

Monthly Energy Review

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Energy Information Administration

Energy Plus
Greenhouse Gases 2001

Monthly Energy Review

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The *Monthly Energy Review (MER)* presents an overview of the Energy Information Administration's recent monthly energy statistics. The statistics cover the major activities of U.S. production, consumption, trade, stocks, and prices for petroleum, natural gas, coal, electricity, and nuclear energy. Also included are international energy and thermal and metric conversion factors.

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Monthly Energy Review

March 2003

Energy Information Administration
Office of Energy Markets and End Use
U.S. Department of Energy
Washington, DC 20585

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Energy Plug

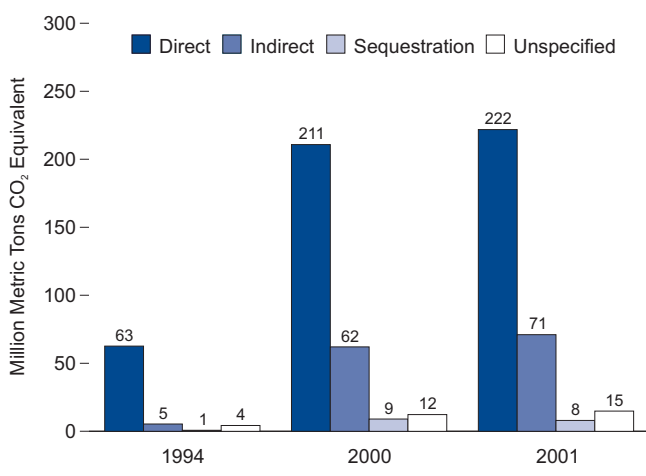


Voluntary Reporting of Greenhouse Gases 2001

The Energy Policy Act of 1992 directed the Energy Information Administration (EIA) to establish a mechanism for the voluntary collection of information on reductions in greenhouse gas emissions and carbon fixation. *Voluntary Reporting of Greenhouse Gases 2001* is the EIA's eighth annual summary of data collected under the Voluntary Reporting of Greenhouse Gases Program.

A total of 228 U.S. companies and other entities reported in 2001 that they had undertaken projects to reduce or sequester greenhouse gases. Reported direct emission reductions represented over 3 percent of total U.S. greenhouse gas emissions in 2001, while reported indirect reductions were 1 percent. Carbon sequestration represented a fraction of one percent. Direct reductions are emission reductions from sources owned or leased by the reporting entity, while indirect reductions are emission reductions from sources not owned or leased by the reporting entity but that occur as a result of the entity's activities.

Reported Project-Level Reductions, 2001



Source: Energy Information Administration.

Reported emission reductions included 222 million metric tons of carbon dioxide equivalent (MMTCO₂e) in direct reductions, 71 MMTCO₂e in indirect emissions and 8 million metric tons of reductions from carbon sequestration.

Who Reported. Reports were received from 228 participants who undertook 1,705 projects in 2001 to reduce or sequester greenhouse gases. The electric power sector continued to provide the largest number of participants with

103 companies reporting—including nearly all the largest electricity generating utilities—even though total reports declined due to mergers and acquisitions under continued electric industry restructuring. Reports were also received from entities in automobile manufacturing, petroleum production and refining, coal mining, food processing, chemicals, and other industries and services. The total number of participants from outside the electric power sector (125 reporters) was ten times the number for 1994, when only 13 reports from 8 non-electricity industries were received.

Projects Reported. The principal objective of the majority of projects reported for 2001 was to reduce carbon dioxide emissions. Most of these projects reduced carbon dioxide either by lowering fossil fuel consumption or by switching to less carbon-intensive sources of energy. Many also achieved small reductions in emissions of other gases. Almost all of the 383 carbon sequestration projects that were reported increased the amount of carbon stored in sinks through various forestry measures, including afforestation, reforestation, urban forestry, forest preservation, and modified forest management techniques.

EIA uses basic and modified reference cases against which actual emissions are compared in order to estimate emission reductions. In a basic reference case, actual historical emissions or sequestration are used as the reference. In a modified reference case, an estimate is made of what emissions or sequestration would have been in the absence of the project.

Commitments. Eighty-five entities reported formal commitments to reduce future emissions, to take action to reduce emissions in the future, or to provide financial support for activities related to greenhouse gas reductions. More than one-third of these entities were electricity generators participating in the Climate Challenge Program, a joint, voluntary effort of the U.S. Department of Energy (DOE) and the electric power industry to reduce, avoid, or sequester greenhouse gases.

Voluntary Reporting of Greenhouse Gases 2001 contains chapters on reducing emissions in the electric power industry; reducing emissions from energy end use; carbon sequestration; reducing methane emissions; hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride; and future commitments. It also contains an analysis of the effect of legislation and government policy on reported emissions and emission reductions, as well as on the future of the Voluntary Reporting of Greenhouse Gases Program.

Voluntary Reporting of Greenhouse Gases 2001 DOE/EIA-0608(2001); 210 pages, 57 tables, 18 figures. The publication is available on the EIA Web site at <http://www.eia.doe.gov>. Under "Environment" select "Voluntary Reporting." Contact the webmaster at wmaster@eia.doe.gov or call 202-586-8959 if you have problems. Questions about the contents of the report should be directed to Stephen Calopedis, Office of Integrated Analysis and Forecasting, at stephen.calopedis@eia.doe.gov or 202-586-1156 For general information about energy, contact the National Energy Information Center at infoctr@eia.doe.gov or 202-586-8800.

Section 1. Energy Overview

Energy production during December 2002 totaled 6.0 quadrillion Btu, a 0.6-percent decrease compared with the level of production during December 2001. Production of nuclear electric power decreased 8.7 percent; natural gas plant liquids decreased 6.9 percent; natural gas (dry) decreased 3.7 percent; coal increased 2.7 percent; and crude oil increased 0.1 percent, compared with the level of production during December 2001.

Energy consumption during December 2002 totaled 8.7 quadrillion Btu, 5.4 percent above the level of consumption during December 2001. Consumption of coal increased

12.6 percent; nuclear electric power decreased 8.7 percent; natural gas increased 6.0 percent; and petroleum increased 4.1 percent, compared with the level 1 year earlier.

Net imports of energy during December 2002 totaled 2.0 quadrillion Btu, 1.5 percent below the level of net imports 1 year earlier. Net imports of natural gas increased 5.4 percent; petroleum products rose 4.5 percent; and crude oil decreased 2.4 percent. Net exports of coal decreased 12.0 percent while net imports of coal coke increased 231.1 percent, compared with the level in December 2001.

Table 1.1 Energy Summary for December 2002
(Quadrillion Btu)

	December			Cumulative January Through December				
	2002	2001	Percent Change ^a	2002	2002 Daily Rate	2001	2001 Daily Rate	Percent Change ^b
Production^c	6.003	6.043	-0.6	71.843	0.197	72.426	0.198	-0.8
Fossil Fuels	4.785	4.811	-5	57.130	.157	58.320	.160	-2.0
Coal	1.897	1.848	2.7	22.866	.063	23.574	.065	-3.0
Natural Gas (Dry)	^E 1.624	1.686	-3.7	^E 19.389	^E .053	19.917	.055	-2.7
Crude Oil ^d	^E 1.060	1.059	.1	^E 12.314	^E .034	12.282	.034	.3
Natural Gas Plant Liquids .....	.204	.219	-6.9	2.561	.007	2.547	.007	.5
Nuclear Electric Power .....	.654	.716	-8.7	8.202	.022	8.167	.022	.4
Renewable Energy .....	.574	.522	9.9	6.600	.018	6.030	.017	9.5
Consumption^e	8.732	8.286	5.4	95.965	.263	95.909	.263	.1
Fossil Fuels^f	7.526	7.050	6.7	81.267	.223	81.791	.224	-6
Coal	2.078	1.846	12.6	22.053	.060	21.845	.060	1.0
Natural Gas ^g	^F 2.168	2.046	6.0	^E 20.909	^E .057	21.530	.059	-2.9
Petroleum ^h	3.276	3.149	4.1	38.183	.105	38.333	.105	-4
Nuclear Electric Power .....	.654	.716	-8.7	8.202	.022	8.167	.022	.4
Renewable Energy^e .....	.580	.539	7.7	6.760	.019	6.189	.017	9.2
Net Imports	2.040	2.070	-1.5	25.554	.070	26.523	.073	-3.7
Fossil Fuelsⁱ	2.034	2.053	-1.0	25.395	.070	26.364	.072	-3.7
Coal ^j	-.030	-.035	-12.0	-.608	-.002	-.771	-.002	-21.1
Coal Coke .....	.003	.001	231.1	.062	.000	.032	.000	96.9
Natural Gas	^E .290	.275	5.4	^E 3.596	^E .010	3.691	.010	-2.6
Crude Oil ^k	1.596	1.635	-2.4	19.710	.054	20.305	.056	-2.9
Petroleum Products ^l .....	.176	.168	4.5	2.574	.007	3.056	.008	-15.8
Renewable Energy^m	^E .006	^E .017	-62.7	.159	.000	.159	.000	.1

^a Based on data prior to rounding.

^b Based on daily rates prior to rounding.

^c Total production also includes hydroelectricity generated from pumped storage.

^d Includes lease condensate.

^e Alcohol (ethanol blended into motor gasoline) is included in both "Petroleum" and "Renewable Energy," but is counted only once in total energy consumption.

^f Fossil fuel consumption also includes coal coke net imports and electricity net imports from fossil fuels.

^g Includes supplemental gaseous fuels.

^h Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel.

ⁱ Fossil fuel net imports also include electricity net imports from fossil fuels.

^j Minus sign indicates exports are greater than imports.

^k Crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

^l Petroleum products, unfinished oils, pentanes plus, and gasoline blending components.

^m Electricity net imports derived from hydroelectric power or geothermal energy.

E=Estimate. F=Forecast.

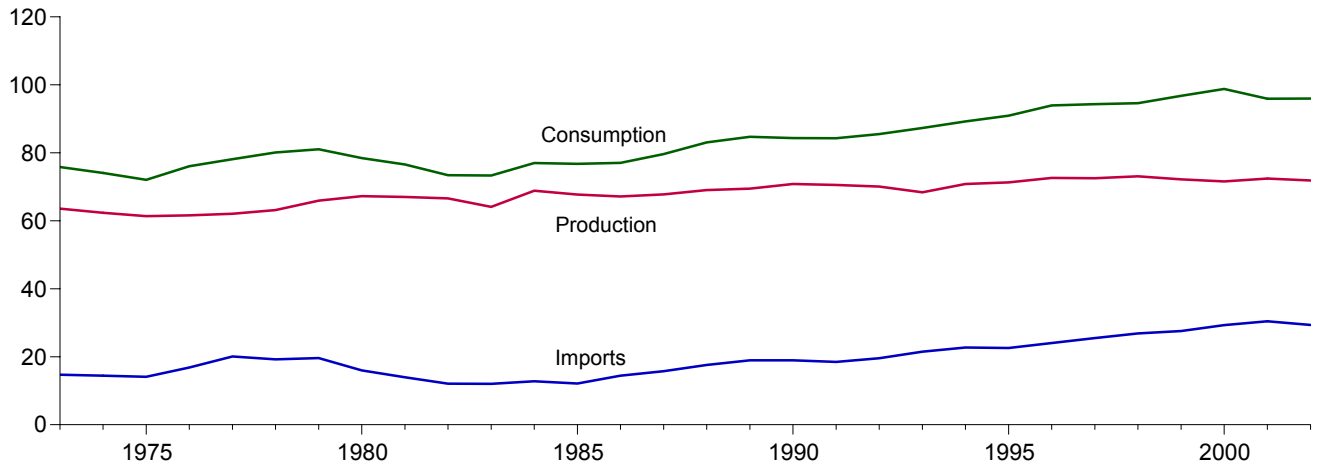
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Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

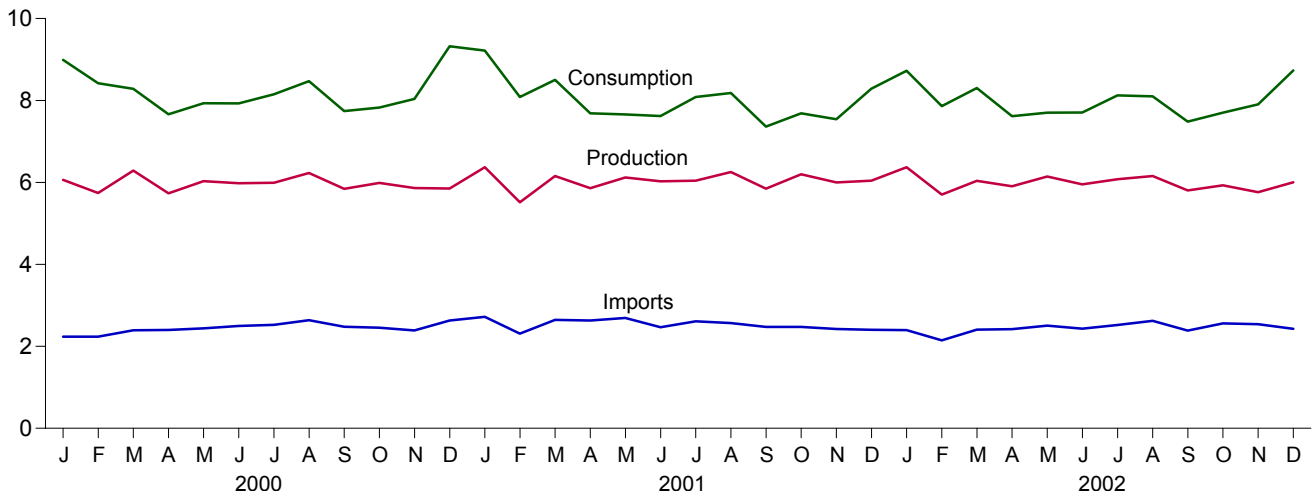
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Figure 1.1 Energy Overview
(Quadrillion Btu)

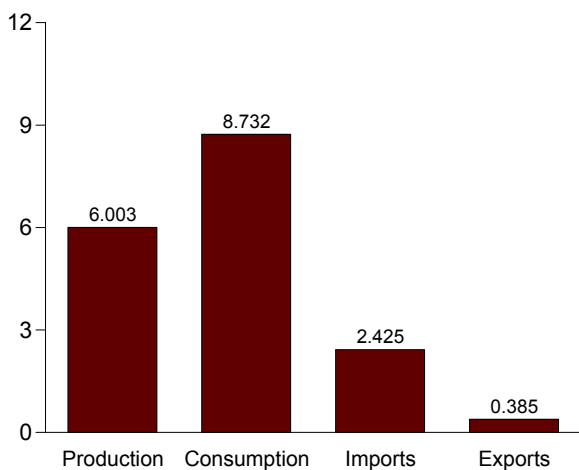
Consumption, Production, and Imports, 1973-2002



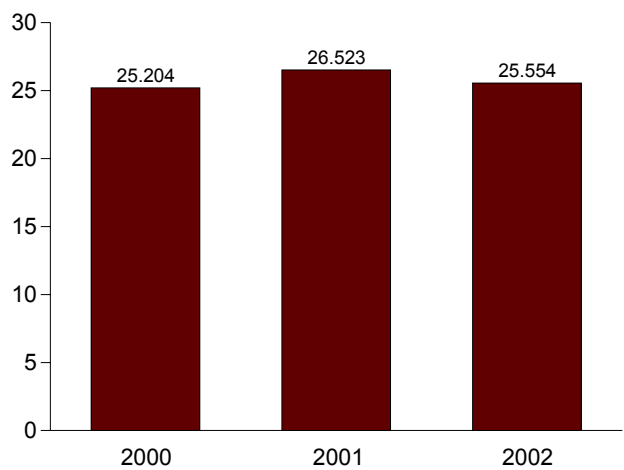
Consumption, Production, and Imports, Monthly



Overview, December 2002



Net Imports, January-December



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
Source: Table 1.2.

Table 1.2 Energy Overview
(Quadrillion Btu)

	Production	Consumption ^a	Imports	Exports	Net Imports
1973 Total	63.585	75.808	14.731	2.051	12.680
1974 Total	62.372	74.080	14.413	2.223	12.190
1975 Total	61.357	72.042	14.111	2.359	11.752
1976 Total	61.602	76.072	16.837	2.188	14.648
1977 Total	62.052	78.122	20.090	2.071	18.019
1978 Total	63.137	80.123	19.254	1.931	17.323
1979 Total	65.948	81.044	19.616	2.870	16.746
1980 Total	67.241	78.435	15.971	3.723	12.247
1981 Total	67.007	76.569	13.975	4.329	9.646
1982 Total	66.574	73.440	12.092	4.633	7.460
1983 Total	64.106	73.317	12.027	3.717	8.310
1984 Total	68.832	76.972	12.767	3.804	8.963
1985 Total	67.720	76.778	12.103	4.231	7.872
1986 Total	67.178	77.065	14.438	4.055	10.382
1987 Total	67.760	79.633	15.764	3.853	11.911
1988 Total	69.025	83.068	17.564	4.415	13.149
1989 Total	69.467	84.716	18.955	4.767	14.188
1990 Total	70.835	84.344	18.952	4.865	14.087
1991 Total	70.528	84.298	18.497	5.157	13.339
1992 Total	70.069	85.513	19.577	4.957	14.621
1993 Total	68.378	87.300	21.498	4.283	17.215
1994 Total	70.848	89.213	22.727	4.075	18.652
1995 Total	71.301	90.943	22.566	4.536	18.030
1996 Total	72.595	93.931	24.010	4.656	19.354
1997 Total	72.545	94.340	25.514	4.576	20.938
1998 Total	73.068	94.623	26.855	4.389	22.466
1999 Total	72.197	96.767	27.549	3.811	23.738
2000 January	6.062	8.991	2.237	.327	1.910
February	5.740	8.419	2.234	.269	1.965
March	6.289	8.285	2.393	.371	2.021
April	5.735	7.662	2.399	.315	2.084
May	6.031	7.932	2.440	.332	2.108
June	5.982	7.929	2.497	.332	2.165
July	5.991	8.151	2.526	.317	2.209
August	6.229	8.470	2.639	.388	2.251
September	5.844	7.740	2.479	.330	2.149
October	5.987	7.827	2.453	.382	2.071
November	5.863	8.039	2.387	.384	2.004
December	5.853	9.322	2.628	.361	2.266
Total	71.604	98.775	29.313	4.109	25.204
2001 January	R 6.370	R 9.216	2.720	.358	2.362
February	R 5.515	R 8.084	2.308	.305	2.003
March	R 6.157	R 8.501	2.647	.302	2.345
April	R 5.859	R 7.688	2.631	.324	2.307
May	R 6.120	R 7.658	2.693	.368	2.326
June	R 6.025	R 7.621	2.466	.313	2.153
July	R 6.041	R 8.086	2.612	.287	2.325
August	R 6.255	R 8.181	2.567	.346	2.221
September	R 5.847	R 7.361	2.474	.301	2.173
October	R 6.197	R 7.685	2.472	.320	2.152
November	R 5.999	R 7.543	2.423	.336	2.087
December	R 6.043	R 8.286	2.405	.335	2.070
Total	R 72.426	R 95.909	30.419	3.895	26.523
2002 January	R 6.370	R 8.726	2.394	R .298	R 2.096
February	R 5.704	R 7.862	2.145	R .288	R 1.857
March	R 6.037	R 8.302	2.407	R .278	R 2.129
April	R 5.904	R 7.618	2.418	R .302	R 2.116
May	R 6.146	R 7.702	2.504	R .306	R 2.198
June	R 5.953	R 7.707	2.430	R .318	R 2.112
July	R 6.076	R 8.125	2.521	R .275	R 2.246
August	R 6.154	R 8.100	R 2.622	R .353	R 2.270
September	R 5.804	R 7.485	2.383	R .310	R 2.072
October	R 5.931	R 7.701	2.559	R .346	R 2.213
November	R 5.760	R 7.905	R 2.541	R .335	R 2.206
December	6.003	8.732	2.425	.385	2.040
Total	71.843	R 95.965	29.348	3.794	25.554

^a The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed Forces in Europe; and adjustments to account for discrepancies between reporting systems.

R=Revised.

Notes: • For definitions, see Notes 1 through 4 at end of section.

• Totals may not equal sum of components due to independent rounding.

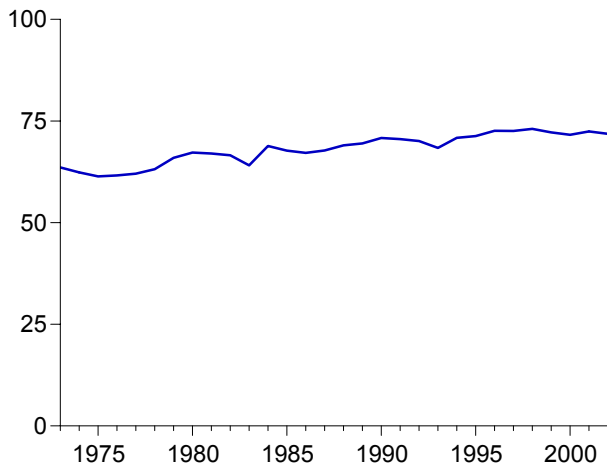
• Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

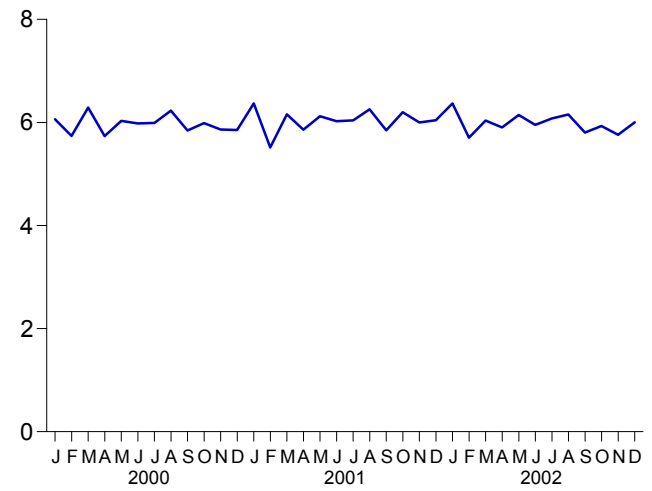
Sources: • **Production:** Table 1.3. • **Consumption:** Table 1.4. • **Imports and Exports:** Tables 3.1b, 4.3, 6.1, 7.1, A2-A6, 10.3b, and Section 2, "Energy Consumption Notes and Sources," Note 5. • **Net Imports:** Table 1.5.

Figure 1.2 Energy Production
(Quadrillion Btu)

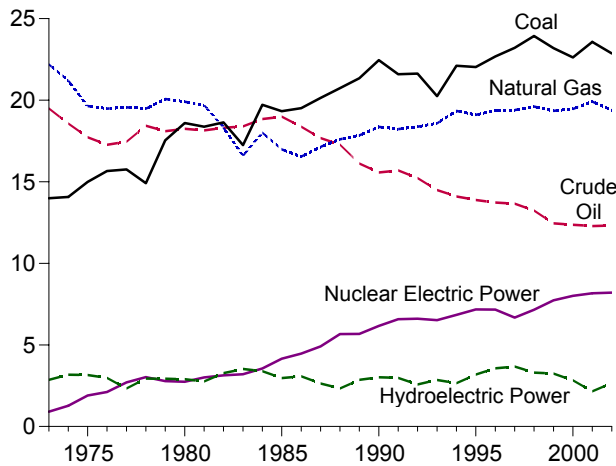
Total, 1973-2002



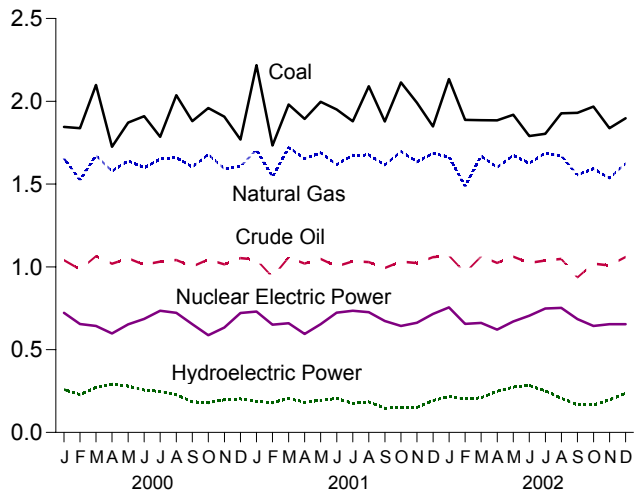
Total, Monthly



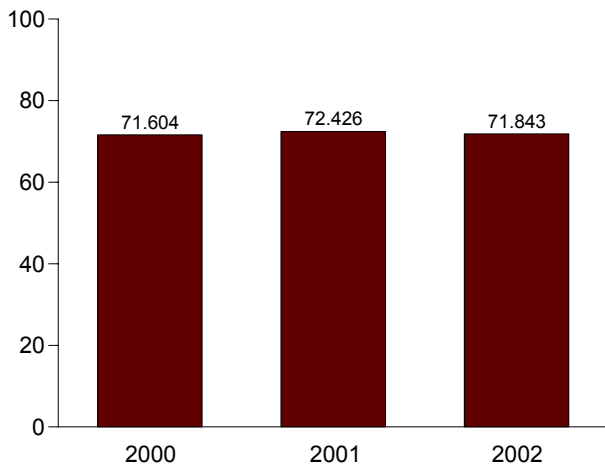
By Major Sources, 1973-2002



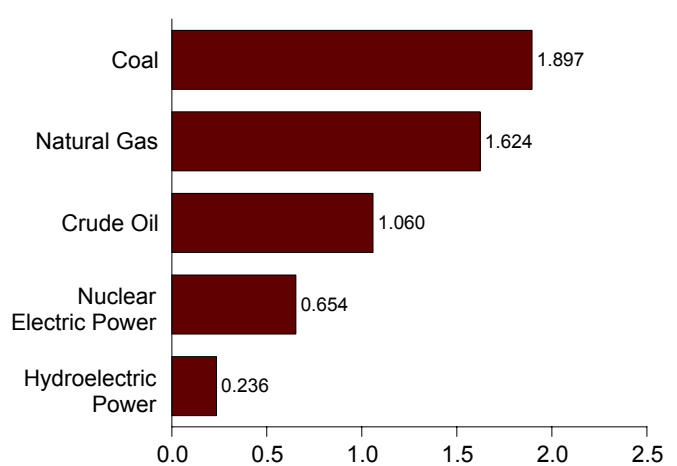
By Major Sources, Monthly



Total, January-December



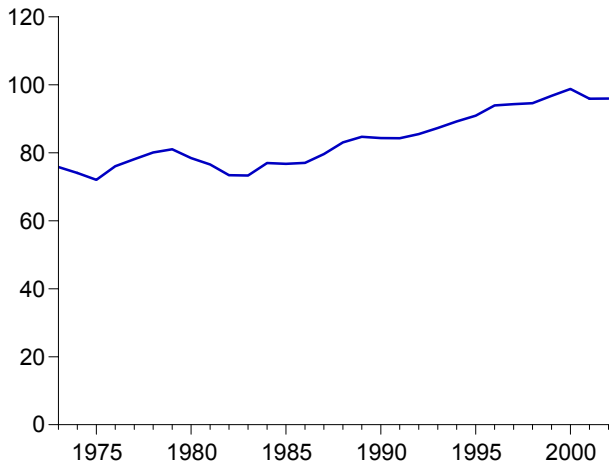
By Major Sources, December 2002



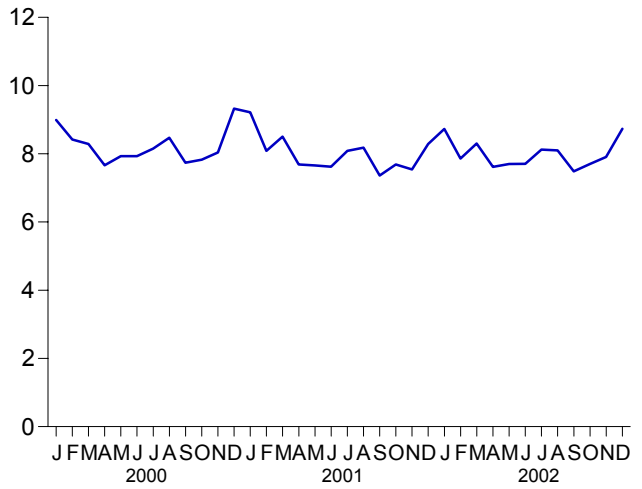
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
Source: Table 1.3.

Figure 1.3 Energy Consumption
(Quadrillion Btu)

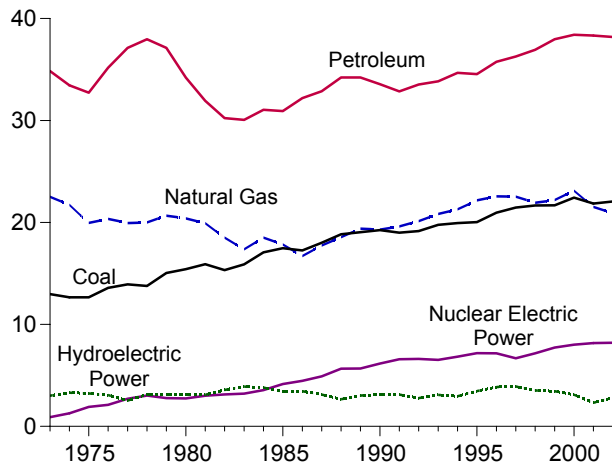
Total, 1973-2002



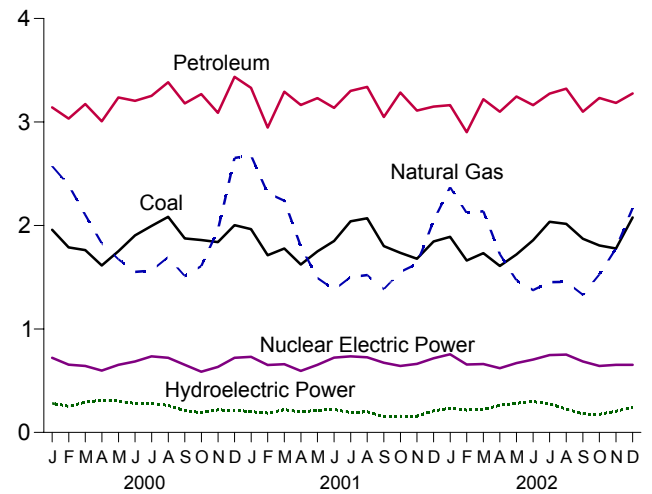
Total, Monthly



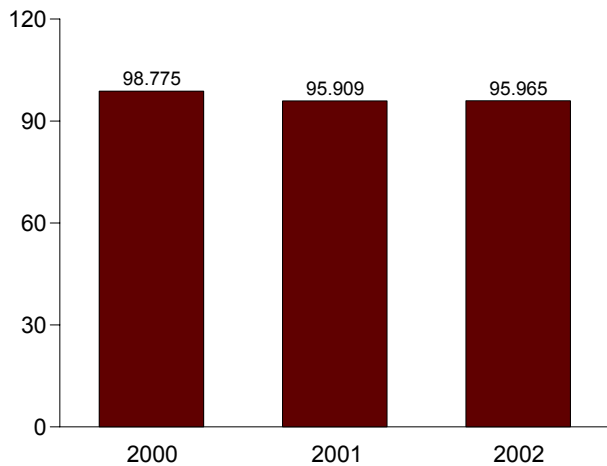
By Major Sources, 1973-2002



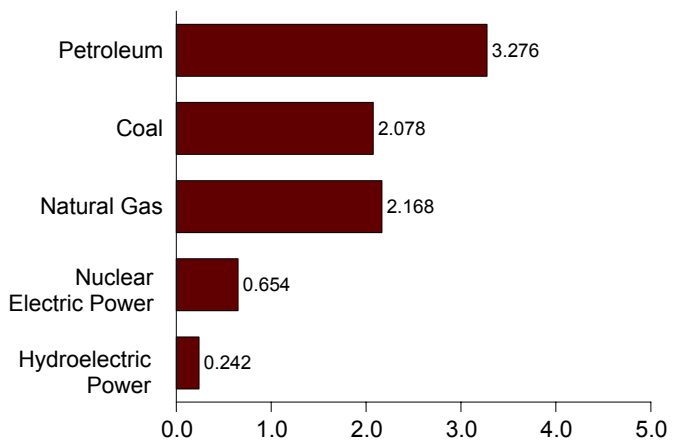
By Major Sources, Monthly



Total, January-December



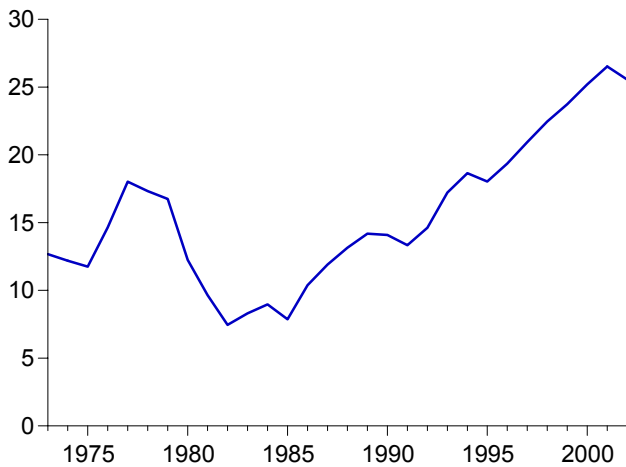
By Major Sources, December 2002



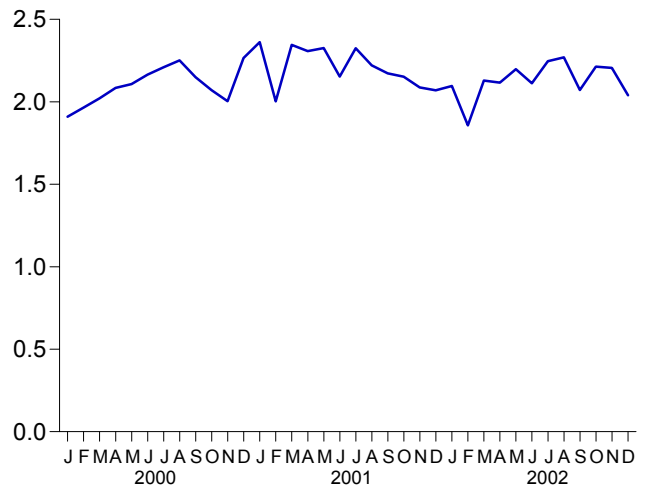
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
Source: Table 1.4.

Figure 1.4 Energy Net Imports
(Quadrillion Btu, Except as noted)

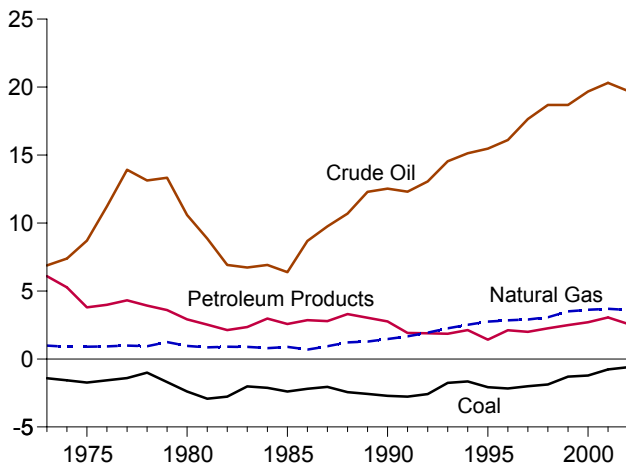
Total, 1973-2002



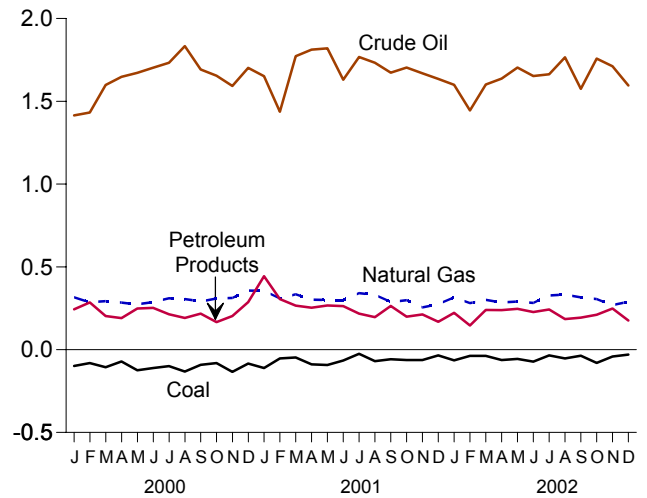
Total, Monthly



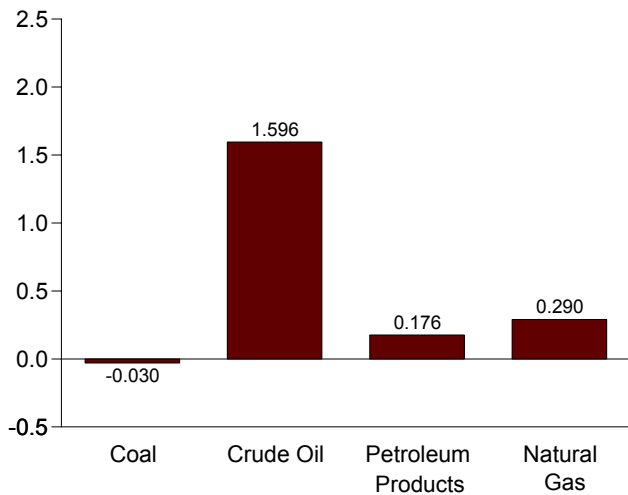
By Major Sources, 1973-2002



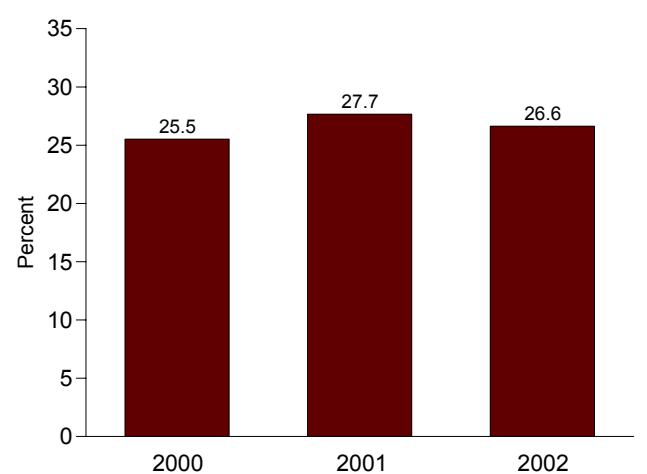
By Major Sources, Monthly



By Major Sources, December 2002



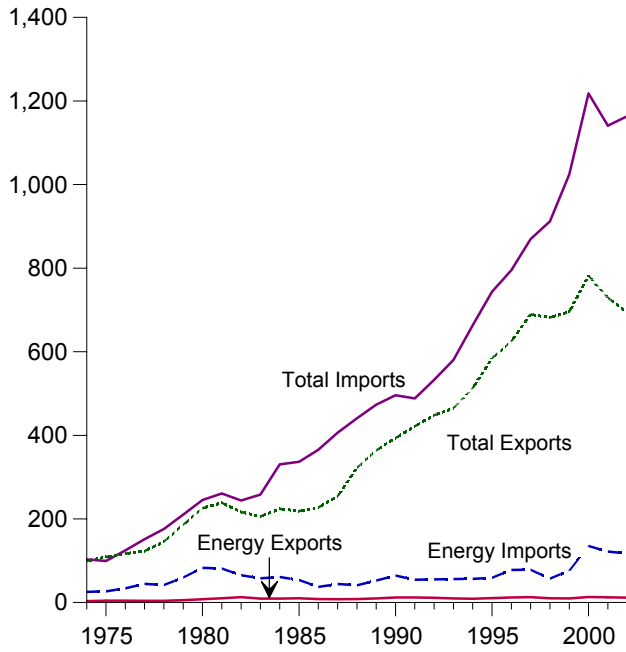
As Share of Consumption, January-December



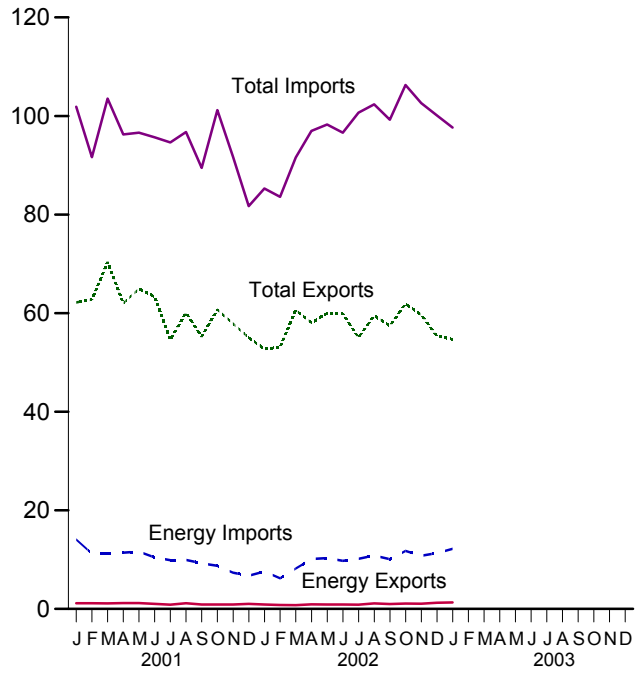
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>
Sources: Tables 1.4 and 1.5.

Figure 1.5 Merchandise Trade Value
(Billion Dollars)

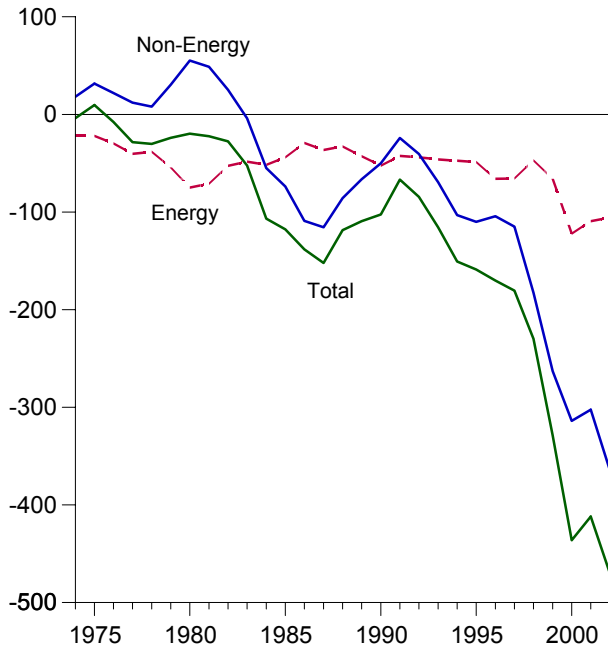
Imports and Exports, 1974-2002



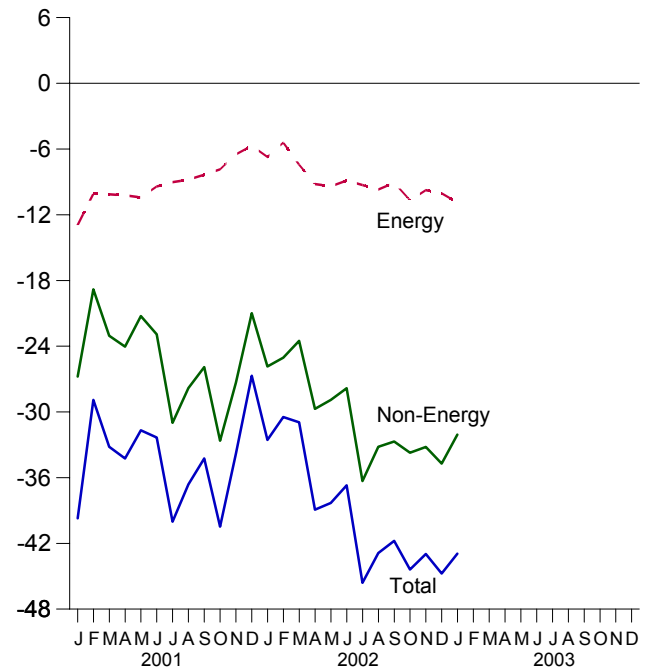
Imports and Exports, Monthly



Trade Balance, 1974-2002



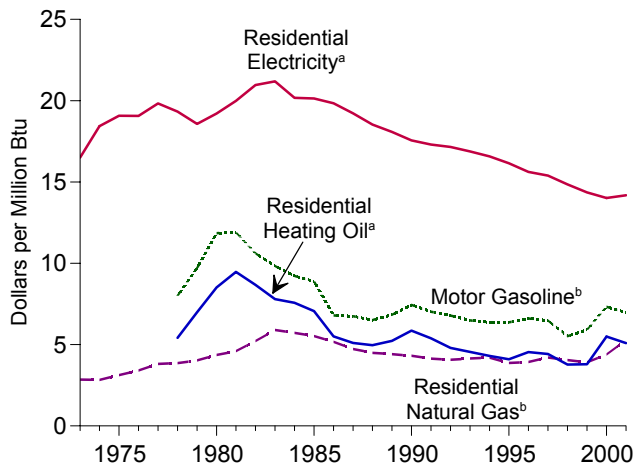
Trade Balance, Monthly



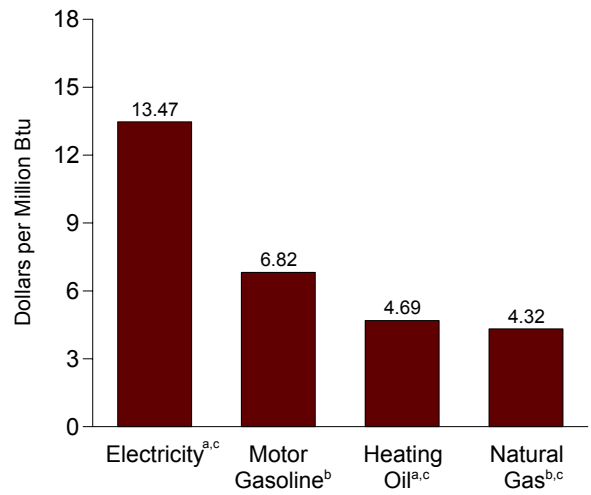
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
Source: Table 1.6.

Figure 1.6 Cost of Fuels to End Users in Constant (1982-1984) Dollars

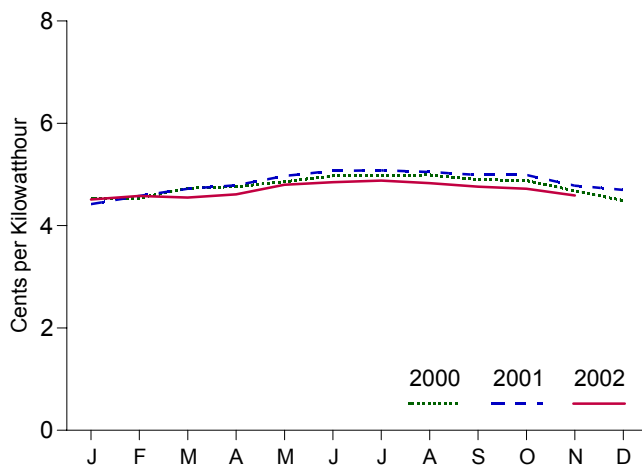
Costs, 1973-2001



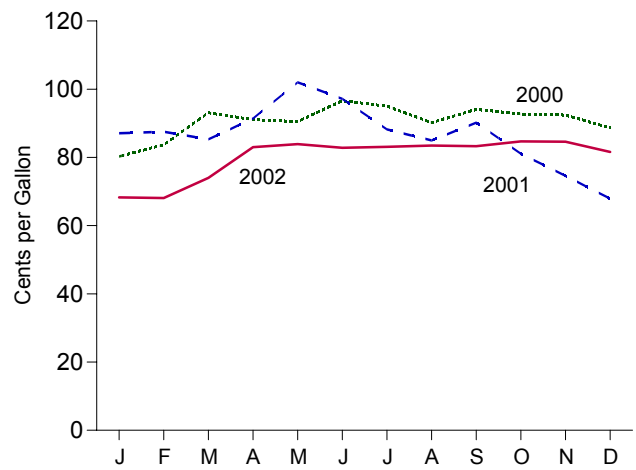
Costs, November 2002



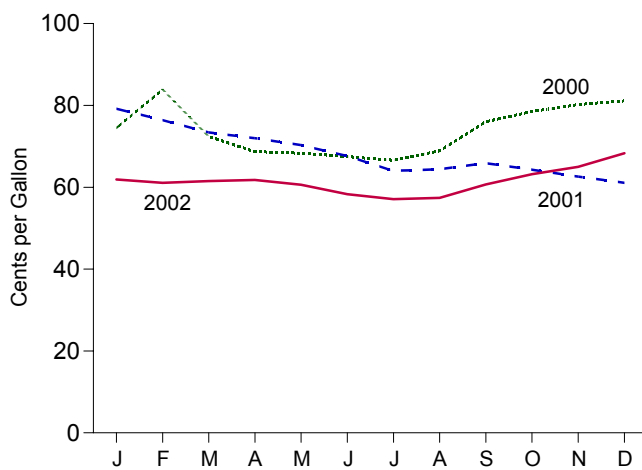
Residential Electricity^a, Monthly



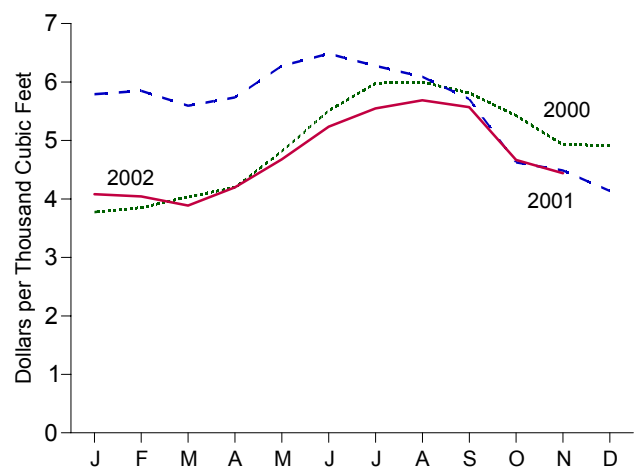
Motor Gasoline^b, Monthly



Residential Heating Oil^a, Monthly



Residential Natural Gas^b, Monthly



^aExcludes taxes.
^bIncludes taxes.
^cResidential.

Note: Because vertical scales differ, graphs should not be compared.
 Web Page: <http://www.eai.doe.gov/emeu/mer/overview.html>.
 Source: Table 1.7.

Table 1.7 Cost of Fuels to End Users in Constant (1982-84) Dollars

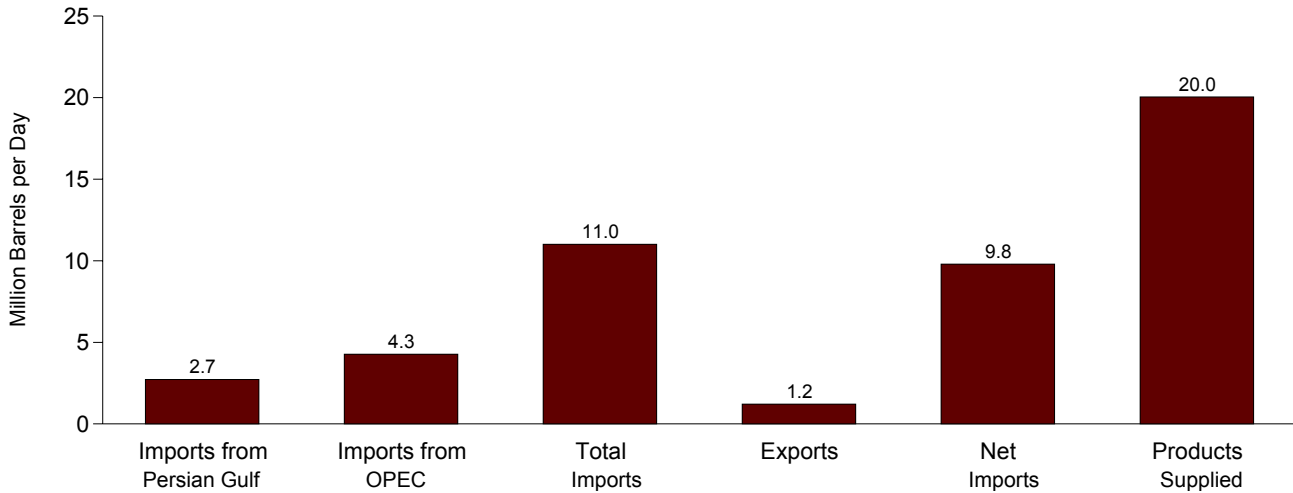
	Consumer Price Index (Urban) ^a	Motor Gasoline ^b		Residential Heating Oil ^c		Residential Natural Gas ^d		Residential Electricity ^c	
	Index 1982-1984=100	Cents per Gallon	Dollars per Million Btu	Cents per Gallon	Dollars per Million Btu	Cents per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatthour	Dollars per Million Btu
1973 Average	44.4	NA	NA	NA	NA	290.5	2.85	5.6	16.50
1974 Average	49.3	NA	NA	NA	NA	290.1	2.83	6.3	18.43
1975 Average	53.8	NA	NA	NA	NA	317.8	3.12	6.5	19.07
1976 Average	56.9	NA	NA	NA	NA	348.0	3.41	6.5	19.06
1977 Average	60.6	NA	NA	NA	NA	387.8	3.81	6.8	19.83
1978 Average	65.2	100.0	8.00	75.2	5.42	392.6	3.86	6.6	19.33
1979 Average	72.6	121.5	9.71	97.0	6.99	410.5	4.03	6.3	18.57
1980 Average	82.4	148.2	11.85	118.2	8.52	446.6	4.36	6.6	19.21
1981 Average	90.9	148.8	11.90	131.4	9.47	471.9	4.60	6.8	19.99
1982 Average	96.5	132.7	10.61	120.2	8.67	535.8	5.22	7.2	20.96
1983 Average	99.6	123.0	9.83	108.2	7.80	608.4	5.90	7.2	21.19
1984 Average	103.9	115.3	9.22	105.0	7.57	589.0	5.72	6.88	20.17
1985 Average	107.6	111.2	8.89	97.9	7.06	568.8	5.52	6.87	20.13
1986 Average	109.6	84.9	6.79	76.3	5.50	531.9	5.17	6.77	19.84
1987 Average	113.6	84.2	6.74	70.7	5.10	487.7	4.73	6.56	19.22
1988 Average	118.3	81.4	6.51	68.7	4.96	462.4	4.49	6.32	18.53
1989 Average	124.0	85.5	6.83	72.6	5.23	454.8	4.41	6.17	18.08
1990 Average	130.7	93.1	7.44	81.3	5.86	443.8	4.31	5.99	17.56
1991 Average	136.2	87.8	7.02	74.8	5.39	427.3	4.14	5.90	17.30
1992 Average	140.3	84.8	6.78	66.6	4.80	419.8	4.07	5.85	17.15
1993 Average	144.5	81.2	6.49	63.0	4.55	426.3	4.15	5.76	16.88
1994 Average	148.2	79.2	6.36	59.6	4.30	432.5	4.20	5.65	16.57
1995 Average	152.4	79.1	6.37	56.9	4.10	397.6	3.87	5.51	16.15
1996 Average	156.9	82.1	6.61	63.0	4.54	404.1	3.93	5.33	15.62
1997 Average	160.5	80.4	6.48	61.3	4.42	432.4	4.21	5.25	15.39
1998 Average	163.0	68.4	5.51	52.3	3.77	418.4	4.05	5.07	14.85
1999 Average	166.6	73.3	5.91	52.6	3.79	401.6	3.91	4.90	14.36
2000 January	168.8	80.3	6.48	74.5	5.37	377.4	3.68	4.54	13.30
February	169.8	83.7	6.75	83.9	6.05	385.2	3.75	4.54	13.31
March	171.2	93.1	7.51	72.4	5.22	403.6	3.93	4.73	13.85
April	171.3	91.1	7.35	68.7	4.95	419.7	4.09	4.76	13.94
May	171.5	90.5	7.30	68.3	4.93	481.6	4.69	4.86	14.25
June	172.4	96.6	7.79	67.5	4.86	551.0	5.37	4.97	14.55
July	172.8	95.0	7.66	66.6	4.80	597.8	5.83	4.98	14.60
August	172.8	90.2	7.27	68.9	4.97	600.1	5.85	4.99	14.64
September	173.7	94.1	7.59	76.0	5.48	581.5	5.67	4.90	14.36
October	174.0	92.7	7.47	78.5	5.66	542.5	5.29	4.88	14.30
November	174.1	92.4	7.45	80.2	5.79	492.8	4.80	4.68	13.72
December	174.0	88.7	7.15	81.1	5.85	492.0	4.79	4.49	13.17
Average	172.2	90.8	7.32	76.1	5.49	450.6	4.39	4.79	14.02
2001 January	175.1	87.1	7.02	79.2	5.71	579.1	5.63	4.42	12.96
February	175.8	87.5	7.05	76.4	5.51	584.8	5.68	4.58	13.42
March	176.2	85.3	6.88	73.4	5.30	559.6	5.44	4.72	13.82
April	176.9	91.4	7.37	72.0	5.19	573.8	5.58	4.79	14.03
May	177.7	102.0	8.22	70.3	5.07	627.5	6.10	4.97	14.56
June	178.0	97.2	7.84	67.6	4.87	648.3	6.30	5.07	14.87
July	177.5	88.2	7.11	64.0	4.61	627.6	6.10	5.08	14.88
August	177.5	85.0	6.85	64.4	4.64	609.0	5.92	5.05	14.81
September	178.3	90.2	7.27	65.9	4.75	570.9	5.55	4.99	14.61
October	177.7	81.1	6.54	64.3	4.63	462.6	4.50	4.99	14.61
November	177.4	74.6	6.02	62.6	4.51	448.7	4.36	4.78	14.01
December	176.7	67.9	5.47	61.1	4.41	413.7	4.02	4.70	13.77
Average	177.1	86.4	6.97	70.6	5.09	543.8	5.28	4.84	14.18
2002 January	177.1	68.3	5.50	61.9	4.47	408.2	3.97	4.51	13.22
February	177.8	68.1	5.49	61.1	4.40	404.4	3.93	4.58	13.42
March	178.8	74.0	5.97	61.5	4.43	388.7	3.78	4.55	13.34
April	179.8	83.0	6.69	61.8	4.46	419.9	4.08	4.61	13.50
May	179.8	83.9	6.76	60.6	4.37	467.7	4.55	4.80	14.07
June	179.9	82.8	6.67	58.3	4.20	523.6	5.09	4.85	14.21
July	180.1	83.1	6.70	57.1	4.12	554.7	5.39	4.88	14.30
August	180.7	83.5	6.73	57.4	4.14	568.9	5.53	4.83	14.16
September	181.0	83.3	6.71	60.7	4.38	556.9	5.41	4.76	13.96
October	181.3	84.7	6.83	63.2	4.56	466.6	4.53	4.72	13.82
November	181.3	84.6	6.82	65.0	4.69	444.0	4.32	4.59	13.47
December	180.9	81.6	6.58	68.3	4.93	NA	NA	NA	NA
Average	179.9	80.1	6.46	62.7	4.52	NA	NA	NA	NA

^a Consumer Price Index, All Urban Consumers, All Items, 1982-1984 = 100.0.
^b Includes taxes.
^c Excludes taxes.
 NA=Not available.
 Notes: • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding.

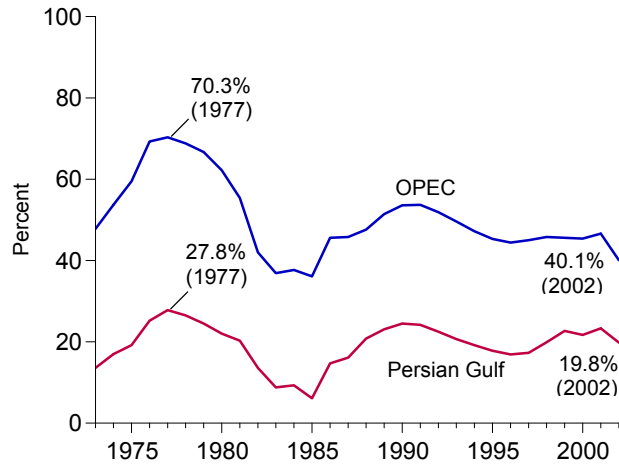
• Geographic coverage is the 50 States and the District of Columbia.
 Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
 Sources: • **Fuel Prices:** Tables 9.4 (All Types), 9.8c, 9.11, and 9.9, adjusted by the CPI. • **CPI: 1973-1997—Economic Report of the President,** February 2003, Table B-60. **1998 forward—**Council of Economic Advisers, *Economic Indicators*, February 2003, "Consumer Prices - All Urban Consumers." • **Conversion Factors:** Tables A1, A3, A4, and A6.

Figure 1.7 Overview of U.S. Petroleum Trade

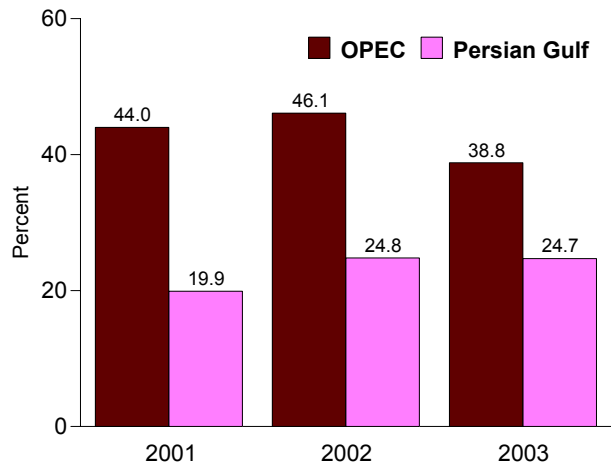
Overview, January 2003



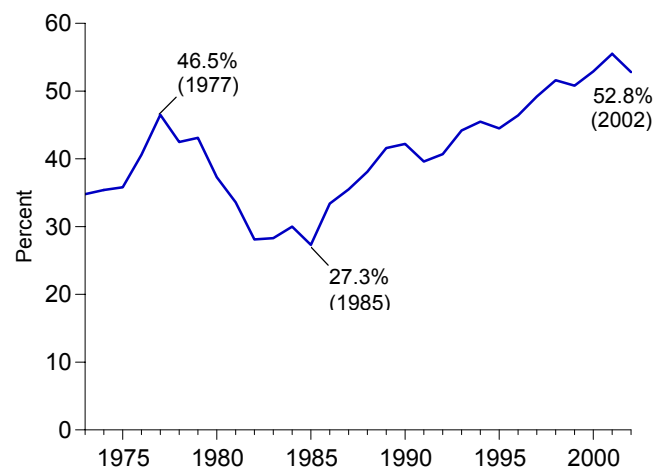
Imports from OPEC and the Persian Gulf as a Share of Total Imports
1973-2002



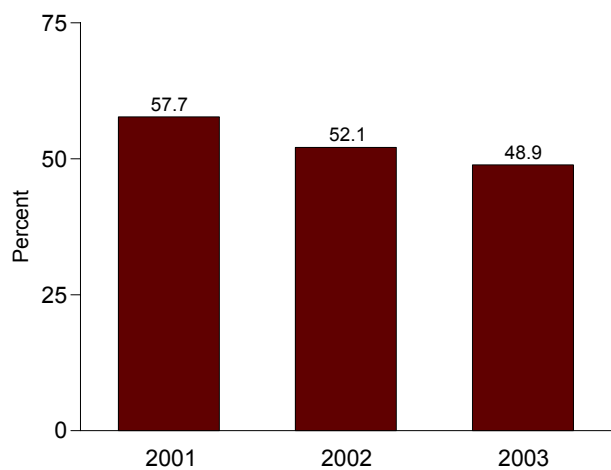
January



Net Imports as Share of Products Supplied
1973-2002



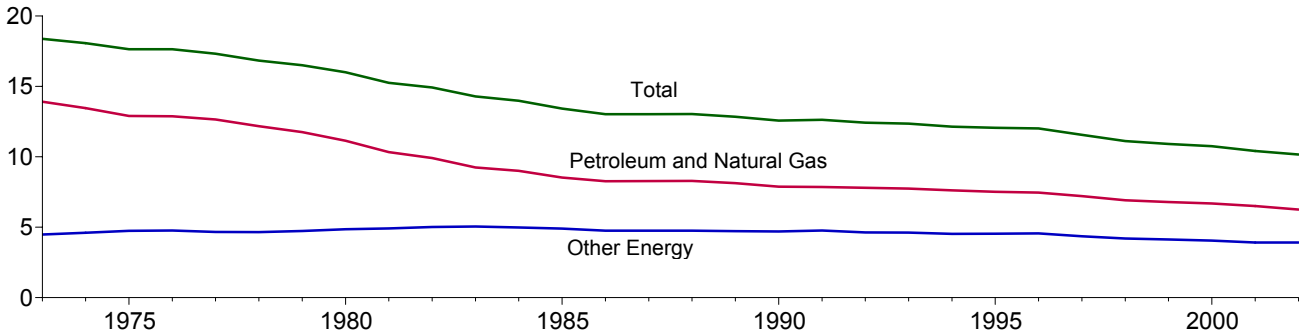
January



OPEC=Organization of Petroleum Exporting Countries.
Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
Source: Table 1.8.

Figure 1.8 Energy Consumption per Dollar of Gross Domestic Product
(Thousand Btu per Chained (1996) Dollar)



Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Table 1.9 Energy Consumption per Dollar of Gross Domestic Product
(Seasonally Adjusted at Annual Rates)

	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Dollar of GDP		
	Petroleum and Natural Gas	Other Energy ^a	Total		Petroleum and Natural Gas	Other Energy ^a	Total
	Quadrillion Btu				Billion Chained (1996) Dollars	Thousand Btu per Chained (1996) Dollar	
1973 Year	57.352	18.456	75.808	4,123.4	13.91	4.48	18.38
1974 Year	55.187	18.893	74.080	4,099.0	13.46	4.61	18.07
1975 Year	52.678	19.364	72.042	4,084.4	12.90	4.74	17.64
1976 Year	55.520	20.552	76.072	4,311.7	12.88	4.77	17.64
1977 Year	57.053	21.069	78.122	4,511.8	12.65	4.67	17.32
1978 Year	57.966	22.158	80.123	4,760.6	12.18	4.65	16.83
1979 Year	57.789	23.255	81.044	4,912.1	11.76	4.73	16.50
1980 Year	54.596	23.839	78.435	4,900.9	11.14	4.86	16.00
1981 Year	51.859	24.710	76.569	5,021.0	10.33	4.92	15.25
1982 Year	48.736	24.704	73.440	4,919.3	9.91	5.02	14.93
1983 Year	47.411	25.906	73.317	5,132.3	9.24	5.05	14.29
1984 Year	49.558	27.413	76.972	5,505.2	9.00	4.98	13.98
1985 Year	48.756	28.022	76.778	5,717.1	8.53	4.90	13.43
1986 Year	48.904	28.161	77.065	5,912.4	8.27	4.76	13.03
1987 Year	50.609	29.024	79.633	6,113.3	8.28	4.75	13.03
1988 Year	52.774	30.294	83.068	6,368.4	8.29	4.76	13.04
1989 Year	53.595	^{b c} 31.121	^{b c} 84.716	6,591.8	8.13	4.72	12.85
1990 Year	52.849	31.495	84.344	6,707.9	7.88	4.70	12.57
1991 Year	52.452	31.846	84.298	6,676.4	7.86	4.77	12.63
1992 Year	53.657	31.855	85.513	6,880.0	7.80	4.63	12.43
1993 Year	54.668	32.632	87.300	7,062.6	7.74	4.62	12.36
1994 Year	55.958	33.255	89.213	7,347.7	7.62	4.53	12.14
1995 Year	56.717	34.226	90.943	7,543.8	7.52	4.54	12.06
1996 Year	58.316	35.615	93.931	7,813.2	7.46	4.56	12.02
1997 Year	58.795	35.545	94.340	8,159.5	7.21	4.36	11.56
1998 Year	58.870	35.753	94.623	8,508.9	6.92	4.20	11.12
1999 Year	60.163	36.604	96.767	8,859.0	6.79	4.13	10.92
2000 1 st Quarter	60.261	NA	NA	9,097.4	6.62	NA	NA
2 nd Quarter	61.807	NA	NA	9,205.7	6.71	NA	NA
3 rd Quarter	60.819	NA	NA	9,218.7	6.60	NA	NA
4 th Quarter	62.409	NA	NA	9,243.8	6.75	NA	NA
Year	61.514	37.260	98.775	9,191.4	6.69	4.05	10.75
2001 1 st Quarter	^R 62.793	NA	NA	9,229.9	6.80	NA	NA
2 nd Quarter	^R 60.156	NA	NA	9,193.1	6.54	NA	NA
3 rd Quarter	^R 58.889	NA	NA	9,186.4	^R 6.41	NA	NA
4 th Quarter	^R 57.681	NA	NA	9,248.8	6.24	NA	NA
Year	^R 59.863	^R 36.045	^R 95.909	9,214.5	^R 6.50	3.91	10.41
2002 1 st Quarter	^R 59.475	NA	NA	9,363.2	^R 6.35	NA	NA
2 nd Quarter	^R 59.587	NA	NA	9,392.4	^R 6.34	NA	NA
3 rd Quarter	^R 58.238	NA	NA	9,485.6	^R 6.14	NA	NA
4 th Quarter	59.082	NA	NA	9,518.2	6.21	NA	NA
Year	59.092	36.873	95.965	9,439.9	6.26	3.91	10.17

^a Coal, nuclear electric power, renewable energy, and pumped-storage hydroelectric power.

