	10,226	10,201	10,201
Central & South America										
Argentina	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Bolivia	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403
Brazil	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Chile	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Colombia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Costa Rica	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Dominican Republic	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
Ecuador	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
El Salvador	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402
Guatemala	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Haiti	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410
Honduras	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402
Jamaica	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403
Nicaragua	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415
Panama	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398
Paraguay	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Peru	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Puerto Rico	10,389	10,389	10,389	10,389	10,389	10,389	10,389	10,389	10,389	10,389
Suriname	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Uruguay	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Venezuela	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Western Europe										
Austria	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Belgium	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Finland	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
France	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Germany	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Greece	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Iceland	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Ireland	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398
Italy	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Luxembourg	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409
Norway	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Portugal	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Spain	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Sweden	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Switzerland	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Turkey	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
United Kingdom	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Bosnia and Herzegovina	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Croatia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Macedonia, TFYR	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Slovenia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Yugoslavia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400

See footnotes at end of table.

Table C7 Gross Heat Content of Hydroelectric Power, 1992 - 2001 (Continued)

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Eastern Europe & Former U.S.S.R.										
Albania	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Bulgaria	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398
Former Czechoslovakia	10,400	--	--	--	--	--	--	--	--	--
Czech Republic	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Slovakia	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Hungary	10,419	10,419	10,419	10,419	10,419	10,419	10,419	10,419	10,419	10,419
Poland	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
Romania	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Armenia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Azerbaijan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Georgia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Kazakhstan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Kyrgyzstan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Latvia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Lithuania	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Moldova	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Russia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Tajikistan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Ukraine	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Uzbekistan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Middle East										
Iran	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Iraq	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Israel	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Jordan	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526
Lebanon	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Syria	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Africa										
Algeria	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
Angola	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Cameroon	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Congo (Brazzaville)	10,390	10,390	10,390	10,390	10,390	10,390	10,390	10,390	10,390	10,390
Congo (Kinshasa)	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Cote d'Ivoire (Ivory Coast)	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
Egypt	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Ethiopia	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
Gabon	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
Ghana	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Guinea	10,424	10,424	10,424	10,424	10,424	10,424	10,424	10,424	10,424	10,424
Kenya	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Madagascar	10,412	10,412	10,412	10,412	10,412	10,412	10,412	10,412	10,412	10,412
Malawi	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394
Mali	10,375	10,375	10,375	10,375	10,375	10,375	10,375	10,375	10,375	10,375
Morocco	10,407	10,407	10,407	10,407	10,407	10,407	10,407	10,407	10,407	10,407
Mozambique	10,339	10,339	10,339	10,339	10,339	10,339	10,339	10,339	10,339	10,339
Nigeria	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398
Reunion	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
South Africa	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394
Sudan	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391
Swaziland	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Tanzania	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Uganda	10,392	10,392	10,392	10,392	10,392	10,392	10,392	10,392	10,392	10,392
Zambia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Zimbabwe	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401

See footnotes at end of table.

Table C7 Gross Heat Content of Hydroelectric Power, 1992 - 2001 (Continued)

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Asia & Oceania										
Afghanistan	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Australia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Bangladesh	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Bhutan	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Burma	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Cambodia	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333
China	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Fiji	10,405	10,405	10,405	10,405	10,405	10,405	10,405	10,405	10,405	10,405
French Polynesia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
India	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Indonesia	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Japan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Korea, North	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Korea, South	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Laos	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
Malaysia	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
Nepal	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394
New Caledonia	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394	10,394
New Zealand	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Pakistan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Papua New Guinea	10,393	10,393	10,393	10,393	10,393	10,393	10,393	10,393	10,393	10,393
Philippines	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Samoa	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Sri Lanka	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
Taiwan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Thailand	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
U.S. Pacific Islands	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Vietnam	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399

- - = Not applicable.

Note: There is no generally accepted practice for evaluating the thermal conversion rates for power plants that generate electricity from hydroelectric sources. Therefore, estimates of the prevailing annual average heat content for fossil-fueled, steam-electric power plants are used to evaluate the heat content for hydroelectric power. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption such as droughts.

Sources: See sources at the end of Section 6.

Table C8 Gross Heat Content of Nuclear Electric Power, 1992 - 2001

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	11,440	11,376	11,376	11,356	11,356	11,356	11,292	11,292	11,292	11,292
Mexico	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065
United States	10,471	10,504	10,452	10,507	10,503	10,494	10,491	10,450	10,429	10,442
Central & South America										
Argentina	11,809	11,809	11,809	11,705	11,705	11,705	11,705	11,705	11,705	11,705
Brazil	10,246	10,246	10,246	10,216	10,216	10,216	10,216	10,216	10,216	10,357
Western Europe										
Belgium	10,373	10,373	10,373	10,354	10,354	10,354	10,354	10,354	10,354	10,354
Finland	10,278	10,278	10,278	10,208	10,208	10,208	10,208	10,208	10,208	10,208
France	10,399	10,396	10,355	10,355	10,349	10,349	10,340	10,340	10,337	10,337
Germany	10,205	10,205	10,205	10,061	10,061	10,061	10,061	10,061	10,061	10,061
Netherlands	10,485	10,485	10,485	10,485	10,485	9,721	9,721	9,721	9,721	9,721
Spain	10,151	10,151	10,151	10,151	10,151	10,151	10,151	10,151	10,151	10,151
Sweden	10,090	10,090	10,090	10,079	10,079	10,079	10,079	10,079	10,079	10,079
Switzerland	10,540	10,540	10,540	10,273	10,273	10,273	10,273	10,273	10,273	10,273
United Kingdom	12,461	12,424	12,552	12,446	12,446	12,446	12,446	12,446	12,446	12,446
Slovenia	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035
Eastern Europe & Former U.S.S.R.										
Bulgaria	11,006	11,006	11,006	11,006	11,006	11,006	11,006	11,006	11,006	11,006
Former Czechoslovakia	12,274	--	--	--	--	--	--	--	--	--
Czech Republic	--	12,099	12,099	11,373	11,373	11,373	11,373	11,373	11,373	11,336
Slovakia	--	12,318	12,318	11,818	11,818	11,818	11,875	11,875	11,875	11,912
Hungary	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065	10,065
Romania	--	--	--	--	11,930	11,930	11,930	11,930	11,930	11,930
Armenia	--	--	--	--	11,725	11,725	11,725	11,725	11,725	11,725
Kazakhstan	11,373	11,373	11,373	11,373	11,373	11,373	11,373	11,373	--	--
Lithuania	10,663	10,663	10,663	10,663	10,663	10,663	10,663	10,663	10,663	10,663
Russia	11,038	11,030	11,030	11,030	11,030	11,030	11,030	11,030	11,030	11,030
Ukraine	10,911	10,911	10,911	10,903	10,903	10,920	10,920	10,920	10,920	10,920
Africa										
South Africa	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035	10,035
Asia & Oceania										
China	10,339	10,207	10,159	10,159	10,159	10,159	10,159	10,159	10,159	10,159
India	11,906	11,957	11,957	11,998	11,998	11,998	11,998	11,998	12,032	12,107
Japan	10,250	10,234	10,226	10,236	10,223	10,217	10,217	10,217	10,217	10,217
Korea, South	10,088	10,088	10,035	10,035	9,991	9,955	9,975	9,976	10,049	10,049
Pakistan	10,797	10,797	10,797	10,797	10,797	10,797	10,797	10,797	10,797	10,648
Taiwan	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876	9,876

-- = Not applicable.

Note: The average heat content of electricity generated by nuclear electric power plants is calculated by dividing the heat content of electricity consumed in nuclear generating units (3,412 Btu per kilowatthour) by the estimated efficiency factor (the ratio of output to input) for each nuclear power plant.

Sources: See sources at the end of Section 6.

Table C9 Gross Heat Content of Geothermal Electric Power, 1992 - 2001

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Mexico	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
United States	20,914	20,914	20,914	20,914	20,960	20,960	21,017	21,017	21,017	21,017
Central & South America										
Costa Rica	--	--	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
El Salvador	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Nicaragua	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Western Europe										
Iceland	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Italy	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Portugal	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Turkey	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Eastern Europe & Former U.S.S.R.										
Russia	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Middle East										
Jordan	21,020	21,020	--	--	--	--	--	--	--	--
Africa										
Ethiopia	21,020	21,020	21,020	21,020	21,020	--	--	21,020	21,020	21,020
Kenya	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Asia & Oceania										
Indonesia	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Japan	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
New Zealand	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Philippines	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020	21,020
Thailand	--	--	--	--	--	21,020	21,020	21,020	21,020	21,020

-- = Not applicable.

Note: The average heat content of electricity generated by geothermal electric power plants is calculated by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities.

Sources: See sources at the end of Section 6.

Table C10 Gross Heat Content of Solar, Wind, and Wood and Waste Electric Power, 1992 - 2001

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
North America										
Canada	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Mexico	--	--	10,400	10,400	10,400	10,400	10,401	10,401	10,401	10,401
United States	10,342	10,309	10,316	10,312	10,340	10,213	10,197	10,226	10,201	10,201
Central & South America										
Argentina	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Bolivia	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403
Brazil	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Chile	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Colombia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Costa Rica	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Cuba	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Dominican Republic	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404	10,404
El Salvador	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402	10,402
Guatemala	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Haiti	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410	10,410
Jamaica	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403	10,403
Nicaragua	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415	10,415
Panama	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398	10,398
Paraguay	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Peru	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Trinidad and Tobago	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Uruguay	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
Western Europe										
Austria	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Belgium	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397	10,397
Croatia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Denmark	10,345	10,345	10,345	10,345	10,345	10,345	10,345	10,345	10,345	10,345
Faroe Islands	--	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Finland	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
France	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Germany	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Greece	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Ireland	10,398	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Italy	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Luxembourg	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409
Netherlands	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Norway	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Portugal	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Slovenia	--	--	--	--	--	--	--	10,400	10,400	10,400
Spain	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Sweden	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Switzerland	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Turkey	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
United Kingdom	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Eastern Europe & Former U.S.S.R.										
Belarus	--	--	--	--	--	--	10,400	10,400	10,400	10,400
Bulgaria	--	--	--	--	--	--	10,400	10,400	10,400	10,400
Czech Republic	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Hungary	--	--	--	--	--	--	10,401	10,401	10,401	10,401
Estonia	--	--	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Poland	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399	10,399
Romania	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Russia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400

See footnotes at end of table.

Table C10 Gross Heat Content of Solar, Wind, and Wood and Waste Electric Power, 1992 - 2001 (Continued)

(Btu per Kilowatthour)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Asia & Oceania										
Australia	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
China	--	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
India	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Japan	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Korea, South	--	--	10,401	10,401	10,401	10,401	10,401	10,401	10,401	10,401
New Zealand	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400	10,400
Thailand	--	--	--	10,400	10,400	10,400	10,400	10,400	10,400	10,400

-- = Not applicable.

Note: There is no generally accepted practice for evaluating the thermal conversion rates for power plants that generate electricity from solar, wind, and wood and waste. Therefore, estimates of the prevailing annual average heat content for fossil-fueled, steam-electric power plants are used to evaluate the heat content for solar, wind, and wood and waste power.

Sources: See sources at the end of Section 6.

Appendix D

Energy Market Chronology: 2001

Energy Market Chronology: 2001

The following chronology lists international events that hold significance for world energy markets. Sources include: Associated Press (AP), Dow Jones Business News (DJ), Reuters, The Los Angeles Times (LAT), The New York Times (NYT), The Oil Daily (OD), The Wall Street Journal (WSJ), The Washington Post (WP), the United States Department of Energy (DOE), USA Today (USAT), and World Markets Online (WMO).

*(**Note:** For monthly chronologies for 1996-2003 and annual highlights for 1970-2002, see the Chronologies section of our International (Energy) Web Page at (**http://www.eia.doe.gov/emeu/international/chronolo.html**)).*

Jan. 2 A federal appeals court orders the Department of the Interior to reimburse Marathon Oil and ExxonMobil $78 million each for breaking leases for drilling rights off the North Carolina coast. The companies argued that new environmental laws effectively breached their drilling contracts. (DJ, WP)

Jan. 5 The State of Texas sues ExxonMobil, alleging that the company had produced oil from State-owned land in Texas without paying royalties. The claim involves the Hawkins field in East Texas. (WSJ)

Jan. 6 California power utility Southern California Edison announces that it will cut 1,450 jobs and reduce equipment maintenance in an effort to avoid bankruptcy. The company has been hit by rising prices for purchases of electricity, which it has not been able to pass on to its customers. (DJ)

Jan. 10 The White House announces that President Clinton will not designate the Arctic National Wildlife Refuge (ANWR) as a national monument prior to his departure from office. Environmental groups had been pressing for national monument status for the ANWR to prevent oil drilling. (DJ)

Jan. 11 Crude oil prices rise sharply on indications that the Organization of Petroleum Exporting Countries (OPEC) will cut output quotas at its next meeting scheduled for January 17th in Vienna. The New York Mercantile Exchange (NYMEX) contract for February crude closes at $29.48 per barrel, up $1.84, or about 7 percent. (DJ)

Jan. 12 California narrowly avoids rolling blackouts as its power crisis again reaches a "Stage 3" alert. The State Department of Water Resources steps in to purchase power from suppliers in the Pacific Northwest, who had become unwilling to sell to the California Independent System Operator (ISO) due to its unstable financial condition. (WSJ)

Jan. 13 Amerada Hess withdraws its offer to purchase Lasmo PLC, a British independent oil exploration and production company. Italy's ENI had offered a higher bid of $4 billion, and Amerada Hess said it would not match the higher offer. (DJ)

Jan. 15 Schneider Electric of France announces that it will take over another French utility, Legrand SA, in a deal valued at $6.85 billion. The move reflects a trend toward consolidation and cost cutting as utilities in Europe prepare for competition. (WSJ)

Jan. 16 Southern California Edison defaults on $600 million in payments owed to bondholders and electricity suppliers. (DJ)

Jan. 17 The Organization of Petroleum Exporting Countries (OPEC) agrees, at a meeting of ministers in Vienna, to reduce members' production quotas by 1.5 million barrels per day. The move comes in response to OPEC members' concerns about declining prices. Analysts expect the actual production cuts to total somewhat less than 1.5 million barrels per day, as some OPEC members had quotas above their actual production capacity. (NYT, WP)

Jan. 17 California utilities impose rolling blackouts on large portions of the State as demand for electricity exceeds available supplies. The blackouts, which generally last one hour, are imposed to prevent an uncontrolled collapse of the electricity distribution system. (DJ, LAT, WSJ)

Jan. 17 The Minerals Management Service (MMS), an agency of the Department of the Interior, sharply raises its estimates of oil and gas reserves in the United States deepwater outer continental shelf, due to recent drilling success in the Gulf of Mexico.

The agency raises its estimates for recoverable natural gas by about 65 percent and for recoverable oil by about 35 percent. (DJ)

Jan. 18 The Department of Energy issues a rule that will tighten efficiency standards for air conditioners and heat pumps by 30 percent. The rule is designed to help hold down future growth in electricity demand during peak usage periods. (NYT)

Jan. 20 George W. Bush is sworn into office as the President of the United States. Later in the day, the Senate votes to confirm Spencer Abraham as the new Secretary of Energy. (WP)

Jan. 21 A small tanker carrying diesel fuel runs aground in Ecuador's Galapagos Islands and begins to leak, threatening an environmental disaster. This is later averted as winds push much of the oil slick out to sea. (NYT)

Jan. 22 President Bush names Curtis Hebert as chairman of the Federal Energy Regulatory Commission (FERC). Two seats on the five-seat body remain vacant. (DJ)

Jan. 29 Natural gas prices fall 13 percent in a single day, on unseasonably warm temperatures in key urban markets. February Henry Hub natural gas closes at $6.293 per million British thermal units (Btu), down 96.3 cents. It had reached a high of $10.10 per million Btu on December 27, 2000. (DJ)

Jan. 29 President Bush names Vice President Richard Cheney to chair a White House task force that will oversee the new administration's efforts in devising a national energy policy. (DJ)

Jan. 31 Taiwan's legislature passes, by a 134 to 70 majority, a resolution calling for the resumption of work to complete the nation's fourth nuclear power plant. Construction on the $5.4 billion plant was halted in October 2000 after a new government under President Chen Shui-bian took office earlier in the year promising to end the expansion of nuclear power. Earlier in the month, Taiwan's highest court ruled that the government's action in terminating construction had been legally improper. (DJ)

Jan. 31 The California Senate passes a bill to authorize the State government to spend up to $10 billion for the purchase of electricity, to be financed by the issuance of State bonds. The plan envisioned by the bill would have the State government enter into long-term power purchase agreements with suppliers, and resell the electricity at cost to private California utilities. Two of the largest California utilities, Southern California Edison and Pacific Gas and Electric (PG&E) have been unable to secure adequate supplies of electricity from other firms due to cash flow and credit problems. State intervention is intended to overcome these financial hurdles. Governor Gray Davis is expected to sign the bill into law later in the week. (DJ)

Jan. 31 Halliburton announces that it has agreed to sell its Dresser Equipment Group unit to two investment firms for $1.1 billion. Halliburton expects to realize a $300 million net gain from the transaction. (DJ)

Feb. 2 California Governor Gray Davis signs into law a bill that authorizes the State government to sell up to $10 billion in bonds to finance purchases of electricity, in a bid to alleviate the State's electricity supply shortage. The State will enter into long-term contracts with suppliers, which are expected to bring a reduction in the rates paid over the last several months on the spot market. (LAT)

Feb. 5 El Paso Energy announces plans to invest $1.5 billion over the next five years on the construction of terminals to import liquefied natural gas (LNG) into the United States and Mexico. The company is considering three possible projects in the United States and one in the Bahamas that would supply Florida through an undersea pipeline, as well as two projects in Mexico. Enron also recently announced plans for a facility to import LNG into Florida through a terminal in the Bahamas. (WSJ)

Feb. 8 Citing an energy crisis of "catastrophic proportions," a federal judge orders three major electricity suppliers to continue to supply electricity to California despite their concerns over the financial health of the State's two main investor-owned utilities. (DJ)

Feb. 12 Indonesia signs a $9 billion deal with Singapore to supply natural gas to the island nation over the next 20 years. The deal is to lead to the construction of a pipeline from gas deposits on the Indonesian island of Sumatra to Singapore, with supplies beginning in 2003. Indonesia already sells gas to Singapore from its offshore Natuna field, which flows through a separate pipeline. (DJ)

Feb. 12 Potomac Electric Power Company (PEPCO) agrees to acquire Connectiv, the parent company of Delmarva Power and Light and Atlantic Energy, for $2.2 billion. The combined company would serve more than 1.8 million customers in Delaware, the District of Columbia, Maryland, New Jersey, and Virginia. (DJ, WP)

Feb. 12 A federal judge denies a request by Southern California Edison (SCE) to remove a rate freeze which has kept the company from recouping from its customers the costs imposed on it by soaring wholesale power prices. (DJ)

Feb. 13 Italy's ENI is chosen as the operator of Kazakhstan's giant offshore Kashagan oilfield, beating out ExxonMobil, Royal Dutch Shell, and TotalFinaElf. The decision comes one week after TotalFinaElf's purchase of BP's stake in the field for $400 million. (DJ, WSJ)

Feb. 13 Taiwan's government orders the resumption of construction on the country's fourth nuclear power plant. Whether or not to build the plant has been a source of political discord over the last year, with President Chen Shui-Bian having been elected on a platform promising to cancel the project, but facing opposition from a majority in parliament. (DJ)

Feb. 14 Natural gas prices fall sharply on news that amounts in storage declined less than expected. Henry Hub natural gas closes on the New York Mercantile Exchange (NYMEX) at $5.518 per million British thermal units, down 50.1 cents. (DJ)

Feb. 14 Kuwait's Prime Minister appoints Adel al-Subeih as Minister of Petroleum. (DJ)

Feb. 16 United States and British aircraft strike Iraqi air defense targets near Baghdad. (DJ)

Feb. 16 Ecuador's government signs an agreement with a multinational consortium including Occidental Petroleum and Kerr McGee to build a $1.1 billion crude oil pipeline linking the country's Amazon jungle to an export terminal on its Pacific coast. (DJ)

Feb. 19 President George W. Bush visits Mexican President Vicente Fox in Mexico, his first foreign trip as president. Discussions with Fox are reported to include the oil and gas industry and electric power grid links between Mexico and the United States. Foreign investment in the energy sector is a controversial issue in Mexico, where the energy sector historically has been state-owned. (DJ)

Feb. 20 The United States Supreme Court declines to consider an appeal by five major oil companies against Unocal's patent on production of cleaner "reformulated" gasoline sold in California, allowing a lower court ruling in favor of Unocal to stand. The ruling may eventually have effects beyond the California market, as tighter environmental standards for fuels take effect across much of the country. (DJ, WSJ)

Feb. 20 A federal jury returns a $500 million judgment against ExxonMobil for allegedly inflating wholesale fuel prices charged to independent retailers over a 12-year period from 1983 to 1994. (DJ, LAT, WSJ)

Feb. 21 The Federal Energy Regulatory Commission (FERC) gives final approval for the construction of the Gulfstream Natural Gas System, a proposed $1.7 billion pipeline designed to deliver natural gas to growing markets in Florida. (DJ)

Feb. 22 For the first time in six weeks, California lifts all alerts on its electric power grid, due to the availability of more imported electricity and the return to service of power plants that had been closed for maintenance. With these developments, power reserves in the State reach 7 percent. (DJ)

Feb. 23 The State of California and Southern California Edison (SCE) agree that the company will sell the State government its transmission lines for $2.76 billion. The utility will be allowed to issue bonds that will recover a "substantial" portion of its uncollected power costs. (DJ)

Feb. 23 Petroecuador declares *force majeure* on the shipment of 1.8 million barrels of oil, due to continuing protests in its inland oil-producing region. Local residents in the area began takeovers of the oilfields earlier in the week in order to press the Ecuadorean government for funding for local infrastructure and services. (DJ)

Feb. 23 Secretary of State Colin Powell begins a trip to the Middle East for consultations with regional leaders that will include stops in Egypt, Saudi Arabia, Israel, Gaza and the West Bank, Jordan, Kuwait, and Syria. It is his first foreign travel since taking office. (DJ)

Feb. 26 Enron signs a $1.3 billion energy management contract with pharmaceutical giant Eli Lilly. Enron will provide and manage the supply of electricity and natural gas at Eli Lilly facilities, as well as maintain energy assets and related infrastructure. (DJ)

Feb. 27 Shares of China National Offshore Oil Corporation (CNOOC) begin trading on the New York Stock Exchange. The company produces the majority of China's offshore oil. (DJ, NYT)

Feb. 27 The United States Supreme Court rejects a challenge to the regulatory authority of the Environmental Protection Agency (EPA) under the Clean Air Act. In a unanimous opinion, the Court rules that the EPA must consider only public health and safety in its decisions on acceptable levels of pollutant emissions, and is not required to conduct an analysis of financial costs and benefits. (NYT, WP)

Feb. 28 The Environmental Protection Agency (EPA) announces that it intends to proceed with implementation of tighter restrictions on sulfur content in diesel fuel, which were proposed by the Clinton administration. The rule, which will require a reduction of 97 percent in sulfur content by 2006, has been opposed by many in the refining industry. (DJ)

Feb. 28 The Federal Trade Commission (FTC) announces that it found no evidence of collusion among oil companies in relation to the summer 2000 surge in retail gasoline prices in the Midwest. The FTC will release the full report on its investigation in March 2000. (DJ)

Feb. 28 Calpine Corporation signs two contracts valued at up to $8.3 billion to sell electricity to the California Department of Water Resources, which was empowered to purchase power on the wholesale market due to the financial difficulties of the State's two largest investor-owned utilities. Deliveries of power under the contracts will begin July 1, 2001. (DJ)

Mar. 2 California's largest utility, Pacific Gas and Electric, secures a $1 billion loan to pay its creditors and avoid bankruptcy. (LAT)

Mar. 4 Tests in recent days confirm the world's largest oil find in three decades in the Kashagan field in the Caspian Sea. Kashagan is a single reservoir at least 25 miles across, and two-and-a-half times the size of the nearby Tengiz field. (WSJ)

Mar. 5 Governor Gray Davis of California announces that the State has reached forty separate deals worth $40 billion to buy power over the next ten years. This would provide an additional capacity of about 8,900 megawatts. (WSJ)

Mar. 5 The United States Supreme Court refuses to hear an appeal of the Environmental Protection Agency's new regulations that would reduce air pollution in the eastern half of the United States, paving the way for their implementation. (WP)

Mar. 6 United States Secretary of Energy Spencer Abraham formally establishes the Northeast Home Heating Oil Reserve, a two-million-barrel government-owned reserve to be used in emergency circumstances. (DOE)

Mar. 7 Royal Dutch/Shell Group announces an unsolicited $1.8 billion takeover bid for Denver-based natural gas producer Barrett Resources Corporation. (NYT)

Mar. 8 United States Secretary of Energy Abraham attends the Hemispheric Energy Conference in Mexico, an annual meeting of Energy Ministers from 34 nations. He also meets with senior Mexican government officials in order to promote President Bush's "hemispheric energy policy." (LAT)

Mar. 8 Denver-based natural gas producer Barrett Resources Corporation rejects Royal Dutch/Shell Group's $1.8-billion takeover bid and invites other offers. (WSJ)

Mar. 12 Russian President Vladimir Putin formally agrees to resume conventional arms sales to Iran and to complete a delayed nuclear power plant. These agreements also set out general principles for the Russia-Iran military relationship and principles for resolving competing claims over oil and gas deposits in the Caspian Sea. (NYT, LAT)

Mar. 12 Turkey signs a natural gas purchase deal with Azerbaijan that will deliver 233 billion cubic feet over 15 years. This adds momentum to United States and Turkish-backed pipeline plans from Baku to Ceyhan, Turkey. (WSJ)

Mar. 13 United States President Bush, in a policy reversal, declares that his administration will not seek to regulate power plants' emissions of carbon dioxide, citing an Energy Department study that regulating these emissions could result in higher electricity prices. (NYT)

Mar. 13 Exxon Mobil temporarily shuts down on-shore natural gas operations in the Indonesian region of Aceh due to escalating violence and risk to employees and contractors. (WSJ)

Mar. 15 United States Secretary of Energy Abraham testifies before Congress that power blackouts in California this summer are "inevitable." However, he does not argue for any federal government action to avert this outcome. (LAT)

Mar. 15 The world's largest oil rig, located 80 miles offshore Brazil and operated by the Brazilian state oil company Petrobras, suffers three explosions. This one platform accounted for more than 5 percent of Petrobras' total production. On March 20 Petrobras' Platform-36 sinks with 400,000 gallons of fuel and crude oil aboard. (WSJ)

Mar. 17 Organization of Petroleum Exporting Countries (OPEC) decides to cut output by 4 percent or 1 million barrels per day, effective April 1. The cut is aimed at preventing a price collapse in a time of weakening demand. (NYT)

Mar. 19 About 800,000 customers in California experience rolling blackouts in the wake of unseasonably warm weather that raised demand. (WP)

Mar. 20 California experiences the second straight day of blackouts, with about 550,000 customers losing power in rolling blackouts. (NYT)

Mar. 21 BP and ENI of Italy agree to build a $2.5 billion natural gas liquefaction plant in Egypt with Egyptian Petroleum Corp. The facility will be built at Damietta on the Mediterranean with initial exports targeted to Southern Europe. (WSJ)

Mar. 22 Mexican state oil company Pemex unveils a restructuring plan involving $3 billion in cuts for the company and possibly large job reductions. (LAT)

Mar. 26 Kazakhstan's Prime Minister opens an oil pipeline from the giant Tengiz field to the Russian port of Novorossiisk on Monday, giving the Central Asian producer its first direct link to international markets. The 900-mile pipeline will carry 600,000 barrels of oil per day by the end of the year, and eventually 1.5 million barrels per day. (NYT)

Mar. 27 A heavily guarded train carrying nuclear waste from France to storage in Germany sparks large protests across its route in Germany. (Reuters)

Mar. 27 California regulators (State Public Utilities Commission) approve a 40-46 percent rise in electricity prices. The panel defends this action by stating that it is the only way to avoid blackouts. (LAT, NYT, WP)

Mar. 27 The Bush administration declares that it has no interest in implementing or ratifying the international climate treaty negotiated in Kyoto in 1997. (NYT)

Mar. 28 Oil workers in Venezuela, the world's third largest oil exporter, begin a strike but the state-run oil company PDVSA says vital operations continue under a contingency plan. (Reuters)

Mar. 28 Crude oil prices drop after the United States Energy Information Administration reports a sharp increase in United States crude oil inventories. Inventories grew by 11.2 million barrels in the past week to a total of 301.5 million barrels. However, prices would go on to rise in the following week. (WSJ)

Mar. 28 The two-day Arab Summit in Amman, Jordan, ends with leaders agreeing to support the Palestinian cause and approving $240 million in aid for the Palestinians. However, no agreement was reached on a common policy toward Iraq. (Reuters)

Mar. 29 President Bush announces that he is prepared to look elsewhere than the Arctic National Wildlife Refuge for oil and gas resources if opposition to drilling there is successful. (NYT)

Mar. 30 The oil workers' strike in Venezuela ends after weak support among workers and clashes with the Venezuelan National Guard. (Reuters)

Mar. 30 The Western Hemisphere climate conference, a gathering of environment ministers in Montreal, ends with the United States declining to go along with a Latin American plan for industrialized countries to reduce their emissions. (NYT)

Apr. 1 Qatar's Ras Laffan Liquefied Natural Gas Company (RasGas II) signs an agreement with a consortium comprising Chiyoda, Mitsui, and Snamprogetti SpA to set up a third natural gas train at the RasGas plant. This sets in motion the largest-ever liquefied natural gas (LNG) export deal, with India to purchase 7.5 million metric tons per year for 25 years through PetroNet LNG. (WMO)

Apr. 2 The tentative $8 billion merger between FPL Group and Entergy collapses. This merger would have created the largest electric utility in the United States, with 6.3 million customers and 48,000 megawatts of generating capacity. (WSJ)

Apr. 2 The Korean Ministry of Commerce, Industry, and Energy announces that it is splitting state-owned Korea Electric Power Company (KEPCO) into six privatized companies. According to the sell-off plan, foreigners will have the right to manage two of the five new companies, meaning that 30 percent of the country's total generating capacity will be under the control of overseas investors. The Korea Power Exchange (KPX) has also been established to act as an intermediary for the trade of electricity between KEPCO and its subsidiaries. As a result, wholesale electricity prices will now be set by the market. (WMO)

Apr. 5 Governor Gray Davis of California, after previously opposing electricity rate increases, announces his support for a rate increase. The California Public Utilities Commission had already approved the biggest rate increase in State history the previous week, but Governor Davis' rate increase proposal would, in effect, be an alternative plan to that of the Public Utilities Commission. (WSJ)

Apr. 6 California's largest utility, Pacific Gas and Electric, formally files for Chapter 11 bankruptcy protection. The utility is attempting to get relief from $9 billion in debt. (NYT)

Apr. 9 The Mozambican and South African governments sign an agreement finalizing a deal on a 900-kilometer (559.2-mile), $1.35 billion gas pipeline from Mozambique's gas fields to the Gauteng industrial area in South Africa. (WMO)

Apr. 9 U.S. President George Bush's budget for the Department of Energy is released. It calls for a 50 percent, or $190 million, cut in research programs for renewable energy sources. However, it adds $51 million for research on the use of hydrogen gas as an energy source and on advancing power transmission technology. (WP)

Apr. 9 Governor Gray Davis announces that the State of California will buy Southern California Edison's transmission lines for $2.76 billion. This comes only days after California's largest utility, Pacific Gas and Electric, filed for bankruptcy, and is an attempt to prevent the State's second largest utility from having to do the same. (LAT)

Apr. 10 E.ON AG of Germany announces plans to take over Powergen PLC of the United Kingdom in a $7.4 billion deal that would create the world's second largest electricity provider. E.ON is a conglomerate that derives half its market capitalization from non-utility businesses. Ownership of Powergen will give E. ON access to the U.S. market. (WSJ)

Apr. 10 The front month gasoline futures price rises 3.4 percent (3.39 cents per gallon) to its highest level since June 2000, following a fire that shut down El Paso Energy's Coastal Refinery in Aruba. (WSJ)

Apr. 11 Shell Malaysia announces that it will invest $5.8 billion in Malaysia over the next five years to expand oil and gas operations, $2.6 billion of which will go towards exploration. (WMO)

Apr. 12 The administration of U.S. President Bush decides to retain rules from the previous administration regarding energy efficiency requirements for clothes washers and water heaters. The requirement is for the new machines to be 22 percent more efficient by 2004 and 35 percent more efficient by 2007. (NYT)

Apr. 12 ExxonMobil announces that it has made a major oil discovery in Indonesia. Its Mobil Cepu unit made the discovery at the Banyu Urip No. 3 well, an onshore tract in the Central and East Java provinces, with estimated recoverable reserves in excess of 250 million barrels of crude oil. (DJ)

Apr. 12 Data released by the International Energy Agency (IEA) show that the Organization of Petroleum Exporting Countries (OPEC) continued to produce oil above its target level in March. Output was reduced by only 120,000 bbl/d instead of the target cut of 770,000 bbl/d. (DJ)

Apr. 13 The U.S. Department of Energy announces that energy efficiency standards for central air conditioners will only need to be raised 20 percent, instead of the 30 percent proposed by the previous Clinton administration. U.S. Secretary of Energy Spencer Abraham comments that the 20- percent standard is more realistic and affordable. (WP, NYT)

Apr. 16 Ninety-two employees of Occidental Petroleum in Colombia are kidnapped in the eastern province of Aruaca. However, about 80 of them are released a few hours later after an army antiterrorism unit moves into the area. The rest are released on April 19. (WMO)

Apr. 16 Conoco's Killingholme refinery in the United Kingdom suffers an explosion, shutting down the refinery and killing two workers. The plant processes some 230,000 barrels of crude oil and other feedstocks per day and its shutdown boosts NYMEX crude oil futures prices. (Reuters)

Apr. 17 U.S. oil major Chevron announces that oil reserves in the Tengiz field in western Kazakhstan are about 368 million barrels according to its latest estimates. This is more than double previous estimates. The field, with Chevron as the operator in a consortium consisting of Chevron, ExxonMobil, Kazakhstan's state oil company Kazakhoil and LukArco (a joint venture between BP and Russia's Lukoil), produced about 1.4 million barrels of crude in 2000. (WMO)

Apr. 17 A letter from U.S. Department of the Interior Secretary Gale Norton to Florida Governor Jeb Bush is released that states that the Bush Administration has decided to go ahead with plans to auction six million acres of potentially oil-and-gas-rich seabed in the Gulf of Mexico. The U.S. Department of the Interior estimates that the area contains 396 million barrels of oil and 2.9 trillion cubic feet of natural gas. (USAT)

Apr. 18 The Turkish Parliament passes a natural gas market bill that ends the state monopoly in natural gas and brings Turkish law in this area into compliance with European Union law. (WMO)

Apr. 18 A study is released by the Organization for Economic Cooperation and Development (OECD) predicting that, without strong government action, the emission of greenhouse gases will jump by one third in the next twenty years. (DJ)

Apr. 19 U.S. President George Bush states publicly that the U.S. government has no intention of removing economic sanctions on Iran and Libya. President Bush does not mention Iraq. According to the *Washington Post*, this statement comes after a draft of Vice President Cheney's energy task force report raised the possibility of lifting some of these restrictions. The Iran-Libya Sanctions Act expires in August, at which point the U.S. Congress will have to renew it for sanctions to continue. (WP)

Apr. 22 The Summit of the Americas in Quebec ends, with all countries, except Venezuela and Cuba (the only country not to attend), agreeing to establish a Free Trade Area of the Americas by the end of 2005. This would be the world's largest free trade zone, with combined output of more than $11 trillion. The United States, Canada, and Mexico also agree to create a joint task force to look at ways to facilitate energy trade in the North American market. (Reuters)

Apr. 23 The Australian Government rejects Royal Dutch/Shell Group's planned takeover of Woodside Petroleum. Woodside is Australia's largest energy company and Australia used a rare national interest veto that it justified by asserting that the government was ensuring the development of the North West Shelf gas field, the country's largest developed energy resource. (WSJ)

Apr. 23 U.S. major oil companies ExxonMobil and Conoco release earnings figures showing profits for the first quarter of 2001 of $5 billion and $616 million, respectively. These figures represent more than a 50 percent increase from the same period a year ago. Overall, companies in the Standard & Poor's energy sector are expected to post a 54 percent increase in profits for the first quarter. (WP)

Apr. 23 Russia reaches a credit agreement with the World Bank that involves a commitment to end subsidies for the coal industry in 2002. The World Bank is funding an $800 million modernization program for the Russian coal sector, as part of its support for structural reforms in the country. (WMO)

Apr. 24 Venezuela calls upon foreign companies operating in the country to cut their crude oil production in order for the country to meet its OPEC production quota. Most OPEC countries rely upon cuts in their own state-owned company's production to comply with quotas. (WMO)

Apr. 24 Tosco's Los Angeles-area refinery catches fire, halting production of about 5.5 million gallons of gasoline and other fuels per day. Gasoline prices on the Los Angeles spot market rise 7.5 cents to $1.425 per gallon. (LAT)

Apr. 25 A Federal Court of Appeals panel dismisses a lower court's finding that strip mining of West Virginia mountaintops violates local environmental law, allowing the mechanized strip mining, that has largely replaced underground mining in Appalachia, to continue. Environmental groups plan to appeal this ruling. (NYT)

Apr. 24 The Federal Energy Regulatory Commission announces a plan to control California's electricity prices. Effective May 1, the regulators will be able to impose price controls on power generators when electricity reserves fall below 7.5 percent. (NYT)

Apr. 26 The Directors of the Dabhol Electricity Plant of India, owned by Enron of the U.S., decide to halt electricity sales to the Maharashtra state electricity board. The state has declared its willingness to renegotiate the power purchasing agreement with Enron, but the company appears skeptical. The government would have to pay about $384 million to Enron if the project is terminated. (WMO)

Apr. 27 The Brazilian Government announces that it will invest $8 billion in the country's power sector by the end of 2002 in order to increase generating capacity by 6,000 megawatts. This comes as the possibility of power rationing looms due to a shortage of generating capacity. (WMO)

Apr. 24 Saudi Arabian Energy Minister Ali al-Naimi meets with a number of senior U.S. officials, including Vice-President Dick Cheney and Secretary of Energy Spencer Abraham. Al-Naimi, in a statement before the meetings, says leading oil producers would not allow record-high gasoline prices to spin out of control. (WMO, Reuters)

Apr. 30 U.S. Vice-President Dick Cheney previews the administration's energy plan in a speech in Toronto, Canada. Cheney, stating that conservation alone cannot solve America's energy needs, calls for increased domestic production of fossil fuels and increased usage of nuclear power to meet America's energy demand. He also calls for the construction of new coal-fired and natural-gas-fired electric power plants, and the upgrading and expansion of the electricity transmission grid. (WSJ, USAT)

May 1 Mexican President Vicente Fox announces plans to dissolve the board of Mexican state oil company Pemex and to instead create an eight-member advisory committee. This is a reversal from his previous policy to fill the board of Pemex with high-profile private-sector executives. (WMO)

May 3 U.S. President George W. Bush orders federal agencies in California to cut their energy use and to take other appropriate actions to conserve energy. The Federal Government consumes 1.5 percent of the nation's electricity. (WP)

May 3 ExxonMobil announces that it has made a major oil discovery offshore Angola, 217 miles northwest of Luanda. The discovery is located in Block 15 and is believed to contain 3.5 billion barrels of oil. (WMO)

May 4 California Governor Gray Davis announces a $7 billion agreement by the State to buy electricity over 10 years from Sempra Energy. Governor Davis asserts that this will contribute to bringing reliable power to California at a lower price than the spot market. (LAT)

May 4 A draft report of the Mitchell Commission is distributed to Israeli and Palestinian officials. The report says that Israel should freeze settlement construction, but does not recommend sending an international force to the region, as Palestinians have been demanding. The international commission, led by former U.S. Senator George Mitchell, was formed as part of a U.S.-brokered Israeli-Palestinian cease-fire agreement reached at an October 2000 summit at the Egyptian resort of Sharm el-Sheikh. (USAT)

May 7 The Williams Companies announces that it has acquired Barrett Resources for $2.5 billion in cash and stock. Barrett Resources is a natural gas exploration and production company. Williams builds power plants, transports natural gas, and trades electricity. (NYT, WMO)

May 7 Valero Energy announces that it has reached an agreement to acquire Ultramar Diamond Shamrock for $6 billion. If approved by shareholders and regulators, the new company would be the second-largest petroleum refiner in the United States, with a refining of capacity slightly under 2 million barrels per day. (NYT, WMO)

May 8 The State Planning Board of the People's Republic of China approves a plan to make a very large investment in the country's rural power grids. This includes maintenance and renovation as well as construction of new lines. (WMO)

May 8 AES Corporation announces that it has suspended plans to invest $2-$2.5 billion in energy projects in Brazil. AES alleges that the Brazilian government's pricing policy jeopardizes the profitability of its operations there. (Reuters)

May 9 Four people are killed in the Aceh region of Indonesia when two bombs explode, damaging a natural gas pipeline and pumping station owned by ExxonMobil. ExxonMobil suspended on-shore operations, including shipments from the liquefied natural gas (LNG) terminal at Arun, on March 9, 2001, due to the possibility of violence. This has reduced Indonesia's export earnings from LNG. (WMO)

May 9 BP Trinidad and Tobago announces the discovery of a one-trillion-cubic-foot natural gas field off the east coast of Trinidad, enough to power the entire country's electricity needs for about 50 years. More importantly, this represents another source for Trinidad and Tobago's liquefied natural gas exports and increases confidence in the hydrocarbon potential of Trinidad's east coast. (WMO)

May 15 The California Public Utilities Commission approves a plan that calls for a $5.7 billion rate increase, much of it falling on residential customers. The plan is retroactive to March 27, 2001, with rates designed to reward those who conserve and to punish those who do not. (LAT)

May 16 Norwegian Oil Minister Olav Akselsen announces that Norway's oil production has plateaued and that there are no plans to raise or lower production in concert with OPEC. (Reuters)

May 17 President Bush issues the administration's new energy policy. Among the plan's 105 specific recommendations are calls for reduced regulations to encourage more oil, gas, and nuclear production, tax incentives to boost coal output, and other tax incentives to promote conservation and alternative fuels. The plan also calls for increasing energy assistance to low-income households and for making the electricity grid more interconnected, both domestically and with Mexico and Canada. (LAT, WP, WSJ)

May 17 The companies involved in the proposed Baku-Ceyhan oil pipeline, including the manager, BP, have found the initial cost estimate viable, and will proceed to the next phase of the project, a more detailed $150 million feasibility study. The proposed pipeline would loosen Russian control of Caspian Sea oil and serve as an alternative to the Bosporus as a transport route for oil from the Tengiz field. (NYT)

May 17 BP and Shell say that they will build a $150 million, 100-mile natural gas pipeline in the Gulf of Mexico. The Okeanos pipeline will have the capacity to move as much as one billion cubic feet of gas per day from offshore production fields in ultradeep waters. (WSJ)

May 18 Brazil orders consumers and citizens to cut electricity consumption by 20 percent to avoid blackouts. Rationing will begin on June 1, and includes surcharges for those who do not meet the cutback and rewards for those who do. This comes as a drought has reduced Brazil's hydroelectric generating capacity, which accounts for about 90 percent of the country’s total generation capacity. (NYT)

May 18 Saudi Arabia selects the eight foreign companies to take part in its "Gas Initiative," three core venture gas projects that have an anticipated worth of $25 billion. They are: Core Venture 1: ExxonMobil (lead), Shell, BP, and Phillips; Venture 2: ExxonMobil (lead), Occidental and Enron (a joint bid); Venture 3: Shell (lead), TotalFinaElf, and Conoco. The Gas Initiative is the first major reopening of Saudi Arabia's upstream hydrocarbon sector since nationalization in the 1970s. (WMO)

May 21 The price of Brent crude oil futures for delivery in early June peaks at $29.68 per barrel, the highest level in a year. This comes as concern increases over U.S. gasoline supplies, heightening Israeli-Palestinian tensions, a possible Iraqi halt in oil exports, and OPEC statements to the effect that a production quota increase in June is unlikely. (WMO)

May 21 The Enron Corporation's power generating venture in India, the Dabhol Power Company, serves formal notice that it will terminate its power supply contract and pull out. The $2.9 billion Dabhol project represents the single largest foreign investment in India. The gas-fired plant already had a generating capacity of 740 megawatts and another 1,444 megawatts was scheduled to go on line in June. (NYT)

May 23 Shell announces that it has discovered a huge reserve of oil in Oil Mining Lease 118 offshore Nigeria. This is the same block where Shell is developing the 600-million barrel Bonga field. The discovery would appear to confirm the immense potential of Nigeria's deepwater offshore area. (WMO)

May 29 California Governor Gray Davis meets with President Bush and informs him that he plans to file a lawsuit against the Federal Energy Regulatory Commission to force the federal government to impose price controls on wholesale electricity in California. President Bush reiterates his opposition to price caps. (Reuters)

May 29 Natural gas futures plunge six percent to a 10-month low on speculation that growing U.S. inventories will help power plants meet summer demand for air-conditioning. The price for June delivery fell 23.5 cents, to $3.738 per million British thermal units on the New York Mercantile Exchange (NYMEX). (LAT)

May 30 Iraqi Oil Minister Amir Mohammad Rasheed signs an oil and gas cooperation agreement with his Algerian counterpart, Chekib Khelil. The deal is thought to include an Algerian role in the development of the Touba oil field in southern Iraq and a new natural gas field in the Western Desert of Iraq. (WMO)

May 31 The United States and Britain win Security Council approval of a one-month extension of the United Nations oil-for-food program. A vote on the new "smart sanctions" on Iraq proposed by the United States and Britain is delayed at least one month. Iraq demands the usual six-month extension, and says that it will cut off oil exports in response. (WSJ)

May 31 Ukrainian President Leonid Kuchma orders his new government to suspend the planned privatization of electricity generating and distribution companies. Privatization of electricity companies was one of the key terms laid down by the International Monetary Fund to secure loans to Ukraine under its currently frozen $2.6 billion aid program. (Reuters)

June 1 Electricity rationing goes into effect in Brazil in response to electricity shortages caused by droughts in the heavily hydroelectric-dependent country. Three-quarters of consumers must cut consumption by 20 percent for six months or face rolling blackouts and unscheduled power interruptions. (NYT)

June 3 Iraq announces that it will halt crude oil exports in response to a United Nations Security Council resolution that extends the oil-for-food program by only one month, instead of the normal six-month period. The oil-for-food program affects revenues from Iraqi sales of about 2.1 million barrels per day. However, it has been reported Iraq will continue to sell several hundred thousand barrels per day to its neighbors through sales that are outside of the oil-for-food program. The Organization of Petroleum Exporting Countries (OPEC) announces that, if need be, it will make up for lost Iraqi production. Oil prices do not change greatly in response to either announcement. (NYT)

June 3 The eight energy companies selected by Saudi Arabia on May 18 to take part in its Gas Initiative formally sign agreements to develop the projects. It is expected that the conversion of Saudi Arabia's power plants from oil to natural gas, which is part of the deal, will free up more crude oil for export. (LAT, WP)

June 4 An Omnibus Power Bill is passed in the Philippines. The effect is that the state-run National Power Corporation will be broken up and sold to private interests. Passage of this bill is seen as key to obtaining the necessary investment to maintain adequate power supply in the Philippines, and about $1 billion in development loans for the Philippines was contingent on its passage. (WSJ)

June 5 The Environmental Protection Agency (EPA) sets final health and safety standards for a proposed nuclear waste depository at Yucca Mountain in the Nevada desert. This is a key step in allowing construction of the facility, which is essential to efforts to rejuvenate the U.S. nuclear power industry. The following day, the EPA sets ground water standards for this same site. (WP)

June 5 OPEC ministers agree to leave the cartel's oil production quotas unchanged for at least a month, until a scheduled emergency meeting July 3. OPEC had been expected to leave the quotas unchanged until September, but Iraq's suspension of oil exports on June 3 created uncertainty. (LAT)

June 5 Egypt and Jordan sign a 30-year agreement to export Egyptian natural gas to Jordan through a pipeline. The pipeline will have an initial capacity of 35.3 billion cubic feet per year, and the 156-mile pipeline will go from the Egyptian Mediterranean city of El-Arish to the Jordanian Red Sea coastal town of Aqaba. Construction is expected to take 18 months. (DJ)