^b Beginning in 1989, includes electricity generated by nonutility nuclear units.

^c Beginning in 1989, includes coal consumed by "Other Power Producers." See Table 6.2.

^R=Revised. NA=Not available.

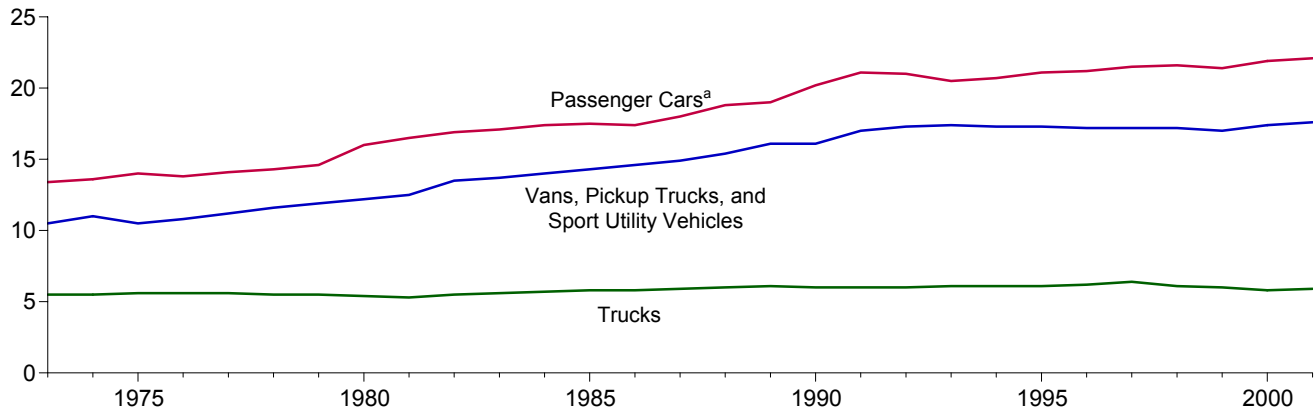
Notes: • Quarterly data are seasonally adjusted and shown at annual rates. • Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding. • Totals may not equal sum of

components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Sources: • **Energy Consumption:** Table 1.4. • **Gross Domestic Product: 1973-2000**—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, August 2002, Table 2A. • **2001 forecast**—U.S. Department of Commerce, Bureau of Economic Analysis, *BEA News Release*, March 27, 2003, Table 3, which is available at website www.bea.doc.gov/bea/newsrel/gdp400p.htm.

Figure 1.9 Motor Vehicle Fuel Rates
(Miles per Gallon)



^aMotorcycles are included through 1989.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Table 1.10 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates

	Passenger Cars ^a			Vans, Pickup Trucks, and Sport Utility Vehicles ^b			Trucks ^c			All Motor Vehicles ^d		
	Mileage (miles per vehicle)	Fuel Consumption (gallons per vehicle)	Fuel Rate (miles per gallon)	Mileage (miles per vehicle)	Fuel Consumption (gallons per vehicle)	Fuel Rate (miles per gallon)	Mileage (miles per vehicle)	Fuel Consumption (gallons per vehicle)	Fuel Rate (miles per gallon)	Mileage (miles per vehicle)	Fuel Consumption (gallons per vehicle)	Fuel Rate (miles per gallon)
1973	9,884	737	13.4	9,779	931	10.5	15,370	2,775	5.5	10,099	850	11.9
1974	9,221	677	13.6	9,452	862	11.0	14,995	2,708	5.5	9,493	788	12.0
1975	9,309	665	14.0	9,829	934	10.5	15,167	2,722	5.6	9,627	790	12.2
1976	9,418	681	13.8	10,127	934	10.8	15,438	2,764	5.6	9,774	806	12.1
1977	9,517	676	14.1	10,607	947	11.2	16,700	3,002	5.6	9,978	814	12.3
1978	9,500	665	14.3	10,968	948	11.6	18,045	3,263	5.5	10,077	816	12.4
1979	9,062	620	14.6	10,802	905	11.9	18,502	3,380	5.5	9,722	776	12.5
1980	8,813	551	16.0	10,437	854	12.2	18,736	3,447	5.4	9,458	712	13.3
1981	8,873	538	16.5	10,244	819	12.5	19,016	3,565	5.3	9,477	697	13.6
1982	9,050	535	16.9	10,276	762	13.5	19,931	3,647	5.5	9,644	686	14.1
1983	9,118	534	17.1	10,497	767	13.7	21,083	3,769	5.6	9,760	686	14.2
1984	9,248	530	17.4	11,151	797	14.0	22,550	3,967	5.7	10,017	691	14.5
1985	9,419	538	17.5	10,506	735	14.3	20,597	3,570	5.8	10,020	685	14.6
1986	9,464	543	17.4	10,764	738	14.6	22,143	3,821	5.8	10,143	692	14.7
1987	9,720	539	18.0	11,114	744	14.9	23,349	3,937	5.9	10,453	694	15.1
1988	9,972	531	18.8	11,465	745	15.4	22,485	3,736	6.0	10,721	688	15.6
1989	10,157	533	19.0	11,676	724	16.1	22,926	3,776	6.1	10,932	688	15.9
1990	^a 10,504	^a 520	^a 20.2	11,902	738	16.1	23,603	3,953	6.0	11,107	677	16.4
1991	10,571	501	21.1	12,245	721	17.0	24,229	4,047	6.0	11,294	669	16.9
1992	10,857	517	21.0	12,381	717	17.3	25,373	4,210	6.0	11,558	683	16.9
1993	10,804	527	20.5	12,430	714	17.4	26,262	4,309	6.1	11,595	693	16.7
1994	10,992	531	20.7	12,156	701	17.3	25,838	4,202	6.1	11,683	698	16.7
1995	11,203	530	21.1	12,018	694	17.3	26,514	4,315	6.1	11,793	700	16.8
1996	11,330	534	21.2	11,811	685	17.2	26,092	4,221	6.2	11,813	700	16.9
1997	11,581	539	21.5	12,115	703	17.2	27,032	4,218	6.4	12,107	711	17.0
1998	11,754	544	21.6	12,173	707	17.2	25,397	4,135	6.1	12,211	721	16.9
1999	11,848	553	21.4	11,957	701	17.0	26,014	4,352	6.0	12,206	732	16.7
2000	11,976	547	21.9	11,672	669	17.4	25,617	4,391	5.8	12,164	720	16.9
2001 ^e	11,766	532	22.1	11,140	633	17.6	26,431	4,491	5.9	11,800	692	17.1

^a Motorcycles are included through 1989.

^b Includes a small number of trucks with 2 axles and 4 tires, such as step vans.

^c Single-unit trucks with 2 axles and 6 or more tires, and combination trucks.

^d Includes buses and motorcycles, which are not shown separately.

^e Preliminary.

Notes: Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Sources: • **Passenger Cars: 1990-1994:** U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 1998*, Table 4-13. • **All Other Data:** • **1973-1994:** Federal Highway Administration (FHWA), *Highway Statistics Summary to 1995*, Table VM-201A. • **1995 forward:** FHWA, *Highway Statistics*, annual, Table VM-1.

Table 1.11 Heating Degree-Days by Census Division

Census Divisions	February 1 through February 28					Cumulative July 1 through February 28				
	Normal ^a	2002	2003	Percent Change		Normal ^a	2002	2003	Percent Change	
				Normal to 2003	2002 to 2003				Normal to 2003	2002 to 2003
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	1,060	898	1,101	4	23	4,768	3,981	4,850	2	22
Middle Atlantic New Jersey, New York, Pennsylvania	983	810	1,084	10	34	4,332	3,442	4,601	6	34
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	1,061	883	1,098	4	24	4,835	3,883	4,737	-2	22
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	1,078	904	1,114	3	23	5,163	4,148	4,988	-3	20
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	507	461	485	-4	5	2,233	1,872	2,291	3	22
East South Central Alabama, Kentucky, Mississippi, Tennessee	623	628	606	-3	-4	2,853	2,495	2,909	2	17
West South Central Arkansas, Louisiana, Oklahoma, Texas	414	464	399	-4	-14	1,912	1,744	1,912	0	10
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	737	733	712	-3	-3	3,835	3,485	3,354	-12	-4
Pacific^b California, Oregon, Washington	439	416	389	-11	-6	2,256	2,093	1,717	-24	-18
U.S. Average^b	732	652	740	1	14	3,388	2,843	3,302	-2	16

^a "Normal" is based on calculations of data from 1971 through 2000.

^b Excludes Alaska and Hawaii.

(s)=Less than 0.5 percent and greater than -0.5 percent.

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. The daily average temperature

is the mean of the maximum and minimum temperatures in a 24-hour period. For example, a weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days). If a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree days).

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Sources: See end of section.

Table 1.12 Cooling Degree-Days by Census Division

Census Divisions	February 1 through February 28					Cumulative January 1 through February 28				
	Normal ^a	2002	2003	Percent Change		Normal ^a	2002	2003	Percent Change	
				Normal to 2003	2002 to 2003				Normal to 2003	2002 to 2003
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	0	0	0	(^c)	(^c)	0	0	0	(^c)	(^c)
Middle Atlantic New Jersey, New York, Pennsylvania	0	0	0	(^c)	(^c)	0	0	0	(^c)	(^c)
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	0	0	0	(^c)	(^c)	0	0	0	(^c)	(^c)
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	0	0	0	(^c)	(^c)	0	0	0	(^c)	(^c)
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	27	21	27	(^c)	(^c)	57	52	33	(^c)	(^c)
East South Central Alabama, Kentucky, Mississippi, Tennessee	4	0	1	(^c)	(^c)	11	8	1	(^c)	(^c)
West South Central Arkansas, Louisiana, Oklahoma, Texas	11	4	7	(^c)	(^c)	23	19	10	(^c)	(^c)
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	2	2	1	(^c)	(^c)	2	1	1	(^c)	(^c)
Pacific^b California, Oregon, Washington	1	2	0	(^c)	(^c)	2	2	2	(^c)	(^c)
U.S. Average^b	6	5	6	(^c)	(^c)	14	12	7	(^c)	(^c)

^a "Normal" is based on calculations of data from 1961 through 1990.

^b Excludes Alaska and Hawaii.

^c Percent change is not meaningful: normal is less than 100 or ratio is incalculable.

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. The daily average temperature

is the mean of the maximum and minimum temperatures in a 24-hour period. For example, if a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree-days). A weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days).

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Sources: See end of section.

Energy Overview

Note 1. Energy Production: Includes production of fossil fuels (coal, dry natural gas, crude oil and lease condensate, and natural gas plant liquids), nuclear electric power, pumped-storage hydroelectric power, and renewable energy. Renewable energy production is assumed to be equivalent to: end-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, and solar thermal direct use and photovoltaic energy; and electric utility and nonutility net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. See Section 10 for further information on renewable energy.

Note 2. Energy Consumption: Includes consumption of fossil fuels (coal, natural gas, and petroleum), some secondary energy derived from fossil fuels (supplemental gaseous fuels, coal coke net imports, and electricity net imports from fossil fuels), nuclear electric power, pumped-storage hydroelectric power, and renewable energy. Renewable energy consumption includes: end-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, and solar thermal direct use and photovoltaic energy; electric utility and nonutility net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind; and net imports of electricity from hydroelectric power and geothermal energy. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. See Section 10 for further information on renewable energy.

Note 3. Energy Imports: Includes imports of fossil fuels (coal, natural gas, and petroleum, including crude oil imported for the Strategic Petroleum Reserve), some secondary energy derived from fossil fuels (coal coke imports, and electricity imports from fossil fuels), and renewable energy (electricity imports derived from hydroelectric power and geothermal energy). Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. See Section 10 for further information on renewable energy.

Note 4. Energy Exports: Includes exports of fossil fuels (coal, natural gas, and petroleum), some secondary energy derived from fossil fuels (coal coke exports, and electricity exports from fossil fuels), and renewable energy (electricity exports derived from hydroelectric power). Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. See Section 10 for further information on renewable energy.

Note 5. Merchandise Trade Value: Import data presented are based on the customs value. That value does not include insurance and freight and is consequently lower than the cost, insurance, and freight (CIF) value, which is also reported by the Bureau of the Census. All export data, and

import data prior to 1981, are on a free alongside ship (f.a.s.) basis.

“Balance” is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. “Energy” includes mineral fuels, lubricants, and related material. “Non-Energy Balance” and “Total Merchandise” include foreign exports (i.e., re-exports) and nonmonetary gold and Department of Defense Grant-Aid shipments. The “Non-Energy Balance” is calculated by subtracting the “Energy” from the “Total Merchandise Balance.”

“Imports” consist of government and nongovernment shipments of merchandise into the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the U.S. Foreign Trade Zones. They reflect the total arrival from foreign countries of merchandise that immediately entered consumption channels, warehouses, the Foreign Trade Zones, or the Strategic Petroleum Reserve. They exclude shipments between the United States, Puerto Rico, and U.S. possessions, shipments to U.S. Armed Forces and diplomatic missions abroad for their own use, U.S. goods returned to the United States by its Armed Forces, and in-transit shipments.

Table 1.6 Sources

U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division:

Petroleum Exports

1974–1987: “U.S. Exports,” FT410, December issues. 1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions. 1990–1992: “U.S. Merchandise Trade,” Final Report. 1993–2001: “U.S. International Trade in Goods and Services,” Annual Revision. 2002: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Petroleum Imports

1974–1987: “U.S. Merchandise Trade,” FT900, December issues, 1975–1988. 1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions. 1990–1993: “U.S. Merchandise Trade,” Final Report. 1994–2001: “U.S. International Trade in Goods and Services,” Annual Revision. 2002: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Energy Exports and Imports

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments. 1988: January–July, monthly FT-900 supplement, 1989 issues. August–December, monthly FT-900, 1989 issues. 1989: Monthly FT-900, 1990 issues. 1990–1992: “U.S. Merchandise Trade,” Final Report.

1993–2001: “U.S. International Trade in Goods and Services,” Annual Revision.

2002: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Petroleum, Energy, and Non-Energy Balances

Calculated by the Energy Information Administration.

Total Merchandise

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.

1988: “Report on U.S. Merchandise Trade, 1988 Final Revisions,” August 18, 1989.

1989: “Report on U.S. Merchandise Trade, 1989 Revisions,” July 10, 1990.

1990: “U.S. Merchandise Trade, 1990 Final Report,” May 10, 1991, and “U.S. Merchandise Trade, December 1992,” February 18, 1993, page 3.

1991: “U.S. Merchandise Trade, 1992 Final Report,” May 12, 1993.

1992–2001: “U.S. International Trade in Goods and Services,” Annual Revision.

2002: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Tables 1.11 and 1.12 Sources

There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Analysis Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population.

The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for 1990 by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-1 (heating degree-days) and 5-2 (cooling degree-days) developed by the National Climatic Data Center, Asheville, NC, which compiles data from some 8,000 weather stations.

Section 2. Energy Consumption by Sector

U.S. total energy consumption in December 2002 was 8.7 quadrillion Btu, 5 percent higher than in December 2001.

Residential sector total consumption was 2.1 quadrillion Btu in December 2002, 13 percent higher than the December 2001 level. The sector accounted for 24 percent of total energy consumption.

Commercial sector total consumption was 1.5 quadrillion Btu in December 2002, 4 percent higher than the December 2001 level. The sector accounted for 17 percent of total energy consumption.

Industrial sector total consumption was 2.8 quadrillion Btu in December 2002, slightly lower than the December 2001

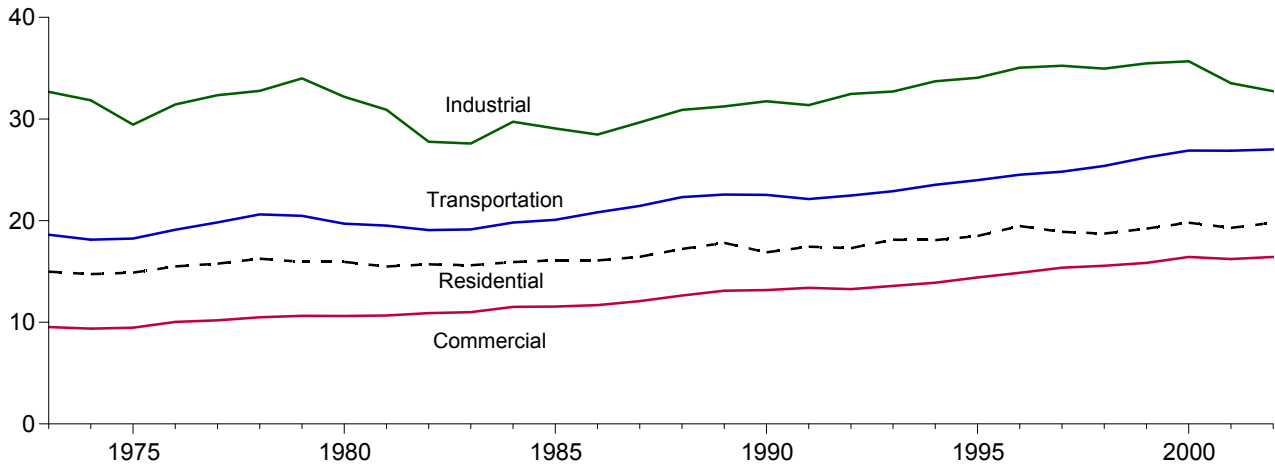
level. The sector accounted for 32 percent of total energy consumption.

Transportation sector total consumption was 2.3 quadrillion Btu in December 2002, 6 percent higher than the December 2001 level. The sector accounted for 26 percent of total energy consumption.

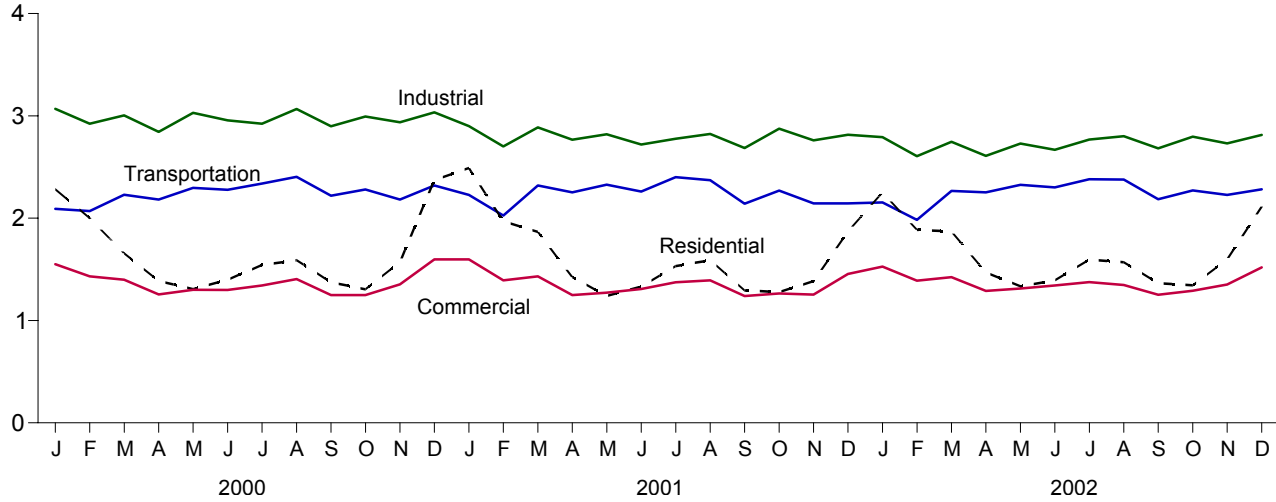
Electric power sector primary consumption was 3.1 quadrillion Btu in December 2002, 8 percent higher than the December 2001 level. Fossil fuels accounted for 68 percent of all primary energy consumed by the electric power sector; nuclear electric power 21 percent; and renewable energy 11 percent.

Figure 2.1 Energy Consumption by Sector
(Quadrillion Btu)

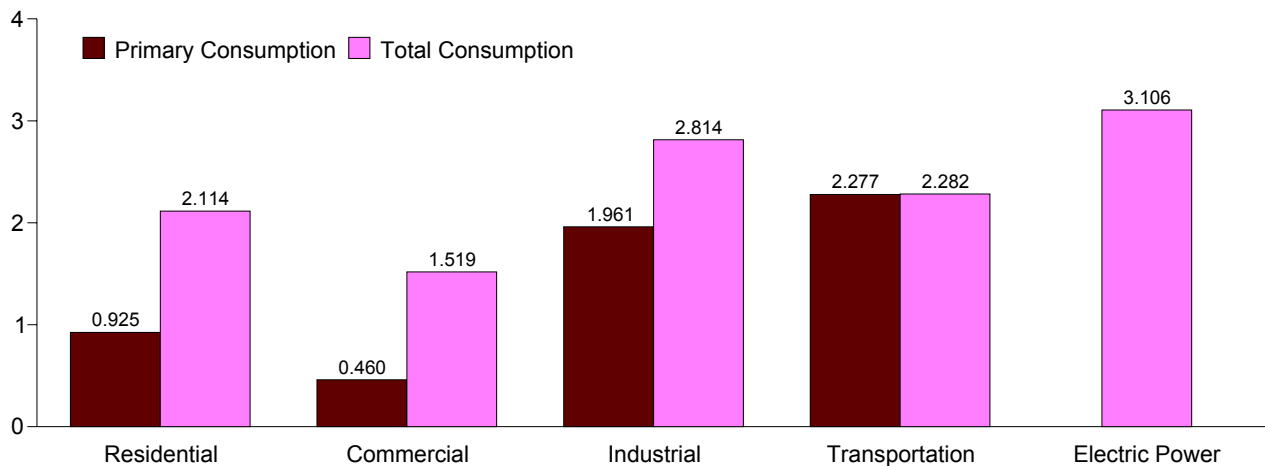
Total Consumption End Use, 1973-2002



Total Consumption End Use, Monthly



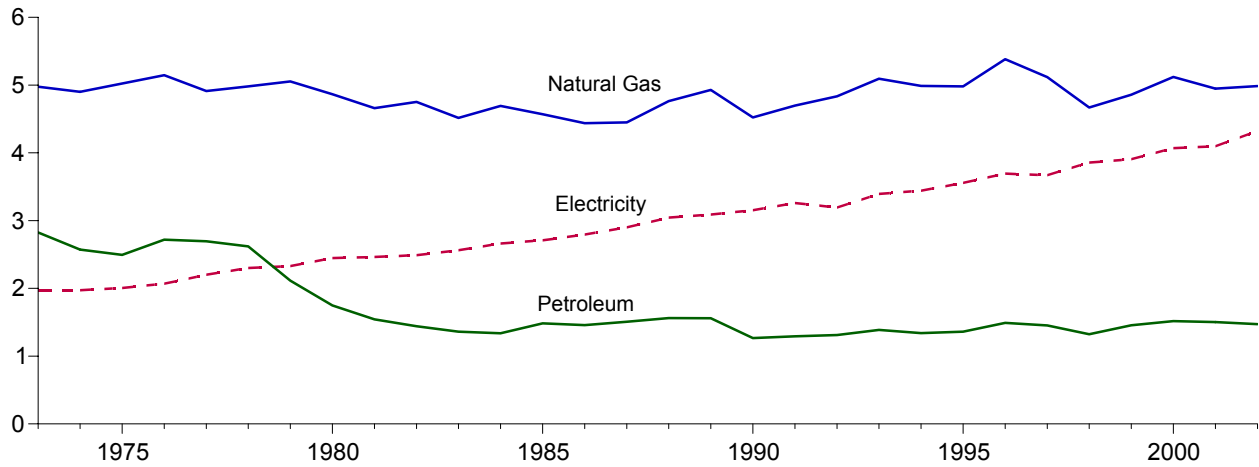
By Sector, December 2002



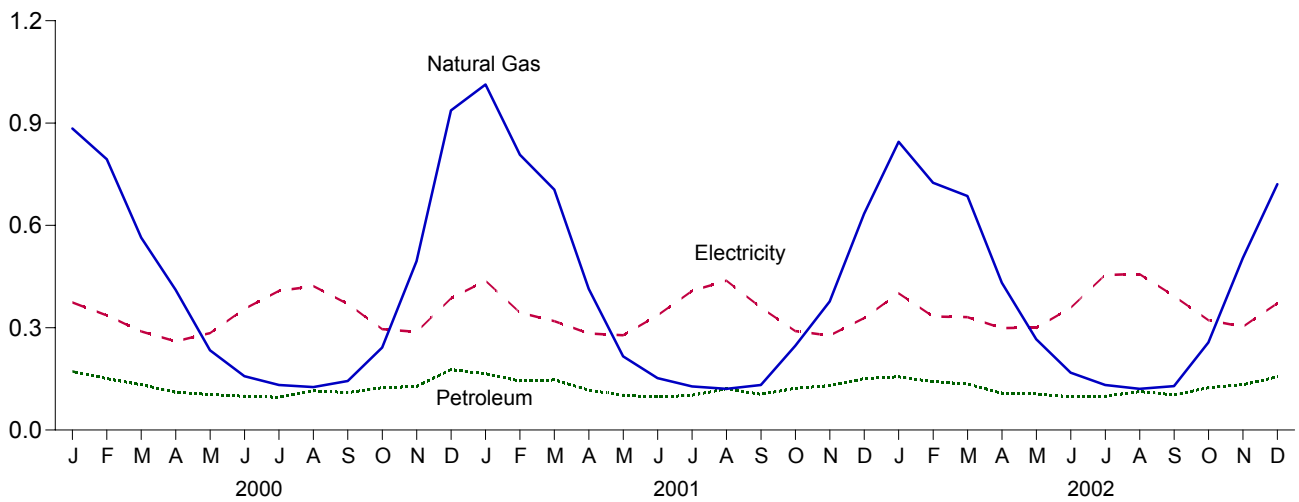
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.1.

Figure 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

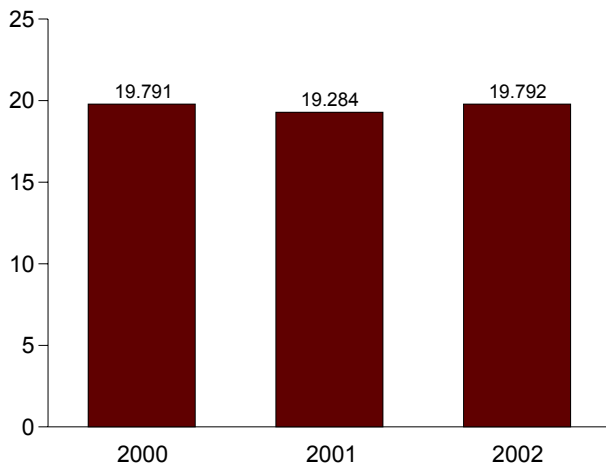
By Major Sources, 1973-2002



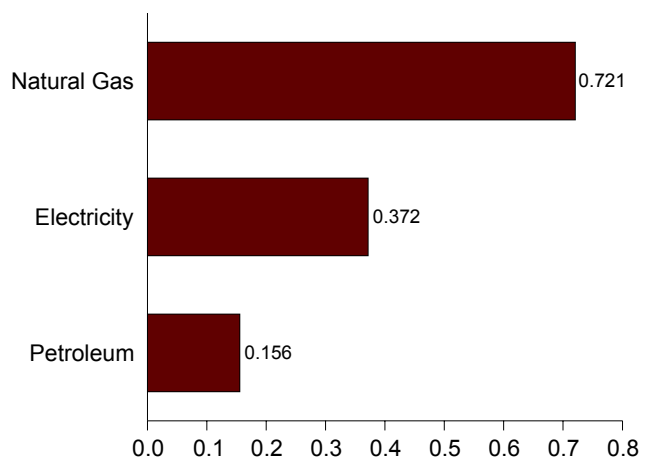
By Major Sources, Monthly



Total, January-December



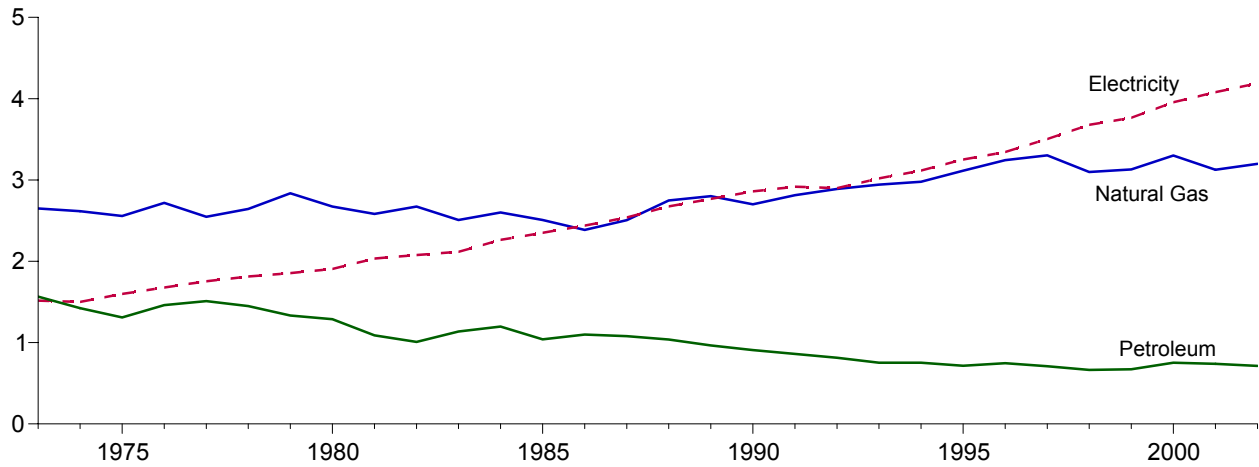
By Major Sources, December 2002



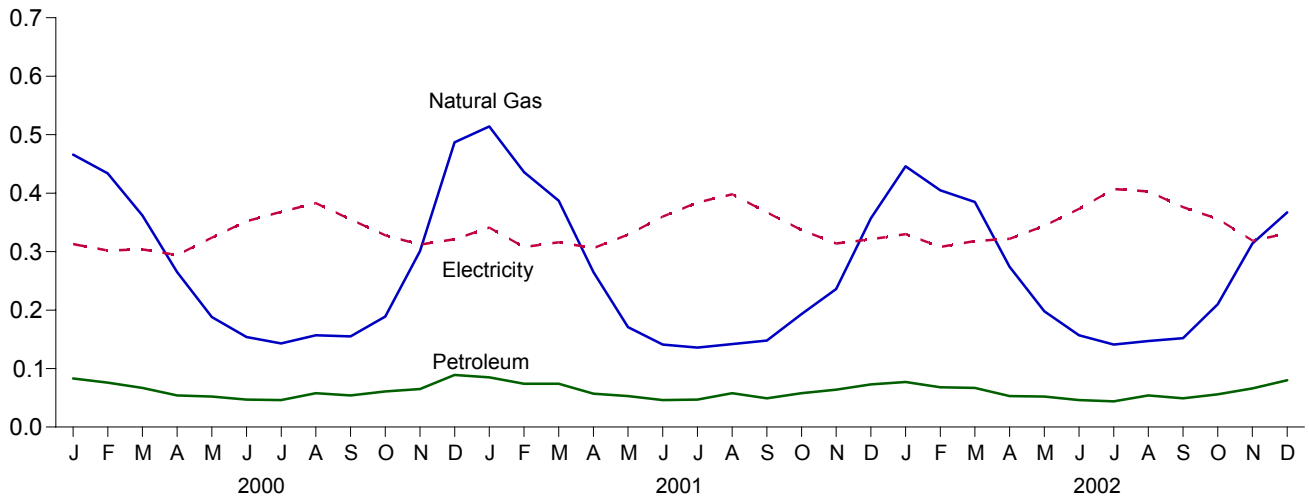
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.2.

Figure 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

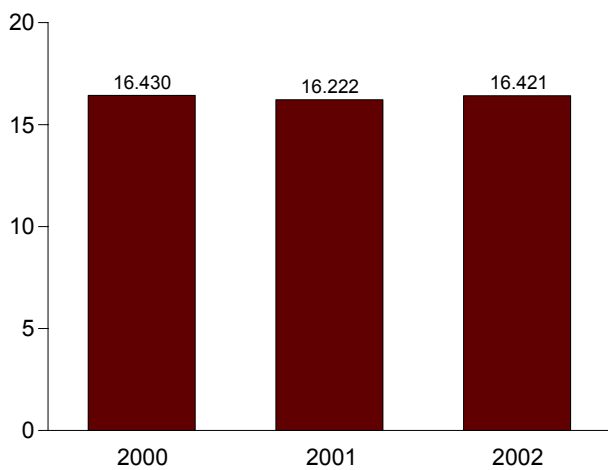
By Major Sources, 1973-2002



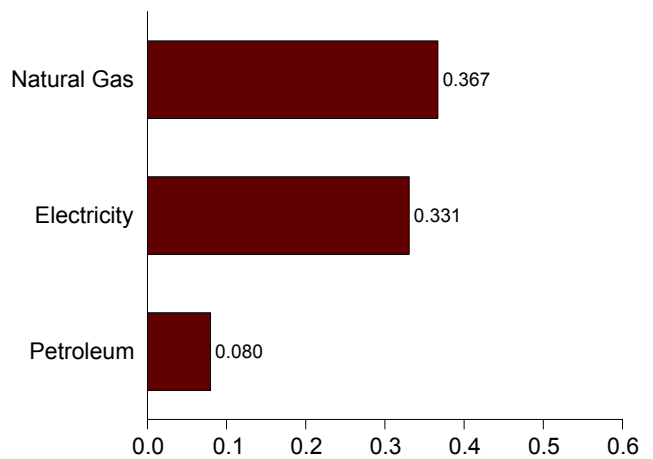
By Major Sources, Monthly



Total, January-December



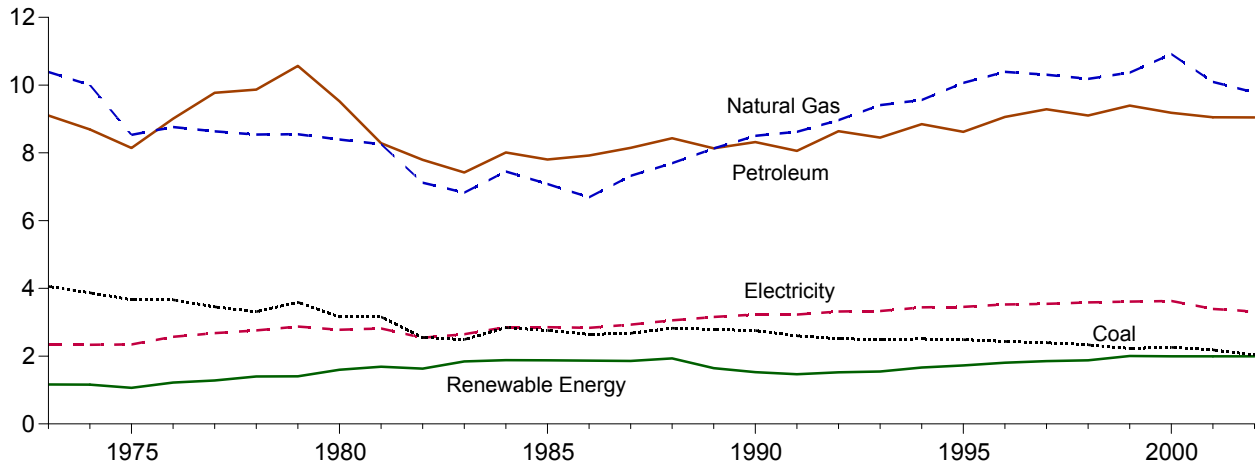
By Major Sources, December 2002



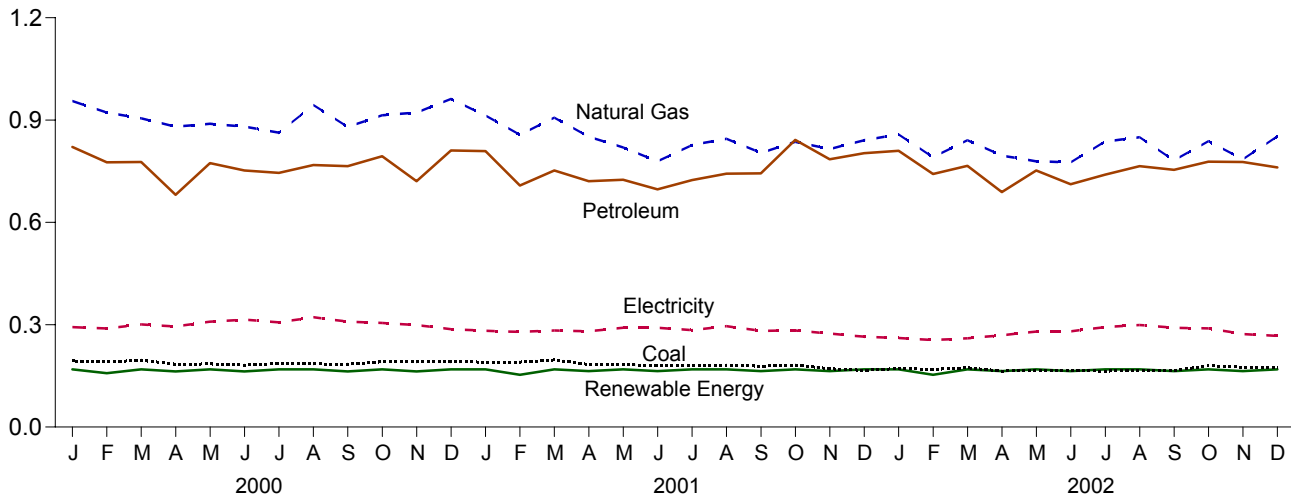
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.3.

Figure 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

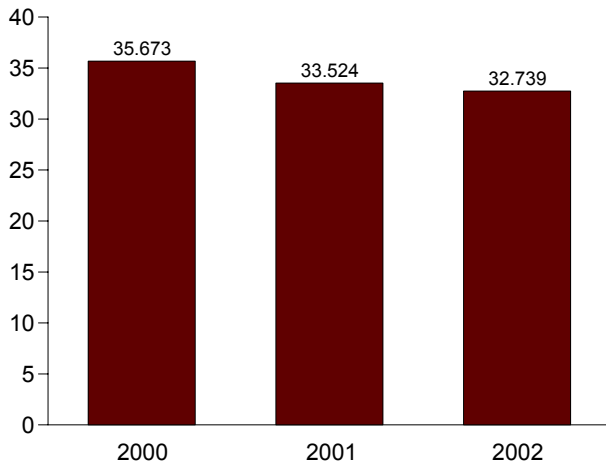
By Major Sources, 1973-2002



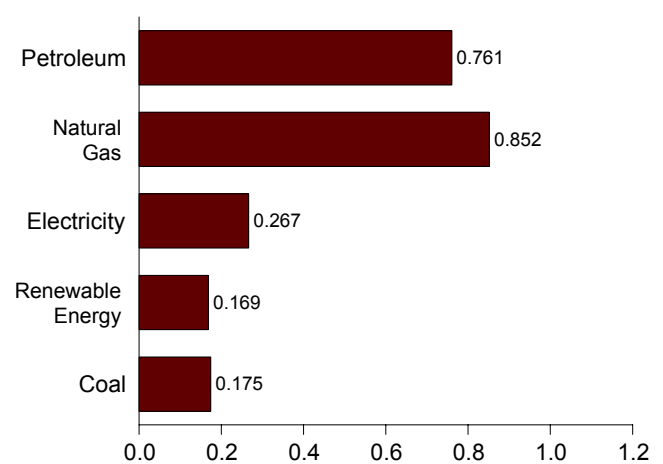
By Major Sources, Monthly



Total, January-December



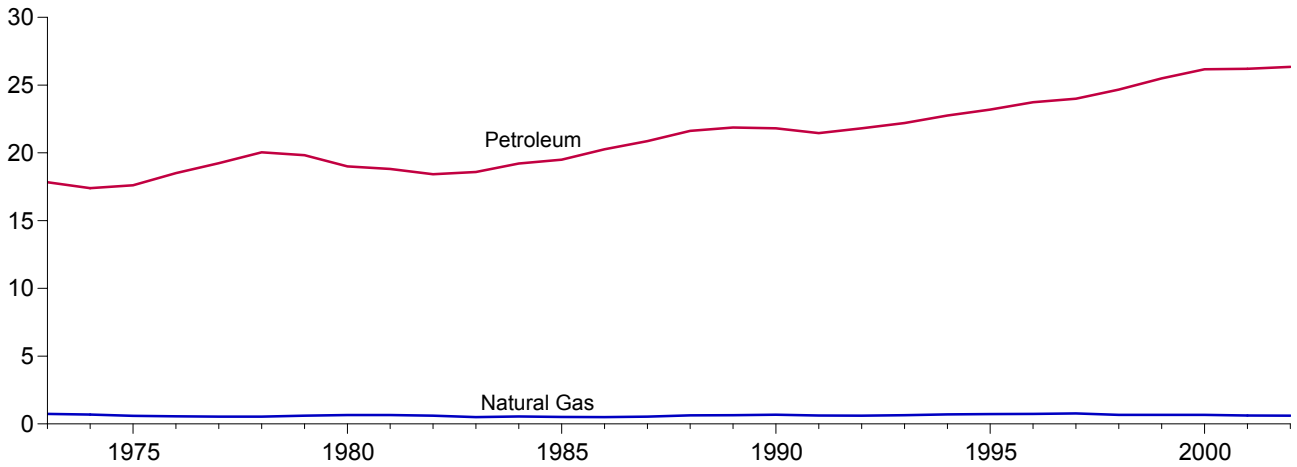
By Major Sources, December 2002



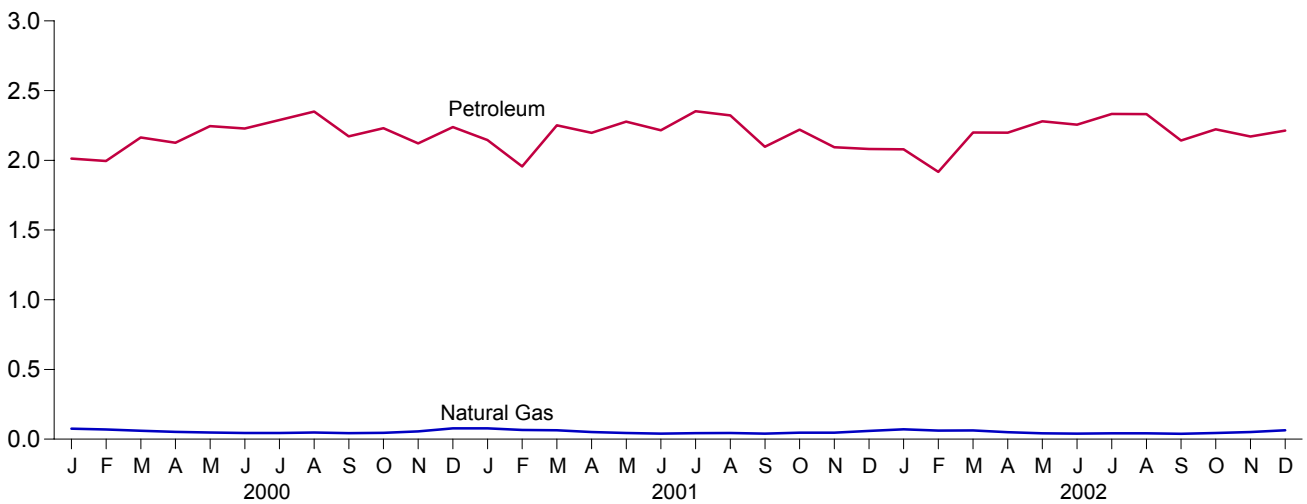
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.4.

Figure 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

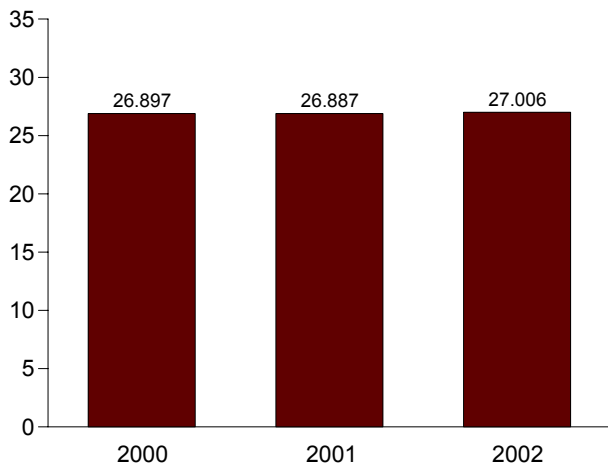
By Major Sources, 1973-2002



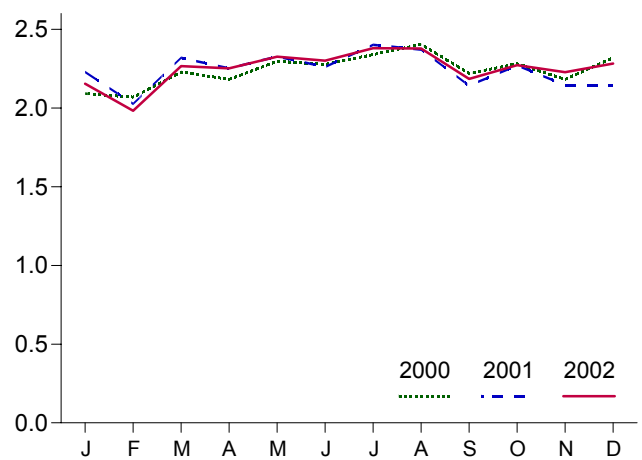
By Major Sources, Monthly



Total, January-December



Total, Monthly



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>
Source: Table 2.5.

Table 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

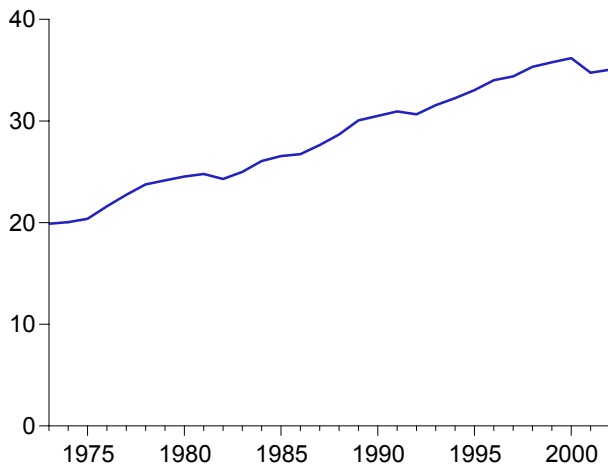
	Primary Consumption						Electricity ^d	Electrical System Energy Losses ^e	Total ^c
	Fossil Fuels ^a				Renewable Energy	Total Primary ^c			
	Coal	Natural Gas ^b	Petroleum	Total	Alcohol Fuels ^c				
1973 Total	0.003	0.743	17.831	18.576	NA	18.576	0.011	0.025	18.612
1974 Total .....	.002	.685	17.399	18.086	NA	18.086	.010	.024	18.119
1975 Total .....	.001	.595	17.614	18.209	NA	18.209	.010	.025	18.244
1976 Total	(s)	.559	18.506	19.065	NA	19.065	.010	.024	19.099
1977 Total	(s)	.543	19.241	19.784	NA	19.784	.010	.025	19.820
1978 Total	(f)	.539	20.041	20.580	NA	20.580	.010	.025	20.615
1979 Total	(f)	.612	19.825	20.436	NA	20.436	.010	.024	20.471
1980 Total	(f)	.650	19.008	19.658	NA	19.658	.011	.027	19.696
1981 Total	(f)	.658	18.811	19.469	.007	19.469	.011	.026	19.506
1982 Total	(f)	.612	18.420	19.032	.019	19.032	.011	.027	19.070
1983 Total	(f)	.505	18.593	19.098	.035	19.098	.013	.030	19.141
1984 Total	(f)	.545	19.216	19.761	.043	19.761	.014	.033	19.809
1985 Total	(f)	.519	19.504	20.023	.052	20.023	.014	.033	20.071
1986 Total	(f)	.499	20.269	20.768	.060	20.768	.015	.035	20.818
1987 Total	(f)	.535	20.870	21.405	.069	21.405	.016	.036	21.456
1988 Total	(f)	.632	21.629	22.261	.070	22.261	.016	.036	22.313
1989 Total	(f)	.649	21.868	22.517	.071	22.517	.016	.038	22.571
1990 Total	(f)	.680	21.808	22.488	.063	22.488	.016	.037	22.541
1991 Total	(f)	.620	21.456	22.077	.073	22.077	.016	.037	22.130
1992 Total	(f)	.606	21.812	22.419	.083	22.419	.016	.036	22.471
1993 Total	(f)	.643	22.201	22.844	.097	22.844	.016	.036	22.896
1994 Total	(f)	.707	22.760	23.467	.109	23.467	.017	.038	23.522
1995 Total	(f)	.722	23.199	23.921	.117	23.921	.017	.038	23.975
1996 Total	(f)	.734	23.735	24.469	.084	24.469	.017	.037	24.523
1997 Total	(f)	.776	23.993	24.770	.106	24.770	.017	.037	24.823
1998 Total	(f)	.662	24.675	25.336	.117	25.336	.017	.037	25.390
1999 Total	(f)	.669	25.494	26.164	.122	26.164	.017	.038	26.219
2000 January	(f)	.075	2.012	2.087	.012	2.087	.001	.003	2.091
February	(f)	.069	1.995	2.064	.010	2.064	.001	.003	2.069
March	(f)	.060	2.164	2.224	.012	2.224	.001	.003	2.229
April	(f)	.052	2.126	2.178	.010	2.178	.001	.003	2.182
May	(f)	.048	2.245	2.292	.012	2.292	.002	.003	2.297
June	(f)	.044	2.228	2.272	.009	2.272	.002	.003	2.277
July	(f)	.044	2.289	2.334	.011	2.334	.002	.003	2.339
August	(f)	.048	2.350	2.399	.012	2.399	.002	.004	2.404
September	(f)	.043	2.172	2.214	.011	2.214	.002	.003	2.219
October	(f)	.045	2.231	2.276	.013	2.276	.002	.003	2.281
November	(f)	.056	2.122	2.178	.013	2.178	.001	.003	2.182
December	(f)	.077	2.238	2.315	.014	2.315	.001	.003	2.319
Total	(f)	.670	26.171	26.840	.139	26.840	.018	.039	26.897
2001 January	(f)	R .077	2.146	R 2.223	.015	R 2.223	.002	.003	R 2.228
February	(f)	R .066	1.956	R 2.022	.012	R 2.022	.001	.003	R 2.026
March	(f)	R .064	2.251	R 2.315	.012	R 2.315	.002	.003	R 2.319
April	(f)	R .051	2.197	R 2.248	.011	R 2.248	.001	.003	R 2.252
May	(f)	.044	2.278	2.322	.011	2.322	.002	.003	2.327
June	(f)	.040	2.215	2.255	.012	2.255	.002	.004	2.261
July	(f)	R .043	2.352	R 2.395	.011	R 2.395	.002	.004	R 2.401
August	(f)	R .044	2.322	R 2.366	.010	R 2.366	.002	.004	R 2.371
September	(f)	R .040	2.097	R 2.136	.012	R 2.136	.002	.003	R 2.142
October	(f)	.046	2.220	2.265	.016	2.265	.002	.003	2.270
November	(f)	R .047	2.094	R 2.141	.013	R 2.141	.002	.003	R 2.145
December	(f)	R .059	2.081	R 2.140	.013	R 2.140	.001	.003	R 2.145
Total	(f)	R .619	26.209	R 26.829	.147	R 26.829	.020	.039	R 26.887
2002 January	(f)	R .071	R 2.079	R 2.150	.013	R 2.150	.001	.003	R 2.154
February	(f)	R .061	R 1.917	R 1.978	.012	R 1.978	.001	.003	1.983
March	(f)	R .062	2.200	2.261	.012	2.261	.001	.003	2.266
April	(f)	R .050	2.198	R 2.247	.012	R 2.247	.001	.003	2.252
May	(f)	.042	2.280	2.322	.014	2.322	.001	.003	R 2.326
June	(f)	R .040	R 2.256	2.296	.012	2.296	.002	.003	2.301
July	(f)	.042	R 2.333	2.375	.015	2.375	.002	.003	2.380
August	(f)	.042	R 2.331	2.373	.014	2.373	.002	.003	2.378
September	(f)	.038	R 2.142	2.181	.015	2.181	.002	.003	R 2.185
October	(f)	.044	R 2.223	R 2.267	.017	R 2.267	.002	.003	2.272
November	(f)	R .051	R 2.171	R 2.222	.020	R 2.222	R .001	.003	R 2.227
December	(f)	F .064	2.213	E 2.277	.019	2.277	.002	.003	2.282
Total	(f)	E .607	26.344	E 26.951	.174	R 26.951	.018	.036	27.006

^a Most nonutility use of fossil fuels to produce electricity is included in the end-use sectors. See Note 2 at end of section.
^b Includes natural gas consumed in the operation of pipelines (primarily in compressors). For 1990-1999, annual values also include natural gas used by vehicles, whereas monthly values do not. See Table 4.4.
^c Alcohol (ethanol blended into motor gasoline) is included in both "Petroleum" and "Alcohol Fuels," but is counted only once in both total primary consumption and total consumption.
^d Electric utility retail sales of electricity, including nonutility sales of electricity to utilities for distribution to end users; does not include nonutility facility use of onsite

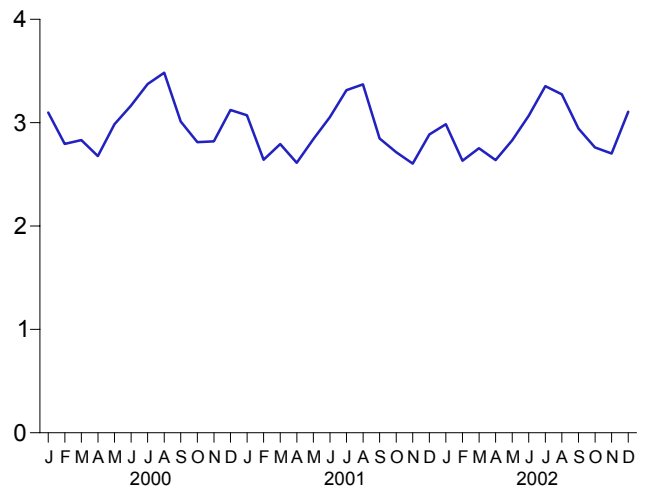
electricity generation or electricity sold by nonutilities directly to end users.
^e See Note 12 at end of Section.
^f Since 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.
R=Revised. NA=Not available. E=Estimate. F=Forecast. (s)=Less than 0.5 trillion Btu.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Additional Notes and Sources: See end of section.

Figure 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

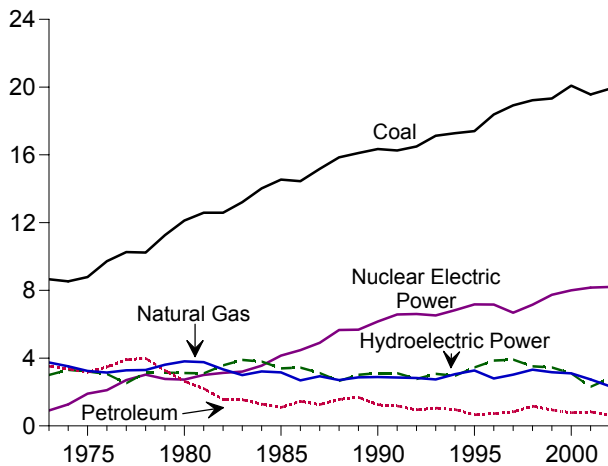
Total, 1973-2002



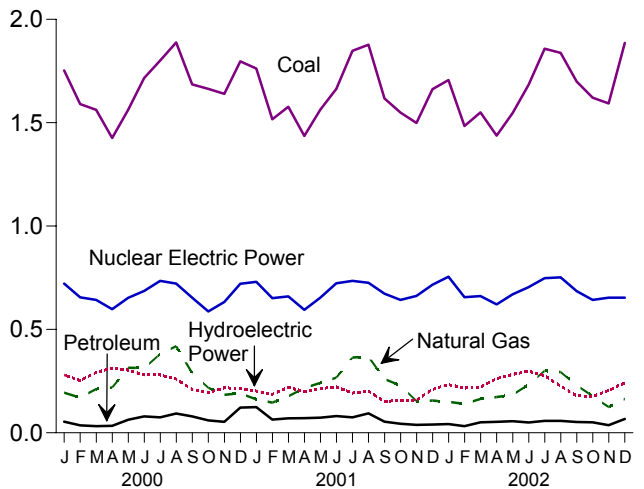
Total, Monthly



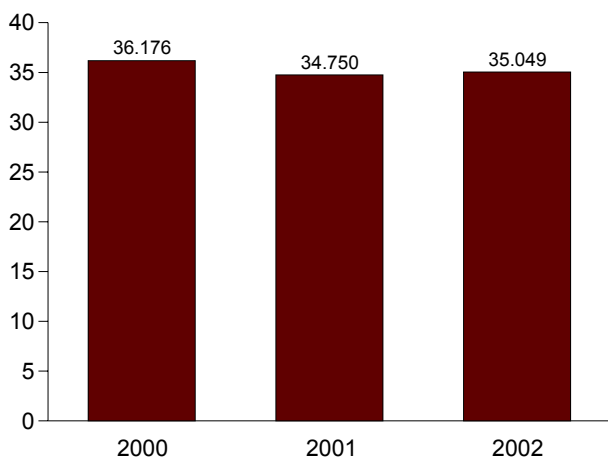
By Major Sources, 1973-2002



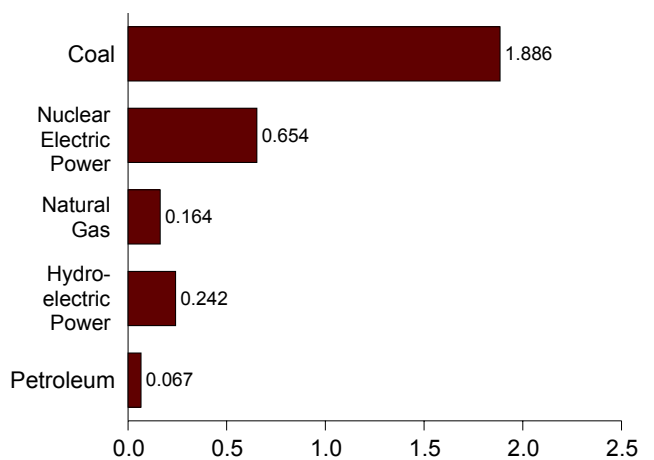
By Major Sources, Monthly



Total, January-December



By Major Sources, December 2002



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.6.

Energy Consumption by Sector

Most of the data in this section of the *Monthly Energy Review (MER)* are developed from a group of energy-related surveys, typically called “supply surveys,” conducted by the Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, or the quantities supplied to the market, or both. The data obtained from EIA’s supply surveys are integrated to yield the summary consumption statistics published in this section (and in Section 1) of the *MER*.

Users of EIA’s energy consumption statistics should be aware of a second group of energy-related surveys, typically called “consumption surveys.” Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be associated with energy use. For example, the Manufacturing Energy Consumption Survey belongs to the consumption survey group because it collects information directly from end users (the manufacturing establishments). There are important differences between the supply and consumption surveys that need to be taken into account in any analysis that uses both data sources. For information on those differences, see *Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533, Energy Information Administration, Washington, DC, April 6, 1990.

Note 1. Energy Consumption:

Primary Consumption: Includes consumption in the five energy-use sectors (residential, commercial, industrial, transportation, and electric power) of fossil fuels (coal, natural gas, and petroleum), some secondary energy derived from fossil fuels (supplemental gaseous fuels, coal coke net imports, and electricity net imports from fossil fuels), nuclear electric power, pumped-storage hydroelectric power, and renewable energy. Renewable energy consumption includes: end-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, and solar thermal direct use and photovoltaic energy; electric utility and nonutility net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind; and net imports of electricity from hydroelectric power and geothermal energy.

Total Consumption: In addition to primary consumption in the four end-use sectors (residential, commercial, industrial, and transportation), includes: electric utility retail sales of electricity, including nonutility sales of electricity to utilities for distribution to end users; and electrical system energy losses (see Note 12).

Note 2. Energy-Use Sectors: Energy use is assigned to the five major economic sectors, as closely as possible, following the guidelines below.

Note: Most consumption of fossil fuels at nonutility power producers is included in the end-use sectors, mainly industrial. For further information on nonutility consumption of fossil fuels, see Note 4 (“Coal”), Note 6 (“Natural Gas”), and Note 7 (“Petroleum”).

Residential Sector—An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters.

Commercial Sector—An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment.

Industrial Sector—An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing; agriculture, forestry, and fisheries; mining; and construction. Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products.

Transportation Sector—An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use.

Electric Power Sector—An energy-consuming sector that consists of all utility and nonutility facilities and equipment used to generate, transmit, and/or distribute electricity.

Although the energy-use allocations are made according to these aggregations as closely as possible, some data are collected by using different classifications. For example, electric utilities may classify commercial and industrial users by the quantity of electricity purchased rather than by the business activity of the purchaser. Natural gas used in agriculture, forestry, and fisheries was collected and reported in the commercial sector through 1995. Beginning with 1996 data, deliveries of natural gas for agriculture, forestry, and fisheries are reported in the industrial sector

instead. Another example is master-metered condominiums and apartments, and buildings with a combination of residential and commercial units. In many cases, the metering and billing practices cause residential energy usage of electricity, natural gas, or fuel oil to be included in the commercial sector. No adjustments for these discrepancies were made.

Note 3. Conversion Factors: See Appendix A.

Note 4. Coal: See Tables 6.2 and A5.

Note: Coal consumed by “Other Power Producers” (nonutility wholesale producers of electricity, and some nonutility cogeneration plants), is included in the electric power sector (see Table 6.2). Coal consumed by nonutilities not included in “Other Power Producers” is included in the end-use sectors, mainly industrial.

Note 5. Coal Coke Net Imports: Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports.

Note: Coal coke net imports are included in the industrial sector.

Sources:

1973–1975: DOI, BOM, *Minerals Yearbook*, “Coke and Coal Chemicals” chapter.

1976–1980: EIA, *Energy Data Report*, “Coke and Coal Chemicals” annual.

1981: EIA, *Energy Data Report*, “Coke Plant Report,” quarterly.

1982 forward: *Quarterly Coal Report*.

Note 6. Natural Gas: See Tables 4.4 and A4.

Note: Natural gas consumed by nonutility power producers is included in the end-use sectors, mainly industrial.

For Section 2 calculations, lease and plant fuel consumption are included in the industrial sector, and pipeline fuel use of natural gas is included in the transportation sector.

Residential and commercial monthly sales data for 1973–1979, which are used to estimate monthly consumption values from EIA annual consumption values, are from the American Gas Association, “Monthly Gas Utility Statistical Report.”

Note 7. Petroleum: Petroleum consumption in this section of the *Monthly Energy Review (MER)* is the series called “petroleum product supplied” from Section 3.

Note: Petroleum consumed by nonutility power producers is included in the end-use sectors, mainly industrial.

The sources for petroleum product supplied by product are:

1973–1975: DOI, BOM, *Mineral Industry Surveys*, “Petroleum Statement, Annual.”

1976–1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual.”

1981–2001: EIA, *Petroleum Supply Annual*.

2002 forward: EIA, *Petroleum Supply Monthly*.

Energy-use allocation procedures by individual product are described below.

Aviation Gasoline—All aviation gasoline use is assigned to the transportation sector.

Asphalt—All asphalt use is assigned to the industrial sector.

Distillate Fuel—Distillate fuel use is assigned to the energy-use sectors as described below.

Distillate Fuel Used by Electric Utilities, All Time Periods—For 1973–1979, consumption of distillate fuel is assumed to be the amount of petroleum (minus small amounts of kerosene and kerosene-type jet fuel deliveries) consumed in gas turbine and internal combustion plants. For 1980 forward, consumption of distillate fuel is assumed to be the amount of light oil (minus small amounts of kerosene deliveries through 1982) consumed at electric utilities. Source: Table 7.7.

Distillate Fuel Used by Sectors Other Than Electric Utilities, Annually Through 1997—The aggregate nonutility use of distillate fuel is total distillate fuel supplied minus the electric utility consumption. The nonutility annual consumption totals are allocated to the individual nonutility sectors (residential, commercial, industrial, and transportation) in proportion to the share of “adjusted sales” of each end-use sector, as reported in EIA’s *Fuel Oil and Kerosene Sales* report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172. “Adjusted sales” are sales that have been adjusted at the PAD district level to equal EIA volume estimates of petroleum products supplied in the U.S. market. Following are notes on the individual sector groupings:

Since 1979, the residential sector adjusted sales total is directly from the *Sales* reports. Prior to 1979, each year’s sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the commercial sector adjusted sales total is directly from the *Sales* reports. Prior to 1979, each year’s sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the industrial sector adjusted sales total is the sum of the adjusted sales for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, each year’s sales subtotal of the heating plus industrial category

is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

The transportation sector adjusted sales total is the sum of the adjusted sales for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

Distillate Fuel Used by Sectors Other Than Electric Utilities, Monthly Through 1997—Residential and commercial monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. The years' sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983–1997, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

The transportation highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." After 1993, the sales-for-highway-use data are no longer available as a monthly series; the 1993 data are used for allocating succeeding year's totals into months. The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.

Industrial monthly estimates are made by subtracting the residential and commercial, transportation, and electric utility sector estimates from each month's total distillate fuel consumption.

Distillate Fuel Used by Sectors Other Than Electric Utilities, 1998 Forward—Each month's nonutility consumption subtotal is disaggregated into sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1997.

Jet Fuel—Through 1982, small amounts of kerosene-type jet fuel were consumed by electric utilities. Kerosene-type jet fuel deliveries to electric utilities as reported on the Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.

Kerosene—Kerosene use is allocated to the sectors in proportion to annual sales grouped into sectors from EIA's *Fuel Oil and Kerosene Sales* reports (based primarily on data collected by Form EIA-821, previously Form EIA-172).

Residential deliveries are taken directly from the *Sales* reports for 1979–1997. Sales for 1997 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Commercial sales are directly from the *Sales* reports for 1979–1997. Sales for 1997 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Industrial sales are directly from the *Sales* reports for 1979–1997. Sales for 1997 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

Liquefied Petroleum Gases (LPG)—The annual shares of LPG's total consumption that are estimated to be used by each sector are applied to each month's total LPG consumption to create monthly sector consumption estimates. The annual sector shares are calculated as described below.

Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the sector.

The quantity of LPG sold each year for consumption in internal combustion engines is allocated between the transportation and industrial sectors on the basis of data for special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration, in *Highway Statistics*. The allocations of LPG sold for internal combustion engine use to the transportation sector range from a low of 28 percent (in 1997) to a high of 73 percent (in 1994).

LPG consumed annually by the industrial sector is estimated as the difference between LPG total supplied and the estimated consumption of LPG by the sum of the residential and commercial sector and the transportation sector. The industrial sector includes LPG used by chemical plants as raw materials or solvents and used in the production of synthetic rubber; refinery fuel use; use as synthetic natural gas feedstock and use in secondary recovery projects; all farm use; LPG sold to gas utility companies for distribution through the mains; and a portion of the use of LPG as an internal combustion engine fuel.

Sources of the annual sales data for creating annual energy shares are:

1973–1982: EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.

1983: End-use consumption estimates for 1983 are based on 1982 end-use consumption because the collection of data under Form EIA-174 was discontinued after data year 1982. 1984–forward: American Petroleum Institute (API), “Sales of Natural Gas Liquids and Liquefied Refinery Gases,” which is based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association. EIA adjusts the data to remove quantities of pentanes plus and to estimate withheld values.

Lubricants—The consumption of lubricants is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to the two sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, “Sales of Lubricating and Industrial Oils and Greases.” The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

Motor Gasoline—The total monthly consumption of motor gasoline is allocated to the sectors in proportion to aggregations of annual sales categories created on the basis of the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24, and MF-25, as follows:

Commercial sales are the sum of sales for public non-highway use and miscellaneous and unclassified uses.

Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics*.

Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.

Petroleum Coke—A portion of petroleum coke is consumed by electric utilities, as reported on Form EIA-759, “Monthly Power Plant Report” (formerly Form FPC-4). The remaining petroleum coke is assigned to the industrial sector.

Residual Fuel—Residual fuel use is assigned to the sectors as described below.

Residual Fuel Used by Electric Utilities, All Time Periods—For 1973–1979, consumption of residual fuel is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980 forward, consumption of residual fuel is assumed to be the amount of heavy oil consumed at electric utilities. Source: Table 7.7.

Residual Fuel Used by Sectors Other Than Electric Utilities, Annually Through 1997—The aggregate nonutility use of residual fuel is total residual fuel consumption minus

the electric utility consumption. The nonutility annual totals are allocated into the individual nonutility sectors in proportion to the amount of residual fuel sold to end users, grouped into sectors from EIA’s *Fuel Oil and Kerosene Sales* reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

Since 1979, commercial sales data are directly from the *Sales* reports. Prior to 1979, each year’s sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares.

Since 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Prior to 1979, each year’s sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to oil company and all other uses.

Transportation sales are the sum of sales for railroad, vessel bunkering, and military uses for all years.

Residual Fuel Used by Sectors Other Than Electric Utilities, Monthly Through 1997—Commercial monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month’s share of the year’s sales of No. 2 heating oil. The years’ sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983–1996, EIA, Form EIA-782A, “Refiners’/Gas Plant Operators’ Monthly Petroleum Product Sales Report,” No. 2 Fuel Oil Sales to End Users and for Resale.

Transportation monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusting for the number of days per month.

Industrial monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month’s total residual fuel supplied.

Residual Fuel Used by Sectors Other Than Electric Utilities, 1998 Forward—Each month’s nonutility consumption subtotal is disaggregated into the sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1997.

Road Oil—Road oil use is assigned to the industrial sector.

All Other Petroleum Products—Consumption of all remaining petroleum products is assigned to the industrial sector.

Note 8. Nuclear Electric Power—See Tables 8.1 and A6.

Note: Nuclear electric power is included in the electric power sector.

Note 9. Hydroelectric Pumped Storage—See Tables 7.2 and A6.

Note: Pumped-storage hydroelectric power is included in the electric power sector.

Note 10. Renewable Energy—See Tables 10.2, 10.3a, and 10.3b.

Note: End-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, and solar thermal direct use and photovoltaic energy is included in the end-use sectors. Included in the electric power sector are: electric utility and nonutility net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind; and net imports of electricity from hydroelectric power and geothermal energy.

Note 11. Electricity: End-use consumption of electricity is based on data from Table 7.5 for electric utility retail sales of electricity (which include nonutility sales of electricity to utilities for distribution to end users, but do not include nonutility facility use of onsite electricity generation or electricity sold by nonutilities directly to end users). “Other,” which is primarily for use in government buildings, is added to the commercial sector, except for approximately 5 percent used by railroads and railways and attributed to the transportation sector. Kilowatthours are converted to Btu at the rate of 3,412 Btu per kilowatthour.

Note 12. Electrical System Energy Losses: Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector—see Table 2.6—and the total energy content of electric utility retail sales of electricity (which include nonutility sales of electricity to utilities for distribution to end users, but do not include nonutility facility use of onsite electricity generation or electricity sold by nonutilities directly to end users)—see Tables 7.5 and A6. Most of these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called “line losses”), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector’s share of total electricity sales. Overall, approximately 67 percent of total energy input is lost in conversion; of electricity generated, approximately 5 percent is lost in plant use and 9 percent is lost in transmission and distribution. Calculated electrical system energy losses may be less than actual losses, because primary consumption does not include the energy equivalent of utility purchases of electricity from non-electric utilities and from Canada and Mexico, although they are included in electricity sales.

Section 3. Petroleum

Total petroleum imports¹ averaged 10.7 million barrels per day in February 2003, 2 percent lower than the previous month's rate and slightly lower than the February 2002 rate.

In February 2003, 19.9 million barrels per day of petroleum products were supplied for domestic use, 2 percent higher than the February 2002 rate. Motor gasoline accounted for 42 percent of the total; distillate fuel oil, 22 percent; and kerosene-type jet fuel, 8 percent.

Motor gasoline product supplied during February 2003 averaged 8.4 million barrels per day, 1 percent lower than the previous month's rate and 2 percent lower than the February 2002 rate. Total motor gasoline stocks were 206 million barrels at the end of February 2003, 6 million barrels below the stock level in the previous month and 12 million barrels below the level 1 year earlier.

Distillate fuel oil product supplied during February 2003 averaged 4.4 million barrels per day, 2 percent higher than the previous month's rate and 18 percent higher than the February 2002 rate. Distillate fuel oil ending stocks for February 2003 were 97 million barrels, 15 million barrels below the stock level in the previous month and 33 million barrels below the level 1 year earlier.

Kerosene-type jet fuel product supplied in February 2003 averaged 1.5 million barrels per day, 2 percent higher than the previous month's rate and 1 percent higher than the February 2002 rate. Kerosene-type jet fuel stocks measured 39 million barrels at the end of February 2003, 2 million barrels below the stock level in both the previous month and 1 year earlier.

Estimates (except of crude production) for the most current month are based on Energy Information Administration (EIA) weekly data and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on historical and provisional data through November 2002.

¹Total import data include imports into the Strategic Petroleum Reserve.

Table 3.1a Petroleum Overview: Field Production, Stock Change, Petroleum Products Supplied, and Stocks

	Field Production			Stock Change ^a		Petroleum Products Supplied	Stocks ^b
	Total Domestic ^c	Crude Oil	Natural Gas Plant Liquids	Crude Oil ^d	Petroleum Products		Crude Oil ^d and Petroleum Products
	Thousand Barrels per Day						Million Barrels
1973 Average	10,975	9,208	1,738	-11	146	17,308	1,008
1974 Average	10,498	8,774	1,688	62	117	16,653	^e 1,074
1975 Average	10,045	8,375	1,633	^e 17	^e 15	16,322	1,133
1976 Average	9,774	8,132	^f 1,604	39	-96	17,461	1,112
1977 Average	9,913	8,245	1,618	170	378	18,431	1,312
1978 Average	10,328	8,707	1,567	78	-172	18,847	1,278
1979 Average	10,179	8,552	1,584	148	25	18,513	1,341
1980 Average	10,214	8,597	1,573	98	42	17,056	^e 1,392
1981 Average	10,230	8,572	1,609	^e 290	^e -130	16,058	1,484
1982 Average	10,252	8,649	1,550	136	-283	15,296	^e 1,430
1983 Average	10,299	8,688	1,559	^e 214	^e -234	15,231	1,454
1984 Average	10,554	8,879	1,630	199	81	15,726	1,556
1985 Average	10,636	8,971	1,609	50	-153	15,726	1,519
1986 Average	10,289	8,680	1,551	78	124	16,281	1,593
1987 Average	10,008	8,349	1,595	128	-87	16,665	1,607
1988 Average	9,818	8,140	1,625	1	-29	17,283	1,597
1989 Average	9,219	7,613	1,546	86	-129	17,325	1,581
1990 Average	8,994	7,355	1,559	-35	142	16,988	1,621
1991 Average	9,168	7,417	1,659	-42	32	16,714	1,617
1992 Average	8,996	7,171	1,697	-1	-68	17,033	^e 1,592
1993 Average	9,836	6,847	1,736	81	^e 70	17,237	^e 1,647
1994 Average	8,645	6,662	1,727	18	-2	17,718	1,653
1995 Average	8,626	6,560	1,762	-93	-153	17,725	1,563
1996 Average	8,607	6,465	1,830	^E -124	-28	18,309	1,507
1997 Average	8,611	6,452	1,817	51	93	18,620	1,560
1998 Average	8,392	6,252	1,759	74	165	18,917	1,647
1999 Average	8,107	5,881	1,850	-118	-304	19,519	1,493
2000 Average	8,110	5,822	1,911	-70	(s)	19,701	1,468
2001 January	7,528	5,799	1,398	317	38	20,092	1,479
February	7,891	5,780	1,732	-424	223	19,689	1,473
March	8,127	5,880	1,833	861	-501	19,876	1,484
April	8,062	5,863	1,831	736	513	19,729	1,522
May	8,146	5,829	1,912	-42	1,130	19,501	1,555
June	8,062	5,766	1,908	-671	929	19,561	1,563
July	8,066	5,749	1,899	164	7	19,919	1,568
August	8,062	5,725	1,955	-160	-488	20,153	1,548
September	8,128	5,709	2,034	79	944	19,016	1,579
October	8,164	5,746	2,025	142	-205	19,824	1,577
November	8,274	5,881	2,001	36	323	19,396	1,588
December	8,131	5,887	1,889	87	-133	19,003	1,586
Average	8,054	5,801	1,868	99	227	19,649	1,586
2002 January	8,155	5,934	1,834	414	-207	19,170	1,592
February	8,190	5,938	1,898	424	-979	19,475	1,576
March	8,167	5,914	1,897	198	-379	19,516	1,571
April	8,233	5,887	1,918	-42	656	19,419	1,589
May	8,306	5,908	1,937	193	524	19,678	1,611
June	8,181	5,887	1,872	-140	197	19,810	1,613
July	8,023	5,773	1,848	-369	270	19,847	1,610
August	8,216	5,827	1,933	-136	-327	20,134	1,596
September	7,719	5,378	1,902	-683	-36	19,416	1,574
October	7,957	5,671	1,878	769	-807	19,593	1,573
November	8,149	5,792	1,896	77	78	19,940	1,578
December	8,083	5,894	1,761	-215	-658	19,859	1,550
Average	8,115	5,817	1,881	40	-136	19,656	1,550
2003 January	^{RE} 8,030	^{RE} 5,842	^R 1,756	^R -148	^R -1,348	^R 20,042	^R 1,504
February	^E 8,251	^{PE} 5,900	^E 1,891	^E -22	^E -839	^E 19,938	^E 1,493
2-Month Average	^E 8,135	^{PE} 5,869	^E 1,820	^E -89	^E -1,106	^E 19,993	^E 1,493
2002 2-Month Average	8,171	5,936	1,864	419	-573	19,315	1,576
2001 2-Month Average	7,700	5,790	1,557	-35	125	19,901	1,473

^a A negative number indicates a decrease in stocks and a positive number indicates an increase. Distillate stocks in the "Northeast Heating Oil Reserve" are not included.

^b Stocks are at end of period. Distillate stocks in the "Northeast Heating Oil Reserve" are not included.

^c Includes crude oil, natural gas plant liquids, and other liquids.

^d Includes stocks located in the Strategic Petroleum Reserve.

^e See Note 4 at end of section.

^f See Note 6 at end of section.

^g Beginning in 1993, includes fuel ethanol blended into finished motor

gasoline and oxygenate production from merchant MTBE (methyl tertiary butyl ether) plants.

PE=Preliminary estimate. R=Revised. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Notes: • Crude oil includes lease condensate. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S1. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S1.

Table 3.1b Petroleum Overview: Imports, Exports, and Net Imports

	Imports			Exports			Net Imports ^b
	Total	Crude Oil ^a	Petroleum Products	Total	Crude Oil	Petroleum Products	
Thousand Barrels per Day							
1973 Average	6,256	3,244	3,012	231	2	229	6,025
1974 Average	6,112	3,477	2,635	221	3	218	5,892
1975 Average	6,056	4,105	1,951	209	6	204	5,846
1976 Average	7,313	5,287	2,026	223	8	215	7,090
1977 Average	8,807	6,615	2,193	243	50	193	8,565
1978 Average	8,363	6,356	2,008	362	158	204	8,002
1979 Average	8,456	6,519	1,937	^c 471	235	^c 236	^c 7,985
1980 Average	6,909	5,263	1,646	544	287	258	6,365
1981 Average	5,996	4,396	1,599	595	228	367	5,401
1982 Average	5,113	3,488	1,625	815	236	579	4,298
1983 Average	5,051	3,329	1,722	739	164	575	4,312
1984 Average	5,437	3,426	2,011	722	181	541	4,715
1985 Average	5,067	3,201	1,866	781	204	577	4,286
1986 Average	6,224	4,178	2,045	785	154	631	5,439
1987 Average	6,678	4,674	2,004	764	151	613	5,914
1988 Average	7,402	5,107	2,295	815	155	661	6,587
1989 Average	8,061	5,843	2,217	859	142	717	7,202
1990 Average	8,018	5,894	2,123	857	109	748	7,161
1991 Average	7,627	5,782	1,844	1,001	116	885	6,626
1992 Average	7,888	6,083	1,805	950	89	861	6,938
1993 Average	8,620	6,787	1,833	1,003	98	904	7,618
1994 Average	8,996	7,063	1,933	942	99	843	8,054
1995 Average	8,835	7,230	1,605	949	95	855	7,886
1996 Average	9,478	7,508	1,971	981	110	871	8,498
1997 Average	10,162	8,225	1,936	1,003	108	896	9,158
1998 Average	10,708	8,706	2,002	945	110	835	9,764
1999 Average	10,852	8,731	2,122	940	118	822	9,912
2000 Average	11,459	9,071	2,389	1,040	50	990	10,419
2001 January	12,555	8,933	3,623	954	18	936	11,601
February	11,643	8,609	3,035	1,004	24	980	10,639
March	12,132	9,603	2,530	938	37	901	11,194
April	12,653	10,111	2,542	942	5	937	11,711
May	12,529	9,885	2,644	1,069	64	1,005	11,461
June	11,732	9,105	2,627	976	15	960	10,756
July	11,760	9,552	2,208	879	11	868	10,881
August	11,622	9,383	2,239	1,048	28	1,020	10,573
September	11,818	9,339	2,478	825	8	817	10,993
October	11,379	9,211	2,168	946	11	935	10,432
November	11,628	9,320	2,309	960	9	951	10,669
December	10,994	8,839	2,154	1,109	12	1,097	9,885
Average	11,871	9,328	2,543	971	20	951	10,900
2002 January	10,847	8,646	2,201	861	11	850	9,986
February	10,769	8,642	2,127	1,123	4	1,118	9,646
March	10,957	8,650	2,307	853	8	845	10,104
April	11,524	9,140	2,384	890	8	882	10,635
May	11,612	9,205	2,407	910	7	903	10,702
June	11,532	9,228	2,304	880	5	874	10,653
July	11,294	9,010	2,284	839	33	806	10,455
August	11,821	9,545	2,276	1,138	9	1,129	10,683
September	11,029	8,796	2,233	1,015	7	1,008	10,014
October	11,745	9,495	2,250	962	4	958	10,783
November	12,142	9,561	2,580	1,026	10	1,016	11,115
December	10,987	8,619	2,369	1,272	2	1,270	9,715
Average	11,358	9,047	2,311	980	9	971	10,378
2003 January	^R 11,008	^R 8,547	^R 2,461	^R 1,212	10	^R 1,202	^R 9,796
February	^E 10,744	^E 8,256	^E 2,488	^E 906	^E 10	^E 896	^E 9,838
2-Month Average	^E 10,883	^E 8,409	^E 2,474	^E 1,067	^E 10	^E 1,057	^E 9,816
2002 2-Month Average	10,810	8,644	2,166	985	8	977	9,825
2001 2-Month Average	12,122	8,779	3,344	978	21	957	11,145

^a Includes crude oil for storage in the Strategic Petroleum Reserve.

^b Net imports equals imports minus exports.

^c See Note 6 at end of section.

R=Revised. E=Estimate.

Notes: • Crude oil includes lease condensate. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the

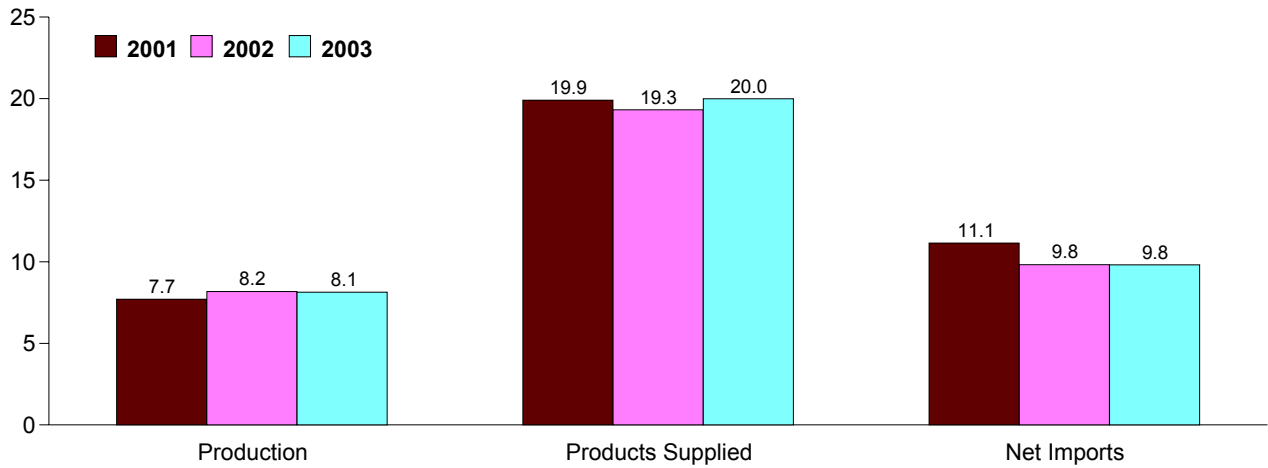
50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

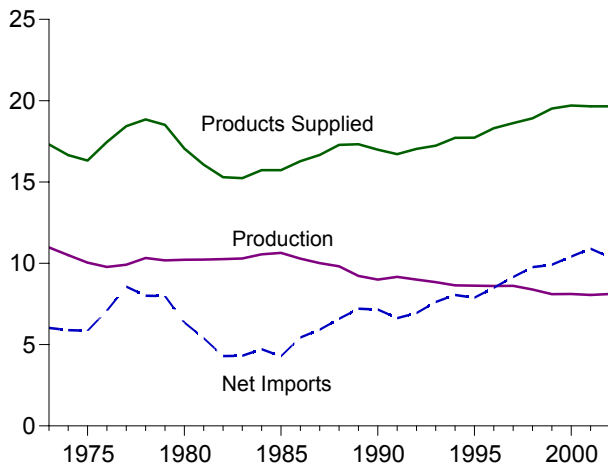
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S1. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S1.

Figure 3.1a Petroleum Overview
(Million Barrels per Day)

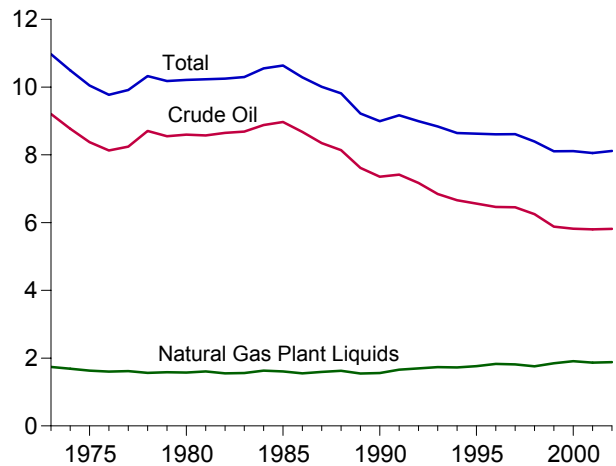
Overview, January-February



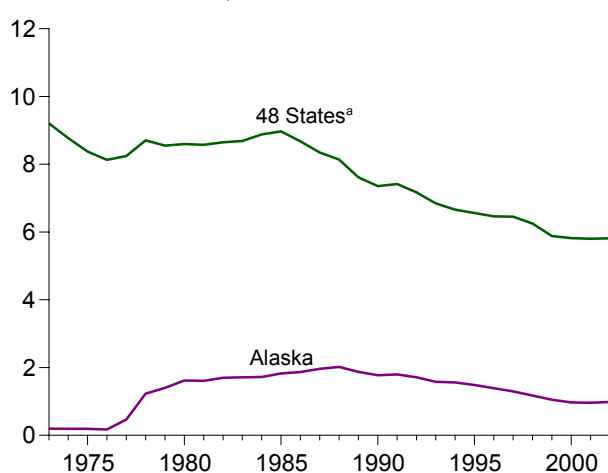
Overview, 1973-2002



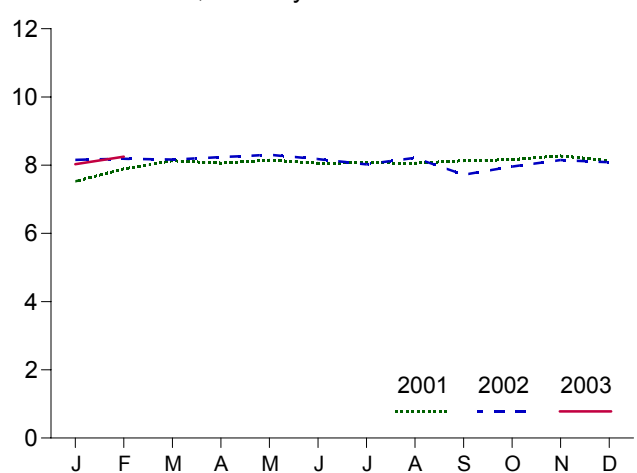
Production, 1973-2002



Crude Oil Production, 1973-2002



Total Production, Monthly

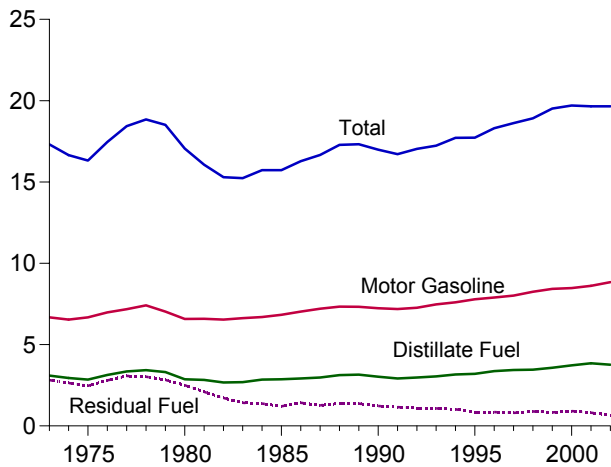


^aUnited States excluding Alaska and Hawaii.
Note: Because vertical scales differ, graphs should not be compared.

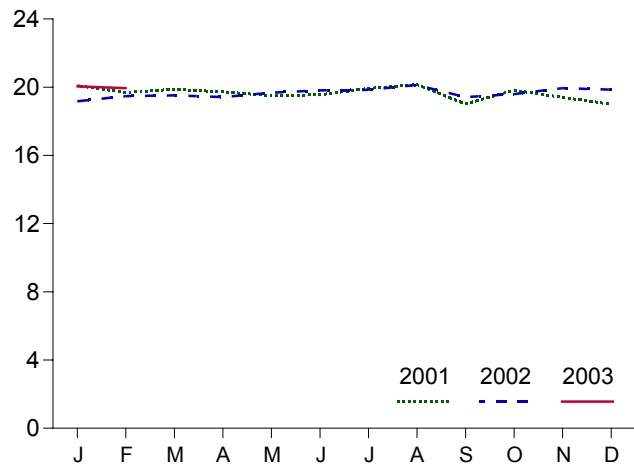
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.
Sources: Tables 3.1a, 3.1b, and 3.2a.

Figure 3.1b Petroleum Overview
(Million Barrels per Day, Except as Noted)

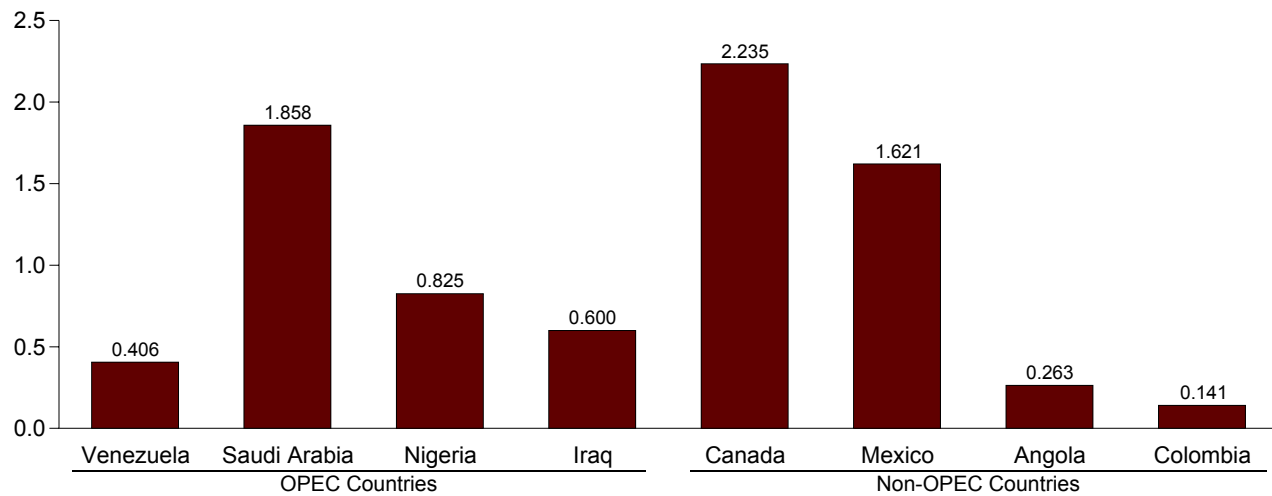
Products Supplied, 1973-2002



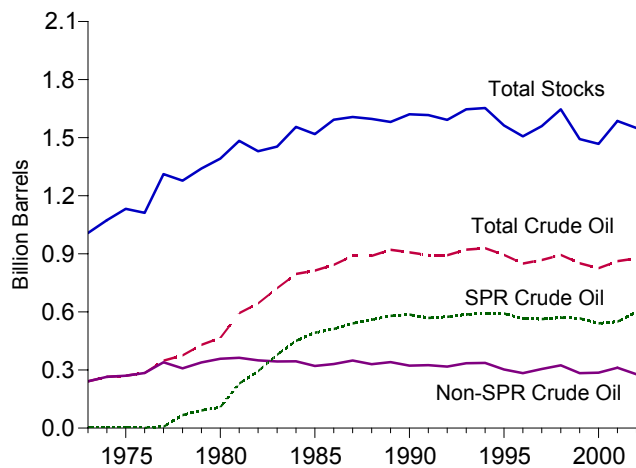
Products Supplied, Monthly



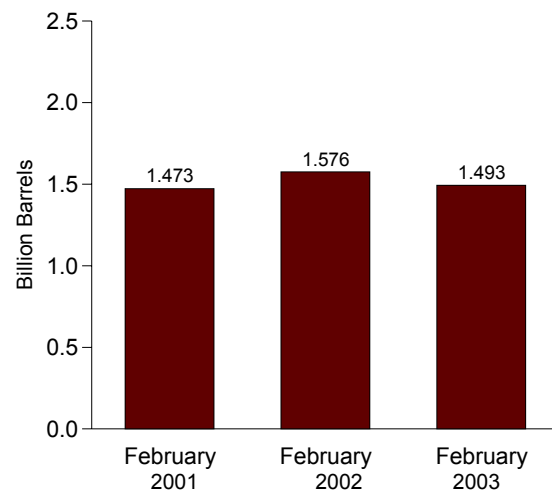
Imports from Selected Countries, January 2003



Stocks, End of Year, 1973-2002



Total Stocks, End of Month



Notes: • OPEC=Organization of Petroleum Exporting Countries. • SPR=Strategic Petroleum Reserves. • Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.
Sources: Tables 3.1a, 3.2b, 3.3a, 3.3b, 3.3d, 3.3e, 3.3f, 3.4, 3.5, and 3.6.

Table 3.2a Crude Oil Supply and Disposition: Supply

	Supply						
	Field Production		Imports			Unaccounted-for Crude Oil ^b	Crude Oil Used Directly ^c
	Total Domestic	Alaskan	Total	SPR ^a	Other		
	Thousand Barrels per Day						
1973 Average	9,208	198	3,244	-	3,244	3	-19
1974 Average	8,774	193	3,477	-	3,477	-25	-15
1975 Average	8,375	191	4,105	-	4,105	17	-17
1976 Average	8,132	173	5,287	-	5,287	77	^d -19
1977 Average	8,245	464	6,615	21	6,594	-6	-14
1978 Average	8,707	1,229	6,356	^d 161	6,195	-57	^d -15
1979 Average	8,552	1,401	6,519	67	6,452	-11	^d -14
1980 Average	8,597	1,617	5,263	44	5,219	34	^d -14
1981 Average	8,572	1,609	4,396	256	4,141	83	-58
1982 Average	8,649	1,696	3,488	165	3,323	71	-59
1983 Average	8,688	1,714	3,329	234	3,096	114	-
1984 Average	8,879	1,722	3,426	197	3,229	185	-
1985 Average	8,971	1,825	3,201	118	3,083	145	-
1986 Average	8,680	1,867	4,178	48	4,130	139	-
1987 Average	8,349	1,962	4,674	73	4,601	145	-
1988 Average	8,140	2,017	5,107	51	5,055	196	-
1989 Average	7,613	1,874	5,843	56	5,787	200	-
1990 Average	7,355	1,773	5,894	27	5,867	258	-
1991 Average	7,417	1,798	5,782	0	5,782	195	-
1992 Average	7,171	1,714	6,083	10	6,073	258	-
1993 Average	6,847	1,582	6,787	15	6,772	168	-
1994 Average	6,662	1,559	7,063	12	7,051	266	-
1995 Average	6,560	1,484	7,230	0	7,230	193	-
1996 Average	6,465	1,393	7,508	0	7,508	215	-
1997 Average	6,452	1,296	8,225	0	8,225	145	-
1998 Average	6,252	1,175	8,706	0	8,706	115	-
1999 Average	5,881	1,050	8,731	8	8,722	191	-
2000 Average	5,822	970	9,071	8	9,062	155	-
2001 January	5,799	980	8,933	32	8,901	392	-
February	5,780	977	8,609	0	8,609	25	-
March	5,880	1,009	9,603	15	9,588	64	-
April	5,863	986	10,111	0	10,111	304	-
May	5,829	957	9,885	30	9,856	70	-
June	5,766	935	9,105	0	9,105	123	-
July	5,749	927	9,552	15	9,538	243	-
August	5,725	928	9,383	0	9,383	19	-
September	5,709	892	9,339	0	9,339	44	-
October	5,746	895	9,211	0	9,211	198	-
November	5,881	1,023	9,320	17	9,302	-155	-
December	5,887	1,046	8,839	18	8,821	61	-
Average	5,801	963	9,328	11	9,318	117	-
2002 January	5,934	1,036	8,646	33	8,613	298	-
February	5,938	1,031	8,642	59	8,583	123	-
March	5,914	1,036	8,650	0	8,650	94	-
April	5,887	1,009	9,140	0	9,140	270	-
May	5,908	1,002	9,205	16	9,189	385	-
June	5,887	1,019	9,228	17	9,212	79	-
July	5,773	931	9,010	0	9,010	315	-
August	5,827	965	9,545	0	9,545	-174	-
September	5,378	886	8,796	0	8,796	18	-
October	5,671	983	9,495	0	9,495	-92	-
November	5,792	908	9,561	34	9,527	-148	-
December	5,894	1,010	8,619	34	8,585	173	-
Average	5,817	984	9,047	16	9,031	112	-
2003 January	RE 5,842	RE 984	R 8,547	0	R 8,547	R -190	-
February	PE 5,900	PE 1,019	E 8,256	E 0	E 8,256	E 83	-
2-Month Average	PE 5,869	PE 1,001	E 8,409	E 0	E 8,409	E -60	-
2002 2-Month Average	5,936	1,033	8,644	45	8,599	215	-
2001 2-Month Average	5,790	979	8,779	17	8,762	218	-

^a Strategic Petroleum Reserve.

^b A balancing item.

^c Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.

^d See Note 6 at end of section.

PE=Preliminary estimate. R=Revised. - =Not applicable. E=Estimate.

Notes: • Crude oil includes lease condensate. • Totals may not equal

sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S2. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S2.

Table 3.2b Crude Oil Supply and Disposition: Disposition and Stocks

	Disposition						Stocks ^a		
	Crude Losses	Stock Change ^b		Refinery Inputs	Exports	Product Supplied ^d	Total	SPR ^c	Other Primary
		SPR ^c	Other						
Thousand Barrels per Day						Million Barrels			
1973 Average	13	-	-11	12,431	2	-	242	-	242
1974 Average	13	-	62	12,133	3	-	265	-	265
1975 Average	13	-	17	12,442	6	-	271	-	271
1976 Average	^e 14	-	39	13,416	8	-	285	-	285
1977 Average	16	20	150	14,602	50	-	348	7	340
1978 Average	16	163	-84	14,739	158	-	376	67	309
1979 Average	16	67	81	14,648	235	-	430	91	339
1980 Average	^e 14	45	52	13,481	287	-	^f 466	108	^f 358
1981 Average	5	336	^f -46	12,470	228	-	594	230	363
1982 Average	3	174	-38	11,774	236	-	^g 644	294	^g 350
1983 Average	2	234	^g -20	11,685	164	66	723	379	344
1984 Average	2	195	4	12,044	181	64	796	451	345
1985 Average	1	117	-67	12,002	204	60	814	493	321
1986 Average	(s)	50	28	12,716	154	49	843	512	331
1987 Average	(s)	80	49	12,854	151	34	890	541	349
1988 Average	(s)	52	-51	13,246	155	40	890	560	330
1989 Average	(s)	56	30	13,401	142	28	921	580	341
1990 Average	(s)	16	-51	13,409	109	24	908	586	323
1991 Average	(s)	-47	5	13,301	116	18	893	569	325
1992 Average	(s)	17	-18	13,411	89	13	893	575	318
1993 Average	(s)	34	47	13,613	98	10	922	587	335
1994 Average	(s)	13	5	13,866	99	9	929	592	337
1995 Average	(s)	(s)	-93	13,973	95	7	895	592	303
1996 Average	(s)	-71	-53	14,195	110	6	850	566	284
1997 Average	0	-7	57	14,662	108	2	868	563	305
1998 Average	(s)	22	52	14,889	110	0	895	571	324
1999 Average	(s)	-11	-107	14,804	118	0	852	567	284
2000 Average	0	-73	3	15,067	50	0	826	541	286
2001 January	0	32	285	14,789	18	0	836	542	294
February	0	(s)	-424	14,813	24	0	824	542	282
March	0	20	841	14,649	37	0	851	542	309
April	0	2	734	15,536	5	0	873	542	331
May	0	30	-71	15,763	64	0	872	543	328
June	0	0	-671	15,650	15	0	852	543	308
July	0	15	149	15,369	11	0	857	544	313
August	0	0	-160	15,259	28	0	852	544	308
September	0	34	45	15,005	8	0	854	545	309
October	0	14	127	15,002	11	0	858	545	313
November	0	71	-35	15,001	9	0	860	547	312
December	0	94	-7	14,688	12	0	862	550	312
Average	0	26	73	15,128	20	0	862	550	312
2002 January	0	141	273	14,453	11	0	875	555	320
February	0	191	233	14,274	4	0	887	560	327
March	0	50	149	14,452	8	0	893	561	331
April	0	175	-217	15,332	8	0	892	567	325
May	0	146	47	15,298	7	0	898	571	326
June	0	173	-313	15,329	5	0	893	576	317
July	0	67	-436	15,434	33	0	882	579	303
August	0	121	-257	15,325	9	0	878	582	296
September	0	166	-848	14,868	7	0	857	587	270
October	0	77	691	14,301	4	0	881	590	292
November	0	209	-132	15,119	10	0	883	596	288
December	0	103	-318	14,899	2	0	877	599	278
Average	0	134	-94	14,926	9	0	877	599	278
2003 January	0	^R 5	^R -153	^R 14,337	10	0	^R 872	599	^R 273
February	^E 0	^E 0	^E -22	^E 14,252	^E 10	^E 0	^E 872	^E 599	^E 273
2-Month Average	^E 0	^E 3	^E -91	^E 14,296	^E 10	^E 0	^E 872	^E 599	^E 273
2002 2-Month Average	0	165	254	14,368	8	0	887	560	327
2001 2-Month Average	0	17	-52	14,801	21	0	824	542	282

^a Stocks are at end of period.
^b A negative number indicates a decrease in stocks and a positive number indicates an increase.
^c Strategic Petroleum Reserve. Crude oil stocks in the SPR include non-U.S. stocks held under foreign or commercial storage agreements.
^d Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.
^e See Note 6 at end of section.
^f Stocks of Alaskan crude oil in transit are included from January 1981 forward. See Note 5 at end of section.
^g See Note 4 at end of section.
^h R=Revised. - =Not applicable. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.
Notes: • Crude oil includes lease condensate. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S2. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S2.

Table 3.3a Petroleum Imports From Bahrain, Iran, Iraq, and Kuwait
(Thousand Barrels per Day)

	Persian Gulf ^a							
	Bahrain		Iran		Iraq		Kuwait ^b	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	11	0	223	216	4	4	47	42
1974 Average	12	0	469	463	0	0	5	5
1975 Average	16	0	280	278	2	2	16	4
1976 Average	3	0	298	298	26	26	5	1
1977 Average	10	0	535	530	74	74	48	42
1978 Average	3	0	555	554	62	62	6	5
1979 Average	1	0	304	297	88	88	8	5
1980 Average	(s)	0	9	8	28	28	27	27
1981 Average	1	0	0	0	(s)	0	0	0
1982 Average	1	0	35	35	3	3	5	2
1983 Average	2	0	48	48	10	10	14	7
1984 Average	1	0	10	10	12	12	36	24
1985 Average	4	0	27	27	46	46	21	4
1986 Average	2	0	19	19	81	81	68	28
1987 Average	0	0	98	98	83	82	84	70
1988 Average	2	0	^c (s)	^c (s)	345	343	92	80
1989 Average	0	0	0	0	449	441	157	155
1990 Average	1	0	0	0	518	514	86	79
1991 Average	2	0	32	32	0	0	6	6
1992 Average	0	0	0	0	0	0	51	39
1993 Average	1	0	0	0	0	0	353	344
1994 Average	1	0	0	0	0	0	312	307
1995 Average	1	0	0	0	0	0	218	213
1996 Average	1	0	0	0	1	1	236	235
1997 Average	0	0	0	0	89	89	253	253
1998 Average	1	0	0	0	336	336	301	300
1999 Average	0	0	0	0	725	725	248	246
2000 Average	1	0	0	0	620	620	272	263
2001 January	0	0	0	0	310	310	247	206
February	0	0	0	0	253	253	280	251
March	0	0	0	0	579	579	308	302
April	0	0	0	0	880	880	263	242
May	0	0	0	0	1,011	1,011	256	240
June	6	0	0	0	810	810	270	270
July	0	0	0	0	710	710	292	287
August	0	0	0	0	563	563	261	256
September	0	0	0	0	1,192	1,192	259	237
October	0	0	0	0	1,177	1,177	226	221
November	0	0	0	0	889	889	196	196
December	0	0	0	0	1,126	1,126	145	140
Average	(s)	0	0	0	795	795	250	237
2002 January	0	0	0	0	988	988	207	207
February	0	0	0	0	706	706	290	279
March	0	0	0	0	780	780	184	179
April	0	0	0	0	583	583	192	185
May	0	0	0	0	436	436	182	163
June	0	0	0	0	167	167	265	243
July	0	0	0	0	301	301	244	238
August	0	0	0	0	246	246	178	169
September	0	0	0	0	148	148	297	286
October	0	0	0	0	215	215	198	182
November	0	0	0	0	380	380	258	230
December	0	0	0	0	366	366	193	190
Average	0	0	0	0	442	442	223	212
2003 January	4	0	0	0	600	600	166	134

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b Imports from the Neutral Zone are reported as originating in either Saudi Arabia or Kuwait depending on the country reported to U.S. Customs.

^c A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. The oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on November 29, 1987.

(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **Bahrain:** Energy Information Administration (EIA), Form EIA-814, "Monthly Imports Report." • **All Other Data: 1973-1991**—EIA, *Petroleum Supply Annual 1992, Volume 1*, May, 1993, Table S3. **1992 forward**—EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3b Petroleum Imports From Qatar, Saudi Arabia, U.A.E., and Total Persian Gulf
(Thousand Barrels per Day)

	Persian Gulf ^a							
	Qatar		Saudi Arabia ^b		United Arab Emirates		Total ^a	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	7	7	486	462	71	71	848	802
1974 Average	17	17	461	438	74	69	1,039	992
1975 Average	18	18	715	701	117	117	1,165	1,121
1976 Average	24	24	1,230	1,222	254	254	1,840	1,825
1977 Average	67	67	1,380	1,373	335	333	2,448	2,418
1978 Average	64	64	1,144	1,142	385	385	2,219	2,212
1979 Average	31	31	1,356	1,347	281	281	2,069	2,049
1980 Average	22	22	1,261	1,250	172	172	1,519	1,508
1981 Average	7	7	1,129	1,112	81	77	1,219	1,196
1982 Average	7	7	552	530	92	81	696	659
1983 Average	(s)	0	337	321	30	18	442	405
1984 Average	5	4	325	309	117	90	506	450
1985 Average	(s)	0	168	132	45	35	311	244
1986 Average	13	12	685	618	44	38	912	796
1987 Average	0	0	751	642	61	56	1,077	949
1988 Average	0	0	1,073	911	29	23	1,541	1,357
1989 Average	2	2	1,224	1,116	28	21	1,861	1,734
1990 Average	4	4	1,339	1,195	17	9	1,966	1,801
1991 Average	0	0	1,802	1,703	3	2	1,845	1,743
1992 Average	1	0	1,720	1,597	6	0	1,778	1,636
1993 Average	1	0	1,414	1,282	14	12	1,782	1,637
1994 Average	0	0	1,402	1,297	13	11	1,728	1,615
1995 Average	0	0	1,344	1,260	10	5	1,573	1,479
1996 Average	0	0	1,363	1,248	3	3	1,604	1,488
1997 Average	4	0	1,407	1,293	2	0	1,755	1,635
1998 Average	4	1	1,491	1,404	3	3	2,136	2,044
1999 Average	10	1	1,478	1,387	2	0	2,464	2,360
2000 Average	9	0	1,572	1,523	15	3	2,488	2,409
2001 January	7	0	1,804	1,629	138	79	2,504	2,224
February	0	0	1,800	1,734	44	0	2,377	2,239
March	20	0	1,788	1,730	4	0	2,699	2,611
April	19	0	1,658	1,626	84	76	2,904	2,824
May	30	0	1,770	1,724	52	35	3,120	3,011
June	23	2	1,764	1,694	28	0	2,901	2,776
July	11	0	1,713	1,683	10	0	2,736	2,680
August	10	0	1,835	1,826	26	17	2,695	2,661
September	14	0	1,478	1,439	84	32	3,028	2,900
October	6	0	1,432	1,384	16	16	2,857	2,797
November	10	0	1,543	1,514	0	0	2,637	2,598
December	10	0	1,370	1,357	0	0	2,651	2,623
Average	13	(s)	1,662	1,611	40	21	2,761	2,664
2002 January	9	0	1,490	1,464	0	0	2,694	2,660
February	11	0	1,464	1,436	0	0	2,470	2,420
March	0	0	1,541	1,517	0	0	2,505	2,476
April	0	0	1,574	1,556	97	97	2,445	2,420
May	10	0	1,547	1,503	0	0	2,175	2,102
June	10	0	1,598	1,565	51	51	2,091	2,027
July	44	35	1,392	1,354	17	0	1,998	1,928
August	9	0	1,437	1,411	25	0	1,896	1,826
September	44	37	1,531	1,512	31	17	2,052	2,000
October	40	32	1,690	1,633	0	0	2,143	2,062
November	0	0	1,511	1,474	17	17	2,166	2,102
December	0	0	1,851	1,815	18	16	2,429	2,387
Average	15	9	1,553	1,521	21	16	2,254	2,200
2003 January	0	0	1,858	1,820	90	34	2,718	2,588

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b Imports from the Neutral Zone are reported as originating in either Saudi Arabia or Kuwait depending on the country reported to U.S. Customs.

(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports

are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3c Petroleum Imports From Algeria, Ecuador, Gabon, Indonesia, and Libya
(Thousand Barrels per Day)

	Other OPEC ^a									
	Algeria		Ecuador ^b		Gabon ^c		Indonesia		Libya	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	136	120	48	47	0	0	213	200	164	133
1974 Average	190	180	42	42	23	23	300	284	4	4
1975 Average	282	264	57	57	27	27	390	379	232	223
1976 Average	432	408	51	51	28	26	539	537	453	444
1977 Average	559	544	57	55	42	35	541	507	723	704
1978 Average	649	634	54	38	41	38	573	533	654	638
1979 Average	636	608	42	30	42	42	420	380	658	642
1980 Average	488	456	27	17	26	25	348	314	554	548
1981 Average	311	261	48	38	35	35	366	318	319	317
1982 Average	170	90	42	32	40	40	248	226	26	23
1983 Average	240	176	61	56	59	59	338	315	0	0
1984 Average	323	194	55	47	58	57	343	304	1	0
1985 Average	187	84	67	56	52	51	314	292	4	0
1986 Average	271	78	77	64	26	25	318	297	0	0
1987 Average	295	115	29	23	35	35	285	262	0	0
1988 Average	300	58	47	33	16	15	205	186	0	0
1989 Average	269	60	89	80	50	49	183	158	0	0
1990 Average	280	63	49	38	64	64	114	98	0	0
1991 Average	253	44	63	53	84	84	111	102	0	0
1992 Average	196	24	65	62	124	123	78	70	0	0
1993 Average	220	24	(b)	(b)	152	151	81	65	0	0
1994 Average	243	21	(b)	(b)	194	194	111	92	0	0
1995 Average	234	27	(b)	(b)	(c)	(c)	88	64	0	0
1996 Average	256	8	(b)	(b)	(c)	(c)	59	44	0	0
1997 Average	285	6	(b)	(b)	(c)	(c)	58	51	0	0
1998 Average	290	10	(b)	(b)	(c)	(c)	66	50	0	0
1999 Average	259	25	(b)	(b)	(c)	(c)	81	70	0	0
2000 Average	225	1	(b)	(b)	(c)	(c)	48	36	0	0
2001 January	286	0	(b)	(b)	(c)	(c)	61	20	0	0
February	223	0	(b)	(b)	(c)	(c)	76	42	0	0
March	279	19	(b)	(b)	(c)	(c)	76	60	0	0
April	326	0	(b)	(b)	(c)	(c)	58	52	0	0
May	379	54	(b)	(b)	(c)	(c)	78	73	0	0
June	265	20	(b)	(b)	(c)	(c)	65	57	0	0
July	190	0	(b)	(b)	(c)	(c)	29	28	0	0
August	243	0	(b)	(b)	(c)	(c)	38	37	0	0
September	200	0	(b)	(b)	(c)	(c)	26	25	0	0
October	293	0	(b)	(b)	(c)	(c)	39	29	0	0
November	320	37	(b)	(b)	(c)	(c)	22	21	0	0
December	326	0	(b)	(b)	(c)	(c)	51	42	0	0
Average	278	11	(b)	(b)	(c)	(c)	51	40	0	0
2002 January	253	0	(b)	(b)	(c)	(c)	80	67	0	0
February	269	0	(b)	(b)	(c)	(c)	104	84	0	0
March	359	75	(b)	(b)	(c)	(c)	63	63	0	0
April	366	77	(b)	(b)	(c)	(c)	60	58	0	0
May	367	53	(b)	(b)	(c)	(c)	83	76	0	0
June	305	19	(b)	(b)	(c)	(c)	57	57	0	0
July	160	0	(b)	(b)	(c)	(c)	26	14	0	0
August	176	0	(b)	(b)	(c)	(c)	34	34	0	0
September	262	32	(b)	(b)	(c)	(c)	49	49	0	0
October	239	40	(b)	(b)	(c)	(c)	74	66	0	0
November	239	21	(b)	(b)	(c)	(c)	13	13	0	0
December	239	40	(b)	(b)	(c)	(c)	21	21	0	0
Average	269	30	(b)	(b)	(c)	(c)	55	50	0	0
2003 January	302	39	(b)	(b)	(c)	(c)	25	25	0	0

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b Ecuador withdrew from OPEC on December 31, 1992. As of January 1993, imports from Ecuador appear on Table 3.3f under "Non-OPEC."

^c Gabon withdrew from OPEC on December 31, 1994. As of January 1995, imports from Gabon appear on Table 3.3f under "Non-OPEC."

(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3d Petroleum Imports From Nigeria, Venezuela, Total Other OPEC, and Total OPEC
(Thousand Barrels per Day)

	Other OPEC ^a						Total OPEC ^b	
	Nigeria		Venezuela		Total		Total	Crude Oil
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil		
1973 Average	459	448	1,135	344	2,156	1,293	2,993	2,095
1974 Average	713	697	979	319	2,253	1,549	3,280	2,540
1975 Average	762	746	702	395	2,452	2,091	3,601	3,211
1976 Average	1,025	1,014	700	241	3,229	2,721	5,066	4,545
1977 Average	1,143	1,130	690	250	3,754	3,225	6,193	5,643
1978 Average	919	910	646	181	3,536	2,972	5,751	5,184
1979 Average	1,080	1,069	690	293	3,569	3,063	5,637	5,112
1980 Average	857	841	481	156	2,781	2,356	4,300	3,864
1981 Average	620	611	406	147	2,106	1,726	3,323	2,922
1982 Average	514	510	412	155	1,451	1,075	2,146	1,734
1983 Average	302	301	422	164	1,422	1,072	1,862	1,477
1984 Average	216	207	548	253	1,544	1,062	2,049	1,512
1985 Average	293	280	605	306	1,522	1,069	1,830	1,312
1986 Average	440	437	793	416	1,926	1,317	2,837	2,113
1987 Average	535	529	804	488	1,983	1,451	3,060	2,400
1988 Average	618	607	794	439	1,981	1,339	3,520	2,696
1989 Average	815	800	873	495	2,279	1,642	4,140	3,376
1990 Average	800	784	1,025	666	2,332	1,713	4,296	3,514
1991 Average	703	683	1,035	668	2,249	1,634	4,092	3,377
1992 Average	681	665	1,170	826	2,313	1,770	4,092	3,406
1993 Average	740	722	1,300	1,010	2,493	1,972	4,273	3,609
1994 Average	637	624	1,334	1,034	2,520	1,965	4,247	3,580
1995 Average	627	621	1,480	1,151	2,430	1,862	4,002	3,341
1996 Average	617	595	1,676	1,303	2,609	1,950	4,211	3,438
1997 Average	698	689	1,773	1,394	2,814	2,140	4,569	3,775
1998 Average	696	689	1,719	1,377	2,771	2,125	4,905	4,169
1999 Average	657	623	1,493	1,150	2,489	1,869	4,953	4,228
2000 Average	896	875	1,546	1,223	2,716	2,135	5,203	4,544
2001 January	881	842	1,796	1,431	3,023	2,294	5,527	4,517
February	894	859	1,500	1,250	2,693	2,150	5,071	4,389
March	1,076	1,057	1,702	1,384	3,133	2,520	5,832	5,131
April	1,192	1,137	1,623	1,333	3,200	2,522	6,104	5,346
May	988	916	1,514	1,312	2,959	2,354	6,080	5,365
June	793	724	1,623	1,297	2,745	2,097	5,641	4,873
July	869	834	1,685	1,445	2,773	2,308	5,509	4,987
August	727	690	1,586	1,374	2,594	2,101	5,289	4,763
September	1,057	994	1,282	1,041	2,565	2,060	5,593	4,960
October	842	812	1,511	1,288	2,685	2,129	5,542	4,926
November	696	662	1,423	1,144	2,461	1,864	5,097	4,462
December	614	579	1,382	1,178	2,373	1,799	5,024	4,423
Average	885	842	1,553	1,291	2,768	2,184	5,528	4,848
2002 January	537	513	1,437	1,247	2,307	1,826	5,001	4,486
February	454	438	1,435	1,212	2,262	1,734	4,733	4,154
March	588	558	1,375	1,130	2,386	1,825	4,891	4,302
April	563	502	1,116	997	2,106	1,634	4,552	4,055
May	552	537	1,286	1,106	2,288	1,772	4,463	3,874
June	717	691	1,178	958	2,257	1,726	4,347	3,753
July	561	539	1,565	1,331	2,312	1,883	4,310	3,811
August	820	792	1,679	1,514	2,708	2,341	4,604	4,167
September	536	489	1,532	1,302	2,378	1,871	4,429	3,871
October	574	549	1,616	1,453	2,502	2,108	4,645	4,170
November	590	556	1,598	1,438	2,439	2,027	4,605	4,129
December	650	625	778	652	1,688	1,337	4,117	3,724
Average	596	567	1,383	1,195	2,303	1,842	4,558	4,041
2003 January	825	798	406	399	1,558	1,261	4,272	3,850

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b OPEC includes the Persian Gulf nations that are displayed on Tables 3.3a and 3.3b except Bahrain, which is not a member of OPEC, and the nations displayed under "Other OPEC" on Tables 3.3c and 3.3d. Ecuador withdrew from OPEC on December 31, 1992; as of January 1993, imports from Ecuador appear on Table 3.3f under "Non-OPEC." Gabon withdrew on December 31, 1994; as of January 1995, imports from Gabon appear on

Table 3.3f under "Non-OPEC." Imports from Bahrain are accounted for under "Other Non-OPEC" on Table 3.3h.

Notes: • Beginning in November 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3e Petroleum Imports From Angola, Australia, Bahamas, Brazil, Canada, and China

(Thousand Barrels per Day)

	Non-OPEC ^a											
	Angola		Australia		Bahamas		Brazil		Canada		China	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	49	49	2	0	174	0	9	0	1,325	1,001	(s)	0
1974 Average	49	48	1	0	164	0	2	0	1,070	791	0	0
1975 Average	75	71	5	0	152	0	5	0	846	600	0	0
1976 Average	12	7	2	0	118	0	0	0	599	371	0	0
1977 Average	24	17	3	0	171	0	0	0	517	279	0	0
1978 Average	20	6	5	0	160	0	0	0	467	248	0	0
1979 Average	43	39	6	0	147	0	1	0	538	271	13	13
1980 Average	42	37	1	0	78	0	3	1	455	199	(s)	0
1981 Average	49	45	5	0	74	0	23	14	447	164	18	0
1982 Average	44	42	5	(s)	65	0	47	19	482	214	40	8
1983 Average	78	71	4	0	125	0	41	2	547	274	34	6
1984 Average	90	85	38	25	88	0	60	(s)	630	341	46	15
1985 Average	110	104	37	21	40	0	61	0	770	468	59	36
1986 Average	112	102	41	30	37	0	50	0	807	570	90	68
1987 Average	192	180	58	49	37	0	84	0	848	608	82	63
1988 Average	212	203	64	59	32	0	98	0	999	681	88	82
1989 Average	284	279	36	31	34	0	82	0	931	630	80	76
1990 Average	237	236	53	47	37	0	49	0	934	643	80	77
1991 Average	254	254	26	21	35	0	22	0	1,033	743	91	87
1992 Average	336	336	19	17	36	0	20	0	1,069	797	90	84
1993 Average	336	336	19	18	28	0	33	0	1,181	900	51	50
1994 Average	331	322	17	16	29	0	31	1	1,272	983	65	64
1995 Average	367	360	16	16	2	0	8	0	1,332	1,040	53	53
1996 Average	351	344	31	25	1	0	9	0	1,424	1,075	57	57
1997 Average	427	425	48	31	1	0	5	0	1,563	1,198	49	48
1998 Average	468	465	57	31	4	0	26	0	1,598	1,266	42	42
1999 Average	361	357	42	31	3	0	26	0	1,539	1,178	21	13
2000 Average	301	295	56	49	0	0	51	5	1,807	1,348	44	33
2001 January	312	300	53	44	0	0	143	35	1,935	1,342	33	33
February	499	485	27	20	0	0	88	0	1,867	1,346	2	0
March	374	374	47	20	6	0	81	21	1,938	1,411	35	14
April	381	381	111	68	14	0	87	31	1,852	1,391	24	14
May	358	356	31	21	0	0	127	16	1,780	1,368	31	21
June	302	302	22	22	5	0	67	0	1,900	1,472	26	0
July	297	285	65	65	0	0	86	0	1,690	1,270	23	20
August	323	311	20	20	19	0	54	0	1,723	1,272	57	28
September	334	324	46	46	10	0	80	17	1,685	1,262	22	0
October	242	222	30	21	26	0	84	32	1,734	1,316	22	21
November	267	267	21	21	31	0	56	0	1,899	1,414	0	0
December	263	263	46	46	10	0	33	0	1,944	1,408	9	0
Average	328	321	43	34	10	0	82	13	1,828	1,356	24	13
2002 January	294	282	41	41	10	0	63	31	1,866	1,299	12	12
February	276	262	69	69	26	0	67	35	1,838	1,305	45	42
March	321	300	42	42	26	0	122	65	1,821	1,318	4	0
April	367	355	66	66	7	0	117	68	1,943	1,434	1	0
May	353	353	63	63	16	0	144	77	1,912	1,454	16	15
June	459	446	21	21	16	0	129	69	1,880	1,450	51	34
July	308	298	43	43	35	0	93	59	1,877	1,355	43	32
August	223	211	45	23	23	0	191	119	2,022	1,537	45	34
September	342	329	87	65	39	0	94	53	1,874	1,412	15	0
October	258	246	67	67	20	0	131	75	2,073	1,570	48	48
November	402	390	84	64	23	0	73	17	2,071	1,485	21	21
December	317	312	61	51	26	0	66	14	2,082	1,490	14	13
Average	326	315	57	51	22	0	108	57	1,939	1,426	26	21
2003 January	263	245	20	20	31	0	114	48	2,235	1,621	19	16

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.
(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of

Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3f Petroleum Imports From Colombia, Ecuador, Gabon, Italy, Malaysia, and Mexico

(Thousand Barrels per Day)

	Non-OPEC ^a											
	Colombia		Ecuador ^b		Gabon ^c		Italy		Malaysia		Mexico	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	9	2	-	-	-	-	125	0	12	1	16	1
1974 Average	5	0	-	-	-	-	74	0	12	1	8	2
1975 Average	9	0	-	-	-	-	27	0	8	5	71	70
1976 Average	21	6	-	-	-	-	39	0	18	16	87	87
1977 Average	17	0	-	-	-	-	51	0	66	55	179	177
1978 Average	20	0	-	-	-	-	38	0	42	37	318	316
1979 Average	18	0	-	-	-	-	30	0	66	52	439	437
1980 Average	4	0	-	-	-	-	4	0	70	61	533	507
1981 Average	1	0	-	-	-	-	11	0	36	33	522	469
1982 Average	5	0	-	-	-	-	18	(s)	20	18	685	645
1983 Average	10	0	-	-	-	-	18	(s)	4	3	826	766
1984 Average	8	0	-	-	-	-	45	(s)	1	0	748	659
1985 Average	23	0	-	-	-	-	60	(s)	3	1	816	715
1986 Average	87	57	-	-	-	-	76	0	12	11	699	621
1987 Average	148	115	-	-	-	-	54	1	13	12	655	602
1988 Average	134	106	-	-	-	-	65	5	19	19	747	674
1989 Average	172	136	-	-	-	-	34	3	39	39	767	716
1990 Average	182	140	-	-	-	-	58	2	41	40	755	689
1991 Average	163	123	-	-	-	-	47	3	24	24	807	759
1992 Average	126	102	-	-	-	-	55	0	10	10	830	787
1993 Average	171	141	81	78	-	-	31	0	11	10	919	863
1994 Average	161	146	91	91	-	-	22	0	10	6	984	939
1995 Average	219	207	97	96	229	229	5	0	8	6	1,068	1,027
1996 Average	234	226	104	96	184	184	8	0	11	6	1,244	1,207
1997 Average	271	270	115	114	230	230	7	0	23	8	1,385	1,360
1998 Average	354	349	101	98	207	207	12	0	35	26	1,351	1,321
1999 Average	468	452	118	114	168	168	10	0	35	21	1,324	1,254
2000 Average	342	318	128	125	143	143	30	0	45	29	1,373	1,313
2001 January	379	345	103	94	94	94	43	0	41	4	1,456	1,391
February	321	294	92	90	177	177	44	0	18	0	1,120	1,058
March	228	204	103	103	152	152	64	0	87	54	1,454	1,371
April	301	257	123	120	177	177	24	0	39	22	1,572	1,548
May	323	260	155	149	127	127	49	0	31	0	1,312	1,266
June	308	248	111	84	155	155	32	0	24	13	1,234	1,214
July	239	215	126	117	149	149	55	0	13	0	1,348	1,322
August	350	326	126	113	98	98	19	0	26	10	1,471	1,422
September	307	268	133	132	86	86	63	0	29	21	1,490	1,437
October	234	226	184	178	136	136	27	0	59	34	1,432	1,399
November	278	236	97	97	173	173	47	0	25	12	1,765	1,717
December	283	242	80	80	159	159	8	0	47	15	1,603	1,558
Average	296	260	120	113	140	140	40	0	37	15	1,440	1,394
2002 January	245	213	104	83	212	212	30	0	33	14	1,352	1,309
February	369	348	82	77	52	52	37	0	22	0	1,611	1,579
March	222	214	110	104	124	124	54	0	17	0	1,451	1,430
April	281	256	81	63	164	164	30	0	18	0	1,458	1,415
May	220	202	88	82	188	188	28	0	40	22	1,562	1,509
June	229	204	108	105	123	123	16	0	7	0	1,492	1,447
July	210	199	107	93	206	206	22	0	27	11	1,591	1,515
August	239	217	79	79	170	170	24	0	52	29	1,500	1,475
September	273	263	107	102	164	164	24	0	4	0	1,450	1,417
October	237	232	156	151	88	88	25	0	22	17	1,577	1,527
November	270	212	153	148	127	127	40	0	23	12	1,571	1,531
December	289	248	100	100	88	88	67	0	4	0	1,772	1,734
Average	256	233	106	99	143	143	33	0	23	9	1,532	1,490
2003 January	141	120	71	71	113	113	25	0	12	11	1,621	1,566

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b Through 1992, Ecuador was a member of OPEC. See Table 3.3c.

^c Through December 1994, Gabon was a member of OPEC. See Table 3.3c.

- =Not applicable. (s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3g Petroleum Imports From Netherlands, Netherlands Antilles, Norway, Puerto Rico, Russia, and Spain
(Thousand Barrels per Day)

	Non-OPEC ^a											
	Netherlands		Netherlands Antilles		Norway		Puerto Rico		Russia ^b		Spain	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	53	0	585	0	1	0	99	0	26	0	26	0
1974 Average	43	0	511	0	1	1	90	0	20	0	12	0
1975 Average	19	4	332	0	17	12	90	0	14	0	1	0
1976 Average	8	0	275	0	36	35	88	0	11	2	1	0
1977 Average	31	4	211	0	50	48	105	0	12	2	10	0
1978 Average	5	2	229	0	104	104	94	0	8	1	3	0
1979 Average	23	7	231	0	75	75	92	0	1	0	4	0
1980 Average	2	(s)	225	0	144	144	88	0	1	0	1	0
1981 Average	30	(s)	197	0	119	114	62	0	5	(s)	1	(s)
1982 Average	35	(s)	175	0	102	102	50	0	1	0	3	(s)
1983 Average	65	3	189	0	66	65	40	0	1	(s)	2	(s)
1984 Average	65	3	188	0	114	112	42	0	13	(s)	11	0
1985 Average	58	0	40	0	32	31	28	0	8	(s)	29	1
1986 Average	54	0	25	0	60	53	21	0	18	(s)	53	0
1987 Average	60	0	29	0	80	70	21	0	11	0	55	0
1988 Average	61	0	36	0	67	62	22	0	29	0	68	0
1989 Average	49	0	42	0	138	127	32	0	48	0	67	0
1990 Average	55	0	31	0	102	96	32	0	45	1	47	0
1991 Average	29	0	81	0	82	74	27	0	29	1	33	0
1992 Average	26	0	65	0	127	119	26	0	18	5	32	0
1993 Average	10	0	82	0	142	137	29	0	55	36	37	0
1994 Average	32	0	98	0	202	190	22	0	30	27	37	0
1995 Average	15	0	52	0	273	258	15	0	25	14	16	1
1996 Average	19	0	64	0	313	293	20	0	25	18	29	1
1997 Average	25	0	74	0	309	288	16	0	13	3	21	0
1998 Average	31	0	82	0	236	221	15	0	24	9	18	0
1999 Average	27	0	65	0	304	263	13	0	89	21	10	0
2000 Average	30	1	90	0	343	302	15	0	72	7	25	0
2001 January	77	0	141	0	321	229	11	0	190	0	58	0
February	48	0	101	0	395	299	8	0	183	0	47	0
March	48	0	125	0	400	313	5	0	53	0	35	0
April	23	0	105	0	382	325	6	0	115	0	19	0
May	61	0	44	0	411	376	3	0	88	0	31	0
June	56	0	66	0	284	254	12	0	47	0	33	0
July	25	0	70	0	448	363	0	0	81	0	25	0
August	40	0	67	0	287	227	0	0	118	0	11	0
September	34	0	55	0	388	350	3	0	124	0	27	0
October	50	0	75	0	259	211	0	0	34	0	22	0
November	22	0	77	0	387	331	0	0	22	0	16	0
December	33	0	46	0	140	106	0	0	30	0	43	0
Average	43	0	81	0	341	281	4	0	90	0	31	0
2002 January	7	0	114	0	187	168	0	0	49	0	16	0
February	34	0	106	0	243	204	0	0	51	0	10	0
March	47	0	98	0	314	272	0	0	95	12	19	0
April	93	0	80	0	612	559	2	0	192	36	8	0
May	100	0	42	0	476	424	0	0	363	220	23	0
June	45	0	70	0	535	498	0	0	209	78	8	0
July	29	0	45	0	402	356	0	0	165	79	30	0
August	82	0	56	0	478	402	0	0	227	100	29	0
September	26	0	77	0	342	294	0	0	235	104	0	0
October	65	0	71	0	318	308	0	0	287	209	0	0
November	58	0	84	0	409	388	0	0	255	85	19	0
December	61	0	43	0	230	144	0	0	280	97	41	0
Average	54	0	74	0	379	335	(s)	0	202	86	17	0
2003 January	132	0	49	0	210	104	0	0	190	99	12	0

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been refined from Middle East crude oil.

^b Imports from other States in the former U.S.S.R. may be included in imports from Russia for the years 1973 through 1992.
(s)=Less than 500 barrels per day.

Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Table 3.3h Petroleum Imports From Trinidad and Tobago, United Kingdom, U.S. Virgin Islands, Other Non-OPEC, Total Non-OPEC, and Total Imports
(Thousand Barrels per Day)

	Non-OPEC ^a										Total Imports	
	Trinidad and Tobago		United Kingdom		U.S. Virgin Islands		Other Non-OPEC ^b		Total			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	255	60	15	0	329	0	153	36	3,263	1,149	6,256	3,244
1974 Average	251	63	8	0	391	0	122	30	2,832	937	6,112	3,477
1975 Average	242	115	14	(s)	406	0	120	14	2,454	893	6,056	4,105
1976 Average	274	104	31	13	422	0	203	101	2,247	742	7,313	5,287
1977 Average	289	134	126	97	466	0	287	157	2,614	971	8,807	6,615
1978 Average	253	142	180	169	428	0	239	146	2,612	1,172	8,363	6,356
1979 Average	190	123	202	197	431	0	269	192	2,819	1,407	8,456	6,519
1980 Average	176	115	176	173	388	0	219	162	2,609	1,399	6,909	5,263
1981 Average	133	102	375	369	327	0	236	163	2,672	1,474	5,996	4,396
1982 Average	112	92	456	441	316	0	306	174	2,968	1,754	5,113	3,488
1983 Average	96	83	382	365	282	0	378	215	3,189	1,853	5,051	3,329
1984 Average	94	87	402	378	294	0	411	210	3,388	1,914	5,437	3,426
1985 Average	113	98	310	278	247	0	394	137	3,237	1,888	5,067	3,201
1986 Average	125	93	350	317	244	0	426	144	3,387	2,065	6,224	4,178
1987 Average	106	75	352	304	272	0	459	196	3,617	2,274	6,678	4,674
1988 Average	97	71	315	254	242	0	487	196	3,882	2,411	7,402	5,107
1989 Average	94	73	215	160	321	0	457	197	3,921	2,467	8,061	5,843
1990 Average	96	76	189	155	282	0	417	180	3,721	2,381	8,018	5,894
1991 Average	88	72	138	106	243	0	282	137	3,535	2,405	7,627	5,782
1992 Average	95	70	230	200	249	0	335	149	3,796	2,676	7,888	6,083
1993 Average	74	55	350	312	254	0	452	240	4,347	3,178	8,620	6,787
1994 Average	77	62	458	396	328	0	450	239	4,749	3,483	8,996	7,063
1995 Average	70	62	383	341	278	0	302	181	4,833	3,889	8,835	7,230
1996 Average	76	58	308	216	313	0	440	265	5,267	4,070	9,478	7,508
1997 Average	61	56	226	169	300	0	422	250	5,593	4,450	10,162	8,225
1998 Average	66	53	250	161	293	0	531	288	5,803	4,537	10,708	8,706
1999 Average	58	40	365	284	280	1	575	304	5,899	4,502	10,852	8,731
2000 Average	85	56	366	291	291	0	618	214	6,257	4,526	11,459	9,071
2001 January	95	55	417	287	339	0	785	164	7,028	4,415	12,555	8,933
February	45	16	378	249	273	0	840	186	6,573	4,220	11,643	8,609
March	67	57	253	167	263	0	483	211	6,301	4,472	12,132	9,603
April	85	60	254	155	201	0	656	216	6,549	4,764	12,653	10,111
May	58	38	418	359	223	0	793	164	6,450	4,520	12,529	9,885
June	70	59	241	192	339	0	759	218	6,091	4,232	11,732	9,105
July	85	58	368	309	320	0	739	392	6,252	4,565	11,760	9,552
August	86	51	314	273	202	0	920	469	6,333	4,620	11,622	9,383
September	91	51	229	165	283	0	704	221	6,225	4,379	11,818	9,339
October	45	39	365	265	263	0	514	182	5,837	4,284	11,379	9,211
November	68	56	367	278	259	0	656	257	6,531	4,858	11,628	9,320
December	69	69	286	225	247	0	592	246	5,969	4,417	10,994	8,839
Average	72	51	324	244	268	0	702	244	6,343	4,480	11,871	9,328
2002 January	71	71	327	245	266	0	546	181	5,846	4,160	10,847	8,646
February	63	63	378	297	242	0	416	155	6,037	4,488	10,769	8,642
March	73	69	288	236	198	0	621	162	6,066	4,348	10,957	8,650
April	59	59	459	385	192	0	743	227	6,973	5,086	11,524	9,140
May	71	63	487	402	159	0	799	260	7,149	5,331	11,612	9,205
June	90	77	683	579	236	0	780	346	7,185	5,476	11,532	9,228
July	73	73	509	471	240	0	929	409	6,984	5,199	11,294	9,010
August	68	50	559	480	234	0	872	454	7,217	5,378	11,821	9,545
September	99	76	358	278	231	0	758	367	6,600	4,925	11,029	8,796
October	112	75	591	486	233	0	722	225	7,100	5,324	11,745	9,495
November	91	82	669	632	321	0	771	239	7,536	5,432	12,142	9,561
December	88	55	415	376	281	0	543	172	6,870	4,895	10,987	8,619
Average	80	68	477	406	236	0	710	267	6,800	5,005	11,358	9,047
2003 January	119	73	491	411	179	0	688	181	6,736	4,698	11,008	8,547

^a The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil.