June 6 A report from the National Academy of Sciences on global warming, which had been requested by the Bush Administration, is released. The report affirms the view that global warming is a real problem, i.e., that greenhouse gases are accumulating in the earth's atmosphere, and that air and ocean temperatures are rising. (NYT)

June 6 Russian lawmakers in the lower house (Duma) approve a plan to import spent nuclear fuel (about 20,000 metric tons over ten years) from power plants in Europe and Asia. Russia would earn an estimated $20 billion for storing the radioactive material. However, about 90 percent of the spent fuel Russia could import is from U.S.-designed nuclear reactors, and hence, cannot be transferred to a third country without the permission of the United States. The U.S. State Department states that it would want several assurances regarding reprocessing and transport security that Russia may be unwilling to agree to. (LAT)

June 7 BP announces that it will build a new $600 million platform offshore Trinidad that is expected to double the company's production of natural gas there by 2004. BP currently produces one billion cubic feet per day in Trinidad. (DJ)

June 7 Tony Blair is re-elected Prime Minister of Great Britain, as his Labour Party wins a large majority of seats in the House of Commons. (WSJ)

June 11 German Chancellor Gerhard Schroeder and leading energy companies sign an agreement that will shut down 19 nuclear electric power plants in Germany. The agreement limits nuclear plants to 32 years of operation, meaning that all nuclear plants in Germany could be shut down by 2021. (DJ)

June 11 Saudi Arabia announces that it has seized ownership, effective June 7, of the 1.6- million-barrel-per-day IPSA pipeline that had carried Iraqi crude oil to the Saudi Red Sea port of Mu'jiz prior to before Iraq's invasion of Kuwait. The seizure includes pumping stations, storage tanks, and the maritime terminal. Saudi Arabia claims that the asset was confiscated as a result of aggressive Iraqi actions. Iraq insists that it still owns the pipeline. (DJ)

June 14 President Bush meets with European leaders at a European Union (EU) gathering. After the meeting, European Commission President Romano Prodi announces that EU member nations will soon begin a concerted drive to ratify the 1997 Kyoto Protocol, an international pact to combat global warming that Bush has rejected. (LAT)

June 14 The California Supreme Court rejects allegations that nine of the largest oil companies in the United States conspired to fix gasoline prices in California. This ruling may affect the California attorney general's ability to bring charges of antitrust behavior in the State's wholesale power market. (DJ)

June 15 ExxonMobil and Qatar Petroleum sign a letter of intent for a natural gas to liquids (GTL) project that would be the largest in the world. The plant would have a production capacity of 80,000 to 90,000 barrels per day and would use about 640 million to 720 million cubic feet of natural gas per day as feedstock. The project is expected to cost between $1.6 billion and $1.8 billion to construct. (OD)

June 16 The Iraqi Trade Minister, Mohammed Mehdi Saleh, states that Iraqi crude oil exports will not resume as long as the U.S.-British changes to the memorandum governing the oil-for-food program (i.e. "smart sanctions") are being considered. (AP)

June 18 The Federal Energy Regulatory Commission (FERC) votes unanimously to extend wholesale electricity price controls to ten western states that share their transmission grids with California. The order applies a proxy price based upon California-specific data to the whole area. That proxy price will be based on the operating costs of the least-efficient power plant operating in California during electricity emergencies. (WSJ)

June 18 Statoil, the Norwegian state-owned oil company, takes part in an initial public offering. The Norwegian government sells about 18 percent of the company, raising about $2.9 billion, while retaining the remaining equity. Statoil is the ninth-largest publicly traded oil company in the world and controls vast oil and natural gas resources in the North Sea. (NYT)

June 19 Hunt Oil Company of the United States agrees to pay $600 million to acquire Chieftain International of Canada. Most of Chieftain's assets are in the Gulf of Mexico, and this purchase boosts Hunt Oil's presence there. (WSJ)

June 19 Administrative workers for Shell in Nigeria go on strike, shutting down administrative offices and flow stations, with a production loss of 100,000 barrels per day, according to Shell. Downstream Shell workers will make a decision whether to strike on June 28. (Reuters)

June 19 Brazil's two-day auction of exploration and production rights ends, with 34 of 53 blocks offered by the National Petroleum Agency sold. About $240 million was raised from the sale, which exceeded expectations. Brazilian state-oil company Petrobras was the largest purchaser, obtaining 13 blocks on its own or as consortium leader. (Reuters)

June 21 A U.S. federal grand jury returns a 46-count indictment charging 13 Saudis and one Lebanese with the 1996 truck-bombing of the Khobar Towers apartments in Saudi Arabia that killed 19 Americans and injured nearly 400 others. The indictment also alleges Iranian government involvement in the bombing. (NYT)

June 22 Electricity prices in the western United States fall to their lowest level in over a year in the wake of federal price controls and declining natural gas prices. The price for a megawatt-hour at the Palo Verde, Arizona transmission hub fell to $92, compared to $160 just before the FERC ruling of June 18. (WSJ)

June 24 Qatar signs a contract with Edison Gas of Italy to supply 3.5 million metric tons of liquefied natural gas (LNG) per year for 25 years, starting in 2005. Qatar aims to export 30 million metric tons of LNG per year by 2007. (Reuters)

June 27 Crude oil and gasoline futures prices on the New York Mercantile Exchange (NYMEX) collapse to their lowest levels in over a year. Gasoline futures for July delivery fall 6.35 cents, or 8.2 percent, to 71.44 cents per gallon. Crude oil futures for August delivery fall $1.37, or 5.1 percent, to $25.61 per barrel. This comes in the wake of reports that inventories are steady or rising for gasoline and crude oil. (DJ)

June 28 The U.S. House of Representatives approves a measure banning new offshore drilling for oil and natural gas in the Great Lakes. (WP)

June 28 Brazilian power regulator Aneel sells licenses to build and operate eight hydroelectric plants, receiving $1.08 billion in concession fees from successful bidders. The new projects are expected to add 2,282 megawatts to the national grid. (DJ)

June 29 The Energy Information Administration (EIA) releases a preliminary estimate showing that carbon dioxide emissions from energy sources in the United States rose by 41 million metric tons carbon equivalent, or 2.7 percent, in 2000, much higher than the average annual growth rate of 1.5 percent for the period 1990 - 2000. (LAT)

June 30 ENI of Italy signs a $550 million contract to develop Iran's Darquain (Darkhovin) field, with expected production of 160,000 barrels per day. This deal may be seen as a test of the U.S. government's resolve to enforce sanctions against foreign companies investing in Iran's energy sector. (LAT)

July 2 U.S. Secretary of the Interior Gale A. Norton states that the Bush Administration will seek to let oil companies drill on about 1.5 million acres of the Gulf of Mexico out of the 6 million originally under consideration. This removes acreage closest to the shores of Alabama and Florida. (NYT)

July 2 The United Nations (U.N.) Security Council, facing an almost certain Russian veto, agrees to postpone indefinitely a vote on the U.S.-led "smart sanctions" package for Iraq, despite support by the four other council members. Instead, it will extend, most likely through the end of the year, the program that allows Iraq to export oil and import food and other commodities under U.N. supervision. (WSJ)

July 3 At a meeting of its oil ministers, the Organization of Petroleum Exporting Countries (OPEC) agrees to maintain current production quotas. Ministers indicate that, if Iraqi oil returns to the market, they may cut production in response to maintain their desired level of prices. (WP)

July 5 Australia and East Timor sign an agreement to share royalties from oil and natural gas production in the Timor Sea, which separates the two countries. The deal supersedes the former agreement between Australia and Indonesia that divided royalties 50-50, with a new arrangement of 90 percent for East Timor and 10 percent for Australia. This agreement clears the way for $7.25 billion in proposed energy projects for the area and further downstream projects for Australia. (WSJ)

July 9 California State officials and power suppliers fail to reach agreement on disputed charges worth $8.9 billion. Chief Judge of the Federal Energy Regulatory Commission Curtis L. Wagner Jr. states that California consumers were overcharged by as much as $1 billion (going back to October 2000), but a group of energy companies offered refunds of $716.1 million, adding that these refunds should be offset by amounts they are still owed for previous power deliveries. (WP)

July 10 Amerada Hess agrees to acquire Triton Energy for $2.7 billion in cash. Both companies' boards have approved the transaction. Triton Energy is an international exploration and production company with major oil and natural gas assets in West Africa and Latin America. Triton's total proved reserves are estimated at 293.5 million barrels of oil equivalent. Amerada Hess' total proved reserves are estimated at 1.1 billion barrels of oil equivalent. (DJ)

July 11 The Federal Energy Regulatory Commission (FERC) orders a consolidation of U.S. power-grid assets in order to foster large, competitive markets in the Northeast and Southeast. This is part of the FERC's goal to promote the development of four regional transmission organizations (RTOs) to oversee the national power grid, including an 11-state RTO in the west, including California. (DJ)

July 11 Iraq resumes oil exports, ending a 5-week halt in protest of a U.S. and British-sponsored United Nations (U.N.) Security Council resolution that would have overhauled U.N. sanctions, after this resolution did not come to a vote (see July 2). The oil-for-food program will be extended for five months. (NYT)

July 12 The Russian government approves a plan to break up the state electricity monopoly RAO Unified Energy Systems (UES) into transmission and power-generating units, and to sell off some operations. Under the plan, UES' coast-to-coast transmission lines will be spun off into a separate company; the state will still own 52 percent of UES. (WSJ)

July 12 A bomb attack shuts down pumping at Colombia's Cano Limon Pipeline, the country's second-largest crude oil export pipeline, just 19 hours after it had been returned to service after an earlier bombing. The 485-mile pipeline, which can transport 120,000 barrels per day to the port of Covenas, has been bombed over 100 times in 2001. In the previous week, the 110,000-barrel-per-day Colombia Pipeline was also bombed, shutting down production there. For the year-to-date, Colombia's oil exports have fallen 28.7 percent compared to the previous year. (OD, DJ)

July 16 A 13-member panel appointed by the U.S. National Academy of Sciences recommends, in a draft report, that the federal government require automakers to improve the mileage of new vehicles. President Bush has said that the panel's findings will help him decide whether and how much to increase fuel economy standards. (NYT)

July 16 BP agrees to buy a 51 percent stake in German energy conglomerate E.ON's Veba Oel petroleum station and oil unit in a deal valuing the business at about $5.56 billion. BP has the option to acquire the remaining 49 percent. The deal would make BP the market leader in retail fuel sales in Germany. (DJ)

July 17 The U.S. National Academy of Sciences releases a study of 39 research and development programs in energy efficiency and fossil fuel technology funded by the Department of Energy since 1978. The study determines that the programs yielded an economic return of $40 billion from a $13 billion investment. (LAT)

July 18 Crude oil futures fall to their lowest levels in 14 months after data from the Energy Information Administration and the American Petroleum Institute show a larger-than-expected build in crude oil stocks. Crude oil for August delivery falls 68 cents per barrel to $24.89 on the New York Mercantile Exchange (NYMEX). (DJ)

July 23 Following days of intense negotiations at the COP-6 meeting in Bonn, an agreement is reached by 178 countries that would require industrialized countries to cut emissions of gases linked to global warming. The final product is a modified version of the Kyoto Protocol. The United States declines to participate in the agreement. (NYT)

July 23 Endesa, Spain's largest power company, agrees to buy Eletrogen of Italy for $3.2 billion, making Endesa the third-largest electricity generator in Italy. (NYT)

July 24 Mexican Energy Minister Ernesto Martens declares that maintenance work will reduce Mexico's crude oil exports by about 70,000 barrels per day for the next four months, meaning that no further Mexican production cuts will be needed to provide cooperation with expected Organization of Petroleum Exporting Countries (OPEC) production quota cuts. On July 9, Mexico had declared *force majeure* on export of Maya, its main export crude oil, until November due to maintenance on its oil and gas pipelines. (Reuters, OD)

July 24 An Iranian warship in the Caspian Sea threatens a BP oil exploration ship off the coast of Azerbaijan. This prompts BP to suspend exploration in the area. The two vessels were in the Araz-Alov-Sharg field 90 miles southeast of Baku. Iran claims the field is in Iranian waters. Caspian Sea region countries have been unable to agree on a division of the Sea. (NYT)

July 25 Faced with declining oil prices, ministers of the Organization of Petroleum Exporting Countries (OPEC) agree to cut crude oil production quotas by about 4 percent, or one million barrels per day. The cut will take effect September 1, and is aimed at maintaining the price of the OPEC basket of crude oils at around $25 per barrel. Crude oil futures for September delivery climbed 47 cents per barrel, to $26.78, on the New York Mercantile Exchange (NYMEX) after the announcement. (DJ)

July 26 U.S. Environmental Protection Agency (EPA) Administrator Christie Whitman proposes significant changes in the regulation of power plant pollution. Five specific programs would be replaced with a single, flexible approach that includes expanded pollution credit trading. (LAT)

July 26 Former Indonesian President Abdurrahman Wahid leaves the presidential palace and the country, ending a 2-day standoff and clearing the way for his successor, Megawati Sukarnoputri, the former vice-president, to take over. The National Assembly had voted on July 23 to remove Wahid from office and install Sukarnoputri in the presidency. (AP)

July 30 The flow of natural gas from Iran to Turkey through the Tabriz-Ankara pipeline, completed on July 26, is delayed. Turkey states that its state gas company, Botas, wants to conduct additional tests on the pipeline. The National Iranian Gas Company claims that the delays are a tactic by Turkey to avoid paying compensation to Iran for not being technically prepared on the agreed start-date for exports. Under the 23-year deal signed in 1996, Iran was to have begun exporting 106-billion cubic feet per day, increasing to 353-billion cubic feet per day from 2007 onward. (AP)

July 30 Energy authorities from Colombia and Ecuador sign an agreement in Quito to build a $50 million, 230-kilovolt interconnection to allow the countries to share electric power. The interconnection will link the substation of Jamondino in Pasto, Colombia with the Pomasqui substation in Quito. Ecuador will likely be a net importer from Colombia because of overcapacity in Colombia. (DJ)

Aug. 1 A Phillips Petroleum-led coalition announces that it is postponing its investment commitment for the Bayu-Undan project, which involves construction of a $500 million pipeline to transport natural gas from the offshore field in the Timor Sea to Darwin, Australia for processing into liquefied natural gas (LNG). The Bayu-Undan field contains an estimated 3.4 trillion cubic feet of gas. The reason for the postponement reportedly concerns taxation uncertainties after oil and gas reserves in the Timor Gap were redistributed between Australia and East Timor. (OD, DJ)

Aug. 1 The U.S. House of Representatives votes to allow oil drilling in the Arctic National Wildlife Refuge. It also votes to reject a proposal to substantially boost the gasoline mileage of sport-utility vehicles. (WP)

Aug. 2 U.S. President George Bush signs an executive order calling on the federal government to purchase products that consume no more than 1 watt of electricity in their standby mode. (WMO)

Aug. 2 A three-day strike costing $1 million per day at Venezuela's Sincor Heavy Oil project ends. Sincor is a joint venture of TotalFinaElf, Statoil, and PdVSA that will convert the heavy oil into 31 to 32 degree API Zuata Sweet crude oil. (WMO)

Aug. 2 Crude oil futures prices for September delivery on the New York Mercantile Exchange rise $0.94 to $27.71 per barrel, their highest level in six weeks. This comes after a July 31 report by the American Petroleum Institute showing a decline in U.S. petroleum inventories for the first time in more than a month. (WSJ)

Aug. 7 Venezuelan President Hugo Chavez announces that Venezuela will have a new hydrocarbons law by mid-November. He states that the new law will promote the participation of domestic companies in the oil sector. The bill is expected to include taxation and royalty reforms. (WMO)

Aug. 8 The Energy Information Administration announces that petroleum demand in July averaged 19.7 million barrels per day, up from 19.3 million barrels per day in June, for the second-highest July figure ever recorded. Gasoline demand averaged 9 million barrels per day for July an all-time high. (DJ)

Aug. 8 U.S. Secretary of Energy Spencer Abraham announces that four programs to encourage the development of low-generation-cost fuel cells will receive $270 million in subsidies from the Department of Energy. (WMO)

Aug. 10 The United States and Great Britain reject a proposal by United Nations Secretary General Kofi Annan to permit the Iraqi government to use $1 billion per year to fund infrastructure improvements and to increase oil production capacity. It has been suggested that without infrastructure investment, Iraq's production could fall significantly over the next few years. (WMO)

Aug. 10 The State of California files a lawsuit against the U.S. Environmental Protection Agency over federal requirements that expensive anti-pollution additives be added to gasoline in the State. The additives raise the cost of gasoline by 3 to 5 cents per gallon, and California maintains that these additives are not necessary to maintain clean air standards. (LAT)

Aug. 13 Iraqi Vice-President Ramadan announces that Syria will soon hire contractors to build a new oil pipeline stretching from the Iraqi border to Syria. The pipeline would replace an old one that was shut down in 1982, but that has been recently reported to be operating. (DJ)

Aug. 13 An electricity interconnection between Venezuela and Brazil is inaugurated today by the presidents of the two countries at Santa Elena de Uairen, Venezuela. The transmission line will link this city to Boa Vista in Brazil. The power is generated by the 12,500-megawatt Guri hydroelectric plant in Venezuela. (WMO)

Aug. 13 BP signs an agreement with Algerian state oil and gas company Sonatrach for the development of the 7.1-trillion-cubic-foot in Salah natural gas field. The $2.5 billion project will split development costs 65/35. Production is expected to come on stream in 2004, and will peak at 141 billion cubic feet per year. (WMO)

Aug. 14 Devon Energy has agreed to buy Mitchell Energy for $3.1 billion in cash and stock. The transaction, which was approved by the boards of trustees of both companies, also involves the assumption by Devon of $400 million of Mitchell's debt. This deal will make Devon the second-largest independent producer of natural gas in the United States. (WSJ, DJ)

Aug. 14 The Environmental Protection Agency announces that it will not issue a reassessment of an air pollution rule affecting coal-fired power plants by August 17, as originally announced in the President's energy policy plan speech in May. Instead, the decision, which is part of a plan to ease the regulatory burden on the energy industry without having an environmental rollback, will be delayed until September in order to be part of a more comprehensive set of policy options. (NYT, WP)

Aug. 14 President Bush names Pat Wood III to be the new chairman of the Federal Energy Regulatory Commission, effective September 1, to succeed Curtis Hebert, who announced his resignation on August 6. (WSJ)

Aug. 15 Rebels in southern Sudan attack oil field operations for the first time since operations there restarted two years ago. Oil production was interrupted for only 12 hours, according to Sudanese officials. Production from these fields is about 200,000 barrels per day. (WP)

Aug. 20 A Superior Court Judge in San Jose, California signs a settlement agreement between the environmental group Communities for a Better Environment and five large oil companies (Shell, Chevron, Texaco, Equilon Enterprises, and Unocal) that will force the companies to clean up their sites that have been contaminated with the gasoline additive methyl tertiary butyl ether (MTBE). Arco, Tosco, and ExxonMobil are still in litigation. (DJ)

Aug. 24 The United States decides to support a modified British proposal to tighten procedures for pricing Iraqi crude oil. According to reports, Iraq is attempting to price its oil at artificially low levels, and favoring buyers willing to pay surcharges to secret accounts, thereby circumventing United Nations (U.N.) control over Iraqi oil revenue. Britain had proposed that the U.N. and Iraq set prices every 10 days, instead of the current 30 days, to make it more difficult for Iraq to exploit fluctuations in the market. The United States and Britain today agreed to 15 days instead of 10. (WP)

Aug. 24 The retail price of gasoline in the United States is found to have risen by 6.25 cents per gallon nationwide over the previous two weeks, according the Lundberg Survey of 8,000 stations. This is the first reported rise in national average retail gasoline prices since May 18. (DJ)

Aug. 24 Iranian President Khatemi and Turkmen President Niyazov call for a suspension of oilfield development in disputed sectors of the Caspian Sea. Both countries claim areas being developed by Azerbaijan. The unresolved legal status of claims by the five littoral States (Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan) to the Caspian is an impediment to hydrocarbon development in some areas. (WMO)

Aug. 27 Several dozen oil workers, including eight foreigners, are released by militants after being taken hostage during a raid on a drilling rig off the coast of Nigeria on August 23. The militants release the hostages and evacuate the rig after negotiations with company officials. Work was suspended on the rig, which is now being guarded by a security force. (DJ)

Aug. 28 The European Commission approves the $5.3 billion takeover of Italian power company Montedison by Italenergia, a holding company led by the Fiat Group. However, the Commission warns that, if Electricite de France, a minority stakeholder in Italenergia, were to gain control of Italenergia, the case would be open to reexamination. (NYT)

Aug. 28 National Grid PLC of the United Kingdom announces that it is the managing member of a new electricity-transmission alliance that will manage the electric-transmission systems of 10 companies in 11 American states. The new regional transmission organization (RTO) will be called Alliance Transco, and will have a gross book value of $12 billion. The RTO plans to start operating December 15, 2001. (DJ)

Sep. 3 Santa Fe International agrees to buy rival oil and natural gas driller Global Marine for $3 billion in stock. Santa Fe is the smaller company, but is paying a 17 percent premium for shares in Global Marine. The deal, which has been approved by both companies' boards of directors, creates one of the world's largest drilling companies, GlobalSantaFe Corporation, from two mid-sized companies. (DJ)

Sep. 3 Libya's Foreign Minister announces that U.S. companies will be given one year to resume oil operations in the country before Libya decides whether their licenses should be revoked and given to other firms. Current U.S. sanctions forbid companies from operating in Libya due to previous Libyan involvement in terrorist acts against the United States and other people. (Reuters)

Sep. 4 Devon Energy agrees to buy natural gas-producer Anderson Exploration of Canada for $3.4 billion. Under the merger plan, Devon will commence a tender offer for at least two-thirds of Anderson's outstanding shares while Anderson agrees not to solicit further offers while also paying a $135 million breakup fee. The deal gives Devon access to large undeveloped gas reserves in Canada. The transaction will increase Devon's proven reserves by 35 percent, to about 2 billion barrels of oil equivalent. Natural gas production will rise to 2.2 billion cubic feet per day, making Devon the largest independent producer of natural gas in North America. (DJ)

Sep. 5 The New York Mercantile Exchange (NYMEX) begins trading of 15-day Brent futures contracts, which had previously been traded only on the International Petroleum Exchange in London. The price of Brent crude oil is an important international benchmark used in pricing formulas for up to two-thirds of the world's crude oil. (DJ)

Sep. 5 Enron Chairman and Chief Executive Kenneth Lay announces that the company will divest itself of $4-$5 billion in assets in the next two years. Enron, one of the world's largest energy companies, is restructuring itself and placing more emphasis on its trading operations. (DJ)

Sep. 6 Twelve crude oil pipelines at China's largest refinery, Maoming, explode. About 20,000 people are evacuated and six workers are injured. The refinery's output is lowered by 73,000 barrels per day. Maoming is a unit of the China Petroleum and Chemical Corporation (Sinopec). The oil pipelines begin functioning at a reduced capacity on September 16. (DJ)

Sep. 7 BP decides to withdraw from negotiations with PetroChina for a stake in the construction of PetroChina's planned $4.8 billion, 2,485-mile natural gas pipeline from Xinjiang to Shanghai. ExxonMobil, Royal Dutch/Shell, and Gazprom are still in negotiations with PetroChina. (DJ)

Sep. 6 The U.S. Federal Trade Commission approves Chevron's bid to buy Texaco. Texaco must sell its interests in Equilon Enterprises and Motiva Enterprises in order to complete the $39 billion deal. The new company, ChevronTexaco, will have a market value of over $100 billion, assets of $83 billion, net proven reserves of 11.5 billion barrels of oil equivalent, and daily production of 2.7 million barrels of oil equivalent. (DJ)

Sep. 10 Dominion Resources announces that it has agreed to buy Louis Dreyfus Natural Gas for $1.8 billion in cash and stock. Dominion Resources is a natural gas and electricity company with 2.8 trillion cubic feet of gas reserves and 4 million electricity customers. Louis Dreyfus is an independent natural gas exploration and production company operating primarily in Texas and the Gulf of Mexico, with proven reserves of 1.8 trillion cubic feet of natural gas equivalent. (WSJ)

Sep. 11 The largest terrorist attack in world history occurs as two hijacked airplanes crash into the twin towers of the World Trade Center in New York City, one hijacked plane crashes into the U.S. Department of Defense's Pentagon headquarters, and another hijacked plane crashes into a rural part of Pennsylvania. The World Trade Center is destroyed, and the Pentagon is heavily damaged. Thousands of people die and economic damage is estimated to be in the billions. Aviation is halted in the

United States and all major U.S. trading markets (including energy) are closed for the remainder of the week. The U.S. government blames the attack on Osama Bin Laden's terrorist network. (NYT)

Sep. 13 Relative calm returns to world oil markets as U.S. retail gasoline prices return to normal levels and Brent crude oil futures fall back to $28.02 per barrel for October delivery after spiking to above $31.00 in the aftermath of the September 11 attacks. Also, energy trading by Houston energy companies resumes and limited commercial aviation starts. (WMO)

Sep. 16 The California State Legislature ends its session without approving a bailout for Southern California Edison that Governor Gray Davis had requested. A bill that would have let Southern California Edison issue $2.9 billion in bonds was not allowed to come to a vote in the Senate. Southern California Edison, with 4.3 million customers, acquired a debt of $3.9 billion during the California power crisis in the winter of 2001. (NYT)

Sep. 17 Phillips Petroleum completes its $7.36 billion stock acquisition of Tosco, after getting approval from the U.S. Federal Trade Commission. This makes Phillips the second-largest oil refiner in the United States, with capacity to refine 1.7 million barrels per day. (WSJ, LAT)

Sep. 17 Major trading markets in the United States, including the New York Stock Exchange and the New York Mercantile Exchange (NYMEX), reopen for the first time since September 11. (NYT)

Sep. 19 Enron invokes a clause in its Dabhol power plant contract, claiming that because India's Maharashtra State Electricity Board has violated its power purchase agreement, the Maharashtra state government and the government of India are liable for $5 billion. India could avoid facing liabilities that could total $5 billion by choosing to settle the dispute by paying offshore sponsors and foreign lenders, according to Enron's Dabhol unit. (Reuters)

Sep. 19 BP and Methanex of Canada conclude a deal to construct the world's largest methanol plant, in central Trinidad. The $400 million plant would begin production in 2003 and have capacity to produce 5,000 metric tons per day. (DJ)

Sep. 20 Iraq accuses Kuwait of excessive extraction from the joint al-Ratqa border oilfield. Iraq's foreign minister requests compensation from Kuwait. (Reuters)

Sep. 20 PG&E, California's largest utility, files its bankruptcy plans. PG&E argues that it should reorganize into two utility companies because this would put it in a better position to borrow the money needed to pay off $13.2 billion in debt. Some consumer groups object to the plan, contending that it could lead to higher electricity rates because of reduced State oversight. (NYT)

Sep. 20 Duke Energy agrees to pay $3.5 billion in cash and stock and to assume $4-$5 billion in debt in order to acquire Canadian Westcoast Energy. Duke Energy is the largest U.S. utility owner, and the deal will add U.S. and Canadian natural gas pipelines to its portfolio. The companies' combined natural gas assets will include 18,900 miles of transmission pipeline, 58,700 miles of gathering pipeline, 16,500 miles of distribution pipeline, 241 billion cubic feet of natural gas storage capacity, and 84 gas processing facilities. (LAT)

Sep. 24 Crude oil and petroleum products futures fall to their lowest levels in nearly two years amid fears that a recession will reduce energy demand. At the New York Mercantile Exchange (NYMEX), crude oil for October delivery falls $3.96 to $22.01 per barrel, and crude oil for November delivery falls $3.82 to $22.44 per barrel. Over the past six trading sessions, crude oil and gasoline futures have fallen more than 26 percent and heating oil futures have fallen nearly 29 percent. (DJ, NYT)

Sep. 24 U.S. Nuclear Regulatory Commission Chairman Richard A. Meserve announces that a comprehensive review of nuclear plant security is underway in light of the September 11 terrorist attacks. One concern is that a fully-fueled airliner could penetrate the concrete dome enclosing nuclear reactors. (WP)

Sep. 25 An explosion at the deepest coal mine in the United States, at Brookwood, Alabama, kills thirteen miners in the deadliest domestic mining accident since 1984. The blast occurs at Blue Creek Mine No. 5 when the ceiling in a shaft falls in over a battery charger, sparking naturally occurring methane. It could be weeks or months before production at the mine can resume, as fires continue to rage and the mine is being flooded by water in an effort to extinguish the fires. (NYT)

Sep. 26 Reliant Resources agrees to buy Orion Power Holdings for $2.9 billion in cash in addition to assuming about $1.8 billion of Orion's debt. Reliant has 20,000 megawatts of electricity generating capacity in the United States and nearly 3,500

megawatts in Europe. Reliant expects the acquisition of Orion will enhance its position as a provider of wholesale power, natural gas, and energy services. (DJ)

Sep. 26 Federal Energy Regulatory Commission (FERC) Chairman Pat Wood III proposes that electric utilities that refuse to join multi-state regional power grids by December 15 would lose the ability to charge market-based rates and face delays in merger approvals. FERC is pressing for the creation of four super-regional grids to minimize the market power of dominant utilities. (WP)

Sep. 27 At its two-day meeting in Vienna, the Organization of Petroleum Exporting Countries (OPEC) decides to keep its production quotas unchanged at 23.2 million barrels per day, despite crude oil prices being at their lowest levels since 1999. (NYT)

Oct. 2 The California Public Utilities Commission approves a plan that would save Southern California Edison from bankruptcy by allowing the utility to pay off $3.3 billion in debt and eventually to resume normal operations. The plan would keep current high electricity rates in place for several years. The utility and its shareholders would pay off slightly less than half of the cost of retiring the debt, and the utility's customers would pay off the remainder under the plan. The plan is temporarily blocked for two weeks on October 30, pending a civil suit. (LAT, NYT)

Oct. 4 The U.S. Energy Information Administration releases its Winter Fuels Outlook 2001/2002, which predicts lower gasoline, heating fuel, and electricity costs for this winter as compared with the previous one. The main reasons are adequate inventories and declining energy demand because of the weaker economy. (NYT)

Oct. 4 Japan's National Police Agency tightens security around 34 nuclear electric power plants, government buildings, and U.S. facilities in Japan in response to the September 11 terrorist attacks in the United States. (AP)

Oct. 7 Crude oil resumes flowing through the trans-Alaska pipeline after workers welded shut a bullet hole that caused 260,000 gallons of oil to spill out. The pipeline, which carries about 17 percent of the United States' oil production, had been shut down on October 4 after being pierced by a bullet in an apparent act of criminal mischief. (DJ)

Oct. 7 Air raids by the United States and its coalition partner, Great Britain, begin against Taliban and al-Qaeda targets in Afghanistan, after the Taliban refuse to hand over alleged terrorist mastermind Osama Bin Laden and his associates. The raids are intended to "disrupt the use of Afghanistan as a terrorist base of operations and to attack the military capability of the Taliban regime," according to U.S. President George Bush. (Reuters)

Oct. 8 The Federal Energy Regulatory Commission (FERC) orders four companies (Dynegy, Mirant, Williams, and Reliant Energy) to give refunds because the prices they charged for electricity in July exceeded federal limits. The amounts were not specified, but the order comes after FERC set price ceilings in June for ten western states that the companies did not abide by. (LAT)

Oct. 8 Burlington Resources agrees to purchase Canadian Hunter Exploration for $2.08 billion. Canadian Hunter Exploration has estimated proven reserves of 1.2 trillion cubic feet of natural gas, 90 percent of which are in Canada, and 6.2 million barrels of oil and natural gas liquids. Canadian Hunter Exploration also has two million acres that are undeveloped. This deal expands Burlington Resources' reserve base by 12 percent, to 11.5 trillion cubic feet of natural gas equivalent. (WSJ)

Oct. 8 Enron agrees to sell its Portland General Electric Utility unit to Northwest Natural Gas for $1.88 billion in cash and stock. Northwest Natural Gas also is expected to assume $1.1 billion in debt. After the sale, Northwest Natural Gas will have assets of $5 billion, more than 1.25 million customers, 2,000 megawatts of generation capacity, 26,000 miles of electric transmission and distribution lines, and 12,000 miles of natural gas distribution lines. (DJ)

Oct. 9 Royal Dutch/Shell announces that it will acquire Texaco's interests in two U.S. refining ventures, Motiva Enterprises and Equilon Enterprises, for $2.1 billion in cash, and the assumption of $1.4 billion in debt, and $300 million in pension liabilities. Texaco agreed to sell the companies as part of an agreement with the U.S. Federal Trade Commission allowing Texaco to complete its merger with Chevron. Motiva will be wholly owned by Shell, and Equilon will be majority owned by Shell and minority owned by Saudi Refining. Motiva and Equilon own over 20,000 gasoline stations and eight refineries in the U.S. (DJ)

Oct. 9 The U.S. House of Representatives passes a measure urging the Bush Administration to add more oil to the Strategic Petroleum Reserve. The resolution, which is not legally binding, urges that the emergency stockpile be expanded to its full capacity of 1 billion barrels. (AP)

Oct. 11 The Federal Energy Regulatory Commission (FERC) approves a plan by the Williams Companies to reopen the Cove Point, Maryland, liquefied natural gas (LNG) terminal by April, 2002. The facility had been closed in the 1980s, as it was then uneconomic, but it may now serve as an alternative to Boston's Everett terminal (see October 16) and El Paso Energy will most likely make use of the facility (see October 18). The Cove Point terminal has connections to a number of important east coast pipelines. (WMO)

Oct. 15 The first tanker loading from the new $2.5 billion Kazakh-Russia Pipeline takes place. This is a trial run that informally inaugurates the pipeline. Initial capacity of the pipeline is expected to be around 560,000 barrels per day. The Caspian Pipeline Consortium, led by ChevronTexaco, operates the pipeline. (Reuters)

Oct. 16 The U.S. Coast Guard lifts a ban on liquefied natural gas (LNG) tankers entering Boston Harbor to make deliveries to Distrigas' Everett LNG terminal that had been imposed on September 26 in response to the terrorist attacks of September 11. LNG regasified at the Everett terminal normally provides 15 to 20 percent of the natural gas that heats homes and businesses in New England, with the percentage rising to 35 percent on the coldest days. On October 26, the Mayor of Boston asks a federal court to prevent LNG tankers from entering Boston Harbor because he claims there are inadequate disaster response plans. (Reuters)

Oct. 17 Norway's Labor Prime Minister Jens Stoltenberg announces that he will resign effective October 19, so that a new coalition government, headed by Kjell Magne Bondevik and consisting of the Conservative Party and the Christian People's Party, can take power. The incoming government has promised to cut taxes, rationalize state ownership, and boost privatization. (Reuters)

Oct. 17 Venezuela's state-owned natural gas entity, Enagas, announces that it will increase its ownership share of the proposed $2.2 billion Cristobal liquefied natural gas (LNG) project from 30 percent to 60 percent, sharply reducing the shares of its partners ExxonMobil, Royal Dutch/Shell, and Mitsubishi. It is feared that this may jeopardize the future of the project. (OD)

Oct. 18 Crude oil for November delivery falls to its lowest level since August 1999 on the New York Mercantile Exchange (NYMEX). Light, sweet crude falls 50 cents to settle at $21.31 per barrel. Brent crude for December delivery closes at $20.36 per barrel on London's International Petroleum Exchange (IPE), down 37 cents. Poor economic prospects in the next few months and OPEC's inability to respond so far are seen as factors contributing to the decrease in crude oil prices. (OD)

Oct. 18 El Paso Energy announces that it will buy 1.8 million metric tons per year of liquefied natural gas (LNG) from Norway's Snohvit LNG project, led by Statoil, in what will be Norway's first LNG project. Deliveries will begin in 2006 to Williams Companies' Cove Point, Maryland, terminal, though El Paso Energy may make use of other terminals as well. (OD)

Oct. 22 OPEC announces that its 10 members with output restrictions implemented only 539,000 barrels per day of a promised one million-barrel-per-day crude oil production cut in September. (Reuters)

Oct. 22 The natural gas transportation unit of Brazilian state energy company Petrobras invites private firms to submit requests for the expansion of the BrazBol imports route, a key move toward free access to the pipeline between Brazil and Bolivia. Moreover, Petrobras will not be able to acquire more than a 40 percent share of new capacities under the rules recently imposed by the National Petroleum Agency (ANP). (Reuters)

Oct. 25 Some 34,000 Brazilian oil workers go on strike against Petrobras, dramatically reducing oil production and refining. Crude oil production falls by 60 to 70 percent and natural gas production by 34 percent. Eight of eleven refineries reduce or cease operations. Workers claim that Petrobras' $2 billion in profits in the first half of 2001 should be used to raise salaries. Workers end the strike on October 29 after accepting a smaller wage hike proposal than they had demanded. (Reuters, OD)

Oct. 28 Mexican President Vicente Fox states that Mexico, despite pressure from OPEC to help reverse low oil prices, will not cut or freeze state oil company Pemex's crude oil output for now. This will make it more difficult for OPEC's production quota cuts to have a lasting effect on world oil prices. (Reuters)

Oct. 29 ExxonMobil announces that a consortium it leads will spend $4 billion over 5 years to develop large offshore oil and natural gas fields in Russia's far eastern Sakhalin region. The fields are estimated to contain 2.3 billion barrels of oil and 17 trillion cubic feet of natural gas. ExxonMobil will be the operator and own a 30 percent interest in the fields. Sakhalin Oil and Gas Development of Japan will own 30 percent, ONGC Videsh of India 20 percent, Sakhalinmorneftegas-Shelf of Russia 11.5 percent, and RN-Astra of Russia 8.5 percent. The total investment could grow to $12 billion over the 30 to 40 year project life. This is the single largest foreign investment in Russia, as Russia continues to undertake market reforms. (WSJ, NYT)

Oct. 29 Experts from OPEC member countries and from non-OPEC countries Russia, Egypt, Norway, Mexico, Kazakhstan, and Angola, meet in Vienna to discuss the outlook for oil markets, but no recommendations for production cuts are made. Few details of the meeting are released. (DJ)

Oct. 30 U.S. retail gasoline prices fall to $1.27 per gallon, a drop of 26 cents per gallon since mid-September, and the lowest level since early-January 2000. This is despite the fact that average U.S. gasoline demand for the past four weeks was up 1.7 percent to 8.6 million barrels per day, compared to the same period a year ago, according to the U.S. Energy Information Administration. (DJ)

Oct. 30 The U.S. Federal Aviation Administration (FAA) releases a statement banning aircraft flying under 18,000 feet from flying within a radius of 10 nautical miles of 86 sensitive nuclear sites. This follows a general terrorist threat warning issued by the FBI, in response to which Homeland Security Director Tom Ridge urges U.S. energy companies to be on high alert. (WMO)

Oct. 31 The U.S. Department of Commerce releases data that shows that the U.S. economy declined by 0.4 percent for the quarter ending in September. This is the first contraction since the first quarter of 1993. (Reuters)

Oct. 31 OPEC President (and Algerian Oil Minister) Chakib Khelil states that OPEC oil producers are prepared to cut supply to get weak oil prices back up to the group's $25- per-barrel target price. OPEC member Kuwait states that it will support any move that OPEC makes. (Reuters)

Nov. 2 The United States recalls its ambassador to Venezuela for consultations, following comments made recently by Venezuelan President Chavez about the United States war on terrorism. (AP)

Nov. 2 Crude oil production begins at BP's Northstar field located off Alaska's north shore. Production of 65,000 barrels per day is expected by next quarter. Northstar is the first field to be successfully developed in federal waters off Alaska's North Slope, coming online 18 years after it was initially discovered. The Northstar production module is the largest ever built in Alaska, with 22 wells planned. Recoverable crude oil reserves are estimated at 175 million barrels. (OD)

Nov. 6 Crude oil for December delivery on the New York Mercantile Exchange (NYMEX) falls to a two-year low after members of the Organization of Petroleum Exporting Countries (OPEC) warn that a downward price spiral could occur if major non-OPEC oil exporters do not reduce oil production. The NYMEX price settles at $19.92 per barrel, down 10 cents per barrel from the low of November 5, and the first time it has been under $20 per barrel since mid-1999. (NYT)

Nov. 6 ChevronTexaco signs an exploration and production sharing agreement with Bahrain. ChevronTexaco expects to drill its first well by the end of 2002. Bahrain recently gained sovereignty over the Hawar Islands through an International Court of Justice decision in March 2001, opening a formerly disputed area of the Persian Gulf to exploration. (OD)

Nov. 7 The Federal Energy Regulatory Commission (FERC) orders California's electric grid operator (ISO) to begin sending utility bills to the State, rather than to utility companies, for more than $1.6 billion of power used to stabilize the electric system since the State's power crisis last year. California assumed payment responsibility for the State's cash-strapped utilities in January. (WSJ)

Nov. 7 A U.S. Federal Appeals Court rules that a $5 billion punitive damage judgment against ExxonMobil stemming from the Exxon Valdez oil spill in Alaska is excessive. However, the court rejects ExxonMobil's claims that the plaintiffs are entitled to no punitive damages. Instead, the case returns to federal trial court to have the award reduced. (LAT)

Nov. 8 Brunei announces the creation of a national oil company. According to an official statement, the company will "consolidate and mobilize the petroleum industry of Brunei." Brunei is the third-largest oil producer and the fourth-largest liquefied natural gas (LNG) producer in Southeast Asia. Royal Dutch/Shell and TotalFinaElf are active in Brunei. (DJ)

Nov. 9 The U.S. Energy Information Administration (EIA) reports that energy-related carbon dioxide emissions rose 3.1 percent in the year 2000, and have risen 14 percent since 1990. EIA reports that the emissions increase between 1999 and 2000 was a result of strong economic growth and more use of fossil fuels due to cold weather and a drought that reduced hydroelectric power generation. (LAT)

Nov. 9 Enron, the world's largest electricity and natural gas trading company, agrees to an all-stock takeover by former competitor Dynegy. ChevronTexaco, a 27 percent stakeholder in Dynegy, will immediately inject $1.5 billion cash into Enron, and an additional $1 billion into the combined entity. The merged company will be called Dynegy Inc., and Dynegy executives will occupy all top positions. The deal is expected to take at least six months to close. (WMO)

Nov. 10 An agreement is reached at talks in Marrakech, Morocco, on rules for implementation of the Kyoto climate change treaty. Rules for joint implementation projects, the Clean Development Mechanism, and funding for less developed countries are elaborated. The United States does not participate actively in negotiations or agree to the rules. (OD)

Nov. 13 U.S. President George Bush orders that the Strategic Petroleum Reserve be filled to capacity over the next few years. The reserve has a capacity of about 700 million barrels of oil, and now contains about 545 million barrels of oil. The Strategic Petroleum Reserve is intended, in the short run, to smooth out price spikes and shortages caused by a supply disruption. (NYT)

Nov. 13 President Hugo Chavez of Venezuela announces new hydrocarbon laws that will increase production royalty payments to the government by as much as 80 percent. These laws also reverse the policy of allowing foreign oil companies to hold majority partnerships with the state oil company PDVSA. There are concerns that these laws may reduce foreign investment in Venezuela's hydrocarbons sector. (WSJ)

Nov. 14 At its meeting in Vienna, Austria, OPEC announces that it intends to cut its crude oil output quotas by 1.5 million barrels per day effective January 1, but only if non-OPEC producers cut their output by 500,000 barrels per day as well. The production cuts are an effort to steady or raise world oil prices, which have fallen markedly since September. (DJ)

Nov. 14 Mexico pledges to cut its crude oil exports by 100,000 barrels per day as of January 1, 2002, in order to strengthen world oil prices in concert with OPEC actions. Mexico is the world's seventh-largest crude oil producer and exported 1.6 million barrels per day in September 2001. (Reuters)

Nov. 15 The NYMEX crude oil price for December delivery falls 11.6 percent to $17.45 per barrel, after Russia appeared to reject OPEC's proposal to cut oil production. Over the last week the December delivery price has fallen 21 percent. Oil prices have not been this low in over two years. (NYT)

Nov. 18 Phillips Petroleum and Conoco agree to merge into a new company to be called ConocoPhillips, which would be the third-largest oil and natural gas company in the United States, and the sixth largest in the world, in terms of production. The company also would be the largest gasoline retailer in the United States and the fifth-largest refiner in the world. Combined total reserves of the new company would be 8.7 billion barrels of oil equivalent, and production would be 1.7 million barrels of oil equivalent per day. The new company expects to be able to compete more effectively with its larger rivals and to achieve significant cost savings. The new company will be based in Houston, Texas. (NYT)

Nov. 20 Non-OPEC oil exporter Oman indicates that it will cut production by about 3 percent or 25,000 barrels per day, in order to reduce oil supply and cooperate with OPEC's contingent cuts. (Reuters)

Nov. 22 Norway's Oil and Energy Minister announces that he has a mandate to reduce the country's current crude oil production of about 3.2 million barrels per day by as much as 200,000 barrels per day. The cut would be pro rata, meaning that all companies will have to participate in the output cut. The timing and extent of the actual cut will depend on the overall package of supply reduction agreed upon by OPEC and other large non-OPEC producers. Brent crude oil at the International Petroleum Exchange (IPE) rises $1.17 per barrel to $19.02 per barrel, on the news. (WSJ)

Nov. 26 The European Commission approves German utility E. ON's $13.5 billion takeover of U.K. utility Powergen (which also owns LG&E of the United States), creating one of the world's largest electric utilities. The takeover had previously been approved by American and British regulators. (OD)

Nov. 26 The U.S. Energy Information Administration (EIA) reports in its Weekly Survey of Gasoline Prices that U.S. gasoline prices have fallen to their lowest levels since July 1999, the result of a supply glut. The average price for regular unleaded gasoline fell 4 cents per gallon over the last week to $1.127 per gallon, down 38 cents per gallon from a year ago and the lowest level for any week since early July 1999. (Reuters)

Nov. 27 Iraq rejects a call by U.S. President George Bush to let United Nations weapons inspectors back into the country to determine whether it is building weapons of mass destruction. An Iraqi spokesman states that, before asking Iraq to allow weapons inspectors to return, the United Nations should lift the 11-year-old sanctions on Iraq and the West should abolish the no-fly zones in northern and southern Iraq. (Reuters)

Nov. 28 Dynegy withdraws from its merger offer with Enron. Without an infusion of capital from a merger or other source, it will be difficult for Enron to continue payments to its creditors in light of the downgrade of Enron's debt rating to single-B-minus earlier in the day by Standard & Poor's. If Enron is unable to repay or refinance its debt, the company, formerly one of the largest energy companies in the world, may have to declare bankruptcy. (DJ)

Nov. 29 The United Nations Security Council unanimously approves a resolution extending the Oil-for-Food program in Iraq for another six-month period. This resolution allows Iraq to sell unlimited quantities of oil on the condition that the proceeds are used to buy food, medicine, and other humanitarian goods, and to pay war reparations. This resolution also calls on members of the Security Council to agree by May 31, 2002, on a list of "dual use" items that would require United Nations approval before Iraq could import them through the program. (WP, DJ)

Dec. 2 Enron files for Chapter 11 bankruptcy in the Southern District of New York for 14 affiliated entities, including Enron, Enron North America, Enron Energy Services, Enron Transportation Services, Enron Broadband Services, and Enron Metals & Commodity Corporation. Enron was formerly the world's largest electricity and natural gas trading company, and the seventh-largest publicly-traded energy company in the world. Enron also files a $10 billion lawsuit against Dynegy, alleging breach of contract, in connection with Dynegy's November 28 termination of its proposed merger with Enron. (DJ)

Dec. 3 Iran condemns a November 30 agreement between Azerbaijan and Kazakhstan on sharing the resources of the Caspian Sea, labeling it "provocative." Iran believes that only a comprehensive agreement involving all five states bordering the Caspian Sea should be negotiated. (AP)

Dec. 5 Sempra Energy announces that it has signed a memorandum of understanding with a consortium led by Repsol, BP, BG, and Brindas of Argentina to bring up to 800 million cubic feet of liquefied natural gas (LNG) per day from Bolivia to Sempra's proposed Baja California LNG terminal where it would be regasified. The natural gas would then be piped to its final destinations in California and various areas of Mexico. (LAT)

Dec. 5 Bolivia gives authorization to Sociedad Transierra, an international consortium of energy companies, to build a 280-mile pipeline to Brazil. Sociedad Transierra is comprised of Brazil's state energy company Petrobras, Spain's Repsol-YPF, and France's TotalFinaElf. Construction of the pipeline is set to begin in mid-January and will transport 777 million cubic feet of natural gas per day to Brazil. (Reuters)

Dec. 6 The High Court of Bangladesh blocks for at least three months a government move to export natural gas to India through a pipeline. Bangladesh has proven reserves of more than 12 trillion cubic feet of gas, enough to cover domestic requirements for 15 years, according to an unofficial estimate. But the country's opposition parties, including former Prime Minister Hasina's Awami League, and some local experts are opposed to the export of gas unless there is a surplus after estimated domestic needs for the next 50 years have been met. (Reuters)

Dec. 6 The U.S. Energy Information Administration (EIA) predicts that, for the first time since 1991, U.S. petroleum demand will decline year on year. For 2001, EIA expects U.S. petroleum demand to average 19.69 million barrels per day, down 10,000 barrels per day from 2000. The decline in demand, especially for jet fuel since the September 11 attacks, has contributed to a buildup of U.S. oil inventories and has helped keep crude oil and petroleum product prices relatively low. (Reuters)

Dec. 7 The California State Government makes its first payment of $404.8 million to the State's non-profit grid operator following an order by the Federal Energy Regulatory Commission (FERC) on November 7 that sent the grid operator's power bills to the State rather than to utilities. In January 2001, the State of California bought power on behalf of PG&E and Southern California Edison after the two companies had trouble meeting their fiscal obligations, but the State has since then been reluctant to pay the high rates charged by generators in that period. (DJ)

Dec. 10 In Venezuela, a nationwide, 12-hour strike takes place during which thousands of businesses close and millions of Venezuelans stay home in order to protest the economic policies of Venezuelan President Hugo Chavez. The strike is led by Fedecamaras, Venezuela's largest private business chamber. (DJ)

Dec. 12 The state-owned Turkish Petroleum Corporation (TPAO) announces that the company plans to explore for oil in the Kurdish-controlled area of Northern Iraq. On December 14, TPAO announces that it has signed a deal with the Iraqi Oil Ministry to drill 20 wells at the Khurmala field near Kirkuk, just south of Kurdish-controlled areas. Later in the month, TPAO denies having plans to explore Kurdish-controlled areas, but claims the contract with the Iraqi Oil Ministry's North Oil Company is U.N.-approved. A UN spokesman later denies this. (NYT, Reuters, OD)

Dec. 14 The U.S. Government announces that 2.9 million barrels of crude oil are scheduled to be added to the U.S. Strategic Petroleum Reserve in December, and a further 5.6 million barrels in January. This nearly triples the amounts scheduled in mid-November. (OD)

Dec. 14 A new rule from the U.S. Department of Energy takes effect such that the U.S. government no longer must prove that the Yucca Mountain nuclear waste storage facility in Nevada would prevent radioactive contamination of the environment through its underground rock formations. Rather, a combination of advanced storage containers and natural geological barriers would be able to satisfy environmental standards for protecting the ground water and atmosphere from the release of radioactive materials. (WP)

Dec. 17 The U.S. Energy Information Administration (EIA) reports that the average U.S. retail price of unleaded regular gasoline fell 3.6 cents per gallon over the last week to $1.059 per gallon, the cheapest level since mid-March 1999. The price is down 36 cents per gallon from a year ago and is at the lowest level since the week of March 22, 1999, according to EIA's weekly survey of more than 800 service stations. (Reuters)

Dec. 19 The Federal Energy Regulatory Commission (FERC) outlines its schedule for a proposed rulemaking to set national standards for competitive power markets. FERC also unveils a staff paper with a proposal for a standardized market design in preparation for the formal launching of the rulemaking process in March. FERC also announces that it would delay, possibly for several months, a strict new market power rule that could limit a utility's electricity rates if it controls too much generation in a given area. (DJ, Reuters)

Dec. 19 A 30-year, $6 billion deal between Venezuela and China for the export of 6 million tons per year of the Orimulsion boiler fuel is concluded. China's state-owned National Petroleum Corporation (CNPC) and Venezuela's Orimulsion boiler fuel producer Bitumes de Orinoco, or Bitor, will build a 6.5-million-metric ton, $300 million Orimulsion plant in Venezuela. Most of the plant's production will be exported to China. The plant is scheduled to come online by early 2004. CNPC has a 70 percent stake in the venture and Bitor, which is owned by Petroleos de Venezuela, has the remaining 30 percent, but Bitor has a "golden share" giving it decision-making power. (AP)

Dec. 20 Iraq announces that it will renew its oil export agreement with Jordan. Iraq will supply Jordan with around 110,000 barrels per day of crude oil and petroleum products next year. Jordan's oil purchases from Iraq are exempted from United Nations sanctions. The deal is worth about $700 million. (Reuters, OD)

Dec. 21 The Indian Oil Minister announces that India will build a strategic reserve of crude oil and petroleum products. When India had previously considered building a strategic reserve in 1995, the plans sought to build tanks to stock 12.55 million metric tons of petroleum products, and also proposed facilities to store 4.25 million metric tons of imported crude oil. (Reuters)

Dec. 23 Qatar's state oil company signs a $3.5 billion deal with Dolphin Energy for the construction and development of a natural gas pipeline from Qatar's offshore reserves to the United Arab Emirates (UAE). The Dolphin Gas Project plans to pump 2 billion cubic feet per day of natural gas from the Khuff reserves in Qatar's North Field to the gas gathering and processing plant at Ras Laffan, and then to a 275-mile subsea pipeline to Tawilah in Abu Dhabi and Jebel Ali in Dubai. Dolphin is owned by the UAE's state-owned Offsets Group (70 percent) and by TotalFinaElf (30 percent). (AP)

Dec. 26 Phillips Petroleum states that the government of East Timor has agreed on tax rates and other conditions, thereby allowing work to proceed on the $1.6 billion Bayu-Undan natural gas project in the Timor Sea off northern Australia. It had been delayed on August 1, 2001 because of taxation uncertainties between Phillips and East Timor. Phillips will make additional on-shore infrastructure and community investments in East Timor. (OD)

Dec. 26 Crude oil prices on the New York Mercantile Exchange record one of their largest one-day jumps of the year as traders become convinced that OPEC will follow through on production cuts. Prices per barrel for February delivery settle at $20.27 per barrel, an increase of $1.65, or 8.4 percent higher than the December 21 closing price (the last day of trading before the holiday weekend). Also contributing to the price increase was the return of cold weather to the northeastern United States and forecasts that show that the cold weather pattern may continue. Nevertheless, prices are still considerably lower than one year ago. (NYT)

Dec. 28 OPEC oil ministers meeting in Cairo agree to reduce their crude oil output quotas by a combined 1.5 million barrels per day (about 6.5 percent) for a six-month period beginning January 1, 2002. OPEC ministers also announce that they will meet again in March. OPEC received commitments for 462,500 barrels per day of the 500,000 barrels per day in cuts that it had requested from non-OPEC exporters, close enough to the target for OPEC to go ahead and implement its concomitant cuts. This month, Russia announced an export cut of 150,000 barrels per day on December 5. Oman announced a cut of 25,000 barrels per day on December 11, and raised it to 40,000 barrels per day on December 20. Angola announced a cut of 22,500 barrels per day on December 14. Norway announced a cut of 150,000 barrels per day on December 17. Mexico had already announced an export cut of 100,000 barrels per day in November. (DJ, Reuters)

Dec. 31 Leaders of the member states of the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) sign an agreement at the end of a two-day annual summit in Oman to move forward the setting up of a customs union to 2003 from 2005 and to establish a single currency by 2010 - part of a planned joint trade zone. (Reuters)

Appendix E

World Energy Consumption (Btu), 1992-2001

Table E1 World Primary Energy Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	10.94	11.46	11.74	11.75	12.12	12.37	12.05	12.74	13.15	12.51
Mexico	5.12	5.13	5.30	5.31	5.55	5.65	5.93	6.06	6.19	6.00
United States	86.05	87.78	89.57	91.50	94.52	94.97	95.34	96.97	99.32	97.05
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	**102.14**	**104.38**	**106.63**	**108.57**	**112.20**	**113.01**	**113.34**	**115.79**	**118.67**	**115.58**
Central & South America										
Argentina	2.12	2.29	2.25	2.33	2.41	2.50	2.63	2.64	2.68	2.66
Brazil	6.30	6.58	6.89	7.30	7.76	8.19	8.45	8.70	9.03	8.78
Chile	0.60	0.65	0.69	0.77	0.83	0.96	0.94	0.99	1.02	1.06
Colombia	0.98	1.07	1.10	1.10	1.19	1.23	1.24	1.19	1.20	1.13
Cuba	0.41	0.40	0.41	0.42	0.43	0.39	0.37	0.38	0.38	0.39
Venezuela	2.22	2.29	2.42	2.47	2.58	2.66	2.86	2.74	2.78	2.95
Other	2.70	2.83	3.00	3.16	3.30	3.45	3.60	3.72	3.90	3.93
Total	**15.33**	**16.11**	**16.77**	**17.54**	**18.50**	**19.38**	**20.11**	**20.36**	**20.99**	**20.92**
Western Europe										
Austria	1.19	1.23	1.23	1.28	1.29	1.33	1.35	1.44	1.42	1.42
Belgium	2.24	2.26	2.31	2.36	2.55	2.63	2.66	2.61	2.71	2.77
Denmark	0.82	0.85	0.84	0.88	0.88	0.91	0.90	0.88	0.89	0.90
Finland	1.18	1.20	1.23	1.12	1.14	1.26	1.29	1.30	1.30	1.33
France	9.41	9.37	9.28	9.54	9.92	9.87	10.18	10.28	10.36	10.52
Germany	14.00	14.06	14.01	14.32	14.30	14.30	14.33	14.12	14.18	14.35
Greece	1.04	1.09	1.11	1.12	1.15	1.22	1.29	1.28	1.35	1.39
Ireland	0.40	0.40	0.42	0.45	0.47	0.49	0.53	0.56	0.59	0.61
Italy	7.22	7.05	6.97	7.56	7.64	7.45	7.73	7.77	7.97	8.11
Netherlands	3.53	3.60	3.57	3.70	3.82	3.83	3.81	3.83	3.92	4.23
Norway	1.65	1.65	1.66	1.73	1.74	1.81	1.86	1.89	1.85	1.91
Portugal	0.76	0.78	0.81	0.85	0.88	0.94	0.99	1.01	1.08	1.09
Spain	4.12	4.04	4.22	4.48	4.39	4.72	5.02	5.21	5.48	5.70
Sweden	2.17	2.18	2.19	2.34	2.28	2.18	2.28	2.23	2.26	2.22
Switzerland	1.21	1.20	1.20	1.17	1.21	1.23	1.21	1.23	1.24	1.30
Turkey	2.13	2.33	2.23	2.47	2.74	2.96	3.02	2.92	3.01	2.89
United Kingdom	9.33	9.65	9.64	9.60	10.09	9.81	9.77	9.74	9.77	9.81
Croatia	0.33	0.33	0.36	0.37	0.37	0.38	0.40	0.38	0.42	0.43
Yugoslavia	0.69	0.55	0.60	0.46	0.70	0.73	0.77	0.64	0.62	0.63
Other	0.82	0.83	0.81	0.91	0.89	0.89	0.93	1.04	1.12	1.15
Total	**64.24**	**64.65**	**64.71**	**66.71**	**68.46**	**68.94**	**70.30**	**70.36**	**71.54**	**72.76**
Eastern Europe & Former U.S.S.R.										
Bulgaria	1.00	0.93	0.92	0.99	1.01	0.96	0.90	0.85	0.94	0.93
Former Czechoslovakia	3.24	--	--	--	--	--	--	--	--	--
Czech Republic	--	1.66	1.56	1.68	1.78	1.71	1.57	1.47	1.53	1.53
Slovakia	--	0.79	0.77	0.82	0.81	0.80	0.79	0.77	0.75	0.83
Hungary	1.08	1.06	1.06	1.06	1.08	1.07	1.07	1.07	1.05	1.09
Poland	3.87	4.00	3.84	3.69	3.55	4.09	3.83	3.68	3.71	3.54
Romania	2.06	1.99	1.88	2.02	2.06	2.03	1.75	1.56	1.55	1.64
Azerbaijan	0.99	0.85	0.76	0.73	0.65	0.64	0.55	0.57	0.52	0.57
Belarus	1.57	1.34	1.10	1.06	1.07	1.07	1.07	1.12	1.29	1.21
Kazakhstan	3.37	2.79	2.25	2.04	1.99	1.70	1.64	1.63	1.63	1.73
Lithuania	0.44	0.37	0.36	0.37	0.33	0.34	0.36	0.30	0.32	0.33
Russia	34.88	32.67	29.63	28.24	27.92	25.52	25.63	26.69	27.40	28.20
Turkmenistan	0.29	0.27	0.27	0.29	0.28	0.29	0.25	0.31	0.39	0.48
Ukraine	8.88	8.58	7.31	7.21	6.73	6.44	6.26	6.33	6.14	6.08
Uzbekistan	1.66	2.04	1.76	1.85	1.91	1.89	1.84	1.87	1.94	2.08
Other	1.83	1.39	1.21	1.18	1.30	1.27	1.30	1.28	1.29	1.32
Total	**65.16**	**60.75**	**54.68**	**53.25**	**52.47**	**49.82**	**48.81**	**49.49**	**50.48**	**51.54**

See footnotes at end of table.

Table E1 World Primary Energy Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	0.24	0.29	0.28	0.29	0.29	0.35	0.36	0.36	0.38	0.39
Iran	3.35	3.47	3.66	3.81	3.96	4.44	4.64	4.94	5.05	5.18
Iraq	0.84	0.96	1.08	1.13	1.12	1.03	1.05	1.07	1.07	1.08
Israel	0.54	0.60	0.62	0.61	0.65	0.70	0.75	0.76	0.84	0.79
Kuwait	0.35	0.48	0.57	0.59	0.75	0.80	0.85	0.92	0.91	0.92
Oman	0.20	0.23	0.24	0.22	0.23	0.27	0.35	0.30	0.34	0.34
Qatar	0.46	0.53	0.54	0.54	0.55	0.58	0.59	0.56	0.61	0.64
Saudi Arabia	3.39	3.52	3.64	3.85	4.05	4.08	4.27	4.35	4.71	4.91
Syria	0.59	0.64	0.68	0.65	0.70	0.74	0.81	0.83	0.86	0.86
United Arab Emirates	1.55	1.48	1.49	1.60	1.67	1.79	1.84	1.80	1.80	2.06
Yemen	0.17	0.14	0.14	0.14	0.14	0.15	0.14	0.15	0.14	0.15
Other	0.36	0.39	0.45	0.47	0.49	0.52	0.54	0.56	0.57	0.58
Total	**12.03**	**12.73**	**13.37**	**13.93**	**14.61**	**15.44**	**16.19**	**16.61**	**17.28**	**17.92**
Africa										
Algeria	1.29	1.20	1.23	1.30	1.26	1.20	1.25	1.25	1.24	1.31
Angola	0.09	0.08	0.08	0.09	0.08	0.09	0.08	0.09	0.09	0.09
Egypt	1.43	1.51	1.55	1.58	1.73	1.79	1.85	1.89	2.02	2.13
Gabon	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.03	0.04
Libya	0.49	0.51	0.53	0.56	0.59	0.62	0.60	0.56	0.63	0.65
Morocco	0.33	0.36	0.40	0.37	0.40	0.40	0.42	0.44	0.46	0.48
Nigeria	0.78	0.80	0.74	0.83	0.85	0.85	0.81	0.81	0.81	0.92
South Africa	3.75	3.72	4.06	4.09	4.12	4.51	4.33	4.51	4.55	4.60
Zimbabwe	0.24	0.22	0.23	0.23	0.23	0.22	0.20	0.26	0.24	0.24
Other	1.48	1.51	1.56	1.55	1.61	1.66	1.70	1.75	1.87	1.99
Total	**9.92**	**9.96**	**10.43**	**10.64**	**10.91**	**11.40**	**11.30**	**11.61**	**11.95**	**12.45**
Asia & Oceania										
Australia	3.80	3.91	3.94	4.09	4.16	4.53	4.57	4.78	4.84	4.97
Bangladesh	0.29	0.31	0.34	0.37	0.39	0.40	0.42	0.47	0.50	0.51
Brunei	0.05	0.05	0.05	0.06	0.06	0.06	0.05	0.07	0.07	0.08
China	29.31	31.36	34.04	35.21	36.04	37.61	37.07	36.84	36.95	39.67
Hong Kong	0.52	0.56	0.61	0.66	0.68	0.61	0.69	0.83	0.79	0.87
India	8.71	9.10	9.59	11.10	11.17	11.47	11.76	12.16	12.67	12.80
Indonesia	2.54	2.87	3.05	3.25	3.51	3.64	3.48	3.86	4.05	4.63
Japan	19.14	19.41	20.18	20.83	21.48	21.78	21.43	21.57	21.75	21.92
Korea, North	3.02	3.12	3.08	3.04	2.97	2.82	2.72	2.71	2.85	2.84
Korea, South	4.79	5.55	6.01	6.63	6.95	7.41	6.82	7.32	7.89	8.06
Malaysia	1.14	1.29	1.43	1.47	1.64	1.67	1.68	1.74	1.87	2.27
New Zealand	0.74	0.77	0.80	0.86	0.82	0.81	0.79	0.80	0.86	0.84
Pakistan	1.29	1.41	1.50	1.58	1.70	1.68	1.73	1.78	1.86	1.87
Philippines	0.77	0.84	0.90	0.96	1.02	1.09	1.13	1.22	1.25	1.25
Singapore	0.97	1.08	1.16	1.18	1.35	1.49	1.54	1.55	1.57	1.65
Taiwan	2.21	2.43	2.66	2.93	3.19	3.21	3.48	3.64	3.99	4.07
Thailand	1.47	1.68	1.87	2.25	2.45	2.59	2.44	2.64	2.75	2.90
Vietnam	0.30	0.38	0.41	0.51	0.55	0.54	0.55	0.64	0.71	0.76
Other	0.55	0.58	0.63	0.64	0.64	0.66	0.68	0.72	0.75	0.79
Total	**81.60**	**86.71**	**92.25**	**97.61**	**100.77**	**104.05**	**103.04**	**105.36**	**107.98**	**112.76**
World Total	**350.43**	**355.28**	**358.84**	**368.25**	**377.93**	**382.04**	**383.09**	**389.58**	**398.88**	**403.92**

[1] Preliminary.

- - = Not applicable.

(s) = Value less than 5 trillion Btu.

Notes: Sum of components may not equal total due to independent rounding.

Primary energy consumption reported in this table includes petroleum, dry natural gas, coal, net hydroelectric, nuclear, geothermal, solar, wind, and wood and waste electric power, as reported in Tables E2-E7. Primary energy consumption for the United States also includes: (1) the consumption of geothermal, solar, and wood and waste energy not used for electricity generation; (2) electricity imports from Mexico that are derived from geothermal energy; and (3) net imports of electricity derived from nonrenewable sources. Primary energy consumption for all countries, except the United States, has been adjusted to include total electricity imports and to exclude total electricity exports. This adjustment is necessary because the consumption data for electric power by type, as reported in Tables E5-E7, are not adjusted for electricity imports and exports, except for hydroelectric power in the United States. As a result of these adjustments, primary energy consumption reported in this table might not be equal to sum of the individual fuel types reported in Tables E2-E7.

Sources: See sources at the end of Sections 3, 4, 5, and 6.

Table E2 World Petroleum Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	3.28	3.33	3.40	3.45	3.53	3.78	3.83	3.98	4.05	3.79
Mexico	3.47	3.44	3.62	3.47	3.56	3.63	3.83	3.91	3.90	3.77
United States	33.53	33.84	34.67	34.55	35.76	36.27	36.93	37.96	38.40	38.33
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	**40.30**	**40.63**	**41.72**	**41.49**	**42.86**	**43.69**	**44.61**	**45.86**	**46.37**	**45.92**
Central & South America										
Argentina	0.90	0.97	0.92	0.91	0.97	0.98	1.03	1.05	1.04	0.99
Bolivia	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.10
Brazil	3.12	3.24	3.44	3.67	3.90	4.16	4.29	4.36	4.39	4.46
Chile	0.30	0.34	0.36	0.40	0.44	0.47	0.48	0.49	0.48	0.49
Colombia	0.46	0.48	0.48	0.50	0.55	0.57	0.58	0.56	0.56	0.50
Costa Rica	0.05	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.07	0.07
Cuba	0.39	0.39	0.40	0.41	0.42	0.36	0.35	0.36	0.35	0.36
Dominican Republic	0.14	0.12	0.14	0.15	0.16	0.17	0.18	0.20	0.25	0.26
Ecuador	0.24	0.22	0.24	0.25	0.26	0.27	0.28	0.26	0.26	0.26
El Salvador	0.05	0.05	0.05	0.06	0.06	0.07	0.08	0.08	0.08	0.08
Guatemala	0.06	0.07	0.08	0.08	0.09	0.10	0.12	0.12	0.12	0.12
Honduras	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Jamaica	0.11	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.14	0.14
Netherlands Antilles	0.14	0.14	0.14	0.15	0.15	0.16	0.16	0.16	0.16	0.16
Panama	0.09	0.09	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.11
Peru	0.25	0.26	0.27	0.30	0.32	0.34	0.36	0.37	0.36	0.33
Puerto Rico	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.42	0.40
Trinidad and Tobago	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.05	0.05
Uruguay	0.07	0.07	0.07	0.06	0.07	0.08	0.09	0.10	0.09	0.09
Venezuela	0.83	0.83	0.85	0.88	0.88	0.89	0.91	0.90	0.99	1.00
Virgin Islands, U.S.	0.12	0.11	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.13
Other	0.24	0.26	0.27	0.30	0.29	0.31	0.34	0.35	0.36	0.36
Total	**8.00**	**8.28**	**8.60**	**9.04**	**9.50**	**9.89**	**10.25**	**10.42**	**10.58**	**10.52**
Western Europe										
Austria	0.48	0.48	0.49	0.49	0.48	0.51	0.52	0.60	0.55	0.55
Belgium	1.08	1.05	1.08	1.05	1.19	1.25	1.27	1.20	1.24	1.26
Denmark	0.40	0.41	0.44	0.47	0.50	0.49	0.48	0.47	0.45	0.45
Finland	0.46	0.44	0.46	0.36	0.40	0.46	0.44	0.45	0.42	0.44
France	3.96	3.85	3.77	3.90	4.00	4.04	4.19	4.19	4.17	4.20
Germany	5.87	5.97	5.92	5.92	5.98	6.02	6.03	5.86	5.74	5.82
Greece	0.70	0.72	0.74	0.74	0.77	0.79	0.82	0.81	0.84	0.85
Ireland	0.22	0.22	0.24	0.26	0.26	0.28	0.31	0.35	0.35	0.36
Italy	4.08	3.87	3.84	4.28	4.28	3.99	4.06	3.84	3.87	3.88
Luxembourg	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.10	0.10
Netherlands	1.59	1.58	1.59	1.65	1.61	1.69	1.69	1.74	1.78	1.88
Norway	0.37	0.37	0.37	0.39	0.43	0.45	0.45	0.45	0.39	0.40
Portugal	0.58	0.55	0.56	0.60	0.57	0.61	0.68	0.69	0.69	0.70
Spain	2.29	2.18	2.33	2.60	2.43	2.66	2.87	2.98	3.05	3.13
Sweden	0.70	0.68	0.72	0.84	0.82	0.67	0.76	0.74	0.69	0.67
Switzerland	0.59	0.57	0.58	0.53	0.56	0.58	0.55	0.55	0.56	0.59
Turkey	1.02	1.16	1.11	1.23	1.30	1.29	1.27	1.26	1.33	1.25
United Kingdom	3.67	3.70	3.72	3.72	3.72	3.65	3.61	3.50	3.47	3.45
Bosnia and Herzegovina	0.07	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Croatia	0.14	0.13	0.17	0.19	0.17	0.17	0.19	0.19	0.18	0.19
Macedonia, TFYR	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Slovenia	0.07	0.09	0.09	0.10	0.11	0.11	0.11	0.11	0.11	0.11
Yugoslavia	0.12	0.07	0.07	0.06	0.11	0.14	0.13	0.12	0.13	0.13
Other	0.10	0.11	0.11	0.11	0.12	0.13	0.13	0.14	0.18	0.18
Total	**28.69**	**28.38**	**28.53**	**29.63**	**29.98**	**30.13**	**30.76**	**30.41**	**30.36**	**30.70**

See footnotes at end of table.

Table E2 World Petroleum Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.04	0.04	0.05
Bulgaria	0.28	0.25	0.27	0.28	0.25	0.23	0.22	0.20	0.22	0.20
Former Czechoslovakia	0.45	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.31	0.32	0.33	0.38	0.34	0.35	0.37	0.34	0.36
Slovakia	--	0.13	0.14	0.14	0.14	0.14	0.15	0.14	0.16	0.17
Hungary	0.36	0.35	0.36	0.33	0.31	0.32	0.33	0.32	0.30	0.30
Poland	0.62	0.62	0.63	0.65	0.75	0.79	0.84	0.83	0.90	0.86
Romania	0.53	0.53	0.47	0.52	0.55	0.58	0.53	0.44	0.45	0.45
Armenia	0.10	0.05	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Azerbaijan	0.43	0.41	0.39	0.38	0.28	0.28	0.32	0.32	0.29	0.30
Belarus	0.79	0.62	0.51	0.49	0.44	0.41	0.40	0.40	0.48	0.49
Estonia	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05
Georgia	0.06	0.03	0.02	0.02	0.04	0.04	0.05	0.05	0.06	0.06
Kazakhstan	0.85	0.71	0.63	0.59	0.53	0.44	0.42	0.41	0.40	0.41
Kyrgyzstan	0.07	0.04	0.03	0.04	0.04	0.04	0.03	0.04	0.04	0.04
Latvia	0.11	0.09	0.08	0.09	0.10	0.09	0.09	0.09	0.08	0.09
Lithuania	0.18	0.16	0.17	0.16	0.14	0.14	0.16	0.13	0.14	0.15
Moldova	0.12	0.09	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.05
Russia	9.32	7.86	6.66	6.25	5.52	5.37	5.21	5.29	5.39	5.42
Tajikistan	0.04	0.04	0.01	0.02	0.05	0.05	0.06	0.06	0.04	0.04
Turkmenistan	0.16	0.14	0.13	0.13	0.13	0.14	0.12	0.11	0.13	0.13
Ukraine	1.74	1.22	1.06	1.01	0.80	0.74	0.79	0.77	0.53	0.59
Uzbekistan	0.40	0.37	0.35	0.38	0.30	0.30	0.29	0.30	0.29	0.30
Total	**16.72**	**14.13**	**12.39**	**11.94**	**10.88**	**10.57**	**10.49**	**10.42**	**10.39**	**10.53**
Middle East										
Bahrain	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06
Cyprus	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
Iran	2.28	2.34	2.36	2.39	2.34	2.57	2.59	2.60	2.62	2.65
Iraq	0.73	0.86	0.95	1.00	1.00	0.91	0.94	0.95	0.95	0.97
Israel	0.43	0.42	0.42	0.44	0.45	0.49	0.52	0.54	0.57	0.55
Jordan	0.15	0.15	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.22
Kuwait	0.25	0.28	0.35	0.37	0.40	0.45	0.51	0.60	0.55	0.57
Lebanon	0.11	0.14	0.16	0.17	0.18	0.20	0.21	0.22	0.22	0.22
Oman	0.08	0.08	0.08	0.09	0.10	0.10	0.11	0.11	0.11	0.11
Qatar	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.06
Saudi Arabia	2.13	2.19	2.24	2.45	2.52	2.40	2.54	2.64	2.87	2.93
Syria	0.39	0.44	0.48	0.48	0.49	0.51	0.53	0.54	0.55	0.56
United Arab Emirates	0.60	0.65	0.69	0.69	0.66	0.72	0.71	0.66	0.64	0.66
Yemen	0.17	0.14	0.14	0.14	0.14	0.15	0.14	0.15	0.14	0.15
Total	**7.49**	**7.85**	**8.22**	**8.58**	**8.66**	**8.87**	**9.20**	**9.41**	**9.65**	**9.80**

See footnotes at end of table.

Table E2 World Petroleum Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Africa										
Algeria	0.41	0.40	0.40	0.40	0.39	0.38	0.40	0.38	0.40	0.41
Angola	0.06	0.05	0.05	0.06	0.05	0.06	0.05	0.06	0.06	0.06
Cameroon	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.05
Congo (Brazzaville)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Congo (Kinshasa)	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.03	0.03	0.03
Cote d'Ivoire (Ivory Coast)	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.07	0.07
Egypt	0.94	0.95	0.96	0.98	1.07	1.13	1.18	1.17	1.17	1.17
Ethiopia	0.05	0.05	0.03	0.03	0.02	0.02	0.04	0.04	0.05	0.05
Gabon	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03
Ghana	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.06	0.08	0.08
Kenya	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.12	0.12
Libya	0.31	0.34	0.35	0.38	0.40	0.42	0.40	0.41	0.44	0.45
Morocco	0.27	0.28	0.30	0.29	0.28	0.29	0.29	0.32	0.32	0.34
Nigeria	0.54	0.55	0.52	0.58	0.59	0.58	0.54	0.52	0.50	0.56
Senegal	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06
South Africa	0.85	0.83	0.84	0.86	0.88	0.90	0.92	0.95	0.94	0.94
Sudan	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.09	0.11
Tunisia	0.15	0.15	0.15	0.14	0.15	0.16	0.16	0.16	0.17	0.18
Zimbabwe	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05
Other	0.40	0.41	0.46	0.43	0.44	0.45	0.47	0.48	0.53	0.55
Total	**4.46**	**4.49**	**4.56**	**4.66**	**4.79**	**4.92**	**4.98**	**5.04**	**5.16**	**5.30**
Asia & Oceania										
Australia	1.43	1.50	1.57	1.66	1.59	1.64	1.66	1.71	1.70	1.71
Bangladesh	0.08	0.09	0.10	0.11	0.11	0.12	0.12	0.14	0.15	0.15
Brunei	0.01	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.03
Burma	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.08	0.08	0.08
China	5.57	6.19	6.57	6.98	7.44	8.10	8.44	8.99	9.86	10.22
Guam	0.04	0.05	0.07	0.05	0.04	0.05	0.04	0.05	0.04	0.04
Hong Kong	0.32	0.33	0.38	0.39	0.39	0.35	0.40	0.56	0.52	0.55
India	2.66	2.73	2.94	3.27	3.48	3.66	3.86	4.19	4.40	4.40
Indonesia	1.48	1.59	1.61	1.68	1.78	1.97	1.89	2.00	2.16	2.17
Japan	11.10	10.95	11.56	11.63	11.92	11.61	11.20	11.32	11.20	10.97
Korea, North	0.15	0.15	0.14	0.13	0.10	0.10	0.14	0.16	0.18	0.18
Korea, South	3.05	3.54	3.88	4.19	4.50	4.73	4.01	4.30	4.45	4.44
Malaysia	0.62	0.70	0.79	0.83	0.91	0.94	0.92	0.92	0.94	0.96
Mongolia	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
New Zealand	0.22	0.25	0.26	0.31	0.27	0.26	0.27	0.27	0.29	0.28
Pakistan	0.49	0.55	0.61	0.64	0.71	0.72	0.75	0.76	0.80	0.79
Papua New Guinea	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Philippines	0.55	0.60	0.64	0.69	0.72	0.77	0.80	0.77	0.73	0.71
Singapore	0.93	1.03	1.11	1.13	1.29	1.43	1.48	1.50	1.52	1.56
Sri Lanka	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.14	0.16	0.16
Taiwan	1.17	1.30	1.39	1.56	1.64	1.63	1.69	1.79	1.99	2.09
Thailand	1.00	1.14	1.26	1.42	1.56	1.61	1.52	1.66	1.66	1.62
Vietnam	0.13	0.16	0.18	0.20	0.24	0.27	0.28	0.33	0.36	0.38
Other	0.14	0.14	0.14	0.14	0.15	0.15	0.16	0.17	0.16	0.17
Total	**31.31**	**33.17**	**35.39**	**37.23**	**39.08**	**40.35**	**39.91**	**41.86**	**43.39**	**43.71**
World Total	**136.98**	**136.93**	**139.41**	**142.58**	**145.76**	**148.42**	**150.20**	**153.42**	**155.89**	**156.48**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table E3 World Dry Natural Gas Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	2.64	2.78	2.92	2.85	2.98	2.95	2.86	3.18	3.35	2.95
Mexico	1.06	1.08	1.14	1.16	1.23	1.26	1.36	1.34	1.46	1.45
United States	20.83	21.35	21.84	22.78	23.20	23.33	22.93	23.01	24.04	23.22
Total	**24.54**	**25.22**	**25.91**	**26.79**	**27.41**	**27.54**	**27.16**	**27.52**	**28.85**	**27.63**
Central & South America										
Argentina	0.82	0.87	0.89	1.00	1.06	1.05	1.13	1.19	1.23	1.15
Barbados	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bolivia	0.03	0.03	0.03	0.05	0.04	0.05	0.03	0.03	0.05	0.04
Brazil	0.15	0.15	0.16	0.17	0.19	0.20	0.21	0.24	0.35	0.35
Chile	0.05	0.06	0.07	0.07	0.07	0.10	0.12	0.17	0.19	0.24
Colombia	0.14	0.15	0.15	0.15	0.16	0.20	0.21	0.17	0.19	0.19
Cuba	(s)	(s)	(s)	(s)	(s)	0.03	0.01	0.02	0.02	0.02
Ecuador	(s)	(s)	(s)	0.01	0.01	(s)	(s)	(s)	0.01	0.01
Peru	0.02	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01
Puerto Rico	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Trinidad and Tobago	0.20	0.23	0.26	0.28	0.32	0.34	0.34	0.35	0.37	0.43
Uruguay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)
Venezuela	0.91	0.97	1.04	1.06	1.14	1.18	1.32	1.21	1.14	1.33
Total	**2.34**	**2.50**	**2.65**	**2.80**	**3.00**	**3.17**	**3.40**	**3.41**	**3.57**	**3.80**
Western Europe										
Austria	0.24	0.25	0.26	0.28	0.30	0.29	0.30	0.30	0.29	0.29
Belgium	0.40	0.42	0.43	0.47	0.52	0.50	0.55	0.59	0.59	0.58
Denmark	0.09	0.11	0.12	0.14	0.16	0.19	0.19	0.20	0.21	0.21
Finland	0.11	0.11	0.12	0.12	0.13	0.13	0.15	0.15	0.15	0.16
France	1.25	1.26	1.25	1.27	1.41	1.40	1.43	1.50	1.54	1.61
Germany	2.45	2.53	2.65	3.06	3.06	2.93	3.05	3.08	3.13	3.27
Greece	0.01	(s)	(s)	(s)	(s)	0.01	0.03	0.05	0.08	0.07
Ireland	0.08	0.10	0.10	0.10	0.12	0.12	0.12	0.13	0.15	0.16
Italy	1.81	1.85	1.79	1.97	2.03	2.09	2.26	2.45	2.56	2.57
Luxembourg	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Netherlands	1.49	1.53	1.48	1.52	1.68	1.58	1.57	1.52	1.54	1.57
Norway	0.14	0.10	0.10	0.11	0.11	0.14	0.14	0.17	0.15	0.16
Portugal	0.00	0.00	0.00	0.00	0.00	(s)	0.03	0.09	0.09	0.10
Spain	0.26	0.26	0.27	0.34	0.38	0.50	0.51	0.59	0.67	0.72
Sweden	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Switzerland	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11
Turkey	0.17	0.19	0.20	0.26	0.31	0.37	0.39	0.46	0.55	0.59
United Kingdom	2.20	2.51	2.65	2.83	3.35	3.20	3.26	3.45	3.57	3.47
Bosnia and Herzegovina	0.02	0.01	0.01	0.09	(s)	(s)	0.01	0.01	0.01	0.01
Croatia	0.10	0.11	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.11
Macedonia, TFYR	0.01	0.01	0.00	0.00	0.00	0.00	(s)	(s)	0.00	0.00
Slovenia	0.02	0.03	0.03	0.04	0.05	0.03	0.04	0.04	0.04	0.04
Yugoslavia	0.08	0.04	0.06	0.04	0.10	0.10	0.11	0.06	0.02	0.02
Total	**11.05**	**11.54**	**11.75**	**12.89**	**13.98**	**13.85**	**14.38**	**15.11**	**15.60**	**15.90**

See footnotes at end of table.

Table E3 World Dry Natural Gas Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bulgaria	0.18	0.17	0.17	0.21	0.22	0.18	0.13	0.12	0.19	0.20
Former Czechoslovakia	0.40	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.26	0.24	0.29	0.33	0.34	0.34	0.34	0.33	0.35
Slovakia	--	0.22	0.21	0.28	0.24	0.25	0.25	0.26	0.26	0.28
Hungary	0.34	0.37	0.37	0.40	0.45	0.43	0.43	0.44	0.42	0.47
Poland	0.34	0.36	0.37	0.39	0.43	0.43	0.43	0.41	0.44	0.46
Romania	0.94	0.91	0.85	0.90	0.89	0.83	0.65	0.62	0.60	0.69
Armenia	0.07	0.05	0.06	0.06	0.07	0.05	0.05	0.05	0.05	0.05
Azerbaijan	0.55	0.41	0.35	0.33	0.34	0.34	0.21	0.22	0.21	0.25
Belarus	0.67	0.62	0.52	0.47	0.51	0.55	0.57	0.63	0.72	0.66
Estonia	0.05	0.02	0.02	0.03	0.03	0.04	0.06	0.04	0.04	0.04
Georgia	0.18	0.09	0.06	0.08	0.07	0.07	0.07	0.04	0.04	0.04
Kazakhstan	0.74	0.55	0.55	0.40	0.53	0.52	0.50	0.50	0.51	0.53
Kyrgyzstan	0.09	0.08	0.07	0.03	0.07	0.07	0.07	0.07	0.07	0.07
Latvia	0.06	0.03	0.02	0.04	0.04	0.05	0.05	0.05	0.06	0.06
Lithuania	0.14	0.09	0.08	0.10	0.09	0.10	0.11	0.08	0.09	0.10
Moldova	0.08	0.07	0.05	0.05	0.08	0.09	0.09	0.08	0.08	0.08
Russia	16.61	16.31	15.34	14.64	14.63	13.55	14.17	14.14	14.26	14.54
Tajikistan	0.07	0.05	0.06	0.03	0.05	0.04	0.04	0.04	0.05	0.05
Turkmenistan	0.15	0.15	0.16	0.18	0.18	0.17	0.16	0.21	0.27	0.35
Ukraine	3.62	4.01	3.44	3.11	3.07	2.97	2.73	2.88	2.91	2.74
Uzbekistan	1.11	1.56	1.25	1.37	1.46	1.48	1.43	1.45	1.54	1.62
Total	**26.41**	**26.38**	**24.23**	**23.38**	**23.78**	**22.54**	**22.53**	**22.65**	**23.14**	**23.66**
Middle East										
Bahrain	0.20	0.24	0.24	0.24	0.24	0.29	0.31	0.31	0.32	0.33
Iran	0.93	0.99	1.19	1.31	1.50	1.76	1.93	2.23	2.35	2.45
Iraq	0.11	0.09	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.10
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Kuwait	0.10	0.20	0.22	0.22	0.34	0.34	0.33	0.32	0.35	0.35
Oman	0.12	0.15	0.15	0.14	0.13	0.17	0.24	0.19	0.23	0.23
Qatar	0.42	0.50	0.50	0.50	0.51	0.54	0.55	0.52	0.56	0.59
Saudi Arabia	1.26	1.33	1.39	1.41	1.53	1.68	1.73	1.71	1.84	1.99
Syria	0.12	0.13	0.13	0.10	0.14	0.15	0.20	0.21	0.21	0.20
United Arab Emirates	0.94	0.84	0.80	0.92	1.00	1.07	1.12	1.15	1.16	1.40
Total	**4.20**	**4.47**	**4.75**	**4.96**	**5.52**	**6.13**	**6.53**	**6.75**	**7.14**	**7.64**
Africa										
Algeria	0.86	0.77	0.81	0.88	0.86	0.80	0.83	0.85	0.82	0.89
Angola	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Cote d'Ivoire (Ivory Coast)	0.00	0.00	0.00	(s)	0.02	0.02	0.03	0.05	0.05	0.05
Egypt	0.37	0.42	0.44	0.46	0.50	0.50	0.51	0.54	0.68	0.78
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Gabon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Libya	0.18	0.18	0.18	0.18	0.19	0.20	0.20	0.16	0.19	0.20
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Nigeria	0.18	0.19	0.17	0.19	0.20	0.22	0.22	0.23	0.25	0.29
Senegal	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
South Africa	(s)	0.07	0.07	0.07	0.07	0.06	0.05	0.05	0.06	0.07
Tunisia	0.04	0.06	0.08	0.07	0.08	0.10	0.12	0.12	0.12	0.15
Total	**1.66**	**1.71**	**1.78**	**1.87**	**1.94**	**1.94**	**1.99**	**2.03**	**2.20**	**2.46**

See footnotes at end of table.

Table E3 World Dry Natural Gas Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Australia	0.63	0.66	0.69	0.74	0.74	0.75	0.78	0.80	0.85	0.88
Bangladesh	0.19	0.21	0.23	0.25	0.26	0.26	0.28	0.31	0.34	0.34
Brunei	0.04	0.03	0.03	0.04	0.03	0.04	0.03	0.04	0.04	0.06
Burma	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.06	0.07	0.08
China	0.61	0.64	0.68	0.70	0.77	0.87	0.91	0.99	1.11	1.24
Hong Kong	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
India	0.55	0.61	0.68	0.72	0.72	0.74	0.79	0.78	0.82	0.83
Indonesia	0.74	0.93	1.05	1.16	1.21	1.23	1.07	1.23	1.18	1.39
Japan	2.12	2.13	2.28	2.31	2.50	2.55	2.65	2.76	2.88	2.97
Korea, South	0.18	0.23	0.30	0.37	0.48	0.59	0.55	0.67	0.75	0.83
Malaysia	0.40	0.48	0.51	0.51	0.59	0.62	0.65	0.69	0.76	1.16
New Zealand	0.20	0.18	0.18	0.17	0.19	0.21	0.18	0.20	0.22	0.24
Pakistan	0.51	0.54	0.59	0.60	0.65	0.65	0.66	0.73	0.80	0.77
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Singapore	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.09
Taiwan	0.11	0.11	0.14	0.15	0.16	0.19	0.22	0.22	0.24	0.23
Thailand	0.25	0.31	0.34	0.37	0.42	0.53	0.56	0.61	0.69	0.83
Vietnam	0.01	0.01	0.01	0.03	0.03	0.01	0.03	0.04	0.04	0.05
Total	**6.66**	**7.20**	**7.85**	**8.26**	**8.91**	**9.37**	**9.51**	**10.23**	**10.89**	**12.03**
World Total	**76.86**	**79.02**	**78.93**	**80.96**	**84.55**	**84.54**	**85.50**	**87.70**	**91.39**	**93.11**

[1] Preliminary.
-- = Not applicable.
(s) = Value less than 5 trillion Btu.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 4.

Table E4 World Coal Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	1.10	1.22	1.26	1.28	1.30	1.45	1.40	1.48	1.59	1.69
Mexico	0.18	0.18	0.19	0.21	0.24	0.26	0.27	0.25	0.27	0.27
United States [2]	19.16	19.86	19.97	20.15	21.04	21.50	21.74	21.69	22.66	21.97
Total	**20.43**	**21.27**	**21.41**	**21.64**	**22.58**	**23.22**	**23.41**	**23.42**	**24.52**	**23.93**
Central & South America										
Argentina	0.03	0.03	0.05	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Brazil	0.39	0.40	0.38	0.39	0.40	0.40	0.40	0.51	0.53	0.52
Chile	0.07	0.07	0.08	0.09	0.12	0.18	0.17	0.17	0.13	0.09
Colombia	0.15	0.15	0.13	0.11	0.11	0.14	0.14	0.11	0.11	0.11
Costa Rica	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Cuba	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Dominican Republic	0.01	0.01	(s)	(s)	(s)	(s)	(s)	0.01	(s)	0.01
Guatemala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(s)	0.01	0.01
Haiti	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Honduras	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jamaica	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Panama	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Peru	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.02
Puerto Rico	(s)	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Uruguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Venezuela	(s)	(s)	(s)	(s)	0.01	(s)	0.04	(s)	0.01	(s)
Virgin Islands, U.S.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**0.67**	**0.69**	**0.67**	**0.66**	**0.72**	**0.79**	**0.83**	**0.87**	**0.86**	**0.80**
Western Europe										
Austria	0.10	0.11	0.12	0.13	0.13	0.15	0.13	0.13	0.15	0.14
Belgium	0.33	0.34	0.36	0.37	0.35	0.36	0.36	0.31	0.34	0.36
Denmark	0.27	0.30	0.31	0.26	0.35	0.27	0.24	0.19	0.17	0.17
Finland	0.13	0.17	0.20	0.17	0.20	0.20	0.14	0.15	0.15	0.17
France	0.70	0.59	0.56	0.61	0.63	0.57	0.68	0.59	0.57	0.48
Germany	3.96	3.81	3.66	3.52	3.46	3.47	3.40	3.22	3.24	3.15
Greece	0.30	0.34	0.34	0.33	0.32	0.36	0.37	0.37	0.39	0.41
Iceland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Ireland	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08
Italy	0.45	0.42	0.42	0.46	0.42	0.44	0.46	0.46	0.49	0.54
Luxembourg	0.04	0.04	0.04	0.02	0.02	0.01	(s)	(s)	(s)	(s)
Malta	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Netherlands	0.30	0.33	0.34	0.36	0.36	0.37	0.34	0.29	0.31	0.51
Norway	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.07
Portugal	0.11	0.12	0.13	0.14	0.14	0.15	0.13	0.16	0.16	0.12
Spain	0.82	0.79	0.76	0.71	0.59	0.68	0.65	0.72	0.75	0.68
Sweden	0.08	0.10	0.10	0.09	0.11	0.09	0.09	0.09	0.09	0.09
Switzerland	0.01	0.01	0.01	0.01	0.01	(s)	(s)	(s)	0.01	0.01
Turkey	0.67	0.63	0.61	0.62	0.72	0.86	0.89	0.81	0.78	0.76
United Kingdom	2.34	2.18	2.00	1.77	1.71	1.61	1.49	1.39	1.46	1.63
Bosnia and Herzegovina	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.11	0.13	0.13
Croatia	0.02	0.02	0.01	(s)	0.01	0.01	0.01	0.01	0.02	0.02
Macedonia, TFYR	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07
Slovenia	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.06	0.06	0.06
Yugoslavia	0.36	0.34	0.35	0.25	0.38	0.36	0.39	0.30	0.31	0.32
Total	**11.25**	**10.90**	**10.57**	**10.11**	**10.17**	**10.27**	**10.09**	**9.55**	**9.79**	**9.98**

See footnotes at end of table.