^b Includes Bahrain, which is shown on Table 3.3a.

^c As of January 1993, includes petroleum imported from Ecuador, which withdrew from OPEC on December 31, 1992. As of January 1995, includes petroleum imported from Gabon, which withdrew from OPEC on December 31, 1994.

(s)=Less than 500 barrels per day.

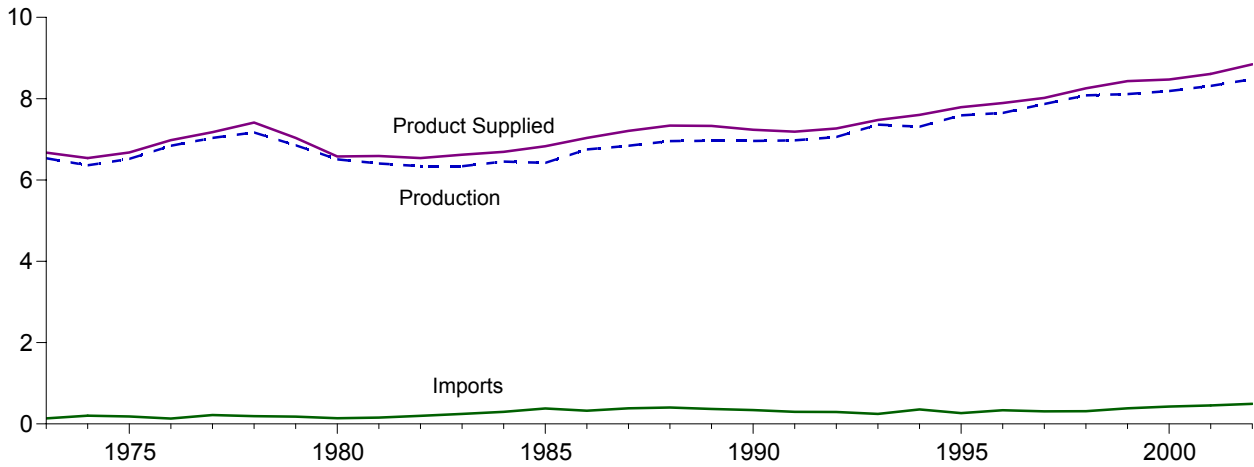
Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

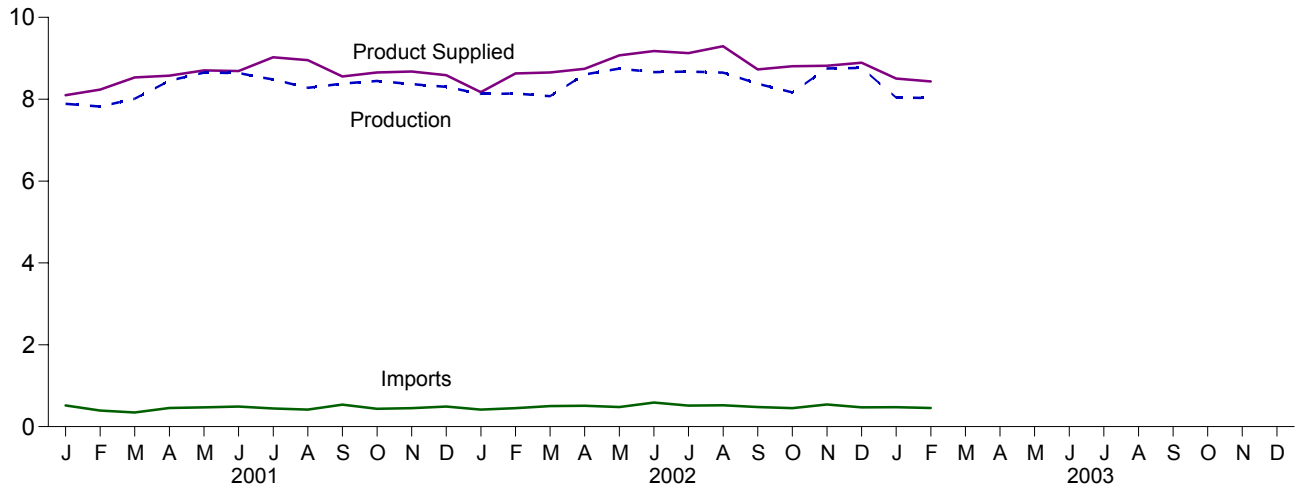
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S3.

Figure 3.2 Finished Motor Gasoline
(Million Barrels per Day, Except as Noted)

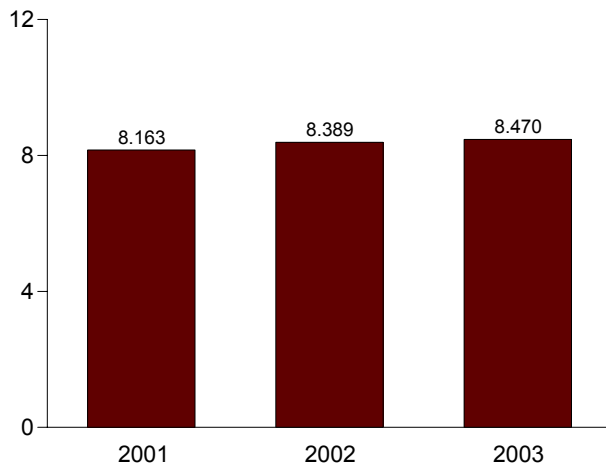
Overview, 1973-2002



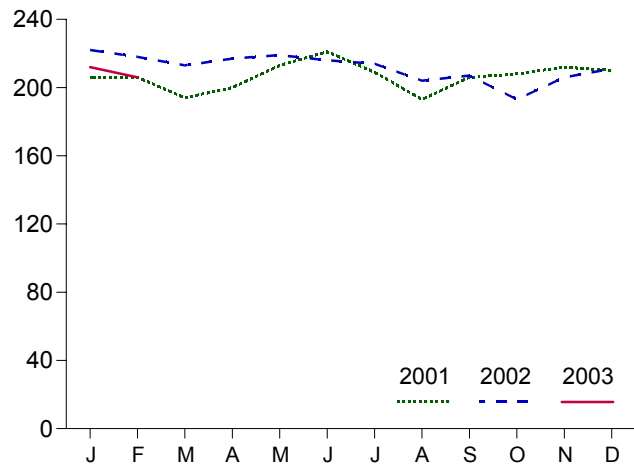
Overview, Monthly



Product Supplied, January-February



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>
Source: Table 3.4.

Table 3.4 Finished Motor Gasoline Supply and Disposition

	Supply		Disposition			Motor Gasoline Stocks ^a		Oxygenates Stocks ^a
	Total Production	Imports ^b	Stock Change ^{b,c}	Exports	Product Supplied	Total ^d	Finished	
	Thousand Barrels per Day					Million Barrels		
1973 Average	6,535	134	-9	4	6,674	209	NA	NA
1974 Average	6,360	204	24	2	6,537	^e 218	NA	NA
1975 Average	6,520	184	^e 28	2	6,675	235	NA	NA
1976 Average	6,841	131	-10	3	6,978	231	NA	NA
1977 Average	7,033	217	72	2	7,177	258	NA	NA
1978 Average	7,169	190	-54	1	7,412	238	NA	NA
1979 Average	6,852	181	-2	(s)	7,034	237	NA	NA
1980 Average	6,506	140	66	1	6,579	^e 261	NA	NA
1981 Average ^f	6,405	157	^e -28	2	6,588	253	203	NA
1982 Average	6,338	197	-25	20	6,539	^e 235	^e 194	NA
1983 Average	6,340	247	^e -45	10	6,622	222	186	NA
1984 Average	6,453	299	54	6	6,693	243	205	NA
1985 Average	6,419	381	-41	10	6,831	223	190	NA
1986 Average	6,752	326	11	33	7,034	233	194	NA
1987 Average	6,841	384	-15	35	7,206	226	189	NA
1988 Average	6,956	405	3	22	7,336	228	190	NA
1989 Average	6,963	369	-35	39	7,328	213	177	NA
1990 Average	6,959	342	10	55	7,235	220	181	NA
1991 Average	6,975	297	3	82	7,188	219	182	NA
1992 Average	7,058	294	-11	96	7,268	216	178	NA
1993 Average	^g 7,360	247	26	105	^g 7,476	226	187	^h 13
1994 Average	7,312	356	-31	97	7,601	215	176	17
1995 Average	7,588	265	-40	104	7,789	202	161	12
1996 Average	7,647	336	-12	104	7,891	195	157	13
1997 Average	7,870	309	26	137	8,017	210	166	12
1998 Average	8,082	311	15	125	8,253	216	172	14
1999 Average	8,111	382	-49	111	8,431	193	154	14
2000 Average	8,186	427	-3	144	8,472	196	153	12
2001 January	7,888	519	183	125	8,099	206	159	12
February	7,822	394	-146	128	8,234	206	155	12
March	8,011	346	-320	145	8,532	194	145	12
April	8,450	455	187	143	8,575	200	150	12
May	8,651	473	316	102	8,706	213	160	12
June	8,637	490	310	127	8,690	221	169	13
July	8,481	443	-229	129	9,023	209	162	13
August	8,277	415	-378	117	8,953	193	151	13
September	8,381	539	248	115	8,557	206	158	14
October	8,446	435	70	156	8,655	208	160	13
November	8,366	452	34	107	8,677	212	161	13
December	8,301	491	7	200	8,585	210	161	13
Average	8,312	454	23	133	8,610	210	161	13
2002 January	8,131	416	280	96	8,172	222	170	15
February	8,137	451	-144	102	8,630	218	166	14
March	8,073	504	-181	104	8,655	213	160	14
April	8,606	512	242	134	8,743	217	168	14
May	8,748	480	69	88	9,071	219	170	15
June	8,661	587	-59	131	9,176	216	168	15
July	8,677	515	-71	136	9,128	214	166	15
August	8,648	523	-255	133	9,294	204	158	14
September	8,379	480	16	113	8,729	207	158	13
October	8,166	451	-322	135	8,804	193	148	13
November	8,751	542	345	130	8,818	206	159	13
December	8,767	470	158	186	8,892	211	164	12
Average	8,480	494	6	124	8,844	211	164	12
2003 January	^R 8,038	^R 474	^R -166	^R 175	^R 8,504	^R 212	^R 158	13
February	^E 8,028	^E 455	^E -129	^E 179	^E 8,433	^E 206	^E 153	NA
2-Month Average	^E 8,034	^E 465	^E -149	^E 177	^E 8,470	^E 206	^E 153	NA
2002 2-Month Average	8,134	433	79	99	8,389	218	166	14
2001 2-Month Average	7,856	459	27	126	8,163	206	155	12

^a Stocks are at end of period.

^b From 1981 forward, blending components are excluded.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase.

^d Includes motor gasoline blending components and gasohol, but excludes oxygenates, which are reported separately.

^e See Note 4 at end of section.

^f See Note 2 at end of section.

^g Beginning in 1993, motor gasoline production and product supplied include blending of fuel ethanol and an adjustment to correct for the imbalance of motor gasoline blending components. See Note 2 at end of

section.

^h See Note 1 at end of section.

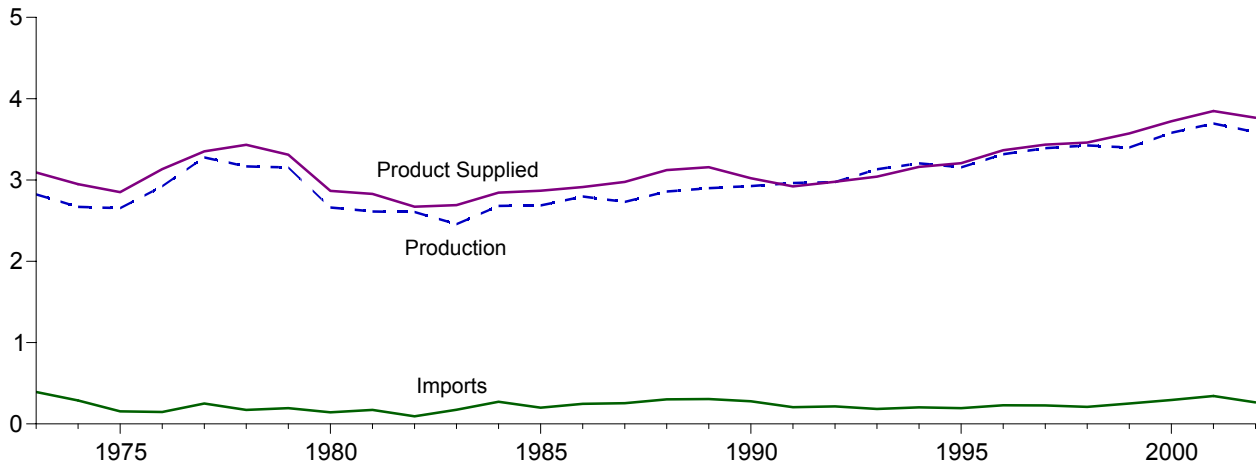
^R=Revised. ^{NA}=Not available. ^E=Estimate. (s)=Less than 500 barrels per day.

Note: Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

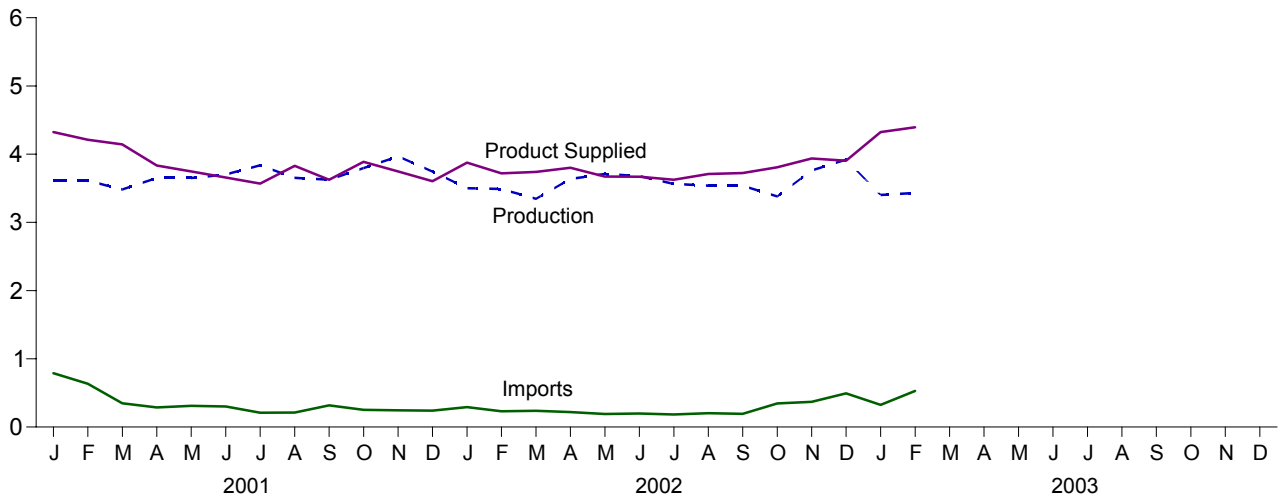
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S4. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S4.

Figure 3.3 Distillate Fuel Oil
(Million Barrels per Day, Except as Noted)

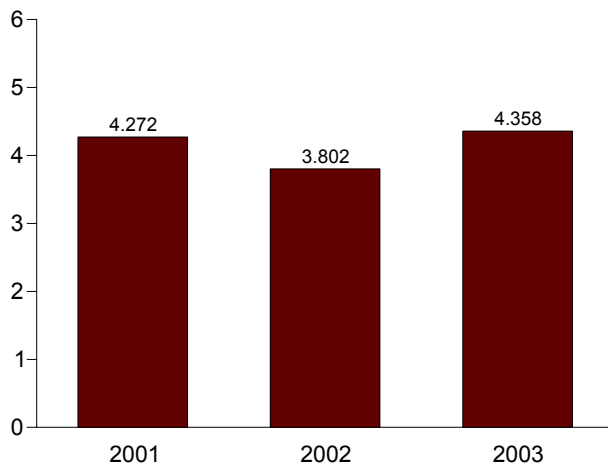
Overview, 1973-2002



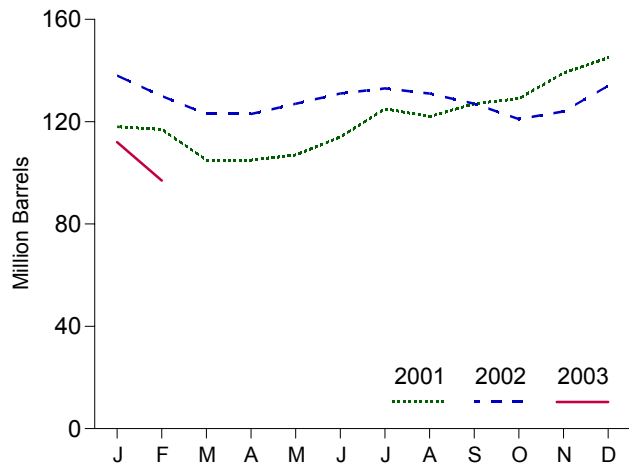
Overview, Monthly



Product Supplied, January-February



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>
Source: Table 3.5.

Table 3.5 Distillate Fuel Oil Supply and Disposition

	Supply			Disposition			Stocks ^a		
	Total Production	Imports	Crude Oil Used Directly ^b	Stock Change ^c	Exports	Product Supplied ^b	Total	Sulfur Content	
								0.05 Percent or Less ^d	Greater Than 0.05 Percent ^d
Thousand Barrels per Day							Million Barrels		
1973 Average	2,822	392	2	115	9	3,092	196	NA	NA
1974 Average	2,669	289	2	^e 10	2	2,948	^f 200	NA	NA
1975 Average	2,654	155	2	^{e,f} -41	1	2,851	209	NA	NA
1976 Average	2,924	146	1	-62	1	3,133	186	NA	NA
1977 Average	3,278	250	1	176	1	3,352	250	NA	NA
1978 Average	3,167	173	1	-93	3	3,432	216	NA	NA
1979 Average	3,153	193	1	34	3	3,311	229	NA	NA
1980 Average	2,662	142	1	-64	3	2,866	^f 205	NA	NA
1981 Average ^g	2,613	173	10	^f -38	5	2,829	192	NA	NA
1982 Average	2,606	93	10	-35	74	2,671	^f 179	NA	NA
1983 Average	2,456	174	-	^f -124	64	2,690	140	NA	NA
1984 Average	2,681	272	-	57	51	2,845	161	NA	NA
1985 Average	2,687	200	-	-48	67	2,868	144	NA	NA
1986 Average	2,798	247	-	31	100	2,914	155	NA	NA
1987 Average	2,731	255	-	-56	66	2,976	134	NA	NA
1988 Average	2,859	302	-	-30	69	3,122	124	NA	NA
1989 Average	2,899	306	-	-49	97	3,157	106	NA	NA
1990 Average	2,925	278	-	73	109	3,021	130	NA	NA
1991 Average	2,962	205	-	31	215	2,921	144	NA	NA
1992 Average	2,974	216	-	-8	219	2,979	141	NA	NA
1993 Average	3,132	184	-	1	274	3,041	141	^g 64	^g 77
1994 Average	3,205	203	-	12	234	3,162	145	73	73
1995 Average	3,155	193	-	-41	183	3,207	130	67	63
1996 Average	3,316	230	-	-10	190	3,365	127	68	58
1997 Average	3,392	228	-	32	152	3,435	138	68	70
1998 Average	3,424	210	-	48	124	3,461	156	77	79
1999 Average	3,399	250	-	-84	162	3,572	125	69	56
2000 Average	3,580	295	-	-20	173	3,722	118	72	46
2001									
January	3,609	789	-	6	67	4,325	118	68	50
February	3,612	635	-	-42	77	4,212	117	70	47
March	3,483	348	-	-387	75	4,143	105	68	37
April	3,650	288	-	-3	107	3,834	105	66	39
May	3,652	310	-	71	146	3,746	107	65	42
June	3,702	302	-	225	120	3,659	114	69	45
July	3,837	209	-	364	113	3,569	125	74	51
August	3,654	212	-	-102	140	3,829	122	68	54
September	3,625	317	-	166	152	3,624	127	72	55
October	3,796	253	-	62	99	3,888	129	69	60
November	3,968	244	-	334	132	3,746	139	76	63
December	3,744	241	-	180	202	3,604	145	82	62
Average	3,695	344	-	73	119	3,847	145	82	62
2002									
January	3,501	292	-	-192	109	3,875	138	81	57
February	3,489	231	-	-279	279	3,720	130	78	52
March	3,345	239	-	-225	67	3,741	123	74	49
April	3,636	219	-	-14	68	3,801	123	74	48
May	3,709	191	-	155	74	3,671	127	77	50
June	3,679	199	-	115	93	3,670	131	78	53
July	3,565	183	-	80	44	3,624	133	77	56
August	3,538	202	-	-89	119	3,710	131	71	60
September	3,537	193	-	-120	127	3,723	127	68	59
October	3,381	345	-	-180	96	3,809	121	66	56
November	3,761	370	-	82	114	3,936	124	71	52
December	3,921	493	-	340	171	3,904	134	81	54
Average	3,589	264	-	-26	112	3,766	134	81	54
2003									
January	^R 3,403	^R 324	-	^R -717	^R 119	^R 4,325	112	^R 68	^R 44
February	^E 3,433	^E 528	-	^E -526	^E 93	^E 4,394	^E 97	^E 61	^E 36
2-Month Average	^E 3,417	^E 421	-	^E -626	^E 107	^E 4,358	^E 97	^E 61	^E 36
2002 2-Month Average	3,495	263	-	-233	190	3,802	130	78	52
2001 2-Month Average	3,610	716	-	-17	72	4,272	117	70	47

^a Stocks are at end of period. Distillate fuel oil stocks in the "Northeast Heating Oil Reserve" are not included.

^b Beginning in January 1983, crude oil used directly as distillate fuel oil is reported as crude oil product supplied on Table 3.2b rather than as distillate fuel oil product supplied.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase.

^d By weight.

^e See Note 6 at end of section.

^f See Note 4 at end of section.

^g See Note 3 at end of section.

R=Revised. NA=Not available. - =Not applicable. E=Estimate.

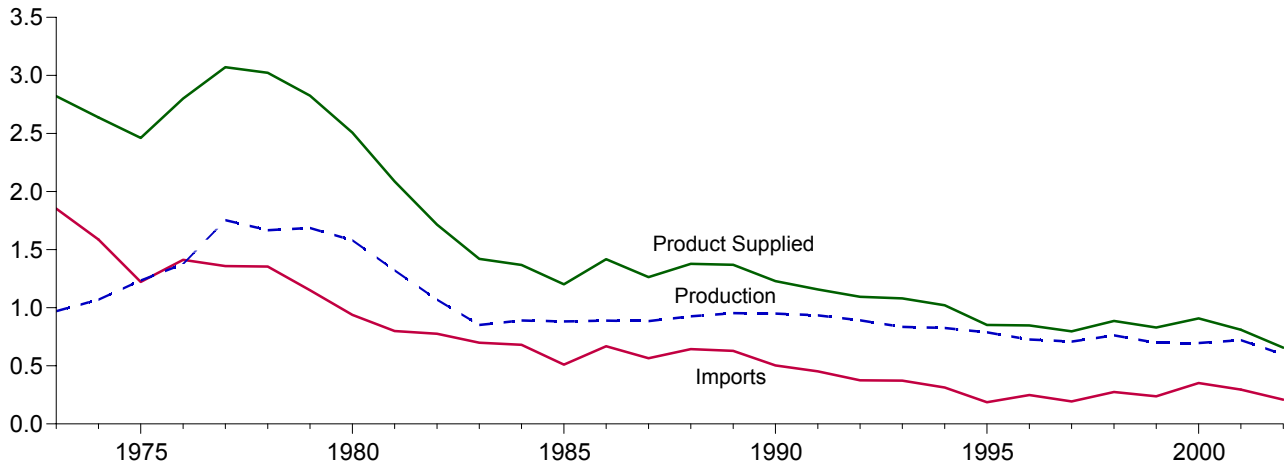
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

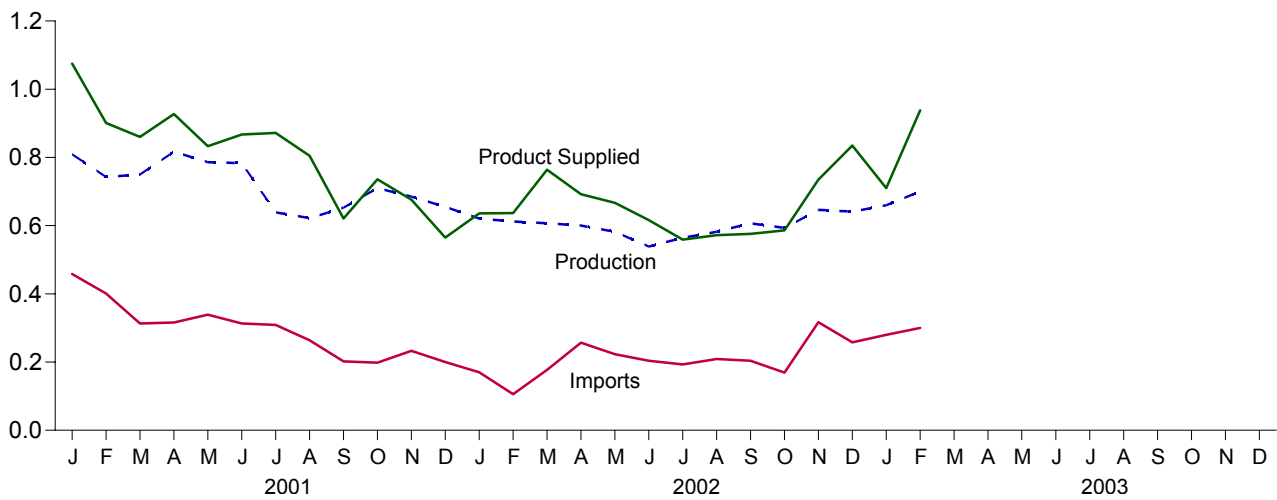
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S5. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S5.

Figure 3.4 Residual Fuel Oil
(Million Barrels per Day, Except as Noted)

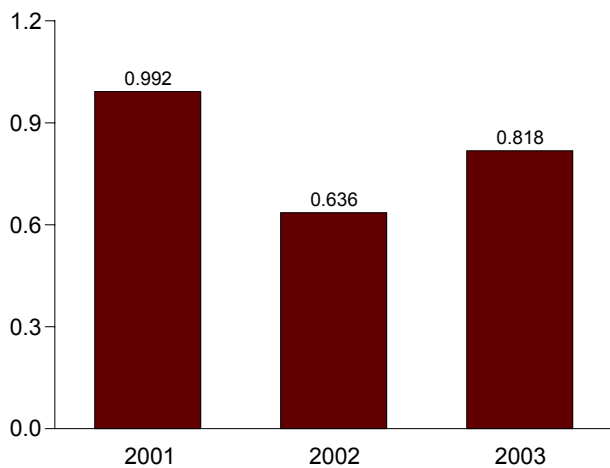
Overview, 1973-2002



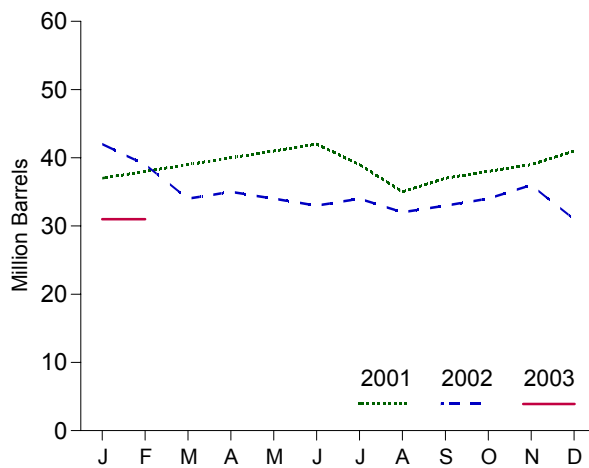
Overview, Monthly



Product Supplied, January-February



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>
Source: Table 3.6.

Table 3.6 Residual Fuel Oil Supply and Disposition

	Supply			Disposition			Stocks ^c
	Total Production	Imports	Crude Oil Used Directly ^a	Stock Change ^b	Exports	Product Supplied ^a	
	Thousand Barrels per Day							Million Barrels
1973 Average	971	1,853	17	-5	23	2,822	53
1974 Average	1,070	1,587	13	17	14	2,639	^d 60
1975 Average	1,235	1,223	15	^d -2	15	2,462	74
1976 Average	1,377	1,413	17	-5	12	2,801	72
1977 Average	1,754	1,359	13	48	6	3,071	90
1978 Average	1,667	1,355	13	1	13	3,023	90
1979 Average	1,687	1,151	12	15	9	2,826	96
1980 Average	1,580	939	12	-10	33	2,508	^d 92
1981 Average ^e	1,321	800	48	^d -37	118	2,088	78
1982 Average	1,070	776	48	-32	209	1,716	^d 66
1983 Average	852	699	-	^d -55	185	1,421	49
1984 Average	891	681	-	12	190	1,369	53
1985 Average	882	510	-	-7	197	1,202	50
1986 Average	889	669	-	-8	147	1,418	47
1987 Average	885	565	-	(s)	186	1,264	47
1988 Average	926	644	-	-8	200	1,378	45
1989 Average	954	629	-	-2	215	1,370	44
1990 Average	950	504	-	13	211	1,229	49
1991 Average	934	453	-	4	226	1,158	50
1992 Average	892	375	-	-20	193	1,094	43
1993 Average	835	373	-	4	123	1,080	44
1994 Average	826	314	-	-6	125	1,021	42
1995 Average	788	187	-	-13	136	852	37
1996 Average	726	248	-	24	102	848	46
1997 Average	708	194	-	-15	120	797	40
1998 Average	762	275	-	12	138	887	45
1999 Average	698	237	-	-25	129	830	36
2000 Average	696	352	-	1	139	909	36
2001 January	809	458	-	31	160	1,075	37
February	743	401	-	44	200	901	38
March	750	313	-	20	183	860	39
April	817	316	-	21	185	927	40
May	786	339	-	46	246	833	41
June	783	313	-	19	209	867	42
July	639	309	-	-82	158	872	39
August	622	264	-	-132	214	805	35
September	653	202	-	72	161	621	37
October	710	198	-	33	139	736	38
November	685	233	-	33	209	676	39
December	655	200	-	60	231	565	41
Average	721	295	-	13	191	811	41
2002 January	621	170	-	18	138	636	42
February	612	106	-	-89	171	637	39
March	607	177	-	-152	171	764	34
April	600	257	-	6	159	692	35
May	582	223	-	-23	160	667	34
June	539	204	-	-38	165	616	33
July	564	193	-	27	171	559	34
August	582	209	-	-53	272	572	32
September	607	205	-	35	200	576	33
October	593	169	-	22	153	586	34
November	646	317	-	67	160	735	36
December	641	258	-	-142	205	835	31
Average	599	208	-	-27	177	657	31
2003 January	^R 660	^R 280	-	^R -1	^R 231	^R 710	31
February	^E 701	^E 300	-	^E 11	^E 52	^E 938	^E 31
2-Month Average	^E 679	^E 289	-	^E 4	^E 146	^E 818	^E 31
2002 2-Month Average	617	140	-	-33	153	636	39
2001 2-Month Average	778	431	-	37	179	992	38

^a Beginning in January 1983, crude oil used directly as residual fuel oil is reported as crude oil product supplied on Table 3.2b rather than as residual fuel oil product supplied.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase.

^c Stocks are at end of period.

^d See Note 4 at end of section.

^e See Note 3 at end of section.

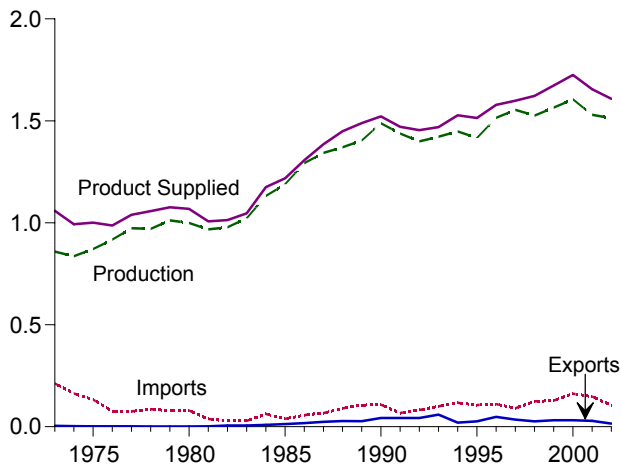
^R=Revised. - =Not applicable. ^E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Note: Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

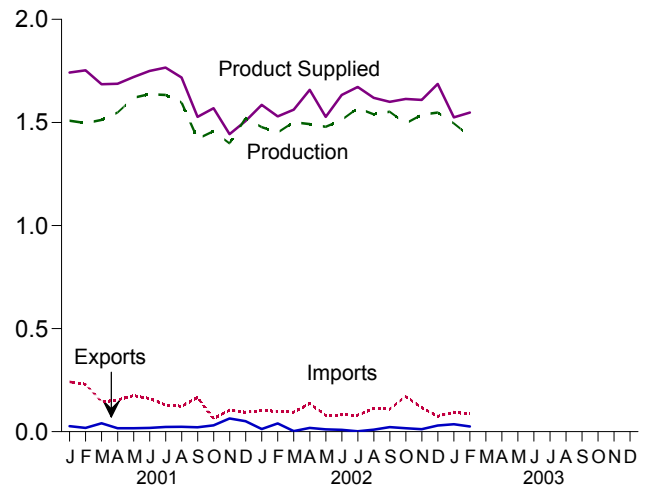
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S6. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S6.

Figure 3.5 Jet Fuel
(Million Barrels Per Day, Except as Noted)

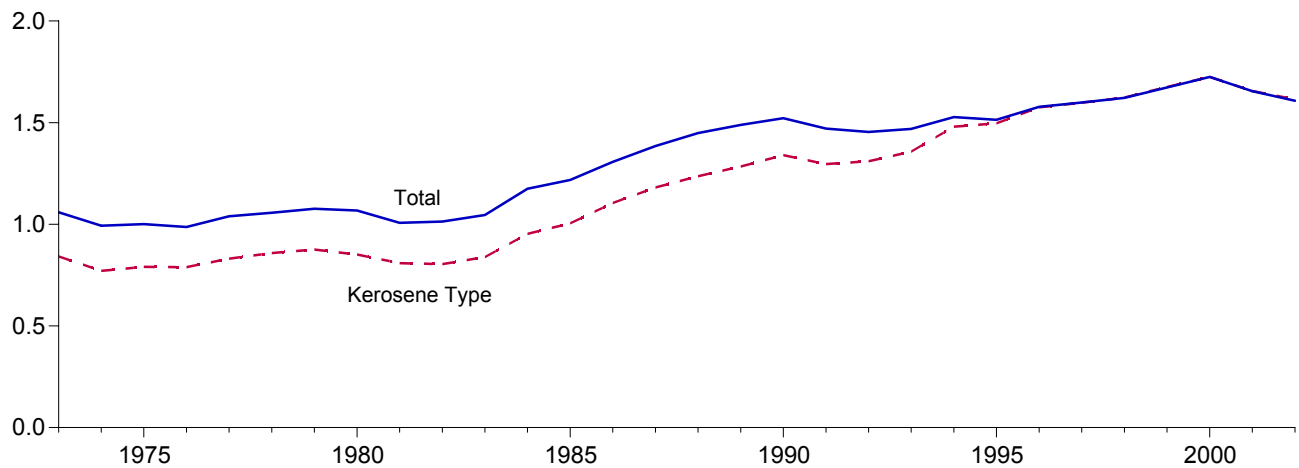
Overview, 1973-2002



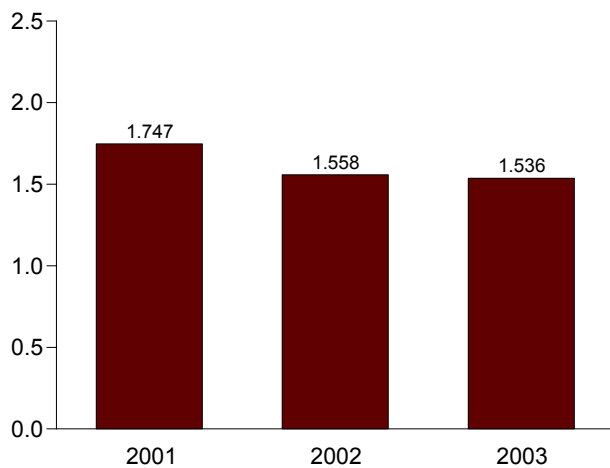
Overview, Monthly



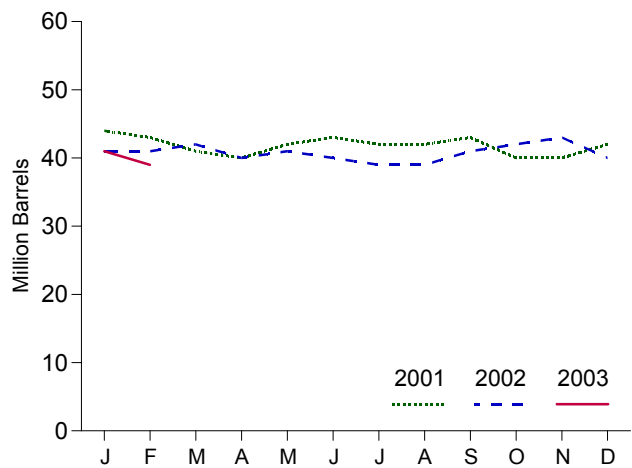
Product Supplied by Type, 1973-2002



Product Supplied, January-February



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.
Source: Table 3.7.

Table 3.7 Jet Fuel Supply and Disposition

	Supply			Disposition				Stocks ^a	
	Production		Imports	Stock Change ^b	Exports	Product Supplied			
	Total	Kerosene Type				Total	Kerosene Type	Total	Kerosene Type
	Thousand Barrels per Day							Million Barrels	
1973 Average	859	679	212	8	4	1,059	842	29	23
1974 Average	836	641	163	2	3	993	771	^c 29	^c 24
1975 Average	871	691	133	^c 2	2	1,001	791	30	25
1976 Average	918	731	76	5	2	987	789	32	26
1977 Average	973	787	75	7	2	1,039	831	35	28
1978 Average	970	791	86	-2	1	1,057	858	34	28
1979 Average	1,012	835	78	13	1	1,076	876	39	33
1980 Average	999	811	80	10	1	1,068	851	^c 42	^c 36
1981 Average	968	775	38	^c -4	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	^c 37	^c 31
1983 Average	1,022	817	29	^c (s)	6	1,046	839	39	32
1984 Average	1,132	919	62	9	9	1,175	953	42	35
1985 Average	1,189	983	39	-4	13	1,218	1,005	40	34
1986 Average	1,293	1,097	57	25	18	1,307	1,105	50	43
1987 Average	1,343	1,138	67	(s)	24	1,385	1,181	50	42
1988 Average	1,370	1,164	90	-17	28	1,449	1,236	44	38
1989 Average	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990 Average	1,488	1,311	108	31	43	1,522	1,340	52	46
1991 Average	1,438	1,274	67	-9	43	1,471	1,296	49	44
1992 Average	1,399	1,254	82	-16	43	1,454	1,310	43	39
1993 Average	1,422	1,309	100	-7	59	1,469	1,357	40	38
1994 Average	1,448	1,410	117	18	20	1,527	1,480	47	46
1995 Average	1,416	1,407	106	-19	26	1,514	1,497	40	39
1996 Average	1,515	1,513	111	(s)	48	1,578	1,575	40	40
1997 Average	1,554	1,554	91	11	35	1,599	1,598	44	44
1998 Average	1,526	1,525	124	2	26	1,622	1,623	45	45
1999 Average	1,565	1,565	128	-11	32	1,673	1,675	41	40
2000 Average	1,606	1,606	162	11	32	1,725	1,725	45	44
2001 January	1,508	1,508	242	-20	27	1,742	1,743	44	44
February	1,497	1,497	230	-44	18	1,753	1,752	43	43
March	1,512	1,512	145	-69	41	1,685	1,685	41	41
April	1,548	1,547	153	-4	17	1,688	1,687	40	40
May	1,620	1,620	175	59	17	1,720	1,722	42	42
June	1,637	1,637	161	30	18	1,750	1,749	43	43
July	1,633	1,633	129	-27	23	1,766	1,763	42	42
August	1,597	1,597	123	-21	24	1,718	1,720	42	42
September	1,420	1,420	166	38	21	1,527	1,525	43	43
October	1,458	1,458	63	-79	31	1,569	1,568	40	40
November	1,398	1,398	104	-6	64	1,443	1,444	40	40
December	1,521	1,521	94	58	51	1,507	1,512	42	42
Average	1,530	1,529	148	-7	29	1,655	1,656	42	42
2002 January	1,477	1,477	102	-18	13	1,585	1,589	41	41
February	1,451	1,451	99	-20	40	1,529	1,529	41	41
March	1,501	1,501	94	31	3	1,562	1,562	42	42
April	1,492	1,491	137	-48	18	1,658	1,674	40	40
May	1,479	1,479	79	20	11	1,527	1,535	41	41
June	1,512	1,512	81	-49	9	1,633	1,642	40	39
July	1,569	1,568	80	-25	2	1,672	1,671	39	39
August	1,539	1,538	112	22	10	1,619	1,626	39	39
September	1,552	1,552	110	40	22	1,600	1,608	41	41
October	1,495	1,495	171	35	17	1,614	1,630	42	42
November	1,537	1,536	117	33	12	1,609	1,609	43	43
December	1,548	1,547	75	-94	30	1,687	1,704	40	40
Average	1,513	1,513	105	-6	15	1,608	1,615	40	40
2003 January	^R 1,495	^R 1,495	^R 94	^R 27	^R 36	^R 1,525	^R 1,524	41	41
February	^E 1,432	^E 1,432	^E 86	^E -54	^E 25	^E 1,548	^E 1,548	^E 39	^E 39
2-Month Average	^E 1,465	^E 1,465	^E 90	^E -12	^E 31	^E 1,536	^E 1,535	^E 39	^E 39
2002 2-Month Average	1,465	1,465	100	-19	26	1,558	1,560	41	41
2001 2-Month Average	1,502	1,503	236	-31	23	1,747	1,747	43	43

^a Stocks are at end of period.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase.

^c See Note 4 at end of section.

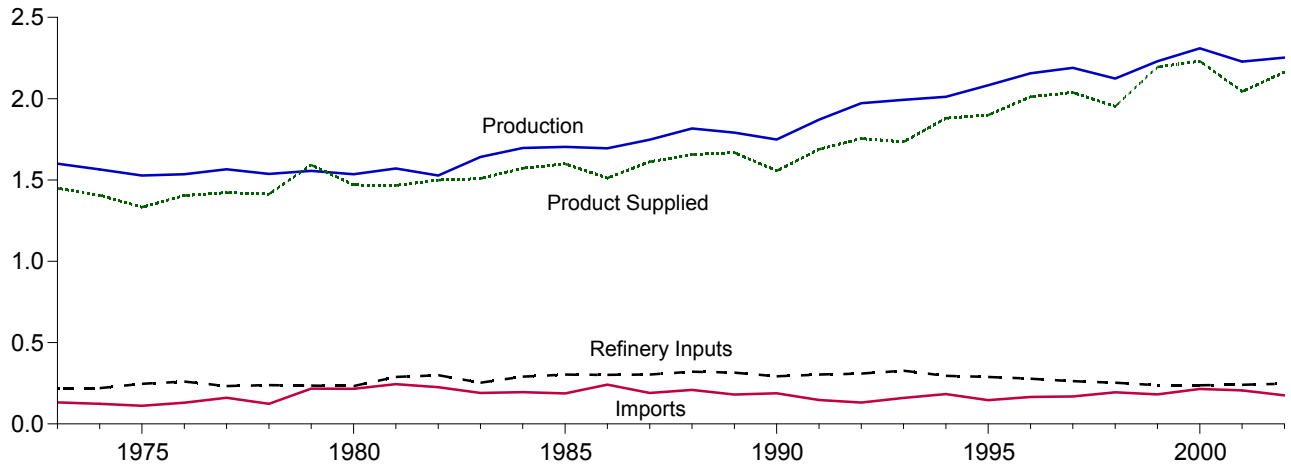
R=Revised. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Note: Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

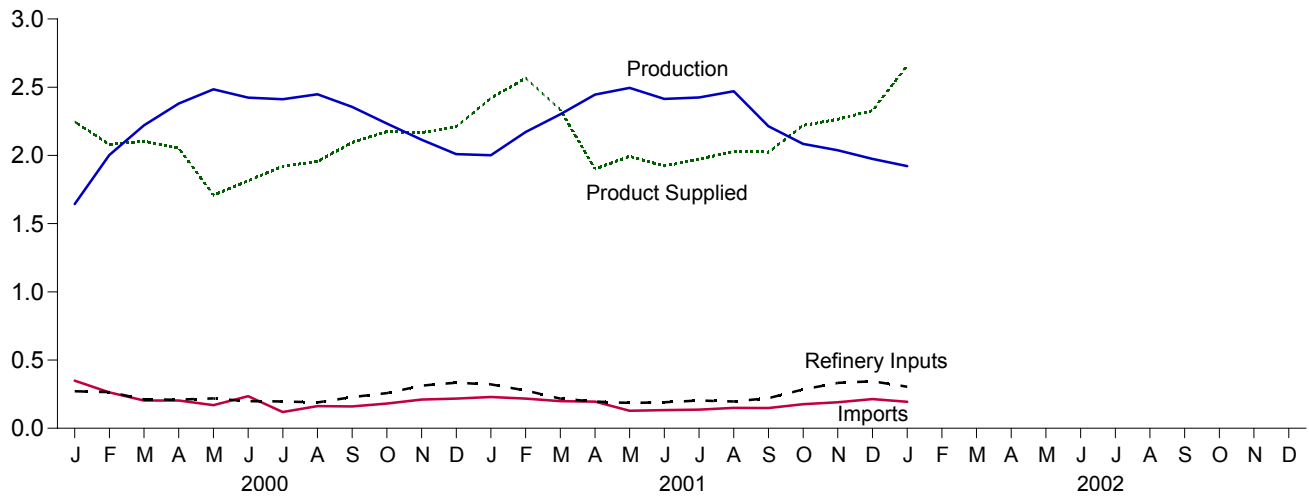
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S7. • 1992 forward: EIA, *Petroleum Supply Monthly*, March 2003, Table S7.

Figure 3.6 Liquefied Petroleum Gases
(Million Barrels per Day, Except as Noted)

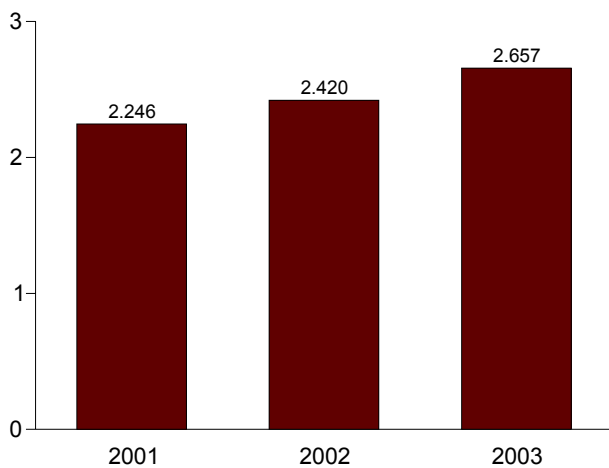
Overview, 1973-2002



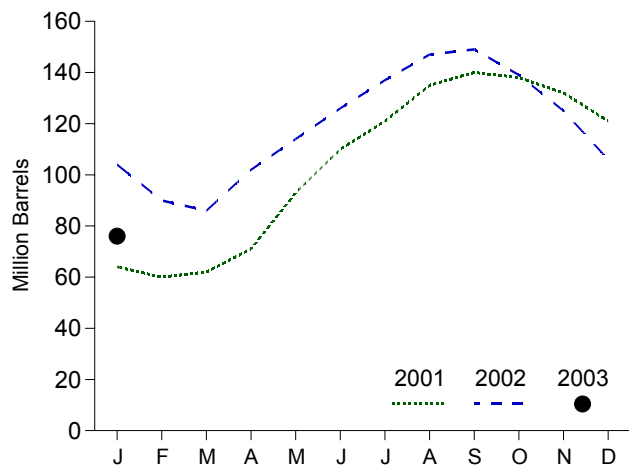
Overview, Monthly



Product Supplied, January



Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/pepo.html>
Source: Table 3.8.

Table 3.8 Liquefied Petroleum Gases Supply and Disposition

	Supply		Disposition				Stocks ^b
	Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels per Day							Million Barrels
1973 Average	1,600	132	35	220	27	1,449	99
1974 Average	1,565	123	38	220	25	1,406	c 113
1975 Average	1,527	112	c 35	246	26	1,333	125
1976 Average	1,535	130	-24	260	25	1,404	116
1977 Average	1,566	161	55	233	18	1,422	136
1978 Average	1,537	123	-12	239	20	1,413	c 132
1979 Average	1,556	217	c -70	236	15	1,592	111
1980 Average	1,535	216	27	233	21	1,469	c 120
1981 Average	1,571	244	c 18	289	42	1,466	135
1982 Average	d 1,527	226	-111	300	65	1,499	c 94
1983 Average	1,642	190	c -4	253	73	1,509	c 101
1984 Average	1,697	195	c -19	291	48	1,572	101
1985 Average	1,704	187	-75	304	62	1,599	74
1986 Average	1,695	242	80	302	42	1,512	103
1987 Average	1,748	190	-15	304	38	1,612	97
1988 Average	1,817	209	1	321	49	1,656	97
1989 Average	1,791	181	-47	315	35	1,668	80
1990 Average	1,749	188	48	293	40	1,556	98
1991 Average	1,871	147	-15	304	41	1,689	92
1992 Average	1,972	131	-10	309	49	1,755	89
1993 Average	1,993	160	49	327	43	1,734	106
1994 Average	2,012	183	-19	296	38	1,880	99
1995 Average	2,082	146	-17	289	58	1,899	93
1996 Average	2,156	166	-19	278	51	2,012	86
1997 Average	2,190	169	9	263	50	2,038	89
1998 Average	2,124	194	70	253	42	1,952	115
1999 Average	2,230	182	-71	238	50	2,195	89
2000 Average	2,310	215	-19	238	74	2,231	83
2001 January	1,644	349	-601	272	75	2,246	64
February	2,002	263	-140	266	59	2,081	60
March	2,221	203	75	212	33	2,105	62
April	2,380	204	288	209	35	2,053	71
May	2,484	170	696	219	31	1,709	93
June	2,423	235	589	199	56	1,815	110
July	2,412	119	363	196	51	1,920	121
August	2,448	162	432	189	34	1,956	135
September	2,356	160	158	228	35	2,095	140
October	2,234	181	-55	258	37	2,175	138
November	2,115	211	-191	312	37	2,168	132
December	2,009	217	-361	334	43	2,210	121
Average	2,228	206	105	241	44	2,044	121
2002 January	2,001	229	-565	322	52	2,420	104
February	2,171	217	-498	276	44	2,567	90
March	2,302	199	-115	218	64	2,335	86
April	2,446	195	515	195	32	1,900	102
May	2,495	129	378	186	67	1,993	114
June	2,414	133	402	190	31	1,923	126
July	2,425	137	355	203	33	1,972	137
August	2,470	150	348	196	46	2,030	147
September	2,214	148	49	221	67	2,025	149
October	2,085	176	-326	284	85	2,219	139
November	2,038	191	-466	333	98	2,265	125
December	1,974	214	-615	344	131	2,328	106
Average	2,253	176	-43	247	63	2,163	106
2003 January	1,922	194	-959	304	113	2,657	76

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are at end of period.

^c See Note 4 at end of section.

^d See Note 6 at end of section.

Notes: • Liquefied petroleum gases include ethane, ethylene, propane,

propylene, normal butane, butylene, isobutane and isobutylene.

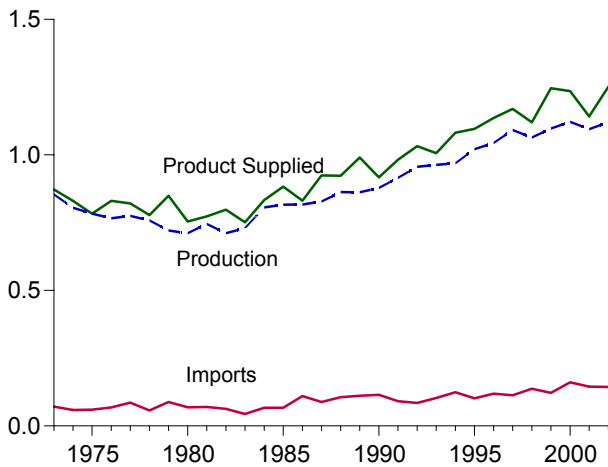
• Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

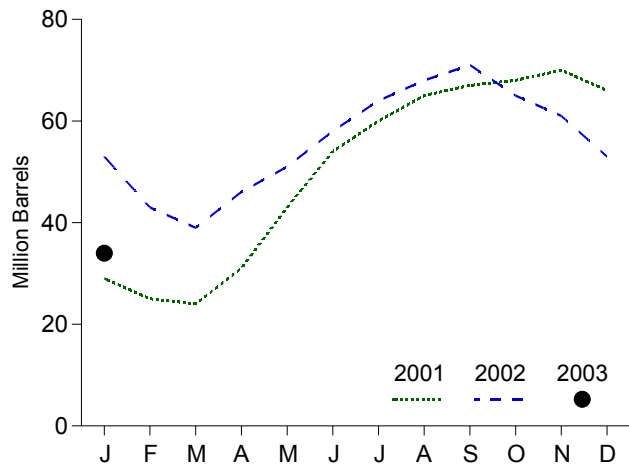
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S8. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S9.

Figure 3.7 Propane and Propylene
(Million Barrels per Day, Except as Noted)

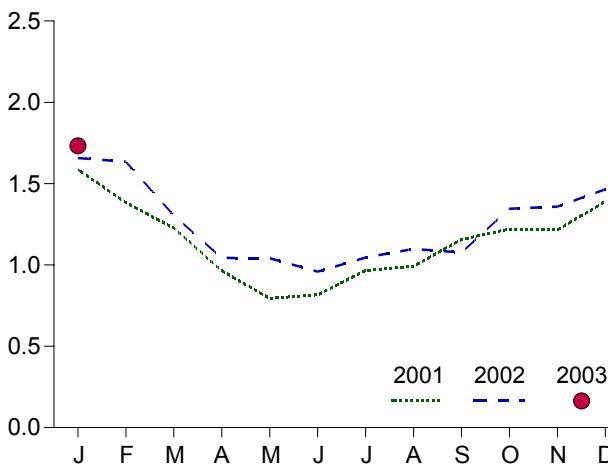
Overview, 1973-2002



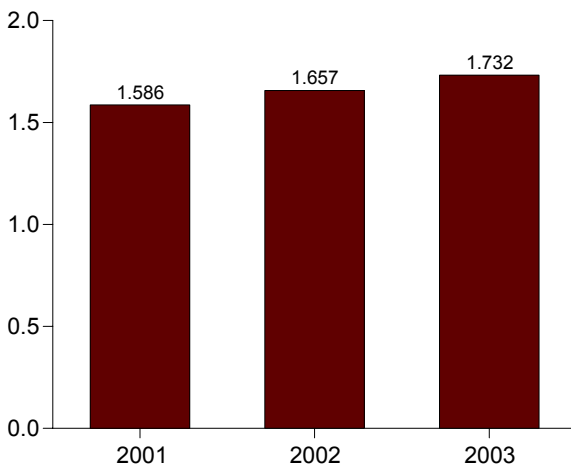
Stocks, End of Month



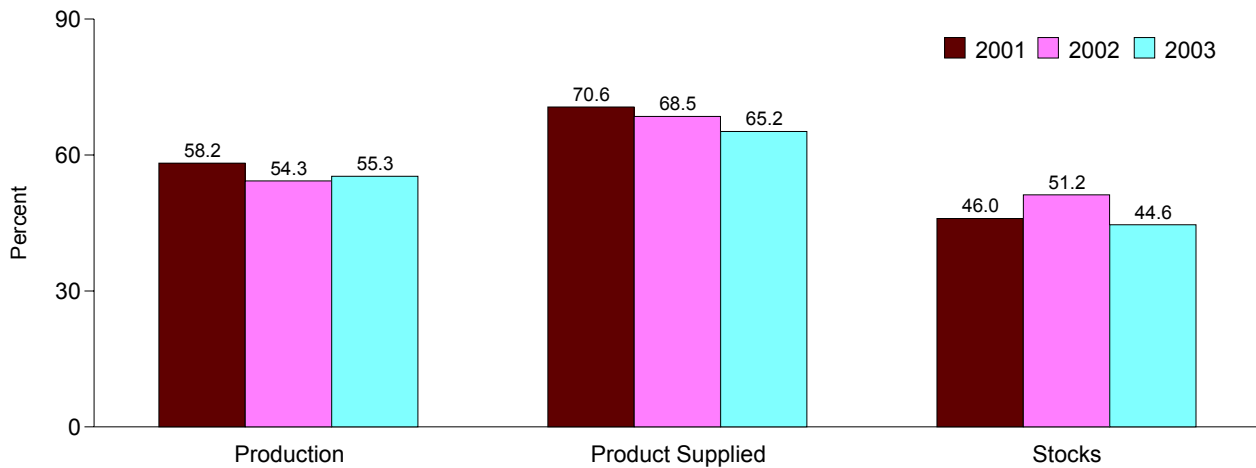
Product Supplied, Monthly



Product Supplied, January



Share of Liquefied Petroleum Gases, January



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/pepro.html>.
Source: Table 3.9 and, for calculation of shares, data prior to rounding.

Table 3.9 Propane and Propylene Supply and Disposition (A Subset of Table 3.8)

	Supply		Disposition				Stocks ^b
	Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels per Day							Million Barrels
1973 Average	854	71	30	8	15	872	65
1974 Average	805	59	11	9	14	830	69
1975 Average	783	60	36	11	13	783	82
1976 Average	766	68	-22	12	13	830	74
1977 Average	775	86	21	10	10	821	81
1978 Average	758	57	15	13	9	778	^c 87
1979 Average	721	88	^c -61	14	8	849	64
1980 Average	711	69	4	12	10	754	^c 65
1981 Average	745	70	^c 18	5	18	773	76
1982 Average	711	63	-59	4	31	798	^c 54
1983 Average	730	44	^c -24	4	43	751	^c 48
1984 Average	806	67	^c 7	4	30	833	58
1985 Average	816	67	-50	3	48	883	39
1986 Average	817	110	64	4	28	831	63
1987 Average	828	88	-41	8	24	924	48
1988 Average	863	106	7	8	31	923	50
1989 Average	862	111	-52	11	24	990	32
1990 Average	878	115	48	(s)	28	917	49
1991 Average	915	91	-3	(s)	28	982	48
1992 Average	956	85	-24	(s)	33	1,032	39
1993 Average	963	103	34	(s)	26	1,006	51
1994 Average	969	124	-13	0	24	1,082	46
1995 Average	1,021	102	-10	0	38	1,096	43
1996 Average	1,044	119	(s)	0	28	1,136	43
1997 Average	1,092	113	3	0	32	1,170	44
1998 Average	1,064	137	56	0	25	1,120	65
1999 Average	1,097	122	-59	0	33	1,246	43
2000 Average	1,122	161	-5	0	53	1,235	41
2001 January	957	312	-379	0	62	1,586	29
February	1,048	222	-155	0	41	1,383	25
March	1,072	151	-25	0	22	1,226	24
April	1,110	105	232	0	18	965	31
May	1,121	80	392	0	15	794	43
June	1,093	103	348	0	32	816	54
July	1,102	92	186	0	42	966	60
August	1,111	95	187	0	27	992	65
September	1,146	92	54	0	27	1,157	67
October	1,138	146	38	0	26	1,220	68
November	1,135	175	68	0	26	1,216	70
December	1,104	176	-145	0	35	1,390	66
Average	1,095	145	67	0	31	1,142	66
2002 January	1,087	197	-414	0	42	1,657	53
February	1,114	177	-379	0	35	1,635	43
March	1,113	145	-105	0	60	1,304	39
April	1,134	155	221	0	25	1,043	46
May	1,155	86	157	0	43	1,041	51
June	1,134	100	252	0	23	959	58
July	1,137	119	190	0	22	1,045	64
August	1,138	116	128	0	28	1,098	68
September	1,093	130	93	0	54	1,076	71
October	1,080	143	-196	0	74	1,345	65
November	1,138	167	-137	0	85	1,358	61
December	1,126	192	-266	0	119	1,465	53
Average	1,121	144	-37	0	51	1,251	53
2003 January	1,063	161	-602	0	95	1,732	34

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are at end of period.

^c See Note 4 at end of section.

(s)=Less than 500 barrels per day.

Note: Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **1973 through 1975:** U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual." • **1976 through 1980:** Energy Information Administration (EIA), *Energy Data Reports*, Petroleum Statement, Annual." • **1981-1991:** EIA, *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S8. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S8.

Table 3.10 Other Petroleum Products Supply and Disposition

	Supply		Disposition				Stocks ^b
	Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	Products Supplied	
	Thousand Barrels per Day							Million Barrels
1973 Average	2,833	290	1	750	162	2,211	179
1974 Average	2,722	269	25	665	172	2,129	^c 188
1975 Average	2,547	144	^c -6	537	158	2,001	188
1976 Average	2,725	129	(s)	524	172	2,158	188
1977 Average	2,939	130	20	514	164	2,371	195
1978 Average	3,076	80	-12	492	165	2,511	191
1979 Average	3,141	116	24	352	208	2,673	200
1980 Average	2,957	130	15	310	197	2,566	^c 205
1981 Average	2,771	188	^c -42	723	197	2,081	241
1982 Average	2,475	305	-68	787	205	^d 1,857	^c 216
1983 Average	2,437	382	^c -6	712	236	1,877	^c 217
1984 Average	2,500	503	^c -32	791	236	2,007	198
1985 Average	2,532	550	22	886	227	1,947	206
1986 Average	2,704	504	-15	888	291	2,045	201
1987 Average	2,737	543	-1	829	264	2,187	200
1988 Average	2,773	645	22	799	294	2,303	208
1989 Average	2,771	627	12	797	305	2,285	213
1990 Average	2,842	705	-32	887	289	2,402	201
1991 Average	2,826	675	18	936	277	2,269	208
1992 Average	2,928	707	-3	906	263	2,470	^c 207
1993 Average	^e 3,035	770	^c -2	1,081	^e 300	^e 2,426	206
1994 Average	2,973	761	24	861	329	2,518	215
1995 Average	3,031	708	-23	958	348	2,457	206
1996 Average	3,108	879	-11	1,014	376	2,608	202
1997 Average	3,204	945	30	985	402	2,733	213
1998 Average	3,253	888	18	1,002	380	2,741	219
1999 Average	3,211	943	-64	1,061	338	2,819	196
2000 Average	3,154	938	30	991	429	2,642	207
2001 January	2,802	1,266	438	544	483	2,604	221
February	3,045	1,111	551	597	499	2,509	236
March	2,883	1,174	180	902	424	2,550	242
April	2,984	1,126	23	984	451	2,651	242
May	3,120	1,177	-57	1,103	465	2,787	241
June	3,229	1,126	-243	1,388	430	2,780	233
July	3,214	998	-382	1,432	393	2,769	221
August	3,197	1,062	-287	1,162	492	2,893	213
September	3,140	1,094	261	1,048	334	2,591	220
October	3,061	1,038	-236	1,060	473	2,802	213
November	3,107	1,066	119	965	402	2,686	217
December	2,858	910	-75	941	370	2,533	214
Average	3,053	1,095	20	1,013	434	2,681	214
2002 January	2,914	992	271	711	441	2,482	222
February	2,974	1,022	50	1,071	482	2,392	224
March	3,047	1,094	263	982	436	2,459	232
April	3,161	1,064	-47	1,174	472	2,626	230
May	3,127	1,305	-76	1,257	503	2,747	228
June	3,228	1,101	-174	1,267	445	2,791	223
July	3,247	1,175	-96	1,205	420	2,893	220
August	3,316	1,081	-299	1,237	550	2,909	211
September	3,197	1,097	-57	1,109	479	2,764	209
October	3,062	937	-36	1,004	471	2,561	208
November	3,070	1,042	18	1,015	503	2,576	208
December	3,038	858	-304	1,440	547	2,213	199
Average	3,116	1,064	-41	1,123	479	2,619	199
2003 January	3,071	1,095	468	850	526	2,323	213

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are at end of period.

^c See Note 4 at end of section.

^d See Note 6 at end of section.

^e Beginning in 1993, other petroleum products production, exports, and products supplied include an adjustment to oxygenates and motor gasoline blending components.

(s)=Less than +500 barrels per day and greater than -500 barrels per day.

Notes: • Other petroleum products include pentanes plus, other

hydrocarbons and alcohol, unfinished oils, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, liquefied petroleum gases, and crude oil that is used as fuel. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S9. • **1992 forward:** EIA, *Petroleum Supply Monthly*, March 2003, Table S10.

Petroleum

Note 1. Survey Respondents: The Energy Information Administration (EIA) uses a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review such industry publications as the *Oil and Gas Journal* and *Oil Daily* for information on facilities or companies starting up or closing down operations. Those sources are augmented by articles in newspapers, letters from respondents indicating changes in status, and information received from survey systems.

To supplement routine frames maintenance and to provide more thorough coverage, a comprehensive frames investigation is conducted every 3 years. This investigation results in the reassessment and recompilation of the complete frame for each survey. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

In 1991, the EIA conducted a frame identifier survey of companies that produce, blend, store, or import oxygenates. A summary of the results from the identification survey was published in the *Weekly Petroleum Status Report* dated February 12, 1992, and in the February 1992 issue of the *Petroleum Supply Monthly*. In order to continue to provide relevant information about U.S. and regional gasoline supply, the EIA conducted a second frame identifier survey of those companies during 1992. As a result, numerous respondents were added to the monthly surveys effective in January 1993. See Explanatory Note 7 in the *Petroleum Supply Monthly*.

Note 2. Motor Gasoline: Beginning in January 1981, the EIA expanded its universe to include non-refinery blenders and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately.

Beginning with the reporting of January 1993 data, the EIA made adjustments to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by the EIA through 1992 were underreported because the reporting system was (1) not collecting all fuel ethanol blending, and (2) there was a misreporting of motor gasoline blending components that were blended into finished gasoline. The adjustments are incorporated into EIA's data beginning in January 1993. To facilitate data analysis across the 1992–1993 period, EIA has prepared a table of 1992 data adjusted according to the 1993 basis. See *Petroleum Supply Monthly*, March 1993, Table H3.