Table E4 World Coal Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bulgaria	0.37	0.34	0.31	0.31	0.33	0.38	0.37	0.35	0.36	0.35
Former Czechoslovakia	2.08	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.95	0.84	0.90	0.91	0.88	0.74	0.62	0.80	0.73
Slovakia	--	0.24	0.21	0.21	0.21	0.20	0.18	0.18	0.16	0.17
Hungary	0.21	0.18	0.17	0.16	0.16	0.17	0.16	0.17	0.16	0.15
Poland	2.91	3.00	2.82	2.64	2.36	2.84	2.57	2.46	2.41	2.26
Romania	0.42	0.40	0.41	0.42	0.43	0.38	0.31	0.26	0.29	0.30
Armenia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Azerbaijan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Belarus	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.02
Estonia	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01
Georgia	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Kazakhstan	1.56	1.29	0.90	0.90	0.79	0.63	0.62	0.62	0.61	0.71
Kyrgyzstan	0.05	0.03	0.04	0.02	0.02	0.01	0.02	0.02	0.02	0.02
Latvia	0.02	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)
Lithuania	0.02	0.02	0.02	0.01	0.01	0.01	0.01	(s)	(s)	(s)
Moldova	0.08	0.05	0.05	0.03	0.02	0.01	0.01	(s)	(s)	(s)
Russia	6.07	5.64	4.99	4.67	5.22	4.00	3.69	4.51	4.88	5.16
Tajikistan	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Turkmenistan	0.01	0.01	0.01	0.01	(s)	(s)	0.00	0.00	0.00	0.00
Ukraine	2.73	2.47	1.97	2.28	1.96	1.81	1.81	1.83	1.84	1.84
Uzbekistan	0.09	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04
Total	**16.71**	**14.79**	**12.87**	**12.67**	**12.52**	**11.40**	**10.58**	**11.11**	**11.61**	**11.78**
Middle East										
Cyprus	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Iran	0.04	0.03	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.05
Israel	0.11	0.18	0.19	0.18	0.21	0.23	0.24	0.24	0.28	0.26
Other	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.15**	**0.22**	**0.24**	**0.23**	**0.27**	**0.28**	**0.30**	**0.30**	**0.34**	**0.32**
Africa										
Algeria	0.03	0.03	0.02	0.03	0.02	0.01	0.02	0.02	0.02	0.02
Botswana	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.03
Cameroon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Egypt	0.03	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.03	0.03
Ghana	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kenya	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Libya	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Madagascar	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malawi	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mauritania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mauritius	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Morocco	0.04	0.07	0.07	0.07	0.09	0.08	0.10	0.10	0.11	0.11
Mozambique	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	0.00
Niger	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nigeria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
South Africa	2.81	2.78	3.07	3.07	3.10	3.47	3.23	3.34	3.40	3.47
Swaziland	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01
Tanzania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Tunisia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Zambia	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Zimbabwe	0.15	0.14	0.15	0.15	0.12	0.10	0.10	0.12	0.11	0.12
Total	**3.12**	**3.11**	**3.41**	**3.39**	**3.43**	**3.75**	**3.55**	**3.67**	**3.73**	**3.81**

See footnotes at end of table.

Table E4 World Coal Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Australia	1.57	1.57	1.50	1.53	1.66	1.97	1.96	2.09	2.10	2.19
Bangladesh	(s)	(s)	(s)	(s)	0.01	0.01	(s)	(s)	0.01	0.01
Bhutan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Burma	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01
China	21.71	22.91	24.96	25.51	25.83	26.57	25.52	24.69	23.61	25.37
Fiji	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00
Hong Kong	0.23	0.26	0.19	0.20	0.20	0.16	0.20	0.16	0.16	0.21
India	4.69	4.95	5.04	6.27	6.14	6.15	6.10	6.20	6.48	6.51
Indonesia	0.20	0.23	0.28	0.29	0.40	0.34	0.38	0.48	0.57	0.91
Japan	2.69	2.71	2.81	2.95	3.02	3.27	3.18	3.29	3.54	3.69
Korea, North	2.62	2.72	2.69	2.67	2.64	2.49	2.36	2.33	2.46	2.45
Korea, South	0.98	1.19	1.24	1.40	1.24	1.33	1.36	1.32	1.60	1.70
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	0.06	0.06	0.07	0.07	0.09	0.07	0.07	0.06	0.10	0.08
Mongolia	0.06	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05
Nepal	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01
New Caledonia	(s)	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.03
Pakistan	0.09	0.09	0.10	0.09	0.10	0.09	0.08	0.09	0.09	0.09
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	0.06	0.08	0.08	0.08	0.10	0.11	0.10	0.16	0.21	0.20
Singapore	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Sri Lanka	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Taiwan	0.51	0.63	0.71	0.80	0.94	0.95	1.11	1.17	1.31	1.31
Thailand	0.18	0.19	0.22	0.38	0.38	0.36	0.29	0.32	0.33	0.37
Vietnam	0.09	0.13	0.13	0.17	0.15	0.14	0.13	0.13	0.15	0.15
Total	**35.84**	**37.85**	**40.13**	**42.53**	**43.01**	**44.12**	**42.95**	**42.60**	**42.80**	**45.32**
World Total	**88.18**	**88.82**	**89.32**	**91.23**	**92.69**	**93.84**	**91.70**	**91.52**	**93.65**	**95.94**

[1] Preliminary.
[2] United States coal consumption is from Energy Information Administration, Annual Energy Review 2001, table 1.3. It is the sum of data from the coal and coal coke net imports columns.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Coal includes anthracite, subanthracite, bituminous, subbituminous, lignite, and brown coal.
Sources: See sources at the end of Section 5.

Table E5 World Net Hydroelectric Power Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	3.26	3.33	3.40	3.45	3.67	3.61	3.42	3.56	3.69	3.41
Mexico	0.27	0.27	0.21	0.28	0.32	0.27	0.25	0.34	0.34	0.29
United States [2]	2.77	3.08	2.96	3.45	3.86	3.84	3.47	3.41	3.02	2.29
Total	**6.30**	**6.68**	**6.56**	**7.19**	**7.85**	**7.72**	**7.14**	**7.31**	**7.05**	**5.99**
Central & South America										
Argentina	0.25	0.31	0.28	0.28	0.24	0.29	0.27	0.22	0.30	0.41
Bolivia	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02
Brazil	2.30	2.42	2.50	2.61	2.74	2.87	3.00	3.02	3.14	2.76
Chile	0.17	0.18	0.17	0.20	0.19	0.20	0.16	0.14	0.20	0.22
Colombia	0.23	0.29	0.33	0.33	0.37	0.33	0.32	0.35	0.33	0.33
Costa Rica	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.06	0.06
Dominican Republic	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ecuador	0.05	0.06	0.07	0.05	0.07	0.07	0.07	0.07	0.08	0.07
El Salvador	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.01
Guatemala	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Haiti	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Honduras	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Jamaica	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nicaragua	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Panama	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Paraguay	0.28	0.32	0.37	0.43	0.49	0.52	0.52	0.53	0.55	0.47
Peru	0.10	0.12	0.13	0.14	0.14	0.14	0.14	0.15	0.17	0.18
Puerto Rico	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Suriname	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02
Uruguay	0.08	0.08	0.08	0.06	0.06	0.07	0.09	0.06	0.06	0.08
Venezuela	0.49	0.49	0.53	0.53	0.55	0.59	0.60	0.62	0.65	0.62
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**4.11**	**4.44**	**4.62**	**4.80**	**5.03**	**5.25**	**5.36**	**5.36**	**5.67**	**5.34**
Western Europe										
Austria	0.36	0.38	0.37	0.38	0.35	0.37	0.38	0.42	0.43	0.41
Belgium	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Finland	0.16	0.14	0.12	0.13	0.12	0.13	0.15	0.13	0.15	0.14
France	0.70	0.66	0.80	0.73	0.67	0.64	0.64	0.74	0.69	0.76
Germany	0.18	0.18	0.21	0.22	0.23	0.18	0.18	0.20	0.22	0.24
Greece	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05	0.04	0.02
Iceland	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.07
Ireland	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Italy	0.43	0.43	0.46	0.39	0.43	0.43	0.42	0.47	0.46	0.50
Luxembourg	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Norway	1.20	1.23	1.15	1.25	1.07	1.13	1.19	1.25	1.46	1.24
Portugal	0.05	0.09	0.11	0.09	0.15	0.13	0.13	0.08	0.12	0.14
Spain	0.19	0.25	0.29	0.24	0.41	0.36	0.35	0.24	0.29	0.42
Sweden	0.77	0.77	0.61	0.70	0.53	0.71	0.77	0.74	0.81	0.81
Switzerland	0.34	0.37	0.40	0.36	0.29	0.35	0.34	0.41	0.38	0.43
Turkey	0.27	0.35	0.31	0.37	0.42	0.41	0.43	0.36	0.32	0.25
United Kingdom	0.06	0.04	0.05	0.05	0.03	0.04	0.05	0.06	0.05	0.03
Bosnia and Herzegovina	0.04	0.02	0.04	0.04	0.05	0.05	0.05	0.06	0.05	0.05
Croatia	0.04	0.04	0.05	0.05	0.07	0.05	0.05	0.06	0.07	0.08
Macedonia, TFYR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Slovenia	0.04	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.04
Yugoslavia	0.12	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.12	0.12
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**5.02**	**5.17**	**5.21**	**5.26**	**5.11**	**5.26**	**5.44**	**5.52**	**5.80**	**5.76**

See footnotes at end of table.

Table E5 World Net Hydroelectric Power Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.03	0.03	0.04	0.04	0.06	0.06	0.05	0.05	0.05	0.05
Bulgaria	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Former Czechoslovakia	0.04	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.01	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Slovakia	--	0.04	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05
Hungary	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Poland	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02
Romania	0.12	0.13	0.13	0.17	0.16	0.18	0.19	0.19	0.15	0.15
Armenia	0.03	0.04	0.04	0.02	0.02	0.01	0.02	0.02	0.02	0.02
Azerbaijan	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Georgia	0.07	0.07	0.05	0.05	0.06	0.06	0.07	0.07	0.06	0.06
Kazakhstan	0.07	0.08	0.09	0.09	0.08	0.07	0.06	0.06	0.08	0.09
Kyrgyzstan	0.10	0.09	0.12	0.11	0.13	0.11	0.10	0.13	0.14	0.13
Latvia	0.03	0.03	0.03	0.03	0.02	0.03	0.04	0.03	0.03	0.03
Lithuania	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Moldova	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	1.78	1.79	1.82	1.83	1.60	1.63	1.64	1.66	1.64	1.80
Tajikistan	0.16	0.18	0.17	0.15	0.15	0.14	0.15	0.16	0.14	0.14
Ukraine	0.08	0.12	0.13	0.10	0.09	0.10	0.16	0.15	0.12	0.13
Uzbekistan	0.06	0.08	0.07	0.06	0.07	0.06	0.06	0.06	0.06	0.05
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**2.65**	**2.79**	**2.85**	**2.83**	**2.60**	**2.62**	**2.70**	**2.72**	**2.64**	**2.82**
Middle East										
Iran	0.10	0.10	0.08	0.07	0.08	0.07	0.07	0.05	0.04	0.04
Iraq	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Lebanon	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)	(s)	(s)
Syria	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.10	0.10
Total	**0.19**	**0.18**	**0.16**	**0.16**	**0.16**	**0.16**	**0.17**	**0.15**	**0.14**	**0.15**
Africa										
Algeria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Angola	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cameroon	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Congo (Brazzaville)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05
Cote d'Ivoire (Ivory Coast)	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Egypt	0.09	0.11	0.11	0.11	0.12	0.12	0.13	0.16	0.14	0.15
Ethiopia	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Gabon	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ghana	0.06	0.06	0.06	0.06	0.07	0.07	0.04	0.05	0.07	0.09
Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kenya	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01
Madagascar	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01
Malawi	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mali	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Morocco	0.01	(s)	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01
Mozambique	(s)	(s)	(s)	(s)	(s)	0.01	0.02	0.07	0.07	0.07
Nigeria	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Reunion	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)
South Africa	0.01	(s)	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
Sudan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Swaziland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Tanzania	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Uganda	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Zambia	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.08	0.08	0.08
Zimbabwe	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04
Other	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.57**	**0.57**	**0.58**	**0.59**	**0.63**	**0.66**	**0.63**	**0.72**	**0.73**	**0.76**

See footnotes at end of table.

Table E5 World Net Hydroelectric Power Consumption (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Australia	0.16	0.17	0.17	0.16	0.16	0.17	0.16	0.17	0.17	0.17
Bangladesh	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bhutan	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Burma	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.04
Cambodia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
China	1.35	1.55	1.72	1.92	1.92	2.01	2.11	2.10	2.29	2.74
Fiji	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
French Polynesia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
India	0.72	0.73	0.85	0.75	0.71	0.77	0.85	0.83	0.77	0.81
Indonesia	0.10	0.09	0.07	0.08	0.08	0.05	0.10	0.10	0.09	0.10
Japan	0.85	0.98	0.69	0.85	0.83	0.92	0.95	0.89	0.90	0.90
Korea, North	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.22	0.22
Korea, South	0.03	0.04	0.02	0.03	0.02	0.03	0.04	0.04	0.04	0.02
Laos	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Malaysia	0.04	0.05	0.07	0.06	0.05	0.04	0.05	0.08	0.07	0.07
Nepal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
New Caledonia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.21	0.24	0.27	0.28	0.27	0.25	0.25	0.24	0.25	0.23
Pakistan	0.19	0.22	0.20	0.24	0.24	0.21	0.23	0.20	0.18	0.20
Papua New Guinea	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Philippines	0.04	0.05	0.06	0.06	0.07	0.06	0.05	0.08	0.08	0.08
Samoa	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Sri Lanka	0.03	0.04	0.04	0.05	0.03	0.04	0.04	0.04	0.03	0.03
Taiwan	0.09	0.07	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.09
Thailand	0.04	0.04	0.05	0.07	0.08	0.07	0.05	0.04	0.06	0.06
U.S. Pacific Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Vietnam	0.07	0.08	0.09	0.11	0.12	0.12	0.11	0.14	0.15	0.17
Total	**4.27**	**4.68**	**4.72**	**5.06**	**5.01**	**5.15**	**5.41**	**5.34**	**5.50**	**6.03**
World Total	**23.11**	**24.51**	**24.70**	**25.89**	**26.37**	**26.83**	**26.85**	**27.12**	**27.52**	**26.85**

[1] Preliminary.
[2] Includes hydroelectric pumped storage.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.
Consumption accounts for thermal equivalent conversion losses.
Sources: See sources at the end of Section 6.

Table E6 World Net Nuclear Electric Power Consumption (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	0.88	1.02	1.17	1.06	1.00	0.88	0.76	0.79	0.78	0.82
Mexico	0.04	0.05	0.04	0.08	0.08	0.10	0.09	0.10	0.08	0.08
United States	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03
Total	**7.39**	**7.48**	**7.90**	**8.21**	**8.16**	**7.58**	**7.92**	**8.49**	**8.72**	**8.93**
Central & South America										
Argentina	0.08	0.09	0.09	0.08	0.08	0.09	0.08	0.08	0.07	0.08
Brazil	0.02	(s)	(s)	0.02	0.02	0.03	0.03	0.04	0.05	0.15
Total	**0.10**	**0.09**	**0.09**	**0.11**	**0.10**	**0.12**	**0.12**	**0.12**	**0.12**	**0.22**
Western Europe										
Belgium	0.43	0.41	0.40	0.41	0.43	0.47	0.45	0.48	0.47	0.46
Finland	0.19	0.19	0.19	0.19	0.19	0.19	0.21	0.22	0.22	0.22
France	3.34	3.64	3.54	3.71	3.91	3.87	3.81	3.88	4.08	4.14
Germany	1.54	1.49	1.46	1.46	1.53	1.63	1.54	1.62	1.62	1.64
Netherlands	0.04	0.04	0.04	0.04	0.04	0.02	0.04	0.04	0.04	0.04
Spain	0.54	0.54	0.53	0.53	0.54	0.53	0.57	0.57	0.60	0.61
Sweden	0.61	0.59	0.70	0.67	0.70	0.67	0.70	0.67	0.55	0.66
Switzerland	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.24	0.24	0.26
United Kingdom	0.86	1.01	1.00	1.00	1.07	1.11	1.18	1.14	1.02	1.07
Slovenia	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.05	0.05
Total	**7.82**	**8.18**	**8.16**	**8.30**	**8.69**	**8.80**	**8.82**	**8.90**	**8.88**	**9.15**
Eastern Europe & Former U.S.S.R.										
Bulgaria	0.12	0.15	0.16	0.18	0.20	0.18	0.18	0.17	0.19	0.20
Former Czechoslovakia	0.29	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.15	0.15	0.13	0.14	0.14	0.14	0.14	0.15	0.16
Slovakia	--	0.14	0.14	0.13	0.13	0.12	0.13	0.15	0.16	0.19
Hungary	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.13	0.14	0.14
Romania	0.00	0.00	0.00	0.00	0.01	0.06	0.06	0.06	0.06	0.06
Armenia	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
Kazakhstan	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00
Lithuania	0.15	0.13	0.08	0.11	0.14	0.12	0.14	0.11	0.09	0.12
Russia	1.25	1.25	1.02	1.04	1.14	1.15	1.08	1.22	1.35	1.38
Ukraine	0.76	0.78	0.71	0.73	0.83	0.82	0.77	0.74	0.78	0.78
Total	**2.71**	**2.73**	**2.41**	**2.46**	**2.74**	**2.75**	**2.65**	**2.74**	**2.93**	**3.06**
Africa										
South Africa	0.09	0.07	0.10	0.11	0.12	0.13	0.14	0.13	0.13	0.11
Total	**0.09**	**0.07**	**0.10**	**0.11**	**0.12**	**0.13**	**0.14**	**0.13**	**0.13**	**0.11**
Asia & Oceania										
China	0.01	0.03	0.14	0.13	0.14	0.12	0.14	0.14	0.16	0.17
India	0.07	0.07	0.06	0.08	0.09	0.13	0.13	0.14	0.17	0.22
Japan	2.17	2.42	2.61	2.83	2.93	3.13	3.23	3.07	3.00	3.16
Korea, South	0.54	0.56	0.56	0.64	0.70	0.73	0.85	0.98	1.04	1.07
Pakistan	0.01	(s)	0.01	0.01	(s)	(s)	(s)	(s)	(s)	0.02
Taiwan	0.32	0.33	0.33	0.34	0.36	0.34	0.35	0.36	0.37	0.34
Total	**3.12**	**3.41**	**3.70**	**4.02**	**4.23**	**4.45**	**4.69**	**4.70**	**4.74**	**4.98**
World Total	**21.23**	**21.96**	**22.36**	**23.21**	**24.05**	**23.82**	**24.34**	**25.08**	**25.52**	**26.45**

[1] Preliminary.
-- = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.
Consumption accounts for thermal equivalent conversion losses.
No consumption is reported for Middle East.
Sources: See sources at the end of Section 6.

Table E7 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Consumption(Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	0.04	0.05	0.06	0.05	0.06	0.06	0.07	0.08	0.08	0.07
Mexico	0.12	0.12	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12
United States	0.97	1.00	0.99	0.95	0.97	0.98	0.98	1.01	1.03	1.01
Total	**1.13**	**1.16**	**1.16**	**1.12**	**1.14**	**1.15**	**1.16**	**1.21**	**1.22**	**1.21**
Central & South America										
Argentina	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bolivia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Brazil	0.07	0.07	0.07	0.08	0.09	0.10	0.10	0.12	0.12	0.15
Chile	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Colombia	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01
Costa Rica	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Cuba	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Dominican Republic	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
El Salvador	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Guatemala	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Jamaica	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nicaragua	0.01	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)
Panama	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Paraguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Peru	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Trinidad and Tobago	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Uruguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**0.11**	**0.11**	**0.12**	**0.13**	**0.15**	**0.16**	**0.16**	**0.19**	**0.20**	**0.24**
Western Europe										
Austria	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Belgium	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Croatia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Denmark	0.01	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.06
Faroe Islands	0.00	0.00	(s)	(s)	(s)	(s)	0.00	0.00	0.00	0.00
Finland	0.05	0.06	0.06	0.07	0.06	0.08	0.10	0.09	0.09	0.09
France	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Germany	0.06	0.06	0.08	0.09	0.10	0.10	0.13	0.14	0.19	0.23
Greece	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01
Iceland	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.03
Ireland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Italy	0.07	0.08	0.07	0.08	0.08	0.09	0.11	0.12	0.13	0.13
Luxembourg	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Netherlands	0.01	0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.05	0.05
Norway	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Portugal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)
Spain	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.06	0.07	0.10
Sweden	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04
Switzerland	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01
Turkey	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
United Kingdom	0.02	0.05	0.05	0.06	0.03	0.03	0.04	0.05	0.05	0.06
Total	**0.33**	**0.38**	**0.41**	**0.46**	**0.45**	**0.54**	**0.64**	**0.70**	**0.84**	**0.92**
Eastern Europe & Former U.S.S.R.										
Belarus	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Czech Republic	--	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01
Hungary	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Poland	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01
Romania	(s)	(s)	0.00	(s)	0.00	(s)	(s)	0.00	0.00	0.00
Estonia	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
Total	**0.02**	**0.03**	**0.02**	**0.02**	**0.02**	**0.03**	**0.03**	**0.04**	**0.04**	**0.05**

See footnotes at end of table.

Table E7 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Consumption(Btu), 1992 - 2001(Cont

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Jordan	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**(s)**	**(s)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Africa										
Ethiopia	(s)	(s)	(s)	(s)	(s)	0.00	0.00	(s)	(s)	(s)
Kenya	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**
Asia & Oceania										
Australia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
China	0.00	0.00	(s)	0.03	0.01	0.03	0.02	0.02	0.02	0.01
India	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.02	0.02
Indonesia	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05
Japan	0.21	0.21	0.23	0.26	0.27	0.29	0.22	0.23	0.23	0.23
Korea, South	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.07	0.07
Philippines	0.11	0.11	0.13	0.12	0.13	0.14	0.18	0.21	0.23	0.26
Thailand	0.00	0.00	0.00	(s)	(s)	0.01	0.01	0.01	0.02	0.02
Total	**0.40**	**0.40**	**0.45**	**0.51**	**0.54**	**0.60**	**0.57**	**0.62**	**0.65**	**0.69**
World Total	**2.01**	**2.09**	**2.17**	**2.25**	**2.31**	**2.49**	**2.57**	**2.76**	**2.97**	**3.11**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Data are reported as net consumption as opposed to gross. Net consumption excludes the energy consumed by the generating units.
Consumption accounts for thermal equivalent conversion losses.
Sources: See sources at the end of Section 6.

Appendix F

World Energy Production (Btu), 1992-2001

Table F1 World Primary Energy Production (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	14.48	15.40	16.36	16.85	17.24	17.54	17.50	17.73	18.18	18.20
Mexico	8.01	8.11	8.10	8.04	8.74	9.07	9.31	9.06	9.35	9.59
United States	69.93	68.26	70.68	71.18	72.49	72.39	72.79	71.64	71.06	71.57
Total	**92.42**	**91.78**	**95.14**	**96.06**	**98.48**	**99.00**	**99.59**	**98.43**	**98.59**	**99.36**
Central & South America										
Argentina	2.33	2.54	2.68	2.91	3.03	3.29	3.38	3.41	3.49	3.64
Bolivia	0.18	0.17	0.18	0.20	0.20	0.20	0.21	0.19	0.22	0.26
Brazil	4.01	4.15	4.31	4.51	4.87	5.14	5.56	5.96	6.46	6.20
Chile	0.33	0.33	0.33	0.35	0.33	0.34	0.30	0.24	0.28	0.31
Colombia	1.90	1.99	2.01	2.38	2.61	2.85	3.06	3.22	3.09	3.03
Ecuador	0.76	0.83	0.88	0.93	0.95	0.93	0.90	0.90	0.95	0.99
Paraguay	0.28	0.32	0.37	0.43	0.49	0.52	0.52	0.54	0.55	0.47
Peru	0.37	0.43	0.44	0.45	0.43	0.40	0.41	0.39	0.40	0.40
Trinidad and Tobago	0.51	0.53	0.56	0.58	0.62	0.63	0.63	0.72	0.80	0.83
Venezuela	6.96	7.27	7.70	8.08	8.62	9.49	9.46	8.55	9.38	8.94
Other	0.32	0.34	0.36	0.35	0.39	0.43	0.46	0.48	0.50	0.53
Total	**17.96**	**18.92**	**19.84**	**21.18**	**22.55**	**24.22**	**24.89**	**24.59**	**26.13**	**25.61**
Western Europe										
Austria	0.50	0.51	0.49	0.52	0.48	0.50	0.52	0.55	0.57	0.55
Belgium	0.46	0.44	0.43	0.43	0.45	0.49	0.48	0.51	0.50	0.48
Denmark	0.51	0.56	0.59	0.61	0.71	0.82	0.84	0.98	1.14	1.12
Finland	0.39	0.39	0.37	0.38	0.37	0.40	0.46	0.44	0.46	0.45
France	4.63	4.84	4.87	4.97	5.04	4.91	4.80	4.94	5.03	5.14
Germany	6.17	5.84	5.71	5.58	5.49	5.56	5.26	5.31	5.25	5.21
Greece	0.33	0.35	0.35	0.36	0.35	0.39	0.40	0.40	0.41	0.42
Italy	1.36	1.39	1.46	1.40	1.47	1.47	1.46	1.40	1.39	1.36
Netherlands	2.93	2.98	2.91	2.91	3.25	2.89	2.78	2.58	2.48	2.64
Norway	7.09	7.28	7.65	8.36	9.29	9.61	9.37	9.55	10.27	10.22
Spain	1.34	1.34	1.33	1.20	1.37	1.30	1.32	1.18	1.28	1.45
Sweden	1.40	1.38	1.33	1.40	1.26	1.41	1.50	1.44	1.40	1.51
Switzerland	0.58	0.61	0.66	0.62	0.55	0.61	0.61	0.67	0.64	0.70
Turkey	0.95	0.99	0.95	0.99	1.05	1.11	1.17	1.06	0.98	0.91
United Kingdom	9.07	9.40	10.19	10.76	11.51	11.28	11.54	11.91	11.15	11.16
Bosnia and Herzegovina	0.05	0.04	0.05	0.08	0.07	0.06	0.06	0.16	0.18	0.18
Croatia	0.20	0.21	0.22	0.21	0.22	0.19	0.19	0.18	0.19	0.21
Yugoslavia	0.55	0.52	0.53	0.43	0.55	0.55	0.60	0.50	0.48	0.49
Other	0.41	0.45	0.48	0.47	0.53	0.51	0.52	0.45	0.50	0.52
Total	**38.92**	**39.52**	**40.57**	**41.69**	**44.01**	**44.07**	**43.87**	**44.22**	**44.31**	**44.70**
Eastern Europe & Former U.S.S.R.										
Bulgaria	0.41	0.43	0.43	0.47	0.50	0.48	0.49	0.45	0.49	0.49
Former Czechoslovakia	2.46	--	--	--	--	--	--	--	--	--
Czech Republic	--	1.27	1.18	1.13	1.21	1.11	1.04	0.95	1.04	1.07
Slovakia	--	0.24	0.25	0.24	0.24	0.23	0.23	0.25	0.26	0.30
Hungary	0.56	0.53	0.53	0.52	0.51	0.53	0.49	0.46	0.46	0.46
Poland	3.68	3.70	3.75	3.60	3.25	3.86	3.35	3.20	3.05	3.08
Romania	1.49	1.47	1.43	1.46	1.43	1.41	1.26	1.21	1.20	1.21
Azerbaijan	0.78	0.72	0.66	0.65	0.65	0.62	0.73	0.84	0.84	0.89
Kazakhstan	3.77	3.39	2.57	2.28	2.36	2.44	2.38	2.33	2.94	3.28
Lithuania	0.15	0.14	0.09	0.13	0.15	0.13	0.16	0.12	0.11	0.14
Russia	48.98	45.53	42.87	41.87	42.04	40.15	40.43	42.08	43.28	44.88
Tajikistan	0.17	0.18	0.18	0.15	0.16	0.14	0.15	0.16	0.15	0.15
Turkmenistan	2.34	2.58	1.49	1.36	1.55	1.16	0.75	1.15	2.05	2.12
Ukraine	4.38	4.00	3.50	3.63	3.45	3.40	3.41	3.51	3.49	3.52
Uzbekistan	1.79	1.90	2.04	2.15	2.15	2.18	2.39	2.39	2.41	2.62
Other	0.44	0.45	0.43	0.40	0.44	0.42	0.42	0.44	0.44	0.44
Total	**71.40**	**66.52**	**61.40**	**60.04**	**60.09**	**58.27**	**57.68**	**59.55**	**62.19**	**64.65**

See footnotes at end of table.

Table F1 World Primary Energy Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	0.29	0.35	0.35	0.34	0.33	0.40	0.40	0.41	0.41	0.42
Iran	8.53	8.83	9.16	9.35	9.65	9.84	9.90	10.00	10.40	10.50
Iraq	1.02	1.21	1.33	1.35	1.39	2.60	4.71	5.48	5.62	5.31
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kuwait	2.44	4.28	4.73	4.81	4.94	4.85	5.02	4.60	5.04	4.85
Oman	1.72	1.82	1.90	1.99	2.07	2.13	2.20	2.17	2.43	2.57
Qatar	1.39	1.45	1.44	1.51	1.66	1.90	2.31	2.37	2.82	2.91
Saudi Arabia	20.39	20.11	20.00	20.25	20.39	20.82	21.00	19.64	21.12	20.37
Syria	1.29	1.45	1.47	1.48	1.53	1.51	1.53	1.52	1.49	1.47
United Arab Emirates	6.11	5.78	5.84	6.14	6.34	6.50	6.61	6.25	6.77	6.95
Yemen	0.38	0.46	0.70	0.72	0.71	0.76	0.81	0.85	0.92	0.92
Other	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Total	**43.57**	**45.76**	**46.94**	**47.97**	**49.03**	**51.33**	**54.50**	**53.30**	**57.04**	**56.28**
Africa										
Algeria	5.06	4.87	4.79	5.13	5.28	5.63	5.75	6.03	6.29	6.24
Angola	1.15	1.11	1.17	1.40	1.54	1.55	1.60	1.61	1.62	1.61
Cameroon	0.33	0.30	0.26	0.27	0.26	0.30	0.29	0.25	0.22	0.20
Congo (Brazzaville)	0.37	0.39	0.38	0.40	0.43	0.54	0.56	0.57	0.60	0.58
Congo (Kinshasa)	0.12	0.12	0.11	0.12	0.12	0.12	0.11	0.11	0.11	0.11
Egypt	2.44	2.55	2.59	2.67	2.73	2.60	2.57	2.68	2.63	2.66
Gabon	0.65	0.68	0.72	0.80	0.81	0.81	0.77	0.72	0.69	0.66
Libya	3.34	3.17	3.21	3.23	3.28	3.39	3.26	3.07	3.30	3.21
Nigeria	4.43	4.45	4.37	4.53	4.57	4.85	4.90	4.89	5.18	5.49
South Africa	4.21	4.30	4.60	4.84	4.86	5.44	5.52	5.43	5.56	5.59
Tunisia	0.25	0.23	0.21	0.20	0.22	0.25	0.25	0.25	0.25	0.24
Zambia	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Zimbabwe	0.18	0.16	0.16	0.17	0.15	0.13	0.13	0.15	0.15	0.16
Other	0.27	0.28	0.30	0.32	0.40	0.48	0.54	0.76	1.11	1.19
Total	**22.91**	**22.70**	**22.96**	**24.15**	**24.71**	**26.16**	**26.34**	**26.61**	**27.79**	**28.01**
Asia & Oceania										
Australia	6.57	6.61	6.91	7.43	7.57	8.33	8.67	8.85	9.69	10.02
Bangladesh	0.20	0.22	0.24	0.26	0.27	0.27	0.30	0.32	0.35	0.36
Brunei	0.70	0.71	0.72	0.75	0.73	0.74	0.74	0.81	0.85	0.88
Burma	0.09	0.09	0.10	0.10	0.10	0.09	0.10	0.10	0.18	0.35
China	30.33	31.85	34.08	35.47	36.02	37.63	36.38	35.32	34.90	38.26
India	7.17	7.37	7.63	9.01	8.75	8.96	9.01	9.06	9.34	9.37
Indonesia	5.99	6.29	6.63	6.97	7.42	7.40	7.48	7.94	7.80	8.12
Japan	3.54	3.90	3.81	4.19	4.29	4.55	4.60	4.39	4.32	4.49
Korea, North	2.80	2.91	2.88	2.85	2.81	2.66	2.53	2.55	2.68	2.67
Korea, South	0.79	0.77	0.72	0.77	0.82	0.85	0.98	1.10	1.16	1.17
Malaysia	2.26	2.35	2.41	2.59	2.84	3.01	3.14	3.16	3.20	3.56
Mongolia	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
New Zealand	0.61	0.63	0.65	0.64	0.67	0.70	0.66	0.67	0.70	0.69
Pakistan	0.91	0.96	0.98	1.04	1.08	1.06	1.07	1.11	1.16	1.18
Papua New Guinea	0.12	0.27	0.23	0.21	0.22	0.17	0.17	0.21	0.16	0.15
Philippines	0.21	0.22	0.23	0.22	0.23	0.23	0.26	0.32	0.34	0.38
Taiwan	0.45	0.44	0.47	0.47	0.49	0.48	0.49	0.49	0.49	0.46
Thailand	0.59	0.65	0.73	0.94	0.97	1.14	1.13	1.17	1.28	1.33
Vietnam	0.45	0.55	0.60	0.75	0.76	0.81	0.93	1.03	1.12	1.24
Other	0.09	0.10	0.11	0.11	0.10	0.10	0.11	0.11	0.10	0.10
Total	**63.94**	**66.94**	**70.17**	**74.83**	**76.18**	**79.24**	**78.78**	**78.77**	**79.90**	**84.83**
World Total	**351.13**	**352.14**	**357.02**	**365.93**	**375.06**	**382.30**	**385.65**	**385.48**	**395.95**	**403.44**

[1] Preliminary.

- - = Not applicable.

(s) = Value less than 5 trillion Btu.

Notes: Sum of components may not equal total due to independent rounding.

Primary energy production reported in this table includes petroleum (crude oil and natural gas plant liquids), dry natural gas, and coal, and net hydroelectric, nuclear, geothermal, solar, wind, and wood and waste electric power generation.

Primary energy production for the United States also includes the production of geothermal, solar, and wood and waste energy not used for electricity generation. As a result, primary energy production for the United States reported in this table might not be equal to sum of the individual fuel types reported in Tables F2-F8.

Sources: See sources at the end of Sections 3, 4, 5, and 6.

Table F2 World Crude Oil Production (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada [2]	3.41	3.56	3.70	3.83	3.91	4.08	4.20	4.04	4.20	4.30
Mexico	5.87	5.86	5.89	5.74	6.28	6.63	6.74	6.37	6.63	6.93
United States	15.22	14.49	14.10	13.89	13.72	13.66	13.24	12.45	12.36	12.28
Total	**24.51**	**23.92**	**23.70**	**23.46**	**23.91**	**24.37**	**24.17**	**22.87**	**23.19**	**23.51**
Central & South America										
Argentina	1.21	1.30	1.42	1.56	1.66	1.82	1.85	1.75	1.67	1.71
Bolivia	0.04	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.06	0.07
Brazil	1.35	1.39	1.45	1.50	1.72	1.82	2.09	2.44	2.74	2.79
Chile	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Colombia	0.95	1.00	0.99	1.29	1.37	1.43	1.61	1.79	1.52	1.32
Cuba	0.04	0.05	0.06	0.06	0.07	0.07	0.07	0.09	0.10	0.12
Ecuador	0.70	0.75	0.80	0.86	0.87	0.85	0.82	0.81	0.87	0.90
Peru	0.25	0.27	0.27	0.28	0.26	0.25	0.25	0.23	0.21	0.20
Trinidad and Tobago	0.30	0.30	0.29	0.29	0.29	0.27	0.27	0.27	0.27	0.25
Venezuela	5.32	5.49	5.80	6.16	6.60	7.34	7.09	6.33	7.08	6.45
Other	0.02	0.03	0.03	0.04	0.05	0.05	0.07	0.08	0.07	0.07
Total	**10.24**	**10.64**	**11.18**	**12.11**	**12.95**	**13.98**	**14.21**	**13.88**	**14.61**	**13.90**
Western Europe										
Austria	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.04
Denmark	0.34	0.36	0.38	0.39	0.43	0.48	0.49	0.62	0.75	0.72
France	0.12	0.12	0.12	0.11	0.09	0.08	0.07	0.07	0.06	0.06
Germany	0.14	0.13	0.13	0.13	0.13	0.12	0.13	0.12	0.14	0.14
Greece	0.03	0.02	0.02	0.02	0.02	0.02	0.01	(s)	0.01	0.01
Italy	0.19	0.19	0.19	0.21	0.23	0.25	0.24	0.18	0.20	0.18
Netherlands	0.12	0.11	0.18	0.15	0.13	0.12	0.12	0.07	0.06	0.06
Norway	4.59	4.82	5.17	5.68	6.39	6.45	6.19	6.19	6.58	6.39
Spain	0.05	0.04	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Sweden	(s)	(s)	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	0.18	0.17	0.16	0.15	0.15	0.15	0.14	0.13	0.12	0.10
United Kingdom	3.88	4.06	5.03	5.27	5.45	5.33	5.54	5.68	4.83	4.83
Croatia	0.08	0.08	0.08	0.07	0.06	0.06	0.07	0.05	0.05	0.05
Slovenia	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Yugoslavia	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03
Total	**9.80**	**10.19**	**11.60**	**12.29**	**13.19**	**13.15**	**13.11**	**13.21**	**12.89**	**12.63**
Eastern Europe & Former U.S.S.R.										
Albania	0.02	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Bulgaria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Former Czechoslovakia	0.01	--	--	--	--	--	--	--	--	--
Czech Republic	--	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Slovakia	--	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Hungary	0.08	0.08	0.09	0.08	0.07	0.08	0.06	0.06	0.06	0.06
Poland	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.04
Romania	0.29	0.28	0.29	0.28	0.29	0.28	0.28	0.26	0.25	0.25
Azerbaijan	0.46	0.43	0.39	0.38	0.38	0.37	0.49	0.59	0.60	0.65
Belarus	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Georgia	0.01	(s)	(s)	(s)	(s)	0.01	(s)	(s)	(s)	(s)
Kazakhstan	0.96	0.88	0.76	0.78	0.87	1.00	1.02	1.14	1.31	1.51
Kyrgyzstan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Lithuania	0.00	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Russia	16.42	14.44	13.17	12.87	12.59	12.71	12.56	13.05	13.94	15.13
Tajikistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Turkmenistan	0.21	0.17	0.17	0.15	0.16	0.19	0.24	0.30	0.30	0.32
Ukraine	0.15	0.14	0.14	0.14	0.14	0.12	0.12	0.16	0.16	0.16
Uzbekistan	0.08	0.10	0.16	0.25	0.25	0.24	0.25	0.22	0.20	0.16
Total	**18.78**	**16.66**	**15.31**	**15.06**	**14.89**	**15.14**	**15.17**	**15.92**	**17.00**	**18.42**

See footnotes at end of table.

Table F2 World Crude Oil Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	0.08	0.09	0.09	0.09	0.08	0.09	0.08	0.08	0.08	0.08
Iran	7.39	7.61	7.78	7.83	7.94	7.87	7.81	7.64	7.97	8.00
Iraq	0.91	1.09	1.17	1.19	1.23	2.45	4.57	5.33	5.48	5.17
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kuwait	2.29	4.00	4.38	4.45	4.47	4.34	4.51	4.10	4.50	4.32
Oman	1.59	1.66	1.74	1.82	1.90	1.94	1.93	1.95	2.08	2.06
Qatar	0.89	0.87	0.88	0.93	1.08	1.16	1.47	1.40	1.56	1.51
Saudi Arabia	18.02	17.68	17.52	17.76	17.78	18.04	18.10	16.90	18.18	17.32
Syria	1.08	1.25	1.26	1.29	1.31	1.26	1.24	1.21	1.18	1.16
United Arab Emirates	4.80	4.56	4.63	4.72	4.82	4.89	4.95	4.58	5.02	4.81
Yemen	0.38	0.46	0.70	0.72	0.71	0.76	0.81	0.85	0.92	0.92
Total	**37.44**	**39.27**	**40.13**	**40.80**	**41.32**	**42.80**	**45.46**	**44.05**	**46.96**	**45.34**
Africa										
Algeria	2.47	2.36	2.39	2.44	2.53	2.59	2.53	2.44	2.55	2.57
Angola	1.12	1.08	1.14	1.37	1.51	1.52	1.56	1.58	1.59	1.58
Benin	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)
Cameroon	0.31	0.28	0.23	0.24	0.24	0.27	0.26	0.22	0.18	0.17
Congo (Brazzaville)	0.37	0.38	0.38	0.40	0.43	0.53	0.56	0.57	0.59	0.58
Congo (Kinshasa)	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.05
Cote d'Ivoire (Ivory Coast)	(s)	(s)	0.01	0.02	0.03	0.04	0.04	0.03	0.02	0.02
Egypt	1.91	1.92	1.94	1.99	2.00	1.85	1.80	1.84	1.62	1.51
Equatorial Guinea	(s)	0.01	0.01	0.01	0.03	0.10	0.17	0.20	0.33	0.36
Gabon	0.64	0.67	0.71	0.78	0.79	0.80	0.76	0.71	0.68	0.65
Ghana	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Libya	3.03	2.87	2.90	2.93	2.96	3.05	2.93	2.78	2.98	2.88
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nigeria	4.18	4.21	4.14	4.28	4.31	4.58	4.62	4.57	4.66	4.84
South Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.05
Sudan	(s)	(s)	(s)	(s)	(s)	0.01	0.02	0.13	0.35	0.39
Tunisia	0.23	0.20	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.14
Total	**14.33**	**14.05**	**14.12**	**14.72**	**15.09**	**15.59**	**15.52**	**15.36**	**15.85**	**15.82**
Asia & Oceania										
Australia	1.09	1.02	1.09	1.14	1.16	1.20	1.11	1.10	1.47	1.34
Bangladesh	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01
Brunei	0.35	0.35	0.36	0.35	0.33	0.34	0.34	0.39	0.41	0.42
Burma	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03
China	6.12	6.20	6.31	6.42	6.74	6.87	6.86	6.86	6.99	7.08
India	1.18	1.12	1.23	1.47	1.37	1.41	1.38	1.36	1.36	1.34
Indonesia	3.16	3.17	3.16	3.15	3.25	3.18	3.18	3.08	2.99	2.87
Japan	0.04	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.01
Malaysia	1.36	1.33	1.34	1.42	1.45	1.46	1.50	1.44	1.44	1.37
New Zealand	0.08	0.08	0.08	0.06	0.07	0.11	0.09	0.08	0.07	0.07
Pakistan	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.11	0.12	0.13
Papua New Guinea	0.11	0.26	0.23	0.20	0.21	0.16	0.16	0.20	0.14	0.14
Philippines	0.02	0.02	0.01	0.01	(s)	(s)	(s)	(s)	(s)	0.02
Taiwan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Thailand	0.12	0.12	0.13	0.12	0.14	0.17	0.17	0.19	0.25	0.26
Vietnam	0.23	0.26	0.31	0.38	0.39	0.42	0.54	0.64	0.70	0.78
Total	**14.02**	**14.12**	**14.43**	**14.89**	**15.28**	**15.49**	**15.50**	**15.50**	**15.99**	**15.87**
World Total	**129.13**	**128.86**	**130.46**	**133.32**	**136.64**	**140.52**	**143.15**	**140.79**	**146.50**	**145.48**

[1] Preliminary.
[2] Includes oil processed from Athabasca Tar Sands.
-- = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Crude oil includes lease condensate.
Sources: See sources at the end of Section 3.

Table F3 World Natural Gas Plant Liquids Production (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	0.67	0.74	0.77	0.84	0.87	0.92	0.95	0.95	1.02	1.03
Mexico	0.60	0.61	0.61	0.59	0.56	0.51	0.56	0.58	0.58	0.57
United States	2.36	2.41	2.39	2.44	2.53	2.50	2.42	2.53	2.61	2.55
Total	**3.63**	**3.75**	**3.77**	**3.87**	**3.96**	**3.93**	**3.93**	**4.06**	**4.21**	**4.15**
Central & South America										
Argentina	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
Bolivia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Brazil	0.04	0.04	0.05	0.06	0.05	0.05	0.05	0.05	0.06	0.06
Chile	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Colombia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cuba	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00
Ecuador	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Peru	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Trinidad and Tobago	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Venezuela	0.17	0.22	0.22	0.23	0.23	0.22	0.22	0.26	0.27	0.31
Total	**0.31**	**0.37**	**0.40**	**0.42**	**0.42**	**0.39**	**0.41**	**0.45**	**0.46**	**0.51**
Western Europe										
Austria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
France	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Greece	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Italy	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00
Netherlands	0.02	0.03	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.03
Norway	0.15	0.16	0.16	0.22	0.22	0.22	0.21	0.19	0.19	0.46
Spain	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
United Kingdom	0.26	0.28	0.36	0.44	0.43	0.38	0.39	0.39	0.38	0.42
Croatia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.48**	**0.51**	**0.60**	**0.73**	**0.72**	**0.67**	**0.67**	**0.65**	**0.64**	**0.94**
Eastern Europe & Former U.S.S.R.										
Former Czechoslovakia	(s)	--	--	--	--	--	--	--	--	--
Czech Republic	--	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00
Hungary	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02
Poland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00
Romania	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Azerbaijan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Kazakhstan	0.13	0.12	0.10	0.08	0.08	0.08	0.08	0.11	0.16	0.14
Kyrgyzstan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00
Russia	0.35	0.33	0.30	0.27	0.28	0.30	0.33	0.35	0.35	0.36
Tajikistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00
Turkmenistan	0.02	0.02	0.01	0.02	0.02	0.03	0.03	0.02	0.02	0.02
Ukraine	0.03	0.03	0.03	0.03	0.02	0.04	0.04	0.03	0.02	0.02
Uzbekistan	0.05	0.06	0.06	0.07	0.08	0.07	0.07	0.07	0.09	0.10
Total	**0.63**	**0.60**	**0.54**	**0.51**	**0.52**	**0.56**	**0.59**	**0.64**	**0.70**	**0.68**
Middle East										
Bahrain	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Iran	0.08	0.09	0.09	0.10	0.10	0.11	0.12	0.12	0.12	0.13
Iraq	(s)	0.02	0.03	0.04	0.03	0.03	0.02	0.02	0.02	0.03
Kuwait	0.05	0.08	0.13	0.15	0.13	0.17	0.18	0.18	0.18	0.18
Oman	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Qatar	0.08	0.08	0.07	0.08	0.07	0.10	0.12	0.15	0.18	0.21
Saudi Arabia	1.11	1.10	1.09	1.09	1.09	1.11	1.18	1.04	1.10	1.06
Syria	(s)	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01
United Arab Emirates	0.24	0.24	0.25	0.26	0.27	0.26	0.28	0.26	0.33	0.48
Total	**1.58**	**1.65**	**1.70**	**1.76**	**1.72**	**1.82**	**1.93**	**1.81**	**1.97**	**2.11**

See footnotes at end of table.

Table F3 World Natural Gas Plant Liquids Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Africa										
Algeria	0.26	0.27	0.26	0.27	0.28	0.30	0.29	0.35	0.43	0.46
Egypt	0.08	0.10	0.10	0.11	0.12	0.13	0.14	0.14	0.18	0.21
Libya	0.06	0.07	0.07	0.06	0.08	0.10	0.10	0.10	0.10	0.10
South Africa	(s)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Tunisia	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**0.42**	**0.46**	**0.45**	**0.46**	**0.49**	**0.54**	**0.54**	**0.60**	**0.73**	**0.79**
Asia & Oceania										
Australia	0.09	0.09	0.09	0.08	0.10	0.11	0.11	0.11	0.11	0.12
Bangladesh	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Brunei	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.04	0.04
Burma	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
India	0.05	0.05	0.08	0.08	0.13	0.14	0.15	0.15	0.15	0.15
Indonesia	0.11	0.12	0.12	0.11	0.12	0.13	0.13	0.13	0.13	0.12
Japan	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Malaysia	0.02	0.03	0.03	0.03	0.03	0.08	0.14	0.14	0.10	0.11
New Zealand	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pakistan	(s)	(s)	(s)	0.01	(s)	(s)	0.01	0.01	0.01	(s)
Taiwan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Thailand	0.02	0.02	0.03	0.06	0.06	0.08	0.10	0.10	0.10	0.10
Total	**0.32**	**0.35**	**0.39**	**0.41**	**0.48**	**0.59**	**0.69**	**0.69**	**0.66**	**0.66**
World Total	**7.38**	**7.68**	**7.85**	**8.16**	**8.31**	**8.51**	**8.75**	**8.89**	**9.36**	**9.86**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table F4 World Dry Natural Gas Production (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	4.60	4.99	5.45	5.72	5.83	5.89	6.12	6.41	6.60	6.71
Mexico	0.98	1.05	1.08	1.06	1.21	1.25	1.34	1.36	1.39	1.38
United States	18.38	18.58	19.35	19.10	19.36	19.39	19.61	19.34	19.46	19.84
Total	**23.95**	**24.63**	**25.88**	**25.88**	**26.40**	**26.53**	**27.08**	**27.11**	**27.45**	**27.93**
Central & South America										
Argentina	0.74	0.79	0.82	0.92	0.98	1.01	1.09	1.28	1.38	1.37
Barbados	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bolivia	0.11	0.10	0.10	0.12	0.11	0.12	0.11	0.09	0.12	0.15
Brazil	0.15	0.15	0.16	0.17	0.19	0.20	0.21	0.23	0.27	0.22
Chile	0.06	0.06	0.07	0.07	0.07	0.08	0.07	0.04	0.04	0.04
Colombia	0.14	0.15	0.15	0.15	0.16	0.20	0.21	0.17	0.19	0.19
Cuba	(s)	(s)	(s)	(s)	(s)	0.03	0.01	0.02	0.02	0.02
Ecuador	(s)	(s)	(s)	0.01	0.01	(s)	(s)	(s)	0.01	0.01
Peru	0.02	0.03	0.03	0.03	0.03	0.01	0.01	0.01	0.01	0.01
Trinidad and Tobago	0.20	0.23	0.26	0.28	0.32	0.34	0.34	0.43	0.52	0.56
Venezuela	0.91	0.97	1.04	1.06	1.14	1.18	1.32	1.13	1.14	1.33
Total	**2.34**	**2.49**	**2.65**	**2.80**	**3.00**	**3.17**	**3.40**	**3.40**	**3.70**	**3.91**
Western Europe										
Austria	0.05	0.06	0.05	0.06	0.06	0.05	0.06	0.07	0.07	0.06
Belgium	(s)	(s)	(s)	0.00	(s)	0.00	0.00	0.00	(s)	0.00
Denmark	0.16	0.18	0.19	0.21	0.25	0.31	0.30	0.31	0.33	0.33
France	0.12	0.13	0.13	0.12	0.11	0.09	0.08	0.07	0.07	0.07
Germany	0.61	0.61	0.63	0.67	0.72	0.71	0.69	0.74	0.70	0.70
Greece	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Ireland	0.08	0.10	0.10	0.10	0.10	0.08	0.06	0.05	0.04	0.03
Italy	0.65	0.69	0.73	0.72	0.72	0.70	0.69	0.63	0.60	0.56
Netherlands	2.73	2.78	2.64	2.66	3.01	2.67	2.54	2.39	2.29	2.45
Norway	1.14	1.06	1.16	1.21	1.61	1.79	1.77	1.90	2.02	2.08
Spain	0.05	0.03	0.01	0.02	0.02	0.01	(s)	0.01	0.01	0.02
Switzerland	(s)	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.01
United Kingdom	2.04	2.40	2.57	2.81	3.34	3.19	3.34	3.69	4.04	3.95
Bosnia and Herzegovina	(s)	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Croatia	0.07	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.07
Slovenia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Yugoslavia	0.03	0.04	0.03	0.03	0.03	0.03	0.04	0.03	0.02	0.02
Total	**7.75**	**8.15**	**8.31**	**8.71**	**10.03**	**9.70**	**9.65**	**9.96**	**10.27**	**10.36**

See footnotes at end of table.

Table F4 World Dry Natural Gas Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bulgaria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Former Czechoslovakia	0.01	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Slovakia	--	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hungary	0.17	0.17	0.17	0.17	0.16	0.15	0.13	0.12	0.11	0.11
Poland	0.11	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15
Romania	0.78	0.75	0.69	0.68	0.63	0.61	0.51	0.50	0.48	0.50
Azerbaijan	0.29	0.25	0.24	0.24	0.25	0.22	0.21	0.22	0.21	0.21
Belarus	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Georgia	(s)	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)
Kazakhstan	0.30	0.25	0.17	0.18	0.16	0.23	0.20	0.17	0.33	0.37
Kyrgyzstan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	22.80	21.99	21.62	21.17	21.43	20.35	21.06	21.01	20.82	20.70
Tajikistan	(s)	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Turkmenistan	2.11	2.40	1.32	1.19	1.37	0.94	0.49	0.82	1.72	1.78
Ukraine	0.76	0.70	0.66	0.65	0.67	0.67	0.67	0.66	0.67	0.67
Uzbekistan	1.53	1.61	1.69	1.72	1.72	1.77	1.97	2.00	2.03	2.27
Total	**28.89**	**28.29**	**26.73**	**26.18**	**26.56**	**25.11**	**25.41**	**25.67**	**26.53**	**26.80**
Middle East										
Bahrain	0.20	0.24	0.24	0.24	0.24	0.29	0.31	0.31	0.32	0.33
Iran	0.93	1.01	1.19	1.32	1.50	1.75	1.86	2.16	2.25	2.29
Iraq	0.11	0.09	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.10
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Kuwait	0.10	0.20	0.22	0.22	0.34	0.34	0.33	0.32	0.35	0.35
Oman	0.12	0.15	0.16	0.15	0.15	0.18	0.26	0.21	0.34	0.51
Qatar	0.42	0.50	0.50	0.50	0.51	0.64	0.72	0.82	1.08	1.20
Saudi Arabia	1.26	1.33	1.39	1.41	1.53	1.68	1.73	1.71	1.84	1.99
Syria	0.12	0.13	0.13	0.10	0.14	0.15	0.20	0.21	0.21	0.20
United Arab Emirates	1.07	0.98	0.95	1.16	1.25	1.34	1.37	1.41	1.42	1.66
Total	**4.33**	**4.64**	**4.91**	**5.22**	**5.79**	**6.52**	**6.90**	**7.26**	**7.93**	**8.64**
Africa										
Algeria	2.33	2.24	2.13	2.42	2.47	2.74	2.94	3.24	3.31	3.20
Angola	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Cote d'Ivoire (Ivory Coast)	0.00	0.00	0.00	(s)	0.02	0.02	0.03	0.05	0.05	0.05
Egypt	0.37	0.42	0.44	0.46	0.50	0.50	0.51	0.54	0.68	0.78
Equatorial Guinea	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Gabon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Libya	0.25	0.24	0.24	0.23	0.24	0.24	0.24	0.19	0.22	0.23
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Nigeria	0.18	0.19	0.17	0.19	0.20	0.22	0.22	0.26	0.46	0.58
Senegal	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
South Africa	(s)	0.07	0.07	0.07	0.07	0.06	0.05	0.05	0.06	0.07
Tunisia	0.02	0.02	0.01	0.01	0.03	0.07	0.08	0.08	0.08	0.09
Total	**3.17**	**3.19**	**3.09**	**3.42**	**3.55**	**3.88**	**4.09**	**4.44**	**4.89**	**5.02**

See footnotes at end of table.

Table F4 World Dry Natural Gas Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Australia	0.86	0.92	0.99	1.10	1.13	1.13	1.17	1.19	1.26	1.27
Bangladesh	0.19	0.21	0.23	0.25	0.26	0.26	0.28	0.31	0.34	0.34
Brunei	0.33	0.34	0.34	0.38	0.38	0.37	0.36	0.39	0.40	0.42
Burma	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.06	0.13	0.27
China	0.61	0.64	0.68	0.70	0.78	0.87	0.91	0.99	1.11	1.24
India	0.55	0.61	0.68	0.72	0.72	0.74	0.79	0.78	0.82	0.83
Indonesia	1.97	2.15	2.41	2.44	2.57	2.58	2.47	2.73	2.57	2.66
Japan	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
Malaysia	0.83	0.93	0.97	1.07	1.30	1.43	1.44	1.50	1.58	2.00
New Zealand	0.20	0.18	0.18	0.17	0.20	0.21	0.18	0.20	0.22	0.24
Pakistan	0.51	0.54	0.59	0.60	0.65	0.65	0.66	0.73	0.80	0.77
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Taiwan	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Thailand	0.25	0.31	0.34	0.37	0.42	0.53	0.56	0.61	0.64	0.65
Vietnam	0.01	0.01	0.01	0.03	0.03	0.01	0.03	0.04	0.04	0.05
Total	**6.48**	**7.02**	**7.61**	**8.03**	**8.62**	**8.98**	**9.06**	**9.66**	**10.05**	**10.88**
World Total	**76.90**	**78.41**	**79.18**	**80.26**	**83.96**	**83.89**	**85.58**	**87.51**	**90.82**	**93.53**

[1] Preliminary.
-- = Not applicable.
(s) = Value less than 5 trillion Btu.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 4.

Table F5 World Coal Production (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	1.62	1.71	1.83	1.90	1.92	2.09	1.98	1.91	1.82	1.85
Mexico	0.14	0.15	0.16	0.16	0.18	0.20	0.21	0.19	0.21	0.22
United States [2]	21.63	20.25	22.11	22.03	22.68	23.21	23.94	23.19	22.62	23.44
Total	**23.39**	**22.11**	**24.09**	**24.09**	**24.78**	**25.50**	**26.13**	**25.29**	**24.66**	**25.51**
Central & South America										
Argentina	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)
Brazil	0.08	0.08	0.08	0.07	0.06	0.07	0.07	0.07	0.08	0.07
Chile	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.02
Colombia	0.57	0.55	0.53	0.60	0.71	0.88	0.91	0.89	1.03	1.18
Peru	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Venezuela	0.06	0.10	0.11	0.11	0.10	0.16	0.23	0.21	0.24	0.23
Total	**0.77**	**0.77**	**0.77**	**0.82**	**0.90**	**1.15**	**1.24**	**1.19**	**1.37**	**1.49**
Western Europe										
Austria	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Belgium	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)
France	0.29	0.26	0.23	0.25	0.22	0.18	0.16	0.13	0.09	0.06
Germany	3.65	3.37	3.21	3.02	2.79	2.82	2.59	2.49	2.37	2.26
Greece	0.27	0.30	0.29	0.30	0.29	0.32	0.34	0.35	0.36	0.38
Ireland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Italy	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Norway	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.04
Portugal	(s)	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spain	0.50	0.47	0.45	0.36	0.36	0.36	0.33	0.30	0.29	0.28
Sweden	(s)	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turkey	0.49	0.47	0.47	0.46	0.47	0.54	0.57	0.55	0.52	0.54
United Kingdom	1.95	1.57	1.12	1.14	1.16	1.19	0.99	0.91	0.77	0.79
Bosnia and Herzegovina	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.11	0.13	0.13
Croatia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00
Macedonia, TFYR	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
Slovenia	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05
Yugoslavia	0.35	0.33	0.34	0.23	0.36	0.36	0.39	0.29	0.30	0.32
Total	**7.71**	**6.95**	**6.28**	**5.94**	**5.81**	**5.94**	**5.54**	**5.28**	**4.99**	**4.93**
Eastern Europe & Former U.S.S.R.										
Albania	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bulgaria	0.27	0.26	0.26	0.26	0.27	0.27	0.28	0.25	0.26	0.25
Former Czechoslovakia	2.12	--	--	--	--	--	--	--	--	--
Czech Republic	--	1.10	0.99	0.96	1.03	0.93	0.86	0.77	0.85	0.86
Slovakia	--	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04
Hungary	0.15	0.13	0.12	0.12	0.13	0.14	0.13	0.13	0.13	0.12
Poland	3.52	3.50	3.56	3.40	3.06	3.66	3.16	3.02	2.85	2.86
Romania	0.28	0.30	0.31	0.31	0.33	0.26	0.20	0.19	0.23	0.24
Georgia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kazakhstan	2.31	2.05	1.45	1.16	1.18	1.06	1.02	0.85	1.05	1.17
Kyrgyzstan	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Moldova	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00	0.00
Russia	6.36	5.71	4.92	4.68	4.98	4.00	3.74	4.76	5.15	5.48
Tajikistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Ukraine	2.58	2.24	1.83	1.97	1.70	1.64	1.65	1.76	1.75	1.75
Uzbekistan	0.07	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Total	**17.71**	**15.42**	**13.55**	**12.97**	**12.77**	**12.06**	**11.13**	**11.84**	**12.36**	**12.82**

See footnotes at end of table.

Table F5 World Coal Production (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Iran	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Total	**0.03**	**0.03**	**0.04**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.04**	**0.04**
Africa										
Algeria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Botswana	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Cameroon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Morocco	0.02	0.02	0.02	0.02	0.01	0.01	0.01	(s)	(s)	(s)
Mozambique	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Niger	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nigeria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
South Africa	4.11	4.14	4.40	4.63	4.64	5.20	5.26	5.18	5.29	5.33
Swaziland	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01
Tanzania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Zambia	0.01	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Zimbabwe	0.15	0.14	0.15	0.15	0.13	0.11	0.11	0.12	0.12	0.12
Total	**4.32**	**4.35**	**4.61**	**4.84**	**4.81**	**5.36**	**5.42**	**5.35**	**5.46**	**5.50**
Asia & Oceania										
Afghanistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Australia	4.37	4.40	4.57	4.93	5.01	5.71	6.10	6.27	6.66	7.11
Bhutan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Burma	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01
China	22.24	23.43	25.23	26.29	26.43	27.74	26.33	25.21	24.33	27.01
India	4.61	4.79	4.73	5.91	5.72	5.76	5.69	5.78	6.06	6.00
Indonesia	0.62	0.74	0.83	1.15	1.35	1.40	1.55	1.84	1.96	2.32
Japan	0.18	0.17	0.16	0.14	0.13	0.09	0.08	0.08	0.07	0.07
Korea, North	2.56	2.66	2.64	2.61	2.58	2.43	2.31	2.34	2.46	2.45
Korea, South	0.21	0.17	0.13	0.10	0.09	0.08	0.08	0.08	0.08	0.07
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	(s)	0.01	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01
Mongolia	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Nepal	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.07	0.07	0.06	0.07	0.08	0.07	0.07	0.07	0.07	0.08
Pakistan	0.07	0.07	0.07	0.06	0.07	0.07	0.06	0.06	0.06	0.06
Philippines	0.04	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03
Taiwan	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)	0.00
Thailand	0.16	0.16	0.18	0.32	0.28	0.28	0.24	0.22	0.21	0.24
Vietnam	0.13	0.19	0.18	0.23	0.21	0.27	0.25	0.21	0.23	0.23
Total	**35.33**	**36.97**	**38.88**	**41.91**	**42.04**	**43.99**	**42.86**	**42.26**	**42.30**	**45.73**
World Total	**89.25**	**86.60**	**88.23**	**90.59**	**91.14**	**94.03**	**92.36**	**91.23**	**91.17**	**96.02**

[1] Preliminary.
[2] United States coal production is from Energy Information Administration, Annual Energy Review 2001, table 1.2.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Coal includes anthracite, subanthracite, bituminous, subbituminous, lignite, and brown coal.
Sources: See sources at the end of Section 5.

Table F6 World Net Hydroelectric Power Generation (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	3.26	3.33	3.40	3.45	3.67	3.61	3.42	3.56	3.69	3.41
Mexico	0.27	0.27	0.21	0.28	0.32	0.27	0.25	0.34	0.34	0.29
United States [2]	2.57	2.85	2.65	3.18	3.56	3.60	3.25	3.21	2.75	2.13
Total	**6.10**	**6.45**	**6.25**	**6.91**	**7.55**	**7.48**	**6.92**	**7.10**	**6.78**	**5.83**
Central & South America										
Argentina	0.25	0.31	0.28	0.28	0.24	0.29	0.27	0.22	0.30	0.41
Bolivia	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02
Brazil	2.30	2.42	2.50	2.61	2.74	2.87	3.00	3.02	3.14	2.76
Chile	0.17	0.18	0.17	0.20	0.19	0.20	0.16	0.14	0.20	0.22
Colombia	0.23	0.29	0.33	0.33	0.37	0.33	0.32	0.35	0.33	0.33
Costa Rica	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.06	0.06
Dominican Republic	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ecuador	0.05	0.06	0.07	0.05	0.07	0.07	0.07	0.07	0.08	0.07
El Salvador	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.01
Guatemala	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Haiti	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Honduras	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Jamaica	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nicaragua	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Panama	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Paraguay	0.28	0.32	0.37	0.43	0.49	0.52	0.52	0.53	0.55	0.47
Peru	0.10	0.12	0.13	0.14	0.14	0.14	0.14	0.15	0.17	0.18
Puerto Rico	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Suriname	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02
Uruguay	0.08	0.08	0.08	0.06	0.06	0.07	0.09	0.06	0.06	0.08
Venezuela	0.49	0.49	0.53	0.53	0.55	0.59	0.60	0.62	0.65	0.62
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**4.11**	**4.44**	**4.62**	**4.80**	**5.03**	**5.25**	**5.36**	**5.36**	**5.67**	**5.34**
Western Europe										
Austria	0.36	0.38	0.37	0.38	0.35	0.37	0.38	0.42	0.43	0.41
Belgium	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Finland	0.16	0.14	0.12	0.13	0.12	0.13	0.15	0.13	0.15	0.14
France	0.70	0.66	0.80	0.73	0.67	0.64	0.64	0.74	0.69	0.76
Germany	0.18	0.18	0.21	0.22	0.23	0.18	0.18	0.20	0.22	0.24
Greece	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05	0.04	0.02
Iceland	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.07
Ireland	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Italy	0.43	0.43	0.46	0.39	0.43	0.43	0.42	0.47	0.46	0.50
Luxembourg	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Norway	1.20	1.23	1.15	1.25	1.07	1.13	1.19	1.25	1.46	1.24
Portugal	0.05	0.09	0.11	0.09	0.15	0.13	0.13	0.08	0.12	0.14
Spain	0.19	0.25	0.29	0.24	0.41	0.36	0.35	0.24	0.29	0.42
Sweden	0.77	0.77	0.61	0.70	0.53	0.71	0.77	0.74	0.81	0.81
Switzerland	0.34	0.37	0.40	0.36	0.29	0.35	0.34	0.41	0.38	0.43
Turkey	0.27	0.35	0.31	0.37	0.42	0.41	0.43	0.36	0.32	0.25
United Kingdom	0.06	0.04	0.05	0.05	0.03	0.04	0.05	0.06	0.05	0.03
Bosnia and Herzegovina	0.04	0.02	0.04	0.04	0.05	0.05	0.05	0.06	0.05	0.05
Croatia	0.04	0.04	0.05	0.05	0.07	0.05	0.05	0.06	0.07	0.08
Macedonia, TFYR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Slovenia	0.04	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.04
Yugoslavia	0.12	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.12	0.12
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**5.02**	**5.17**	**5.21**	**5.26**	**5.11**	**5.26**	**5.44**	**5.52**	**5.80**	**5.76**

See footnotes at end of table.

Table F6 World Net Hydroelectric Power Generation (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.03	0.03	0.04	0.04	0.06	0.06	0.05	0.05	0.05	0.05
Bulgaria	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Former Czechoslovakia	0.04	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.01	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Slovakia	--	0.04	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05
Hungary	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Poland	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02
Romania	0.12	0.13	0.13	0.17	0.16	0.18	0.19	0.19	0.15	0.15
Armenia	0.03	0.04	0.04	0.02	0.02	0.01	0.02	0.02	0.02	0.02
Azerbaijan	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Georgia	0.07	0.07	0.05	0.05	0.06	0.06	0.07	0.07	0.06	0.06
Kazakhstan	0.07	0.08	0.09	0.09	0.08	0.07	0.06	0.06	0.08	0.09
Kyrgyzstan	0.10	0.09	0.12	0.11	0.13	0.11	0.10	0.13	0.14	0.13
Latvia	0.03	0.03	0.03	0.03	0.02	0.03	0.04	0.03	0.03	0.03
Lithuania	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Moldova	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	1.78	1.79	1.82	1.83	1.60	1.63	1.64	1.66	1.64	1.80
Tajikistan	0.16	0.18	0.17	0.15	0.15	0.14	0.15	0.16	0.14	0.14
Ukraine	0.08	0.12	0.13	0.10	0.09	0.10	0.16	0.15	0.12	0.13
Uzbekistan	0.06	0.08	0.07	0.06	0.07	0.06	0.06	0.06	0.06	0.05
Other	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**2.65**	**2.79**	**2.85**	**2.83**	**2.60**	**2.62**	**2.70**	**2.72**	**2.64**	**2.82**
Middle East										
Iran	0.10	0.10	0.08	0.07	0.08	0.07	0.07	0.05	0.04	0.04
Iraq	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Lebanon	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)	(s)	(s)
Syria	0.08	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.10	0.10
Total	**0.19**	**0.18**	**0.16**	**0.16**	**0.16**	**0.16**	**0.17**	**0.15**	**0.14**	**0.15**
Africa										
Algeria	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Angola	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cameroon	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Congo (Brazzaville)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05
Cote d'Ivoire (Ivory Coast)	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Egypt	0.09	0.11	0.11	0.11	0.12	0.12	0.13	0.16	0.14	0.15
Ethiopia	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Gabon	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ghana	0.06	0.06	0.06	0.06	0.07	0.07	0.04	0.05	0.07	0.09
Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kenya	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01
Madagascar	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01
Malawi	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mali	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Morocco	0.01	(s)	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01
Mozambique	(s)	(s)	(s)	(s)	(s)	0.01	0.02	0.07	0.07	0.07
Nigeria	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Reunion	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	(s)
South Africa	0.01	(s)	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
Sudan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Swaziland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Tanzania	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Uganda	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Zambia	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.08	0.08	0.08
Zimbabwe	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04
Other	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.57**	**0.57**	**0.58**	**0.59**	**0.63**	**0.66**	**0.63**	**0.72**	**0.73**	**0.76**

See footnotes at end of table.

Table F6 World Net Hydroelectric Power Generation (Btu), 1992 - 2001 (Continued)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Australia	0.16	0.17	0.17	0.16	0.16	0.17	0.16	0.17	0.17	0.17
Bangladesh	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bhutan	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Burma	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.04
Cambodia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
China	1.35	1.55	1.72	1.92	1.92	2.01	2.11	2.10	2.29	2.74
Fiji	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
French Polynesia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
India	0.72	0.73	0.85	0.75	0.71	0.77	0.85	0.83	0.77	0.81
Indonesia	0.10	0.09	0.07	0.08	0.08	0.05	0.10	0.10	0.09	0.10
Japan	0.85	0.98	0.69	0.85	0.83	0.92	0.95	0.89	0.90	0.90
Korea, North	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.22	0.22
Korea, South	0.03	0.04	0.02	0.03	0.02	0.03	0.04	0.04	0.04	0.02
Laos	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Malaysia	0.04	0.05	0.07	0.06	0.05	0.04	0.05	0.08	0.07	0.07
Nepal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
New Caledonia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.21	0.24	0.27	0.28	0.27	0.25	0.25	0.24	0.25	0.23
Pakistan	0.19	0.22	0.20	0.24	0.24	0.21	0.23	0.20	0.18	0.20
Papua New Guinea	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Philippines	0.04	0.05	0.06	0.06	0.07	0.06	0.05	0.08	0.08	0.08
Samoa	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Sri Lanka	0.03	0.04	0.04	0.05	0.03	0.04	0.04	0.04	0.03	0.03
Taiwan	0.09	0.07	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.09
Thailand	0.04	0.04	0.05	0.07	0.08	0.07	0.05	0.04	0.06	0.06
U.S. Pacific Islands	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Vietnam	0.07	0.08	0.09	0.11	0.12	0.12	0.11	0.14	0.15	0.17
Total	**4.27**	**4.68**	**4.72**	**5.06**	**5.01**	**5.15**	**5.41**	**5.34**	**5.50**	**6.03**
World Total	**22.91**	**24.28**	**24.39**	**25.61**	**26.07**	**26.59**	**26.63**	**26.92**	**27.25**	**26.70**

[1] Preliminary.
[2] Includes hydroelectric pumped storage.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit and excludes generation from pumped storage.
Sources: See sources at the end of Section 6.

Table F7 World Net Nuclear Electric Power Generation (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	0.88	1.02	1.17	1.06	1.00	0.88	0.76	0.79	0.78	0.82
Mexico	0.04	0.05	0.04	0.08	0.08	0.10	0.09	0.10	0.08	0.08
United States	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03
Total	**7.39**	**7.48**	**7.90**	**8.21**	**8.16**	**7.58**	**7.92**	**8.49**	**8.72**	**8.93**
Central & South America										
Argentina	0.08	0.09	0.09	0.08	0.08	0.09	0.08	0.08	0.07	0.08
Brazil	0.02	(s)	(s)	0.02	0.02	0.03	0.03	0.04	0.05	0.15
Total	**0.10**	**0.09**	**0.09**	**0.11**	**0.10**	**0.12**	**0.12**	**0.12**	**0.12**	**0.22**
Western Europe										
Belgium	0.43	0.41	0.40	0.41	0.43	0.47	0.45	0.48	0.47	0.46
Finland	0.19	0.19	0.19	0.19	0.19	0.19	0.21	0.22	0.22	0.22
France	3.34	3.64	3.54	3.71	3.91	3.87	3.81	3.88	4.08	4.14
Germany	1.54	1.49	1.46	1.46	1.53	1.63	1.54	1.62	1.62	1.64
Netherlands	0.04	0.04	0.04	0.04	0.04	0.02	0.04	0.04	0.04	0.04
Spain	0.54	0.54	0.53	0.53	0.54	0.53	0.57	0.57	0.60	0.61
Sweden	0.61	0.59	0.70	0.67	0.70	0.67	0.70	0.67	0.55	0.66
Switzerland	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.24	0.24	0.26
United Kingdom	0.86	1.01	1.00	1.00	1.07	1.11	1.18	1.14	1.02	1.07
Slovenia	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.05	0.05
Total	**7.82**	**8.18**	**8.16**	**8.30**	**8.69**	**8.80**	**8.82**	**8.90**	**8.88**	**9.15**
Eastern Europe & Former U.S.S.R.										
Bulgaria	0.12	0.15	0.16	0.18	0.20	0.18	0.18	0.17	0.19	0.20
Former Czechoslovakia	0.29	--	--	--	--	--	--	--	--	--
Czech Republic	--	0.15	0.15	0.13	0.14	0.14	0.14	0.14	0.15	0.16
Slovakia	--	0.14	0.14	0.13	0.13	0.12	0.13	0.15	0.16	0.19
Hungary	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.13	0.14	0.14
Romania	0.00	0.00	0.00	0.00	0.01	0.06	0.06	0.06	0.06	0.06
Armenia	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
Kazakhstan	0.01	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00
Lithuania	0.15	0.13	0.08	0.11	0.14	0.12	0.14	0.11	0.09	0.12
Russia	1.25	1.25	1.02	1.04	1.14	1.15	1.08	1.22	1.35	1.38
Ukraine	0.76	0.78	0.71	0.73	0.83	0.82	0.77	0.74	0.78	0.78
Total	**2.71**	**2.73**	**2.41**	**2.46**	**2.74**	**2.75**	**2.65**	**2.74**	**2.93**	**3.06**
Africa										
South Africa	0.09	0.07	0.10	0.11	0.12	0.13	0.14	0.13	0.13	0.11
Total	**0.09**	**0.07**	**0.10**	**0.11**	**0.12**	**0.13**	**0.14**	**0.13**	**0.13**	**0.11**
Asia & Oceania										
China	0.01	0.03	0.14	0.13	0.14	0.12	0.14	0.14	0.16	0.17
India	0.07	0.07	0.06	0.08	0.09	0.13	0.13	0.14	0.17	0.22
Japan	2.17	2.42	2.61	2.83	2.93	3.13	3.23	3.07	3.00	3.16
Korea, South	0.54	0.56	0.56	0.64	0.70	0.73	0.85	0.98	1.04	1.07
Pakistan	0.01	(s)	0.01	0.01	(s)	(s)	(s)	(s)	(s)	0.02
Taiwan	0.32	0.33	0.33	0.34	0.36	0.34	0.35	0.36	0.37	0.34
Total	**3.12**	**3.41**	**3.70**	**4.02**	**4.23**	**4.45**	**4.69**	**4.70**	**4.74**	**4.98**
World Total	**21.23**	**21.96**	**22.36**	**23.21**	**24.05**	**23.82**	**24.34**	**25.08**	**25.52**	**26.45**

[1] Preliminary.
-- = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit.
No generation is reported for Middle East.
Sources: See sources at the end of Section 6.

Table F8 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Generation (Btu), 1992 - 2001

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	0.04	0.05	0.06	0.05	0.06	0.06	0.07	0.08	0.08	0.07
Mexico	0.12	0.12	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12
United States	0.97	1.00	0.99	0.95	0.97	0.98	0.98	1.01	1.03	1.01
Total	**1.13**	**1.16**	**1.16**	**1.12**	**1.14**	**1.15**	**1.16**	**1.21**	**1.22**	**1.21**
Central & South America										
Argentina	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Bolivia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Brazil	0.07	0.07	0.07	0.08	0.09	0.10	0.10	0.12	0.12	0.15
Chile	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Colombia	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01
Costa Rica	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Cuba	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Dominican Republic	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
El Salvador	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Guatemala	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Jamaica	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nicaragua	0.01	0.01	0.01	0.01	0.01	(s)	(s)	(s)	(s)	(s)
Panama	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Paraguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Peru	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Trinidad and Tobago	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Uruguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**0.11**	**0.11**	**0.12**	**0.13**	**0.15**	**0.16**	**0.16**	**0.19**	**0.20**	**0.24**
Western Europe										
Austria	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Belgium	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Croatia	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Denmark	0.01	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.06
Faroe Islands	0.00	0.00	(s)	(s)	(s)	(s)	0.00	0.00	0.00	0.00
Finland	0.05	0.06	0.06	0.07	0.06	0.08	0.10	0.09	0.09	0.09
France	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Germany	0.06	0.06	0.08	0.09	0.10	0.10	0.13	0.14	0.19	0.23
Greece	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.01	0.01
Iceland	(s)	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.03
Ireland	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Italy	0.07	0.08	0.07	0.08	0.08	0.09	0.11	0.12	0.13	0.13
Luxembourg	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Netherlands	0.01	0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.05	0.05
Norway	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Portugal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)
Spain	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.06	0.07	0.10
Sweden	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04
Switzerland	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01
Turkey	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
United Kingdom	0.02	0.05	0.05	0.06	0.03	0.03	0.04	0.05	0.05	0.06
Total	**0.33**	**0.38**	**0.41**	**0.46**	**0.45**	**0.54**	**0.64**	**0.70**	**0.84**	**0.92**
Eastern Europe & Former U.S.S.R.										
Belarus	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Czech Republic	--	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01
Hungary	0.00	0.00	0.00	0.00	0.00	0.00	(s)	(s)	(s)	(s)
Poland	(s)	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.01
Romania	(s)	(s)	0.00	(s)	0.00	(s)	(s)	0.00	0.00	0.00
Estonia	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Russia	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
Total	**0.02**	**0.03**	**0.02**	**0.02**	**0.02**	**0.03**	**0.03**	**0.04**	**0.04**	**0.05**

See footnotes at end of table.

Table F8 World Net Geothermal, Solar, Wind, Wood and Waste Electric Power Generation (Btu), 1992 - 2001 (Cont.)

(Quadrillion (10^{15}) Btu)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Jordan	(s)	(s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**(s)**	**(s)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Africa										
Ethiopia	(s)	(s)	(s)	(s)	(s)	0.00	0.00	(s)	(s)	(s)
Kenya	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**
Asia & Oceania										
Australia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
China	0.00	0.00	(s)	0.03	0.01	0.03	0.02	0.02	0.02	0.01
India	(s)	(s)	(s)	(s)	0.01	0.01	0.01	0.01	0.02	0.02
Indonesia	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05
Japan	0.21	0.21	0.23	0.26	0.27	0.29	0.22	0.23	0.23	0.23
Korea, South	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
New Zealand	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.07	0.07
Philippines	0.11	0.11	0.13	0.12	0.13	0.14	0.18	0.21	0.23	0.26
Thailand	0.00	0.00	0.00	(s)	(s)	0.01	0.01	0.01	0.02	0.02
Total	**0.40**	**0.40**	**0.45**	**0.51**	**0.54**	**0.60**	**0.57**	**0.62**	**0.65**	**0.69**
World Total	**2.01**	**2.09**	**2.17**	**2.25**	**2.31**	**2.49**	**2.57**	**2.76**	**2.97**	**3.11**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5 trillion Btu.
Notes: Sum of components may not equal total due to independent rounding.
Generation data consist of both utility and nonutility sources. Data are reported as net generation as opposed to gross. Net generation excludes the energy consumed by the generating unit.
Sources: See sources at the end of Section 6.

Appendix G

World Production of Crude Oil, Natural Gas Plant Liquids (NGPL), Other Liquids, and Refinery Processing Gain

Table G1 World Production of Crude Oil, NGPL, and Other Liquids, 1992 - 2001

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	2,065	2,186	2,275	2,386	2,432	2,558	2,632	2,560	2,676	2,738
Mexico	3,123	3,132	3,146	3,064	3,278	3,411	3,495	3,345	3,450	3,590
United States	8,996	8,836	8,645	8,626	8,607	8,611	8,392	8,107	8,110	8,054
Total	**14,185**	**14,154**	**14,066**	**14,076**	**14,318**	**14,580**	**14,519**	**14,012**	**14,236**	**14,382**
Central & South America										
Argentina	583	629	694	757	800	882	897	850	809	829
Barbados	1	1	1	1	1	1	2	2	2	1
Bolivia	28	29	30	34	37	37	43	43	40	44
Brazil	793	806	858	890	1,001	1,068	1,229	1,391	1,530	1,561
Chile	26	26	24	23	21	14	15	15	14	14
Colombia	439	461	455	593	631	661	743	828	703	614
Cuba	18	22	26	28	32	33	34	40	42	50
Ecuador	324	353	374	401	405	393	379	377	398	421
Guatemala	5	7	8	10	13	16	24	23	21	21
Peru	117	127	129	131	121	119	117	107	101	95
Suriname	5	5	6	7	7	5	7	10	10	10
Trinidad and Tobago	142	141	138	139	138	132	130	135	133	125
Venezuela	2,484	2,593	2,734	2,899	3,088	3,423	3,312	2,996	3,330	3,080
Total	**4,967**	**5,200**	**5,479**	**5,913**	**6,295**	**6,785**	**6,931**	**6,816**	**7,132**	**6,866**
Western Europe										
Austria	24	22	22	24	22	20	21	19	20	21
Denmark	163	174	185	186	208	230	238	300	363	346
France	70	68	69	62	55	46	40	37	36	35
Germany	85	81	79	78	78	75	77	76	88	86
Greece	14	12	11	10	9	10	7	1	6	6
Italy	86	86	89	97	105	114	110	86	94	79
Netherlands	67	67	103	87	81	77	79	59	55	46
Norway	2,324	2,450	2,624	2,905	3,242	3,282	3,149	3,139	3,317	3,408
Spain	31	24	21	17	11	8	11	6	5	7
Sweden	(s)	(s)	(s)	(s)	0	0	0	0	0	0
Turkey	84	76	72	67	67	68	65	59	53	48
United Kingdom	1,986	2,084	2,593	2,756	2,827	2,751	2,856	2,922	2,508	2,541
Croatia	42	43	46	40	36	37	38	32	30	29
Yugoslavia	23	23	24	22	22	20	18	18	16	15
Total	**4,999**	**5,210**	**5,938**	**6,350**	**6,764**	**6,736**	**6,710**	**6,754**	**6,588**	**6,667**
Eastern Europe & Former U.S.S.R.										
Albania	11	11	12	10	10	9	6	6	6	6
Bulgaria	1	1	1	1	1	1	1	1	1	1
Former Czechoslovakia	2	--	--	--	--	--	--	--	--	--
Czech Republic	--	2	3	3	4	3	4	4	6	7
Slovakia	--	1	1	1	2	2	1	1	1	1
Hungary	46	45	50	46	42	50	43	40	42	41
Poland	3	5	5	5	5	6	7	9	13	17
Romania	143	137	142	141	142	141	138	132	128	127
Azerbaijan	222	208	192	182	182	180	237	283	286	307
Belarus	40	40	40	38	36	36	36	37	37	37
Estonia	0	0	0	0	0	7	4	3	5	5
Georgia	3	2	2	1	1	3	2	2	2	2
Kazakhstan	530	490	415	414	457	521	526	604	718	798
Kyrgyzstan	2	2	2	2	2	2	2	2	2	2
Lithuania	0	2	3	3	3	4	5	5	6	5
Russia	7,862	6,950	6,335	6,175	6,035	6,115	6,074	6,310	6,711	7,286
Tajikistan	1	1	1	1	1	1	1	(s)	(s)	(s)
Turkmenistan	110	90	85	81	88	106	127	155	157	162
Ukraine	95	87	85	85	81	85	82	98	88	86
Uzbekistan	66	85	115	160	165	157	161	147	151	143
Total	**9,137**	**8,159**	**7,487**	**7,349**	**7,256**	**7,428**	**7,458**	**7,837**	**8,361**	**9,035**

See footnotes at end of table.

Table G1 World Production of Crude Oil, NGPL, and Other Liquids, 1992 - 2001 (Continued)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	44	53	54	51	45	52	48	48	48	43
Iran	3,479	3,595	3,673	3,703	3,746	3,734	3,709	3,632	3,771	3,804
Iraq	425	527	573	585	599	1,175	2,165	2,523	2,586	2,452
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kuwait	1,092	1,905	2,110	2,152	2,147	2,116	2,200	2,013	2,194	2,117
Oman	746	781	816	861	893	910	906	916	974	964
Qatar	478	468	465	497	560	620	781	776	870	864
Saudi Arabia	9,045	8,902	8,818	8,933	8,915	9,074	9,144	8,499	9,109	8,711
Syria	483	562	568	584	590	571	561	546	528	523
United Arab Emirates	2,410	2,305	2,343	2,393	2,438	2,476	2,515	2,329	2,568	2,566
Yemen	182	220	335	345	340	362	388	409	440	438
Total	**18,384**	**19,318**	**19,754**	**20,104**	**20,273**	**21,091**	**22,417**	**21,691**	**23,088**	**22,483**
Africa										
Algeria	1,354	1,307	1,320	1,347	1,392	1,437	1,401	1,392	1,484	1,520
Angola	526	509	536	646	709	714	735	745	746	742
Benin	6	6	6	3	2	1	1	1	1	1
Cameroon	140	127	108	111	108	124	121	100	85	77
Congo (Brazzaville)	174	181	180	188	201	253	265	270	280	275
Congo (Kinshasa)	26	25	26	30	30	28	26	22	26	24
Cote d'Ivoire (Ivory Coast)	2	1	7	8	16	19	20	15	11	11
Egypt	926	945	954	980	987	927	909	927	850	817
Equatorial Guinea	2	5	5	5	17	52	83	102	168	181
Gabon	298	313	329	365	368	370	352	331	315	301
Ghana	1	2	1	4	6	5	5	6	7	7
Libya	1,473	1,402	1,419	1,430	1,450	1,506	1,450	1,379	1,470	1,429
Morocco	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Nigeria	1,943	1,960	1,931	1,993	2,001	2,132	2,153	2,130	2,165	2,256
South Africa	129	183	183	192	195	196	199	182	189	196
Sudan	(s)	(s)	(s)	(s)	2	5	10	69	186	209
Tunisia	114	102	96	90	88	85	81	84	82	73
Total	**7,113**	**7,067**	**7,100**	**7,392**	**7,572**	**7,856**	**7,812**	**7,755**	**8,065**	**8,119**
Asia & Oceania										
Australia	591	558	592	614	632	659	614	611	792	731
Bangladesh	1	1	2	1	2	2	2	2	3	4
Brunei	177	178	180	176	166	175	179	204	215	217
Burma	15	14	14	10	8	9	11	10	12	14
China	2,845	2,890	2,939	2,990	3,131	3,200	3,198	3,195	3,249	3,300
India	589	564	635	750	731	760	751	743	736	732
Indonesia	1,579	1,589	1,590	1,579	1,627	1,605	1,605	1,559	1,513	1,451
Japan	20	19	18	18	18	17	17	16	18	17
Malaysia	666	657	662	702	715	750	810	778	755	729
New Zealand	55	58	55	45	45	66	55	50	45	42
Pakistan	64	63	58	62	58	60	58	57	58	63
Papua New Guinea	53	126	110	100	103	80	79	97	70	68
Philippines	8	9	6	3	2	1	1	1	1	8
Taiwan	3	2	2	2	2	2	1	1	1	1
Thailand	65	67	78	89	96	122	135	145	170	174
Vietnam	106	120	141	173	175	191	246	290	316	357
Total	**6,838**	**6,916**	**7,081**	**7,315**	**7,513**	**7,699**	**7,763**	**7,757**	**7,954**	**7,908**
World Total	**65,625**	**66,024**	**66,905**	**68,499**	**69,991**	**72,176**	**73,610**	**72,623**	**75,424**	**75,461**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 500 barrels per day.
Notes: NGPL are natural gas plant liquids. Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table G2 World Production of Crude Oil, NGPL, Other Liquids, and Refinery Processing Gain, 1992 - 2001

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	2,125	2,241	2,328	2,448	2,494	2,623	2,694	2,620	2,742	2,808
Mexico	3,151	3,160	3,174	3,092	3,306	3,439	3,523	3,373	3,478	3,618
United States	9,768	9,602	9,413	9,400	9,445	9,461	9,278	8,993	9,058	8,957
Total	**15,045**	**15,003**	**14,915**	**14,940**	**15,245**	**15,523**	**15,494**	**14,986**	**15,278**	**15,383**
Central & South America										
Argentina	588	634	699	762	805	887	902	855	814	834
Barbados	1	1	1	1	1	1	2	2	2	1
Bolivia	28	29	30	34	37	37	43	43	40	44
Brazil	806	819	871	903	1,014	1,081	1,242	1,404	1,543	1,574
Chile	27	27	25	24	22	15	16	16	15	15
Colombia	441	463	457	595	633	663	745	830	705	616
Cuba	18	22	26	28	32	33	34	40	42	50
Dominican Republic	1	1	1	1	1	1	1	1	1	1
Ecuador	325	354	375	402	406	394	380	378	399	422
Guatemala	5	7	8	10	13	16	24	23	21	21
Netherlands Antilles	6	6	6	6	6	6	6	6	6	6
Panama	1	1	1	1	1	1	1	1	1	1
Peru	119	129	131	133	123	121	119	109	103	97
Suriname	5	5	6	7	7	5	7	10	10	10
Trinidad and Tobago	145	144	141	142	141	135	133	138	136	128
Venezuela	2,501	2,610	2,751	2,916	3,105	3,440	3,329	3,013	3,347	3,097
Virgin Islands, U.S.	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Total	**5,019**	**5,253**	**5,531**	**5,965**	**6,347**	**6,837**	**6,983**	**6,868**	**7,184**	**6,919**
Western Europe										
Austria	26	24	24	26	24	22	23	21	22	23
Belgium	12	12	12	12	12	12	12	12	12	12
Denmark	167	178	189	190	212	234	242	304	367	350
France	112	111	112	105	98	89	83	80	79	78
Germany	132	137	135	134	134	131	133	132	144	142
Greece	17	15	14	13	12	13	10	4	9	9
Ireland	1	1	1	1	1	1	1	1	1	1
Italy	155	147	150	158	166	175	171	147	155	140
Netherlands	101	101	137	121	115	111	113	93	89	80
Norway	2,327	2,453	2,627	2,908	3,245	3,285	3,152	3,142	3,320	3,411
Portugal	2	2	2	2	2	2	2	2	2	2
Spain	45	38	35	31	25	22	25	20	19	21
Sweden	4	4	4	4	4	4	4	4	4	4
Switzerland	1	1	1	1	1	1	1	1	1	1
Turkey	88	80	76	71	71	72	69	63	57	52
United Kingdom	2,032	2,129	2,638	2,801	2,872	2,796	2,901	2,967	2,553	2,586
Croatia	42	43	46	40	36	37	38	32	30	29
Slovenia	0	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Yugoslavia	23	23	24	22	22	20	18	18	16	15
Total	**5,287**	**5,499**	**6,227**	**6,639**	**7,053**	**7,025**	**6,999**	**7,043**	**6,877**	**6,956**

See footnotes at end of table.

Table G2 World Production of Crude Oil, NGPL, Other Liquids, and Refinery Processing Gain, 1992 - 2001 (Cont.)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	11	11	12	10	10	9	6	6	6	6
Bulgaria	1	1	1	1	1	1	1	1	1	1
Former Czechoslovakia	2	--	--	--	--	--	--	--	--	--
Czech Republic	--	2	3	3	4	3	4	4	6	7
Slovakia	--	1	1	1	2	2	1	1	1	1
Hungary	46	45	50	46	42	50	43	40	42	41
Poland	3	5	5	5	5	6	7	9	13	17
Romania	143	137	142	141	142	141	138	132	128	127
Azerbaijan	222	208	192	182	182	180	237	283	286	307
Belarus	40	40	40	38	36	36	36	37	37	37
Estonia	0	0	0	0	0	7	4	3	5	5
Georgia	3	2	2	1	1	3	2	2	2	2
Kazakhstan	530	490	415	414	457	521	526	604	718	798
Kyrgyzstan	2	2	2	2	2	2	2	2	2	2
Lithuania	0	2	3	3	3	4	5	5	6	5
Russia	7,862	6,950	6,335	6,175	6,035	6,115	6,074	6,310	6,711	7,286
Tajikistan	1	1	1	1	1	1	1	(s)	(s)	(s)
Turkmenistan	110	90	85	81	88	106	127	155	157	162
Ukraine	95	87	85	85	81	85	82	98	88	86
Uzbekistan	66	85	115	160	165	157	161	147	151	143
Total	**9,137**	**8,159**	**7,487**	**7,349**	**7,256**	**7,428**	**7,458**	**7,837**	**8,361**	**9,035**
Middle East										
Bahrain	45	54	55	52	46	53	49	49	49	44
Iran	3,491	3,607	3,685	3,715	3,758	3,746	3,721	3,644	3,783	3,816
Iraq	426	528	574	586	600	1,176	2,166	2,524	2,587	2,453
Israel	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Jordan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kuwait	1,096	1,909	2,114	2,156	2,151	2,120	2,204	2,017	2,198	2,121
Oman	746	781	816	861	893	910	906	916	974	964
Qatar	479	469	466	498	561	621	782	777	871	865
Saudi Arabia	9,060	8,917	8,833	8,948	8,930	9,089	9,159	8,514	9,124	8,726
Syria	483	562	568	584	590	571	561	546	528	523
United Arab Emirates	2,413	2,308	2,346	2,396	2,441	2,479	2,518	2,332	2,571	2,569
Yemen	182	220	335	345	340	362	388	409	440	438
Total	**18,421**	**19,355**	**19,791**	**20,141**	**20,310**	**21,128**	**22,454**	**21,728**	**23,125**	**22,520**
Africa										
Algeria	1,355	1,308	1,321	1,348	1,393	1,438	1,402	1,393	1,485	1,521
Angola	526	509	536	646	709	714	735	745	746	742
Benin	6	6	6	3	2	1	1	1	1	1
Cameroon	140	127	108	111	108	124	121	100	85	77
Congo (Brazzaville)	174	181	180	188	201	253	265	270	280	275
Congo (Kinshasa)	26	25	26	30	30	28	26	22	26	24
Cote d'Ivoire (Ivory Coast)	3	2	8	9	17	20	21	16	12	12
Egypt	927	946	955	981	988	928	910	928	851	818
Equatorial Guinea	2	5	5	5	17	52	83	102	168	181
Gabon	299	314	330	366	369	371	353	332	316	302
Ghana	1	2	1	4	6	5	5	6	7	7
Kenya	1	1	1	1	1	1	1	1	1	1
Libya	1,473	1,402	1,419	1,430	1,450	1,506	1,450	1,379	1,470	1,429
Morocco	1	1	1	1	1	1	1	1	1	1
Nigeria	1,948	1,965	1,936	1,998	2,006	2,137	2,158	2,135	2,170	2,261
South Africa	129	183	183	192	195	196	199	182	189	196
Sudan	(s)	(s)	(s)	(s)	2	5	10	69	186	209
Tunisia	114	102	96	90	88	85	81	84	82	73
Total	**7,124**	**7,078**	**7,111**	**7,403**	**7,583**	**7,867**	**7,823**	**7,766**	**8,076**	**8,130**

See footnotes at end of table.

Table G2 World Production of Crude Oil, NGPL, Other Liquids, and Refinery Processing Gain, 1992 - 2001 (Cont.)