Note 3. Distillate and Residual Fuel Oils: The requirement to report crude oil in pipelines or burned on leases as either distillate or residual fuel oil has been eliminated. Prior to January 1981, the refinery input of unfinished oils

typically exceeded the available supply of unfinished oils. That discrepancy was assumed to be due to the redesignation of distillate and residual fuel oils received as such but used as unfinished oil inputs by the receiving refinery. The imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of that difference was subtracted from distillate and one-third from residual. Beginning in January 1981, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment.

Beginning in January 1993, the end-of-month stocks of distillate fuel oil are split into two sulfur categories (0.05 percent sulfur or less and greater than 0.05 percent sulfur) to meet Environmental Protection Agency requirements effective in October 1992. For further details, see the EIA, *Petroleum Supply Monthly*.

Note 4. New Stock Basis: In January 1975, 1979, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, affecting subsequent stocks reported and stock change calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:

Crude Oil: 1982—645 (Total) and 351 (Other Primary).

Crude Oil and Petroleum Products: 1974—1,121; 1980—1,425; and 1982—1,461.

Motor Gasoline: 1974—225; 1980—263 (Total) and 214 (Finished); 1982—244 (Total) and 202 (Finished).

Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.

Residual Fuel Oil: 1974—75; 1980—91; and 1982—69.

Jet Fuel: 1974—30 (Total) and 24 (Kerosene Type); 1980—42 (Total) and 36 (Kerosene Type); and 1982—39 (Total) and 32 (Kerosene Type).

Liquefied Petroleum Gases: 1974—113; 1978—136; 1980—128; and 1982—102.

Propane and Propylene: 1978—86; 1980—69; and 1982—57.

Other Petroleum Products: 1974—190; 1980—207; and 1982—219.

Stock change calculations beginning in 1975, 1979, 1981, and 1983 were made by using new basis stock levels.

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream, which was formerly included in the "Other Petroleum Products Supply and Disposition" table, is now reported on

a component basis (ethane, propane, normal butane, isobutane, and pentanes plus). Most of these stocks now appear in the "Liquefied Petroleum Gases Supply and Disposition" table. This change affects stocks reported and stock change calculations in each table. Under the new basis, end-of-year 1983 stocks, in million barrels, would have been: 108 for liquefied petroleum gases, 55 for propane and propylene, and 210 for other petroleum products.

In January 1993, changes were made in the monthly surveys to begin collecting bulk terminal and pipeline stocks of oxygenates. This change affected stocks reported and stock change calculations. However, a new basis stock level was not calculated for 1992 end-of-year stocks.

Note 5. Stocks of Alaskan Crude Oil: Stocks of Alaskan Crude oil in transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Other Primary).

Note 6. Data Discrepancies: Due to differences internal to EIA data processing systems, some small discrepancies exist between data in the *Monthly Energy Review (MER)* and the *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*. The data that have discrepancies are footnoted in Section 3 tables and summarized here.

Table	Data Series	Year Average	MER Data	PSA and PSM Data
3.1a	Natural Gas Plant Production	1976	1,604	1,603
3.1b	Exports, Total	1979	471	472
3.1b	Exports, Petroleum Products	1979	236	237
3.1b	Net Imports	1979	7,985	7,984
3.2a	Crude Used Directly	1976	-19	-18
3.2a	Imports, SPR	1978	161	162
3.2a	Crude Used Directly	1978	-15	-14
3.2a	Crude Used Directly	1979	-14	-13
3.2a	Crude Used Directly	1980	-14	-13
3.2b	Crude Losses	1976	14	15
3.2b	Crude Losses	1980	14	15
3.5	Stock Change	1974	10	9
3.5	Stock Change	1975	-41	-40
3.8	Total Production	1982	1,527	1,525
3.1	Products Supplied	1982	1,857	1,856

Section 4. Natural Gas

Total dry natural gas production in the United States during December 2002 was forecast as 1.6 trillion cubic feet, 4 percent lower than production during December 2001.

Consumption of natural and supplemental gas in December 2002 was forecast as 2.1 trillion cubic feet, 6 percent higher than the level in December 2001.

Deliveries to residential consumers in December 2002 were forecast as 701 billion cubic feet, 14 percent higher than the previous December's deliveries. Total deliveries to industrial consumers during December 2002 were forecast as 736 billion cubic feet, 2 percent higher than the previous December's level.

Net imports of natural gas in December 2002 were forecast as 282 billion cubic feet, 5 percent higher than net imports in the previous December.

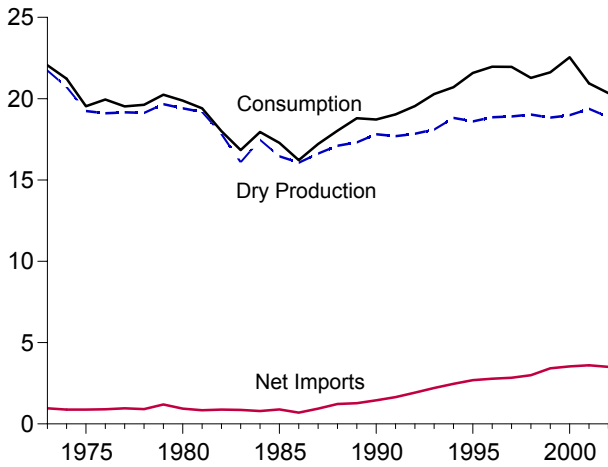
Stocks of working gas¹ in underground natural gas storage reservoirs at the end of December 2002 were 2.4 trillion cubic feet, 18 percent lower than the level of stocks available 1 year earlier.

Net withdrawals from underground storage during December 2002 were forecast as 558 billion cubic feet, 59 percent higher than the amount of net withdrawals during December 2001.

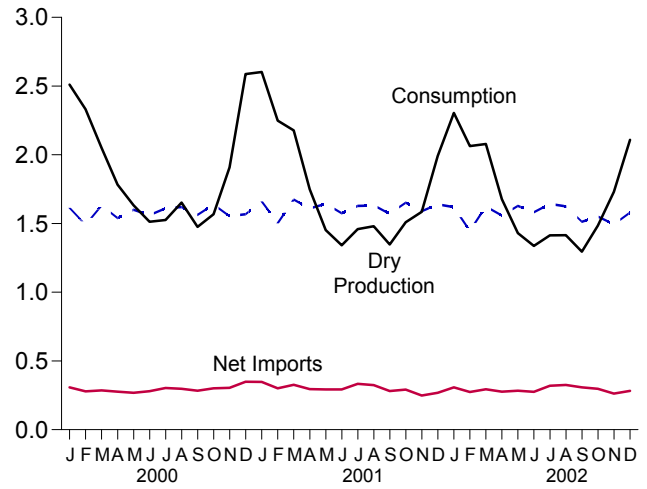
¹Gas available for withdrawal.

Figure 4.1 Natural Gas
(Trillion Cubic Feet)

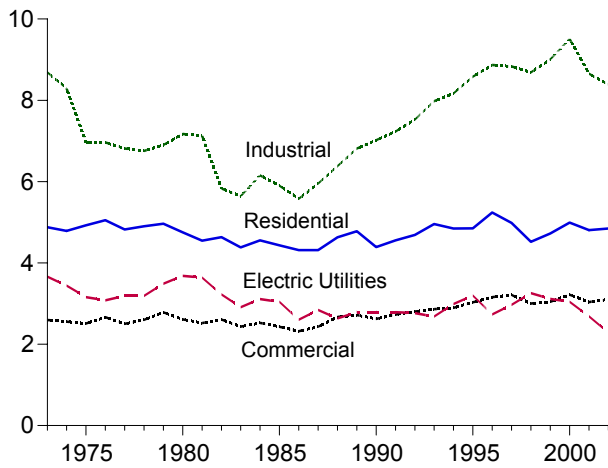
Overview, 1973-2002



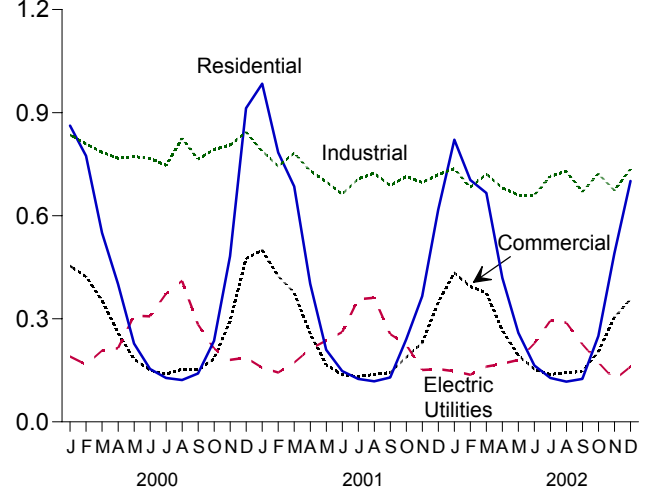
Overview, Monthly



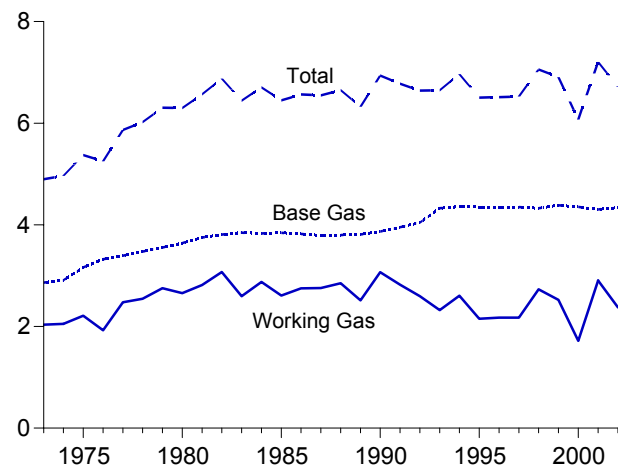
Consumption by Sector, 1973-2002



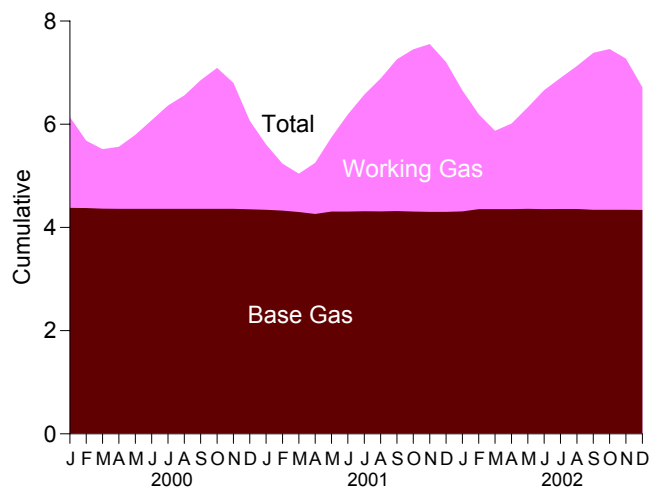
Consumption by Sector, Monthly



Underground Storage, End of Year, 1973-2002



Underground Storage, End of Month



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/natgas.html>.
Sources: Tables 4.1, 4.4, and 4.5.

Table 4.1 Natural Gas Overview
(Billion Cubic Feet)

	Dry Gas Production ^a	Supplemental Gaseous Fuels ^b	Net Imports ^c	Net Withdrawals From Storage ^d	Balancing Item ^e	Consumption ^{f,g}
1973 Total	h21,731	NA	956	-442	-196	22,049
1974 Total	h20,713	NA	882	-84	-289	21,223
1975 Total	h19,236	NA	880	-344	-235	19,538
1976 Total	h19,098	NA	899	165	-216	19,946
1977 Total	h19,163	NA	955	-557	-41	19,521
1978 Total	h19,122	NA	913	-120	-287	19,627
1979 Total	h19,663	NA	1,198	-248	-372	20,241
1980 Total	19,403	155	936	23	-640	19,877
1981 Total	19,181	176	845	-297	-500	19,404
1982 Total	17,820	145	882	-308	^e -537	18,001
1983 Total	16,094	132	864	447	^e -703	16,835
1984 Total	17,466	110	788	-197	-217	17,951
1985 Total	16,454	126	894	235	-428	17,281
1986 Total	16,059	113	689	-147	-493	16,221
1987 Total	16,621	101	939	-6	-444	17,211
1988 Total	17,103	101	1,220	59	-453	18,030
1989 Total	17,311	107	1,275	326	-218	18,801
1990 Total	17,810	123	1,447	-513	-150	18,716
1991 Total	17,698	113	1,644	80	-500	19,035
1992 Total	17,840	118	1,921	173	-508	19,544
1993 Total	18,095	119	2,210	-36	-110	20,279
1994 Total	18,821	111	2,462	-286	-400	20,708
1995 Total	18,599	110	2,687	415	-230	21,581
1996 Total	18,854	109	2,784	2	217	21,966
1997 Total	18,902	103	2,837	24	92	21,959
1998 Total	19,024	102	2,993	-530	-312	21,277
1999 Total	18,832	98	3,422	172	-905	21,620
2000 January	1,614	9	308	799	-220	2,510
February	1,489	8	279	460	95	2,331
March	1,630	7	286	155	-28	2,051
April	1,540	6	277	-47	6	1,783
May	1,600	6	268	-237	-5	1,633
June	1,560	5	280	-291	-41	1,513
July	1,611	7	303	-296	-99	1,526
August	1,620	7	298	-201	-71	1,653
September	1,563	6	284	-297	-81	1,475
October	1,638	7	301	-247	-131	1,568
November	1,553	8	305	295	-252	1,909
December	1,568	9	349	735	-74	2,587
Total	18,987	86	3,538	829	-892	22,547
2001 January	^R 1,661	^R 8	348	^R 496	^R 91	2,603
February	^{RE} 1,502	7	301	^R 339	^R 100	^R 2,249
March	^{RE} 1,675	^R 7	326	^R 183	^R -13	^R 2,178
April	^{RE} 1,609	6	295	^R -279	^R 119	^R 1,749
May	^R 1,643	6	293	^R -479	^R -11	^R 1,452
June	^R 1,574	6	293	^R -441	^R -90	^R 1,342
July	^{RE} 1,628	7	333	^R -385	^R -125	^R 1,459
August	^{RE} 1,631	6	324	^R -307	^R -174	^R 1,480
September	^{RE} 1,571	^R 6	281	^R -372	^R -139	^R 1,347
October	^{RE} 1,651	7	292	^R -190	^R -251	^R 1,509
November	^{RE} 1,590	^R 7	249	^R -73	^R -189	^R 1,585
December	^{RE} 1,640	8	268	^R 352	^R -277	^R 1,991
Total	^R 19,375	^R 79	3,604	^R -1,156	^R -959	^R 20,944
2002 January	^E 1,619	^E 8	308	546	^R -177	^R 2,304
February	^E 1,447	^E 7	274	462	^R -126	^R 2,064
March	^E 1,623	^E 8	294	320	-166	2,079
April	^E 1,558	^E 6	277	-126	-39	1,677
May	^E 1,628	^E 6	284	-323	-165	^R 1,430
June	^E 1,582	^E 5	275	-339	-186	1,337
July	^E 1,642	^E 7	320	-239	^R -317	1,414
August	^E 1,625	^E 7	325	-234	-308	1,415
September	^{RE} 1,513	^E 6	308	-292	-240	^R 1,295
October	^{RE} 1,550	^E 7	^E 298	-84	^R -285	^R 1,485
November	^{RE} 1,494	^{RE} 7	^{RE} 262	198	^R -230	^R 1,730
December	^F 1,580	^F 5	^F 282	^F 558	^F -316	^F 2,109
Total	^E 18,861	^E 78	^E 3,508	^E 447	^E -2,555	^E 20,339

^a "Marketed Production (Wet)" minus "Extraction Loss." See Table 4.2.

^b See Note 4 at end of section.

^c "Imports" minus "Exports." See Table 4.3.

^d "Withdrawals" minus "Injections." Data for 1980-2001 cover underground storage and liquefied natural gas storage. All other time periods cover underground storage only. See also Note 8 at end of section.

^e See Note 7 at end of section. Since 1980, excludes transit shipments that cross the U.S.-Canada border (i.e., natural gas delivered to its destination via the other country).

^f See Note 6 at end of section.

^g For 1990-2000, annual values include natural gas used by vehicles, whereas monthly values do not. See Table 4.4.

^h May include unknown quantities of nonhydrocarbon gases.

^R=Revised. ^{NA}=Not available. ^E=Estimate. ^F=Forecast.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/hatgas.html>.

Sources: • **1973-1996:** Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 94. • **1997 forward:** EIA, *Natural Gas Monthly*, February 2003, Table 2, except for Balancing Item and Consumption, which incorporate the most current electric utilities data from Table 4.4 of this report. • **Forecast values:** Derived from EIA's Short-Term Integrated Forecasting System. See Note 9 at end of section.

Table 4.2 Natural Gas Production
(Billion Cubic Feet)

	Gross Withdrawals ^a	Repressuring ^b	Nonhydrocarbon Gases Removed ^c	Vented and Flared ^d	Marketed Production ^e	Extraction Loss ^f	Dry Gas Production ^g
1973 Total	24,067	1,171	NA	248	^h 22,648	917	^h 21,731
1974 Total	22,850	1,080	NA	169	^h 21,601	887	^h 20,713
1975 Total	21,104	861	NA	134	^h 20,109	872	^h 19,236
1976 Total	20,944	859	NA	132	^h 19,952	854	^h 19,098
1977 Total	21,097	935	NA	137	^h 20,025	863	^h 19,163
1978 Total	21,309	1,181	NA	153	^h 19,974	852	^h 19,122
1979 Total	21,883	1,245	NA	167	^h 20,471	808	^h 19,663
1980 Total	21,870	1,365	199	125	20,180	777	19,403
1981 Total	21,587	1,312	222	98	19,956	775	19,181
1982 Total	20,272	1,388	208	93	18,582	762	17,820
1983 Total	18,659	1,458	222	95	16,884	790	16,094
1984 Total	20,267	1,630	224	108	18,304	838	17,466
1985 Total	19,607	1,915	326	95	17,270	816	16,454
1986 Total	19,131	1,838	337	98	16,859	800	16,059
1987 Total	20,140	2,208	376	124	17,433	812	16,621
1988 Total	20,999	2,478	460	143	17,918	816	17,103
1989 Total	21,074	2,475	362	142	18,095	785	17,311
1990 Total	21,523	2,489	289	150	18,594	784	17,810
1991 Total	21,750	2,772	276	170	18,532	835	17,698
1992 Total	22,132	2,973	280	168	18,712	872	17,840
1993 Total	22,726	3,103	414	227	18,982	886	18,095
1994 Total	23,581	3,231	412	228	19,710	889	18,821
1995 Total	23,744	3,565	388	284	19,506	908	18,599
1996 Total	24,114	3,511	518	272	19,812	958	18,854
1997 Total	24,213	3,492	599	256	19,866	964	18,902
1998 Total	24,108	3,427	617	103	19,961	938	19,024
1999 Total	23,823	3,293	615	110	19,805	973	18,832
2000 January	2,061	302	51	8	1,700	86	1,614
February	1,917	289	50	10	1,569	80	1,489
March	2,085	307	54	7	1,717	87	1,630
April	1,966	282	51	10	1,623	82	1,540
May	2,009	264	52	8	1,686	86	1,600
June	1,971	268	52	8	1,643	83	1,560
July	2,024	264	53	11	1,697	86	1,611
August	2,042	275	53	8	1,707	87	1,620
September	1,985	279	52	8	1,647	84	1,563
October	2,088	302	53	8	1,725	88	1,638
November	1,986	297	45	7	1,636	83	1,553
December	2,019	306	54	7	1,652	84	1,568
Total	24,153	3,434	617	100	20,002	1,016	18,987
2001 January	E 2,119	E 315	E 46	E 9	E 1,750	RE 89	RE 1,661
February	E 1,918	E 289	E 39	E 7	E 1,582	RE 80	RE 1,502
March	E 2,152	E 336	E 43	E 9	E 1,765	RE 90	RE 1,675
April	E 2,051	E 306	E 42	E 8	E 1,695	RE 86	RE 1,609
May	E 2,082	E 301	E 41	E 9	E 1,731	RE 88	RE 1,643
June	E 1,992	E 285	E 41	E 8	E 1,659	RE 84	RE 1,574
July	E 2,054	E 285	E 43	E 9	E 1,716	RE 87	RE 1,628
August	E 2,063	E 293	E 43	E 10	E 1,718	RE 87	RE 1,631
September	E 1,980	E 274	E 42	E 9	E 1,655	RE 84	RE 1,571
October	E 2,069	E 276	E 44	E 9	E 1,739	RE 88	RE 1,651
November	E 2,049	E 322	E 43	E 9	E 1,675	RE 85	RE 1,590
December	E 2,113	E 336	E 40	E 9	E 1,728	RE 88	RE 1,640
Total	E 24,641	E 3,617	E 508	E 105	E 20,412	R 1,037	R 19,375
2002 January	E 2,073	E 326	E 33	E 8	E 1,706	E 87	E 1,619
February	E 1,865	E 303	E 30	E 7	E 1,524	E 77	E 1,447
March	E 2,083	E 332	E 34	E 8	E 1,710	E 87	E 1,623
April	E 1,993	E 311	E 33	E 8	E 1,642	E 83	E 1,558
May	E 2,071	E 315	E 34	E 8	E 1,715	E 87	E 1,628
June	E 2,006	E 298	E 33	E 8	E 1,667	E 85	E 1,582
July	E 2,049	E 276	E 34	E 9	E 1,730	E 88	E 1,642
August	E 2,048	E 294	E 34	E 8	E 1,712	E 87	E 1,625
September	RE 1,909	E 275	E 32	E 8	RE 1,594	E 81	RE 1,513
October	RE 1,988	RE 314	RE 34	E 8	RE 1,633	RE 83	RE 1,550
November	RE 1,895	RE 282	RE 32	E 8	RE 1,574	RE 80	RE 1,494
December	F 2,009	F 302	F 34	F 8	F 1,665	F 85	F 1,580
Total	E 23,990	E 3,628	E 394	E 97	E 19,871	E 1,010	E 18,861

^a Gas withdrawn from gas and oil wells.
^b The injection of natural gas into oil and gas formations for pressure maintenance and cycling purposes.
^c See Note 1 at end of section.
^d Vented: Natural gas released into the air on the base site or at processing plants. Flared: Natural gas burned in flares on the base site or at gas processing plants.
^e "Gross Withdrawals" minus "Repressuring," "Nonhydrocarbon Gases Removed," and "Vented and Flared." See Note 2 at end of section.
^f See Note 3 at end of section.

^g "Marketed Production (Wet)" minus "Extraction Loss."
^h May include unknown quantities of nonhydrocarbon gases.
R=Revised. NA=Not available. E=Estimate. F=Forecast.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/natgas.html>.
Sources: • 1973-1996: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 93. • 1997 forward: EIA, *Natural Gas Monthly*, February 2003, Table 1. • Forecast values: Derived from EIA's Short-Term Integrated Forecasting System. See Note 9 at end of section.

Table 4.3 Natural Gas Trade by Country
(Billion Cubic Feet)

	Imports							Exports				
	Algeria ^a	Australia ^a	Canada ^b	Mexico ^b	Qatar ^a	Trinidad and Tobago ^a	Other ^c	Total	Canada ^b	Japan ^a	Mexico ^b	Total
1973 Total	3	0	1,028	2	0	0	0	1,033	15	48	14	77
1974 Total	0	0	959	(s)	0	0	0	959	13	50	13	77
1975 Total	5	0	948	0	0	0	0	953	10	53	9	73
1976 Total	10	0	954	0	0	0	0	964	8	50	7	65
1977 Total	11	0	997	2	0	0	0	1,011	(s)	52	4	56
1978 Total	84	0	881	0	0	0	0	966	(s)	48	4	53
1979 Total	253	0	1,001	0	0	0	0	1,253	(s)	51	4	56
1980 Total	86	0	797	102	0	0	0	985	(s)	45	4	49
1981 Total	37	0	762	105	0	0	0	904	(s)	56	3	59
1982 Total	55	0	783	95	0	0	0	933	(s)	50	2	52
1983 Total	131	0	712	75	0	0	0	918	(s)	53	2	55
1984 Total	36	0	755	52	0	0	0	843	(s)	53	2	55
1985 Total	24	0	926	0	0	0	0	950	(s)	53	2	55
1986 Total	0	0	749	0	0	0	2	750	9	50	2	61
1987 Total	0	0	993	0	0	0	0	993	3	49	2	54
1988 Total	17	0	1,276	0	0	0	0	1,294	20	52	2	74
1989 Total	42	0	1,339	0	0	0	0	1,382	38	51	17	107
1990 Total	84	0	1,448	0	0	0	0	1,532	17	53	16	86
1991 Total	64	0	1,710	0	0	0	0	1,773	15	54	60	129
1992 Total	43	0	2,094	0	0	0	0	2,138	68	53	96	216
1993 Total	82	0	2,267	2	0	0	0	2,350	45	56	40	140
1994 Total	51	0	2,566	7	0	0	0	2,624	53	63	47	162
1995 Total	18	0	2,816	7	0	0	0	2,841	28	65	61	154
1996 Total	35	0	2,883	14	0	0	5	2,937	52	68	34	153
1997 Total	66	10	2,899	17	0	0	2	2,994	56	62	38	157
1998 Total	69	12	3,052	15	0	0	5	3,152	40	66	53	159
1999 Total	76	12	3,368	55	20	51	5	3,586	39	64	61	163
2000 January	5	0	310	3	0	8	0	326	6	6	6	18
February	5	0	289	1	0	5	0	300	9	6	6	21
March	4	0	291	(s)	2	8	0	307	9	4	8	21
April	3	2	274	1	7	7	0	294	3	6	8	17
May	2	0	275	0	0	11	0	288	4	6	10	20
June	3	0	279	0	2	7	5	296	4	4	9	16
July	3	2	293	(s)	5	14	5	322	4	6	10	20
August	2	0	295	(s)	7	8	5	318	4	6	11	21
September	3	1	283	(s)	8	5	5	305	5	6	10	21
October	8	0	296	1	7	7	5	325	5	8	10	23
November	3	(s)	309	1	7	7	2	330	10	6	9	25
December	8	0	349	4	0	10	0	371	10	6	7	23
Total	47	6	3,544	12	46	99	28	3,782	73	66	106	244
2001 January	5	0	352	2	0	11	2	373	12	6	8	26
February	8	0	305	1	0	7	8	328	15	4	8	27
March	8	0	333	1	2	11	3	358	19	6	7	32
April	5	0	294	2	2	8	7	319	13	6	5	24
May	8	0	295	(s)	5	10	5	322	13	6	10	29
June	4	0	291	0	3	10	9	317	10	4	11	25
July	8	1	339	0	5	7	5	365	10	6	15	31
August	5	1	334	0	0	8	5	353	8	6	16	29
September	5	0	293	0	5	5	7	315	10	6	18	34
October	2	0	314	0	0	9	0	326	11	8	16	34
November	3	0	283	(s)	0	5	0	291	21	6	16	42
December	5	0	294	3	0	8	0	310	25	6	11	42
Total	65	2	3,729	10	23	98	50	3,977	167	66	141	373
2002 January	3	0	334	1	0	5	0	343	16	6	13	34
February	0	0	296	1	0	8	0	305	16	4	11	30
March	0	0	322	0	0	10	0	332	14	6	18	38
April	2	0	299	0	5	10	0	316	13	7	19	39
May	7	0	296	0	6	10	5	324	15	2	23	39
June	5	0	295	0	14	7	0	321	16	6	25	46
July	5	0	344	0	5	11	0	365	11	6	28	45
August	0	0	349	0	3	16	6	373	13	6	29	48
September	0	0	339	0	3	14	0	356	15	6	28	48
October	0	0	316	E 0	0	23	5	E 345	17	6	E 25	E 48
November	3	0	RE 306	E 0	0	19	0	RE 328	RE 35	6	E 25	RE 66
December	3	0	E 331	E 0	0	18	0	E 351	E 38	6	E 25	E 69
Total	27	0	E 3,827	E 2	35	153	16	E 4,059	E 219	63	E 268	E 551

^a As liquefied natural gas.

^b By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977, and 1981 and exported to Mexico beginning in 1998. See Note 5 at end of section.

^c Liquefied natural gas imported from Indonesia in 1986 and 2000, the United Arab Emirates beginning in 1996, Malaysia in 1999, Nigeria beginning in 2000, Oman beginning in 2000 and Brunei beginning in 2002.

R=Revised. E=Estimate. (s)=Less than 500 million cubic feet.

Notes: • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/natgas.html>.

Sources: • 1973-1996: Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." • 1997 forward: EIA, *Natural Gas Monthly*, February 2003, Tables 5 and 6.

Table 4.4 Natural Gas Consumption by Sector
(Billion Cubic Feet)

	Lease and Plant Fuel	Pipeline Fuel ^a	Delivered to Consumers					Total Consumption ^c	
			Residential	Commercial	Industrial ^b	Vehicles	Electric Utilities		Total
1973 Total	1,496	728	4,879	2,597	8,689	NA	3,660	19,825	22,049
1974 Total	1,477	669	4,786	2,556	8,292	NA	3,443	19,077	21,223
1975 Total	1,396	583	4,924	2,508	6,968	NA	3,158	17,558	19,538
1976 Total	1,634	548	5,051	2,668	6,964	NA	3,081	17,764	19,946
1977 Total	1,659	533	4,821	2,501	6,815	NA	3,191	17,329	19,521
1978 Total	1,648	530	4,903	2,601	6,757	NA	3,188	17,449	19,627
1979 Total	1,499	601	4,965	2,786	6,899	NA	3,491	18,141	20,241
1980 Total	1,026	635	4,752	2,611	7,172	NA	3,682	18,216	19,877
1981 Total	928	642	4,546	2,520	7,128	NA	3,640	17,834	19,404
1982 Total	1,109	596	4,633	2,606	5,831	NA	3,226	16,295	18,001
1983 Total	978	490	4,381	2,433	5,643	NA	2,911	15,367	16,835
1984 Total	1,077	529	4,555	2,524	6,154	NA	3,111	16,345	17,951
1985 Total	966	504	4,433	2,432	5,901	NA	3,044	15,811	17,281
1986 Total	923	485	4,314	2,318	5,579	NA	2,602	14,814	16,221
1987 Total	1,149	519	4,315	2,430	5,953	NA	2,844	15,542	17,211
1988 Total	1,096	614	4,630	2,670	6,383	NA	2,636	16,320	18,030
1989 Total	1,070	629	4,781	2,718	6,816	NA	2,787	17,102	18,801
1990 Total	1,236	660	4,391	2,623	7,018	(s)	2,787	16,820	18,716
1991 Total	1,129	601	4,556	2,729	7,231	(s)	2,789	17,305	19,035
1992 Total	1,171	588	4,690	2,803	7,527	1	2,766	17,786	19,544
1993 Total	1,172	624	4,956	2,862	7,981	1	2,682	18,483	20,279
1994 Total	1,124	685	4,848	2,895	8,167	2	2,987	18,899	20,708
1995 Total	1,220	700	4,850	3,031	8,580	3	3,197	19,660	21,581
1996 Total	1,250	711	5,241	3,158	8,870	3	2,732	20,005	21,966
1997 Total	1,203	751	4,984	3,215	8,832	4	2,968	20,004	21,959
1998 Total	1,173	635	4,520	2,999	8,686	5	3,258	19,469	21,277
1999 Total	1,079	645	4,726	3,045	9,006	6	3,113	19,895	21,620
2000 January	96	73	862	454	835	NA	190	2,342	2,510
February	89	67	774	423	809	NA	167	2,174	2,331
March	97	59	550	353	785	NA	208	1,894	2,051
April	92	51	401	259	767	NA	215	1,640	1,783
May	94	46	228	183	772	NA	309	1,492	1,633
June	92	43	154	150	767	NA	307	1,378	1,513
July	95	43	128	139	746	NA	373	1,387	1,526
August	96	47	122	153	825	NA	410	1,510	1,653
September	93	42	141	151	765	NA	284	1,340	1,475
October	98	44	236	184	793	NA	213	1,426	1,568
November	93	55	482	293	806	NA	180	1,761	1,909
December	94	75	913	475	843	NA	187	2,418	2,587
Total	1,130	644	4,992	3,218	9,512	8	3,043	20,772	22,547
2001 January	R 99	R 74	984	500	788	NA	158	2,430	2,603
February	R 89	R 64	784	424	744	NA	144	2,096	R 2,249
March	R 100	R 62	685	376	782	NA	172	2,016	R 2,178
April	R 96	R 50	402	257	731	NA	212	1,603	R 1,749
May	R 98	43	210	166	699	NA	236	1,312	R 1,452
June	R 94	39	148	137	663	NA	261	1,209	R 1,342
July	R 97	R 42	125	132	707	NA	357	1,320	R 1,459
August	R 97	R 42	118	138	724	NA	361	1,341	R 1,480
September	R 93	R 39	129	143	688	NA	255	1,215	R 1,347
October	R 98	44	240	188	714	NA	225	1,366	R 1,509
November	R 95	R 45	366	230	697	NA	151	1,445	R 1,585
December	R 98	R 57	617	347	719	NA	153	1,836	R 1,991
Total	R 1,153	R 602	4,809	3,037	8,656	NA	2,686	19,188	R 20,944
2002 January	E 96	R 69	821	434	737	NA	147	2,139	R 2,304
February	E 86	59	704	394	683	NA	137	1,918	R 2,064
March	E 97	R 60	666	375	721	NA	161	1,923	2,079
April	E 93	48	419	R 266	681	NA	169	1,536	1,677
May	E 97	41	259	193	660	NA	180	1,292	R 1,430
June	E 94	38	164	153	660	NA	229	1,205	1,337
July	E 98	R 41	128	138	715	NA	294	R 1,275	1,414
August	E 97	R 41	117	143	729	NA	288	R 1,277	1,415
September	E 90	37	125	R 147	670	NA	226	1,168	R 1,295
October	E 92	43	250	R 204	722	NA	173	R 1,350	R 1,485
November	RE 89	R 50	R 490	R 305	R 674	NA	R 123	R 1,592	R 1,730
December	F 92	F 63	F 701	F 357	F 736	NA	F 161	F 1,955	F 2,109
Total	E 1,121	E 589	E 4,845	E 3,108	E 8,388	NA	E 2,289	E 18,629	E 20,339

^a Natural gas consumed in the operation of pipelines, primarily in compressors.

^b Most deliveries to nonutility power producers are included in the industrial sector. In instances where the nonutility is primarily a commercial establishment, deliveries are included in the commercial sector.

^c For 1990-2000, annual values include natural gas used by vehicles, whereas monthly values do not.
R=Revised. NA=Not available. E=Estimate. F=Forecast. (s)=Less than 500 million cubic feet.

Notes: • Natural gas includes supplemental gaseous fuels. • Totals may

not equal sum of components due to independent rounding.
• Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/natgas.html>.

Sources: • 1973-1996: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 95. • 1997 forward: EIA, *Natural Gas Monthly*, February 2003, Table 3, except for the electric utilities values, which come from Table 7.7 of this report, and the totals in this table, which incorporate the electric utilities data. • Forecast values: Derived from EIA's Short-Term Integrated Forecasting System.

Table 4.5 Natural Gas in Underground Storage
(Volumes in Billion Cubic Feet)

	Natural Gas in Underground Storage, End of Period			Change in Working Gas From Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total ^a	Volume	Percent	Withdrawals	Injections	Net ^{b,c}
1973 Total	2,864	2,034	4,898	305	17.6	1,533	1,974	-442
1974 Total	2,912	2,050	4,962	16	.8	1,701	1,784	-84
1975 Total	3,162	2,212	5,374	162	7.9	1,760	2,104	-344
1976 Total	3,323	1,926	5,250	-286	-12.9	1,921	1,756	165
1977 Total	3,391	2,475	5,866	549	28.5	1,750	2,307	-557
1978 Total	3,473	2,547	6,020	72	2.9	2,158	2,278	-120
1979 Total	3,553	2,753	6,306	207	8.1	2,047	2,295	-248
1980 Total	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
1981 Total	3,752	2,817	6,569	162	6.1	1,887	2,180	-293
1982 Total	3,808	3,071	6,879	255	9.0	2,094	2,399	-306
1983 Total	3,847	2,595	6,442	-476	-15.5	2,142	1,700	442
1984 Total	3,830	2,876	6,706	281	10.8	2,064	2,252	-188
1985 Total	3,842	2,607	6,448	-270	-9.4	2,359	2,128	231
1986 Total	3,819	2,749	6,567	142	5.5	1,812	1,952	-140
1987 Total	3,792	2,756	6,548	7	.3	1,881	1,887	-6
1988 Total	3,800	2,850	6,650	94	3.4	2,244	2,174	69
1989 Total	3,812	2,513	6,325	-337	-11.8	2,804	2,491	313
1990 Total	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
1991 Total	3,954	2,824	6,778	-244	-8.0	2,689	2,608	80
1992 Total	4,044	2,597	6,641	-227	-8.0	2,724	2,555	168
1993 Total	4,327	2,322	6,649	-275	-10.6	2,717	2,760	-43
1994 Total	4,360	2,606	6,966	284	12.2	2,508	2,796	-288
1995 Total	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
1996 Total	4,341	2,173	6,513	19	.9	2,911	2,906	6
1997 Total	4,350	2,175	6,525	2	.1	2,824	2,800	24
1998 Total	4,326	2,730	7,056	554	25.5	2,379	2,905	-526
1999 Total	4,383	2,523	6,906	-207	-7.6	2,772	2,598	174
2000								
January	4,379	1,760	6,139	-312	-15.1	841	59	782
February	4,378	1,304	5,681	-445	-25.3	533	83	450
March	4,364	1,153	5,517	-255	-18.0	291	139	152
April	4,362	1,203	5,565	-297	-19.6	146	192	-46
May	4,362	1,433	5,795	-404	-21.9	82	313	-231
June	4,361	1,717	6,079	-435	-20.1	65	349	-284
July	4,362	2,003	6,365	-379	-15.8	83	372	-289
August	4,361	2,199	6,560	-414	-15.8	109	305	-196
September	4,360	2,494	6,855	-432	-14.7	80	370	-291
October	4,360	2,732	7,092	-345	-11.1	88	329	-241
November	4,361	2,442	6,803	-628	-20.3	396	108	288
December	4,352	1,719	6,071	-806	-31.9	785	66	720
Total	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
2001								
January	4,344	1,265	5,609	-495	-28.1	588	92	496
February	4,328	912	5,241	-391	-30.0	414	74	339
March	4,300	742	5,042	-412	-35.7	298	116	183
April	4,261	992	5,253	-210	-17.5	70	349	-279
May	4,309	1,440	5,749	7	.5	41	520	-479
June	4,310	1,882	6,193	165	9.6	49	490	-441
July	4,315	2,261	6,576	258	12.9	66	451	-385
August	4,313	2,576	6,889	377	17.1	79	386	-307
September	4,318	2,944	7,262	450	18.0	41	413	-372
October	4,310	3,144	7,454	412	15.1	93	282	-190
November	4,301	3,254	7,555	812	33.2	138	210	-73
December	4,301	2,904	7,204	1,185	68.9	432	80	352
Total	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
2002								
January	4,313	2,344	6,657	1,078	85.2	605	59	546
February	4,356	1,838	6,194	925	101.4	517	55	462
March	4,355	1,518	5,873	776	104.7	425	105	320
April	4,355	1,659	6,014	666	67.1	111	237	-126
May	4,361	1,968	6,329	528	36.7	58	381	-323
June	4,355	2,308	6,663	426	22.6	56	395	-339
July	4,358	2,539	6,896	278	12.3	101	341	-239
August	4,357	2,773	7,130	198	7.7	89	322	-234
September	4,342	3,042	7,384	97	3.3	72	364	-292
October	4,342	3,116	7,458	-28	-9	145	229	-84
November	4,344	2,929	7,273	-325	-10.0	322	124	198
December	4,340	2,375	6,715	-528	-18.2	624	66	558
Total	4,340	2,375	6,715	-528	-18.2	3,126	2,679	447

^a For total underground storage capacity at the end of each calendar year, see Note 8 at end of section.

^b For 1980-2000, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

^c Positive numbers indicate that withdrawals are greater than injections. Negative numbers indicate that injections are greater than withdrawals. Net withdrawals or injections may not equal the difference between applicable

ending stocks. See Note 8 at end of section.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/natgas.html>.

Sources: See end of section.

Natural Gas

Note 1. Nonhydrocarbon Gases Removed: Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the Energy Information Administration (EIA) *Natural Gas Annual (NGA)*. Data are not available prior to 1980. Monthly data are reported by three States and computed for six States. Monthly data are preliminary until after publication of the EIA *NGA*. Differences between annual data published in the EIA *NGA* and the sum of the preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data. For further information on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly (NGM)*.

Note 2. Production.

Annual data—Final annual data are from the EIA *NGA*.

Estimated monthly data—Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *NGM*.

Preliminary monthly data—Monthly data are considered preliminary until after publication of the EIA *NGA*. Preliminary monthly data are gathered from reports to the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary, to a standard 14.73 psi pressure base. Unless there are major changes, data are not revised until after publication of the EIA *NGA*.

Final monthly data—Differences between annual data in the EIA *NGA* and the sum of preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data.

Note 3. Extraction Loss: Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

Annual data are from the EIA *NGA*, where they are estimated on the basis of the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the EIA *NGA*.

Preliminary monthly data are estimated on the basis of extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

Monthly data are revised and considered final after the publication of the EIA *NGA*. Final monthly data are estimated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the EIA *NGA*.

Note 4. Supplemental Gaseous Fuels: Any gaseous substance that, introduced into or commingled with natural

gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Annual data beginning with 1980 are from the EIA *NGA*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

Monthly data are considered preliminary until after the publication of the EIA *NGA*. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

Note 5. Imports and Exports: The United States imports natural gas via pipeline from Canada and Mexico and imports liquefied natural gas (LNG) via tanker from Algeria, Australia, Indonesia, Nigeria, Oman, Qatar, Trinidad and Tobago, and the United Arab Emirates. In addition, very small amounts of LNG arrived from Canada in 1973 (667 million cubic feet), 1977 (572 million cubic feet), and 1981 (6 million cubic feet). The United States exports natural gas via pipeline to Canada and Mexico and exports LNG via tanker to Japan. Also, small amounts of LNG have gone to Mexico since 1998.

Annual and final monthly data are from the annual EIA Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA *NGM*. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas*.

Note 6. Consumption: Consumption includes pipeline fuel use, lease and plant fuel use, and deliveries to consuming sectors.

Final data are from the EIA *NGA*. Monthly data are considered preliminary until after publication of the EIA *NGA*. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA *NGM*.

Note 7. Balancing Item: The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

The increase of 0.2 trillion cubic feet (Tcf) in the "Balancing Item" category in 1983, followed by a decline of 0.5 Tcf

in 1984, reflected unusually large differences resulting from the use of the annual billing cycle (essentially December 15 through the following December 14) consumption data in conjunction with calendar year supply data. Record cold temperatures during the last half of December 1983 resulted in a reported 0.3 Tcf increase in net withdrawals from underground storage for peak shaving as compared with the same period in 1982, but the effect of this cold weather was reflected primarily in 1984 consumption data. For underground storage data, see Table F2 in the May 1985 *NGM*, which was published in July 1985.

Note 8. Natural Gas Storage: Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. The difference is due to changes in the quantity of native gas included in the base gas and/or losses in base gas due to migration from storage reservoirs.

Total underground storage capacity at the end of each calendar year since 1975 (first year data were available), in billion cubic feet, was:

1975 ... 6,280	1984 ... 8,043	1993 ... 7,989
1976 ... 6,544	1985 ... 8,087	1994 ... 8,043
1977 ... 6,678	1986 ... 8,145	1995 ... 7,953
1978 ... 6,890	1987 ... 8,124	1996 ... 7,980
1979 ... 6,929	1988 ... 8,124	1997 ... 8,332
1980 ... 7,434	1989 ... 8,124	1998 ... 8,179
1981 ... 7,805	1990 ... 8,125	1999 ... 8,229
1982 ... 7,915	1991 ... 7,993	2000 ... 8,241
1983 ... 7,985	1992 ... 7,932	2001 ... 8,415

Monthly underground storage data are collected from the Federal Energy Regulatory Commission (FERC) Form FERC-8 (interstate data) and EIA Form EIA-191 (intrastate data). Beginning in January 1991, all data are collected on the revised Form EIA-191. Injection and withdrawal data from the FERC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the EIA *NGA*.

The final monthly and annual storage and withdrawal data for 1980–2000 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

Note 9. Forecast Values: Data values preceded by "F" in this section are forecast values. They are derived from EIA's

Short-Term Integrated Forecasting System (STIFS). The model is driven primarily by data and assumptions about key macroeconomic variables, the world oil price, and weather. The natural gas forecast relies on other variables as well, such as gas wellhead prices, electric power generation by other sources, and U.S. gas import capacity. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the natural gas industry.

The STIFS model results are published monthly in EIA's *Short-Term Energy Outlook*, which is available from the National Energy Information Center (202-586-8800) and accessible on the world wide web at <http://www.eia.doe.gov>. Documentation for the model and instructions for downloading and operating it on a personal computer are provided.

Table 4.5 Sources

Storage Activity

1973-1975: Energy Information Administration (EIA) *Natural Gas Annual 1994, Volume 2*, Table 9.

1976-1979: EIA, *Natural Gas Production and Consumption 1979*, Table 1.

1980-1995: EIA, *Historical Natural Gas Annual 1930 Through 2000*, Table 11.

1996 forward: EIA, *Natural Gas Monthly*, February 2003, Table 9.

Forecast values: derived from EIA's Short-Term Integrated Forecasting System. See Note 9 on this page.

Other Data

1973 and 1974: American Gas Association (AGA), *Gas Facts, 1972 Data*, Table 57, *Gas Facts, 1973 Data*, Table 57, and *Gas Facts, 1974 Data*, Table 40.

1975 and 1976: Federal Energy Administration (FEA), Form FEA-G318-M-O, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8, "Underground Gas Storage Report."

1977 and 1978: EIA, Form FEA-G-318-M-O, "Underground Gas Storage Report," and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report."

1979–1995: EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report."

1996 forward: EIA, *Natural Gas Monthly*, February 2003, Table 9.

Forecast values: derived from EIA's Short-Term Integrated Forecasting System. See Note 9 on this page.

Section 5. Crude Oil and Natural Gas Resource Development

The February 2003 rotary rig count was 907, 6 percent higher than the count in January 2003 and 10 percent higher than the count in February 2002. Of the total number of rigs in operation, 797 were onshore and 110 were offshore. For February 2003, the number of onshore rigs was up 14 percent and the number of offshore rigs was down 11 percent from the February 2002 count. Rotary rigs drilling for natural gas as a share of total rigs stood at 83 percent in February 2003.

Total footage drilled in February 2003 was 16.0 million feet, 23 percent higher than the footage drilled in January 2003 and up 45 percent from that drilled in February 2002.

The estimated number of exploratory and development crude oil and natural gas wells drilled during February 2003 was 1,898, up 7 percent from the number drilled in January 2003 and up 9 percent from the number drilled in

February 2002. The estimated number of crude oil wells drilled was 461, and the estimated number of natural gas wells was 1,437, 6 percent higher and 10 percent higher, respectively, than their February 2002 levels.

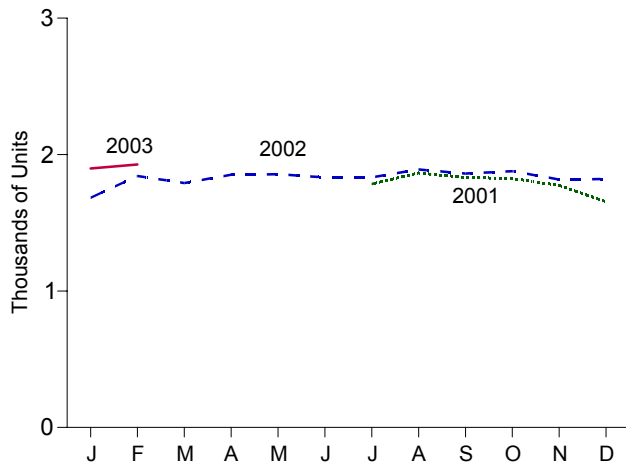
The estimated number of dry holes drilled in February 2003 was 329, up 7 percent from the number drilled in January 2003 and up 9 percent from the number drilled in February 2002.

There were 1.9 thousand well service rigs active in February 2003, 2 percent higher than the previous month and 5 percent more than the count a year ago.

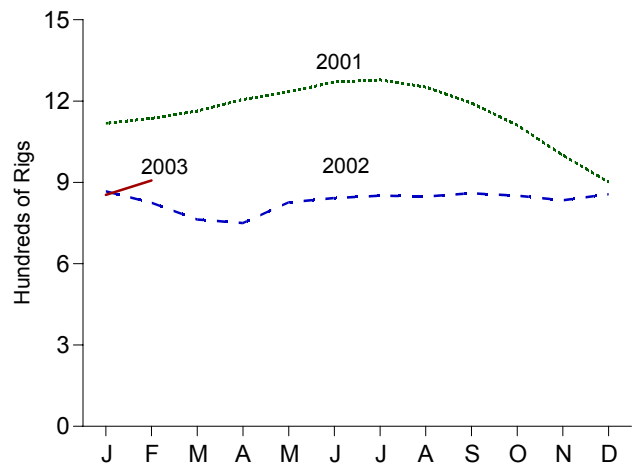
The number of seismic crews active in the 48 States onshore in February 2003 was 29, 11 fewer than a year earlier. The number of crews active in the 48 States offshore was 12, 3 fewer than a year earlier.

Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators

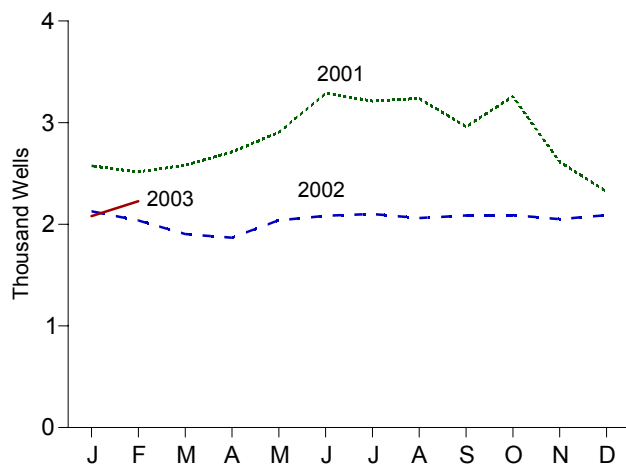
Active Well Service Rig Count



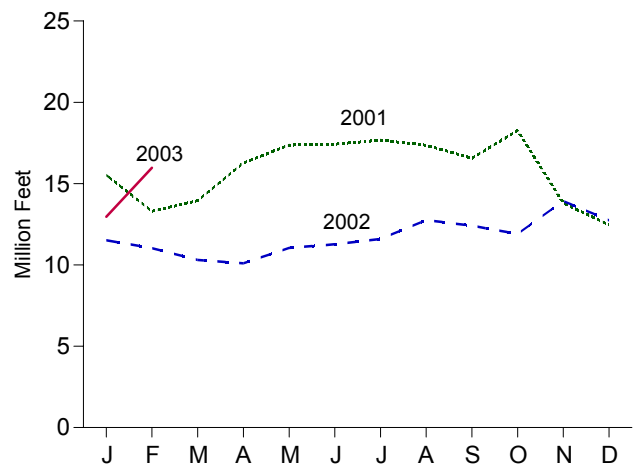
Rotary Rigs in Operation



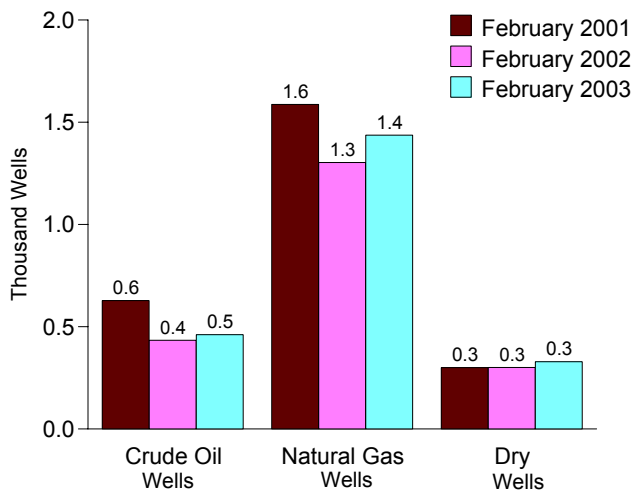
Wells Drilled



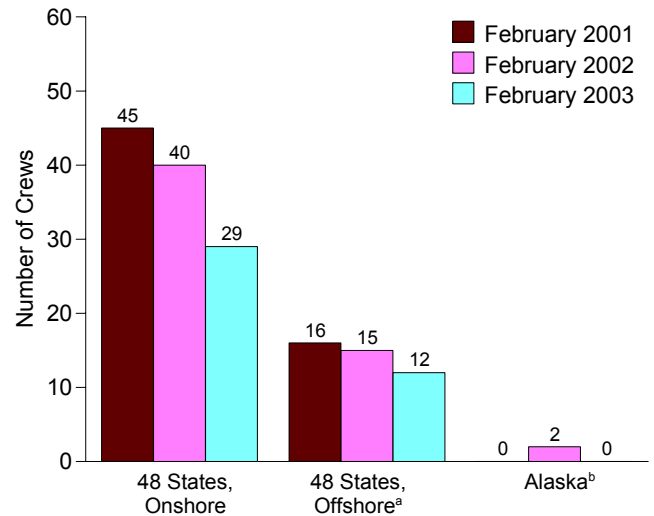
Footage Drilled



Wells Drilled by Type



Maximum U.S. Active Seismic Crew Counts



^aFederal and State Jurisdiction waters of Gulf of Mexico.
^bAll onshore.

Web Page: <http://www.eia.doe.gov/emeu/mer/resource.html>.
 Sources: Tables 5.1-5.3.

Table 5.1 Crude Oil and Natural Gas Drilling Activity Measurements

	Rotary Rigs in Operation ^a					Total Footage Drilled ^c	Active Well Service Rig Count ^d
	By Site		By Objective		Total ^b		
	Onshore	Offshore	Crude Oil	Natural Gas			
	Average							Thousand Feet	Number
1973 Average	1,110	84	NA	NA	1,194	138,223	NA
1974 Average	1,378	94	NA	NA	1,472	153,374	NA
1975 Average	1,554	106	NA	NA	1,660	180,494	NA
1976 Average	1,529	129	NA	NA	1,658	186,982	NA
1977 Average	1,834	167	NA	NA	2,001	215,866	NA
1978 Average	2,074	185	NA	NA	2,259	238,669	NA
1979 Average	1,970	207	NA	NA	2,177	244,798	NA
1980 Average	2,678	231	NA	NA	2,909	314,654	NA
1981 Average	3,714	256	NA	NA	3,970	413,112	NA
1982 Average	2,862	243	NA	NA	3,105	378,295	NA
1983 Average	2,033	199	NA	NA	2,232	317,986	NA
1984 Average	2,215	213	NA	NA	2,428	371,392	NA
1985 Average	1,774	206	NA	NA	1,980	313,045	NA
1986 Average	865	99	NA	NA	964	181,856	NA
1987 Average	841	95	NA	NA	936	162,178	NA
1988 Average	813	123	554	354	936	156,354	NA
1989 Average	764	105	453	401	869	134,439	NA
1990 Average	902	108	532	464	1,010	153,701	NA
1991 Average	779	81	482	351	860	143,021	NA
1992 Average	669	52	373	331	721	121,124	NA
1993 Average	672	82	373	364	754	135,118	NA
1994 Average	673	102	335	427	775	124,809	NA
1995 Average	622	101	323	385	723	117,832	NA
1996 Average	671	108	306	464	779	129,045	NA
1997 Average	821	122	376	564	943	156,661	NA
1998 Average	703	123	264	560	827	143,454	NA
1999 Average	519	106	128	496	625	99,410	NA
2000 Average	778	140	197	720	918	141,392	NA
2001 January	944	174	239	879	1,118	15,525	NA
February	973	163	237	898	1,136	13,296	NA
March	996	167	248	913	1,163	13,953	NA
April	1,037	169	247	957	1,206	16,268	NA
May	1,063	171	235	997	1,234	17,374	NA
June	1,107	163	219	1,050	1,270	17,418	NA
July	1,121	157	219	1,058	1,278	17,672	1,784
August	1,105	147	219	1,032	1,252	17,363	1,865
September	1,049	144	220	972	1,193	16,563	1,832
October	978	133	198	913	1,111	18,264	1,824
November	866	134	174	825	1,000	13,806	1,774
December	778	123	147	754	901	12,465	1,654
Average	1,003	153	217	939	1,156	189,967	NA
2002 January	741	126	141	725	867	11,513	1,683
February	702	123	144	679	825	11,031	1,843
March	649	114	144	617	763	10,303	1,791
April	645	105	136	612	750	10,102	1,852
May	721	105	134	690	826	11,039	1,856
June	732	110	138	704	842	11,274	1,832
July	740	111	133	716	851	11,590	1,832
August	737	111	125	721	848	12,757	1,891
September	746	114	122	736	860	12,410	1,861
October	740	111	140	709	851	11,907	1,878
November	725	109	146	683	834	13,923	1,817
December	742	114	137	714	856	12,747	1,821
Average	717	113	137	691	830	140,596	1,830
2003 January	743	111	132	718	854	12,962	1,898
February	797	110	153	750	907	15,969	1,928
2-Month Average ...	767	110	142	732	877	28,931	1,913
2002 2-Month Average ...	721	124	143	702	846	22,544	1,763
2001 2-Month Average ...	959	168	238	888	1,127	28,821	NA

^a Rotary rigs in operation are reported weekly. Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Multi-month data are averages of the reported data over the covered months, not averages of the weekly data. Annual data are averages over 52 or 53 weeks, not calendar years. Published data are rounded to the nearest whole number.

^b Sum of rigs drilling for crude oil, rigs drilling for natural gas, and other rigs (not shown) drilling for miscellaneous purposes, such as service wells, injection wells, and stratigraphic tests.

^c Values shown are totals.

^d See Glossary.

R=Revised.

Note: Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/resource.html>.

Sources: • **Rotary Rigs in Operation:** By Site - Baker Hughes, Inc., Houston, Texas, *Rotary Rigs Running--by State*. By Type - Baker Hughes, Inc., Houston, Texas, weekly phone recording. • **Total Footage Drilled:** Energy Information Administration computations, which are based on well reports submitted to the American Petroleum Institute by the Petroleum Information Corporation, Denver, Colorado. • **Active Well Service Rig Count:** Weatherford International, Inc., Houston, Texas.

Table 5.2 Crude Oil and Natural Gas Wells Drilled
(Number of Wells)

	Exploratory				Development				Total			
	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total
1973 Total	642	1,067	5,952	7,661	9,525	5,866	4,368	19,759	10,167	6,933	10,320	27,420
1974 Total	859	1,190	6,833	8,882	12,788	5,948	5,283	24,019	13,647	7,138	12,116	32,901
1975 Total	982	1,248	7,129	9,359	15,966	6,879	6,517	29,362	16,948	8,127	13,646	38,721
1976 Total	1,086	1,346	6,772	9,204	16,602	8,063	6,986	31,651	17,688	9,409	13,758	40,855
1977 Total	1,164	1,548	7,283	9,995	17,581	10,574	7,702	35,857	18,745	12,122	14,985	45,852
1978 Total	1,171	1,771	7,965	10,907	18,010	12,642	8,586	39,238	19,181	14,413	16,551	50,145
1979 Total	1,321	1,907	7,437	10,665	19,530	13,347	8,662	41,539	20,851	15,254	16,099	52,204
1980 Total	1,764	2,081	9,039	12,884	30,875	15,252	11,599	57,726	32,639	17,333	20,638	70,610
1981 Total	2,636	2,514	12,349	17,499	40,962	17,652	15,440	74,054	43,598	20,166	27,789	91,553
1982 Total	2,431	2,125	11,247	15,803	36,768	16,854	14,972	68,594	39,199	18,979	26,219	84,397
1983 Total	2,023	1,593	10,148	13,764	35,097	12,971	14,005	62,073	37,120	14,564	24,153	75,837
1984 Total	2,198	1,521	11,278	14,997	40,407	15,606	14,403	70,416	42,605	17,127	25,681	85,413
1985 Total	1,679	1,190	8,924	11,793	33,439	12,978	12,132	58,549	35,118	14,168	21,056	70,342
1986 Total	1,084	793	5,549	7,426	18,013	7,723	7,129	32,865	19,097	8,516	12,678	40,291
1987 Total	925	754	5,049	6,728	15,239	7,301	6,063	28,603	16,164	8,055	11,112	35,331
1988 Total	855	743	4,693	6,291	12,781	7,812	5,348	25,941	13,636	8,555	10,041	32,232
1989 Total	607	705	3,924	5,236	9,597	8,834	4,264	22,695	10,204	9,539	8,188	27,931
1990 Total	654	689	3,715	5,058	11,544	10,355	4,598	26,497	12,198	11,044	8,313	31,558
1991 Total	592	534	3,314	4,440	11,178	8,992	4,282	24,452	11,770	9,526	7,596	28,892
1992 Total	493	423	2,513	3,429	8,264	7,786	3,605	19,655	8,757	8,209	6,118	23,084
1993 Total	502	548	2,469	3,519	7,905	9,469	3,859	21,233	8,407	10,017	6,328	24,752
1994 Total	570	726	2,405	3,701	6,151	8,812	2,902	17,865	6,721	9,538	5,307	21,566
1995 Total	542	570	2,198	3,310	7,085	7,784	2,877	17,746	7,627	8,354	5,075	21,056
1996 Total	483	570	2,136	3,189	7,831	8,732	3,146	19,709	8,314	9,302	5,282	22,898
1997 Total	428	536	2,110	3,074	10,008	10,791	3,592	24,391	10,436	11,327	5,702	27,465
1998 Total	291	504	1,647	2,442	6,773	10,804	3,193	20,770	7,064	11,308	4,840	23,212
1999 Total	154	539	1,195	1,888	4,022	10,338	2,169	16,529	4,176	10,877	3,364	18,417
2000 Total	R 264	609	1,288	R 2,161	R 7,094	15,846	2,737	R 25,677	7,358	16,455	4,025	27,838
2001 January	19	74	101	194	669	1,480	231	2,380	688	1,554	332	2,574
February	29	76	94	199	599	1,511	206	2,316	628	1,587	300	2,515
March	24	51	90	165	665	1,563	188	2,416	689	1,614	278	2,581
April	28	81	127	236	649	1,610	217	2,476	677	1,691	344	2,712
May	28	84	136	248	736	1,678	241	2,655	764	1,762	377	2,903
June	31	89	128	248	717	2,067	258	3,042	748	2,156	386	3,290
July	31	89	153	273	651	2,070	218	2,939	682	2,159	371	3,212
August	27	104	132	263	670	2,056	248	2,974	697	2,160	380	3,237
September	18	82	119	219	619	1,925	198	2,742	637	2,007	317	2,961
October	29	90	144	263	764	2,011	220	2,995	793	2,101	364	3,258
November	20	88	131	239	549	1,651	175	2,375	569	1,739	306	2,614
December	26	53	89	168	462	1,500	192	2,154	488	1,553	281	2,322
Total	310	961	1,444	2,715	7,750	21,122	2,592	31,464	8,060	22,083	4,036	34,179
2002 January	16	60	108	184	409	1,328	207	1,944	425	1,388	315	2,128
February	16	56	103	175	418	1,247	198	1,863	434	1,303	301	2,038
March	16	51	96	163	419	1,137	185	1,741	435	1,188	281	1,904
April	15	51	94	160	395	1,130	182	1,707	410	1,181	276	1,867
May	15	57	103	175	388	1,278	199	1,865	403	1,335	302	2,040
June	15	58	106	179	401	1,301	202	1,904	416	1,359	308	2,083
July	16	59	106	181	406	1,309	205	1,920	422	1,368	311	2,101
August	14	59	105	178	362	1,322	200	1,884	376	1,381	305	2,062
September	14	61	106	181	354	1,349	203	1,906	368	1,410	309	2,087
October	16	58	106	180	406	1,300	203	1,909	422	1,358	309	2,089
November	16	56	104	176	424	1,252	199	1,875	440	1,308	303	2,051
December	15	59	106	180	398	1,309	203	1,910	413	1,368	309	2,090
Total	184	685	1,243	2,112	4,780	15,262	2,386	22,428	4,964	15,947	3,629	24,540
2003 January	15	59	106	180	383	1,316	202	1,901	398	1,375	308	2,081
February	17	62	113	192	444	1,375	216	2,035	461	1,437	329	2,227
2-Month Total	32	121	219	372	827	2,691	418	3,936	859	2,812	637	4,308
2002 2-Month Total	32	116	211	359	827	2,575	405	3,807	859	2,691	616	4,166
2001 2-Month Total	48	150	195	393	1,268	2,991	437	4,696	1,316	3,141	632	5,089

R=Revised.

Notes: • These well counts include only the original drilling of a hole intended to discover or further develop already discovered crude oil or natural gas resources. Other drilling activities, such as drilling an old well deeper, drilling of laterals from the original well, drilling of service and injection wells, and drilling for resources other than crude oil or natural gas are excluded. Due to the methodology used to estimate ultimate well counts from the available partially reported data, the counts shown on this page are frequently

revised. See notes at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/resource.html>.

Sources: Energy Information Administration computations, which are based on well reports submitted by the Petroleum Information Corporation, Denver, Colorado.

Table 5.3 Maximum U.S. Active Seismic Crew Counts
(Number of Crews)

	48 States, Onshore				48 States, Offshore ^a				Alaska ^b				Total
	Dimensions ^c			Total ^d	Dimensions ^c			Total ^d	Dimensions ^c			Total ^d	
	2	3	4		2	3	4		2	3	4		
2000 March	4	36	1	41	7	11	0	19	1	1	0	2	62
April	4	36	1	41	7	11	0	19	1	2	0	3	63
May	3	34	1	38	6	11	0	18	1	2	0	3	59
June	5	37	1	43	7	9	0	17	1	2	0	3	63
July	4	39	1	44	6	6	0	13	0	1	0	1	58
August	4	40	1	45	7	7	0	15	0	1	0	1	61
September	3	39	1	43	7	8	0	16	0	0	0	0	59
October	4	41	1	46	7	9	0	17	0	0	0	0	63
November	4	40	1	46	7	8	0	16	0	0	0	0	62
December	5	41	1	48	8	8	0	17	0	0	0	0	65
2001 January	5	38	1	44	9	7	0	17	0	0	0	0	61
February	6	38	1	45	8	7	0	16	0	0	0	0	61
March	6	38	1	45	9	9	0	18	0	0	0	0	63
April	7	39	1	47	9	9	0	18	0	0	0	0	65
May	7	37	1	45	9	8	0	17	1	1	0	2	64
June	6	35	1	42	9	7	0	16	1	1	0	2	60
July	6	35	1	42	8	8	0	16	0	0	0	0	58
August	8	32	1	41	7	8	0	15	0	0	0	0	56
September	8	30	1	39	6	9	0	15	0	0	0	0	54
October	5	33	1	39	9	10	0	19	0	0	0	0	58
November	7	34	1	42	7	10	0	17	0	0	0	0	59
December	7	33	1	41	8	9	0	17	0	0	0	0	58
2002 January	6	32	0	38	8	6	0	14	1	1	0	2	54
February	9	31	0	40	9	6	0	15	1	1	0	2	57
March	9	26	0	35	10	7	0	17	1	1	0	2	54
April	7	25	0	32	9	7	0	16	1	1	0	2	50
May	8	24	0	32	9	8	0	17	1	1	0	2	51
June	9	23	0	32	9	7	0	16	1	1	0	2	50
July	8	26	0	34	8	8	0	16	1	1	0	2	52
August	7	26	0	33	8	7	0	15	1	1	0	2	50
September	9	28	0	37	10	7	0	17	1	1	0	2	56
October	8	30	0	38	10	7	0	17	1	1	0	2	57
November	8	27	0	35	8	5	0	13	1	1	0	2	50
December	8	22	0	31	7	4	0	11	1	0	0	1	43
2003 January	8	19	1	^R 29	8	4	0	12	0	0	0	0	^R 41
February	9	20	0	29	8	4	0	12	0	0	0	0	41

^a Federal and State Jurisdiction waters of the Gulf of Mexico.

^b All onshore.