(Thousand Barrels per Day)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Australia	604	572	606	627	645	672	627	624	805	744
Bangladesh	1	1	2	1	2	2	2	2	3	4
Brunei	177	178	180	176	166	175	179	204	215	217
Burma	15	14	14	10	8	9	11	10	12	14
China	2,845	2,890	2,939	2,990	3,131	3,200	3,198	3,195	3,249	3,300
India	593	568	639	754	735	764	755	747	740	736
Indonesia	1,576	1,586	1,587	1,576	1,624	1,602	1,602	1,556	1,510	1,448
Japan	79	82	81	81	81	80	80	79	81	80
Korea, South	-17	-11	21	34	10	70	70	67	59	91
Malaysia	667	658	663	703	716	751	811	779	756	730
New Zealand	56	59	56	47	46	67	56	51	46	43
Pakistan	65	64	59	63	59	61	59	58	59	64
Papua New Guinea	53	126	110	100	103	80	79	97	70	68
Philippines	9	10	7	4	3	2	2	2	2	9
Singapore	4	4	4	4	4	4	4	4	4	4
Taiwan	5	4	4	4	4	4	3	3	3	3
Thailand	66	68	79	90	97	123	136	146	171	175
Vietnam	106	120	141	173	175	191	246	290	316	357
Total	**6,906**	**6,993**	**7,190**	**7,437**	**7,611**	**7,857**	**7,922**	**7,913**	**8,101**	**8,088**
World Total	**66,941**	**67,340**	**68,253**	**69,876**	**71,405**	**73,665**	**75,133**	**74,142**	**77,002**	**77,031**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 500 barrels per day.
Notes: NGPL are natural gas plant liquids. Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Table G3 World Oil Supply From Refinery Processing Gain and Other Liquids, 2000

(Thousand Barrels per Day)

Region Country	Refinery Processing Gain	Other Liquids
North America		
Canada	65	0
Mexico	28	0
United States	948	377
Total	**1,041**	**377**
Central & South America		
Argentina	5	0
Brazil	13	225
Chile	1	0
Colombia	2	0
Dominican Republic	1	0
Ecuador	1	0
Netherlands Antilles	6	0
Panama	1	0
Peru	2	0
Trinidad and Tobago	3	0
Venezuela	17	0
Virgin Islands, U.S.	(s)	0
Total	**52**	**225**
Western Europe		
Austria	2	0
Belgium	12	0
Denmark	4	0
France	43	0
Germany	56	24
Greece	3	0
Ireland	1	0
Italy	61	3
Netherlands	34	0
Norway	3	0
Portugal	2	0
Spain	14	0
Sweden	4	0
Switzerland	1	0
Turkey	4	0
United Kingdom	45	0
Total	**289**	**27**
Eastern Europe & Former U.S.S.R.		
Estonia	0	5
Total	**0**	**5**
Middle East		
Bahrain	1	0
Iran	12	0
Iraq	1	0
Kuwait	4	0
Qatar	1	0
Saudi Arabia	15	0
United Arab Emirates	3	0
Total	**37**	**0**

See footnotes at end of table.

Table G3 World Oil Supply From Refinery Processing Gain and Other Liquids, 2000 (Continued)

(Thousand Barrels per Day)

Region Country	Refinery Processing Gain	Other Liquids
Africa		
Algeria	1	0
Cote d'Ivoire (Ivory Coast)	1	0
Egypt	1	0
Gabon	1	0
Kenya	1	0
Morocco	1	0
Nigeria	5	0
South Africa	0	155
Total	**11**	**155**
Asia & Oceania		
Australia	13	0
India	4	0
Indonesia	-3	0
Japan	63	3
Korea, South	59	0
Malaysia	1	0
New Zealand	1	1
Pakistan	1	0
Philippines	1	0
Singapore	4	0
Taiwan	2	0
Thailand	1	0
Total	**147**	**4**
World Total	**1,578**	**793**

(s) = Value less than 500 barrels per day.
Note: Sum of components may not equal total due to independent rounding.
Sources: See sources at the end of Section 3.

Appendix H

World Carbon Dioxide Emissions, 1992-2001

Table H1 World Carbon Dioxide Emissions from the Consumption and Flaring of Fossil Fuels, 1992 - 2001

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	124.71	130.30	134.66	134.67	138.31	146.19	144.86	153.05	159.60	156.19
Mexico	86.41	84.62	89.86	86.90	92.05	94.66	104.37	104.12	101.95	96.05
United States	1,379.62	1,405.39	1,427.00	1,443.21	1,494.39	1,513.38	1,518.85	1,536.63	1,584.70	1,565.31
Other	0.32	0.32	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.33
Total	**1,591.06**	**1,620.63**	**1,651.84**	**1,665.08**	**1,725.05**	**1,754.54**	**1,768.38**	**1,794.11**	**1,846.56**	**1,817.88**
Central & South America										
Argentina	30.69	33.22	32.37	33.24	35.23	35.29	36.79	36.90	36.94	34.85
Brazil	72.21	74.40	77.79	82.47	84.23	87.29	87.51	92.50	94.51	95.77
Chile	8.50	9.04	9.93	10.85	12.28	14.54	14.85	16.10	14.90	14.75
Colombia	14.48	14.90	14.55	14.59	15.37	16.97	17.41	15.62	16.03	15.00
Cuba	7.84	7.97	7.86	8.30	8.16	7.57	7.31	7.50	7.44	7.53
Venezuela	30.52	31.21	32.72	33.67	36.11	36.56	38.53	35.16	36.39	38.55
Other	44.61	47.11	48.87	52.88	54.68	57.34	60.35	60.42	61.68	61.82
Total	**208.85**	**217.86**	**224.10**	**236.00**	**246.06**	**255.55**	**262.74**	**264.20**	**267.89**	**268.27**
Western Europe										
Austria	14.99	15.62	15.69	15.99	16.59	17.01	17.02	18.75	18.04	18.19
Belgium	33.66	33.85	34.82	35.44	37.57	38.41	39.95	37.36	39.00	39.36
Denmark	16.62	15.96	17.49	18.80	19.74	20.50	17.18	16.69	15.97	16.24
Finland	13.38	14.18	15.72	12.17	13.97	15.17	13.32	12.99	13.57	14.40
France	103.93	99.96	97.00	100.69	105.84	103.66	110.01	109.66	109.29	108.13
Germany	241.59	240.88	236.55	238.73	239.79	239.25	235.45	226.34	225.91	223.24
Greece	21.83	22.80	23.28	22.99	23.43	24.61	25.90	26.01	27.60	28.08
Ireland	7.57	7.62	7.89	8.54	8.79	9.14	9.85	10.35	10.85	11.15
Italy	113.58	109.78	107.74	118.45	117.60	112.90	114.58	117.79	120.95	121.50
Netherlands	58.50	60.05	60.05	60.88	62.18	64.43	62.28	59.13	62.30	67.52
Norway	9.66	9.23	9.62	10.00	10.64	11.63	11.93	12.17	11.06	11.45
Portugal	13.02	12.52	12.58	13.53	13.01	14.20	14.97	16.97	17.16	16.25
Spain	65.64	62.48	64.37	66.93	64.03	72.66	74.07	80.35	83.80	82.72
Sweden	14.85	15.03	15.99	17.49	17.79	14.93	16.26	15.70	14.60	14.58
Switzerland	12.56	12.18	12.36	11.52	12.35	12.57	12.02	12.05	12.24	12.27
Turkey	37.53	39.17	37.87	41.19	45.76	49.38	49.63	48.91	50.18	50.07
United Kingdom	156.56	157.60	155.47	152.60	159.13	153.08	147.87	148.74	151.63	154.33
Croatia	4.52	4.70	4.81	4.95	4.71	5.03	5.34	5.43	5.59	5.69
Yugoslavia	12.60	10.88	11.31	8.25	13.21	13.31	14.00	10.91	10.70	11.11
Other	13.04	13.17	12.42	13.55	12.99	12.96	13.09	15.73	17.50	17.60
Total	**965.63**	**957.66**	**953.02**	**972.70**	**999.12**	**1,004.84**	**1,004.74**	**1,002.03**	**1,017.93**	**1,023.87**
Eastern Europe & Former U.S.S.R.										
Bulgaria	17.61	16.13	15.72	15.85	16.18	16.13	15.25	14.24	15.77	15.48
Former Czechoslovakia	65.50	--	--	--	--	--	--	--	--	--
Czech Republic	--	33.29	30.14	32.71	33.85	33.05	29.38	26.62	30.26	29.01
Slovakia	--	11.73	10.88	11.63	11.84	11.03	10.38	10.02	10.16	10.83
Hungary	17.21	16.97	16.62	16.03	15.98	16.03	16.04	16.00	15.14	15.52
Poland	88.93	92.12	87.20	82.99	78.23	91.29	84.90	81.80	82.31	78.61
Romania	34.63	33.95	31.81	33.47	34.23	32.59	27.25	23.80	24.42	25.97
Azerbaijan	16.38	13.86	12.64	12.24	10.53	10.41	12.91	12.82	11.87	9.14
Belarus	25.35	22.34	18.04	16.86	16.40	15.92	16.22	15.89	20.05	19.33
Kazakhstan	66.02	54.02	42.91	39.80	37.77	31.92	30.89	28.67	30.38	33.37
Lithuania	6.23	4.79	4.99	4.77	4.38	4.41	4.79	3.71	4.15	4.33
Russia	573.50	535.63	477.28	444.52	445.14	394.65	395.56	415.15	428.32	440.26
Turkmenistan	5.25	5.17	4.94	5.02	4.97	5.25	4.76	5.16	6.48	7.68
Ukraine	155.54	144.83	120.58	121.80	109.09	102.30	100.06	102.40	98.08	96.58
Uzbekistan	25.96	31.41	26.45	28.40	27.97	27.96	27.48	27.77	28.72	30.16
Other	25.85	17.71	13.84	12.25	13.93	13.62	15.04	14.29	13.81	14.43
Total	**1,123.96**	**1,033.96**	**914.05**	**878.35**	**860.48**	**806.57**	**790.94**	**798.35**	**819.92**	**830.67**

See footnotes at end of table.

Table H1 World Carbon Dioxide Emissions from the Consumption and Flaring of Fossil Fuels, 1992 - 2001 (Cont.)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Middle East										
Bahrain	3.67	4.34	4.29	4.35	4.36	5.24	5.40	5.59	5.94	6.16
Iran	63.97	65.27	68.03	70.80	71.18	78.63	82.89	85.23	87.65	90.12
Iraq	15.65	18.44	20.77	20.82	20.79	18.85	19.51	19.89	19.89	20.03
Israel	11.21	12.71	13.12	13.25	13.07	15.00	15.95	15.88	16.79	16.32
Kuwait	6.57	8.59	10.36	10.81	13.33	14.28	15.35	16.45	16.10	16.39
Oman	3.66	4.01	4.09	3.83	3.95	4.86	5.90	5.55	5.91	6.14
Qatar	6.83	7.82	7.98	8.06	8.18	8.62	8.83	8.39	9.08	9.56
Saudi Arabia	64.36	65.47	67.08	69.44	72.60	71.63	70.21	78.21	81.47	84.56
Syria	9.59	10.75	11.19	10.78	11.42	12.01	12.92	13.75	13.99	14.00
United Arab Emirates	27.67	25.99	25.55	27.32	28.08	30.34	31.64	33.60	31.41	35.28
Yemen	3.29	2.77	2.67	2.71	2.69	3.00	2.72	2.70	2.56	2.61
Other	6.85	7.51	8.47	8.80	9.23	9.64	10.12	10.46	10.71	10.91
Total	**223.32**	**233.68**	**243.60**	**250.95**	**258.88**	**272.12**	**281.45**	**295.71**	**301.49**	**312.07**
Africa										
Algeria	22.65	22.75	23.25	23.87	22.96	21.94	23.03	22.76	22.79	22.50
Angola	2.03	2.10	2.00	3.30	3.30	3.52	3.35	3.65	3.54	3.59
Egypt	25.69	26.28	27.10	26.82	29.32	30.30	30.81	31.12	32.70	34.29
Gabon	1.64	1.63	1.62	1.67	1.77	1.65	1.60	1.68	1.37	1.37
Libya	9.87	10.05	10.32	10.71	11.30	11.85	11.41	10.93	12.00	12.50
Morocco	6.08	6.93	7.45	7.08	7.36	7.35	7.70	8.20	8.36	8.71
Nigeria	25.55	26.36	26.02	27.26	27.69	25.04	24.12	22.94	21.94	23.52
South Africa	86.56	86.34	93.76	93.85	95.13	103.64	98.66	102.05	103.09	105.18
Zimbabwe	4.48	4.26	4.54	4.55	4.20	3.78	3.79	4.16	3.81	3.92
Other	21.55	24.44	24.64	24.60	25.18	25.50	26.99	28.13	30.14	31.33
Total	**206.10**	**211.13**	**220.71**	**223.71**	**228.21**	**234.58**	**231.46**	**235.62**	**239.74**	**246.92**
Asia & Oceania										
Australia	75.34	76.99	76.97	79.59	81.40	89.69	90.40	95.79	96.44	99.03
Bangladesh	4.47	4.78	5.25	5.82	6.16	6.43	6.53	7.27	7.95	8.05
Brunei	0.99	1.00	0.96	0.95	0.94	1.14	0.94	1.12	1.09	1.27
China	667.90	711.86	768.01	787.72	803.15	824.28	805.20	790.95	780.37	831.74
Hong Kong	12.19	13.02	12.21	12.79	12.40	11.17	12.80	14.92	13.96	15.70
India	175.97	185.73	189.98	226.26	226.19	230.10	233.98	236.13	250.50	251.33
Indonesia	47.50	53.72	55.64	58.13	64.18	66.59	64.18	70.72	74.95	87.13
Japan	285.77	283.08	298.64	297.75	308.17	308.59	300.28	304.52	310.45	315.83
Korea, North	71.22	73.77	72.99	72.06	70.75	66.93	64.48	64.05	67.45	67.19
Korea, South	77.55	91.11	99.22	109.28	111.88	117.89	100.57	104.39	115.92	120.80
Malaysia	19.85	22.75	24.20	24.20	27.51	27.65	27.91	28.01	30.45	36.15
New Zealand	8.45	8.51	8.57	9.47	8.89	8.83	8.25	8.52	9.30	9.61
Pakistan	18.94	21.11	22.98	23.73	25.93	25.83	26.69	27.91	29.52	29.15
Philippines	12.47	13.69	14.36	15.63	16.28	17.77	18.20	18.63	19.13	18.62
Singapore	19.04	21.60	22.79	22.43	26.59	27.95	29.05	31.04	29.98	31.27
Taiwan	35.40	42.57	45.08	50.90	56.45	56.76	62.77	61.09	68.93	71.23
Thailand	27.45	31.50	34.98	42.64	46.00	46.11	45.58	46.03	46.05	48.49
Vietnam	5.19	7.26	7.55	9.24	9.50	9.45	9.62	10.86	12.04	12.56
Other	9.37	9.81	10.44	10.34	10.64	10.92	11.38	12.16	12.55	13.00
Total	**1,575.05**	**1,673.88**	**1,770.82**	**1,858.94**	**1,913.01**	**1,954.09**	**1,918.81**	**1,934.12**	**1,977.03**	**2,068.14**
World Total	**5,893.97**	**5,948.80**	**5,978.13**	**6,085.73**	**6,230.82**	**6,282.29**	**6,258.52**	**6,324.14**	**6,470.57**	**6,567.82**

[1] Preliminary.

-- = Not applicable.

Notes: Sum of components may not equal total due to independent rounding.

Includes carbon dioxide emissions from the consumption of petroleum, natural gas, and coal, and the flaring of natural gas.

Tons of carbon equivalent can be converted to tons of carbon dioxide gas by multiplying by 44/12.

Source: Office of Energy Markets and End Use, Energy Information Administration.

Table H2 World Carbon Dioxide Emissions from the Consumption of Petroleum, 1992 - 2001

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	58.00	58.51	60.03	60.47	61.80	66.08	67.00	69.26	70.41	70.40
Mexico	66.67	63.68	67.98	63.74	65.72	66.25	74.00	76.05	71.27	68.42
United States	586.86	588.28	600.88	597.02	619.41	625.31	635.63	650.30	658.78	668.01
Other	0.32	0.32	0.31	0.30	0.31	0.30	0.31	0.31	0.31	0.33
Total	**711.85**	**710.79**	**729.21**	**721.53**	**747.24**	**757.94**	**776.94**	**795.92**	**800.78**	**807.16**
Central & South America										
Argentina	16.96	18.86	17.26	16.84	17.37	18.19	18.99	18.59	18.55	17.64
Bolivia	0.94	0.93	1.04	1.18	1.18	1.21	1.35	1.70	1.70	1.74
Brazil	59.42	61.84	65.53	69.85	70.73	73.45	73.31	75.04	75.25	76.38
Chile	5.68	6.35	6.80	7.56	8.17	8.59	8.90	9.25	8.82	9.01
Colombia	8.64	9.02	9.08	9.58	10.14	10.53	10.73	10.23	10.31	9.30
Costa Rica	0.99	1.09	1.09	1.27	1.20	1.21	1.34	1.49	1.36	1.38
Cuba	7.78	7.89	7.76	8.21	8.11	7.07	7.02	7.15	7.03	7.14
Dominican Republic	2.66	2.34	2.63	2.92	3.07	3.24	3.33	3.73	4.72	4.87
Ecuador	4.55	4.20	4.48	4.61	4.74	4.89	5.23	4.81	4.84	4.79
El Salvador	0.87	0.88	0.98	1.25	1.18	1.26	1.47	1.50	1.49	1.52
Guatemala	1.17	1.31	1.47	1.64	1.71	1.88	2.30	2.34	2.31	2.38
Honduras	0.73	0.73	0.81	0.94	1.05	1.03	1.20	1.25	1.15	1.19
Jamaica	2.27	2.31	2.36	2.65	2.66	2.80	2.90	2.96	2.89	2.90
Netherlands Antilles	2.58	2.82	2.60	3.08	3.08	3.25	3.24	2.90	2.90	2.94
Panama	1.76	1.71	1.80	1.75	2.03	2.08	2.15	2.22	2.25	2.22
Peru	4.83	5.07	5.35	5.78	6.00	6.70	6.76	6.89	6.92	6.30
Puerto Rico	6.16	6.78	6.69	7.55	8.10	8.38	8.98	7.91	7.19	6.79
Trinidad and Tobago	0.84	0.84	0.86	0.82	0.77	0.84	0.81	0.83	0.93	0.91
Uruguay	1.29	1.41	1.25	1.26	1.34	1.41	1.73	1.95	1.73	1.67
Venezuela	15.46	15.34	15.90	16.39	15.92	15.81	16.00	15.60	17.24	17.42
Virgin Islands, U.S.	2.03	2.25	2.06	2.10	2.14	2.09	2.14	2.24	2.50	2.50
Other	4.69	5.10	5.36	5.86	5.73	6.21	6.77	6.89	6.95	7.08
Total	**152.28**	**159.07**	**163.16**	**173.07**	**176.44**	**182.13**	**186.65**	**187.47**	**189.05**	**188.07**
Western Europe										
Austria	8.85	9.01	9.09	8.86	8.93	9.05	9.37	11.23	10.27	10.28
Belgium	19.98	19.53	19.76	19.33	21.27	22.13	23.02	21.10	21.88	21.88
Denmark	7.85	8.04	8.62	9.13	9.66	9.45	9.27	9.14	8.84	8.83
Finland	8.76	8.21	8.49	6.54	7.57	8.35	7.92	8.18	7.74	7.75
France	68.66	67.27	65.05	67.01	69.83	69.17	72.39	73.30	72.88	72.89
Germany	105.12	106.81	104.61	104.16	106.73	108.13	104.30	99.26	97.25	94.97
Greece	13.70	14.03	14.43	14.37	15.08	15.32	15.72	15.58	16.31	16.30
Ireland	4.18	4.18	4.57	5.13	5.12	5.37	6.06	6.82	6.88	6.89
Italy	76.34	72.73	71.74	77.98	77.88	72.21	71.01	70.93	71.16	71.15
Luxembourg	1.59	1.60	1.58	1.48	1.52	1.59	1.65	1.79	1.88	1.87
Netherlands	28.39	28.33	28.38	28.62	28.06	28.92	26.92	25.90	26.71	26.71
Norway	6.61	6.72	6.87	7.06	7.70	8.22	8.50	8.23	7.31	7.30
Portugal	10.24	9.47	9.37	9.81	9.73	10.38	11.37	11.91	11.86	11.87
Spain	40.85	38.73	41.03	43.93	43.50	48.09	50.24	53.66	55.25	55.26
Sweden	12.57	12.21	13.05	14.56	14.98	12.02	13.57	12.90	11.84	11.83
Switzerland	11.23	10.79	10.99	9.96	10.74	11.04	10.45	10.43	10.50	10.50
Turkey	17.94	20.27	19.40	21.51	22.82	21.99	21.13	21.36	22.15	22.14
United Kingdom	66.62	66.06	66.07	66.61	67.07	65.97	62.80	63.27	62.97	62.98
Bosnia and Herzegovina	1.44	0.92	0.83	0.80	0.55	0.55	0.62	0.89	0.80	0.83
Croatia	2.67	2.71	3.16	3.64	3.14	3.24	3.68	3.82	3.47	3.61
Macedonia, TFYR	0.76	0.89	0.75	0.75	0.96	0.86	0.79	0.70	0.82	0.73
Slovenia	1.38	1.64	1.62	1.80	2.09	2.20	2.08	2.07	2.01	2.04
Yugoslavia	1.99	1.36	1.17	1.09	1.80	2.38	2.17	2.18	2.39	2.45
Other	1.84	1.99	2.00	2.02	2.07	2.16	2.27	2.73	3.71	3.84
Total	**519.56**	**513.48**	**512.59**	**526.15**	**538.82**	**538.79**	**537.30**	**537.37**	**536.87**	**534.90**

See footnotes at end of table.

Table H2 World Carbon Dioxide Emissions from the Consumption of Petroleum, 1992 - 2001 (Continued)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.85	0.70	0.53	0.60	0.47	0.41	0.37	0.76	0.85	0.90
Bulgaria	5.51	4.97	5.38	5.06	4.68	3.97	3.81	3.66	3.92	3.58
Former Czechoslovakia	8.31	--	--	--	--	--	--	--	--	--
Czech Republic	--	6.21	6.09	6.40	6.72	6.43	6.33	6.38	5.72	5.87
Slovakia	--	2.62	2.50	2.55	2.68	2.28	2.21	1.96	2.22	2.41
Hungary	6.75	7.03	6.82	6.00	5.31	5.55	5.64	5.42	5.03	4.92
Poland	11.61	12.18	11.84	11.86	13.31	14.30	14.83	14.61	16.10	15.94
Romania	10.35	10.48	8.98	9.73	10.27	10.94	10.06	8.09	8.20	8.27
Armenia	2.13	1.06	0.34	0.24	0.13	0.13	0.15	0.20	0.23	0.23
Azerbaijan	7.99	8.00	7.63	7.45	5.58	5.53	6.39	6.10	5.43	5.56
Belarus	14.74	12.40	10.02	9.37	8.41	7.47	7.57	6.34	9.29	9.40
Estonia	1.08	1.20	1.09	1.03	1.16	1.17	1.14	1.01	0.87	0.96
Georgia	1.16	0.67	0.31	0.33	0.72	0.78	0.96	0.95	1.13	1.17
Kazakhstan	16.53	13.95	12.40	11.39	10.23	8.66	8.27	6.01	7.67	7.93
Kyrgyzstan	1.32	0.78	0.36	0.46	0.49	0.42	0.56	0.46	0.76	0.84
Latvia	2.21	1.69	1.68	1.78	2.03	1.87	2.02	2.02	1.61	1.74
Lithuania	3.52	3.32	3.40	3.16	2.85	2.77	3.00	2.52	2.73	2.83
Moldova	2.49	1.80	0.96	0.92	0.71	0.80	1.49	1.30	0.89	0.98
Russia	175.45	153.75	126.65	115.57	102.56	98.36	98.44	97.98	99.89	100.53
Tajikistan	0.82	0.68	0.29	0.44	1.00	1.00	1.03	1.11	0.77	0.77
Turkmenistan	2.77	2.67	2.38	2.30	2.36	2.78	2.42	2.18	2.54	2.57
Ukraine	34.27	24.49	21.03	19.65	15.19	13.98	14.97	14.62	9.77	10.74
Uzbekistan	7.74	7.26	6.83	7.36	5.76	5.59	5.74	5.83	5.63	5.77
Total	**317.59**	**277.91**	**237.50**	**223.65**	**202.63**	**195.20**	**197.39**	**189.50**	**191.27**	**193.92**
Middle East										
Bahrain	0.84	0.82	0.84	0.89	0.86	1.00	0.99	1.11	1.38	1.42
Cyprus	1.61	1.62	1.84	1.81	1.81	1.81	1.96	2.06	2.01	2.07
Iran	44.00	45.83	45.38	45.13	42.54	46.70	48.92	46.55	47.30	47.81
Iraq	14.08	17.06	19.06	19.11	19.04	16.98	17.54	17.73	17.74	18.09
Israel	8.15	8.37	8.19	8.34	8.18	9.27	9.69	9.65	10.35	9.88
Jordan	2.95	2.98	3.28	3.41	3.70	3.53	3.87	3.85	4.07	4.15
Kuwait	4.93	5.45	6.93	7.38	8.13	9.09	10.31	11.60	10.74	11.09
Lebanon	2.20	2.70	3.10	3.28	3.43	4.01	4.01	4.26	4.31	4.37
Oman	1.59	1.60	1.65	1.76	1.92	1.99	2.01	2.15	2.12	2.14
Qatar	0.78	0.64	0.79	0.87	0.89	0.88	0.95	0.97	1.06	1.12
Saudi Arabia	40.45	41.45	41.94	42.88	44.41	47.00	44.57	53.46	54.67	55.86
Syria	7.39	8.76	9.15	9.13	9.24	9.57	9.92	10.61	10.82	11.01
United Arab Emirates	13.65	13.72	13.82	13.94	13.43	14.15	14.72	16.40	14.04	14.48
Yemen	3.29	2.77	2.67	2.71	2.69	3.00	2.72	2.70	2.56	2.61
Total	**145.91**	**153.75**	**158.64**	**160.64**	**160.27**	**168.99**	**172.17**	**183.10**	**183.16**	**186.09**

See footnotes at end of table.

Table H2 World Carbon Dioxide Emissions from the Consumption of Petroleum, 1992 - 2001 (Continued)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Africa										
Algeria	7.35	7.16	7.07	6.62	6.49	6.32	6.85	6.38	6.86	6.95
Angola	1.10	1.09	1.07	1.14	1.07	1.24	1.00	1.22	1.15	1.22
Cameroon	0.95	0.83	0.83	0.84	0.81	0.85	0.86	0.85	0.89	0.86
Congo (Brazzaville)	0.23	0.26	0.28	0.29	0.27	0.27	0.26	0.16	0.17	0.20
Congo (Kinshasa)	1.00	1.05	0.78	0.82	0.86	0.83	0.78	0.68	0.56	0.56
Cote d'Ivoire (Ivory Coast)	1.04	1.19	1.23	1.20	1.26	1.09	1.03	1.11	1.27	1.24
Egypt	18.59	18.75	19.30	19.09	20.75	21.89	22.34	22.28	21.69	21.73
Ethiopia	0.98	0.90	0.59	0.64	0.46	0.46	0.70	0.87	0.93	0.94
Gabon	0.65	0.64	0.69	0.74	0.83	0.71	0.66	0.75	0.48	0.51
Ghana	0.92	0.95	1.04	1.07	1.10	1.03	1.04	1.19	1.44	1.48
Kenya	1.66	1.70	1.81	1.87	1.96	1.82	2.08	2.12	2.31	2.31
Libya	6.17	6.65	6.82	7.24	7.62	8.03	7.59	8.02	8.70	8.94
Morocco	4.94	5.23	5.58	5.20	5.02	5.23	5.15	5.73	5.63	5.94
Nigeria	10.50	10.79	10.14	11.38	11.12	10.61	10.56	10.23	9.78	10.95
Senegal	0.79	0.80	0.95	1.02	1.03	0.95	1.00	1.10	1.17	1.23
South Africa	16.43	16.11	16.25	16.52	16.85	16.39	17.45	18.25	17.88	17.97
Sudan	1.38	1.33	1.17	1.08	1.07	1.11	1.12	1.19	1.76	2.04
Tunisia	2.81	2.93	2.92	2.68	2.78	2.91	3.05	3.13	3.25	3.34
Zimbabwe	0.80	0.89	0.90	0.98	1.12	1.19	1.23	1.23	1.01	0.92
Other	7.73	7.98	8.19	8.40	8.64	8.69	9.02	9.39	10.12	10.55
Total	**86.03**	**87.24**	**87.60**	**88.81**	**91.11**	**91.61**	**93.76**	**95.88**	**97.06**	**99.89**
Asia & Oceania										
Australia	26.74	27.94	29.27	30.54	29.02	29.41	29.82	31.42	31.24	31.25
Bangladesh	1.56	1.68	1.88	2.12	2.18	2.30	2.35	2.72	2.78	2.87
Brunei	0.27	0.37	0.38	0.39	0.48	0.62	0.50	0.51	0.44	0.48
Burma	0.68	0.71	0.77	0.75	0.81	1.03	1.22	1.50	1.51	1.56
China	107.42	121.16	124.94	132.16	137.63	140.90	147.67	153.58	168.88	175.20
Guam	0.68	0.90	1.29	0.97	0.87	0.99	0.82	0.92	0.78	0.83
Hong Kong	6.25	6.51	7.47	7.68	7.56	7.20	7.95	10.51	9.74	10.22
India	48.78	52.40	53.72	58.51	61.79	65.04	69.49	69.41	76.05	76.14
Indonesia	28.68	31.21	30.84	31.66	34.32	37.94	36.81	38.59	41.50	41.83
Japan	189.49	186.05	197.09	192.35	198.05	191.27	184.25	183.83	182.05	182.06
Korea, North	3.06	2.96	2.87	2.60	1.97	1.99	2.82	3.15	3.52	3.46
Korea, South	49.99	57.82	63.50	68.61	73.94	76.29	58.65	62.13	65.28	66.75
Malaysia	11.68	13.62	14.38	15.18	16.73	17.01	16.87	16.68	17.11	17.37
Mongolia	0.53	0.51	0.52	0.46	0.48	0.32	0.33	0.34	0.34	0.35
New Zealand	4.18	4.59	4.78	5.79	5.01	4.74	4.79	4.97	5.36	5.38
Pakistan	9.31	10.97	12.10	12.75	14.12	14.26	15.04	15.16	15.91	15.91
Papua New Guinea	0.66	0.66	0.65	0.65	0.65	0.66	0.64	0.64	0.64	0.65
Philippines	10.88	11.76	12.35	13.52	13.75	14.98	15.60	14.72	13.90	13.51
Singapore	18.43	20.77	21.94	21.60	25.79	27.15	28.25	30.25	29.18	29.94
Sri Lanka	1.49	1.71	1.80	1.92	2.17	2.41	2.45	2.65	3.06	3.08
Taiwan	21.06	25.47	25.42	28.95	30.84	30.55	32.02	28.81	32.95	34.71
Thailand	19.25	22.12	24.43	27.38	30.17	29.18	30.00	29.04	27.77	27.15
Vietnam	2.53	3.20	3.52	3.91	4.79	5.20	5.52	6.45	7.08	7.46
Other	2.69	2.73	2.75	2.80	2.95	3.00	3.18	3.22	3.17	3.25
Total	**566.27**	**607.85**	**638.63**	**663.25**	**696.03**	**704.45**	**697.05**	**711.19**	**740.24**	**751.40**
World Total	**2,499.49**	**2,510.10**	**2,527.33**	**2,557.10**	**2,612.53**	**2,639.11**	**2,661.27**	**2,700.43**	**2,738.43**	**2,761.42**

[1] Preliminary.

- - = Not applicable.

Notes: Sum of components may not equal total due to independent rounding.

Tons of carbon equivalent can be converted to tons of carbon dioxide gas by multiplying by 44/12.

Source: Office of Energy Markets and End Use, Energy Information Administration.

Table H3 World Carbon Dioxide Emissions from the Consumption and Flaring of Natural Gas, 1992 - 2001

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	39.29	41.22	43.26	42.24	44.13	43.75	42.78	46.93	49.40	43.57
Mexico	15.32	16.39	17.18	17.84	20.19	21.75	23.54	21.63	23.78	20.87
United States	303.26	311.48	317.61	332.22	338.30	339.64	330.66	332.58	347.20	336.17
Total	**357.87**	**369.09**	**378.04**	**392.30**	**402.61**	**405.14**	**396.97**	**401.14**	**420.39**	**400.61**
Central & South America										
Argentina	12.93	13.67	14.00	15.43	16.92	16.13	16.83	17.64	17.95	16.84
Barbados	0.01	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Bolivia	0.75	0.91	1.17	0.89	0.79	0.95	0.70	0.66	0.80	0.88
Brazil	3.01	2.69	2.81	2.92	3.42	3.71	4.05	4.58	6.02	6.33
Chile	1.11	0.93	1.05	1.01	1.02	1.54	1.77	2.50	2.83	3.50
Colombia	2.26	2.19	2.26	2.35	2.45	3.04	3.21	2.71	2.91	2.91
Cuba	0.02	0.02	0.02	0.02	0.02	0.47	0.26	0.32	0.37	0.37
Ecuador	0.43	0.39	0.39	0.60	0.60	0.56	0.56	0.56	0.59	0.60
Peru	0.34	0.56	0.57	0.54	0.56	0.28	0.27	0.27	0.23	0.25
Puerto Rico	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.34
Trinidad and Tobago	3.89	4.47	5.05	5.33	5.80	6.14	6.13	6.27	6.51	7.22
Uruguay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
Venezuela	15.06	15.85	16.77	17.28	20.05	20.71	21.52	19.52	19.01	21.08
Total	**39.81**	**41.70**	**44.10**	**46.38**	**51.64**	**53.54**	**55.33**	**55.05**	**57.44**	**60.36**
Western Europe										
Austria	3.42	3.60	3.71	4.01	4.31	4.15	4.26	4.34	4.14	4.22
Belgium	5.71	6.00	6.13	6.78	7.55	7.21	7.94	8.46	8.49	8.39
Denmark	1.48	1.65	1.82	2.09	2.44	2.80	2.85	3.08	3.11	3.05
Finland	1.52	1.57	1.74	1.80	1.88	1.85	2.12	2.12	2.17	2.35
France	17.94	18.08	17.99	18.36	20.27	20.10	20.59	21.61	22.20	23.20
Germany	35.41	36.64	38.57	44.28	44.32	42.43	44.06	44.50	45.32	47.11
Greece	0.08	0.06	0.03	0.03	0.03	0.11	0.46	0.77	1.08	1.06
Ireland	1.21	1.37	1.39	1.48	1.68	1.76	1.78	1.90	2.18	2.28
Italy	26.10	26.63	25.72	28.34	29.25	30.16	32.47	35.29	36.80	37.03
Luxembourg	0.30	0.31	0.31	0.35	0.39	0.40	0.40	0.42	0.42	0.49
Netherlands	21.53	22.10	21.37	21.98	24.22	22.75	22.61	22.00	22.27	22.60
Norway	2.30	1.60	1.68	1.86	1.86	2.26	2.22	2.75	2.54	2.53
Portugal	0.00	0.00	0.00	0.00	0.00	0.05	0.44	1.23	1.28	1.42
Spain	3.77	3.70	3.93	4.90	5.49	7.18	7.37	8.44	9.66	10.41
Sweden	0.39	0.43	0.42	0.43	0.44	0.45	0.43	0.47	0.43	0.48
Switzerland	1.22	1.28	1.26	1.39	1.51	1.46	1.50	1.55	1.55	1.61
Turkey	2.43	2.71	2.88	3.71	4.47	5.34	5.66	6.71	7.95	8.49
United Kingdom	31.65	37.28	39.76	41.96	49.50	47.04	47.93	50.79	52.21	50.75
Bosnia and Herzegovina	0.25	0.20	0.21	1.24	0.07	0.07	0.10	0.10	0.15	0.15
Croatia	1.45	1.56	1.37	1.24	1.33	1.49	1.42	1.42	1.47	1.51
Macedonia, TFYR	0.14	0.15	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00
Slovenia	0.34	0.41	0.40	0.53	0.69	0.49	0.52	0.54	0.55	0.56
Yugoslavia	1.09	0.52	0.88	0.60	1.50	1.48	1.59	0.93	0.29	0.32
Total	**159.75**	**167.86**	**171.59**	**187.36**	**203.20**	**201.02**	**208.72**	**219.43**	**226.27**	**230.01**

See footnotes at end of table.

Table H3 World Carbon Dioxide Emissions from the Consumption and Flaring of Natural Gas, 1992 - 2001 (Cont.)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.05	0.02	0.04	0.02	0.02	0.01	0.02	0.01	0.02	0.02
Bulgaria	2.65	2.45	2.40	2.97	3.12	2.59	1.92	1.70	2.75	2.92
Former Czechoslovakia	5.76	--	--	--	--	--	--	--	--	--
Czech Republic	--	3.76	3.47	4.16	4.79	4.85	4.86	4.90	4.76	5.10
Slovakia	--	3.18	3.01	3.99	3.52	3.57	3.63	3.68	3.69	4.08
Hungary	4.92	5.30	5.36	5.83	6.50	6.17	6.20	6.29	6.11	6.80
Poland	4.93	5.17	5.30	5.54	6.23	6.25	6.20	5.90	6.34	6.59
Romania	13.60	13.08	12.25	12.97	12.87	11.95	9.36	8.95	8.63	9.98
Armenia	0.99	0.75	0.85	0.85	0.96	0.69	0.75	0.69	0.75	0.75
Azerbaijan	8.37	5.86	5.00	4.79	4.95	4.88	6.53	6.72	6.44	3.58
Belarus	9.64	8.95	7.43	6.75	7.38	7.96	8.14	9.07	10.33	9.49
Estonia	0.76	0.31	0.33	0.38	0.42	0.54	0.81	0.51	0.57	0.65
Georgia	2.66	1.28	0.85	1.12	0.96	1.01	0.99	0.62	0.64	0.62
Kazakhstan	10.70	7.88	7.99	5.78	7.69	7.45	7.13	7.24	7.40	7.61
Kyrgyzstan	1.26	1.18	0.95	0.47	0.97	1.02	1.02	1.02	1.02	1.07
Latvia	0.82	0.41	0.36	0.56	0.51	0.66	0.66	0.66	0.81	0.86
Lithuania	2.05	1.23	1.18	1.43	1.32	1.48	1.63	1.09	1.32	1.40
Moldova	1.19	0.97	0.76	0.76	1.08	1.30	1.25	1.14	1.15	1.11
Russia	244.47	239.04	224.48	210.75	210.70	195.16	204.03	203.57	205.26	209.37
Tajikistan	1.01	0.75	0.85	0.43	0.65	0.61	0.60	0.62	0.67	0.69
Turkmenistan	2.13	2.18	2.24	2.56	2.56	2.45	2.34	2.98	3.94	5.11
Ukraine	52.10	57.68	49.57	44.77	44.24	42.69	39.29	41.52	41.90	39.45
Uzbekistan	16.00	22.52	17.96	19.75	20.99	21.30	20.63	20.84	22.13	23.37
Total	**386.08**	**383.94**	**352.59**	**336.61**	**342.42**	**324.59**	**327.98**	**329.70**	**336.63**	**340.61**
Middle East										
Bahrain	2.83	3.52	3.45	3.45	3.50	4.24	4.41	4.48	4.56	4.74
Iran	19.08	18.59	21.53	24.71	27.45	30.80	32.79	37.37	39.03	40.98
Iraq	1.57	1.38	1.71	1.71	1.75	1.87	1.97	2.16	2.15	1.94
Israel	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Jordan	0.08	0.11	0.15	0.15	0.14	0.15	0.15	0.15	0.15	0.15
Kuwait	1.64	3.13	3.43	3.43	5.20	5.19	5.04	4.85	5.36	5.31
Oman	2.07	2.41	2.44	2.07	2.04	2.87	3.89	3.40	3.78	4.00
Qatar	6.04	7.19	7.19	7.19	7.29	7.74	7.87	7.43	8.02	8.44
Saudi Arabia	23.91	24.03	25.13	26.56	28.19	24.63	25.63	24.75	26.80	28.70
Syria	2.20	1.99	2.04	1.64	2.18	2.43	3.00	3.14	3.17	2.99
United Arab Emirates	14.01	12.28	11.73	13.38	14.65	16.19	16.92	17.20	17.37	20.80
Total	**73.46**	**74.64**	**78.82**	**84.30**	**92.39**	**96.13**	**101.70**	**104.93**	**110.40**	**118.04**
Africa										
Algeria	14.64	14.89	15.57	16.58	16.05	15.26	15.65	15.81	15.40	15.09
Angola	0.94	1.00	0.94	2.15	2.23	2.28	2.35	2.43	2.39	2.37
Cameroon	0.00	1.08	1.23	1.20	1.03	1.03	1.03	1.03	0.97	0.88
Congo (Brazzaville)	0.00	0.65	0.65	0.65	0.65	0.81	0.79	0.70	0.65	0.65
Cote d'Ivoire (Ivory Coast)	0.00	0.00	0.00	0.02	0.28	0.31	0.41	0.68	0.69	0.69
Egypt	6.39	6.66	6.98	7.19	7.68	7.71	7.77	8.27	10.17	11.71
Equatorial Guinea	0.00	0.25	0.25	0.25	0.39	0.40	0.42	0.46	0.50	0.51
Gabon	0.99	0.99	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.86
Libya	3.70	3.39	3.49	3.47	3.68	3.82	3.81	2.90	3.29	3.56
Morocco	0.01	0.02	0.02	0.01	0.01	0.03	0.03	0.03	0.03	0.03
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03
Nigeria	14.97	15.48	15.78	15.78	16.47	14.34	13.52	12.66	12.12	12.52
Senegal	0.00	0.01	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02
South Africa	0.02	0.96	1.04	1.04	0.98	0.96	0.85	0.82	0.96	1.04
Tunisia	0.56	1.09	1.33	1.14	1.29	1.69	1.90	1.94	1.98	2.38
Total	**42.21**	**46.47**	**48.24**	**50.44**	**51.70**	**49.58**	**49.52**	**48.72**	**50.10**	**52.32**

See footnotes at end of table.

Table H3 World Carbon Dioxide Emissions from the Consumption and Flaring of Natural Gas, 1992 - 2001 (Cont.)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	0.17	0.16	0.16	0.11	0.12	0.12	0.12	0.12	0.12	0.12
Australia	9.20	9.57	9.98	10.71	10.81	10.87	11.37	11.68	12.37	12.71
Bangladesh	2.79	3.07	3.34	3.67	3.80	3.80	4.08	4.50	4.83	4.93
Brunei	0.72	0.63	0.58	0.57	0.46	0.52	0.45	0.61	0.65	0.79
Burma	0.53	0.59	0.77	0.88	0.86	0.81	0.94	0.97	1.05	1.20
China	8.84	9.25	9.76	10.06	11.09	12.53	13.11	14.29	16.01	17.90
Hong Kong	0.25	0.26	0.28	0.30	0.31	0.33	0.33	0.34	0.36	0.36
India	10.56	10.18	10.93	11.85	11.56	11.87	12.52	12.39	13.02	13.14
Indonesia	13.87	16.72	17.73	19.24	19.98	20.20	18.01	20.13	19.30	22.75
Japan	30.47	30.63	32.83	33.24	35.99	36.74	38.14	39.81	41.42	42.73
Korea, South	2.62	3.27	4.35	5.26	6.95	8.45	7.91	9.63	10.79	11.90
Malaysia	6.55	7.72	8.18	7.35	8.53	8.94	9.32	9.90	10.94	16.73
New Zealand	2.88	2.58	2.61	2.49	2.83	3.05	2.69	2.86	3.23	3.41
Pakistan	7.41	7.84	8.43	8.69	9.36	9.39	9.55	10.54	11.51	11.11
Papua New Guinea	0.03	0.04	0.03	0.05	0.07	0.06	0.06	0.06	0.06	0.06
Philippines	0.00	0.00	0.00	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Singapore	0.59	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.33
Taiwan	1.65	1.60	2.02	2.17	2.26	2.69	3.15	3.17	3.49	3.38
Thailand	3.59	4.47	4.92	5.29	6.03	7.57	8.00	8.84	9.91	11.89
Vietnam	0.11	0.51	0.51	0.51	0.59	0.25	0.57	0.70	0.80	0.86
Total	**102.81**	**109.90**	**118.21**	**123.24**	**132.40**	**138.98**	**141.11**	**151.36**	**160.65**	**177.30**
World Total	**1,161.98**	**1,193.60**	**1,191.59**	**1,220.63**	**1,276.34**	**1,268.98**	**1,281.33**	**1,310.33**	**1,361.88**	**1,379.26**

[1] Preliminary.
- - = Not applicable.
Notes: Sum of components may not equal total due to independent rounding.
Tons of carbon equivalent can be converted to tons of carbon dioxide gas by multiplying by 44/12.
Source: Office of Energy Markets and End Use, Energy Information Administration.

Table H4 World Carbon Dioxide Emissions from the Consumption of Coal, 1992 - 2001

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
North America										
Canada	27.42	30.57	31.37	31.96	32.38	36.36	35.08	36.86	39.79	42.22
Mexico	4.42	4.54	4.70	5.32	6.14	6.66	6.84	6.44	6.90	6.76
United States	489.50	505.63	508.50	513.97	536.69	548.43	552.56	553.74	578.71	561.13
Total	**521.34**	**540.74**	**544.58**	**551.26**	**575.20**	**591.46**	**594.47**	**597.05**	**625.40**	**610.11**
Central & South America										
Argentina	0.80	0.69	1.11	0.97	0.94	0.97	0.97	0.67	0.44	0.37
Brazil	9.78	9.87	9.45	9.71	10.08	10.13	10.15	12.89	13.24	13.06
Chile	1.72	1.76	2.08	2.27	3.10	4.40	4.17	4.35	3.25	2.24
Colombia	3.59	3.69	3.20	2.66	2.77	3.39	3.47	2.68	2.81	2.79
Costa Rica	0.00	0.00	0.00	(s)	0.01	(s)	(s)	(s)	(s)	(s)
Cuba	0.05	0.06	0.08	0.07	0.02	0.03	0.03	0.03	0.03	0.02
Dominican Republic	0.13	0.16	0.04	0.06	0.07	0.07	0.10	0.15	0.06	0.13
Guatemala	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.15	0.14
Haiti	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Honduras	(s)	(s)	(s)	(s)	(s)	(s)	(s)	0.06	0.09	0.08
Jamaica	0.03	0.03	0.04	0.04	0.06	0.04	0.04	0.02	0.03	0.03
Panama	0.03	0.04	0.04	0.04	0.07	0.04	0.04	0.04	0.04	0.04
Peru	0.32	0.40	0.37	0.37	0.40	0.46	0.49	0.44	0.82	0.64
Puerto Rico	0.10	0.13	0.13	0.13	0.11	0.11	0.11	0.10	0.10	0.10
Uruguay	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Venezuela	(s)	0.03	0.05	(s)	0.14	0.04	1.00	0.04	0.14	0.05
Virgin Islands, U.S.	0.15	0.18	0.20	0.17	0.17	0.16	0.16	0.16	0.16	0.16
Other	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	(s)
Total	**16.76**	**17.09**	**16.84**	**16.54**	**17.99**	**19.88**	**20.76**	**21.68**	**21.40**	**19.84**
Western Europe										
Austria	2.73	3.00	2.88	3.11	3.35	3.80	3.39	3.18	3.63	3.69
Belgium	7.97	8.32	8.93	9.33	8.75	9.07	8.99	7.80	8.62	9.08
Denmark	7.28	6.27	7.06	7.57	7.65	8.25	5.06	4.47	4.02	4.36
Finland	3.11	4.40	5.49	3.83	4.52	4.98	3.29	2.69	3.66	4.30
France	17.33	14.60	13.96	15.32	15.74	14.39	17.04	14.76	14.21	12.04
Germany	101.05	97.43	93.37	90.29	88.74	88.70	87.09	82.59	83.34	81.16
Greece	8.04	8.71	8.82	8.59	8.31	9.19	9.72	9.65	10.21	10.72
Iceland	0.05	0.05	0.07	0.06	0.07	0.06	0.07	0.06	0.11	0.11
Ireland	2.18	2.08	1.94	1.93	1.98	2.01	2.00	1.63	1.79	1.98
Italy	11.14	10.42	10.28	12.14	10.47	10.53	11.10	11.57	12.99	13.32
Luxembourg	1.13	1.30	1.05	0.58	0.54	0.36	0.11	0.11	0.12	0.11
Malta	0.16	0.18	0.18	0.18	0.21	0.20	0.20	0.21	0.21	0.21
Netherlands	8.58	9.62	10.30	10.28	9.90	12.76	12.76	11.23	13.32	18.21
Norway	0.74	0.91	1.06	1.09	1.08	1.16	1.21	1.19	1.21	1.62
Portugal	2.78	3.05	3.22	3.72	3.27	3.77	3.16	3.84	4.02	2.96
Spain	21.01	20.05	19.41	18.09	15.05	17.38	16.46	18.25	18.89	17.06
Sweden	1.89	2.40	2.53	2.51	2.36	2.46	2.27	2.32	2.33	2.28
Switzerland	0.11	0.11	0.11	0.17	0.10	0.08	0.07	0.06	0.20	0.16
Turkey	17.16	16.19	15.59	15.97	18.48	22.05	22.84	20.85	20.08	19.44
United Kingdom	58.29	54.26	49.64	44.04	42.55	40.07	37.14	34.69	36.45	40.59
Bosnia and Herzegovina	0.43	0.32	0.32	0.36	0.37	0.40	0.41	2.70	3.30	3.37
Croatia	0.40	0.43	0.28	0.07	0.24	0.30	0.25	0.19	0.64	0.56
Macedonia, TFYR	1.58	1.63	1.68	1.74	1.72	1.79	2.03	1.87	1.88	1.84
Slovenia	1.67	1.58	1.44	1.66	1.75	1.83	1.81	1.54	1.55	1.45
Yugoslavia	9.51	9.01	9.26	6.57	9.91	9.44	10.25	7.80	8.02	8.34
Total	**286.32**	**276.32**	**268.84**	**259.19**	**257.10**	**265.03**	**258.72**	**245.23**	**254.79**	**258.96**

See footnotes at end of table.