^c In **two-dimensional** (2D) reflection seismic surveying both the sound source and the sound detectors (numbering up to a hundred or more per shot) are moved along a straight line. The resultant product can be thought of as a vertical sonic cross-section of the subsurface beneath the survey line. It is constructed by summing many compressional (pressure) wave reflections from the various sound source and sound detector locations at the halfway sound path points beneath each location (common depth point stacking). In **three-dimensional** (3D) reflection seismic surveying the sound detectors (numbering up to a thousand or more) are spread out over an area and the sound source is moved from location to location through the area. The resultant product can be thought of as a cube of common depth point stacked reflections. Advantages over 2D include the additional dimension, the fact that many more reflections are available for stacking at each point, which provides greatly improved resolution of subsurface features, and elimination of the "ghost" or "side swipe" reflections from

nearby offline features that 2D surveys are prone to (except, of course, along the outer faces of the cube). **Four dimensional** (4D) reflection seismic surveying is the exact repetition of a 3D survey at two or more time intervals. The primary application of 4D is mapping the movement of fluid interfaces in producing oil and gas reservoirs.

^d Includes crews with unknown survey dimension.

R=Revised.

Notes: • "48 States" is the United States excluding Alaska and Hawaii. • Data are reported on the first and fifteenth of each month, except January when they are reported only on the fifteenth. When semi-monthly values differ for the month, the larger of the two values is shown here. Consequently this table reflects the maximum number of crews at work at any time during the month.

Web Page: <http://www.eia.doe.gov/emeu/mer/resource.html>.

Source: *World Geophysical News*, IHS Energy Group, Denver, CO. used with permission.

Crude Oil and Natural Gas Resource Development

Table 5.2 Notes

Three well types are considered in the *Monthly Energy Review (MER)* drilling statistics: “completed for crude oil,” “completed for natural gas,” and “dry hole.” Wells that productively encounter both crude oil and natural gas are categorized as “completed for crude oil.” Both development wells and exploratory wells (new field wildcats, new pool tests, and extension tests) are included in the statistics. All other classes of wells drilled in connection with the search for producible hydrocarbons are excluded.

Prior to the March 1985 *MER*, drilling statistics consisted of completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator of drilling activity. During 1982, for example,

as-reported well completions rose, while the number of actual completions fell. Consequently, the drilling statistics published since the March 1985 *MER* are Energy Information Administration (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API. These estimates are subject to continuous revision as new data, some of which pertain to earlier months and years, become available. Additional information about the EIA estimation methodology may be found in “Estimating Well Completions,” the feature article published in the March 1985 *MER*.

Users of the well completion and footage figures published by the Energy Information Administration (EIA) prior to August 1998 should be aware that these data have been revised. The published well completion and footage figures are produced by the Well Completion Estimation Procedure (WELCOM) based on drilling records provided under contract to the EIA. Problems in the files received by EIA necessitated revision of the historical series for well completions and footage drilled. Queries regarding this matter may be directed to William Trapmann (202-586-6408 or william.trapmann@eia.doe.gov).

Section 6. Coal

Coal production in February 2003 totaled 81 million short tons, 10 percent lower than in February 2002.

Coal consumed by the electric power sector in December 2002 was estimated as 92 million short tons, 13 percent higher than the level in December 2001.

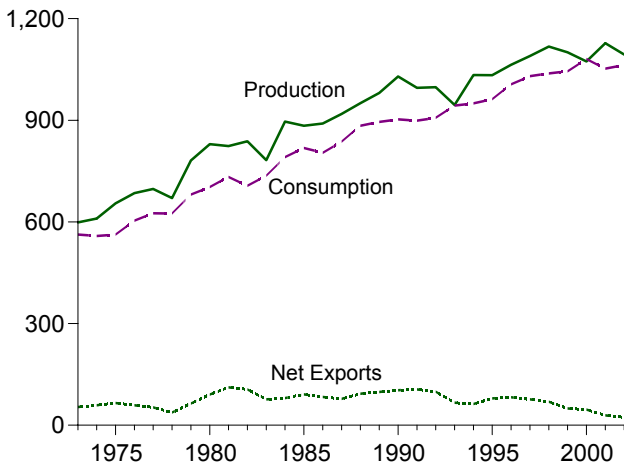
Electric power sector coal stocks were estimated as 143

million short tons at the end of December 2002, 11 percent higher than the level a year earlier.

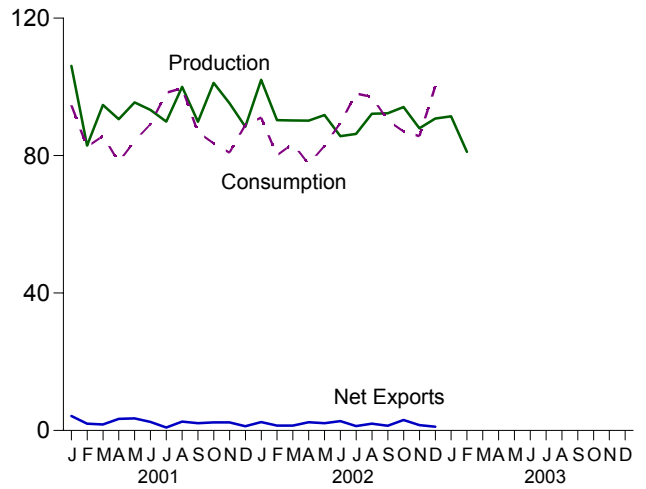
Coal exports in December 2002 totaled 3 million short tons, 17 percent lower than exports in December 2001. Coal imports in December 2002 totaled 2 million short tons, 20 percent lower than imports in December 2001.

Figure 6.1 Coal
(Million Short Tons)

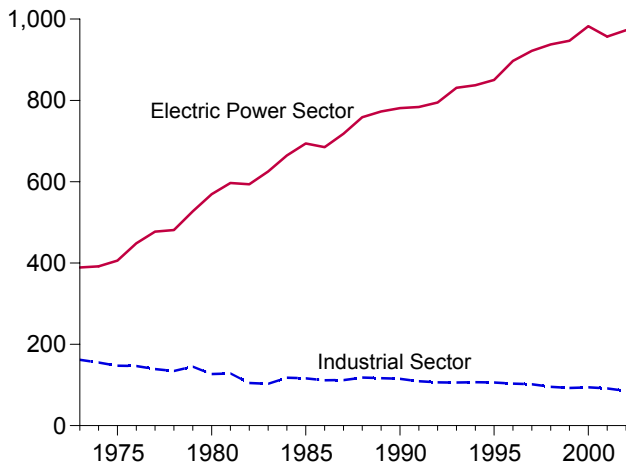
Overview, 1973-2002



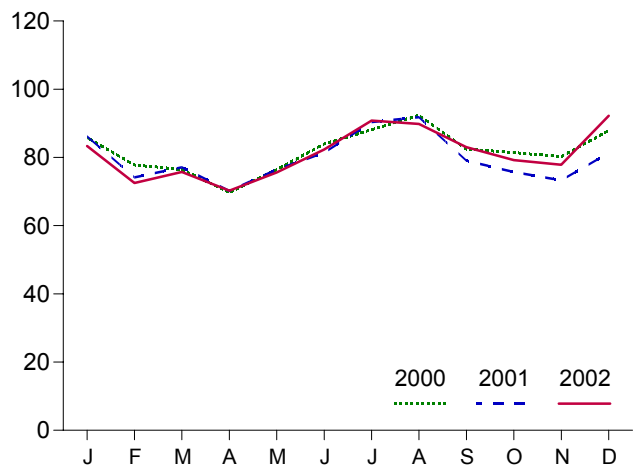
Overview, Monthly



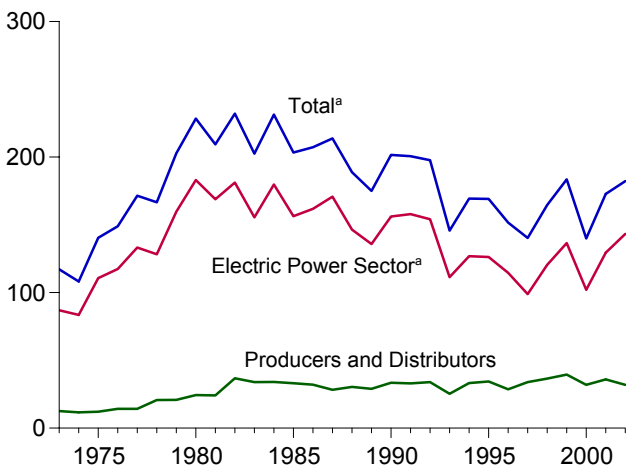
Consumption by Sector, 1973-2002



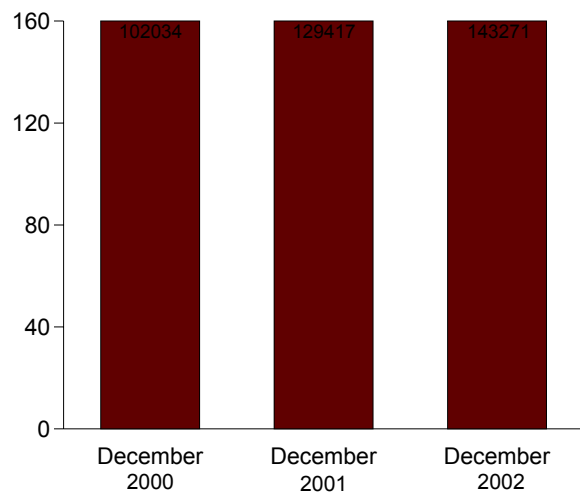
Electric Power Sector Consumption, Monthly



Stocks, End of Year, 1973-2002



Electric Power Sector Stocks, End of Month



^aOther power producers' stocks are included beginning in 1999.
Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/coal.html>.
Sources: Tables 6.1, 6.2, and 6.3.

Table 6.1 Coal Overview
(Thousand Short Tons)

	Production	Consumption	Imports ^a	Exports	Stocks ^b
1973 Total	598,568	562,584	127	53,587	117,155
1974 Total	610,023	558,402	2,080	60,661	108,237
1975 Total	654,641	562,640	940	66,309	140,391
1976 Total	684,913	603,790	1,203	60,021	148,899
1977 Total	697,205	625,291	1,647	54,312	171,543
1978 Total	670,164	625,225	2,953	40,714	166,606
1979 Total	781,134	680,524	2,059	66,042	202,812
1980 Total	829,700	702,730	1,194	91,742	228,407
1981 Total	823,775	732,627	1,043	112,541	209,423
1982 Total	838,112	706,911	742	106,277	232,038
1983 Total	782,091	736,672	1,271	77,772	202,584
1984 Total	895,921	791,296	1,286	81,483	231,300
1985 Total	883,638	818,049	1,952	92,680	203,367
1986 Total	890,315	804,231	2,212	85,518	207,319
1987 Total	918,762	836,941	1,747	79,607	213,780
1988 Total	950,265	883,642	2,134	95,023	188,831
1989 Total	980,729	895,369	2,851	100,815	175,087
1990 Total	1,029,076	902,893	2,699	105,804	201,629
1991 Total	995,984	899,067	3,390	108,969	200,682
1992 Total	997,545	907,378	3,803	102,516	197,685
1993 Total	945,424	943,467	8,181	74,519	145,742
1994 Total	1,033,504	950,141	8,870	71,359	169,358
1995 Total	1,032,974	962,038	9,473	88,547	169,083
1996 Total	1,063,856	1,006,306	8,115	90,473	151,627
1997 Total	1,089,932	1,030,145	7,487	83,545	140,374
1998 Total	1,117,535	1,038,292	8,724	78,048	164,602 ^d
1999 Total	1,100,431	1,044,536	9,089	58,476	183,524
2000 January	87,579	94,385	1,002	4,710	175,019
February	87,219	86,154	698	3,765	182,614
March	99,540	84,902	1,115	5,123	185,425
April	81,839	77,745	823	3,503	185,976
May	88,775	84,368	770	5,536	185,666
June	90,644	91,748	1,152	5,339	179,425
July	84,694	96,157	1,212	4,948	164,159
August	96,659	100,361	1,404	6,405	158,840
September	89,224	90,342	946	4,447	157,616
October	92,959	89,602	1,442	4,492	157,657
November	90,519	88,629	854	5,958	155,440
December	83,961	96,500	1,095	4,264	140,020
Total	1,073,612	1,080,894	12,513	58,489	140,020
2001 January	106,110	R 94,654	1,303	5,512	R 137,254
February	82,900	R 82,534	1,252	3,236	R 141,691
March	94,761	R 85,685	1,355	3,094	R 151,851
April	90,578	R 78,181	1,253	4,623	R 161,758
May	95,505	R 84,284	1,435	4,966	R 168,792
June	93,310	R 89,157	1,436	3,911	R 165,708
July	89,884	R 98,275	2,289	3,166	R 161,238
August	100,000	R 99,686	1,772	4,364	R 152,862
September	89,845	R 86,764	1,986	4,125	R 151,903
October	101,145	R 83,585	1,649	4,002	R 160,326
November	95,244	R 80,879	2,057	4,413	R 167,958
December	88,407	R 88,934	2,001	3,256	R 172,833
Total	1,127,689	R 1,052,619	19,787	48,666	R 172,833
2002 January	R 102,070	R 91,069	1,439	3,873	R 176,692
February	R 90,325	R 80,088	1,222	2,630	R 180,326
March	R 90,224	R 83,456	1,339	2,749	R 182,994
April	R 90,160	R 77,509	1,208	3,584	R 191,507
May	R 91,795	R 82,869	1,227	3,330	R 193,975
June	R 85,635	R 89,485	1,422	4,128	R 188,445
July	R 86,291	R 98,052	1,573	2,843	R 179,361
August	R 92,163	R 97,091	1,555	3,529	R 170,310
September	R 92,314	R 90,212	1,526	2,884	R 168,737
October	R 94,137	R 87,057	1,369	4,407	R 175,279
November	R 87,932	R 85,642	1,393	2,930	R 181,367
December	R 90,760	100,132	1,602	2,712	R 182,194
Total	R 1,093,806	1,062,662	16,875	39,601	182,194
2003 January	91,426	NA	NA	NA	NA
February	81,106	NA	NA	NA	NA
2-Month Total	172,532	NA	NA	NA	NA
2002 2-Month Total	192,395	171,158	2,661	6,504	180,326
2001 2-Month Total	189,010	177,189	2,554	8,748	141,691

^a Includes Puerto Rico.

^b Stocks held by electric utilities, other power producers, coke plants, general industry, and coal producers and distributors at end of period. Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

^c Beginning in 1989, includes coal consumed by "Other Power Producers." See Table 6.2.

^d Beginning in 1998, includes coal stocks at "Other Power Producers." See

Table 6.3.

R=Revised. NA=Not available.

Notes: • For methodology used to calculate production, consumption, and stocks, see Notes 1, 2, and 3 at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/coal.html>.

Sources: See end of section for sources.

Table 6.2 Coal Consumption by Sector
(Thousand Short Tons)

	End-Use Sectors ^a				Transportation	Electric Power Sector			Total
	Residential and Commercial	Industrial				Electric Utilities	Other Power Producers ^{a,b}	Total	
		Coke Plants	Other	Total					
1973 Total	11,117	94,101	68,038	162,139	116	389,212	NA	^c 389,212	562,584
1974 Total	11,417	90,191	64,903	155,094	80	391,811	NA	^c 391,811	558,402
1975 Total	9,410	83,598	63,646	147,244	24	405,962	NA	^c 405,962	562,640
1976 Total	8,916	84,704	61,787	146,912	12	448,371	NA	^c 448,371	603,790
1977 Total	8,954	77,739	61,463	139,202	9	477,126	NA	^c 477,126	625,291
1978 Total	9,511	71,394	63,085	134,479	(d)	481,235	NA	^c 481,235	625,225
1979 Total	8,388	77,368	67,717	145,085	(d)	527,051	NA	^c 527,051	680,524
1980 Total	6,452	66,657	60,347	127,004	(d)	569,274	NA	^c 569,274	702,730
1981 Total	7,421	61,014	67,395	128,409	(d)	596,797	NA	^c 596,797	732,627
1982 Total	8,240	40,908	64,097	105,005	(d)	593,666	NA	^c 593,666	706,911
1983 Total	8,448	37,033	65,980	103,013	(d)	625,211	NA	^c 625,211	736,672
1984 Total	9,130	44,022	73,745	117,767	(d)	664,399	NA	^c 664,399	791,296
1985 Total	7,779	41,056	75,372	116,429	(d)	693,841	NA	^c 693,841	818,049
1986 Total	7,667	35,924	75,583	111,508	(d)	685,056	NA	^c 685,056	804,231
1987 Total	6,914	36,957	75,175	112,132	(d)	717,894	NA	^c 717,894	836,941
1988 Total	7,130	41,888	76,252	118,140	(d)	758,372	NA	^c 758,372	883,642
1989 Total	6,167	40,508	76,134	116,643	(d)	766,888	5,670	^e 772,558	^e 895,369
1990 Total	6,724	38,877	76,330	115,207	(d)	773,549	7,413	780,962	902,893
1991 Total	6,094	33,854	75,405	109,259	(d)	772,268	11,446	783,714	899,067
1992 Total	6,153	32,366	74,042	106,408	(d)	779,860	14,957	794,817	907,378
1993 Total	6,221	31,323	74,892	106,215	(d)	813,508	17,523	831,031	943,467
1994 Total	6,013	31,740	75,179	106,919	(d)	817,270	19,940	837,210	950,141
1995 Total	5,807	33,011	73,055	106,067	(d)	829,007	21,158	850,165	962,038
1996 Total	6,006	31,706	71,689	103,395	(d)	874,681	22,224	896,905	1,006,306
1997 Total	6,463	30,203	71,515	101,718	(d)	900,361	21,603	921,964	1,030,145
1998 Total	4,856	28,189	67,439	95,628	(d)	910,867	26,941	937,808	1,038,292
1999 Total	4,879	28,108	64,738	92,846	(d)	894,120	52,691	946,811	1,044,536
2000 January	533	2,473	5,601	8,074	(d)	77,090	^E 8,689	^E 85,779	94,385
February	397	2,343	5,626	7,969	(d)	69,442	^E 8,346	^E 77,788	86,154
March	308	2,506	5,642	8,148	(d)	67,925	^E 8,521	^E 76,446	84,902
April	351	2,499	5,137	7,637	(d)	61,214	^E 8,543	^E 69,757	77,745
May	236	2,548	5,140	7,687	(d)	67,428	^E 9,017	^E 76,445	84,368
June	238	2,399	5,151	7,549	(d)	73,910	^E 10,050	^E 83,960	91,748
July	288	2,484	5,256	7,739	(d)	77,051	^E 11,079	^E 88,130	96,157
August	294	2,428	5,269	7,698	(d)	80,021	^E 12,348	^E 92,369	100,361
September	243	2,383	5,288	7,671	(d)	70,725	^E 11,703	^E 82,428	90,342
October	193	2,251	5,751	8,002	(d)	69,835	^E 11,572	^E 81,407	89,602
November	400	2,270	5,721	7,991	(d)	69,114	^E 11,123	^E 80,237	88,629
December	645	2,356	5,626	7,982	(d)	75,579	^E 12,294	^E 87,873	96,500
Total	4,127	28,939	65,208	94,147	(d)	859,335	123,285	982,620	1,080,894
2001 January	^R 520	2,176	^R 5,805	^R 7,981	(d)	73,236	^E 12,917	^E 86,153	^R 94,654
February	^R 413	2,145	^R 5,813	^R 7,958	(d)	62,523	^E 11,640	^E 74,163	^R 82,534
March	^R 378	2,466	^R 5,737	^R 8,202	(d)	64,993	^E 12,112	^E 77,105	^R 85,685
April	^R 374	2,320	^R 5,293	^R 7,613	(d)	58,889	^E 11,305	^E 70,194	^R 78,181
May	^R 235	2,337	^R 5,292	^R 7,629	(d)	65,233	^E 11,187	^E 76,420	^R 84,284
June	^R 264	2,268	^R 5,247	^R 7,515	(d)	69,126	^E 12,252	^E 81,378	^R 89,157
July	^R 324	2,206	^R 5,385	^R 7,591	(d)	76,487	^E 13,873	^E 90,360	^R 98,275
August	^R 329	2,249	^R 5,339	^R 7,588	(d)	77,839	^E 13,930	^E 91,769	^R 99,686
September	^R 221	2,145	^R 5,319	^R 7,464	(d)	66,126	^E 12,953	^E 79,079	^R 86,764
October	^R 285	2,203	^R 5,388	^R 7,592	(d)	62,963	^E 12,746	^E 75,709	^R 83,585
November	^R 382	1,846	^R 5,355	^R 7,201	(d)	61,160	^E 12,137	^E 73,297	^R 80,879
December	^R 644	1,715	^R 5,294	^R 7,010	(d)	67,695	^E 13,585	^E 81,280	^R 88,934
Total	^R 4,369	26,075	^R 65,268	^R 91,344	(d)	806,269	^E 150,637	^E 956,906	^R 1,052,619
2002 January	^R 486	^R 1,818	^R 5,418	^R 7,236	(d)	66,776	^E 16,571	^E 83,347	^R 91,069
February	^R 424	^R 1,723	^R 5,424	^R 7,147	(d)	57,553	^E 14,965	^E 72,518	^R 80,088
March	^R 401	^R 1,873	^R 5,441	^R 7,315	(d)	60,123	^E 15,617	^E 75,740	^R 83,456
April	^R 355	1,867	^R 5,028	^R 6,895	(d)	55,963	^E 14,295	^E 70,258	^R 77,509
May	^R 270	1,928	^R 5,055	^R 6,983	(d)	60,836	^E 14,780	^E 75,616	^R 82,869
June	^R 248	1,846	^R 5,081	^R 6,927	(d)	66,324	^E 15,985	^E 82,309	^R 89,485
July	^R 345	1,819	^R 5,081	^R 6,900	(d)	73,016	^E 17,791	^E 90,807	^R 98,052
August	^R 308	1,894	^R 5,087	^R 6,981	(d)	71,994	^E 17,808	^E 89,802	^R 97,091
September	^R 221	1,883	^R 5,089	^R 6,972	(d)	65,909	^E 17,111	^E 83,020	^R 90,212
October	^R 292	^R 2,072	^R 5,466	^R 7,538	(d)	62,889	^E 16,338	^E 79,227	^R 87,057
November	^R 439	^R 1,910	^R 5,447	^R 7,356	(d)	^R 61,711	^E 16,136	^{RE} 77,847	^R 85,642
December	580	1,904	5,460	7,364	(d)	^F 74,171	^E 18,018	^E 92,189	100,132
Total	4,369	22,537	63,077	85,615	(d)	^E 777,263	^E 195,415	^E 972,678	1,062,662

^a Most of the coal consumption at nonutility cogeneration plants is included in the end-use sectors.
^b Nonutility wholesale producers of electricity, and nonutility cogeneration plants that are not included in the end-use sectors.
^c Electric utilities only.
^d After 1977, small amounts of coal consumed by the transportation sector are included in "Other" under the industrial sector.
^e Beginning in 1989, includes coal consumed by "Other Power Producers."

R=Revised, E=Estimate, NA=Not available, F=Forecast.
Notes: • For sector-specific reporting and estimating information, see Note 2 at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/coal.html>.
Sources: See end of section for sources. Forecast values are derived from EIA's Short-Term Integrated Forecasting System. See Note 4 at end of section.

Table 6.3 Coal Stocks
(Thousand Short Tons)

	Producers and Distributors	Residential and Commercial	Consumers						Total	Total
			Industrial			Electric Power Sector				
			Coke Plants	Other	Total	Electric Utilities	Other Power Producers ^a	Total ^b		
1973 Year	12,530	290	6,998	10,370	17,368	86,967	NA	86,967	104,625	117,155
1974 Year	11,634	280	6,209	6,605	12,814	83,509	NA	83,509	96,603	108,237
1975 Year	12,108	233	8,797	8,529	17,326	110,724	NA	110,724	128,283	140,391
1976 Year	14,221	240	9,902	7,100	17,002	117,436	NA	117,436	134,678	148,899
1977 Year	14,225	220	12,816	11,063	23,879	133,219	NA	133,219	157,318	171,543
1978 Year	20,695	360	8,278	9,048	17,326	128,225	NA	128,225	145,911	166,606
1979 Year	20,826	340	10,155	11,777	21,932	159,714	NA	159,714	181,986	202,812
1980 Year	24,379	(c)	9,067	11,951	21,018	183,010	NA	183,010	204,028	228,407
1981 Year	24,149	(c)	6,475	9,906	16,381	168,893	NA	168,893	185,274	209,423
1982 Year	36,784	(c)	4,642	9,479	14,121	181,132	NA	181,132	195,254	232,038
1983 Year	33,931	(c)	4,346	8,710	13,056	155,598	NA	155,598	168,654	202,584
1984 Year	34,090	(c)	6,166	11,317	17,483	179,727	NA	179,727	197,211	231,300
1985 Year	33,133	(c)	3,420	10,438	13,857	156,376	NA	156,376	170,234	203,367
1986 Year	32,093	(c)	2,992	10,429	13,420	161,806	NA	161,806	175,226	207,319
1987 Year	28,321	(c)	3,884	10,777	14,662	170,797	NA	170,797	185,459	213,780
1988 Year	30,418	(c)	3,137	8,768	11,906	146,507	NA	146,507	158,413	188,831
1989 Year	29,000	(c)	2,864	7,363	10,227	135,860	NA	135,860	146,087	175,087
1990 Year	33,418	(c)	3,329	8,716	12,044	156,166	NA	156,166	168,210	201,629
1991 Year	32,971	(c)	2,773	7,061	9,835	157,876	NA	157,876	167,711	200,682
1992 Year	33,993	(c)	2,597	6,965	9,562	154,130	NA	154,130	163,692	197,685
1993 Year	25,284	(c)	2,401	6,716	9,117	111,341	NA	111,341	120,458	145,742
1994 Year	33,219	(c)	2,657	6,585	9,243	126,897	NA	126,897	136,139	169,358
1995 Year	34,444	(c)	2,632	5,702	8,334	126,304	NA	126,304	134,639	169,083
1996 Year	28,648	(c)	2,667	5,688	8,355	114,623	NA	114,623	122,979	151,627
1997 Year	33,973	(c)	1,978	5,597	7,576	98,826	NA	98,826	106,401	140,374
1998 Year	36,530	(c)	2,026	5,545	7,571	120,501	NA	120,501	128,072	164,602
1999 Year	39,475	(c)	1,943	5,569	7,512	129,041	E 7,496	E 136,537	144,049	183,524
2000 January	38,166	(c)	1,940	5,168	7,108	123,661	E 6,084	E 129,745	136,853	175,019
February	39,708	(c)	1,938	4,767	6,705	129,055	E 7,146	E 136,201	142,906	182,614
March	44,271	(c)	1,935	4,367	6,302	127,130	E 7,722	E 134,852	141,154	185,425
April	41,453	(c)	1,903	4,429	6,333	128,669	E 9,521	E 138,190	144,523	185,976
May	41,656	(c)	1,871	4,492	6,363	127,090	E 10,557	E 137,647	144,010	185,666
June	42,179	(c)	1,839	4,555	6,394	119,634	E 11,218	E 130,852	137,246	179,425
July	35,732	(c)	1,745	4,596	6,341	111,494	E 10,592	E 122,086	128,427	164,159
August	35,606	(c)	1,652	4,636	6,288	106,201	E 10,745	E 116,946	123,234	158,840
September	37,307	(c)	1,558	4,677	6,235	102,876	E 11,199	E 114,075	120,309	157,616
October	35,191	(c)	1,537	4,647	6,183	104,422	E 11,861	E 116,283	122,466	157,657
November	34,903	(c)	1,515	4,617	6,132	102,227	E 12,177	E 114,404	120,537	155,440
December	31,905	(c)	1,494	4,587	6,081	90,115	E 11,919	E 102,034	108,115	140,020
2001 January	35,489	(c)	1,630	R 4,500	R 6,130	84,825	E 10,811	E 95,636	R 101,765	R 137,254
February	37,589	(c)	1,766	R 4,413	R 6,178	86,462	E 11,462	E 97,924	R 104,102	R 141,691
March	R 39,214	(c)	1,902	R 4,325	R 6,227	94,644	E 11,765	E 106,409	R 112,637	R 151,851
April	40,265	(c)	1,813	R 4,433	R 6,246	102,626	E 12,621	E 115,247	R 121,493	R 161,758
May	39,568	(c)	1,724	R 4,540	R 6,265	109,595	E 13,365	E 122,960	R 129,224	R 168,792
June	R 38,554	(c)	1,635	R 4,648	R 6,283	107,452	E 13,419	E 120,871	R 127,154	R 165,708
July	39,485	(c)	1,616	R 4,789	R 6,405	102,664	E 12,684	E 115,348	R 121,753	R 161,238
August	38,498	(c)	1,597	R 4,930	R 6,526	96,440	E 11,398	E 107,838	R 114,364	R 152,862
September	R 34,822	(c)	1,577	R 5,070	R 6,647	98,915	E 11,518	E 110,433	R 117,081	R 151,903
October	33,531	(c)	R 1,506	R 5,382	R 6,888	107,745	E 12,161	E 119,906	R 126,795	R 160,326
November	32,956	(c)	R 1,508	R 5,694	R 7,202	115,250	E 12,550	E 127,800	R 135,002	R 167,958
December	R 35,900	(c)	1,510	R 6,006	R 7,516	117,150	E 12,267	E 129,417	R 136,933	R 172,833
2002 January	R 39,548	(c)	R 1,388	R 5,618	R 7,006	116,032	E 14,106	E 130,138	R 137,144	R 176,692
February	41,589	(c)	R 1,309	R 5,230	R 6,539	117,506	E 14,692	E 132,198	R 138,737	R 180,326
March	R 40,284	(c)	R 1,230	R 4,842	R 6,072	121,482	E 15,156	E 136,638	R 142,710	R 182,994
April	44,961	(c)	R 1,306	R 4,916	R 6,221	124,155	E 16,182	E 140,337	146,546	191,507
May	43,946	(c)	R 1,381	R 4,990	R 6,371	126,739	E 17,013	E 143,752	150,029	193,975
June	R 41,288	(c)	1,456	R 5,064	R 6,520	123,590	E 17,046	E 140,636	R 147,157	R 188,445
July	40,496	(c)	1,469	R 5,321	R 6,790	115,953	E 16,122	E 132,075	R 138,865	R 179,361
August	36,489	(c)	1,483	R 5,578	R 7,060	112,103	E 14,658	E 126,761	R 133,821	R 170,310
September	R 35,662	(c)	1,496	R 5,834	R 7,330	109,795	E 15,950	E 125,745	R 133,075	R 168,737
October	35,191	(c)	R 1,385	R 5,820	R 7,205	115,249	E 17,634	E 132,883	R 140,088	R 175,279
November	36,954	(c)	R 1,274	R 5,806	R 7,080	R 118,656	E 18,678	RE 137,334	R 144,413	R 181,367
December	31,968	(c)	1,163	5,792	6,955	F 111,711	E 31,560	E 143,271	150,226	182,194

^a Nonutility wholesale producers of electricity, and nonutility cogeneration plants that are not included in the industrial or commercial sectors.

^b Beginning in 1999, includes coal stocks at "Other Power Producers."

^c Beginning in 1980, the Energy Information Administration ceased collecting data on residential and commercial coal stocks.

R=Revised. E=Estimate. F=Forecast.

Notes: • Stocks are at end of period. • For sector-specific reporting and

estimating information, see Note 3 at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/coal.html>.

Sources: See end of section for sources. Forecast values are derived from EIA's Short-Term Integrated Forecasting System. See Note 4 at end of section.

Coal

Note 1. Production: Preliminary monthly estimates of national coal production are the sum of weekly estimates developed by the Energy Information Administration (EIA) and published in the *Weekly Coal Production* report. When a week extends into a new month, production is allocated on a daily basis and added to the appropriate month. Weekly estimates are based on Association of American Railroads data showing the number of railcars loaded with coal during the week by Class I and certain other railroads. This number is converted into tons of coal by EIA by using the average number of tons of coal per railcar loaded reported in the most recent “Quarterly Freight Commodity Statistics” from the Surface Transportation Board. If an average coal tonnage per railcar loaded is not available for a specific railroad, the national average is used. To derive the estimate of total weekly production, the total rail tonnage for the week is divided by the ratio of quarterly production shipped by rail and total quarterly production. Data for the corresponding quarter of previous years are used to derive this ratio. This method ensures that the seasonal variations are preserved in the production estimates.

When preliminary quarterly data become available, the monthly and weekly estimates are adjusted to conform to the quarterly figure. The adjustment procedure uses State-level production data and is explained in EIA’s *Quarterly Coal Report*. Initial estimates of annual production published in January of the following year are based on preliminary production data covering the first 9 months (three quarters) and weekly/monthly estimates for the fourth quarter. The fourth quarter estimates may or may not be revised when preliminary data become available in March of the following year, depending on the magnitude of the difference between the estimates and the preliminary data. In any event, all quarterly, monthly, and weekly production figures are adjusted to conform to the final annual production data published in the *Monthly Energy Review* in the fall of the following year.

Note 2. Consumption: Coal consumption data are reported by major end-use sector. Forecast data for the most recent months (designated by an “F”) are derived from forecasted values shown in the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled “U.S. Coal Supply and Demand: Mid World Oil Price Case.” The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, October, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

Residential and Commercial: Prior to 1980, monthly consumption estimates for the residential and commercial sector were derived by using reported data to modify baseline figures developed by the Bureau of Mines. From 1980–1987, monthly estimates were derived by

proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-2. During 1981 and 1982, the estimates were also modified to reflect air temperature degree-days. Quarterly consumption data were taken directly from reported data and were defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6. Beginning in January 1988, monthly residential and commercial consumption estimates are derived from reported quarterly data by using monthly national average population weighted heating/cooling degree-days obtained from the National Oceanic and Atmospheric Administration. The monthly ratios are the monthly national sum of heating and cooling degree-days as a proportion of the quarterly national sum. Quarterly consumption data are taken directly from reported data.

Industrial Coke Plants—Prior to 1980, monthly coke plant consumption data were taken directly from reported data. From 1980–1987, coke plant consumption estimates were derived by proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported. Beginning in January 1988, monthly coke plant consumption estimates are derived from the reported quarterly data by using monthly ratios of raw steel production data from the American Iron and Steel Institute. The ratios are the monthly raw steel production from open hearth and basic oxygen process furnaces as a proportion of the quarterly production from those kinds of furnaces.

Industrial Other—Prior to 1978, monthly consumption data for the other industrial sector (all industrial users minus coke plants) were derived by using reported data to modify baseline consumption figures from the most recent Bureau of the Census Annual Survey of Manufactures or Census of Manufactures. For 1978 and 1979, monthly estimates were derived from data reported on Forms EIA-3 and EIA-6. From 1980–1987, monthly figures were estimated by proportioning quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-3. Quarterly consumption data were derived by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts were the greater of either reported receipts from manufacturing plants (Form EIA-3) or reported shipments to the other industrial sector (Form EIA-6), thereby ensuring that agriculture, forestry, fishing, mining, and construction consumption data were included where appropriate. Starting in January 1988, monthly consumption for the other industrial sector is estimated from reported quarterly data by using ratios derived from industrial production indices published by the Board of Governors of the Federal Reserve System. Indices for six major industry groups are used as the basis for calculating the ratios: food manufacturing, which is North American Industry Classification System (NAICS) code 333; paper manufacturing, NAICS 322; chemical manufacturing,

NAICS 325; petroleum and coal products, NAICS 324; nonmetallic mineral products manufacturing, NAICS 327; and primary metal manufacturing, NAICS 331. The monthly ratios are computed as the monthly sum of the weighted indices as a proportion of the quarterly sum of the weighted indices by using the 1977 proportion as the weights.

Electric Utilities—Monthly consumption data for electric utility plants are taken directly from reported data.

Note 3. Stocks: Coal stocks data are reported by major end-use sector. Forecast data for the most recent months (designated by an “F”) are derived from forecasted values shown in the EIA *Short-Term Energy Outlook* (DOE/EIA-0202) table titled “U.S. Coal Supply and Demand: Mid World Oil Price Case.” The monthly estimates are one-third of the quarterly values shown in the then current issue of the publication, regularly released in February, May, October, and November. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

Producers and Distributors—Quarterly stocks at producers and distributors are taken directly from reported data. Monthly data are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks.

Residential and Commercial—Prior to 1980, stock estimates for the residential and commercial sector were taken directly from reported data. Beginning in 1980, stock estimates for the sector were considered to be statistically insignificant and are no longer collected.

Industrial Coke Plants—Prior to 1980, monthly stocks at coke plants were taken directly from reported data. From 1980 forward, coke plant stocks are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Quarterly stocks are taken directly from data reported on Form EIA-5.

Industrial Other—Prior to 1978, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. For 1978–1982, monthly estimates were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. From 1983 forward, other industrial coal stocks are estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available.

Electric Utilities—Monthly stocks data at electric utility plants are taken directly from reported data.

Other Power Producers—Annual stocks data are taken directly from reported data. Monthly data are estimated by EIA based on industry analysis.

Note 4. Forecast Values: Data values preceded by “F” in this section are forecast values. They are derived from EIA’s Short-Term Integrated Forecasting System (STIFS). The model is driven primarily by data and assumptions about key macroeconomic variables, the world oil price, and weather. The coal forecast relies on other variables as well, such as alternative fuel prices (natural gas and oil) and power generation by sources other than fossil fuels, including nuclear and hydroelectric power. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the coal industry.

The STIFS model results are published monthly in EIA’s *Short-Term Energy Outlook*, which is available from the National Energy Information Center (202-586-8800) and accessible on the world wide web at <http://www.eia.doe.gov>. Documentation for the model and instructions for downloading and operating it on a personal computer are provided.

Note 5. Additional Information: EIA’s *Quarterly Coal Report* provides additional information about coal data and estimation procedures.

Table 6.1 Sources

Production

1973–September 1977: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977 forward: Energy Information Administration, *Weekly Coal Production*.

Consumption: See Table 6.2.

Imports and Exports

U.S. Department of Commerce, Bureau of the Census, Monthly Reports IM-145 (Imports) and EM-545 (Exports).

Stocks: See Table 6.3.

Table 6.2 Sources

Residential and Commercial

1973–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers-Upper Lake Docks.”

October 1977–1979: Energy Information Administration (EIA), Form EIA-2, “Monthly Coal Report, Retail Dealers-Upper Lake Docks.”

1980–1997: EIA, Form EIA-6, “Coal Distribution Report,” quarterly.

1998 forward: DOI, Mine Safety and Health Administration, Form 7000-2, “Quarterly Mine Employment and Coal Production.”

Industrial Coke Plants

1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1980: EIA, Form EIA-5/5A, “Coke and Coal Chemicals-Monthly/Annual Supplement.”

1981–1984: EIA, Form EIA-5/5A, “Coke Plant Report-Quarterly/Annual Supplement.”

1985 forward: EIA, Form EIA-5, “Coke Plant Report-Quarterly.”

Industrial Other

1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1979: EIA, Form EIA-3, “Monthly Coal Consumption Report-Manufacturing Plants.”

1980 forward: EIA, Form EIA-3, “Quarterly Coal Consumption Report-Manufacturing Plants,” and Form EIA-6, “Coal Distribution Report,” quarterly.

Transportation

1973–1976: DOI, BOM, *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers-Upper Lake Docks.”

October–December 1977: EIA, Form EIA-6, “Coal Distribution Report,” quarterly.

Electric Utilities

1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–2000: EIA, Form EIA-759 (formerly Form FPC-4), “Monthly Power Plant Report.” 2001: EIA, Form EIA-906, “Power Plant Report.”

Other Power Producers

Annual Data: EIA, Form EIA-860B (formerly Form EIA-867), “Annual Electric Generator Report - Nonutility.”

Monthly Estimates: Through 1997, derived from the daily rate of each annual total. For 1998 forward, estimated by EIA from industry analysis.

Table 6.3 Sources

Producers and Distributors

1973–1979: DOI, BOM, Form 6-1419Q, “Distribution of Bituminous Coal and Lignite Shipments.”

1980 forward: Energy Information Administration (EIA), Form EIA-6, “Coal Distribution Report,” quarterly.

Residential and Commercial

1973–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers-Upper Lake Docks.”

October 1977–1979: EIA, Form EIA-2, “Monthly Coal Report, Retail Dealers-Upper Lake Docks.”

Industrial Coke Plants

1973–September 1977: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1980: Energy Information Administration (EIA), Form EIA-5/5A, “Coke and Coal Chemicals-Monthly/Annual.”

1981–1984: EIA, Form EIA 5/5A, “Coke Plant Report-Quarterly/Annual Supplement.”

1985 forward: EIA, Form EIA-5, “Coke Plant Report-Quarterly.”

Industrial Other

1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1979: EIA, Form EIA-3, “Monthly Coal Consumption Report-Manufacturing Plants.”

1980 forward: EIA, Form EIA-3, “Quarterly Coal Consumption Report-Manufacturing Plants,” and Form EIA-6, “Coal Distribution Report,” quarterly.

Electric Utilities

See Table 7.9.

Other Power Producers

Annual Data: EIA, Form EIA-860B (formerly Form EIA-867), “Annual Electric Generator Report - Nonutility.”

Monthly Estimates: Estimated by EIA from industry analysis.

Section 7. Electricity

Overview. Electricity is produced by electric utilities, which are the traditional, regulated part of the industry, and nonutility power producers, which are expanding rapidly as the industry moves away from regulated entities.

In 2002, U.S. electricity net generation totaled 3.9 trillion kilowatthours. Electric utilities generated 2.6 trillion kilowatthours (66 percent of the total) and nonutility power producers generated 1.3 trillion kilowatthours (34 percent). The Nation imported 36 billion kilowatthours of electricity and exported 15 billion kilowatthours.

Net Generation. The December 2002 forecast for total net generation of electricity was 344 billion kilowatthours, 13 percent higher than in December 2001. At utilities, net generation was forecast at 229 billion kilowatthours, 9 percent higher than in December 2001, while at nonutility power plants, net generation was forecast at 115 billion kilowatthours, 24 percent more than the net generation 1 year earlier.

At utilities in December 2002, fossil fuels (primarily coal) were forecast to account for 73 percent of net generation, nuclear 18 percent, and renewable resources 10 percent. At nonutility power plants, fossil fuels were forecast to account for 73 percent of net generation, nuclear accounted for 19 percent, and renewable resources 8 percent of the total.

Electric Utility Retail Sales. The December 2002 forecast for total utility sales of electricity to end users was 285 billion kilowatthours, up 6 percent, compared with December 2001. December 2002 electricity sales to residential consumers were forecast at 109 billion kilowatthours (38 percent of the month's total), commercial users 88 billion

kilowatthours (31 percent), industrial consumers 78 billion kilowatthours of electricity (27 percent), and other users 9 billion kilowatthours (3 percent).

Consumption of Fossil Fuels. The December 2002 forecast for the consumption of coal to generate electricity was 94 million short tons, 15 percent more than a year earlier. Of the total, 74 million short tons, 10 percent higher than a year earlier, was forecast to be consumed by electric utilities and 20 million short tons, 39 percent more than a year earlier, was forecast to be consumed by nonutility power producers.

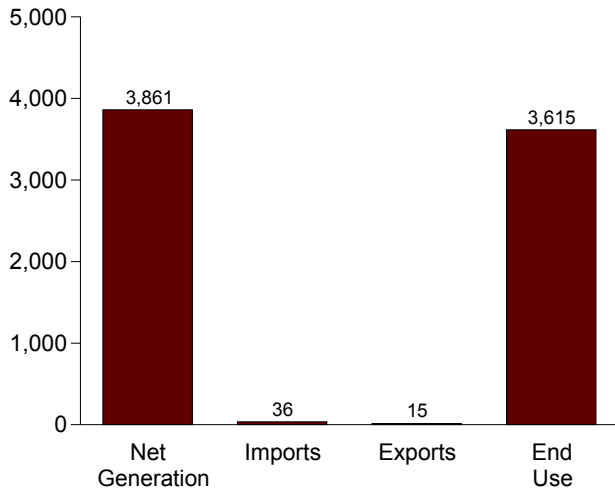
The December 2002 forecast for the consumption of natural gas to generate electricity was 570 billion cubic feet, 17 percent higher than a year earlier. Of the total, 161 billion cubic feet, 5 percent more than a year earlier, was forecast to be consumed by electric utilities and 409 billion cubic feet, 22 percent more than a year earlier, was forecast to be consumed by nonutility power producers.

Stocks of Coal and Petroleum. The end-of-December 2002 forecast for coal held in storage for electricity generation was 163 million short tons, 9 percent more than a year earlier. Of the total, 112 million short tons, 5 percent less than a year earlier, was forecast to be held by electric utilities and 52 million short tons, 60 percent more than the level a year earlier, was forecast to be held by nonutility power producers.

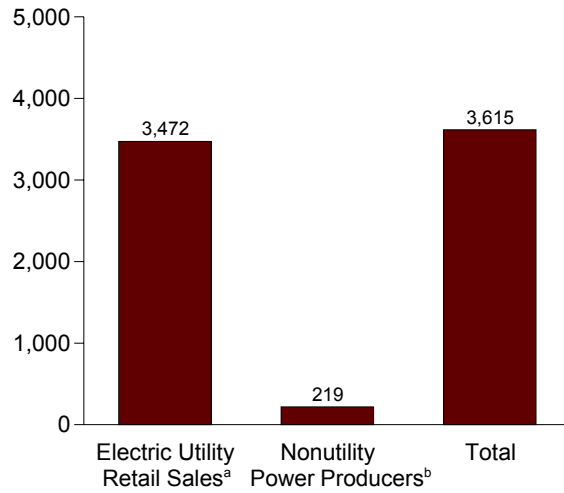
The end-of-December 2002 forecast for petroleum liquids (i.e., heavy and light oil) was 45 million barrels held by electric utilities and nonutility power producers combined, 20 percent less than a year earlier.

Figure 7.1 Electricity Overview
(Billion Kilowatthours)

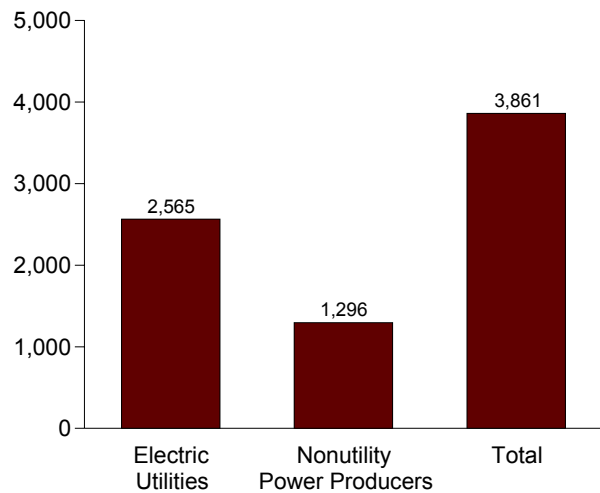
Overview, 2002



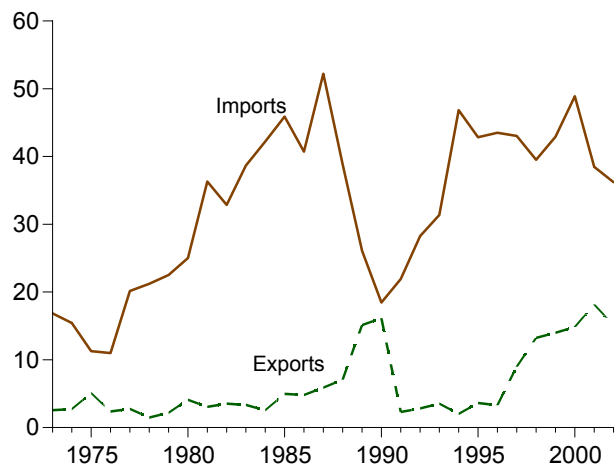
End Use, 2002



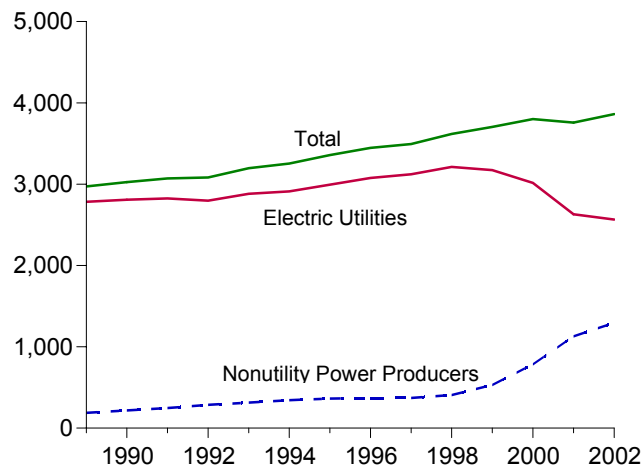
Net Generation, 2002



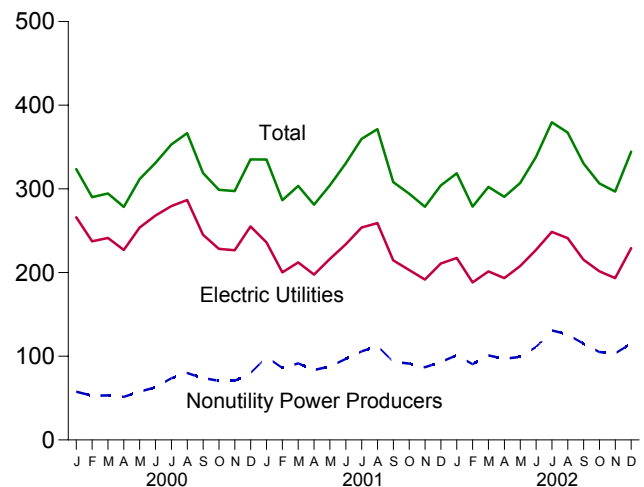
Trade, 1973-2002



Net Generation, 1989-2002



Net Generation, Monthly



^aIncludes nonutility sales of electricity to utilities for distribution to end users, and sales to ultimate consumers by power marketers.

^bNonutility facility use of onsite net generation, and nonutility sales of electricity to end users.

Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.
Source: Table 7.1.

Table 7.1 Electricity Overview
(Billion Kilowatthours)

	Net Generation			Imports ^a	Exports ^a	Losses and Unaccounted for ^b	End Use		
	Electric Utilities	Nonutility Power Producers	Total				Electric Utility Retail Sales ^c	Nonutility Power Producers ^d	Total ^c
1973 Total	1,861	NA	1,861	17	3	NA	1,713	NA	NA
1974 Total	1,867	NA	1,867	15	3	NA	1,706	NA	NA
1975 Total	1,918	NA	1,918	11	5	NA	1,747	NA	NA
1976 Total	2,038	NA	2,038	11	2	NA	1,855	NA	NA
1977 Total	2,124	NA	2,124	20	3	NA	1,948	NA	NA
1978 Total	2,206	NA	2,206	21	1	NA	2,018	NA	NA
1979 Total	2,247	NA	2,247	23	2	NA	2,071	NA	NA
1980 Total	2,286	NA	2,286	25	4	NA	2,094	NA	NA
1981 Total	2,295	NA	2,295	36	3	NA	2,147	NA	NA
1982 Total	2,241	NA	2,241	33	4	NA	2,086	NA	NA
1983 Total	2,310	NA	2,310	39	3	NA	2,151	NA	NA
1984 Total	2,416	NA	2,416	42	3	NA	2,286	NA	NA
1985 Total	2,470	NA	2,470	46	5	NA	2,324	NA	NA
1986 Total	2,487	NA	2,487	41	5	NA	2,369	NA	NA
1987 Total	2,572	NA	2,572	52	6	NA	2,457	NA	NA
1988 Total	2,704	NA	2,704	39	7	NA	2,578	NA	NA
1989 Total	2,784	^e 188	2,972	26	15	236	2,647	100	2,747
1990 Total	2,808	^e 217	3,025	18	16	210	2,713	104	2,817
1991 Total	2,825	^e 246	3,071	22	2	218	2,762	111	2,873
1992 Total	2,797	286	3,083	28	3	224	2,763	122	2,885
1993 Total	2,883	314	3,197	31	4	236	2,861	127	2,988
1994 Total	2,911	343	3,254	47	2	223	2,935	141	3,075
1995 Total	2,995	363	3,358	43	4	235	3,013	149	3,162
1996 Total	3,077	370	3,447	43	3	237	3,101	149	3,250
1997 Total	3,123	372	3,494	43	9	234	3,146	149	3,295
1998 Total	3,212	406	3,618	40	13	220	3,264	160	3,424
1999 Total	3,174	531	3,705	43	14	233	3,312	189	3,501
2000 January	266	58	324	4	1	NA	288	NA	NA
February	237	53	290	4	1	NA	272	NA	NA
March	241	53	295	4	1	NA	262	NA	NA
April	227	51	278	4	1	NA	249	NA	NA
May	254	58	312	4	1	NA	269	NA	NA
June	268	63	331	5	2	NA	300	NA	NA
July	279	74	353	5	1	NA	318	NA	NA
August	287	80	367	5	1	NA	331	NA	NA
September	245	74	319	4	1	NA	304	NA	NA
October	228	71	299	3	1	NA	273	NA	NA
November	227	71	297	4	1	NA	264	NA	NA
December	255	80	335	3	3	NA	292	NA	NA
Total	3,015	785	3,800	49	15	214	3,421	199	^E 3,620
2001 January	236	99	335	3	2	NA	311	NA	NA
February	200	86	287	3	3	NA	273	NA	NA
March	212	91	304	4	2	NA	270	NA	NA
April	198	84	281	4	2	NA	255	NA	NA
May	216	88	304	4	2	NA	264	NA	NA
June	234	97	331	4	1	NA	290	NA	NA
July	254	106	360	4	1	NA	316	NA	NA
August	259	112	371	4	1	NA	332	NA	NA
September	215	93	308	2	1	NA	296	NA	NA
October	203	91	294	2	1	NA	268	NA	NA
November	192	87	279	2	1	NA	254	NA	NA
December	211	93	304	3	1	NA	268	NA	NA
Total	2,630	1,128	3,758	38	18	163	3,397	219	^E 3,615
2002 January	218	101	319	3	1	NA	291	NA	NA
February	188	91	279	3	1	NA	263	NA	NA
March	201	101	302	3	2	NA	267	NA	NA
April	193	97	291	3	2	NA	261	NA	NA
May	208	99	307	2	2	NA	271	NA	NA
June	227	111	338	3	1	NA	297	NA	NA
July	249	131	380	4	1	NA	339	NA	NA
August	241	126	367	4	1	NA	340	NA	NA
September	215	115	330	3	1	NA	311	NA	NA
October	202	105	307	2	1	NA	284	NA	NA
November	^R 193	^R 103	^R 297	2	1	NA	^R 263	NA	NA
December	^F 229	^F 115	^F 344	2	2	NA	^F 285	NA	NA
Total	2,565	1,296	3,861	36	15	NA	3,472	NA	NA

^a Electricity transmitted across U.S. borders with Canada and Mexico.

^b Energy losses that occur between the point of generation and delivery to the customer, and data collection frame differences and nonsampling error. See Note 12 at end of Section 2 for discussion on electrical system energy losses.

^c Includes nonutility sales of electricity to utilities for distribution to end users. Beginning in 1996, also includes sales to ultimate consumers by power marketers.

^d Nonutility facility use of onsite net electricity generation, and nonutility sales of electricity to end users.

^e Data for 1989-1991 were collected for facilities with capacities of 5 megawatts or more. In 1992, the threshold was lowered to include facilities with capacities of 1 megawatt or more. Estimates of the 1-to-5 megawatt

range for 1989-1991 were derived from historical data. The estimation did not include retirements that occurred prior to 1992 and included only the capacity of facilities that came on line before 1992.

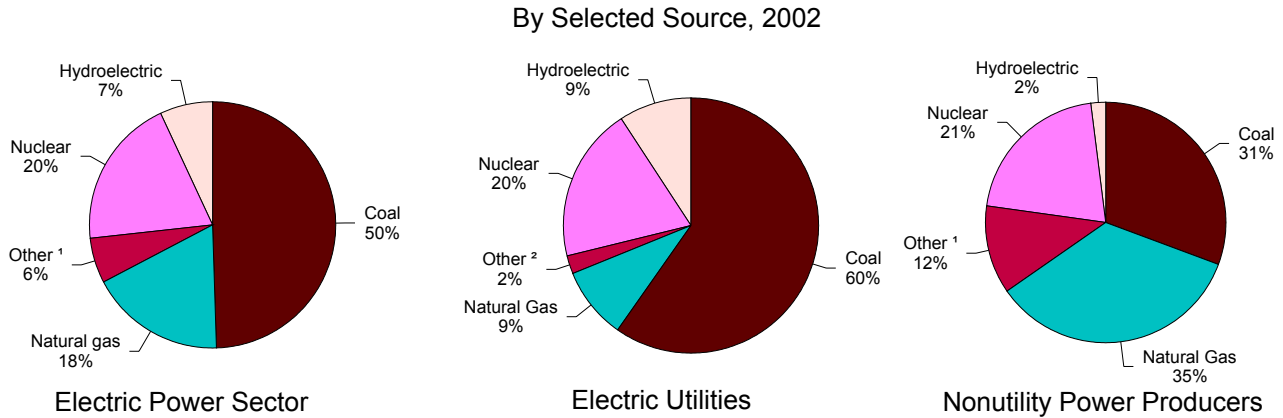
R=Revised. NA=Not available. E=Estimate. F=Forecast.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

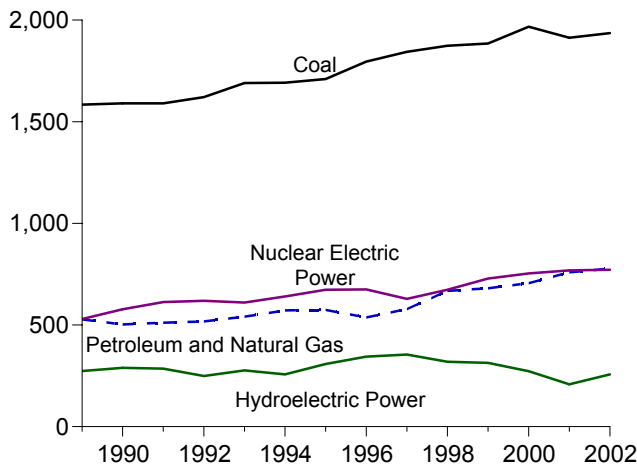
Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Sources: • **Net Generation:** Tables 7.2-7.4. • **Imports and Exports:** See end of section. • **Losses and Unaccounted for:** Calculated. • **End Use:** Table 7.5. **Forecast Values:** Derived from Energy Information Administration's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

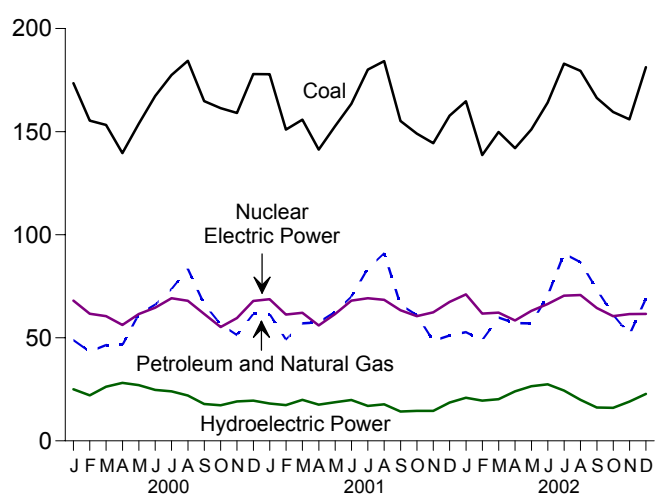
Figure 7.2 Electricity Net Generation
(Billion Kilowatt-hours, Except as Noted)



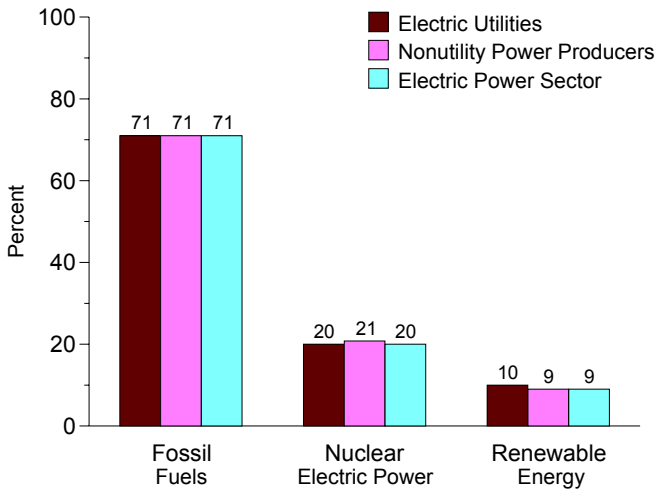
By Major Source, 1989-2002



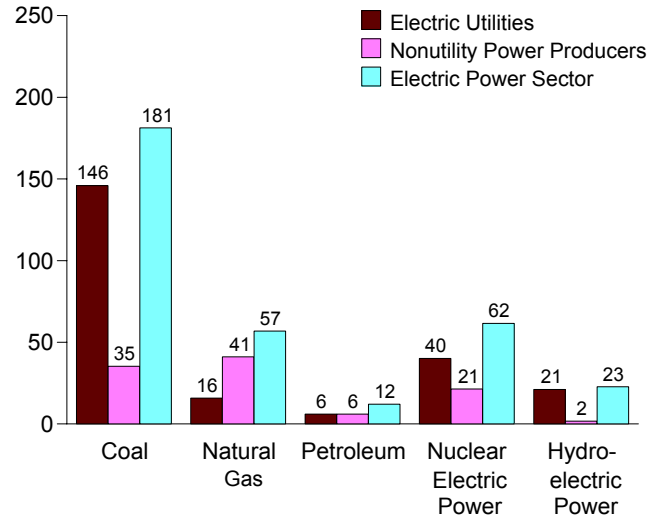
By Major Source, Monthly



Shares of Net Generation by Producer Type and Source Category, 2001



By Producer Type and Selected Source December 2002

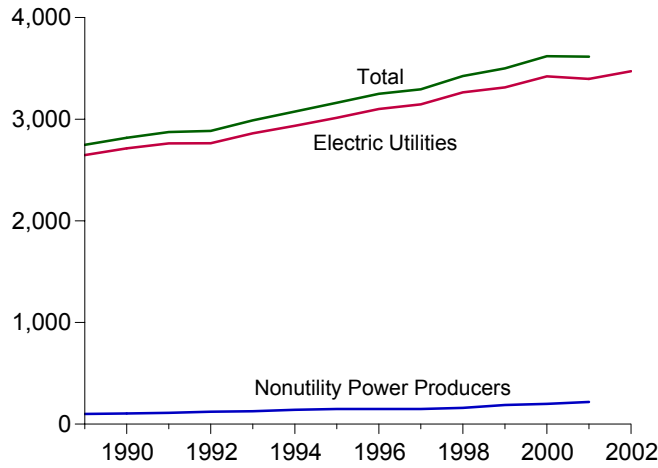


¹Petroleum, other gases, geothermal, wood, waste, wind, solar, batteries, chemicals, hydrogen, pitch, sulfur, and purchased steam.
²Petroleum, geothermal, wood, waste, wind, and solar.

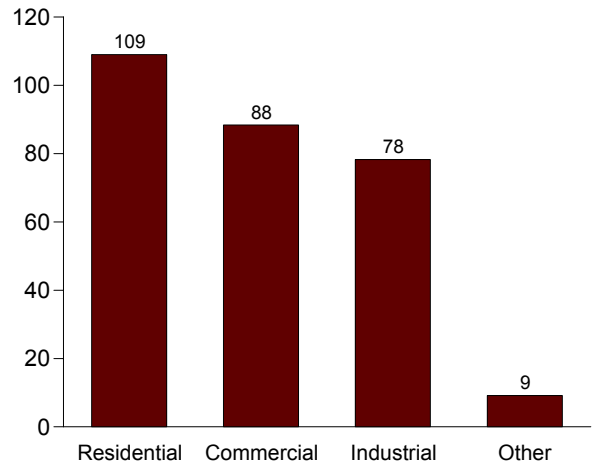
Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.
Sources: Tables 7.2-7.4.

Figure 7.3 Electricity End Use
(Billion Kilowatthours)

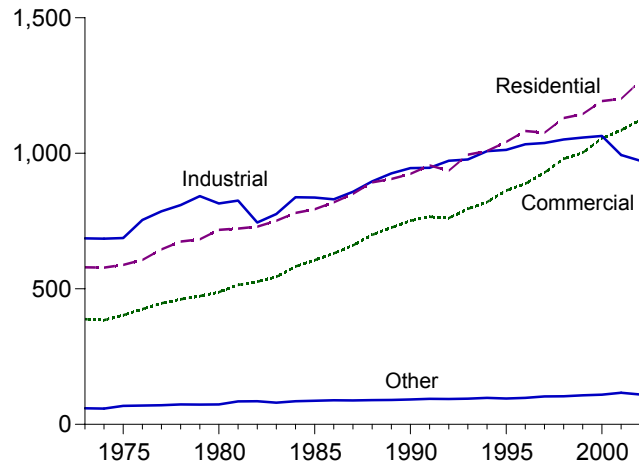
Electricity End User Overview, 1989-2002



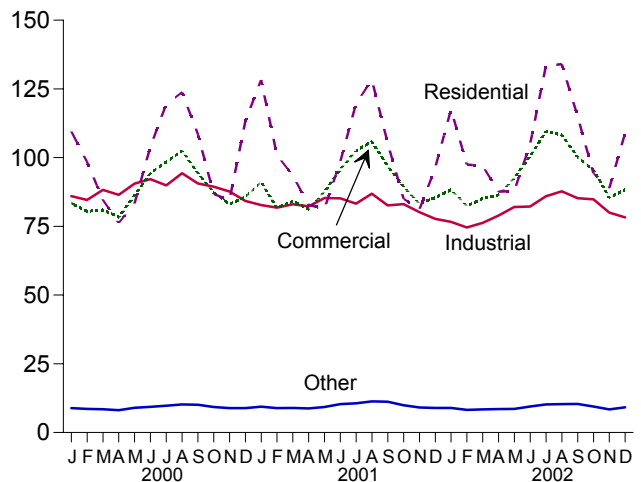
Electric Utility Retail Sales by Sector
December 2002



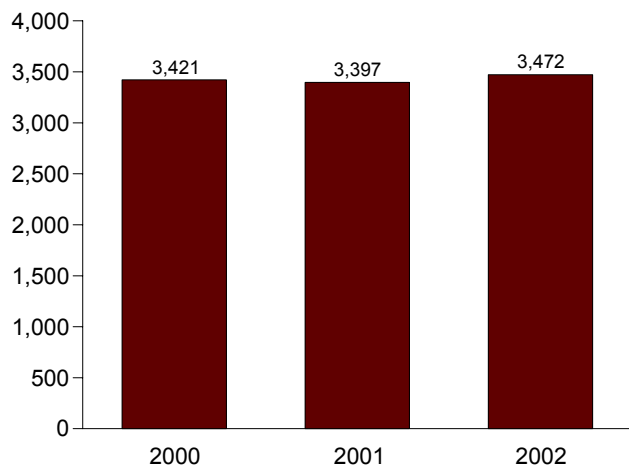
Electric Utility Retail Sales by Sector, 1973-2002



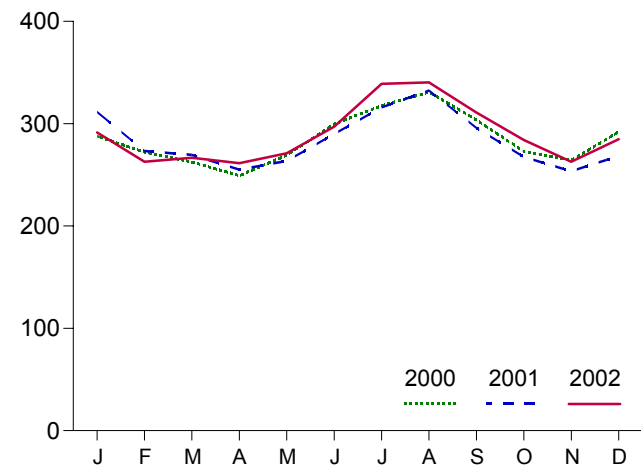
Electric Utility Retail Sales by Sector, Monthly



Electric Utility Retail Sales Total, January-December



Electric Utility Retail Sales Total, Monthly



Notes: • Electric utility data include nonutility sales of electricity to utilities for distribution to end users; beginning in 1996, they also include sales to ultimate consumers by power marketers. • Nonutility data are for nonutility facility use of onsite net electricity generation, and nonutility

sales of electricity to end users. • Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Source: Table 7.5.