Table H4 World Carbon Dioxide Emissions from the Consumption of Coal, 1992 - 2001 (Continued)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Eastern Europe & Former U.S.S.R.										
Albania	0.21	0.16	0.04	0.04	0.02	0.02	0.01	0.01	0.01	0.01
Bulgaria	9.45	8.71	7.95	7.82	8.38	9.57	9.52	8.89	9.10	8.97
Former Czechoslovakia	51.44	--	--	--	--	--	--	--	--	--
Czech Republic	--	23.32	20.58	22.16	22.34	21.77	18.19	15.34	19.78	18.04
Slovakia	--	5.93	5.38	5.08	5.64	5.17	4.54	4.38	4.26	4.34
Hungary	5.53	4.64	4.44	4.21	4.17	4.31	4.19	4.29	3.99	3.80
Poland	72.39	74.77	70.07	65.59	58.69	70.74	63.88	61.30	59.87	56.08
Romania	10.68	10.39	10.58	10.78	11.09	9.70	7.84	6.76	7.59	7.72
Armenia	0.10	(s)	0.02	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Azerbaijan	0.02	(s)	(s)	(s)	(s)	(s)	(s)	0.00	0.00	0.00
Belarus	0.97	0.99	0.60	0.75	0.60	0.50	0.52	0.47	0.43	0.44
Estonia	0.62	0.44	0.44	0.24	0.35	0.38	0.34	0.47	0.37	0.33
Georgia	0.26	0.17	0.16	0.14	0.09	0.06	0.01	0.01	0.01	(s)
Kazakhstan	38.80	32.19	22.52	22.62	19.85	15.80	15.49	15.41	15.30	17.82
Kyrgyzstan	1.24	0.86	1.00	0.57	0.45	0.28	0.52	0.52	0.50	0.54
Latvia	0.58	0.31	0.26	0.17	0.11	0.11	0.07	0.07	0.05	0.05
Lithuania	0.66	0.24	0.41	0.18	0.20	0.17	0.16	0.10	0.09	0.09
Moldova	1.87	1.33	1.27	0.66	0.57	0.29	0.24	0.09	0.07	0.07
Russia	153.58	142.83	126.16	118.19	131.88	101.13	93.09	113.61	123.16	130.36
Tajikistan	0.15	0.19	0.10	0.05	0.06	0.06	0.05	0.06	0.06	0.06
Turkmenistan	0.36	0.32	0.32	0.16	0.05	0.03	0.00	0.00	0.00	0.00
Ukraine	69.16	62.67	49.98	57.38	49.67	45.62	45.81	46.25	46.42	46.39
Uzbekistan	2.22	1.63	1.66	1.29	1.22	1.07	1.12	1.11	0.96	1.02
Total	**420.29**	**372.11**	**323.95**	**318.09**	**315.43**	**286.78**	**265.56**	**279.14**	**292.02**	**296.14**
Middle East										
Cyprus	0.01	0.03	0.02	0.02	0.01	0.02	0.01	0.02	0.03	0.03
Iran	0.89	0.86	1.12	0.97	1.20	1.14	1.18	1.31	1.33	1.33
Israel	3.04	4.32	4.92	4.90	4.88	5.71	6.25	6.23	6.43	6.43
Other	(s)	0.08	0.08	0.13	0.14	0.13	0.13	0.13	0.14	0.14
Total	**3.95**	**5.29**	**6.15**	**6.02**	**6.23**	**7.00**	**7.57**	**7.68**	**7.93**	**7.94**
Africa										
Algeria	0.67	0.70	0.61	0.67	0.42	0.36	0.53	0.57	0.52	0.46
Botswana	0.55	0.54	0.55	0.63	0.52	0.51	0.61	0.62	0.63	0.63
Cameroon	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Congo (Kinshasa)	0.17	0.18	0.19	0.18	0.19	0.18	0.18	0.18	0.17	0.17
Egypt	0.72	0.87	0.83	0.54	0.89	0.69	0.70	0.57	0.85	0.85
Ghana	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Kenya	0.11	0.11	0.09	0.10	0.09	0.10	0.06	0.05	0.04	0.04
Libya	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Madagascar	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Malawi	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mauritania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Mauritius	0.04	0.05	0.03	0.04	0.03	0.02	0.05	0.08	0.04	0.04
Morocco	1.13	1.69	1.86	1.87	2.33	2.10	2.52	2.44	2.70	2.75
Mozambique	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02
Namibia	0.00	0.00	0.00	0.00	0.00	0.00	0.04	(s)	(s)	0.00
Niger	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10
Nigeria	0.07	0.09	0.09	0.10	0.10	0.10	0.04	0.04	0.04	0.04
South Africa	70.10	69.27	76.46	76.29	77.30	86.30	80.35	82.98	84.24	86.18
Swaziland	0.07	0.03	0.12	0.11	0.09	0.09	0.17	0.19	0.19	0.18
Tanzania	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Tunisia	0.10	0.11	0.10	0.08	0.09	0.09	0.07	0.10	0.10	0.10
Zambia	0.27	0.22	0.10	0.08	0.11	0.11	0.12	0.11	0.11	0.11
Zimbabwe	3.68	3.37	3.64	3.58	3.09	2.59	2.56	2.93	2.80	3.00
Total	**77.86**	**77.42**	**84.87**	**84.46**	**85.41**	**93.39**	**88.18**	**91.02**	**92.58**	**94.71**

See footnotes at end of table.

Table H4 World Carbon Dioxide Emissions from the Consumption of Coal, 1992 - 2001 (Continued)

(Million Metric Tons Carbon Equivalent)

Region Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 [1]
Asia & Oceania										
Afghanistan	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Australia	39.40	39.48	37.72	38.34	41.58	49.41	49.20	52.69	52.82	55.07
Bangladesh	0.11	0.03	0.03	0.03	0.18	0.33	0.10	0.05	0.34	0.26
Bhutan	0.04	0.04	0.05	0.06	0.06	0.04	0.04	0.04	0.04	0.04
Burma	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.08	0.22	0.25
China	551.64	581.44	633.31	645.49	654.43	670.85	644.42	623.08	595.47	638.64
Fiji	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Hong Kong	5.70	6.25	4.46	4.81	4.53	3.64	4.53	4.07	3.86	5.12
India	116.63	123.15	125.34	155.90	152.83	153.18	151.96	154.34	161.43	162.05
Indonesia	4.95	5.78	7.07	7.23	9.89	8.46	9.36	11.99	14.16	22.55
Japan	65.81	66.40	68.72	72.16	74.13	80.58	77.90	80.88	86.98	91.04
Korea, North	68.16	70.81	70.13	69.46	68.78	64.94	61.66	60.90	63.93	63.72
Korea, South	24.94	30.03	31.37	35.41	31.00	33.15	34.02	32.63	39.85	42.15
Laos	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Malaysia	1.62	1.41	1.65	1.67	2.25	1.71	1.72	1.42	2.39	2.05
Mongolia	1.65	1.50	1.38	1.42	1.38	1.25	1.24	1.25	1.20	1.24
Nepal	0.07	0.05	0.10	0.08	0.08	0.08	0.20	0.25	0.26	0.27
New Caledonia	0.10	0.14	0.13	0.13	0.11	0.11	0.11	0.10	0.10	0.10
New Zealand	1.39	1.34	1.18	1.18	1.06	1.04	0.77	0.70	0.71	0.82
Pakistan	2.22	2.31	2.45	2.29	2.45	2.18	2.10	2.21	2.10	2.12
Papua New Guinea	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Philippines	1.59	1.93	2.01	2.11	2.52	2.78	2.60	3.91	5.23	5.11
Singapore	0.02	0.03	0.04	0.04	(s)	(s)	(s)	0.00	0.00	0.00
Sri Lanka	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(s)
Taiwan	12.69	15.50	17.64	19.78	23.36	23.52	27.60	29.10	32.49	33.14
Thailand	4.62	4.90	5.62	9.97	9.81	9.37	7.58	8.15	8.37	9.46
Vietnam	2.55	3.55	3.52	4.82	4.11	3.99	3.53	3.71	4.15	4.25
Total	**905.97**	**956.13**	**1,013.98**	**1,072.45**	**1,084.58**	**1,110.66**	**1,080.65**	**1,071.56**	**1,076.14**	**1,139.44**
World Total	**2,232.50**	**2,245.10**	**2,259.21**	**2,308.00**	**2,341.94**	**2,374.21**	**2,315.92**	**2,313.38**	**2,370.26**	**2,427.14**

[1] Preliminary.
- - = Not applicable.
(s) = Value less than 5,000 metric tons.
Notes: Sum of components may not equal total due to independent rounding.
Tons of carbon equivalent can be converted to tons of carbon dioxide gas by multiplying by 44/12.
Source: Office of Energy Markets and End Use, Energy Information Administration.

Glossary

Glossary

Acid Rain: Also called acid precipitation or acid deposition, acid rain is precipitation containing harmful amounts of nitric and sulfuric acids formed primarily by sulfur dioxide and nitrogen oxides released into the atmosphere when fossil fuels are burned. It can be wet precipitation (rain, snow, or fog) or dry precipitation (absorbed gaseous and particulate matter, aerosol particles, or dust). Acid rain has a pH below 5.6. Normal rain has a pH of 5.6, which is slightly acidic. The term pH is a measure of acidity or alkalinity and ranges from 0 to 14. A pH measurement of 7 is regarded as neutral Measurements below 7 indicate increased acidity, while those above 7 indicate increased alkalinity.

Acquisition (Foreign Crude Oil): All transfers of ownership of foreign crude oil to a firm, irrespective of the terms of that transfer. Acquisitions thus include all purchases and exchange receipts as well as any and all foreign crude acquired under reciprocal buy-sell agreements or acquired as a result of a buy-back or other preferential agreement with a host government.

Afforestation: Planting of new forests on lands that have not been recently forested.

Agglomerating Character: Agglomeration describes the caking properties of coal. Agglomerating character is determined by examination and testing of the residue when a small powdered sample is heated to 950 degrees Centigrade under specified conditions. If the sample is "agglomerating," the residue will be coherent, show swelling or cell structure, and be capable of supporting a 500-gram weight without pulverizing.

Alcohol: The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group, CH_3-$(CH_2)_n$-OH. Included are methanol, ethanol, and tertiary butyl alcohol.

Alternating Current: An electric current that reverses its direction at regularly recurring intervals, usually 50 or 60 times per second.

Ampere: The unit of measurement of electrical current produced in a circuit of 1 volt acting through a resistance of 1 ohm.

Anaerobic Decomposition: The breakdown of molecules into simpler molecules or atoms by microorganisms that can survive in the partial or complete absence of oxygen.

Anthracite: The highest rank of coal; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per ton on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). *Note:* Since the 1980's, anthracite refuse or mine waste has been used for steam electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

Anthracite Briquets: See **Coal Briquets**.

Anthropogenic: Made or generated by a human or caused by human activity. The term is used in the context of global climate change to refer to gaseous emissions that are the result of human activities, as well as other potentially climate-altering activities, such as deforestation.

API: The American Petroleum Institute, a trade association.

API Gravity: An arbitrary scale expressing the gravity or density of liquid petroleum products, as established by the American Petroleum Institute (API). The measuring scale is calibrated in terms of degrees API. The higher the API gravity, the lighter the compound. Light crude oils generally exceed 38 degrees API and heavy crude oils are commonly labeled as all crude oils with an API gravity of 22 degrees or below. Intermediate crude oils fall in the range of 22 degrees to 38 degrees API gravity.

Apparent Consumption (Coal): As used here, a calculated amount equal to primary coal production plus imports of coal and coke, minus exports of coal and coke minus changes in stocks of coal and coke. *Notes*: 1) For the United States, coal consumption data are reported by major end-use sector and do not have to be calculated;

2) A net withdrawal from stocks increases consumption and a net addition to stocks decreases consumption.

Apparent Consumption (Natural Gas): As used here, a calculated amount equal to dry natural gas production, plus imports of natural gas, minus exports of natural gas, minus changes in natural gas stocks. *Note*: A net withdrawal from stocks increases consumption and a net addition to stocks decreases consumption.

Apparent Consumption of Refined Petroleum Products: See **Apparent Consumption (Petroleum)**.

Apparent Consumption (Petroleum): As used here, a calculated amount that includes domestic inland consumption, refinery fuel and loss, and international bunker fuels. Also included, where available, are liquefied petroleum gases sold directly from natural gas processing plants for fuel or chemical uses.

Ash: Impurities consisting of silica, iron, alumina, and other incombustible matter that are contained in coal. Ash increases the weight of coal, adds to the cost of handling, and can affect the burning characteristics. Ash content is measured as a percent by weight of coal on an as-received basis (i.e., containing both inherent moisture and mineral matter) or a dry (moisture-free) basis.

Asphalt: A dark brown-to-black cement-like material obtained by petroleum processing and containing bitumens as the predominant component; used primarily for road construction. It includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. *Note:* The conversion factor for asphalt is 5.5 barrels per short ton.

Asphalt (Refined): See **Asphalt**.

Associated-Dissolved Natural Gas: Natural gas that occurs in crude oil reservoirs either as free gas (associated) or as a gas in solution with crude oil (dissolved gas). See **Natural Gas**.

Associated Gas: See **Associated-Dissolved Natural Gas** and **Natural Gas.**

Associated Natural Gas: See **Associated-Dissolved Natural Gas** and **Natural Gas**.

ASTM: The American Society for Testing and Materials, a trade association.

Atmospheric Crude Oil Distillation Unit: See **Distillation Unit (Atmospheric)**.

Aviation Gasoline Blending Components: Naphthas that are used for blending or compounding gasoline into finished aviation gasoline (e.g., straight-run gasoline, alkylate, and reformate). Excluded are oxygenates (alcohols, ethers), butane, and pentanes plus.

Aviation Gasoline (Finished): A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline. See **Jet Fuel; Kerosene-Type Jet Fuel;** and **Naphtha-Type Jet Fuel**.

Barrel: A unit of volume equal to 42 U.S. gallons.

Barrels per Calendar Day: The amount of input that a distillation facility can process under usual operating conditions. The amount is expressed in terms of capacity during a 24-hour period and reduces the maximum processing capability of all units at the facility under continuous operation (see **Barrels per Stream Day**) to account for the following limitations that may delay, interrupt, or slow down production:

1. the capability of downstream processing units to absorb the output of crude oil processing facilities of a given refinery. No reduction is necessary for intermediate streams that are distributed to other than downstream facilities as part of refinery's normal operation;

2. the types and grades of inputs to be processed;

3. the types and grades of products expected to be manufactured;

4. the environmental constraints associated with refinery operations;

5. the reduction of capacity for scheduled downtime due to such conditions as routine inspection, maintenance, repairs, and turnaround; and

6. the reduction of capacity for unscheduled downtime due to such conditions as mechanical problems, repairs, and slowdowns.

Barrels per Stream Day: The maximum number of barrels of input that a distillation facility can process within a 24-hour period when running at full capacity under optimal crude and product slate conditions with no allowance for downtime.

Biodiesel: A renewable fuel synthesized from soybeans, other oil crops, or animal tallow that can substitute for petroleum diesel fuel.

Biofuels: Liquid fuels and blending components produced from biomass (plant) feedstocks, used primarily for transportation.

Biogas: A medium Btu gas containing methane and carbon dioxide, produced from the anaerobic decomposition of organic material in a landfill. Also called biomass gas.

Biogenic: Produced by the actions of living organisms.

Biomass: Nonfossil material of biological origin constituting a renewable energy resource. Included in **Wood and Waste**.

Biomass Gas: See **Biogas**.

Biosphere: The portion of the Earth and its atmosphere that can support life. The part of the global carbon cycle that includes living organisms and biogenic organic matter.

Bitumen: A naturally occurring viscous mixture, mainly of hydrocarbons heavier than pentane, that may contain sulfur compounds and that, in its natural occurring viscous state, is not recoverable at a commercial rate through a well.

Bituminous Briquets: See **Coal Briquets**.

Bituminous Coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Black Liquor: A byproduct of the paper production process that can be used as a source of energy.

Boiler: A device for generating steam for power, processing, or heating purposes; or for producing hot water for heating purposes or hot water supply. Heat from an external combustion source is transmitted to a fluid contained within the tubes in the boiler shell. This fluid is delivered to an end-use at a desired pressure, temperature, and quality.

Briquetting Plant: A facility where coal is converted into coal briquets. See **Coal Briquets**.

British Thermal Unit (Btu): See **Btu (British Thermal Unit)**.

Btu (British Thermal Unit): A standard unit for measuring the quantity of heat energy equal to the quantity of heat needed to raise the temperature of 1 pound of water by 1 degree Fahrenheit at or near 39.2 degrees Fahrenheit. The Btu is a convenient measure by which to compare the energy content of various fuels. See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net**.

Bunker Fuels: Fuel supplied to ships and aircraft, both domestic and foreign, consisting primarily of residual and distillate fuel oil for ships and kerosene-type jet fuel for aircraft. The term "international bunker fuels" is used to denote the consumption of fuel for international transport activities. *Notes*: 1) For the purposes of greenhouse gas emissions inventories, data on emissions from combustion of international bunker fuels are subtracted from national emissions totals. However, because it was often difficult to separate out international bunker fuels, this adjustment was not made in estimating the carbon dioxide emissions that appear here. 2) Historically, bunker fuels have meant only ship fuel. See **Vessel Bunkering**.

Bunkers: See **Bunker Fuels**.

Butane: A normally gaseous straight-chain or branched-chain hydrocarbon, (C_4H_{10}). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and conforms to ASTM Specification D 1835 and Gas Processors Association Specifications for commercial butane.

Butylene: An olefinic hydrocarbon (C_4H_8) recovered from refinery processes.

Carbon Budget: The balance of the exchanges (incomes) and losses) of carbon between carbon sinks (e.g., atmosphere and biosphere) in the carbon cycle. See **Carbon Cycle** and **Carbon Sink**.

Carbon Cycle: All carbon sinks and exchanges of carbon from one sink to another by various chemical, physical, geological, and biological processes. See **Carbon Sink** and **Carbon Budget**.

Carbon Dioxide (CO_2): A colorless, odorless, non-poisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of fossil-fuel combustion as well as other processes. It is considered a greenhouse gas as it traps heat (infrared energy) radiated

by the Earth into the atmosphere and thereby contributes to the potential for global warming. The global warming potential (GWP) of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1). See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

Carbon Dioxide Equivalent: The amount of carbon dioxide by weight emitted into the atmosphere that would produce the same estimated radiative forcing as a given weight of another radiatively active gas. Carbon dioxide equivalents are computed by multiplying the weight of the gas being measured (for example, methane) by its estimated global warming potential (which is 21 for methane). "Carbon equivalent units" are defined as carbon dioxide equivalents multiplied by the carbon content of carbon dioxide (i.e., 12/44).

Carbon Intensity: The amount of carbon by weight emitted per unit of energy consumed. A common measure of carbon intensity is weight of carbon per British thermal unit (Btu) of energy. When there is only one fossil fuel under consideration, the carbon intensity and the emissions coefficient are identical. When there are several fuels, carbon intensity is based on their combined emissions coefficients weighted by their energy consumption levels. See **Emissions Coefficient** and **Carbon Output Rate**.

Carbon Output Rate: The amount of carbon by weight per kilowatthour of electricity produced.

Carbon Sequestration: The fixation of atmospheric carbon dioxide in a carbon sink through biological or physical processes.

Carbon Sink: A reservoir that absorbs or takes up released carbon from another part of the carbon cycle. The four sinks, which are regions of the Earth within which carbon behaves in a systematic manner, are the atmosphere, terrestrial biosphere (usually including freshwater systems), oceans, and sediments (including fossil fuels). See **Carbon Cycle** and **Carbon Budget**.

Catalytic Cracking: The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil. Catalytic cracking processes fresh feeds and recycled feeds.

Catalytic Reforming: A refining process using controlled heat and pressure with catalysts to rearrange certain hydrocarbon molecules, thereby converting paraffinic and naphthenic type hydrocarbons (e.g., low-octane gasoline boiling range fractions) into petrochemical feedstocks and higher octane stocks suitable for blending into finished gasoline.

C.I.F. (Cost, Insurance and Freight): A sales transaction in which the seller pays for the transportation and insurance of the goods up to the port of destination specified by the buyer.

Circuit: A conductor or a system of conductors through which electric current flows.

Climate: The average course or condition of the weather over a period of years as exhibited by temperature, humidity, wind velocity, and precipitation.

Climate Change: A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term "global warming"; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

Coal: A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. See **Coal Rank**.

Coalbed: A bed or stratum of coal. Also called a coal seam.

Coalbed Methane: Methane produced from coalbeds in the same way that natural gas is produced from other strata. See **Methane**.

Coal Briquets: Anthracite, bituminous, and lignite briquets are secondary solid fuels manufactured from coal by a process in which the coal is partly dried, warmed to expel excess moisture, and then compressed into briquets, usually without the use of a binding substance.

Coal Coke: See **Coke (Coal)**.

Coal Production: The sum of sales, mine consumption, issues to miners, and issues to coke, briquetting, and other ancillary plants at mines. Production data include quantities extracted from surface and underground mines, and normally exclude wastes removed at mines or associated preparation plants.

Coal Rank: The classification of coals according to their degree of progressive alteration from lignite to anthracite. In the United States, the standard ranks of coal include lignite, subbituminous coal, bituminous coal,

and anthracite and are based on fixed carbon, volatile matter, heating value, and agglomerating (or caking) properties.

Coal Stocks: Coal quantities that are held in storage for future use and disposition. *Note:* When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of this period.

Cogeneration: The production of electrical energy and another form of useful energy (such as heat or steam) through the sequential use of energy.

Cogenerator: A generating facility that produces electricity and another form of useful thermal energy (such as heat or steam) used for industrial, commercial, heating, or cooling purposes. See **Electric Utility** and **Nonutility Power Producer.**

Coke (Coal): A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000 degrees Fahrenheit so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. Coke from coal is grey, hard, and porous and has a heating value of 24.8 million Btu per ton.

Coke Oven Gas: The gaseous portion of volatile substances driven off in the coking process after other coal chemicals are removed.

Coke (Petroleum): A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (of 42 U.S. gallons each) per short ton. Coke from petroleum has a heating value of 6.024 million Btu per barrel.

Coke Plant: A plant where coal is carbonized in slot or beehive ovens for the manufacture of coke.

Coking Coal: Bituminous coal suitable for making coke. See **Coke (Coal)**.

Combined Cycle: An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for utilization by a steam turbine in the production of electricity. Such designs increase the efficiency of the electric generating unit.

Combined Cycle Unit: An electric generating unit that consists of one or more combustion turbines and one or more boilers with a portion of the required energy input to the boiler(s) provided by the exhaust gas of the combustion turbine(s).

Combined Pumped-Storage Electric Power Plant: A pumped-storage hydroelectric power plant that uses both pumped water and natural stream flow to produce electricity. See **Pumped-Storage Hydroelectric Power Plant** and **Pure Pumped-Storage Hydroelectric Power Plant**.

Combustion: Chemical oxidation accompanied by the generation of light and heat.

Completion: Installation of permanent equipment for the production of oil or gas. If a well is equipped to produce only oil or gas from one zone or reservoir, the definition of a well (classified as an oil well or gas well) and the definition of a completion are identical. However, if a well is equipped to produce oil and/or gas separately from more than one reservoir, a well is not synonymous with a completion. See **Well**.

Conference of the Parties (COP): The collection of nations that have ratified the Framework Convention on Climate Change (FCCC). The primary role of the COP is to keep implementation of the FCCC under review and make the decisions necessary for its effective implementation. See **Framework Convention on Climate Change (FCCC)**.

Consumption: See **Energy Consumption**.

Conventional Gasoline: Finished motor gasoline not included in the oxygenated or reformulated gasoline categories. *Note:* This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock. See **Motor Gasoline (Finished)**.

Conventional Mill (Uranium): A facility engineered and built principally for processing of uraniferous ore materials mined from the earth and the recovery, by chemical treatment in the mill's circuits, of uranium and/or other valued coproduct components from the processed one.

Conventional Thermal Electricity Generation: Electricity generated by an electric power plant using coal, petroleum, or gas as its source of energy.

Conversion Factor: A number that translates units of one measurement system into corresponding values of another measurement system. (Thermal conversion factors or heat contents or heat values can be used to translate physical units of measure for various fuels into Btu equivalents.) *Note*: For specific conversion factors, see EIA data products.

COP: See **Conference of the Parties (COP)**.

Cost, Insurance and Freight: See **C.I.F. (Cost, Insurance and Freight)**.

Cracking: The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. See **Catalytic Cracking** and **Thermal Cracking**.

Crude Oil: A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Depending upon the characteristics of the crude stream, it may also include:

1. Small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured. Lease condensate recovered as a liquid from natural gas wells in lease or field separation facilities and later mixed into the crude stream is also included;

2. Small amounts of nonhydrocarbons produced with the oil, such as sulfur and various metals;

3. Drip gases, and liquid hydrocarbons produced from tar sands, Gilsonite, and oil shale.

Liquids produced at natural gas processing plants are excluded. Crude oil is refined to produce a wide array of petroleum products, including heating oils; gasoline, diesel, and jet fuels; lubricants; asphalt; ethane, propane, and butane; and many other products used for their energy or chemical content.

Crude Oil (including Lease Condensate): See **Crude Oil.**

Crude Oil Landed Cost: The dollar-per-barrel price of crude oil at the port of discharge. Included are the charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Not included are charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage charges).

Crude Oil Less Lease Condensate: A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Such hydrocarbons as lease condensate and natural gasoline recovered as liquids from natural gas wells in lease or field separation facilities and later mixed into the crude stream are excluded. Depending upon the characteristics of the crude stream, crude oil may also include:

1. Small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured;
2. Small amounts of nonhydrocarbons produced with the oil, such as sulfur and various metals.

Crude Oil Production: The volume of crude oil produced from oil reservoirs during given periods of time. The amount of such production for a given period is measured as volumes delivered from lease storage tanks (i.e., the point of custody transfer) to pipelines, trucks, or other media for transport to refineries or terminals with, adjustments for (1) net differences between opening and closing lease inventories, and (2) basic sediment and water.

Cubic Foot (cf), Natural Gas: The amount of natural gas contained at standard temperature and pressure (60 degrees Fahrenheit and 14.73 pounds standard per square inch) in a cube whose edges are one foot long.

Cull Wood: Wood logs, chips, or wood products that are burned.

Current (Electric): A flow of electrons in an electrical conductor. The strength or rate of movement of the electricity is measured in amperes.

Cycling: The practice of producing natural gas for the extraction of natural gas liquids, returning the dry residue to the producing reservoir to maintain reservoir pressure and increase the ultimate recovery of natural gas liquids.

Cycling Plants: See **Natural Gas Processing Plants**.

Czechoslovakia: Country that split into two separate countries—the Czech Republic and Slovakia—on January 1, 1993.

Deforestation: The net removal of trees from forested land.

Delayed Coking: A process by which heavier crude oil fractions can be thermally decomposed under conditions of elevated temperature and pressure to produce a mixture of lighter oils and petroleum coke.

Demand: See **Energy Demand.**

Demand (Electric): See **Electricity Demand**.

Demonstrated Reserves: See **Energy Reserves**.

Development Well: A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

Direct Current: An electric current that flows in a constant direction. The magnitude of the current does not vary or has a slight variation.

Distillate Fuel Oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.

1. **No. 1 Distillate:** A light petroleum distillate that can be used as either a diesel fuel (**see No. 1 Diesel Fuel**) or a fuel oil (see **No. 1 Fuel Oil**).

    a. **No. 1 Diesel Fuel:** A light distillate fuel oil that has distillation temperatures of 550 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in city buses and similar vehicles.

    b. **No. 1 Fuel Oil:** A light distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 550 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used primarily as fuel for portable outdoor stoves and portable outdoor heaters.

2. **No. 2 Distillate:** A petroleum distillate that can be used either as a diesel fuel (see **No. 2 Diesel Fuel**) or a fuel oil (see **No. 2 Fuel Oil**).

    a. **No. 2 Diesel Fuel:** A fuel that has distillation temperatures of 500 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in railroad locomotives, trucks, and automobiles.

        i. **Low Sulfur No.2 Diesel Fuel:** No. 2 diesel fuel that has a sulfur level no higher than 0.05 percent by weight. It is used primarily in motor vehicle diesel engines for on-highway use.

        ii. **High Sulfur No. 2 Diesel Fuel:** No. 2 diesel fuel that has a sulfur level above 0.05 percent by weight.

    b. **No. 2 Fuel Oil (Heating Oil):** A distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used in atomizing-type burners for domestic heating or for moderate capacity commercial/industrial burner units.

3. **No. 4 Fuel:** A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks. It conforms to ASTM Specification D 396 or Federal Specification VV-F-815C and is used extensively in industrial plants and in commercial burner installations that are not equipped with preheating facilities. It also includes No. 4 diesel fuel used for low- and medium-speed diesel engines and conforms to ASTM Specification D 975.

    a. **No. 4 Diesel Fuel:** See **No. 4 Fuel**.

    b. **No. 4 Fuel Oil:** See **No. 4 Fuel**.

Distillation Unit (Atmospheric): The primary distillation unit that processes crude oil (including mixtures of other hydrocarbons) at approximately atmospheric conditions. It includes a pipe still for vaporizing the crude oil and a fractionation tower for separating the vaporized hydrocarbon components in the crude oil into fractions with different boiling ranges. This is done by continuously vaporizing and condensing the components to separate higher boiling point material. The selected boiling ranges are set by the processing scheme, the properties of the crude oil,, and the product specifications.

Distribution: The delivery of energy to retail customers.

Distribution System: The portion of an electric system that is dedicated to delivering electric energy to an end user.

Domestic Inland Consumption (Petroleum): The sum of all refined petroleum products supplied for domestic use (excludes international bunker fuels). Consumption is calculated product-by-product by adding production, imports, and crude oil burned directly, and then subtracting exports and changes in primary stocks. *Note*: A net withdrawal from primary stocks increases consumption and a net addition to primary stocks decreases consumption.

Dry (Coal) Basis: Coal quality data calculated to a theoretical basis in which no moisture is associated with the sample. This basis is determined by measuring the weight loss of a sample when its inherent moisture is driven off under controlled conditions of low temperature air-drying followed by heating to just above the boiling point of water (104 to 110 degrees centigrade).

Dry Gas: See **Dry Natural Gas**.

Dry Hole: An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

Dry Natural Gas: Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute. See **Natural Gas**.

Dry Natural Gas Production: The process of producing consumer-grade natural gas. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used at the production site include (1) the volume returned to reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; and (2) gas vented and flared. Processing losses include (1) nonhydrocarbon gases (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and (2) gas converted to liquid form, such as lease condensate and plant liquids. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals marketed production less extraction loss.

Dry Production: See **Dry Natural Gas Production**.

Dual Fired Unit: A generating unit that can produce electricity using two or more input fuels. In some of these units, only the primary fuel can be used continuously; the alternate fuel(s) can be used only as a start-up fuel or in emergencies.

Electrical Generating Capacity: See **Generator Capacity**.

Electricity: A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

Electricity Capacity: The maximum load of electric power, commonly expressed in megawatts (MW), by which generators, turbines, transformers, transmission circuits, stations, or systems are rated.

Electricity Demand: The rate at which energy is delivered to loads and scheduling points by generation, transmission, and distribution facilities.

Electricity Generation: The process of producing electric energy or the amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatthours (kWh) or megawatthours (MWh).

Electricity Generation, Gross: See **Gross Generation**.

Electricity Generation, Net: See **Net Generation**.

Electricity Installed Capacity: See **Generator Nameplate Capacity (Installed)**.

Electric Plant (Physical): See **Electric Power Plant**.

Electric Power: The rate at which electric energy is transferred. Electric power is measured by capacity and is commonly expressed in **megawatts** (MW).

Electric Power Plant: A facility containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric System: Physically connected generation, transmission, and distribution facilities operated as an integrated unit under one central management, or operating supervision.

Electric Utility: A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities for the generation, transmission, distribution, or sale of electric energy for use primarily by the public. Utilities provide electricity

within a designated franchised service area and file forms listed in the Code of Federal Regulations, Title 18, Part 141. *Note:* Facilities that qualify as cogenerators or small power producers under the Public Utility Regulatory Policies Act (PURPA) are not considered electric utilities. See **Nonutility Power Producer.**

Emissions: Anthropogenic releases of gases to the atmosphere. In the context of global climate change, they consist of radiatively important greenhouse gases (e.g., the release of carbon dioxide during fuel combustion). See **Greenhouse Gases**.

Emissions Coefficient: A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., pounds of carbon dioxide emitted per British thermal unit (Btu) of fossil fuel consumed.)

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in British thermal units. See **Energy Sources**.

Energy Consumption: The use of energy as a source of heat or power or as a raw material input to a manufacturing process.

Energy Demand: The requirement for energy as an input to provide products and/or services.

Energy Loss (Power): See **Power Loss**.

Energy Production: See production terms associated with specific **energy sources**.

Energy Reserves: Estimated quantities of energy sources that are demonstrated to exist with reasonable certainty on the basis of geologic and engineering data (proved reserves) or that can reasonably be expected to exist on the basis of geologic evidence that supports projections from proved reserves (probable/indicated reserves). Knowledge of the location, quantity, and grade of probable/indicated reserves is generally incomplete or much less certain than it is for proved energy reserves. *Note*: This term is equivalent to "Demonstrated Reserves" as defined in the resource/reserve classification contained in the U.S. Geological Survey Circular 831, 1980. Demonstrated reserves include measured and indicated reserves but exclude inferred reserves. See **Probable Energy Reserves**.

Energy Sources: Any substance or natural phenomenon that can be consumed or transformed to supply heat or power. Included are petroleum, coal, natural gas, nuclear, biomass (or more broadly wood and waste), electricity, wind, sunlight, geothermal, water movement, and hydrogen in fuel cells.

Energy Supply: Energy made available for future disposition. Supply can be considered and measured from the point of view of the energy provider or the receiver. See **Energy Sources**.

Enriched Uranium: Uranium in which the ^{235}U isotope concentration has been increased to greater than the 0.711 percent ^{235}U (by weight) present in natural uranium. See **Uranium**.

Enrichment Services: See **Separative Work Units**.

ETBE: See **Ethyl Tertiary Butyl Ether (ETBE)**.

Ethane: A normally gaseous straight-chain hydrocarbon, (C_2H_6). It is a colorless, paraffinic gas that boils at a temperature of -127.48 degrees Fahrenheit. It is extracted from natural gas and refinery gas streams.

Ether: A generic term applied to a group of organic chemical compounds composed of carbon, hydrogen, and oxygen, characterized by an oxygen atom attached to two carbon atoms (e.g., methyl tertiary butyl ether).

Ethylene: An olefinic hydrocarbon recovered from refinery processes or petrochemical processes. Ethylene is used as a petrochemical feedstock for numerous chemical applications and the production of consumer goods.

Ethyl Tertiary Butyl Ether (ETBE): A colorless, flammable, oxygenated hydrocarbon blend stock. See **Oxygenates**.

EU: See **European Union (EU)**.

European Union (EU): Current members are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal,, Spain, Sweden, and United Kingdom.

Exploratory Well: A hole drilled: a) to find and produce oil or gas in an area previously considered unproductive; b) to find a new reservoir in a field previously found to be producing oil or gas from another reservoir; or c) to extend the limit of a known oil or gas reservoir.

Exports (U.S.): Shipments of goods from within the 50 States and the District of Columbia to U.S. possessions

and territories or to foreign countries See **United States (U.S.)**.

Extraction Loss: The reduction in volume of natural gas due to the removal of natural gas liquid constituents, such as ethane, propane, and butane, at natural gas processing plants.

Fabricated Fuel: Fuel assemblies composed of an array of fuel rods loaded with pellets of enriched uranium dioxide. See **Uranium**.

Fahrenheit: A temperature scale on which the boiling point of water is at 212 degrees above zero on the scale and the freezing point is at 32 degrees above zero at standard atmospheric pressure.

F.A.S. Value (Free Alongside Ship Value): The value of a commodity at the port of exportation, generally including the purchase price, plus all charges incurred in placing the commodity alongside the carrier at the port of exportation in the country of exportation.

FCCC: See **Framework Convention on Climate Change (FCCC)** and **Climate Change**.

Field Separation Facility: A surface installation designed to recover lease condensate from a produced natural gas stream usually originating from more than one lease and managed by the operator of one or more these leases.

Fixed Carbon: The nonvolatile matter in coal minus the ash. Fixed carbon is the solid residue other than ash obtained by prescribed methods of destructive distillation of a coal. Fixed carbon is the part of the total carbon that remains when coal is heated in a closed vessel until all volatile matter is driven off.

Flared: Gas disposed of by burning in flares usually at the production sites or at gas processing plants.

Flared Natural Gas: See **Flared**.

Flexicoking: A thermal cracking process that converts heavy hydrocarbons such as crude oil, tar sands bitumen, and distillation residues into light hydrocarbons. Feedstocks can be any hydrocarbons, including those containing high concentrations of sulfur and metals.

Fluid Coking: A thermal cracking process utilizing the fluidized-solids technique to remove carbon (coke) for continuous conversion of heavy, low-grade, oils into lighter products.

F.O.B. (Free On Board): A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

Former Czechoslovakia: See **Czechoslovakia**.

Former U.S.S.R.: See **U.S.S.R.**

Former Yugoslavia: See **Socialist Federal Republic of Yugoslavia**.

Fossil Fuel: An energy source formed in the Earth's crust from decayed organic material. The common fossil fuels are petroleum, coal, and natural gas.

Fossil Fueled Steam-Electric Power Plant: An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Fossil-Fuel Electric Generation: Electric generation in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Fractionation: The process by which saturated hydrocarbons are removed from natural gas and separated into distinct products, or "fractions," such as propane, butane, and ethane.

Framework Convention on Climate Change (FCCC): An agreement opened for signature at the "Earth Summit" in Rio de Janeiro, Brazil, on June 4, 1992, which has the goal of stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent significant anthropogenically forced climate change. See **Climate Change**.

Free On Board: See **F.O.B. (Free On Board).**

Fuel: Any material substance that can be consumed to supply heat or power. Included are petroleum, coal, and natural gas (the fossil fuels) and other consumable materials, such as uranium, biomass, and hydrogen. See **Energy Source**.

Fuel Cells: One or more cells capable of generating an electrical current by converting the chemical energy of a fuel (e.g., hydrogen) directly into electrical energy. Fuel cells differ from conventional electrical cells in that the active materials such as fuel and oxygen are not contained within the cell but are supplied from outside.

Fuel Ethanol: An anhydrous, denatured aliphatic alcohol (C_2H_5OH) intended for motor gasoline blending. See **Oxygenates**.

Fuelwood: See **Wood Energy**.

Futures Market: A trade center for quoting prices on contracts for the delivery of a specified quantity of a commodity at a specified time and place in the future.

Gas Condensate Well: A gas well that produces from a gas reservoir containing considerable quantities of liquid hydrocarbons in the pentane and heavier range generally described as "condensate." See **Lease Condensate**.

Gas (Electric): A fuel burned under boilers and by internal combustion engines for electric generation. These include natural gas, manufactured gas, and waste gas.

Gas Hydrates: See **Natural Gas Hydrates**.

Gasohol: A blend of finished motor gasoline containing alcohol (generally ethanol but sometimes methanol) at a concentration of between 5.7 percent and 10 percent by volume. Also see **Oxygenates**.

Gas Oil: European and Asian designation for No. 2 heating oil and No. 2 diesel fuel.

Gasoline: See **Motor Gasoline (Finished)**.
Gasoline Blending: See **Motor Gasoline Blending**.

Gasoline Grades: The classification of gasoline by octane ratings. Each type of gasoline (conventional, oxygenated, and reformulated) is classified by three grades - Regular, Midgrade, and Premium. *Note:* Gasoline sales are reported by grade in accordance with their classification at the time of sale. In general, automotive octane requirements are lower at high altitudes. Therefore, in some areas of the United States, such as the Rocky Mountain States, the octane ratings for the gasoline grades may be 2 or more octane points lower.

1. **Regular Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. *Note:* Octane requirements may vary by altitude.

2. **Midgrade Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. *Note:* Octane requirements may vary by altitude.

3. **Premium Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than 90. *Note:* Octane requirements may vary by altitude.

Gas to Liquids (GTLs): A process that combines the carbon and hydrogen elements in natural gas molecules to make synthetic liquid petroleum products, such as diesel fuel.

Gas-Turbine Electric Power Plant: A plant in which the prime mover is a gas turbine. A gas turbine typically consists of an axial-flow air compressor and one or more combustion chambers where liquid or gaseous fuel is burned. The hot gases expand to drive the generator and then are used to run the compressor.

Gas Well: A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

GDP: See **Gross Domestic Product (GDP)**.

Generating Facility: An existing or planned location or site at which electricity is or will be produced.

Generating Unit: Any combination of physically connected generator(s), reactor(s), boiler(s), combustion turbine(s), or other prime mover(s) operated together to produce electric power.

Generation (Electricity): See **Electricity Generation**.

Generator: A machine that converts mechanical energy into electrical energy.
Generator Capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for ambient conditions.

Generator Nameplate Capacity (Installed): The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically attached to the generator.

Geothermal: Pertaining to heat within the Earth.

Geothermal Electric Power Generation: Electricity derived from heat found under the Earth's surface. Within the Earth, there are vast amounts of molten rock and metal, covered by succeeding layers of cooler material, up to the crust of the Earth's surface. Underground rivers generate steam that is liberated in the form of geysers through fissures in the Earth's surface.

Geothermal Energy: Hot water or steam extracted from geothermal reservoirs in the Earth's crust. Water or stream extracted from geothermal reservoirs can be used for geothermal heat pumps, water heating, or electricity generation.

Geothermal Plant: A plant in which the prime mover is a steam turbine. The turbine is driven either by steam produced from hot water or by natural steam that derives its energy from heat found in rocks or fluids at various depths beneath the surface of the Earth. The fluids are extracted by drilling and /or pumping.

Giga: One billion (10^9).

Gigawatt (GW): One billion (10^9) watts. See **Watt**.

Gigawatthour (GWh): One billion (10^9) watthours. See **Watthour**.

Gilsonite: Trademark name for uintaite (or uintahite), a black, brilliantly lustrous natural variety of asphalt, found in parts of Utah and western Colorado.

Global Climate Change: See **Climate Change**.

Global Warming: An increase in the near surface temperature of the Earth. Global warming has occurred in the distant past as the result of natural influences, but the term is today most often used to refer to the warming some scientists predict will occur as a result of increased anthropogenic emissions of greenhouse gases. See **Climate Change**.

Global Warming Potential (GWP): An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ration of the radiative forcing that would result from the emission of one kilogram of a greenhouse gas to that from the emission of one kilogram of carbon dioxide over a fixed period of time, such as 100 years.

Greenhouse Effect: The result of water vapor, carbon dioxide, and other atmospheric gases trapping radiant (infrared) energy, thereby keeping the Earth's surface warmer than it would otherwise be. Greenhouse gases within the lower levels of the atmosphere trap this radiation, which would otherwise escape into space, and subsequent re-radiation of some of this energy back to the Earth maintains higher surface temperatures than would occur if the gases were absent. See **Greenhouse Gases**.

Greenhouse Gases: Those gases, such as **water vapor**, **carbon dioxide**, **nitrous oxide**, **methane**, **hydrofluorocarbons (HFCs)**, **perfluorocarbons (PFCs)**, and **sulfur hexafluoride**, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Grid: The layout of an electrical distribution system.

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property located in a country. As long as the labor and property are located in the country, the supplier (that is, the workers and for property, the owners) may be either residents of that country or residents of foreign countries.

Gross Electricity Generation: See **Gross Generation**.

Gross Generation: The total amount of electric energy produced by generating units and measured at the generating terminal in kilowatthours (kWh) or megawatthours (MWh).

Gross Heat Content of a Quantity of Fuel: See **Heat Content of a Quantity of Fuel, Gross**.

Gross Input to Atmospheric Crude Oil Distillation Units: Total input to atmospheric crude oil distillation units. Includes all crude oil, lease condensate, natural gas plant liquids, unfinished oils, liquefied refinery gases, slop oils, and other liquid hydrocarbons produced from tar sands, Gilsonite, and oil shale. See **Distillation Unit (Atmospheric)**.

Gross Production, Natural Gas: See **Gross Withdrawals, Natural Gas**.

Gross Withdrawals, Natural Gas: Full well-stream volume of produced natural gas, including all natural gas plant liquids and all nonhydrocarbon gases, but excluding lease condensate.

GW: See **Gigawatt**.

GWh: See **Gigawatthour.**

GWP: See **Global Warming Potential (GWP)**.

Heap Leach Solutions: The separation, or dissolving-out, from mined rock of the soluble uranium constituents by the natural action of percolating a prepared chemical solution through mounded (heaped) rock material. The mounded material usually contains low grade mineralized material and/or waste rock produced from openpit or underground mines The solutions are collected after percolation is completed and processed to recover the valued component.

Heat Content of a Quantity of Fuel, Gross: The total amount of heat released when a fuel is burned. Coal, crude oil, and natural gas all include chemical compounds of carbon and hydrogen. When those fuels are burned, the carbon and hydrogen combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost.

The amount of heat spent in transforming the water into steam is counted as part of gross heat content but is not counted as part of net heat content. Gross heat content is also referred to as the higher heating value. Btu conversion factors typically used by the Energy Information Administration represent gross heat content.

Heat Content of a Quantity of Fuel, Net: The amount of usable heat energy released when a fuel is burned under conditions similar to those in which it is normally used. Net heat content is also referred to as the lower heating value. Btu conversion factors typically used by the Energy Information Administration represent gross heat content.

Heating Value: See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net**.

Heavy Gas Oils: Petroleum distillates with an approximate boiling range from 651 degrees Fahrenheit to 1000 degrees Fahrenheit.

HFCs: See **Hydrofluorocarbons**.

High Sulfur No. 2 Diesel Fuel: No. 2 diesel fuel that has a sulfur level above 0.05 percent by weight.

High-Temperature Collector: See **Solar Thermal Collector, High-Temperature**.

Hydrocarbon: An organic chemical compound of hydrogen and carbon in either gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (e.g., methane, a constituent of natural gas) to the very heavy and very complex.

Hydroelectric Power: The production of electricity from the kinetic energy of falling water.

Hydroelectric Power Generation: Electricity generated by an electric power plant whose turbines are driven by falling water. It includes electric utility and industrial generation of hydroelectricity, unless otherwise specified. Generation is reported on a net basis, i. e., on the amount of electric energy generated after the electric energy consumed by station auxiliaries and the losses in the transformers that are considered integral parts of the station are deducted.

Hydroelectric Power Plant: A plant in which the turbine generators are driven by falling water.

Hydroelectric Pumped Storage: Hydroelectricity that is generated during peak loads by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

Hydrofluorocarbons (HFCs): A group of man-made chemicals composed of one or two carbon atoms and varying numbers of hydrogen and fluorine atoms. Most HFCs have 100-year Global Warming Potentials in the thousands. See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

Hydrogen: A colorless, odorless, highly flammable gaseous element. It is the lightest of all gases and the most abundant element in the universe, occurring chiefly in combination with oxygen in water and also in acids, bases, alcohols, petroleum, and other hydrocarbons.

IEA: See **International Energy Agency (IEA)**.

Imports (U.S.): Receipts of goods into the 50 States and the District of Columbia from U.S. possessions and territories or from foreign countries. See **United States (U.S.)**.