Table 7.5 Electricity End Use
(Million Kilowatthours)

	Electric Utility Retail Sales ^a					Nonutility Power Producers			Total ^a
	Residential	Commercial	Industrial	Other ^b	Total	Direct Use ^c	Sales to End Users	Total	
1973 Total	579,231	388,266	686,085	59,326	1,712,909	NA	NA	NA	NA
1974 Total	578,184	384,826	684,875	58,039	1,705,924	NA	NA	NA	NA
1975 Total	588,140	403,049	687,680	68,222	1,747,091	NA	NA	NA	NA
1976 Total	606,452	425,094	754,069	69,631	1,855,246	NA	NA	NA	NA
1977 Total	645,239	446,514	786,037	70,571	1,948,361	NA	NA	NA	NA
1978 Total	674,466	461,163	809,078	73,215	2,017,922	NA	NA	NA	NA
1979 Total	682,819	473,307	841,903	73,070	2,071,099	NA	NA	NA	NA
1980 Total	717,495	488,155	815,067	73,732	2,094,449	NA	NA	NA	NA
1981 Total	722,265	514,338	825,743	84,756	2,147,103	NA	NA	NA	NA
1982 Total	729,520	526,397	744,949	85,575	2,086,441	NA	NA	NA	NA
1983 Total	750,948	543,788	775,999	80,219	2,150,955	NA	NA	NA	NA
1984 Total	780,092	582,621	837,836	85,248	2,285,796	NA	NA	NA	NA
1985 Total	793,934	605,989	836,772	87,279	2,323,974	NA	NA	NA	NA
1986 Total	819,088	630,520	830,531	88,615	2,368,753	NA	NA	NA	NA
1987 Total	850,410	660,433	858,233	88,196	2,457,272	NA	NA	NA	NA
1988 Total	892,866	699,100	896,498	89,598	2,578,062	NA	NA	NA	NA
1989 Total	905,525	725,861	925,659	89,765	2,646,809	^d 82,742	^d 17,687	^d 100,430	2,747,239
1990 Total	924,019	751,027	945,522	91,988	2,712,555	^d 84,367	^d 19,824	^d 104,191	2,816,746
1991 Total	955,417	765,664	946,583	94,339	2,762,003	^d 99,623	^d 11,419	^d 111,042	2,873,045
1992 Total	935,939	761,271	972,714	93,442	2,763,365	110,988	10,786	121,774	2,885,140
1993 Total	994,781	794,573	977,164	94,944	2,861,462	111,322	15,569	126,891	2,988,353
1994 Total	1,008,482	820,269	1,007,981	97,830	3,034,563	123,283	17,626	140,909	3,075,472
1995 Total	1,042,501	862,685	1,012,693	95,407	3,013,287	133,609	15,548	149,157	3,162,443
1996 Total	1,082,512	887,445	1,033,631	97,539	3,101,127	134,644	14,284	148,928	3,250,055
1997 Total	1,075,880	928,633	1,038,197	102,901	3,145,610	130,836	18,147	148,983	3,294,593
1998 Total	1,130,109	979,401	1,051,203	103,518	3,264,231	134,041	25,777	159,818	3,424,049
1999 Total	1,144,923	1,001,996	1,058,217	106,952	3,312,087	147,161	41,683	188,844	3,500,931
2000									
January	109,492	83,414	85,988	8,869	287,764	NA	NA	NA	NA
February	98,446	80,425	84,611	8,613	272,095	NA	NA	NA	NA
March	84,645	81,012	88,299	8,462	262,418	NA	NA	NA	NA
April	76,228	78,377	86,439	8,131	249,175	NA	NA	NA	NA
May	83,366	86,362	90,562	8,972	269,263	NA	NA	NA	NA
June	103,976	94,258	92,185	9,345	299,765	NA	NA	NA	NA
July	119,475	98,459	89,895	9,737	317,566	NA	NA	NA	NA
August	123,769	102,422	94,327	10,214	330,733	NA	NA	NA	NA
September	108,546	94,453	90,599	10,094	303,693	NA	NA	NA	NA
October	86,832	87,326	89,418	9,260	272,835	NA	NA	NA	NA
November	84,516	83,019	87,687	8,899	264,121	NA	NA	NA	NA
December	113,153	85,704	84,230	8,900	291,988	NA	NA	NA	NA
Total	1,192,446	1,055,232	1,064,239	109,496	3,421,414	NA	NA	F 198,593	E 3,620,007
2001									
January	128,287	91,062	82,730	9,400	311,479	NA	NA	NA	NA
February	100,887	81,761	81,807	8,856	273,310	NA	NA	NA	NA
March	93,439	84,157	83,027	8,952	269,575	NA	NA	NA	NA
April	82,823	81,230	82,295	8,742	255,090	NA	NA	NA	NA
May	81,427	87,623	85,298	9,268	263,616	NA	NA	NA	NA
June	98,553	95,790	85,174	10,332	289,849	NA	NA	NA	NA
July	119,654	102,474	83,267	10,619	316,014	NA	NA	NA	NA
August	128,295	105,832	86,868	11,305	332,300	NA	NA	NA	NA
September	105,240	96,899	82,614	11,203	295,956	NA	NA	NA	NA
October	85,090	89,479	83,064	9,906	267,539	NA	NA	NA	NA
November	81,077	83,224	80,182	9,129	253,611	NA	NA	NA	NA
December	96,222	85,505	77,756	8,939	268,423	NA	NA	NA	NA
Total	1,200,992	1,085,036	994,083	116,652	3,396,764	NA	NA	F 218,637	E 3,615,401
2002									
January	117,512	88,319	76,633	8,927	291,391	NA	NA	NA	NA
February	97,486	82,365	74,610	8,262	262,723	NA	NA	NA	NA
March	97,003	85,101	76,253	8,396	266,753	NA	NA	NA	NA
April	87,644	86,382	78,917	8,510	261,453	NA	NA	NA	NA
May	87,897	92,599	82,036	8,593	271,125	NA	NA	NA	NA
June	104,856	100,494	82,239	9,433	297,022	NA	NA	NA	NA
July	133,306	109,537	85,938	10,203	338,984	NA	NA	NA	NA
August	133,997	108,279	87,756	10,346	340,378	NA	NA	NA	NA
September	115,071	100,225	85,268	10,404	310,968	NA	NA	NA	NA
October	94,277	95,466	84,832	9,477	284,052	NA	NA	NA	NA
November	^R 88,903	^R 85,425	^R 79,983	^R 8,428	^R 262,738	NA	NA	NA	NA
December	^F 109,028	^F 88,376	^F 78,253	^F 9,172	^F 284,829	NA	NA	NA	NA
Total	E 1,266,980	E 1,122,566	E 972,719	E 110,150	E 3,472,415	NA	NA	NA	NA

^a Includes nonutility sales of electricity to utilities for distribution to end users. Beginning in 1996, also includes sales to ultimate consumers by power marketers.

^b Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

^c Nonutility facility use of onsite net electricity generation.

^d Data for 1989-1991 were collected for facilities with capacities of 5 megawatts or more. In 1992, the threshold was lowered to include facilities with capacities of 1 megawatt or more. Estimates of the 1-to-5 megawatt range for 1989-1991 were derived from historical data. The estimation did not include retirements that

occurred prior to 1992 and included only the capacity of facilities that came on line before 1992.

R=Revised. NA=Not available. E=Estimate. F=Forecast.

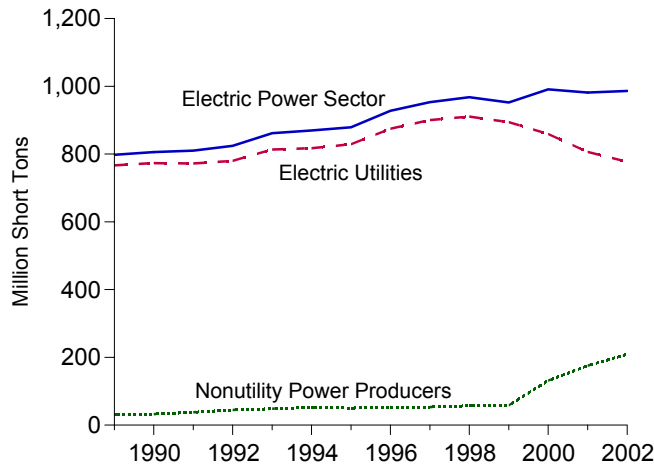
Notes: • Totals may not equal sum of components due to independent rounding.

• Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

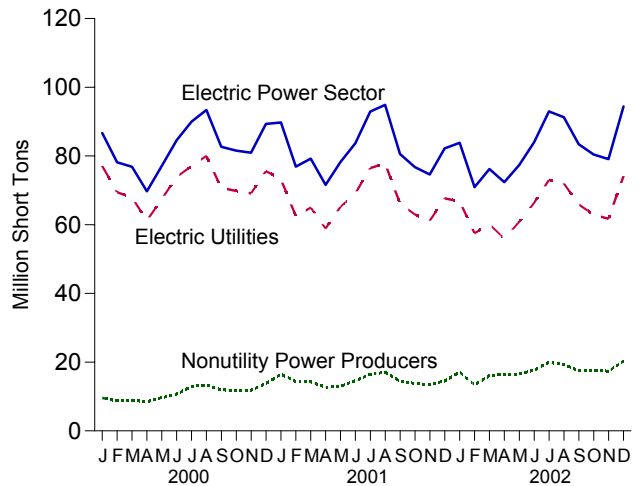
Sources: See end of section. Forecast values are derived from Energy Information Administration's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Figure 7.4 Consumption of Fossil Fuels to Generate Electricity

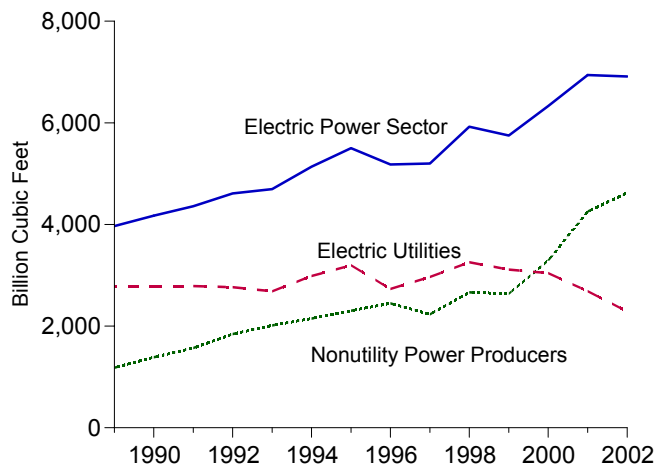
Coal Consumption, 1989-2002



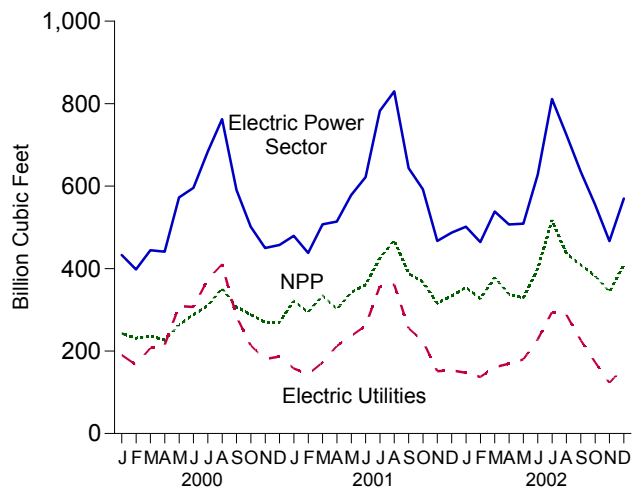
Coal Consumption, Monthly



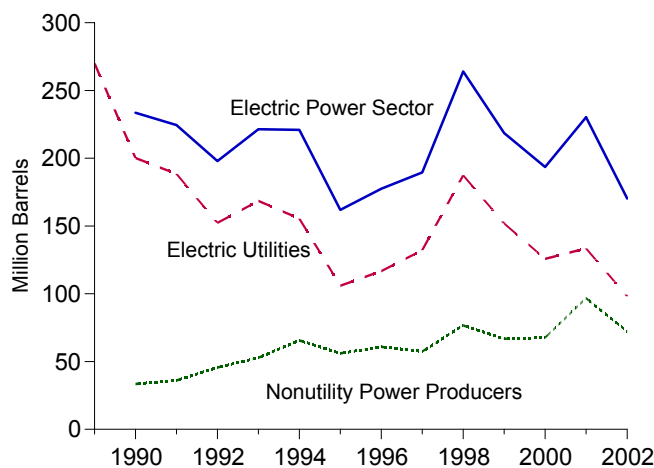
Natural Gas Consumption, 1989-2002



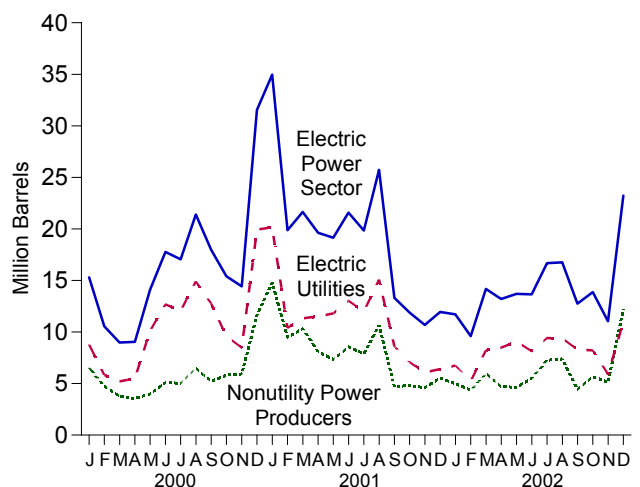
Natural Gas Consumption, Monthly



Petroleum Consumption, 1989-2002



Petroleum Consumption, Monthly



NPP=Nonutility Power Producers.

Notes: • Electric utility data for all years are for fuels consumed to produce electricity only. • Nonutility data prior to 1999 are for fuels consumed to produce both electricity and useful thermal output; nonutility data for 1999 forward are for fuels consumed to produce electricity only.

• Petroleum includes petroleum coke, which is converted to liquid units at 5 barrels per short ton. • Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Sources: Table 7.6, 7.7, and 7.8.

Table 7.6 Consumption of Fossil Fuels To Generate Electricity

	Petroleum				Natural Gas ^d
	Coal ^a	Liquids ^b	Petroleum Coke ^c	Total ^c	
	Thousand Short Tons	Thousand Barrels	Thousand Short Tons	Thousand Barrels	
1989 Total	797,650	295,828	NA	NA	3,968,027
1990 Total	805,860	223,932	1,927	233,570	4,174,073
1991 Total	810,387	212,768	2,351	224,521	4,358,864
1992 Total	824,467	179,211	3,749	197,955	4,610,465
1993 Total	861,851	199,414	4,402	221,426	4,696,228
1994 Total	869,531	192,893	5,615	220,966	5,136,392
1995 Total	879,336	137,181	4,949	161,927	5,500,451
1996 Total	927,880	151,718	5,165	177,544	5,179,827
1997 Total	953,274	160,740	5,764	189,561	5,199,816
1998 Total	967,716	232,889	6,239	264,086	5,924,484
1999 Total	952,516	195,971	4,523	218,584	E 5,748,944
2000 January	86,680	13,136	432	15,295	E 433,009
February	78,180	8,610	386	10,540	E 398,053
March	76,835	7,139	369	8,986	E 444,525
April	69,715	7,282	350	9,034	E 441,203
May	77,092	12,550	310	14,102	E 572,447
June	84,601	16,127	329	17,772	E 595,733
July	89,976	15,450	321	17,057	E 683,015
August	93,366	19,648	349	21,391	E 762,448
September	82,656	16,231	346	17,962	E 590,715
October	81,549	13,778	326	15,406	E 501,618
November	80,967	12,801	325	14,426	E 450,103
December	89,348	30,016	308	31,554	E 457,314
Total	990,966	172,769	4,153	193,533	E 6,330,184
2001 January	89,754	32,866	419	34,959	E 479,304
February	76,901	17,986	379	19,883	E 437,764
March	79,243	19,740	381	21,647	E 507,414
April	71,601	17,994	325	19,621	E 514,140
May	78,254	17,245	381	19,150	E 578,508
June	83,711	19,647	386	21,579	E 621,977
July	92,925	17,600	449	19,846	E 782,353
August	94,884	23,564	434	25,733	E 829,657
September	80,601	11,250	413	13,314	E 643,556
October	76,774	9,777	421	11,883	E 592,310
November	74,633	8,876	361	10,680	E 466,911
December	82,230	9,534	481	11,940	E 487,225
Total	981,511	206,081	4,831	230,235	E 6,941,118
2002 January	83,858	9,060	532	11,718	E 501,509
February	70,939	7,469	425	9,593	E 464,348
March	76,190	12,182	401	14,185	E 538,450
April	72,364	11,194	401	13,201	E 507,175
May	77,383	11,200	500	13,700	E 508,873
June	83,992	11,249	480	13,647	E 628,213
July	92,985	14,424	450	16,674	E 811,381
August	91,277	13,645	621	16,750	E 724,548
September	83,424	10,834	383	12,747	E 634,777
October	80,439	11,765	422	13,872	E 555,591
November	^R 79,094	^R 9,060	^R 397	^R 11,046	^{RE} 466,718
December	^F 94,433	^F 20,034	^F 639	^F 23,227	^F 569,781
Total	E 986,376	E 142,114	E 5,649	E 170,361	E 6,911,362

^a Coal, fine coal, anthracite culm, bituminous gob, lignite waste, tar coal, waste coal, and coke breeze.

^b Fuel oil nos. 1, 2, 4, 5, and 6, crude oil, kerosene, liquid butane, liquid propane, methanol, liquid byproducts, oil waste, sludge oil, and tar oil.

^c Petroleum coke is converted from short tons to barrels by multiplying by 5.

^d Includes supplemental gaseous fuels at electric utilities.

R=Revised. NA=Not available. E=Estimate. F=Forecast.

Notes: • Electric utility data for all years are for fuels consumed to produce

electricity only. Nonutility data prior to 1999 are for fuels consumed to produce both electricity and useful thermal output; nonutility data for 1999 forward are for fuels consumed to produce electricity only. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Sources: Tables 7.7 and 7.8.

This table represents the entire U.S. electric power sector. See Table 7.7 for electric utilities only. See Table 7.8 for nonutility power producers only.

Table 7.7 Consumption of Fossil Fuels To Generate Electricity at Electric Utilities

	Coal Thousand Short Tons	Petroleum					Natural Gas ^d Million Cubic Feet
		Heavy Oil ^a	Light Oil ^b	Total Liquids	Petroleum Coke ^c	Total ^c	
		Thousand Barrels			Thousand Short Tons	Thousand Barrels	
1973 Total	389,212	513,190	47,058	560,248	507	562,781	3,660,172
1974 Total	391,811	483,146	53,128	536,274	625	539,399	3,443,428
1975 Total	405,962	467,221	38,907	506,128	70	506,479	3,157,669
1976 Total	448,371	514,077	41,843	555,920	68	556,261	3,080,868
1977 Total	477,126	574,869	48,837	623,705	98	624,193	3,191,200
1978 Total	481,235	588,319	47,520	635,839	398	637,830	3,188,363
1979 Total	527,051	492,606	30,691	523,297	268	524,636	3,490,523
1980 Total	569,274	391,163	29,051	420,214	179	421,110	3,681,595
1981 Total	596,797	329,798	21,313	351,111	139	351,806	3,640,154
1982 Total	593,666	234,434	15,337	249,771	149	250,517	3,225,518
1983 Total	625,211	228,984	16,512	245,497	261	246,804	2,910,767
1984 Total	664,399	189,289	15,190	204,479	252	205,736	3,111,342
1985 Total	693,841	158,779	14,635	173,414	231	174,571	3,044,083
1986 Total	685,056	216,156	14,326	230,482	313	232,046	2,602,370
1987 Total	717,894	184,011	15,367	199,378	348	201,116	2,844,051
1988 Total	758,372	229,327	18,769	248,096	409	250,141	2,635,613
1989 Total	766,888	241,960	25,491	267,451	517	270,038	2,787,012
1990 Total	773,549	181,231	14,823	196,054	819	200,152	2,787,332
1991 Total	772,268	171,157	13,729	184,886	722	188,494	2,789,014
1992 Total	779,860	135,779	11,556	147,335	999	152,329	2,765,608
1993 Total	813,508	149,287	13,168	162,454	1,220	168,556	2,682,440
1994 Total	817,270	134,666	16,338	151,004	875	155,377	2,987,146
1995 Total	829,007	86,584	15,565	102,150	761	105,956	3,196,507
1996 Total	874,681	96,382	16,892	113,274	681	116,680	2,732,107
1997 Total	900,361	109,989	15,157	125,146	1,400	132,147	2,968,453
1998 Total	910,867	156,573	22,041	178,614	1,769	187,461	3,258,054
1999 Total	894,120	122,303	21,528	143,830	1,608	151,868	3,113,419
2000 January	77,090	6,194	1,769	7,963	162	8,772	190,316
February	69,442	4,083	1,068	5,150	132	5,810	166,842
March	67,925	3,859	913	4,772	87	5,209	207,545
April	61,214	4,222	824	5,046	89	5,493	214,599
May	67,428	7,781	1,921	9,702	81	10,109	308,787
June	73,910	10,533	1,659	12,192	99	12,687	307,218
July	77,051	9,792	1,957	11,749	58	12,041	373,256
August	80,021	12,149	2,198	14,347	114	14,915	410,344
September	70,725	10,836	1,485	12,321	87	12,757	283,535
October	69,835	8,222	1,023	9,245	69	9,588	213,487
November	69,114	6,827	1,292	8,120	74	8,490	180,318
December	75,579	12,852	6,668	19,520	80	19,918	186,846
Total	859,335	97,350	22,779	120,129	1,132	125,788	3,043,094
2001 January	73,236	13,210	6,425	19,636	108	20,174	157,736
February	62,523	8,190	1,694	9,884	100	10,386	143,619
March	64,993	9,032	1,886	10,917	80	11,319	172,448
April	58,889	9,427	1,820	11,246	53	11,513	212,257
May	65,233	9,801	1,626	11,427	77	11,812	236,407
June	69,126	11,111	1,355	12,466	111	13,023	261,345
July	76,487	10,018	1,261	11,279	139	11,975	356,801
August	77,839	12,440	1,762	14,202	177	15,086	361,218
September	66,126	7,102	787	7,889	145	8,613	255,236
October	62,963	5,384	959	6,343	145	7,069	224,674
November	61,160	4,817	672	5,490	122	6,099	151,268
December	67,695	4,750	856	5,606	160	6,407	153,279
Total	806,269	105,283	21,103	126,386	1,418	133,475	2,686,287
2002 January	66,776	4,672	1,319	5,992	151	6,745	147,359
February	57,553	3,773	710	4,483	150	5,232	137,277
March	60,123	6,360	1,139	7,499	146	8,227	160,864
April	55,963	6,657	1,171	7,828	131	8,485	169,266
May	60,836	6,776	1,361	8,137	188	9,077	180,028
June	66,324	6,205	1,041	7,247	179	8,140	228,513
July	73,016	7,314	1,374	8,688	145	9,413	294,491
August	71,994	7,486	1,215	8,700	135	9,375	288,243
September	65,909	6,574	1,051	7,626	139	8,319	225,979
October	62,889	6,372	1,187	7,559	132	8,216	173,249
November	^R 61,711	^R 4,676	^R 767	^R 5,443	^R 93	^R 5,909	^R 122,830
December	^F 74,171	^F 5,952	^F 4,008	^F 9,960	^F 208	^F 10,998	^F 160,757
Total	^E 777,263	^E 72,816	^E 16,344	^E 89,160	^E 1,795	^E 98,137	^E 2,288,854

^a For 1973-1979, steam plant consumption of petroleum; for 1980 forward, fuel oil nos. 5 and 6 (and small amounts of fuel oil no. 4).

^b For 1973-1979, gas turbine and internal combustion plant use of petroleum; for 1980 forward, fuel oil nos. 1 and 2 (and small amounts of kerosene and jet fuel).

^c Petroleum coke is converted from short tons to barrels by multiplying by 5.

^d Includes supplemental gaseous fuels.

^R=Revised. ^E=Estimate. ^F=Forecast.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of

Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1979:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1980-1989:** Energy Information Administration (EIA), *Electric Power Monthly*, March issues. • **1990 forward:** EIA, *Electric Power Monthly*, February 2003, Table 14. **Forecast Values:** Derived from EIA's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Table 7.8 Consumption of Fossil Fuels To Generate Electricity at Nonutility Power Producers

	Petroleum				Natural Gas ^d
	Coal ^a	Liquids ^b	Petroleum Coke	Total ^c	
	Thousand Short Tons	Thousand Barrels	Thousand Short Tons	Thousand Barrels	
1989 Total^e	30,762	28,377	NA	NA	1,181,015
1990 Total^e	32,311	27,878	1,108	33,418	1,386,741
1991 Total^e	38,119	27,882	1,629	36,027	1,569,850
1992 Total	44,607	31,876	2,750	45,626	1,844,857
1993 Total	48,343	36,960	3,182	52,870	2,013,788
1994 Total	52,261	41,889	4,740	65,589	2,149,246
1995 Total	50,329	35,031	4,188	55,971	2,303,944
1996 Total	53,199	38,444	4,484	60,864	2,447,720
1997 Total	52,913	35,594	4,364	57,414	2,231,363
1998 Total	56,849	54,275	4,470	76,625	2,666,430
1999 Total	58,396	52,141	2,915	66,716	^E 2,635,525
2000					
January	9,590	5,173	270	6,523	^E 242,693
February	8,738	3,460	254	4,730	^E 231,211
March	8,910	2,367	282	3,777	^E 236,980
April	8,501	2,236	261	3,541	^E 226,604
May	9,664	2,848	229	3,993	^E 263,660
June	10,691	3,935	230	5,085	^E 288,515
July	12,925	3,701	263	5,016	^E 309,759
August	13,345	5,301	235	6,476	^E 352,104
September	11,931	3,910	259	5,205	^E 307,180
October	11,714	4,533	257	5,818	^E 288,131
November	11,853	4,681	251	5,936	^E 269,785
December	13,769	10,496	228	11,636	^E 270,468
Total	131,631	52,640	3,021	67,745	^E 3,287,090
2001					
January	16,518	13,230	311	14,785	^E 321,568
February	14,378	8,102	279	9,497	^E 294,145
March	14,250	8,823	301	10,328	^E 334,966
April	12,712	6,748	272	8,108	^E 301,883
May	13,021	5,818	304	7,338	^E 342,101
June	14,585	7,181	275	8,556	^E 360,632
July	16,438	6,321	310	7,871	^E 425,552
August	17,045	9,362	257	10,647	^E 468,439
September	14,475	3,361	268	4,701	^E 388,320
October	13,811	3,434	276	4,814	^E 367,636
November	13,473	3,386	239	4,581	^E 315,643
December	14,535	3,928	321	5,533	^E 333,946
Total	175,242	79,695	3,413	96,760	^E 4,254,831
2002					
January	17,082	3,068	381	4,973	^E 354,150
February	13,386	2,986	275	4,361	^E 327,071
March	16,067	4,683	255	5,958	^E 377,586
April	16,401	3,366	270	4,716	^E 337,909
May	16,547	3,063	312	4,623	^E 328,845
June	17,668	4,002	301	5,507	^E 399,700
July	19,969	5,736	305	7,261	^E 516,890
August	19,283	4,945	486	7,375	^E 436,305
September	17,515	3,208	244	4,428	^E 408,798
October	17,550	4,206	290	5,656	^E 382,342
November	^R 17,383	^R 3,617	^R 304	^R 5,137	^{RE} 343,888
December	^F 20,262	^F 10,074	^F 431	^F 12,229	^F 409,024
Total	^E 209,113	^E 52,954	^E 3,854	^E 72,224	^E 4,622,508

^a Coal, fine coal, anthracite culm, bituminous gob, lignite waste, tar coal, waste coal, and coke breeze.

^b Fuel oil nos. 1, 2, 4, 5, and 6, crude oil, kerosene, liquid butane, liquid propane, methanol, liquid byproducts, oil waste, sludge oil, and tar oil.

^c Petroleum coke is converted at 5 barrels per short ton.

^d Natural gas only.

^e Data for 1989-1991 were collected for facilities with capacities of 5 megawatts or more. In 1992, the threshold was lowered to include facilities with capacities of 1 megawatt or more.

^R=Revised. ^{NA}=Not available. ^E=Estimate. ^F=Forecast.

Notes: • Data prior to 1999 are for fuels consumed to produce both electricity and useful thermal output; data for 1999 forward are for fuels consumed to

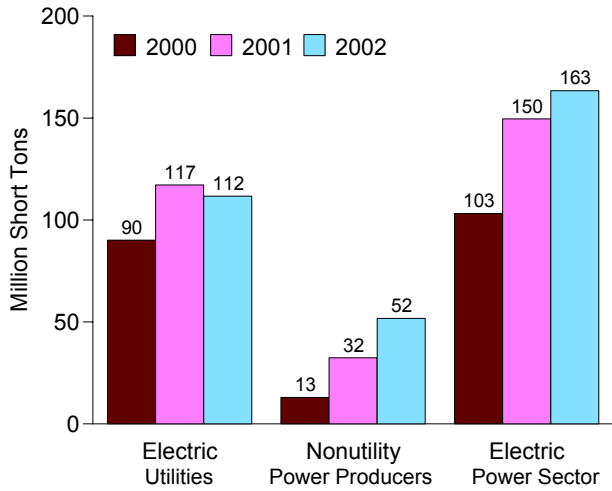
produce electricity only. • Due to restructuring of the electric power sector, the sale of generation assets is resulting in reclassification of plants from electric utility to nonutility plants. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

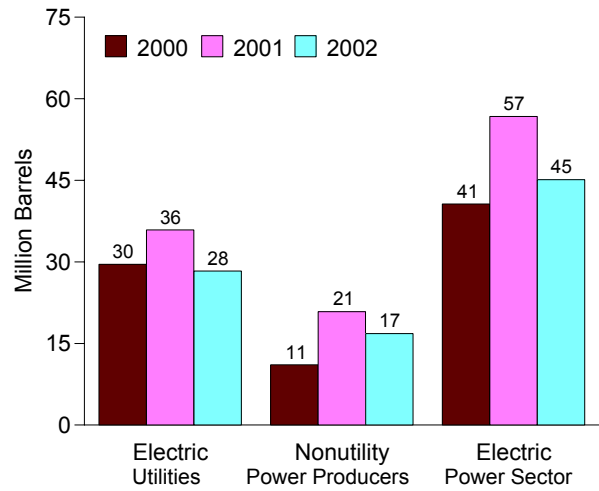
Sources: • **1989-1998:** Energy Information Administration (EIA), Form EIA-860B, "Annual Electric Generator Report-Nonutility" and predecessor form. • **1999 and 2000:** EIA, Form EIA-900, "Monthly Nonutility Power Report." • **2001 and 2002:** EIA, Form EIA-906, "Power Plant Report." **Forecast Values:** Derived from EIA's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Figure 7.5 Electric Power Sector Stocks of Coal and Petroleum

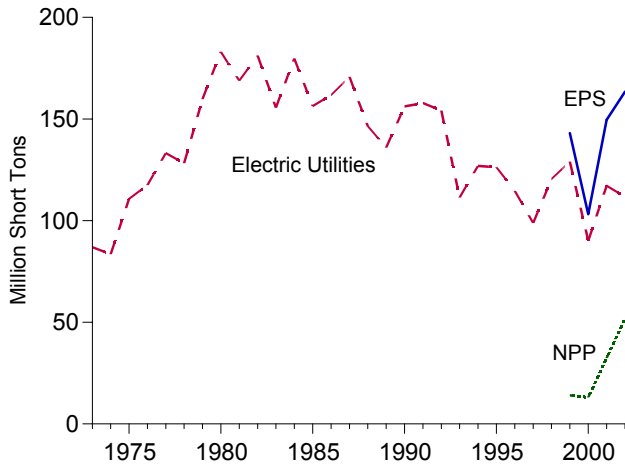
Coal Stocks, December



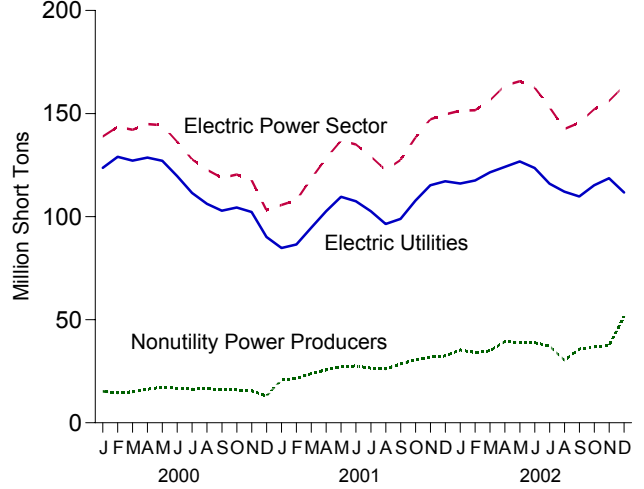
Petroleum Liquids Stocks, December



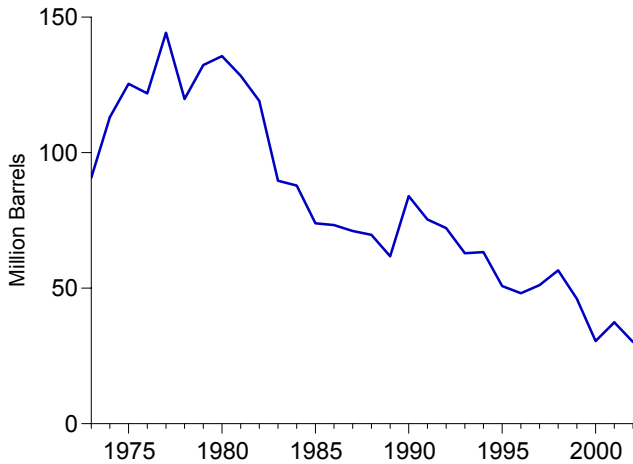
Coal Stocks, 1973-2002



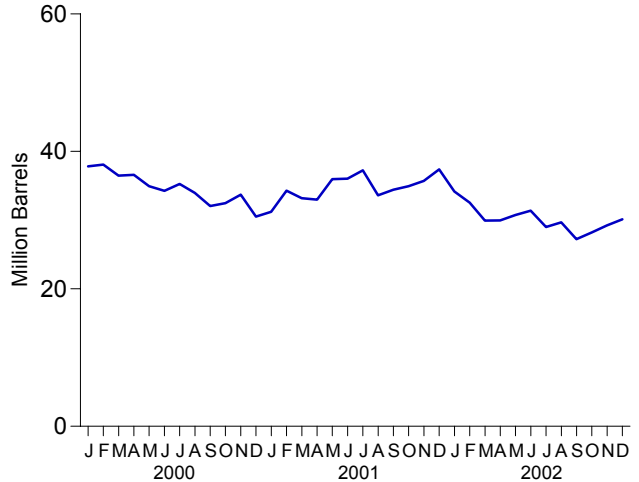
Coal Stocks, Monthly



Petroleum Total Stocks at Electric Utilities, 1973-2002



Petroleum Total Stocks at Electric Utilities, Monthly



EPS=Electric Power Sector.
 NPP=Nonutility Power Producers.
 Notes: • Data are for fuels available to produce electricity; they may include some fuels available to produce useful thermal output at

cogeneration plants. • Petroleum total stocks include petroleum coke, which is converted to liquid units at 5 barrels per short ton. • Because vertical scales differ, graphs should not be compared.
 Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.
 Source: Table 7.9.

Table 7.9 Electric Power Sector Stocks of Coal and Petroleum

	Coal			Petroleum							Total Electric Power Sector
	Electric Utilities	Nonutility Power Producers	Total Electric Power Sector	Electric Utilities				Nonutility Power Producers			
				Heavy Oil ^a	Light Oil ^b	Petroleum Coke ^c	Total ^c	Liquids	Petroleum Coke	Total ^c	
	Thousand Short Tons			Thousand Barrels		Thousand Short Tons	Thousand Barrels	Thousand Barrels	Thousand Short Tons	Thousand Barrels	
1973 Total	86,967	NA	NA	79,121	10,095	312	90,776	NA	NA	NA	NA
1974 Total	83,509	NA	NA	97,718	15,199	35	113,091	NA	NA	NA	NA
1975 Total	110,724	NA	NA	108,825	16,432	31	125,413	NA	NA	NA	NA
1976 Total	117,436	NA	NA	106,993	14,703	32	121,857	NA	NA	NA	NA
1977 Total	133,219	NA	NA	124,750	19,281	44	144,252	NA	NA	NA	NA
1978 Total	128,225	NA	NA	102,402	16,386	198	119,778	NA	NA	NA	NA
1979 Total	159,714	NA	NA	111,121	20,301	183	132,338	NA	NA	NA	NA
1980 Total	183,010	NA	NA	105,351	30,023	52	135,635	NA	NA	NA	NA
1981 Total	168,893	NA	NA	102,042	26,094	42	128,345	NA	NA	NA	NA
1982 Total	181,132	NA	NA	95,515	23,369	41	119,090	NA	NA	NA	NA
1983 Total	155,598	NA	NA	70,573	18,801	55	89,652	NA	NA	NA	NA
1984 Total	179,727	NA	NA	68,503	19,116	50	87,870	NA	NA	NA	NA
1985 Total	156,376	NA	NA	57,304	16,386	49	73,933	NA	NA	NA	NA
1986 Total	161,806	NA	NA	56,841	16,269	40	73,313	NA	NA	NA	NA
1987 Total	170,797	NA	NA	55,069	15,759	51	71,084	NA	NA	NA	NA
1988 Total	146,507	NA	NA	54,187	15,099	86	69,714	NA	NA	NA	NA
1989 Total	135,860	NA	NA	47,446	13,824	105	61,795	NA	NA	NA	NA
1990 Total	156,166	NA	NA	67,030	16,471	94	83,970	NA	NA	NA	NA
1991 Total	157,876	NA	NA	58,636	16,357	70	75,343	NA	NA	NA	NA
1992 Total	154,130	NA	NA	56,135	15,714	67	72,183	NA	NA	NA	NA
1993 Total	111,341	NA	NA	46,769	15,674	89	62,889	NA	NA	NA	NA
1994 Total	126,897	NA	NA	46,342	16,644	69	63,331	NA	NA	NA	NA
1995 Total	126,304	NA	NA	35,102	15,392	65	50,821	NA	NA	NA	NA
1996 Total	114,623	NA	NA	32,473	15,216	91	48,146	NA	NA	NA	NA
1997 Total	98,826	NA	NA	33,336	15,456	469	51,138	NA	NA	NA	NA
1998 Total	120,501	NA	NA	37,447	16,343	559	56,586	NA	NA	NA	NA
1999 Total	129,041	14,050	143,091	27,763	16,549	355	46,089	8,666	NA	NA	NA
2000 January	123,661	15,233	138,894	21,678	14,655	297	37,816	6,710	NA	NA	NA
February	129,055	14,446	143,501	22,055	15,048	195	38,076	6,611	NA	NA	NA
March	127,130	14,983	142,113	20,966	14,643	171	36,462	6,587	NA	NA	NA
April	128,669	16,235	144,904	21,135	14,698	150	36,584	7,336	NA	NA	NA
May	127,090	17,240	144,330	20,169	14,206	113	34,942	7,621	NA	NA	NA
June	119,634	16,719	136,353	19,133	14,693	87	34,261	9,344	NA	NA	NA
July	111,494	16,317	127,811	20,136	14,579	108	35,253	12,470	NA	NA	NA
August	106,201	16,546	122,746	18,759	14,419	157	33,964	11,383	NA	NA	NA
September	102,876	16,020	118,896	17,265	13,780	199	32,039	11,784	NA	NA	NA
October	104,422	15,980	120,402	17,302	13,932	247	32,470	12,365	NA	NA	NA
November	102,227	15,537	117,765	18,451	14,020	245	33,694	12,701	NA	NA	NA
December	90,115	13,001	103,117	16,915	12,655	186	30,502	11,089	NA	NA	NA
2001 January	84,825	20,876	105,701	15,283	14,922	200	31,202	15,502	NA	NA	NA
February	86,462	21,545	108,007	18,060	15,447	156	34,287	16,557	NA	NA	NA
March	94,644	23,831	118,476	17,708	14,704	155	33,185	15,105	NA	NA	NA
April	102,626	25,751	128,377	17,646	14,622	140	32,971	16,411	NA	NA	NA
May	109,595	27,276	136,871	20,916	14,404	130	35,970	19,700	NA	NA	NA
June	107,452	27,555	135,007	19,841	14,957	246	36,027	19,264	NA	NA	NA
July	102,664	26,537	129,202	21,130	14,950	232	37,238	19,886	NA	NA	NA
August	96,440	26,106	122,546	17,819	14,794	200	33,612	16,703	NA	NA	NA
September	98,915	28,536	127,451	17,980	14,848	318	34,415	18,473	NA	NA	NA
October	107,745	30,588	138,333	18,269	14,909	353	34,941	20,098	NA	NA	NA
November	115,250	31,936	147,186	18,859	15,143	341	35,709	20,876	NA	NA	NA
December	117,150	32,420	149,570	20,562	15,312	300	37,376	20,856	NA	NA	NA
2002 January	116,032	35,332	151,364	19,623	12,913	326	34,165	22,762	NA	NA	NA
February	117,506	34,114	151,620	18,233	13,006	259	32,535	20,980	NA	NA	NA
March	121,482	34,936	156,418	15,480	12,908	309	29,934	18,762	NA	NA	NA
April	124,155	39,415	163,571	15,865	12,382	339	29,944	19,881	NA	NA	NA
May	126,739	38,891	165,630	17,101	12,339	263	30,754	19,491	NA	NA	NA
June	123,590	38,943	162,533	17,821	12,327	247	31,382	21,774	NA	NA	NA
July	115,953	37,134	153,087	16,110	12,033	171	28,999	17,854	NA	NA	NA
August	112,103	30,405	142,508	16,271	12,047	270	29,666	15,155	NA	NA	NA
September	109,795	35,774	145,569	13,931	11,822	296	27,235	14,920	NA	NA	NA
October	115,249	36,864	152,112	14,924	11,597	336	28,204	16,156	NA	NA	NA
November	^R 118,656	^R 37,457	^R 156,113	^R 15,912	^R 11,958	^R 272	^R 29,231	^R 16,074	NA	NA	NA
December	^F 111,711	^F 51,713	^F 163,425	^F 16,319	^F 11,992	^F 360	^F 30,111	^F 16,802	NA	NA	NA

^a For 1973-1979, steam plant stocks of petroleum; for 1980 forward, fuel oil nos. 5 and 6 (and small amounts of fuel oil no. 4).

^b For 1973-1979, gas turbine and internal combustion plant stocks of petroleum; for 1980 forward, fuel oil nos. 1 and 2 (and small amounts of kerosene and jet fuel).

^c Petroleum coke is converted from short tons to barrels by multiplying by 5.

R=Revised. NA=Not available. F=Forecast.

Notes: • Stocks are at end of period. • Data are for fuels available to produce electricity; they may include some fuels available to produce useful thermal output at cogeneration plants. Nonutility facilities that are not required to report on Form

EIA-900 are not included. • Due to restructuring of the electric power sector, the sale of generation assets is resulting in reclassification of plants from electric utility to nonutility plants. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.

Sources: See end of section. Forecast values are derived from the Energy Information Administration's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Electricity

Table 7.1 Sources: Imports and Exports

1973–September 1977: Unpublished Federal Power Commission data.

October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.

1981: DOE, Office of Energy Emergency Operations, “Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981,” April 1982 (revised June 1982).

1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.

1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.

1987 and 1988: DOE, ERA, Form ERA-781R, “Annual Report of International Electrical Export/Import Data.”

1989: DOE, Fossil Energy, Form FE-781R, “Annual Report of International Electrical Export/Import Data.”

1990–1998: Mexico’s data: DOE, Fossil Energy, Office of Fuels Programs, Form FE-781R, “Annual Report of International Electrical Export/Import Data.” Canada’s data (metered energy, firm and interruptible): the National Energy Board of Canada.

1999 forward: EIA estimates based on preliminary data from DOE, Fossil Energy, and actual data from the National Energy Board of Canada.

Table 7.3 Sources

1973–September 1977: Federal Power Commission Form FPC-4, “Monthly Power Plant Report.”

October 1977–1979: Federal Energy Regulatory Commission (FERC), Form FPC-4, “Monthly Power Plant Report.”

1980–1989: Energy Information Administration (EIA), *Electric Power Monthly*, March issues, and (for small components) EIA, Form EIA-759, “Monthly Power Plant Report” and predecessor form.

1990–2000: EIA, *Electric Power Monthly*, October 2001, Tables 4 and 5, and (for small components) EIA, Form EIA-759, “Monthly Power Plant Report.”

2001 forward: EIA, *Electric Power Monthly*, February 2003, Tables 4 and 5, and (for small components) EIA, Form EIA-906, “Power Plant Report.”

Table 7.5 Sources

Electric Utilities

1973–September 1977: Federal Power Commission (FPC), Form FPC-5, “Monthly Statement of Electric Operating Revenue and Income.”

October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, “Monthly Statement of Electric Operating Revenue and Income.”

March 1980–1982: FERC, Form FPC-5, “Electric Utility Company Monthly Statement.”

1983: Energy Information Administration (EIA), Form EIA-826, “Monthly Electric Utility Sales and Revenue Report with State Distributions” (formerly “Electric Utility Company Monthly Statement”).

1984–1989: EIA, Form EIA-861, “Annual Electric Utility Report.”

1990 forward: EIA, *Electric Power Monthly*, February 2003, Table 44.

Nonutility Power Producers

1989–1999: EIA, Form EIA-860B, “Annual Electric Generator Report—Nonutility” and predecessor form.

2000–2002: Derived from EIA’s Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Table 7.9 Sources

Electric Utilities

1973–September 1977: FPC, Form FPC-4, “Monthly Power Plant Report.”

October 1977–1979: FERC, Form FPC-4 “Monthly Power Plant Report.”

1980–1989: EIA, *Electric Power Monthly*, March issues.

1990 forward: EIA, *Electric Power Monthly*, February 2003, Table 21.

Nonutility Power Producers

1999 forward: EIA, *Electric Power Monthly*, February 2003, Table 72.

Section 8. Nuclear Energy

U.S. nuclear electricity net generation during December 2002 was forecast as 62 net terawatthours (billion kilowatthours) of electricity, 9 percent lower than in December 2001. Nuclear units generated at an average capacity factor of 84.3 percent, 8.0 percentage points lower than the capacity factor in December 2001.

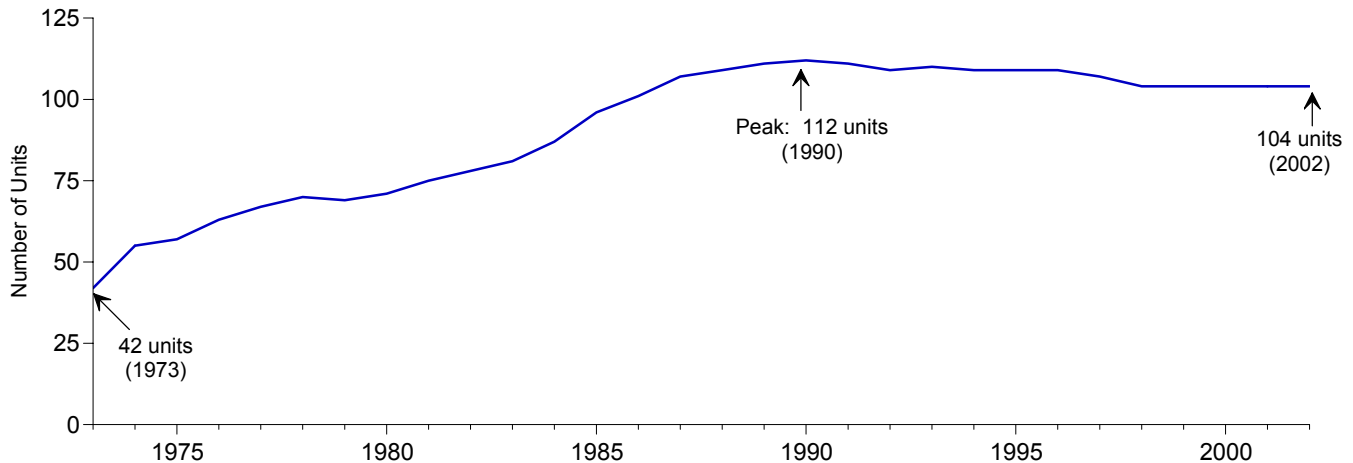
On December 31, 2002, there were 104 operable nuclear generating units in the United States, with a collective net summer capability of 98.2 million kilowatts of electricity.

Of the 104 operable units, 1 unit generated no electricity during the month because of maintenance, refueling, or repair outage, and 86 units reported operating at 90 percent of capacity or more. Of these 86 units, 54 operated at 100 percent or greater (based on net summer capability).

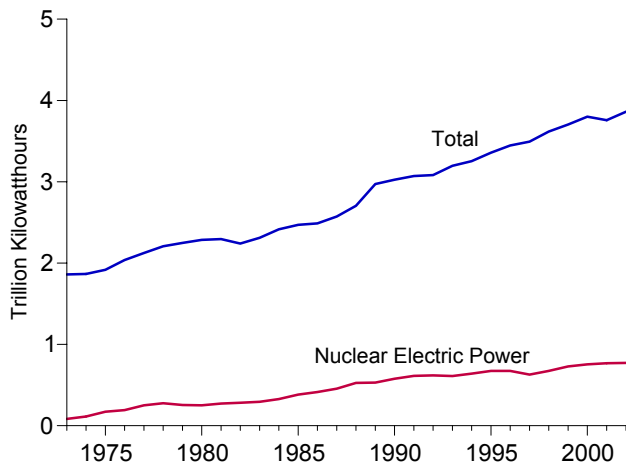
In addition, there were three other units with construction permits, but construction for all three units has been halted. Their combined design capacity is 3.6 million kilowatts.

Figure 8.1 Nuclear Power Plant Operations

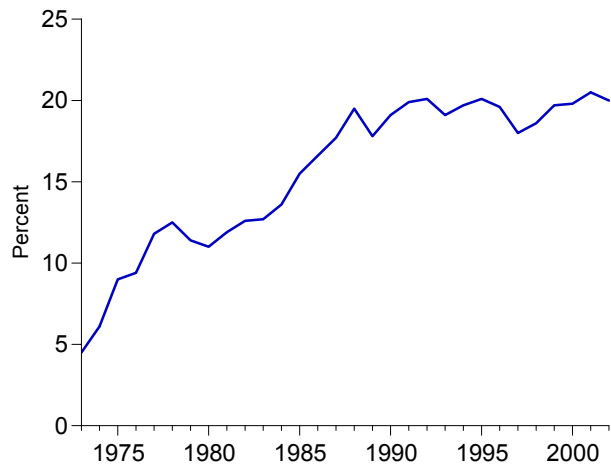
Operable Units, End of Year, 1973-2002



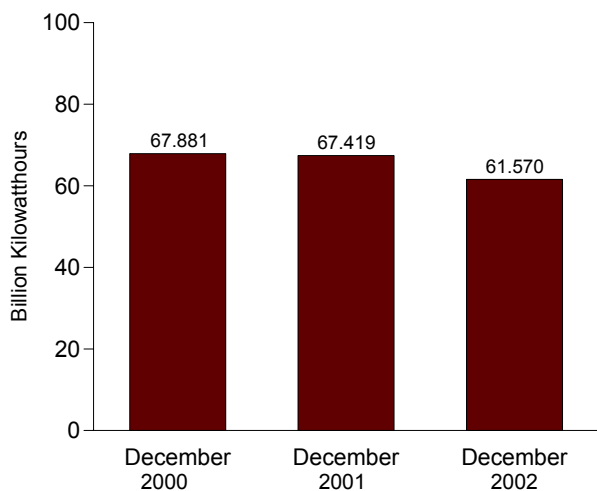
Electricity Net Generation, 1973-2002



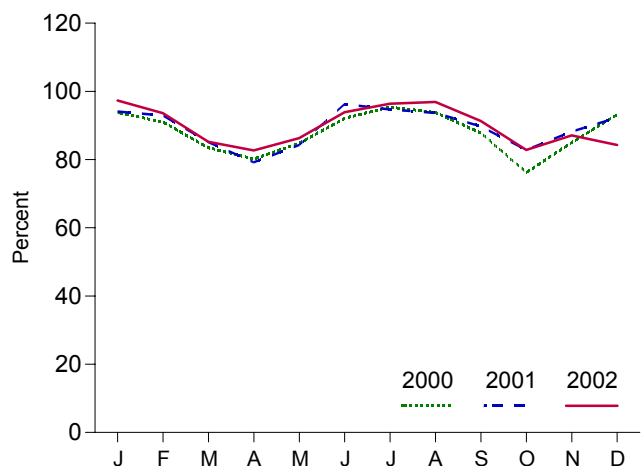
Nuclear Share of Electricity Net Generation, 1973-2002



Nuclear Electricity Net Generation



Capacity Factor, Monthly



Notes: • Includes all units that contributed power to the commercial grid whether they were owned by an electric utility or a nonutility power plant. See Note 1 at end of section for additional information. • Because

vertical scales differ, graphs should not be compared. <http://www.eia.doe.gov/emeu/mer/nuclear.html>. Sources: Table 7.1, 8.1, and 8.2.

Table 8.1 Nuclear Power Plant Operations

	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Net Summer Capability of Operable Units ^{a,b}	Capacity Factor ^c
	Million Kilowatthours	Percent	Million Kilowatts	Percent
1973 Year	83,479	4.5	22.683	53.5
1974 Year	113,976	6.1	31.867	47.8
1975 Year	172,505	9.0	37.267	55.9
1976 Year	191,104	9.4	43.822	54.7
1977 Year	250,883	11.8	46.303	63.3
1978 Year	276,403	12.5	50.824	64.5
1979 Year	255,155	11.4	49.747	58.4
1980 Year	251,116	11.0	51.810	56.3
1981 Year	272,674	11.9	56.042	58.2
1982 Year	282,773	12.6	60.035	56.6
1983 Year	293,677	12.7	63.009	54.4
1984 Year	327,634	13.6	69.652	56.3
1985 Year	383,691	15.5	79.397	58.0
1986 Year	414,038	16.6	85.241	56.9
1987 Year	455,270	17.7	93.583	57.4
1988 Year	526,973	19.5	94.695	63.5
1989 Year	^d 529,402	^d 17.8	^d 98.179	^d 62.2
1990 Year	576,974	19.1	99.642	66.0
1991 Year	612,642	19.9	99.608	70.2
1992 Year	618,841	20.1	99.004	70.9
1993 Year	610,367	19.1	99.060	70.5
1994 Year	640,492	19.7	99.148	73.8
1995 Year	673,402	20.1	99.515	77.4
1996 Year	674,729	19.6	100.784	76.2
1997 Year	628,644	18.0	99.716	71.1
1998 Year	673,702	18.6	97.070	78.2
1999 Year	728,254	19.7	97.411	85.3
2000 January	68,013	21.0	97.411	93.8
February	61,688	21.3	97.411	91.0
March	60,494	20.5	97.411	83.5
April	56,252	20.2	97.411	80.2
May	61,479	19.7	97.411	84.8
June	64,595	19.5	97.411	92.1
July	69,171	19.6	97.411	95.4
August	67,954	18.5	97.411	93.8
September	61,549	19.3	97.411	87.8
October	55,240	18.5	97.411	76.2
November	59,579	20.0	97.411	85.0
December	67,881	20.2	97.860	93.2
Year	753,893	19.8	97.860	88.1
2001 January	68,705	20.5	98.142	94.1
February	61,270	21.4	98.142	92.9
March	62,140	20.5	98.142	85.1
April	55,992	19.9	98.142	79.2
May	61,528	20.2	98.142	84.3
June	68,022	20.6	98.142	96.3
July	69,163	19.2	98.142	94.7
August	68,386	18.4	98.142	93.7
September	63,381	20.6	98.142	89.7
October	60,484	20.5	98.142	82.8
November	62,338	22.4	98.142	88.2
December	67,419	22.2	^R 98.159	92.3
Year	768,826	20.5	^R 98.159	89.4
2002 January	71,057	22.3	^R 98.159	97.3
February	61,738	22.1	^R 98.159	93.6
March	62,227	20.6	^R 98.159	85.2
April	58,437	20.1	^R 98.159	82.7
May	63,032	20.5	^R 98.159	86.3
June	66,372	19.6	^R 98.159	93.9
July	70,421	18.5	^R 98.159	96.4
August	70,778	19.3	^R 98.159	96.9
September	64,481	19.5	^R 98.159	91.3
October	60,493	19.7	^R 98.159	^R 82.8
November	^R 61,520	^R 20.7	^R 98.159	^R 87.1
December	^F 61,570	^F 17.9	98.159	84.3
Year	^E 772,125	^E 20.0	98.159	^R 89.8

^a At end of period.

^b For the definition of "Net Summer Capability," see Note 2(a) at end of section.

^c For an explanation of the method of calculating the capacity factor, see Note 2 at end of section.

^d Beginning in 1989, includes nonutility facilities.

R=Revised. E=Estimate. F=Forecast.

Notes: • The performance data shown in this table are based on a universe of reactor units that differs in some respects from the reactor

universe used to profile the nuclear power industry in Table 8.2. See Note 1 at end of section for further discussion. • Nuclear electricity net generation totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/nuclear.html>.

Sources: See end of section.

Table 8.2 Nuclear Generating Units

	Orders ^a	Construction Permits ^b	Low Power Operating Licenses ^c	New Operable Units ^d	Shutdowns ^e	Total Operable Units ^f	Cancellations ^g	Cumulative Cancellations
1973 Year	42	14	12	15	0	42	0	7
1974 Year	28	23	14	15	2	55	9	16
1975 Year	4	9	3	2	0	57	13	29
1976 Year	3	9	7	7	1	63	1	30
1977 Year	4	15	4	4	0	67	10	40
1978 Year	2	13	3	4	1	70	13	53
1979 Year	0	2	0	0	1	69	6	59
1980 Year	0	0	5	2	0	71	15	74
1981 Year	0	0	3	4	0	75	9	83
1982 Year	0	0	6	4	1	78	18	101
1983 Year	0	0	3	3	0	81	6	107
1984 Year	0	0	7	6	0	87	6	113
1985 Year	0	0	7	9	0	96	2	115
1986 Year	0	0	7	5	0	^h 101	2	117
1987 Year	0	0	6	8	2	107	0	117
1988 Year	0	0	1	2	0	109	3	120
1989 Year	0	0	3	4	2	111	0	120
1990 Year	0	0	1	2	1	112	1	121
1991 Year	0	0	0	0	1	111	0	121
1992 Year	0	0	0	0	2	109	0	121
1993 Year	0	0	1	1	0	110	0	121
1994 Year	0	0	0	0	1	109	1	122
1995 Year	0	0	1	0	0	109	2	124
1996 Year	0	0	0	1	1	109	0	124
1997 Year	0	0	0	0	2	107	0	124
1998 Year	0	0	0	0	3	104	0	124
1999 Year	0	0	0	0	0	104	0	124
2000 January	0	0	0	0	0	104	0	124
February	0	0	0	0	0	104	0	124
March	0	0	0	0	0	104	0	124
April	0	0	0	0	0	104	0	124
May	0	0	0	0	0	104	0	124
June	0	0	0	0	0	104	0	124
July	0	0	0	0	0	104	0	124
August	0	0	0	0	0	104	0	124
September	0	0	0	0	0	104	0	124
October	0	0	0	0	0	104	0	124
November	0	0	0	0	0	104	0	124
December	0	0	0	0	0	104	0	124
Year	0	0	0	0	0	104	0	124
2001 January	0	0	0	0	0	104	0	124
February	0	0	0	0	0	104	0	124
March	0	0	0	0	0	104	0	124
April	0	0	0	0	0	104	0	124
May	0	0	0	0	0	104	0	124
June	0	0	0	0	0	104	0	124
July	0	0	0	0	0	104	0	124
August	0	0	0	0	0	104	0	124
September	0	0	0	0	0	104	0	124
October	0	0	0	0	0	104	0	124
November	0	0	0	0	0	104	0	124
December	0	0	0	0	0	104	0	124
Year	0	0	0	0	0	104	0	124
2002 January	0	0	0	0	0	104	0	124
February	0	0	0	0	0	104	0	124
March	0	0	0	0	0	104	0	124
April	0	0	0	0	0	104	0	124
May	0	0	0	0	0	104	0	124
June	0	0	0	0	0	104	0	124
July	0	0	0	0	0	104	0	124
August	0	0	0	0	0	104	0	124
September	0	0	0	0	0	104	0	124
October	0	0	0	0	0	104	0	124
November	0	0	0	0	0	104	0	124
December	0	0	0	0	0	104	0	124
Year	0	0	0	0	0	104	0	124

^a Placement of an order by a utility or government agency for a nuclear steam supply system.

^b Issuance by regulatory authority of a permit, or equivalent permission, to begin construction. Numbers reflect permits issued in a given year, not extant permits.

^c Issuance by regulatory authority of license, or equivalent permission, to conduct testing but not to operate at full power.

^d Issuance by regulatory authority of full-power operating license, or equivalent permission. Units generally did not begin immediate operation. See Note 1 at end of section.

^e Ceased operating permanently, irrespective of intent.

^f Total of units holding full-power licenses, or equivalent permission to operate, at the end of the period. See Note 1 at end of section.

^g Cancellation by utilities of ordered units. Does not include three units (Bellefonte 1 and 2 and Watts Bar 2) where construction has been stopped indefinitely.

^h Includes Browns Ferry 1, which was shut down in 1985. The unit is defueled but is still fully licensed. In May 2002, the Tennessee Valley Authority announced its intention to have the unit resume operation in 2007. See Note 1(a) at end of section.

Note: This table covers all units that contributed power to the commercial grid whether or not they were owned by an electric utility. See Note 1 at end of section for additional information.

Web Page: <http://www.eia.doe.gov/emeu/mer/nuclear.html>.

Sources: See end of section.

Nuclear Energy

Note 1. In 1997 EIA undertook a major revision of the data categories in Table 8.2 to make them more relevant to current conditions and trends in the U.S. commercial nuclear electric power industry. To acquire the data for the revised categories it was necessary to develop a reactor unit database employing different sources than those used previously for Table 8.2 and still used for Table 8.1. Because of differences in definitions and tally protocols, the year-by-year tallies of operable reactors in the two databases diverge in some years, although this divergence does not change the overall trends.

The data in Table 8.2 apply to commercial nuclear power units, which means that the units contributed power to the commercial electricity grid whether or not they were owned by an electric utility. A total of 259 units ever ordered was identified. (Many of the orders were placed before 1973 and thus do not appear in the table. Annual data on orders and other characteristics from 1953 forward can be found in EIA's *Annual Energy Review 2000*, Tables 9.1 and 9.2.) Although most orders were placed by electric utilities, several units are or were ordered, owned, and operated wholly or in part by the Federal government, including BONUS (Boiling Nuclear Superheater Power Station), Elk River, Experimental Breeder Reactor 2, Hallam, Hanford N, Piqua, and Shippingport.

A reactor is generally defined as operable in Table 8.2 while it possessed a full-power license from the Nuclear Regulatory Commission or its predecessor the Atomic Energy Commission, or equivalent permission to operate, at the end of the year or month shown. The definition is liberal in that it does not exclude units retaining full-power licenses during long, non-routine shutdowns that for a time rendered them unable to generate electricity. Examples are:

(a) In 1985 the five then-active Tennessee Valley Authority (TVA) units (Browns Ferry 1, 2, and 3 and Sequoyah 1 and 2) were shut down under a regulatory forced outage. Browns Ferry 1 remains shut down and has been defueled, while the other units were idle for several years, restarting in 1991, 1995, 1988, and 1988, respectively. All five units are counted as operable during the shutdowns. Browns Ferry 1 is the only one of the five TVA plants that has not returned to service. Because it is still fully licensed to operate, it continues to meet the definition of operable.

(b) Shippingport was shut down from 1974 through 1976 for conversion to a light-water breeder reactor, but is counted as operable from 1957 until its retirement in 1982.

(c) Calvert Cliffs 2 was shut down in 1989 and 1990 for replacement of pressurizer heater sleeves but is counted as operable during those years.

Exceptions to the definition are Shoreham and Three Mile Island 2. Shoreham was granted a full-power license in April 1989, but was shut down two months later and never

restarted. In 1991, the license was changed to Possession Only. Although not operable at the end of the year, Shoreham is treated as operable during 1989 and shut down in 1990, because counting it as operable and shut down in the same year would introduce a statistical discrepancy in the tallies. A major accident closed Three Mile Island 2 in 1979, and although the unit retained its full-power license for several years, it is considered permanently shut down since that year.

Note 2. Capacity: Nuclear generating units may have more than one type of net capacity rating, including the following:

(a) Net Summer Capability—The steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary power, as demonstrated by test at the time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

(b) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of a unit, specified by the utility and used for plant design.

The monthly capacity factors are computed as the actual monthly generation divided by the maximum possible generation for that month. The maximum possible generation is the number of hours in the month multiplied by the net summer capability at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are averages of the monthly values for that year.

Table 8.1 Sources

Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation: See Table 7.2 for actual data. The forecast value is derived from EIA's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Net Summer Capability of Operable Units: 1973-1982: Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones."

1983 forward: Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report," and monthly updates as appropriate.

Capacity Factor: EIA, Office of Coal, Nuclear, Electric and Alternate Fuels for actual data. The forecast value is derived from EIA's Short-Term Integrated Forecasting System. See related note on page 79 (Note 9).

Table 8.2 Sources

Orders: Energy Information Administration, *Commercial Nuclear Power 1991*, Appendix E, September 1991; Nuclear Energy Institute, *Historical Profile of U.S. Nuclear Power Development*, 1988 edition; U.S. Atomic Energy Commission, *1973 Annual Report to Congress, Volume 2, Regulatory Activities*; various utilities.

Construction Permits: Nuclear Regulatory Commission, *Information Digest*, 1997 edition, Appendix A; Nuclear Energy Institute, *Historical Profile of U.S. Nuclear Power Development*, 1988 edition; various utility, Federal, and contractor officials.

Low-Power Operating Licenses: Nuclear Energy Institute, *Historical Profile of U.S. Nuclear Power Development*, 1988 edition; U.S. Department of Energy, *Nuclear Reactors Built, Being Built, and Planned: 1995*; various utility, Federal, and contractor officials.

New Operable Units: Nuclear Regulatory Commission, *Information Digest*, 1997 edition, Table 11 and Appendices A and B; various utility, Federal, and contractor officials.

Shutdowns: Energy Information Administration, *Commercial Nuclear Power 1991*, Appendix E; Nuclear

Regulatory Commission, *Information Digest*, 1997 edition, Appendix B; U.S. Department of Energy, *Nuclear Reactors Built, Being Built, and Planned: 1995*; Tennessee Valley Authority officials; various Nuclear Regulatory Commission documents.

Total Operable Units: Commercial reactors fully licensed to operate, excluding permanent shutdowns.

Cancellations: Energy Information Administration, *Commercial Nuclear Power 1991*, Appendix E, September 1991; Nuclear Regulatory Commission, *Information Digest*, 1997 edition, Appendix C; and Nuclear Energy Institute, *Historical Profile of U.S. Nuclear Power Development*, 1988 edition.

Section 9. Energy Prices

Crude Oil. The average price of domestic crude oil at the wellhead was \$25.29 per barrel in December 2002, 63 percent above the level of December 2001. The refiner acquisition cost of imported crude oil in December 2002 was \$26.57 per barrel, 67 percent above the December 2001 level. The average cost of domestic crude oil in December 2002 was \$27.25, 57 percent more than the December 2001 average.

Motor Gasoline. The national city average retail price of unleaded regular gasoline at all types of stations was \$1.47 per gallon in January 2003, 29 percent higher than the price in January 2002. The price of unleaded premium gasoline averaged \$1.67 in January 2003, 26 percent higher than the price in January 2002.

Residual Fuel Oil. The average price, excluding taxes, of residual fuel oil sold to end users in December 2002 was 62 cents per gallon, 3 percent higher than the previous month's price and 47 percent higher than the December 2001 average. The average resale price, excluding taxes, of residual fuel oil in December 2002 was 64 cents, 9 percent higher than the November 2002 price and 77 percent higher than the price 1 year earlier.

Aviation Fuel. The average price, excluding taxes, of aviation gasoline sold to end users in December 2002 was \$1.35 per gallon, 3 percent lower than the previous month's average but 16 percent higher than the December 2001 average. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in December 2002 was 81 cents per gallon, 6 percent higher than the previous month's average price and 46 percent higher than the December 2001 average price.

No. 2 Distillate Fuel Oil. The December 2002 national average price, excluding taxes, of heating oil sold to residential customers was \$1.24 per gallon, 5 percent higher than the November 2002 price and 14 percent higher than the December 2001 price. The average price of No. 2 fuel oil sold to all end users was 87 cents per gallon in December 2002, 9 percent higher than the November 2002 price and

39 percent higher than the price 1 year earlier.

Electricity. The average price of electricity sold by electric utilities to all ultimate consumers in the United States in November 2002 was 7.00 cents per kilowatt-hour, slightly higher than the November 2001 mean price. The price of electricity sold to residential consumers in November 2002 averaged 8.33 cents per kilowatt-hour, 2 percent lower than the November 2001 price. The price of electricity sold to commercial consumers averaged 7.80 cents per kilowatt-hour in November 2002, 1 percent higher than the November 2001 price. The price of electricity sold to other consumers was 6.65 cents per kilowatt-hour, 3 percent higher than the November 2001 price. The price of electricity sold to industrial users in November 2002 averaged 4.70 cents per kilowatt-hour, 2 percent lower than the price 1 year earlier.