Improved Recovery: Extraction of crude oil or natural gas by any method other than those that rely primarily on natural reservoir pressure, gas lift, or a system of pumps.

Independent Power Producer: A corporation, person, agency, authority, or other legal entity or instrumentality which is a wholesale electricity producer that operates within the franchised service territory of a host electric utility and is usually authorized to sell at market-based rates. Unlike traditional electric utilities, independent power producers do not possess transmission facilities, unless authorized by law, nor do they sell electricity in the retail market. Independent power producers are considered to be nonutility power producers. See **Electric Utility** and **Nonutility Power Producer.**

Indicated Recoverable Reserves, Coal: See **Probable (Indicated) Reserves, Coal**.

Indicated Reserves: See **Probable Energy Reserves**.

In Situ Leach Mining (ISL): The recovery, by chemical leaching, of the valuable components of an orebody without physical extraction of the ore from the ground. Also referred to as “solution mining.”

Intergovernmental Panel on Climate Change (IPCC): A panel established jointly in 1988 by the World Meteorological Organization and the United Nations Environment Program to assess the scientific information relating to climate change and to formulate realistic response strategies.

Internal Combustion Electric Power Plant: A plant in which the prime mover is an internal combustion engine. An internal combustion engine has one or more cylinders in which the process of combustion takes place, converting energy released from the rapid burning of a fuel-air mixture into mechanical energy. Diesel or gas-fired engines are the principal types used in electric plants. The plant is usually operated during periods of high demand for electricity.

International Bunker Fuels: See **Bunker Fuels**.

International Energy Agency (IEA): Current members are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, South Korea (usually listed here as Korea, South), Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. *Note*: Data for Guam, the former Hawaiian Trade Zone, Puerto Rico, and the U.S. Virgin Islands (usually listed here as Virgin Islands, U.S.) are included in the IEA-related data reported here.

Isopentane: A saturated branched-chain hydrocarbon (C_5H_{12}) obtained by fractionation of natural gasoline or isomerization of normal pentane.

Jet Fuel: A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

Joule: The meter-kilogram-second unit of work or energy, equal to the work done by a force of one newton when its point of application moves through a distance of one meter in the direction of the force; equivalent to 10^7 ergs and one watt-second.

Kerosene: A light petroleum distillate that is used in space heaters, cook stoves, and water heaters and is suitable for use as a light source when burned in wick-fed lamps. Kerosene has a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point, a final boiling point of 572 degrees Fahrenheit, and a minimum flash point of 100 degrees Fahrenheit. Included are No. 1-K and No. 2-K, the two grades recognized by ASTM Specification D 3699 as well as all other grades of kerosene called range or stove oil, which have properties similar to those of No. 1 fuel oil. See **Kerosene-Type Jet Fuel**.

Kerosene-Type Jet Fuel: A kerosene-based product having a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point and a final maximum boiling point of 572 degrees Fahrenheit and meeting ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-8133D (Grades JP-5 and JP-8). It is used for commercial and military turbojet and turboprop aircraft engines.

Kilowatt (kW): One thousand (10^3) watts. See **Watt**.

Kilowatthour (kWh): One thousand (10^3) watthours. See **Watthou**r.

kW: See **Kilowatt (kW)**.

kWh: See **Kilowatthour (kWh).**

Kyoto Protocol: The result of negotiations at the third Conference of the Parties (COP-3) in Kyoto, Japan, in December 1997. The Kyoto Protocol sets binding greenhouse gas emissions targets for countries that sign and ratify the agreement. The gases covered under the Protocol include **carbon dioxide**, **methane**, **nitrous oxide**, **hydrofluorocarbons (HFCs)**, **perfluorocarbons (PFCs)**, and **sulfur hexafluoride**.

Landed Cost (Crude Oil): See **Crude Oil Landed Cost**.

Lease Condensate: A mixture consisting primarily of pentanes and heavier hydrocarbons which is recovered as a liquid from natural gas in lease separation facilities. This category excludes natural gas plant liquids, such as butane and propane, which are recovered at downstream natural gas processing plants or facilities.

Lease Separation Facility (Lease Separator): A facility installed at the surface for the purpose of (a) separating gases from produced crude oil and water at the temperature and pressure conditions set by the separator and/or (b) separating gases from that portion of the produced natural gas stream that liquefies at the temperature and pressure conditions set by the separator.

Light Gas Oils: Light petroleum distillates heavier than naphtha, with an approximate boiling range of 401 degrees Fahrenheit to 650 degrees Fahrenheit.

Lignite: The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million Btu per ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Lignite Briquets: See **Coal Briquets**.

Liquefied Natural Gas (LNG): Natural gas (primarily methane) that has been liquefied by reducing its tempera-

ture to minus 260 degrees Fahrenheit at atmospheric pressure. (The volume of the LNG is 1/600 that of the gas in its vapor state.)

Liquefied Petroleum Gases (LPG): A group of hydrogen-based gases derived from crude oil refining or natural gas fractionation. They include ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, and isobutylene. For convenience of transportation, these gases are liquefied through pressurization.

Liquefied Refinery Gases (LRG): Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration, they are retained hi the liquid state. The reported categories are ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane. Excludes still gas used for chemical or rubber manufacture, which is reported as petrochemical feedstock, and also excludes liquefied petroleum gases intended for blending into gasoline, which are reported as gasoline blending components.

Liquid Collector: A medium-temperature solar thermal collector, employed predominately in water heating, which uses pumped liquid as the heat transfer mechanism. See **Solar Thermal Collector, Medium-Temperature**.

LNG: See **Liquefied Natural Gas (LNG)**.

Load (Electric): The amount of electric power delivered or required at any specific point or points on an electric system. The requirement originates at the energy-consuming equipment of the consumers.

Low Sulfur No. 2 Diesel Fuel: No. 2 diesel fuel that has a sulfur level no higher than 0.05 percent by weight. It is used primarily in motor vehicle diesel engines for on-highway use.

Low-Temperature Collector: See **Solar Thermal Collector, Low-Temperature**.

LPG: See **Liquefied Petroleum Gases**.

LRG: See **Liquefied Refinery Gases**.

Lubricants: Substances used to reduce friction between bearing surfaces, or incorporated into other materials used as processing aids in the manufacture of other products, or used as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Lubricants include all grades of lubricating oils, from spindle oil to cylinder oil to those used in greases.

Manufactured Gas: A gas obtained by destructive distillation of coal, or by thermal decomposition of oil, or by the reaction of steam passing through a bed of heated coal or coke. Examples are coal gases, coke oven gases, producer gas, blast furnace gas, blue (water) gas, and carbureted water gas

Market-Based Pricing: Prices of electric power or other forms of energy determined in an open market system of supply and demand under which prices are set solely by agreements as to what buyers will pay and sellers will accept. Such prices could recover less or more than full costs, depending upon what the buyer and seller see as their relevant opportunities and risks.

Marketed Production, Natural Gas: Gross withdrawals of natural gas from reservoirs less gas used for reinjection into reservoirs for repressuring, gas that is vented and flared, and nonhydrocarbon gases removed in treating or processing operations.

Measured Recoverable Reserves, Coal: See **Proved (Measured) Reserves, Coal** and **Proved Recoverable Reserves, Coal**.

Measured Reserves: See **Proved Energy Reserves**.

Medium-Temperature Collector: See **Solar Thermal Collector, Medium-Temperature**.

Megawatt (MW): One million (10^6) watts of electricity. See **Watt**.

Megawatthour (MWh): One million (10^6) watthours. See **Watthour**.

Metallurgical Coal: Coking coal and pulverized coal consumed in making steel.

Metallurgical Coke: A strong, hard coke produced mainly for use in the iron and steel industry, where it serves as a chemical agent and source of energy. It is used mainly in blast furnaces to absorb the oxygen contained in iron oxides and provide energy for smelting. A portion of its potential energy is captured in the gases generated in the smelting process, then recycled in the form of blast furnace gas to provide additional energy inside or outside the smelting process. Metallurgical coke is also used to some extent as a domestic fuel and as a raw material for the manufacture of gas. See **Coke (Coal)**.

Methane (CH_4): A hydrocarbon gas that is the principal constituent of natural gas. Methane has a 100-year Global Warming Potential of 21. See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

Methanol: A light alcohol that can be used for motor gasoline blending. See **Oxygenates**.

Methyl Tertiary Butyl Ether (MTBE): A colorless, flammable, liquid oxygenated hydrocarbon containing 18.15 percent oxygen. See **Oxygenates**.

Metric Ton: A unit of weight equal to 2,204.6 pounds.

Midgrade Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. *Note:* Octane requirements may vary by altitude. See **Gasoline Grades**.

Milling of Uranium: The processing of uranium from ore mined by conventional methods, such as underground or openpit, to separate the uranium from the undesired material in the ore. See **Uranium.**

Million Btu: One million **(**10^6) British thermal units (Btu). See **British Thermal Unit (Btu)**.

Mineral-Matter-Free Basis: Mineral matter in coal is the parent material in coal from which ash is derived. It comes from minerals present in the original plant materials that formed the coal or from extraneous sources such as sediments and precipitates from mineralized water. Mineral matter in coal cannot be analytically determined and is commonly calculated using data on ash and ash-forming constituents. Coal analyses are calculated to the mineral-matter-free basis by adjusting formulas used in calculations in order to deduct the weight of mineral matter from the total coal.

Moist (Coal) Basis: "Moist" coal contains its natural inherent or bed moisture, but does not include water adhering to the surface. Coal analyses expressed on a moist basis are performed or adjusted so as to describe the data when the coal contains only that moisture which exists in the bed in its natural state of deposition, and when the coal has not lost any moisture due to drying.

Motor Gasoline Blending: Mechanical mixing of motor gasoline blending components, and oxygenates when required, to produce finished motor gasoline. Finished motor gasoline may be further mixed with other motor gasoline blending components or oxygenates, resulting in increased volumes of finished motor gasoline and/or changes in the formulation of finished motor gasoline (e.g., conventional motor gasoline mixed with MTBE to produce oxygenated motor gasoline).

Motor Gasoline Blending Components: Naphthas (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock for oxygenate blending (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus. *Note:* Oxygenates are reported as individual components and are included in the total for other hydrocarbons, hydrogen, and oxygenates.

Motor Gasoline, Conventional: See **Conventional Gasoline**.

Motor Gasoline (Finished): A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as defined in ASTM Specification D 4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122 degrees to 158 degrees Fahrenheit at the 10-percent recovery point to 365 degrees to 374 degrees Fahrenheit at the 90-percent recovery point. "Motor Gasoline" includes conventional gasoline; all types of oxygenated gasoline, including gasohol; and reformulated gasoline, but excludes aviation gasoline. *Note:* Volumetric data on blending components, such as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

1. **Conventional Gasoline:** Finished motor gasoline not included in the oxygenated or reformulated gasoline categories. *Note:* This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock.

2. **Oxygenated Gasoline:** Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. See **Nonattainment Area**. *Note:* Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline.

3. **Reformulated Gasoline:** Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. *Note:* This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

Motor Gasoline Grades: See **Gasoline Grades**.

Motor Gasoline, Oxygenated: See **Oxygenated Gasoline**.

Motor Gasoline, Reformulated: See **Reformulated Gasoline**.

MTBE: See **Methyl Tertiary Butyl Ether**.

Municipal Solid Waste: Residential solid waste and some nonhazardous commercial, institutional, and industrial wastes.

MW: See **Megawatt (MW)**.

MWh: See **Megawatthour (MWh)**.

Naphtha: A generic term applied to a petroleum fraction with an approximate boiling range between 122 degrees and 400 degrees Fahrenheit.

Naphthas: Refined or partly refined light distillates with an approximate boiling point range of 27 degrees to 221 degrees Centigrade. Blended further or mixed with other materials, they make high-grade motor gasoline or jet fuel. Also used as solvents, petrochemical feedstocks, or as raw materials for the production of town gas.

Naphtha-Type Jet Fuel: A fuel in the heavy naphtha boiling range having an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees Fahrenheit, and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used primarily for military turbojet and turboprop aircraft engines because it has a lower freeze point than other aviation fuels and meets engine requirements at high altitudes and speeds.

Natural Gas: A gaseous mixture of hydrocarbon compounds, the primary one being methane. *Note:* The Energy Information Administration measures wet natural gas and its two sources of production, associated-dissolved natural gas and nonassociated natural gas, and dry natural gas, which is produced from wet natural gas.

1. **Wet Natural Gas:** A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in porous rock formations at reservoir conditions. The principal hydrocarbons normally contained in the mixture are methane, ethane, propane, butane, and pentane. Typical nonhydrocarbon gases that may be present in reservoir natural gas are water vapor, carbon dioxide, hydrogen sulfide, nitrogen, and trace amounts of helium. Under reservoir conditions, natural gas and its associated liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil and are not distinguishable at the time as separate substances. *Note:* The Securities and Exchange Commission and the Financial Accounting Standards Board refer to this product as natural gas. See **Natural Gas**.
    a. **Associated-Dissolved Natural Gas:** Natural gas that occurs in crude oil reservoirs either as free gas (associated) or as a gas in solution with crude oil (dissolved gas).
    b. **Nonassociated Natural Gas:** Natural gas that is not in contact with significant quantities of crude oil in the reservoir.
2. **Dry Natural Gas:** Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute. See **Natural Gas**.

Natural Gas, "Dry": See **Dry Natural Gas**.

Natural Gas, Dry Production: See **Dry Natural Gas**.

Natural Gas Dry Production: Gross withdrawals of natural gas from reservoirs less gas used for reinjection into reservoirs for repressuring, gas that is flared or vented, gas lost in transmission, and shrinkage. Derived by subtracting shrinkage or extraction loss from marketed production. It represents the amount of natural gas that can be marketed and consumed as a gas.

Natural Gas Gross Production: See **Gross Withdrawals, Natural Gas**.

Natural Gas Gross Withdrawals: See **Gross Withdrawals, Natural Gas**.

Natural Gas Hydrates: Solid, crystalline, wax-like substances composed of water, methane, and usually a small amount of other gases, with the gases being trapped in the interstices of a water-ice lattice. They form beneath permafrost and on the ocean floor under conditions of moderately high pressure and at temperatures near the freezing point of water.

Natural Gas Liquids (NGL): A general term for all liquid products separated from natural gas in gas processing or cycling plants. They include natural gas plant liquids and lease condensate.

Natural Gas Marketed Production: See **Marketed Production, Natural Gas**.

Natural Gasoline: A term used in the gas processing industry to refer to a mixture of liquid hydrocarbons (mostly pentanes and heavier hydrocarbons) extracted from natural gas. It includes isopentane.

Natural Gas, Pipeline Quality: See **Pipeline Quality Natural Gas**.

Natural Gas Plant Liquids (NGPL): Those hydrocarbons in natural gas that are separated as liquids at downstream natural gas processing plants or at fractionating and cycling plants. Data on lease condensate are excluded. Products obtained include liquefied petroleum gases and pentanes plus.

Natural Gas Processing Plants: Facilities designed to recover natural gas liquids from a stream of natural gas that may or may not have passed through lease separators and/or field separation facilities. These facilities also control the quality of natural gas to be marketed. Cycling plants are classified as natural gas processing plants.

Natural Gas Production: See **Dry Natural Gas Production**.

Natural Gas, Wet: See **Wet Natural Gas**.

Net Electricity Consumption: Consumption of electricity computed as generation, plus imports, minus exports, minus transmission and distribution losses.

Net Electricity Generation: See **Net Generation**.

Net Electric Power Generation: See **Net Generation**.

Net Generation: The amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries. *Note:* Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.

Net Heat Content of a Quantity of Fuel: See **Heat Content of a Quantity of Fuel, Net**.

NGL: See **Natural Gas Liquids**.

NGPL: See **Natural Gas Plant Liquids**.

Nitrogen Oxides (NO_x): Compounds of nitrogen and oxygen produced by the combustion of fossil fuels.

Nitrous Oxide (N_2O): A colorless gas, naturally occurring in the atmosphere. Nitrous oxide has a 100-year Global Warming Potential of 310. See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

No. 1 Diesel Fuel: A light distillate fuel oil that has distillation temperatures of 550 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines generally operated under frequent speed and load changes, such as those in city buses and similar vehicles. See **No. 1 Distillate**.

No. 2 Diesel Fuel: A fuel that has distillation temperatures of 500 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines that are generally operated under uniform speed and load conditions, such as those in railroad locomotives, trucks, and automobiles. See **No. 2 Distillate**.

No. 4 Diesel Fuel: See **No. 4 Fuel**.

No. 1 Distillate: A light petroleum distillate that can be used as either a diesel fuel (see **No. 1 Diesel Fuel**) or a fuel oil (see **No. 1 Fuel Oil**).

No. 2 Distillate: A petroleum distillate that can be used either as a diesel fuel (see **No. 2 Diesel Fuel**) or a fuel oil (see **No. 2 Fuel Oil**).

No. 4 Fuel: A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks. It conforms to ASTM Specification D 396 or Federal Specification VV-F-815C and is used extensively in industrial plants and in commercial burner installations that are not equipped with preheating facilities. It also includes No. 4 diesel fuel used for low- and medium-speed diesel engines and conforms to ASTM Specification D 975.

No. 1 Fuel Oil: A light distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 550 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used primarily as fuel for portable outdoor stoves and portable outdoor heaters. See **No. 1 Distillate**.

No. 2 Fuel Oil (Heating Oil): A distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the

specifications defined in ASTM Specification D 396. It is used in atomizing-type burners for domestic heating or for moderate capacity commercial/industrial burner units. See **No. 2 Distillate**.

No. 4 Fuel Oil: See **No. 4 Fuel**.

NO_x: See **Nitrogen Oxides**.

Nonassociated Natural Gas: Natural gas that is not in contact with significant quantities of crude oil in the reservoir. See **Natural Gas**.

Nonattainment Area: Any area that does not meet the national primary or secondary ambient air quality standard established by the U.S. Environmental Protection Agency for designated pollutants, such as carbon monoxide and ozone.

Nonconventional Plant (Uranium): A facility engineered and built principally for processing of uraniferous solutions that are produced during in situ leach mining, from heap leaching, or in the manufacture of other commodities, and the recovery, by chemical treatment in the plant's circuits, of uranium from the processed solutions.

Nonhydrocarbon Gases: Typical nonhydrocarbon gases that may be present in reservoir natural gas such as water vapor, carbon dioxide, hydrogen sulfide, nitrogen, and trace amounts of helium.

Nonutility: See **Nonutility Power Producer**.

Nonutility Power Producer: A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for electric generation and is not an electric utility. Nonutility power producers include qualifying cogenerators, qualifying small power producers, and other nonutility generators (including independent power producers). Nonutility power producers are without a designated franchised service area and do not file forms listed in the Code of Federal Regulations, Title 18, Part 141. See **Electric Utility**.

Normal Butane: See **Butane**.

Nuclear Electric Power (Nuclear Power): Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

Nuclear Fuel: Fissionable materials that have been enriched to such a composition that, when placed in a nuclear reactor, they will support a self-sustaining fission chain reaction, producing heat in a controlled manner for process use.

Nuclear Power: See **Nuclear Electric Power**.

Nuclear Power Generation: See **Nuclear Electric Power**.

Nuclear Power Plant: A single-unit or multi-unit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

Nuclear Reactor: An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

Octane: A flammable liquid hydrocarbon found in petroleum. Used as a standard to measure the anti-knock properties of motor fuel.

Octane Rating: A number used to indicate gasoline's antiknock performance in motor vehicle engines. The two recognized laboratory engine test methods for determining the antiknock rating, i.e., octane rating, of gasolines are the Research method and the Motor method. In the United States, to provide a single number as guidance to the consumer, the antiknock index (R+M)/2, which is the average of the Research and Motor octane numbers, was developed.

OECD: See Organization for Economic Cooperation and Development (OECD).

OECD Europe: See **Organization for Economic Cooperation and Development, Europe (OECD Europe)**.

Off Peak: Period of relatively low system demand. These periods often occur in daily, weekly, and seasonal patterns

Ohm: The unit of measurement of electrical resistance. The resistance of a circuit in which a potential difference of 1 volt produces a current of 1 ampere.

Oil: See **Crude Oil**.

Oil Reservoir: An underground pool of liquid consisting of hydrocarbons, sulfur, oxygen, and nitrogen trapped within a geological formation and protected from evaporation by the overlying mineral strata.

Oil Shale: A sedimentary rock containing kerogen, a solid organic material.

Oil Well: A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

Oil Well (Casinghead) Gas: Associated and dissolved gas produced along with crude oil from oil completions.

OPEC: See **Organization of Petroleum Exporting Countries (OPEC)**.

Operable Nuclear Unit (Foreign): A nuclear generating unit outside the United States that generates electricity for a grid.

Operable Nuclear Unit (U.S.): A United States nuclear generating unit that has completed low-power testing and is in possession of a full-power operating license issued by the Nuclear Regulatory Commission.

Operable Unit (Electric): A unit available to provide electric power to the grid.

Organization for Economic Cooperation and Development (OECD): Current members are Australia, Austria, Belgium, Canada, Czech Republic, Denmark Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, South Korea (usually listed here as Korea, South), Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. *Note*: Data for Guam, the former Hawaiian Trade Zone, Puerto Rico, and the U.S. Virgin Islands (usually listed here as Virgin Islands, U.S.) are included in the OECD-related data reported here.

Organization for Economic Cooperation and Development, Europe (OECD Europe): Includes Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, and United Kingdom.

Organization of Petroleum Exporting Countries (OPEC): Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela. (Ecuador withdrew from OPEC on December 31, 1992 and Gabon withdrew on December 31, 1994.)

Other Hydrocarbons (Petroleum): Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal tar derivatives, Gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

Oxidize: To chemically transform a substance by combining it with oxygen.

Oxygenated Gasoline: Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. See **Nonattainment Area**. *Note:* Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline. See **Motor Gasoline (Finished)**.

Oxygenates: Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. Ethanol, Methyl Tertiary Butyl Ether (MTBE), Ethyl Tertiary Butyl Ether (ETBE), and methanol are common oxygenates.

Paraffin (Oil): A light-colored, wax-free oil obtained by pressing paraffin distillate.

Paraffin (Wax): The wax removed from paraffin distillates by chilling and pressing. When separating from solutions, it is a colorless, more or less translucent, crystalline mass, without odor and taste, slightly greasy to touch, and consisting of a mixture of solid hydrocarbons in which the paraffin series predominates.

Passive Solar Heating: A solar heating system that uses no external mechanical power, such as pumps or blowers, to move the collected solar heat.

Peak Load: The maximum load during a specified period of time.

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

Perfluorocarbons (PFCs): A group of man-made chemicals composed of one or two carbon atoms and four to six fluorine atoms, containing no chlorine. PFCs have no commercial uses and are emitted as a byproduct of aluminum smelting and semiconductor manufacturing. PFCs have very high 100-year Global Warming Potentials and are very long-lived in the atmosphere. See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

Petrochemical Feedstock: Feedstock derived from petroleum, used principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

The categories reported are naphthas (endpoint less than 401 degrees Fahrenheit) and other oils (endpoint equal to or greater than 401 degrees Fahrenheit).

Petroleum: A broadly defined class of liquid hydrocarbon mixtures. Included are **crude oil**, **lease condensate**, **unfinished oils**, refined **petroleum products** obtained from the processing of crude oil, and **natural gas plant liquids**. *Note*: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

Petroleum Coke: See C**oke (Petroleum)**.

Petroleum Consumption: See **Apparent Consumption (Petroleum)**.

Petroleum Jelly: A semi-solid oily product produced from de-waxing lubricating oil basestocks.

Petroleum Products: Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and other miscellaneous products.

Petroleum Stocks: Primary stocks of crude oil and petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in-transit by water from Alaska or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. Primary stocks exclude stocks of foreign origin that are held in bonded warehouse storage.

PFCs: See **Perfluorocarbons**.

Photovoltaic Cell: An electronic device consisting of layers of semiconductor materials fabricated to form a junction (adjacent layers of materials with different electronic characteristics) and electrical contacts and being capable of converting incident light directly into electricity (direct current).

Photovoltaic Energy: Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

Photovoltaic Module: An integrated assembly of interconnected photovoltaic cells designed to deliver a selected level of working voltage and current at its output terminals, packaged for protection against environmental degradation, and suited for incorporation in photovoltaic power systems. The electricity produced is used primarily in applications requiring remote power, such as radio communication, cathodic protection, and navigational aids. See **Photovoltaic Cell**.

Pipeline Quality Natural Gas: A mixture of hydrocarbon compounds existing in the gaseous phase with sufficient energy content, generally above 900 British thermal units, and a small enough share of impurities for transport through commercial gas pipelines and sale to end-users.

Plant: A term commonly used either as a synonym for an industrial establishment or a generation facility or to refer to a particular process within an establishment.

Plant Condensate: One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in natural gas processing plants. Does not include lease condensate.

Plant (Electric): A facility at which are located prime movers, electric generators, and auxiliary equipment for converting mechanical chemical, and/or nuclear energy into electric energy. A plant may contain more than one type of prime mover.

Power (Electric): See **Electric Power**.

Power Loss: The difference between electricity input and output as a result of an energy transfer between two points.

Premium Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than 90. *Note:* Octane requirements may vary by altitude. See **Gasoline Grades**.

Preparation Plant: A mining facility at which coal is crushed, screened, and mechanically cleaned.

Primary Coal: All coal milled and, when necessary, washed and sorted.

Prime Mover: The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly (e.g., photovoltaic solar and fuel cell(s)).

Probable Energy Reserves: Estimated quantities of energy sources that, on the basis of geologic evidence that supports projections from proved reserves, can reasonably be expected to exist and be recoverable under

existing economic and operating conditions. Site information is insufficient to establish with confidence the location, quality, and grades of the energy source. *Note*: This term is equivalent to "Indicated Reserves" as defined in the resource/reserve classification contained in the U.S. Geological Survey Circular 831, 1980. Measured and indicated reserves, when combined, constitute demonstrated reserves. See also **Energy Reserves**.

Probable (Indicated) Reserves, Coal: Reserves or resources for which tonnage and grade are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on the basis of geological evidence. The sites available are too widely or otherwise inappropriately spaced to permit the mineral bodies to be outlined completely or the grade established throughout. See **Probable Energy Reserves**.

Processing Gain: See **Refinery Processing Gain (Petroleum)**.

Processing Loss: See **Refinery Processing Loss (Petroleum)**.

Processing of Uranium: The recovery of uranium from solutions produced by nonconventional mining methods, i.e., in situ leach mining (ISL), a byproduct of copper or phosphate mining, or heap leaching.

Processing Plant (Natural Gas): See **Natural Gas Processing Plant**.

Production: See production terms associated with specific **energy sources**.

Propane: A normally gaseous straight-chain hydrocarbon, (C_3H_8). It is a colorless paraffinic gas that boils at a temperature of -43.67 degrees Fahrenheit. It is extracted from natural gas or refinery gas streams. It includes all products covered by Gas Processors Association Specifications for commercial propane and HD-5 propane and ASTM Specification D 1835.

Propylene: An olefinic hydrocarbon (C_3H_6) recovered from refinery and petrochemical processes.

Proved Energy Reserves: Estimated quantities of energy sources that analysis of geologic and engineering data demonstrates with reasonable certainty are recoverable under existing economic and operating conditions. The location, quantity, and grade of the energy source are usually considered to be well established in such reserves. *Note*: This term is equivalent to "Measured Reserves" as defined in the resource/reserve classification contained in the U.S. Geological Survey Circular 831, 1980. Measured and indicated reserves, when combined, constitute demonstrated reserves. See also **Energy Reserves**.

Proved (Measured) Reserves, Coal: Reserves or resources for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, and drill holes and for which the grade is computed from the results of detailed sampling. The sites for inspection, sampling, and measurement are spaced so closely and the geologic character is so well defined that size, shape, and mineral content are well established. The computed tonnage and grade are judged to be accurate within limits that are stated, and no such limit is judged to be different from the computed tonnage or grade by more than 20 percent. See **Proved Energy Reserves**.

Proved Recoverable Reserves, Coal: Defined by the World Energy Council as the tonnage within the Proved Amount in Place that can be recovered (extracted from the earth in raw form) under present and expected local economic conditions with existing available technology. It approximates the U.S. term proved (measured) reserves, coal. **See Proved (Measured) Reserves, Coal**.

Proved Reserves, Crude Oil: The estimated quantities of all liquids defined as crude oil that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions.

Proved Reserves, Natural Gas: The estimated quantities of natural gas that analysis of geological and engineering data demonstrates with reasonable certainty to be recoverable in future years from known oil and gas reservoirs under existing economic and operating conditions.

Public Utility Regulatory Policies Act of 1978: See **PURPA**.

Pulpwood: Roundwood, whole-tree chips, or wood residues.

Pumped Storage: See **Hydroelectric Pumped Storage**.

Pumped-Storage Hydroelectric Power Plant: A plant that usually generates electric energy during peak-load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level. See **Pure Pumped-Storage Hydroelectric Power Plant** and **Combined Pumped-Storage Electric Power Plant**.

Pure Pumped-Storage Hydroelectric Power Plant: A plant that produces power only from water that has previously been pumped to an upper reservoir.

PURPA: The Public Utility Regulatory Policies Act of 1978, passed by the U.S. Congress. This statute requires States to implement utility conservation programs and create special markets for cogenerators and small producers who meet certain standards, including the requirement that States set the prices and quantities of power the utilities must buy from such facilities.

Quadrillion Btu: One quadrillion **(**10^{15}) British thermal units (Btu). See **British Thermal Unit (Btu)**.

Radiative Forcing: A change in average net radiation at the top of the troposphere (known as the tropopause) because of a change in either incoming solar or exiting infrared radiation. A positive radiative forcing tends on average to warm the Earth's surface; a negative radiative forcing on average tends to cool the Earth's surface. Greenhouse gases, when emitted into the atmosphere, trap infrared energy radiated from the Earth's surface and therefore tend to produce positive radiative forcing. See **Greenhouse Gases**.

Radiatively Active Gases: Gases that absorb incoming solar radiation or outgoing infrared radiation, affecting the vertical temperature profile of the atmosphere. See **Radiative Forcing**.

Recoverable Coal: See **Proved Recoverable Reserves, Coal** and **Proved (Measured) Reserves, Coal**.

Recoverable Reserves of Coal: See **Proved Recoverable Reserves, Coal** and **Proved (Measured) Reserves, Coal**.

Refiner Acquisition Cost of Crude Oil: The cost of crude oil, including transportation and other fees, paid by the refiner. The composite cost is the weighted average of domestic and imported crude oil costs. See **U.S. Refiner Acquisition Cost of Imported Crude Oil**. *Note:* The refiner acquisition cost does not include the cost of crude oil purchased for the Strategic Petroleum Reserve (SPR).

Refinery Fuel: Crude oil and petroleum products consumed at the refinery for all purposes.

Refinery Gain (Petroleum): See **Refinery Losses and Gains**.

Refinery Gas: See **Still Gas (Refinery Gas)**.

Refinery Input (Petroleum): The raw materials and intermediate materials processed at refineries to produce finished petroleum products. They include crude oil, products of natural gas processing plants, unfinished oils, other hydrocarbons and alcohol, motor gasoline and aviation blending components, and finished petroleum products.

Refinery Loss (Petroleum): See **Refinery Losses and Gains (Petroleum)**.

Refinery Losses and Gains (Petroleum): Refinery processing gains and refinery processing losses that take place during the refining process itself. Excludes losses that do not take place during the refining process, e.g., spills, fire losses, and contamination during blending, transportation, or storage.

Refinery Output (Petroleum): The total amount of petroleum products produced at a refinery. Includes petroleum consumed by the refinery.

Refinery (Petroleum): An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas plant liquids, other hydrocarbons, and alcohol.

Refinery Processing Gain (Petroleum): The amount by which the total volume of refinery output is greater than the total volume of refinery input for a given period of time. The processing gain arises when crude oil and other hydrocarbons are processed into petroleum products that are, on average, less dense than the input.

Refinery Processing Loss (Petroleum): The amount by which the total volume of refinery output is less than the total volume of refinery input for a given period of time. The processing loss arises when crude oil and other hydrocarbons are processed into petroleum products that are, on average, more dense than the input.

Reforestation: Replanting of forests on lands that have recently been harvested or otherwise cleared of trees.

Reforming, Catalytic: See **Catalytic Reforming**.

Reformulated Gasoline: Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. *Note:* This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB). See **Motor Gasoline (Finished)**.

Regular Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. *Note:* Octane requirements may vary by altitude. See **Gasoline Grades**.

Reinjected (Natural Gas): The forcing of gas under pressure into an oil reservoir in an attempt to increase recovery.

Renewable Energy Resources: Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include: biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.

Repressuring: The injection of a pressurized fluid (such as air, gas, or water) into oil or gas reservoir formations to effect greater ultimate recovery.

Reserves, Coal: Quantities of unextracted coal that comprise the demonstrated base for future production, including both proved and probable reserves. See **Proved Energy Reserves**; **Probable Energy Reserves**; **Energy Reserves**; **Proved (Measured) Reserves, Coal**; and **Probable (Indicated) Reserves, Coal**.

Reservoir: A porous and permeable underground formation containing an individual and separate natural accumulation of producible hydrocarbons (crude oil and/or natural gas) which is confined by impermeable rock or water barriers and is characterized by a single natural pressure system.

Residual Fuel Oil: A general classification for the heavier oils, known as No. 5 and No. 6 fuel oils, that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. It conforms to ASTM Specifications D 396 and D 975 and Federal Specification VV-F-815C. No. 5, a residual fuel oil of medium viscosity, is also known as Navy Special and is defined in Military Specification MIL-F-859E, including Amendment 2 (NATO Symbol F-770). It is used in steam-powered vessels in government service and inshore power plants. No. 6 fuel oil includes Bunker C fuel oil and is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

Residuum: Residue from crude oil after distilling off all but the heaviest components, with a boiling range greater than 1,000 degrees Fahrenheit.

Road Oil: Any heavy petroleum oil, including residual asphaltic oil, used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

Rotary Rig: A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Roundwood: Logs, bolts, and other round timber generated from the harvesting of trees.

Secondary Coal: Solid fuels manufactured from primary coal, including coke (coal) or metallurgical coke and coal briquets.

Separative Work Units (SWU): The standard measure of uranium enrichment services.

Sequestration: See **Carbon Sequestration**.

Short Ton (Coal): A unit of weight equal to 2,000 pounds.

Shrinkage (Natural Gas): The volume of natural gas that is transformed into liquid products during processing, primarily at natural gas processing plants.

Slovakia: Short-form name used by the U.S. State Department for the Slovak Republic.

Sludge: A dense, slushy, liquid-to semifluid-product that accumulates as an end result of an industrial or technological process designed to purify a substance. Industrial sludges are produced from the processing of energy-related raw materials, chemical products, water, mined ores, sewage, and other natural and man-made products. Sludges can also form from natural processes, such as the runoff produced by rainfall, and accumulate on the bottom of bogs, streams, lakes, and tidelands.

Small Power Producer (SPP): Under the Public Utility Regulatory Policies Act (PURPA), a small power production facility (or small power producer) generates electricity using renewable energy (wood, waste, conventional hydroelectric, wind, solar, and geothermal) as a primary energy source. Fossil fuels can be used, but renewable resources must provide at least 75 percent of the total energy input. See **Nonutility Power Producer**.

SO_2: See **Sulfur Dioxide**.

Socialist Federal Republic of Yugoslavia: Country that dissolved into five separate countries--Bosnia and Herzegovina; Croatia; Macedonia, The Former Yugoslav Republic of; Slovenia; and the (Federal Republic of) Yugoslavia (formerly listed as Serbia and Montenegro)--beginning on June 25, 1991.

Solar Collector: See **Solar Thermal Collector**.

Solar Energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Solar Thermal Collector: A device designed to receive solar radiation and convert it to thermal energy. Normally, a solar thermal collector includes a frame, glazing, and an absorber, together with appropriate insulation. The heat collected by the solar thermal collector may be used immediately or stored for later use. Solar thermal collectors are used for space heating; domestic hot water heating; and heating swimming pools, hot tubs, or spas.

Solar Thermal Collector, High-Temperature: A solar thermal collector designed to operate at a temperature of 180 degrees Fahrenheit or higher.

Solar Thermal Collector, Low-Temperature: Metallic or nonmetallic solar thermal collectors that generally operate at temperatures below 110 degrees Fahrenheit and use pumped liquid or air as the heat transfer medium. They usually contain no glazing and no insulation, and they are often made of plastic or rubber, although some are made of metal.

Solar Thermal Collector, Medium-Temperature: Solar thermal collectors designed to operate in the temperature range of 140 degrees to 180 degrees Fahrenheit, but that can also operate at a temperature as low as 110 degrees Fahrenheit. The collector typically consists of a metal frame, metal absorption panels with integral flow channels (attached tubing for liquid collectors or integral ducting for air collectors), and glazing and insulation on the sides and back.

Solar Thermal Collector, Special: An evacuated tube collector or a concentrating (focusing) collector. Special collectors operate in the temperature range from just above ambient temperature (low concentration for pool heating) to several hundred degrees Fahrenheit (high concentration for air conditioning and specialized industrial processes).

Solar Thermal Energy: See **Solar Energy**.

Special Naphthas: All finished products within the naphtha range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D 1836 and D 484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded. See **Naphthas**.

Special Solar Thermal Collector: See **Solar Thermal Collector, Special**.

Spent Liquor: The liquid residue left after an industrial process; can be a component of waste materials used as fuel.

Spot-Market Price: See **Spot Price**.

Spot Price: The price for a one-time open market transaction for immediate delivery of a specific quantity of product at a specific location where the commodity is purchased "on the spot" at current market rates.

SPR: See **Strategic Petroleum Reserve (SPR)**.

Steam Coal: All nonmetallurgical coal.

Steam-Electric Power Plant (Conventional): A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Still Gas (Refinery Gas): Any form or mixture of gases produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. Still gas is primarily used as a refinery fuel and as a petrochemical feedstock.

Stock Change: The difference between stocks at the beginning of the reporting period and stocks at the end of the reporting period.

Stocks: Inventories of fuel stored for future use. See **Coal Stocks** and **Petroleum Stocks**.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the U.S. Federal government for use during periods of major supply interruption.

Stripper Well (Natural Gas): A well that produces 60 thousand cubic feet per day or less of gas-well gas for a period of 3 consecutive months, while producing at its maximum flow rate.

Stripper Well Property (Petroleum): A property whose average daily production of crude oil per well (excluding condensate recovered in natural gas production) did not exceed an average of 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972.

Subbituminous Coal: A coal whose properties range from those of lignite to those of bituminous coal and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to

24 million Btu per ton on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Sulfur: A yellowish nonmetallic element, sometimes known as "brimstone." It is present at various levels of concentration in many fossil fuels whose combustion releases sulfur compounds that are considered harmful to the environment. Some of the most commonly used fossil fuels are categorized according their sulfur content, with lower sulfur fuels usually selling at a higher price. *Note:* No. 2 distillate is currently reported as having either a 0.05 percent or lower sulfur level for on-highway vehicle use or a greater than 0.05 percent sulfur level for off-highway use, home heating oil, and commercial and industrial uses. Residual fuel oil, regardless of use, is classified as having either no more than 1 percent sulfur or greater than 1 percent sulfur. Coal is also classified as being low-sulfur at concentrations of 1 percent or less or high-sulfur at concentrations greater than 1 percent.

Sulfur Dioxide (SO_2): A toxic, irritating, colorless gas soluble in water, alcohol, and ether. Used as a chemical intermediate, in paper pulping and ore refining, and as a solvent

Sulfur Hexafluoride (SF_6): A colorless gas soluble in alcohol and ether, and slightly less soluble in water. It is used as a dielectric in electronics. It possesses the highest 100-year Global Warming Potential of any gas (23,900). See **Global Warming Potential (GWP)** and **Greenhouse Gases**.

Sulfur Oxides (SO_x): Compounds containing sulfur and oxygen, such as sulfur dioxide (SO_2) and sulfur trioxide (SO_3).

Supply: See **Energy Supply**.

Surface Mine (Coal): A coal-producing mine that is usually within a few hundred feet of the surface. Earth and rock above or around the coal (overburden) is removed to expose the coalbed, which is then mined with surface excavation equipment such as draglines, power shovels, bulldozers, loaders, and augers. It may also be known as an area, contour, open-pit, strip, or auger mine.

SWU: See **Separative Work Units (SWU)**.

Synthetic Natural Gas (SNG): A manufactured product chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons or from coal gasification. It may easily be substituted for, or interchanged with, pipeline quality natural gas.

System (Electric): See **Electric System**.

Tall Oil: The oily mixture of rosin acids, fatty acids, and other materials obtained by acid treatment of the alkaline liquors from the digesting (pulping) of pine wood.

Tanker and Barge: Vessels that transport crude oil or petroleum products. See **Vessel**.

Tar Sands: Naturally occurring bitumen-impregnated sands that yield mixtures of liquid hydrocarbon and that require further processing other than mechanical blending before becoming finished petroleum products.

Therm: One hundred thousand (10^5) British thermal units.

Thermal Cracking: A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking includes gas oil visbreaking, fluid coking, delayed coking, and other thermal cracking processes (e.g., (flexicoking).

Transmission: The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers, or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.

Transmission and Distribution Loss: Electric energy lost due to the transmission and distribution of electricity. Much of the loss is thermal in nature. See **Power Loss**.

Transmission System (Electric): An interconnected group of electric transmission lines and associated equipment for moving or transferring electric energy in bulk between points of supply and points at which it is transformed for delivery over the distribution system lines to consumers, or is delivered to other electric systems.

Troposphere: The inner layer of the atmosphere below about 15 kilometers, within which there is normally a steady decrease of temperature with increasing altitude. Nearly all clouds form and weather conditions manifest themselves within this region. Its thermal structure is caused primarily by the heating of the Earth's surface by solar radiation, followed by heat transfer through turbulent mixing and convection.

Turbine: A machine for generating rotary mechanical power from the energy of a stream of fluid (such as water, steam, or hot gas). Turbines convert the kinetic energy of fluids to mechanical energy through the

principles of impulse and reaction, or a mixture of the two.

Underground Mine (Coal): A mine where coal is produced by tunneling into the earth to the coalbed, which is then mined with underground mining equipment such as cutting machines and continuous, longwall, and shortwall mining machines. Underground mines are classified according to the type of opening used to reach the coal, i.e., drift (level tunnel), slope (inclined tunnel), or shaft (vertical tunnel).

Unfinished Oils: All oils requiring further processing, except those requiring only mechanical blending. Unfinished oils are produced by partial refining of crude oil and include naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

United States (U.S.): Unless otherwise noted, United States in this publication means the 50 States and the District of Columbia. *Note*: The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 States and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands (usually listed here as Virgin Islands, U.S.), Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States." See **Exports (U.S.)** and **Imports (U.S.)**.

Uranium: A heavy, naturally radioactive, metallic element (atomic number 92). Its two principally occurring isotopes are uranium-235 (^{235}U) and uranium-238 (^{238}U). The isotope ^{235}U is indispensable to the nuclear industry because it is the only isotope existing in nature to any appreciable extent that is fissionable by thermal neutrons. The isotope ^{238}U is also important because it absorbs neutrons to produce a radioactive isotope that subsequently decays to plutonium-239 (^{239}Pu), an isotope of plutonium that is also fissionable by thermal neutrons.

Uranium Concentrate: A yellow or brown powder obtained by the milling of uranium ore, processing of in situ leach mining solutions, or as a byproduct of phosphoric acid production. See **In Situ Leach Mining (ISL)**.

Uranium Milling: See **Milling of Uranium**.

Uranium Ore: Rock containing uranium mineralization in concentrations (typically 1 to 4 pounds of U_3O_8 per ton or 0.05 to 0.20 percent U_3O_8) that can be mined economically.

Uranium Oxide: Uranium concentrate or yellowcake. Abbreviated as U_3O_8. See **Yellowcake**.

U.S.: See **United States (U.S.)**.

U.S. Refiner Acquisition Cost of Imported Crude Oil: The average price paid by U.S. refiners for imported, that is, non-U.S., crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. The refiner acquisition cost of imported crude oil includes transportation and other fees paid by the refiner. See **Refiner Acquisition Cost of Crude Oil** and **Imports (U.S.)**.

U.S.S.R.: The Union of Soviet Socialist Republics (or Soviet Union) consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Ukraine, and Uzbekistan. As a political entity, the U.S.S.R. disbanded on December 26, 1991.

Utility: See **Electric Utility**.

Vented: Gas released into the air on the production site or at processing plants.

Vented, Flared (Natural Gas): Gas that is disposed of by releasing (venting) or burning (flaring).

Vented Natural Gas: See **Vented**.

Vessel: A ship used to transport crude oil, petroleum products, or natural gas products. Vessel categories are as follows: Ultra Large Crude Carrier (ULCC), Very Large Crude Carrier (VLCC), Other Tanker, and Specialty Ship (LPG/LNG). See **Tanker and Barge**.

Vessel Bunkering (U.S.): Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

Visbreaking: A thermal cracking process in which heavy atmospheric or vacuum-still bottoms are cracked at moderate temperatures to increase production of distillate products and reduce viscosity of the distillation residues.

Volatile Matter (Coal): Those products, exclusive of moisture, given off by a material as gas or vapor. Volatile matter is determined by heating the coal to 950 degrees Centigrade under carefully controlled conditions and measuring the weight loss, excluding weight of moisture driven off at 105 degrees Centigrade.

Waste: Municipal solid waste, landfill gas, methane, digester gas, liquid acetonitrile waste, tall oil, waste alcohol, medical waste, paper pellets, sludge waste, solid byproducts, tires, agricultural byproducts, closed loop biomass, fish oil, and straw.

Waste Energy: Municipal solid waste, landfill gas, methane, digester gas, liquid acetonitrile waste, tall oil, waste alcohol, medical waste, paper pellets, sludge waste, solid byproducts, tires, agricultural byproducts, closed loop biomass, fish oil, and straw used as fuel.

Water Vapor: Water in a vaporous form, especially when below boiling temperature and diffused (e.g., in the atmosphere). See **Greenhouse Gases**.

Watt (W): The unit of electrical power equal to one ampere under a pressure of one volt. A Watt is equal to 1/746 horsepower.

Watthour (Wh): The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

Waxes: Solid or semi-solid materials derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. Waxes are light-colored, more-or-less translucent crystalline masses, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Included are all marketable waxes, whether crude scale or fully refined. The three grades included are microcrystalline, crystalline fully refined, and crystalline-other. Waxes are used primarily as industrial coatings for surface protection.

Well: A hole drilled in the Earth for the purpose of (1) finding or producing crude oil or natural gas; or (2) producing services related to the production of crude oil or natural gas. See also **Completion**, **Development Well**, **Dry Hole**, **Exploratory Well, Gas Well,** and **Oil Well**.

Wellhead: The top of, or a structure built over, a well.

Wet Natural Gas: A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in porous rock formations at reservoir conditions. The principal hydrocarbons normally contained in the mixture are methane, ethane, propane, butane, and pentane. Typical nonhydrocarbon gases that may be present in reservoir natural gas are water vapor, carbon dioxide, hydrogen sulfide, nitrogen, and trace amounts of helium. Under reservoir conditions, natural gas and its associated liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil and are not distinguishable at the time as separate substances. *Note:* The Securities and Exchange Commission and the Financial Accounting Standards Board refer to this product as natural gas.

White Spirit: A highly refined distillate with a boiling point range of about 150 degrees to 200 degrees Centigrade. It is used as a paint solvent and for dry-cleaning purposes.

Wind Energy: The kinetic energy of wind converted into mechanical energy by wind turbines (i.e., blades rotating from the hub) that drive generators to produce electricity.

Wood: Wood, wood waste, black liquor, red liquor, spent sulfite liquor, pitch, wood sludge, peat, railroad ties, and utility poles.

Wood and Waste: See **Waste** and **Wood**.

Wood Energy: Wood and wood products used as fuel, including wood waste, black liquor, red liquor, spent sulfite liquor, pitch, wood sludge, peat, railroad ties, and utility poles.

Wood Pellets: Fuel manufactured from finely ground wood fiber and used in pellet stoves.

Wood Sludge: See **Sludge**.

Yellowcake: A natural uranium concentrate that takes its name from its color and texture. Yellowcake typically contains 70 to 90 percent U_3O_8 (uranium oxide) by weight. It is used as feedstock for uranium fuel enrichment and fuel pellet fabrication. See **Uranium Concentrate**, **Uranium Oxide**, **Enriched Uranium** and **Fabricated Fuel**.