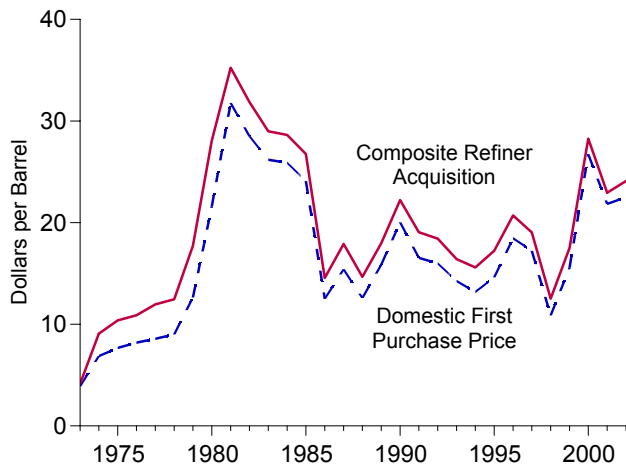
Beginning with January 1986, new series of national average price estimates were based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national averages.

Natural Gas. The average wellhead price of natural gas for November 2002 was estimated as \$3.59 per thousand cubic feet, 31 percent higher than the November 2001 price.

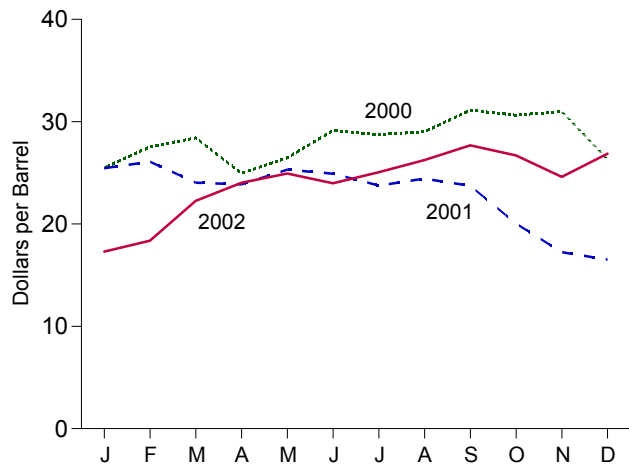
The average price of natural gas delivered to electric utility plants was \$4.26 per thousand cubic feet in October 2002 (latest date for which data are available), 53 percent higher than the October 2001 price. The average price of natural gas used by residential consumers in November 2002 was \$8.05 per thousand cubic feet, 1 percent higher than the November 2001 price. The average price of natural gas used by commercial consumers in November 2002 was \$7.01 per thousand cubic feet, 1 percent higher than the November 2001 price. The average price of natural gas used by industrial consumers in November 2002 was \$4.63 per thousand cubic feet, 18 percent above the November 2001 price.

Figure 9.1 Petroleum Prices

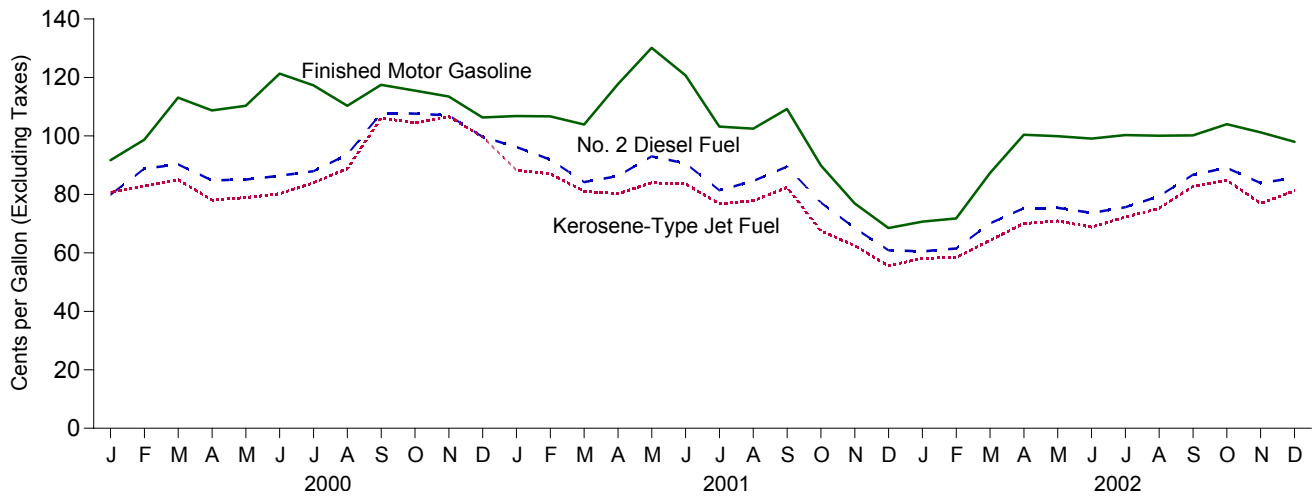
Crude Oil Prices, 1973-2002



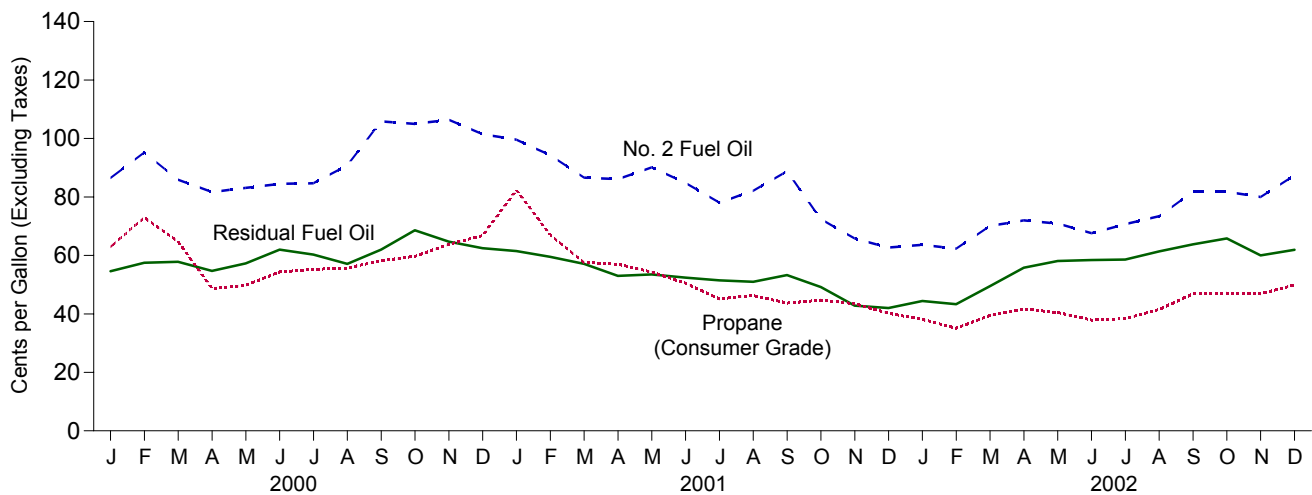
Composite Refiner Acquisition Cost, Monthly



Refiner Prices to End Users: Motor Gasoline, Diesel Fuel, and Jet Fuel, Monthly



Refiner Prices to End Users: No. 2 Fuel Oil, Propane, and Residual Fuel, Monthly



Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.
Sources: Tables 9.1, 9.5, and 9.7.

Table 9.1 Crude Oil Price Summary
(Dollars per Barrel)

	Domestic First Purchase Price ^b	F.O.B. Cost of Imports ^c	Landed Cost of Imports ^d	Refiner Acquisition Cost ^a		
				Domestic	Imported	Composite
1973 Average	3.89	^e 5.21	^e 6.41	^E 4.17	^E 4.08	^E 4.15
1974 Average	6.87	10.91	12.32	7.18	12.52	9.07
1975 Average	7.67	11.18	12.70	8.39	13.93	10.38
1976 Average	8.19	12.15	13.32	8.84	13.48	10.89
1977 Average	8.57	13.24	14.36	9.55	14.53	11.96
1978 Average	9.00	13.29	14.35	10.61	14.57	12.46
1979 Average	12.64	20.07	21.45	14.27	21.67	17.72
1980 Average	21.59	32.37	33.67	24.23	33.89	28.07
1981 Average	31.77	35.15	36.47	34.33	37.05	35.24
1982 Average	28.52	32.02	33.18	31.22	33.55	31.87
1983 Average	26.19	27.81	28.93	28.87	29.30	28.99
1984 Average	25.88	27.60	28.54	28.53	28.88	28.63
1985 Average	24.09	25.84	26.67	26.66	26.99	26.75
1986 Average	12.51	12.52	13.49	14.82	14.00	14.55
1987 Average	15.40	16.69	17.65	17.76	18.13	17.90
1988 Average	12.58	13.25	14.08	14.74	14.56	14.67
1989 Average	15.86	16.89	17.68	17.87	18.08	17.97
1990 Average	20.03	20.37	21.13	22.59	21.76	22.22
1991 Average	16.54	16.89	18.02	19.33	18.70	19.06
1992 Average	15.99	16.77	17.75	18.63	18.20	18.43
1993 Average	14.25	14.71	15.72	16.67	16.14	16.41
1994 Average	13.19	14.18	15.18	15.67	15.51	15.59
1995 Average	14.62	15.69	16.78	17.33	17.14	17.23
1996 Average	18.46	19.32	20.31	20.77	20.64	20.71
1997 Average	17.23	16.94	18.11	19.61	18.53	19.04
1998 Average	10.87	10.76	11.84	13.18	12.04	12.52
1999 Average	15.56	16.47	17.23	17.90	17.26	17.51
2000 January	23.53	24.56	25.61	25.79	25.29	25.49
February	25.48	26.51	27.01	27.80	27.39	27.55
March	26.19	25.71	26.94	29.53	27.70	28.41
April	23.20	23.39	24.72	26.05	24.29	24.97
May	25.58	25.95	26.71	26.62	26.35	26.46
June	27.62	27.73	28.56	29.46	28.91	29.13
July	26.81	26.53	28.29	29.94	28.00	28.74
August	27.91	27.94	29.03	29.36	28.80	29.01
September	29.72	28.84	30.51	32.01	30.56	31.13
October	29.65	27.74	29.54	32.09	29.71	30.63
November	30.36	27.40	28.74	32.43	30.00	31.00
December	24.46	22.79	24.77	27.90	25.19	26.31
Average	26.72	26.27	27.53	29.11	27.70	28.26
2001 January	24.64	22.46	24.04	26.83	24.49	25.45
February	25.27	23.01	24.23	27.66	24.97	26.09
March	22.98	20.88	22.89	25.64	23.01	24.05
April	23.39	21.71	23.06	25.12	22.99	23.87
May	24.06	22.71	24.14	26.37	24.63	25.31
June	23.43	22.74	23.83	26.30	23.95	24.92
July	22.82	21.43	22.88	25.13	22.76	23.76
August	23.08	22.02	23.29	25.44	23.77	24.44
September	22.37	21.01	22.22	25.48	22.51	23.73
October	18.73	17.15	18.38	21.79	18.76	20.04
November	16.40	15.03	16.24	18.99	16.06	17.24
December	15.54	15.22	16.05	17.34	15.95	16.52
Average	21.84	20.46	21.82	24.33	22.00	22.95
2002 January	15.89	16.05	17.25	17.85	16.93	17.31
February	16.92	17.68	19.16	18.70	18.13	18.37
March	20.04	21.64	22.22	21.57	22.78	22.26
April	22.14	23.06	24.16	24.27	23.87	24.03
May	23.51	23.16	24.49	25.78	24.29	24.94
June	22.59	22.63	23.95	24.81	23.33	23.98
July	23.51	23.71	25.00	25.37	24.82	25.06
August	24.76	24.57	26.02	26.87	25.77	26.24
September	26.08	25.78	26.61	28.43	27.14	27.68
October	25.29	^R 24.34	^R 25.59	27.82	25.99	26.70
November	^R 23.38	^R 22.30	^R 24.04	26.02	23.68	24.60
December	25.29	25.28	26.28	27.25	26.57	26.87
Average	22.51	22.55	23.84	24.65	23.68	24.09

^a See Note 4 at end of section.

^b See Note 1 at end of section.

^c See Note 2 at end of section.

^d See Note 3 at end of section.

^e Based on October, November, and December data only.

^R=Revised. ^E=Estimate.

Notes: • Values for Domestic First Purchase Price and Refiner Acquisition Cost for the current month and for F.O.B. and Landed Costs of Imports for the

current 2 months are preliminary. • F.O.B. and landed costs through 1980

reflect the period of reporting; prices since then reflect the period of loading.

• Annual averages are the averages of the monthly prices, weighted by

volume. • Geographic coverage is the 50 States, the District of Columbia,

Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Sources: See end of section.

Table 9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries
(Dollars per Barrel)

	Selected Countries							Persian Gulf Nations ^a	Total OPEC ^b	Total Non-OPEC
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average ^c	W	W	NA	7.81	3.25	NA	5.39	3.68	5.43	4.80
1974 Average	11.87	W	W	12.44	10.17	NA	10.71	10.60	11.33	9.59
1975 Average	10.97	(^d)	11.44	11.82	10.87	NA	11.04	10.88	11.34	10.62
1976 Average	12.02	(^d)	12.22	13.08	11.62	W	11.39	11.65	12.23	11.70
1977 Average	13.29	(^d)	13.42	14.44	12.38	14.11	12.63	12.56	13.29	12.97
1978 Average	13.32	(^d)	13.24	14.05	12.70	13.82	12.38	12.77	13.31	13.23
1979 Average	19.85	(^d)	20.27	21.69	17.28	21.70	16.90	18.77	19.88	20.92
1980 Average	33.45	W	31.06	35.93	28.17	34.36	24.81	28.92	32.21	32.85
1981 Average	35.55	(^d)	33.01	38.31	32.60	36.06	28.95	33.00	35.17	35.12
1982 Average	31.86	(^d)	28.08	35.13	33.73	33.42	23.74	33.55	33.48	30.58
1983 Average	28.14	(^d)	25.20	29.81	27.53	29.91	21.48	27.70	28.46	27.20
1984 Average	27.46	(^d)	26.39	29.51	27.67	28.87	24.23	27.48	27.79	27.45
1985 Average	26.30	(^d)	25.33	28.04	22.04	27.64	23.64	23.31	25.67	25.96
1986 Average	13.30	12.34	11.84	14.35	11.36	13.84	10.92	11.35	12.21	12.87
1987 Average	17.27	17.84	16.36	18.47	15.12	18.28	15.08	15.97	16.43	16.99
1988 Average	13.70	13.61	12.16	15.16	12.16	14.80	12.96	12.38	13.43	13.05
1989 Average	17.66	17.89	15.96	18.31	16.29	17.89	16.09	16.61	17.06	16.72
1990 Average	20.23	20.75	19.26	22.46	20.36	23.43	19.55	18.54	20.40	20.32
1991 Average	18.47	18.49	15.37	20.29	14.62	20.81	14.91	15.22	16.99	16.77
1992 Average	18.41	18.02	15.26	19.98	15.85	19.61	14.39	16.35	16.87	16.66
1993 Average	16.23	15.87	13.74	17.79	13.77	16.64	12.46	14.21	14.78	14.65
1994 Average	15.40	14.99	13.68	16.32	14.12	15.66	12.21	13.97	14.00	14.34
1995 Average	16.58	16.73	15.64	17.40	W	16.94	13.86	W	15.36	16.02
1996 Average	20.71	21.33	19.14	21.27	19.28	19.43	17.73	19.22	18.94	19.65
1997 Average	18.81	18.85	16.72	19.43	15.16	18.59	15.33	15.24	16.26	17.51
1998 Average	12.11	12.56	10.49	12.97	8.87	12.52	9.31	9.09	10.20	11.21
1999 Average	17.46	17.20	15.89	17.32	17.65	19.14	14.33	17.15	15.90	16.84
2000 January	25.99	27.12	23.31	W	25.57	24.47	23.36	25.37	24.45	24.64
February	27.71	29.56	26.25	29.07	23.73	26.22	24.93	24.46	25.89	26.98
March	27.89	29.43	25.37	26.09	23.64	27.76	23.92	23.17	24.30	26.70
April	22.72	25.40	21.91	24.34	27.64	23.62	22.73	25.39	23.92	23.03
May	26.36	26.50	25.27	28.85	24.31	25.91	25.12	24.53	25.71	26.07
June	29.15	29.98	26.90	30.04	24.82	29.09	26.26	24.54	26.84	28.25
July	28.48	27.50	24.89	28.93	26.84	26.92	23.29	26.24	25.77	27.13
August	30.40	30.47	26.66	31.06	26.41	26.41	26.45	26.66	27.74	28.09
September	30.16	32.66	28.00	30.54	27.81	30.24	26.04	26.87	27.80	29.65
October	29.13	32.36	27.29	30.71	23.61	29.05	26.63	24.27	26.71	28.54
November	30.27	32.24	27.07	31.92	22.10	30.91	24.08	22.74	25.43	28.80
December	24.96	25.66	21.46	25.45	21.65	24.80	20.98	21.63	22.07	23.34
Average	27.90	29.04	25.39	28.70	24.62	27.21	24.45	24.72	25.56	26.77
2001 January	24.28	26.72	21.31	26.46	19.79	25.87	20.97	19.62	21.55	23.14
February	25.68	27.06	21.39	26.82	20.58	W	20.43	20.94	22.22	23.67
March	21.97	23.63	18.77	24.70	20.46	W	19.12	20.37	20.83	20.94
April	24.71	25.04	19.78	W	20.83	W	21.12	20.36	21.74	21.69
May	27.45	26.23	21.20	28.74	20.54	28.19	20.10	20.13	21.77	23.62
June	26.87	26.81	21.39	27.63	20.80	W	17.95	20.73	21.48	23.66
July	23.85	25.86	19.18	24.98	W	24.88	18.68	21.03	20.58	22.25
August	24.10	25.23	20.49	25.78	18.93	W	19.67	20.49	21.26	22.59
September	24.03	22.78	20.82	24.60	16.24	23.81	17.11	16.56	18.88	22.42
October	19.70	20.40	16.45	20.14	14.23	20.48	14.76	14.37	15.76	18.17
November	17.49	18.44	14.32	19.02	14.93	W	11.90	14.25	14.05	15.68
December	17.49	18.48	14.26	19.08	15.34	W	12.80	15.21	14.55	15.65
Average	23.25	24.25	18.89	24.85	18.98	23.30	18.01	18.89	19.73	21.04
2002 January	19.12	18.93	14.25	19.63	W	19.24	13.55	17.56	15.89	16.18
February	18.76	19.37	15.91	20.70	21.20	W	14.84	19.88	17.65	17.70
March	22.65	23.88	20.21	24.39	23.41	W	19.30	23.12	21.49	21.74
April	24.36	25.57	22.42	25.66	23.17	W	20.02	23.40	22.49	23.40
May	24.35	26.11	22.83	W	23.19	24.52	19.90	22.78	22.26	23.72
June	22.93	24.30	22.02	24.39	23.55	23.24	20.50	23.56	22.26	22.83
July	24.63	W	22.50	26.01	25.11	25.39	21.71	24.98	23.44	23.92
August	25.93	26.10	23.70	27.28	25.10	W	22.67	25.33	24.12	24.89
September	27.97	29.11	25.25	28.56	24.67	28.41	23.98	24.71	25.09	26.27
October	26.57	27.03	23.74	27.32	^R 23.38	28.20	21.65	^R 22.99	^R 22.89	25.33
November	^R 23.23	24.14	^R 20.75	^R 24.83	^R 24.19	^R 25.10	^R 20.16	^R 23.85	^R 22.10	^R 22.45
December	29.24	27.75	24.23	28.32	25.76	W	23.70	25.75	25.44	25.21
Average	23.75	24.59	21.60	25.09	23.72	24.43	20.11	23.19	22.03	22.89

^a Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

^b Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. Ecuador withdrew at the end of 1992 and Gabon withdrew at the end of 1994.

^c Based on October, November, and December data only.

^d No data reported.

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • The Free on Board (F.O.B.) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of section. • Values for the current 2 months are preliminary.

• Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Sources: See end of section.

Table 9.4 Motor Gasoline Retail Prices, U.S. City Average
(Cents per Gallon, Including Taxes)

	Leaded Regular	Unleaded Regular	Unleaded Premium	All Types ^a
1973 Average	38.8	NA	NA	NA
1974 Average	53.2	NA	NA	NA
1975 Average	56.7	NA	NA	NA
1976 Average	59.0	61.4	NA	NA
1977 Average	62.2	65.6	NA	NA
1978 Average	62.6	67.0	NA	65.2
1979 Average	85.7	90.3	NA	88.2
1980 Average	119.1	124.5	NA	122.1
1981 Average ^b	131.1	137.8	^c 147.0	135.3
1982 Average	122.2	129.6	141.5	128.1
1983 Average	115.7	124.1	138.3	122.5
1984 Average	112.9	121.2	136.6	119.8
1985 Average	111.5	120.2	134.0	119.6
1986 Average	85.7	92.7	108.5	93.1
1987 Average	89.7	94.8	109.3	95.7
1988 Average	89.9	94.6	110.7	96.3
1989 Average	99.8	102.1	119.7	106.0
1990 Average	114.9	116.4	134.9	121.7
1991 Average	NA	114.0	132.1	119.6
1992 Average	NA	112.7	131.6	119.0
1993 Average	NA	110.8	130.2	117.3
1994 Average	NA	111.2	130.5	117.4
1995 Average	NA	114.7	133.6	120.5
1996 Average	NA	123.1	141.3	128.8
1997 Average	NA	123.4	141.6	129.1
1998 Average	NA	105.9	125.0	111.5
1999 Average	NA	116.5	135.7	122.1
2000 January	NA	130.1	148.6	135.6
February	NA	136.9	155.1	142.2
March	NA	154.1	172.3	159.4
April	NA	150.6	169.8	156.1
May	NA	149.8	168.2	155.2
June	NA	161.7	178.6	166.6
July	NA	159.3	177.3	164.2
August	NA	151.0	168.9	155.9
September	NA	158.2	176.4	163.5
October	NA	155.9	174.4	161.3
November	NA	155.5	173.8	160.8
December	NA	148.9	167.9	154.4
Average	NA	151.0	169.3	156.3
2001 January	NA	147.2	165.7	152.5
February	NA	148.4	167.1	153.8
March	NA	144.7	163.8	150.3
April	NA	156.4	174.8	161.7
May	NA	172.9	193.4	181.2
June	NA	164.0	188.1	173.1
July	NA	148.2	169.5	156.5
August	NA	142.7	163.6	150.9
September	NA	153.1	172.6	160.9
October	NA	136.2	156.0	144.2
November	NA	126.3	142.7	132.4
December	NA	113.1	131.2	120.0
Average	NA	146.1	165.7	153.1
2002 January	NA	113.9	132.3	120.9
February	NA	113.0	133.0	121.0
March	NA	124.1	145.0	132.4
April	NA	140.7	162.2	149.3
May	NA	142.1	162.5	150.8
June	NA	140.4	160.6	148.9
July	NA	141.2	160.7	149.6
August	NA	142.3	162.0	150.8
September	NA	142.2	161.9	150.7
October	NA	144.9	164.3	153.5
November	NA	144.8	164.3	153.4
December	NA	139.4	158.9	147.7
Average	NA	135.8	157.8	144.1
2002 January	NA	147.3	166.6	155.7

^a Also includes types of motor gasoline not shown separately.

^b In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, gasohol is included in the average for all types, and unleaded premium is weighted more heavily.

^c Based on September through December data only.

NA=Not available.

Notes: • See Note 5 at end of section. • Geographic coverage for

1973-1977 is 56 urban areas. Geographic coverage for 1978 forward is 85 urban areas.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Sources: • **Monthly Data:** U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Prices: Energy*. • **Annual Data: 1973—Platt's Oil Price Handbook and Oilmanac, 1974, 51st Edition. 1974 forward**—calculated by the Energy Information Administration as the simple averages of monthly data.

Table 9.5 Refiner Prices of Residual Fuel Oil
(Cents per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	29.3	31.4	24.5	27.5	26.3	29.8
1979 Average	45.0	46.8	36.6	38.9	39.9	43.6
1980 Average	60.8	67.5	47.9	52.3	52.8	60.7
1981 Average	74.8	82.9	62.2	67.3	66.3	75.6
1982 Average	69.5	74.7	57.2	61.1	61.2	67.6
1983 Average	64.3	69.5	59.1	61.1	60.9	65.1
1984 Average	68.5	72.0	63.9	65.9	65.4	68.7
1985 Average	61.0	64.4	56.0	58.2	57.7	61.0
1986 Average	32.8	37.2	28.9	31.7	30.5	34.3
1987 Average	41.2	44.7	36.2	39.6	38.5	42.3
1988 Average	33.3	37.2	27.1	30.0	30.0	33.4
1989 Average	40.7	43.6	33.1	34.4	36.0	38.5
1990 Average	47.2	50.5	37.2	40.0	41.3	44.4
1991 Average	36.4	40.2	29.2	30.6	31.4	34.0
1992 Average	35.1	38.9	28.6	31.2	30.8	33.6
1993 Average	33.7	39.7	25.6	30.3	29.3	33.7
1994 Average	34.5	40.1	28.7	33.0	31.7	35.2
1995 Average	38.3	43.6	33.8	37.7	36.3	39.2
1996 Average	45.6	52.6	38.9	43.3	42.0	45.5
1997 Average	41.5	48.8	36.6	40.3	38.7	42.3
1998 Average	29.9	35.4	26.9	28.7	28.0	30.5
1999 Average	38.2	40.5	32.9	36.2	35.4	37.4
2000 January	55.3	66.3	44.6	50.0	49.0	54.6
February	59.2	68.8	48.6	54.0	53.9	57.5
March	53.2	66.5	50.7	55.9	51.9	57.8
April	52.3	65.1	44.5	52.5	48.2	54.7
May	58.9	63.2	51.7	54.9	54.9	57.3
June	65.8	70.2	54.7	59.0	60.0	62.0
July	65.1	69.7	50.8	57.3	58.9	60.3
August	61.5	67.0	46.7	53.6	53.9	57.1
September	71.9	75.8	58.6	59.2	64.5	62.0
October	73.7	76.8	57.3	65.4	63.8	68.6
November	71.3	77.1	52.8	59.2	61.3	64.7
December	66.6	75.8	50.6	57.0	57.9	62.5
Average	62.7	70.8	51.2	56.6	56.6	60.2
2001 January	64.6	74.0	48.5	55.9	56.4	61.5
February	62.5	69.7	49.5	55.1	55.9	59.5
March	57.6	66.6	47.8	52.9	51.8	57.1
April	57.5	64.0	41.8	48.9	48.3	53.0
May	58.4	63.9	44.2	50.2	50.3	53.5
June	53.0	64.1	42.4	49.0	47.9	52.4
July	50.0	63.2	42.2	47.2	46.3	51.5
August	50.4	59.7	41.3	48.0	45.7	51.0
September	51.2	62.2	44.9	51.2	48.9	53.3
October	44.8	59.2	40.0	46.6	42.4	49.2
November	40.5	52.3	31.9	40.2	36.9	42.8
December	40.0	51.2	30.7	39.6	36.3	42.0
Average	52.3	64.2	42.8	49.2	47.6	53.1
2002 January	40.8	50.8	33.7	41.8	38.5	44.4
February	38.0	51.2	33.7	41.0	36.6	43.3
March	45.7	53.2	39.6	48.1	43.8	49.5
April	53.2	59.1	47.8	55.0	51.1	55.8
May	56.3	64.0	52.1	56.6	54.5	58.1
June	53.7	63.5	52.7	57.1	53.3	58.4
July	55.8	63.9	50.7	56.8	53.8	58.6
August	60.6	67.4	55.3	59.2	58.2	61.4
September	60.1	67.8	56.3	62.6	58.5	63.8
October	64.5	72.7	55.0	63.6	60.7	65.8
November	58.9	73.6	59.3	54.6	59.0	60.0
December	67.4	73.9	60.1	56.6	64.2	61.9
Average	54.4	63.9	50.9	54.4	53.0	56.8

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and commercial consumers. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration

(EIA) estimates. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 19.

Table 9.6 Refiner Prices of Petroleum Products for Resale
(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^a	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	43.4	53.7	38.6	40.4	36.9	36.5	23.7
1979 Average	63.7	72.1	66.0	62.4	56.9	57.4	29.1
1980 Average	94.1	112.8	86.8	86.4	80.3	80.1	41.5
1981 Average	106.4	125.0	101.2	106.6	97.6	97.2	46.6
1982 Average	97.3	122.8	95.3	101.8	91.4	91.4	42.7
1983 Average	88.2	117.8	85.4	89.2	81.5	80.8	48.4
1984 Average	83.2	116.5	83.0	91.6	82.1	80.3	45.0
1985 Average	83.5	113.0	79.4	87.4	77.6	77.2	39.8
1986 Average	53.1	91.2	49.5	60.6	48.6	45.2	29.0
1987 Average	58.9	85.9	53.8	59.2	52.7	53.4	25.2
1988 Average	57.7	85.0	49.5	54.9	47.3	47.3	24.0
1989 Average	65.4	95.0	58.3	66.9	56.5	56.7	24.7
1990 Average	78.6	106.3	77.3	83.9	69.7	69.4	38.6
1991 Average	69.9	100.1	65.0	72.2	62.2	61.5	34.9
1992 Average	67.7	99.1	60.5	63.2	57.9	59.1	32.8
1993 Average	62.6	96.5	57.7	60.4	54.4	57.0	35.1
1994 Average	59.9	93.3	53.4	61.8	50.6	52.9	32.4
1995 Average	62.6	97.5	53.9	58.0	51.1	53.8	34.4
1996 Average	71.3	105.5	64.6	71.4	63.9	65.9	46.1
1997 Average	70.0	106.5	61.3	65.3	59.0	60.6	41.6
1998 Average	52.6	91.2	45.0	46.5	42.2	44.4	28.8
1999 Average	64.5	100.7	53.3	55.0	49.3	54.6	34.2
2000 January	78.6	111.5	80.4	97.9	84.1	77.7	49.4
February	88.4	119.8	83.6	101.2	92.4	85.2	60.2
March	98.9	130.3	83.4	84.4	79.6	85.1	52.9
April	88.5	125.5	77.4	76.7	77.4	79.9	48.8
May	97.9	130.8	77.9	77.6	78.4	81.4	49.3
June	109.3	141.9	79.9	80.0	80.3	82.4	53.9
July	99.3	138.8	83.6	83.1	81.0	83.6	54.8
August	96.9	133.8	87.9	89.8	88.3	92.1	60.3
September	104.8	142.5	105.1	107.7	100.9	105.0	65.9
October	102.2	138.1	104.4	108.1	98.8	104.0	64.3
November	100.2	137.6	105.1	112.8	100.4	103.2	63.3
December	87.9	128.3	99.0	105.8	94.1	93.8	76.7
Average	96.3	133.0	88.0	96.9	88.6	89.8	59.5
2001 January	94.1	131.0	88.3	106.4	90.0	90.6	86.4
February	93.8	132.0	87.1	93.4	82.4	85.9	66.9
March	91.0	129.3	80.5	83.6	76.2	78.1	60.1
April	106.3	140.5	79.6	83.0	79.1	82.6	58.5
May	115.3	147.0	83.5	86.6	82.3	89.9	56.2
June	98.5	135.0	82.7	82.6	79.0	85.4	48.7
July	84.0	120.9	75.7	74.7	72.7	75.6	43.5
August	90.6	125.9	77.4	81.3	76.6	80.9	45.3
September	94.1	132.0	80.2	80.1	78.7	84.2	46.4
October	74.0	109.7	67.8	73.1	68.2	71.3	46.0
November	63.4	100.5	61.9	63.5	60.6	61.5	41.6
December	58.3	94.9	55.3	58.6	56.6	54.7	38.1
Average	88.6	125.6	76.3	82.1	75.6	78.4	54.0
2002 January	61.1	96.5	57.3	62.1	57.5	54.6	37.6
February	62.7	98.5	57.4	60.9	57.7	56.8	36.6
March	78.1	103.2	64.2	69.2	64.6	66.7	39.9
April	86.8	116.5	69.5	69.9	68.3	70.9	41.7
May	85.9	114.4	69.6	71.1	68.4	70.6	40.8
June	85.6	116.7	67.9	69.4	65.8	68.2	37.9
July	87.8	118.9	71.5	73.2	68.7	71.0	37.5
August	87.4	115.5	74.0	76.4	71.3	75.7	41.5
September	88.9	119.2	81.6	87.4	78.3	83.6	47.0
October	93.4	123.8	83.8	88.8	79.6	86.1	48.9
November	84.9	118.4	^R 74.9	82.3	74.8	78.7	49.4
December	85.9	112.9	80.0	88.5	80.9	82.1	53.2
Average	82.8	113.7	71.3	76.3	69.2	72.4	43.1

^a See Note 5 at end of section.

R=Revised.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are shown in Table 9.7; they are sales made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial

consumers. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users
(Cents per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^a	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	48.4	51.6	38.7	42.1	40.0	37.7	33.5
1979 Average	71.3	68.9	54.7	58.5	51.6	58.5	35.7
1980 Average	103.5	108.4	86.8	90.2	78.8	81.8	48.2
1981 Average	114.7	130.3	102.4	112.3	91.4	99.5	56.5
1982 Average	106.0	131.2	96.3	108.9	90.5	94.2	59.2
1983 Average	95.4	125.5	87.8	96.1	91.6	82.6	70.9
1984 Average	90.7	123.4	84.2	103.6	91.6	82.3	73.7
1985 Average	91.2	120.1	79.6	103.0	84.9	78.9	71.7
1986 Average	62.4	101.1	52.9	79.0	56.0	47.8	74.5
1987 Average	66.9	90.7	54.3	77.0	58.1	55.1	70.1
1988 Average	67.3	89.1	51.3	73.8	54.4	50.0	71.4
1989 Average	75.6	99.5	59.2	70.9	58.7	58.5	61.5
1990 Average	88.3	112.0	76.6	92.3	73.4	72.5	74.5
1991 Average	79.7	104.7	65.2	83.8	66.5	64.8	73.0
1992 Average	78.7	102.7	61.0	78.8	62.7	61.9	64.3
1993 Average	75.9	99.0	58.0	75.4	60.2	60.2	67.3
1994 Average	73.8	95.7	53.4	66.0	57.2	55.4	53.0
1995 Average	76.5	100.5	54.0	58.9	56.2	56.0	49.2
1996 Average	84.7	111.6	65.1	74.0	67.3	68.1	60.5
1997 Average	83.9	112.8	61.3	74.5	63.6	64.2	55.2
1998 Average	67.3	97.5	45.2	50.1	48.2	49.4	40.5
1999 Average	78.1	105.9	54.3	60.5	55.8	58.4	45.8
2000 January	91.7	118.7	80.7	111.1	86.5	79.9	62.9
February	98.7	119.5	82.8	130.1	95.2	88.8	73.0
March	113.1	129.1	85.0	107.7	85.9	90.3	64.8
April	108.7	124.3	78.1	99.6	81.7	84.8	48.7
May	110.3	126.8	78.9	86.8	83.1	85.1	49.8
June	121.3	139.8	80.2	88.4	84.5	86.4	54.4
July	117.3	142.6	84.0	90.1	84.7	87.9	55.2
August	110.3	NA	88.8	96.5	90.8	93.6	55.7
September	117.5	138.2	106.1	116.2	105.9	107.8	58.2
October	115.5	134.9	104.5	116.0	105.0	107.6	59.7
November	113.5	134.9	106.6	122.9	106.4	107.0	63.8
December	106.3	126.1	99.7	122.7	101.5	99.7	66.8
Average	110.6	130.6	89.9	112.3	92.7	93.5	60.3
2001 January	106.8	128.5	88.3	126.0	99.6	96.2	82.3
February	106.7	129.2	87.0	122.1	94.3	91.9	67.0
March	103.9	124.5	81.1	112.8	86.6	84.2	57.6
April	117.7	134.9	80.2	100.6	86.1	86.3	57.0
May	130.1	150.9	84.0	94.1	90.1	93.0	54.3
June	120.7	145.1	83.6	93.8	84.8	90.6	50.5
July	103.2	134.6	76.8	83.4	78.1	81.4	45.1
August	102.5	136.3	77.8	84.2	82.1	84.6	46.3
September	109.2	142.4	82.4	94.9	88.8	89.5	43.7
October	89.9	125.3	67.5	94.2	72.4	77.2	44.7
November	76.9	119.4	62.5	100.9	65.8	68.5	43.5
December	68.5	115.8	55.6	98.1	62.7	60.9	40.2
Average	103.2	132.3	77.5	104.5	82.9	84.2	50.6
2002 January	70.7	121.2	58.1	98.3	63.6	60.5	38.1
February	71.8	118.5	58.4	97.7	62.3	61.5	35.1
March	87.3	125.2	64.3	99.3	70.1	70.1	39.5
April	100.4	133.4	70.0	NA	72.0	75.3	41.7
May	99.9	128.4	70.9	91.5	70.9	75.4	40.5
June	99.1	127.3	68.8	83.8	67.6	73.7	37.9
July	100.3	139.1	72.2	80.6	70.7	75.6	38.4
August	100.1	136.1	75.2	79.8	73.4	79.4	41.5
September	100.2	139.1	82.8	NA	81.8	86.7	46.9
October	104.0	140.3	84.8	110.2	81.8	89.1	47.1
November	101.2	^R 138.5	76.9	103.8	80.0	83.9	46.9
December	98.0	134.8	81.2	112.0	87.4	85.7	49.9
Average	94.7	131.6	72.2	98.0	73.6	76.2	41.9

^a See Note 5 at end of section.

R=Revised. NA=Not available.

Notes: • Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. Sales for resale are shown in Table 9.6; they are sales made to purchasers other than ultimate consumers. • Values for the current month are preliminary. • Prices

prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 2.

Table 9.8a No. 2 Distillate Prices to Residences: Northeastern States
(Cents per Gallon, Excluding Taxes)

	Maine	New Hampshire	Vermont	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania
1978 Average	48.6	50.3	50.8	48.8	50.7	50.1	50.1	49.6	48.8
1979 Average	68.8	72.5	72.5	70.9	72.8	72.0	71.2	71.0	69.8
1980 Average	96.3	100.4	101.5	97.8	101.1	98.3	98.2	97.9	96.4
1981 Average	120.4	123.7	125.4	121.3	123.8	121.7	123.2	121.5	118.1
1982 Average	115.5	117.4	120.1	117.6	120.1	118.3	120.5	117.4	113.7
1983 Average	102.8	104.1	112.9	109.1	110.5	109.1	112.1	107.9	105.8
1984 Average	103.9	108.4	111.9	111.6	111.4	112.1	115.5	111.0	107.9
1985 Average	99.7	102.4	107.7	107.0	106.7	108.0	111.3	105.9	102.3
1986 Average	74.4	75.9	86.6	82.1	82.8	89.0	91.1	90.2	81.4
1987 Average	74.7	76.5	81.1	80.6	82.5	83.4	85.2	84.3	76.9
1988 Average	77.7	78.2	82.6	82.1	83.6	85.3	86.3	84.8	77.8
1989 Average	89.4	89.3	90.5	92.6	93.9	92.9	95.8	91.8	85.1
1990 Average	98.9	102.8	107.0	108.4	108.6	109.8	112.5	108.7	102.6
1991 Average	96.0	91.6	101.9	103.0	99.9	106.2	111.3	104.0	99.7
1992 Average	87.1	85.6	92.1	92.5	91.2	94.7	102.8	93.9	89.0
1993 Average	82.6	82.8	90.4	89.7	89.3	91.9	100.1	92.4	86.3
1994 Average	81.8	79.2	87.6	87.0	88.5	89.0	96.6	89.5	85.7
1995 Average	78.7	77.9	85.3	84.4	87.4	86.4	95.5	88.8	82.6
1996 Average	97.2	94.0	96.9	97.6	98.6	98.6	106.3	102.4	95.3
1997 Average	94.2	94.2	98.7	96.0	98.9	96.3	106.5	103.3	95.0
1998 Average	78.8	78.8	87.3	81.8	86.8	83.1	94.8	89.2	81.4
1999 Average	81.3	77.0	85.4	83.6	85.8	85.2	96.9	91.3	81.5
2000									
January	126.4	120.9	117.2	123.7	118.8	124.5	141.6	134.7	117.3
February	140.5	140.3	133.2	139.6	132.8	141.5	162.9	154.7	133.1
March	120.8	123.0	118.5	116.8	114.8	120.7	135.8	131.6	114.3
April	113.5	116.4	114.0	111.7	112.2	114.0	127.4	124.8	108.2
May	115.1	117.9	112.3	114.3	114.2	114.4	127.5	125.2	106.5
June	117.1	117.0	117.3	112.9	114.2	113.7	128.1	125.0	106.2
July	118.9	117.9	119.5	111.6	112.6	114.1	127.7	124.8	104.0
August	124.8	121.4	122.2	117.4	115.1	115.8	129.0	128.0	109.7
September	136.2	132.3	133.8	128.7	132.6	129.4	140.5	139.8	123.2
October	138.9	131.5	130.9	132.1	134.0	134.5	147.2	144.2	127.2
November	141.1	135.8	133.4	135.1	138.3	137.2	150.3	149.9	131.3
December	137.3	136.4	132.7	137.0	136.9	139.2	152.2	147.2	135.1
Average	129.7	128.1	125.5	127.3	125.9	129.1	144.2	140.4	122.4
2001									
January	132.5	134.9	132.8	132.7	133.9	136.8	147.7	146.3	133.1
February	129.5	133.3	130.8	129.5	129.4	132.0	143.5	140.6	127.9
March	125.6	130.1	129.1	125.6	125.5	129.0	139.9	133.8	121.5
April	122.9	126.7	128.0	124.3	124.1	127.2	139.6	131.8	116.8
May	121.8	124.5	124.8	122.7	122.4	125.1	137.3	130.8	111.1
June	121.6	125.5	125.0	119.8	121.6	119.1	133.2	128.7	105.7
July	117.8	121.2	122.7	113.8	117.2	113.1	126.9	123.2	101.0
August	115.2	118.9	121.9	113.5	118.0	110.8	127.2	118.3	103.6
September	118.7	118.4	123.0	115.9	119.7	116.2	129.1	120.0	104.9
October	114.6	117.6	121.1	113.4	117.4	113.4	125.9	118.0	102.6
November	110.2	114.8	118.9	109.9	113.9	109.2	123.3	114.2	101.2
December	108.7	114.2	117.3	106.9	111.3	107.4	119.8	112.2	99.7
Average	121.7	125.6	126.1	122.1	123.6	123.9	136.3	131.4	115.9
2002									
January	109.6	113.2	117.4	107.5	112.1	108.4	121.7	113.9	103.3
February	108.7	114.1	117.2	106.9	110.9	106.7	121.0	113.5	100.7
March	112.2	109.6	116.2	111.0	107.7	109.3	119.0	117.0	104.8
April	111.8	108.8	117.6	113.8	112.0	109.7	120.0	120.0	106.2
May	111.8	108.4	118.1	113.6	109.8	109.2	117.6	118.9	104.2
June	110.9	104.7	114.3	110.6	105.7	110.5	115.9	116.5	102.9
July	109.7	101.3	111.5	111.1	105.6	106.7	114.4	113.4	95.3
August	107.7	102.2	112.1	112.4	107.8	107.6	NA	115.2	95.8
September	111.3	106.0	115.0	113.7	110.6	111.1	116.6	120.7	101.8
October	116.6	111.4	118.0	116.2	110.5	112.4	119.4	123.7	106.6
November	^R 115.8	113.4	118.0	118.5	114.4	115.5	125.0	127.6	^R 110.6
December	119.3	118.1	120.6	125.1	120.8	121.3	130.1	134.7	116.8
Average	112.9	111.8	117.2	114.1	112.4	111.8	121.8	121.8	106.3

R=Revised. NA=Not available.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates.

See Note 6 at end of section.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 18.

Table 9.8b No. 2 Distillate Prices to Residences: Selected South Atlantic and Midwestern States

(Cents per Gallon, Excluding Taxes)

	Delaware	District of Columbia	Maryland	Virginia	West Virginia	Ohio	Michigan	Indiana	Illinois	Wisconsin	Minnesota
1978 Average	47.8	50.7	49.2	49.1	46.2	47.4	47.9	48.5	46.5	44.7	47.8
1979 Average	68.2	74.2	70.1	70.4	65.1	68.6	70.9	72.7	68.8	67.3	72.4
1980 Average	95.4	102.6	97.9	98.5	92.2	91.9	97.8	99.6	95.8	91.5	99.9
1981 Average	117.3	127.4	121.4	120.5	115.0	113.2	118.3	118.5	114.9	109.1	118.4
1982 Average	111.3	124.5	117.1	117.7	109.3	110.2	113.9	114.3	110.9	107.8	115.1
1983 Average	106.0	117.0	110.3	108.7	101.0	101.3	106.4	100.7	100.4	101.2	103.1
1984 Average	109.6	118.7	113.5	110.5	102.1	102.1	105.0	103.1	100.1	101.0	104.1
1985 Average	104.6	114.3	108.8	106.3	98.0	99.7	102.1	99.1	97.5	98.3	101.9
1986 Average	85.0	93.1	91.4	86.6	74.6	77.7	81.0	74.8	NA	75.6	79.2
1987 Average	79.3	91.8	86.6	79.5	76.4	74.7	77.5	75.4	79.8	75.1	74.6
1988 Average	80.1	91.6	87.0	80.5	74.2	74.7	77.5	75.4	77.6	73.9	73.5
1989 Average	88.2	98.6	93.8	87.0	83.0	81.6	85.3	83.2	80.9	81.1	82.4
1990 Average	105.8	107.8	111.9	110.6	99.1	98.1	100.9	99.3	96.1	94.2	101.4
1991 Average	99.7	112.2	108.4	101.1	93.4	91.0	94.2	91.8	92.7	89.5	91.1
1992 Average	92.3	105.7	100.0	92.8	86.4	83.6	87.2	81.2	87.7	81.6	82.6
1993 Average	89.9	104.5	98.1	89.3	85.6	84.0	87.2	81.0	84.4	82.3	83.2
1994 Average	89.4	100.0	95.0	85.3	80.9	81.2	86.3	81.2	78.4	81.1	80.6
1995 Average	87.0	101.0	93.6	84.4	81.5	80.8	86.0	81.6	78.5	81.2	80.1
1996 Average	98.4	117.8	106.3	95.2	96.0	92.1	97.7	91.2	89.3	89.9	90.9
1997 Average	98.4	117.4	105.7	94.8	96.2	91.3	94.2	86.5	87.0	93.3	89.9
1998 Average	85.8	102.2	90.2	85.6	81.8	76.7	80.4	74.8	73.5	80.1	73.8
1999 Average	88.4	101.1	90.7	87.0	78.9	82.0	88.3	79.3	71.6	84.7	77.4
2000 January	124.2	W	123.6	120.9	116.1	110.5	NA	109.6	100.6	105.7	101.9
February	137.3	W	141.5	131.9	130.6	120.1	NA	116.1	109.3	110.2	109.8
March	120.6	W	126.3	122.4	119.7	116.7	NA	117.6	108.3	111.8	109.5
April	115.2	W	119.9	114.5	110.3	111.2	NA	112.4	104.6	110.2	107.5
May	109.6	W	119.6	111.9	110.0	111.9	NA	108.6	98.6	109.8	110.2
June	103.7	W	115.1	109.2	109.7	112.5	NA	115.1	96.0	109.9	112.8
July	103.7	W	115.6	108.2	110.2	110.4	NA	112.3	NA	105.3	111.4
August	112.8	W	120.4	117.7	117.1	111.8	NA	118.8	106.8	114.6	110.6
September	124.9	W	133.3	130.2	130.3	129.5	NA	134.0	124.4	127.8	122.4
October	129.7	W	141.5	133.0	132.7	133.7	NA	135.0	123.1	131.8	128.4
November	139.7	W	147.4	135.8	136.6	134.0	NA	131.5	124.2	130.1	128.5
December	140.0	W	150.1	137.0	137.4	132.4	NA	127.0	123.2	130.2	125.7
Average	127.0	W	135.1	126.9	125.1	122.0	NA	120.7	109.5	117.1	115.6
2001 January	139.8	W	150.3	141.4	137.1	131.7	NA	127.0	122.7	128.1	124.9
February	137.6	W	146.5	133.4	127.3	126.9	NA	123.1	118.9	126.6	120.4
March	129.3	W	140.8	122.8	119.1	117.4	NA	114.1	115.7	120.1	114.7
April	123.2	W	137.2	117.4	117.1	117.5	NA	112.3	NA	119.3	118.0
May	113.3	W	128.7	112.8	113.7	120.5	NA	117.8	111.3	121.9	118.7
June	110.8	W	123.2	112.7	112.5	112.9	NA	109.8	105.6	117.1	114.0
July	102.0	W	116.9	106.6	104.5	104.7	NA	102.9	102.2	110.6	106.4
August	101.5	W	117.0	107.6	109.3	110.4	NA	111.7	111.8	117.6	115.4
September	106.2	W	120.0	110.4	112.0	119.1	136.4	118.0	118.3	122.1	116.3
October	NA	W	117.7	106.9	104.3	108.4	122.1	108.3	109.5	112.8	105.5
November	110.3	W	117.1	102.4	NA	100.8	112.0	98.2	98.2	106.1	99.9
December	108.8	W	114.3	97.8	95.5	95.0	108.3	93.4	91.7	96.5	91.0
Average	123.4	143.1	134.2	120.2	113.9	116.0	NA	113.3	112.1	118.0	112.2
2002 January	114.2	W	115.8	101.7	96.8	94.2	102.6	91.9	86.7	96.8	91.5
February	111.0	W	115.1	99.9	95.7	94.3	102.4	95.7	84.2	95.6	91.9
March	113.0	W	117.6	101.6	99.5	101.3	103.6	93.8	83.9	100.3	94.0
April	117.3	129.2	119.1	99.9	101.2	103.1	106.5	94.9	84.6	105.1	101.9
May	106.2	NA	114.2	96.4	102.0	101.4	106.3	W	82.9	106.5	100.7
June	100.5	111.5	111.5	96.4	101.6	97.4	107.1	W	81.0	101.7	101.8
July	98.5	W	109.4	97.3	101.7	95.8	107.4	W	NA	103.7	101.8
August	99.7	W	110.9	99.5	102.5	100.5	108.0	W	NA	103.3	105.3
September	111.2	W	116.4	102.5	107.2	107.1	113.9	W	101.2	111.7	111.0
October	114.8	129.2	120.1	108.0	111.2	114.2	121.3	W	106.7	118.0	116.6
November	^R 119.8	W	124.7	^R 110.3	^R 113.9	^R 115.6	^R 122.5	^R 114.1	^R 112.6	120.2	^R 114.9
December	129.3	W	131.3	119.0	121.4	119.4	123.4	121.0	NA	120.7	116.9
Average	116.5	W	120.1	105.0	105.4	105.6	110.9	102.5	98.8	107.2	105.2

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates.

See Note 6 at end of section.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 18.

Table 9.8c No. 2 Distillate Prices to Residences: Selected Western States and U.S. Average

(Cents per Gallon, Excluding Taxes)

	Idaho	Washington	Oregon	Alaska	U.S. Average
1978 Average	43.6	48.6	45.8	53.2	49.0
1979 Average	62.1	69.7	68.0	68.2	70.4
1980 Average	91.6	100.8	97.3	97.8	97.4
1981 Average	110.4	116.5	111.4	118.0	119.4
1982 Average	110.4	117.6	111.6	117.4	116.0
1983 Average	101.8	109.0	103.6	108.8	107.8
1984 Average	98.5	102.6	99.3	106.9	109.1
1985 Average	97.2	101.1	97.1	108.3	105.3
1986 Average	73.8	77.5	70.4	94.9	83.6
1987 Average	68.8	79.5	72.5	86.5	80.3
1988 Average	68.8	78.5	70.9	86.9	81.3
1989 Average	77.8	87.4	80.2	96.4	90.0
1990 Average	97.4	102.9	97.0	110.1	106.3
1991 Average	95.1	101.6	93.3	105.0	101.9
1992 Average	85.7	94.0	87.6	94.1	93.4
1993 Average	86.2	99.9	91.8	96.1	91.1
1994 Average	78.9	95.0	88.7	86.5	88.4
1995 Average	83.9	96.2	89.4	83.4	86.7
1996 Average	93.3	108.0	98.9	90.9	98.9
1997 Average	95.3	113.9	103.1	97.3	98.4
1998 Average	78.4	97.8	86.1	85.2	85.2
1999 Average	76.2	106.5	93.8	96.6	87.6
2000 January	93.5	127.5	115.6	122.0	125.8
February	97.7	134.0	124.9	126.3	142.5
March	109.2	145.4	136.1	131.3	123.9
April	105.9	133.8	127.7	130.3	117.7
May	96.6	132.0	121.2	124.7	117.2
June	NA	128.1	122.8	120.4	116.3
July	109.6	NA	126.4	121.8	115.0
August	114.1	133.3	131.3	130.8	119.0
September	133.3	156.6	154.4	140.8	132.0
October	140.8	162.8	156.0	NA	136.6
November	140.5	160.5	150.6	154.1	139.7
December	128.4	162.5	155.8	152.9	141.1
Average	117.0	144.5	136.8	133.7	131.1
2001 January	120.8	144.0	134.3	NA	138.6
February	114.0	145.4	134.4	147.5	134.3
March	109.4	141.9	129.7	NA	129.4
April	110.1	141.8	130.3	NA	127.3
May	114.0	144.6	133.8	145.6	124.9
June	111.9	141.3	130.0	140.6	120.3
July	100.3	122.7	115.4	131.8	113.6
August	101.2	119.0	116.8	124.6	114.3
September	107.7	127.9	120.6	NA	117.5
October	100.2	NA	111.0	131.1	114.2
November	90.2	118.1	103.6	125.7	111.0
December	75.8	110.2	95.0	119.9	108.0
Average	103.8	133.6	121.1	137.7	125.0
2002 January	74.7	109.2	93.6	114.0	109.7
February	74.5	108.6	94.3	114.5	108.6
March	79.2	118.2	104.4	110.4	109.9
April	87.1	124.5	108.0	111.8	111.2
May	82.5	125.3	107.6	108.4	108.9
June	79.1	122.2	104.3	105.8	104.9
July	87.5	118.5	NA	102.6	102.9
August	89.9	117.0	108.2	108.1	103.8
September	96.6	124.2	115.6	110.0	109.9
October	102.6	128.6	118.6	110.6	114.6
November	^R 103.2	^R 131.3	119.4	113.0	117.9
December	102.8	130.9	118.1	114.7	123.6
Average	89.0	121.4	106.3	109.4	112.8

R=Revised. NA=Not available.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration (EIA) estimates.

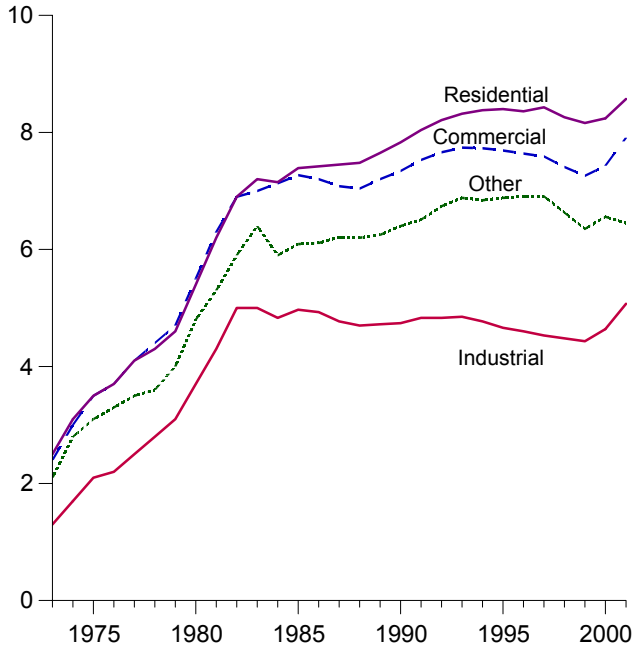
See Note 6 at end of section.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

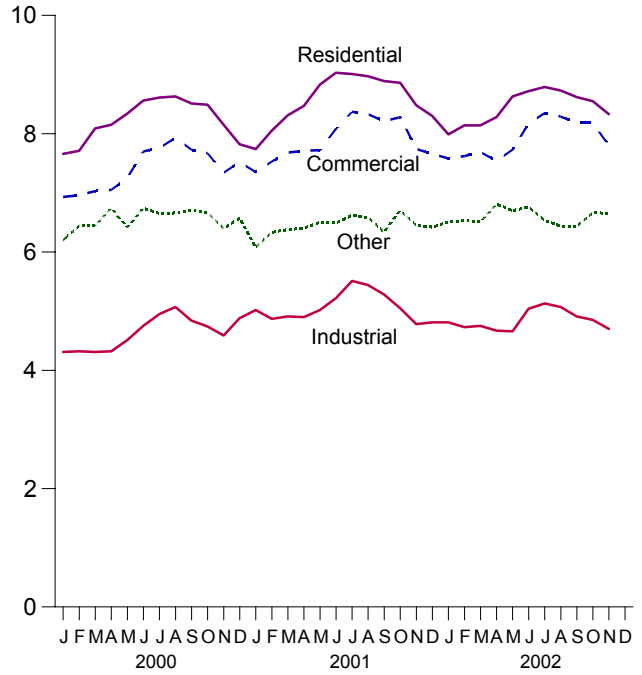
Source: EIA, *Petroleum Marketing Monthly*, March 2003, Table 18.

Figure 9.2 Retail Prices of Electricity Sold by Electric Utilities
(Cents per Kilowatthour)

By Sector, 1973-2001



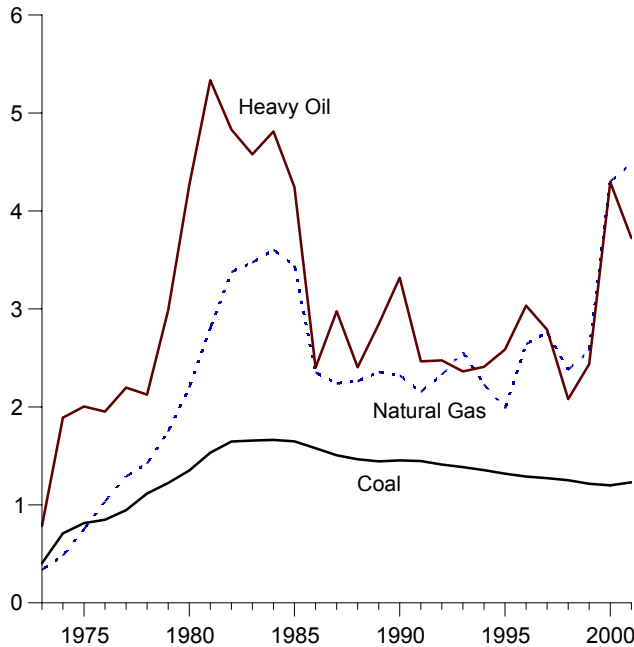
By Sector, Monthly



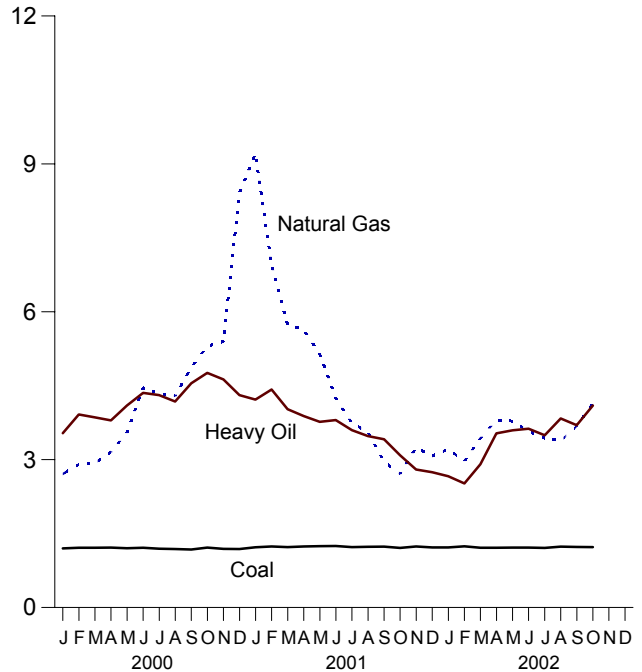
Note: Excludes taxes.
Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.
Source: Table 9.9.

Figure 9.3 Cost of Fossil-Fuel Receipts at Steam-Electric Utility Plants
(Dollars per Million Btu)

Costs, 1973-2001



Costs, Monthly



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.
Source: Table 9.10.

Table 9.9 Retail Prices of Electricity Sold by Electric Utilities
(Cents per Kilowatthour, Excluding Taxes)

	Residential	Commercial	Industrial	Other ^a	Total
1973 Average	2.5	2.4	1.3	2.1	2.0
1974 Average	3.1	3.0	1.7	2.8	2.5
1975 Average	3.5	3.5	2.1	3.1	2.9
1976 Average	3.7	3.7	2.2	3.3	3.1
1977 Average	4.1	4.1	2.5	3.5	3.4
1978 Average	4.3	4.4	2.8	3.6	3.7
1979 Average	4.6	4.7	3.1	4.0	4.0
1980 Average	5.4	5.5	3.7	4.8	4.7
1981 Average	6.2	6.3	4.3	5.3	5.5
1982 Average	6.9	6.9	5.0	5.9	6.1
1983 Average	7.2	7.0	5.0	6.4	6.3
1984 Average	7.15	7.13	4.83	5.90	6.25
1985 Average	7.39	7.27	4.97	6.09	6.44
1986 Average	7.42	7.20	4.93	6.11	6.44
1987 Average	7.45	7.08	4.77	6.21	6.37
1988 Average	7.48	7.04	4.70	6.20	6.35
1989 Average	7.65	7.20	4.72	6.25	6.45
1990 Average	7.83	7.34	4.74	6.40	6.57
1991 Average	8.04	7.53	4.83	6.51	6.75
1992 Average	8.21	7.66	4.83	6.74	6.82
1993 Average	8.32	7.74	4.85	6.88	6.93
1994 Average	8.38	7.73	4.77	6.84	6.91
1995 Average	8.40	7.69	4.66	6.88	6.89
1996 Average	8.36	7.64	4.60	6.91	6.86
1997 Average	8.43	7.59	4.53	6.91	6.85
1998 Average	8.26	7.41	4.48	6.63	6.74
1999 Average	8.16	7.26	4.43	6.35	6.66
2000 January	7.66	6.93	4.31	6.20	6.40
February	7.71	6.96	4.32	6.44	6.39
March	8.09	7.03	4.31	6.45	6.44
April	8.15	7.05	4.32	6.74	6.43
May	8.34	7.25	4.51	6.42	6.64
June	8.56	7.70	4.75	6.74	7.06
July	8.61	7.76	4.95	6.65	7.25
August	8.63	7.93	5.07	6.66	7.34
September	8.51	7.73	4.84	6.71	7.11
October	8.49	7.67	4.74	6.66	6.94
November	8.15	7.34	4.59	6.40	6.66
December	7.82	7.52	4.88	6.57	6.85
Average	8.24	7.43	4.64	6.56	6.81
2001 January	7.74	7.35	5.02	6.08	6.85
February	8.05	7.53	4.87	6.33	6.88
March	8.31	7.68	4.91	6.38	7.00
April	8.47	7.71	4.90	6.40	7.01
May	8.83	7.72	5.02	6.50	7.15
June	9.03	8.08	5.22	6.49	7.51
July	9.01	8.37	5.51	6.62	7.80
August	8.97	8.33	5.44	6.58	7.77
September	8.89	8.21	5.28	6.34	7.56
October	8.86	8.28	5.05	6.70	7.40
November	8.48	7.74	4.78	6.45	6.99
December	8.30	7.66	4.81	6.42	7.02
Average	8.57	7.91	5.07	6.45	7.26
2002 January	7.99	7.58	4.81	6.51	6.98
February	8.14	7.62	4.73	6.53	6.96
March	8.14	7.69	4.75	6.51	6.97
April	8.28	7.54	4.67	6.81	6.90
May	8.63	7.73	4.66	6.70	7.06
June	8.72	8.17	5.04	6.76	7.45
July	8.79	8.35	5.13	6.53	7.65
August	8.73	8.29	5.07	6.44	7.57
September	8.62	8.18	4.91	6.43	7.39
October	8.55	8.18	4.85	6.67	7.26
November	8.33	7.80	4.70	6.65	7.00
11-Month Average	8.46	7.95	4.85	6.59	7.22
2001 11-Month Average	8.60	7.93	5.09	6.45	7.28
2000 11-Month Average	8.28	7.42	4.62	6.56	6.81

^a Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Notes: • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of electric utility billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. See Note 7

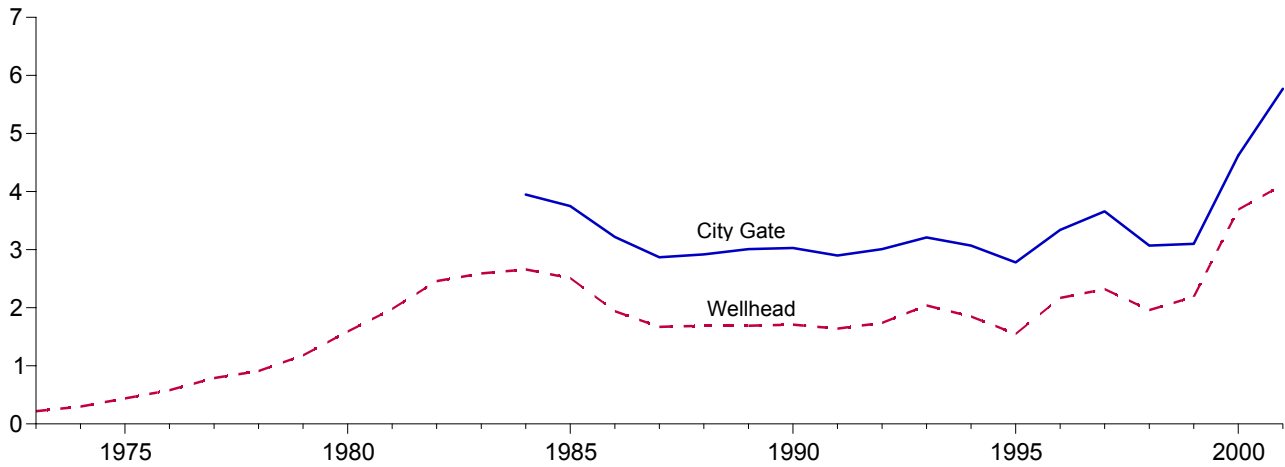
at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

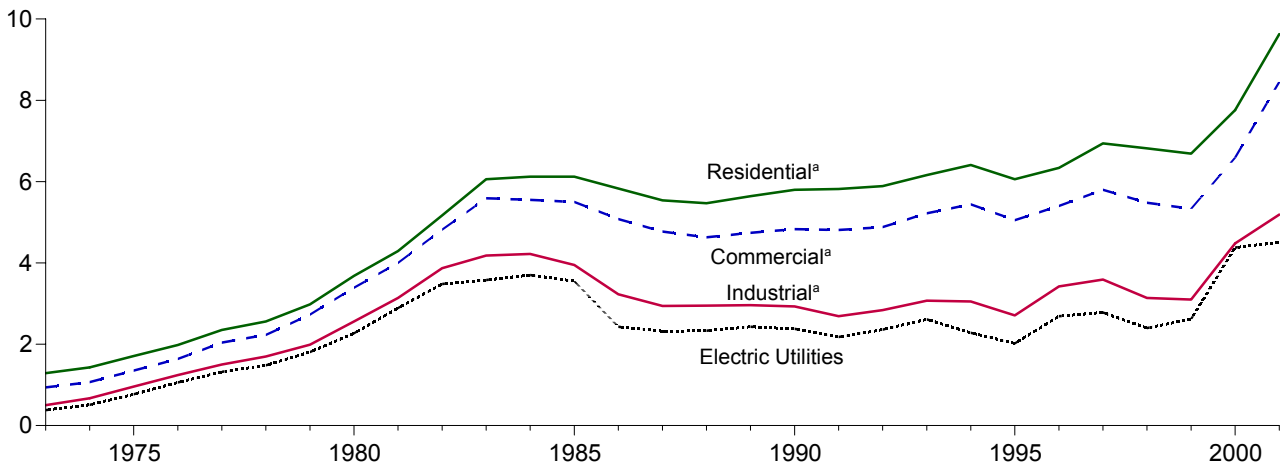
Sources: See end of section.

Figure 9.4 Natural Gas Prices
(Dollars per Thousand Cubic Feet)

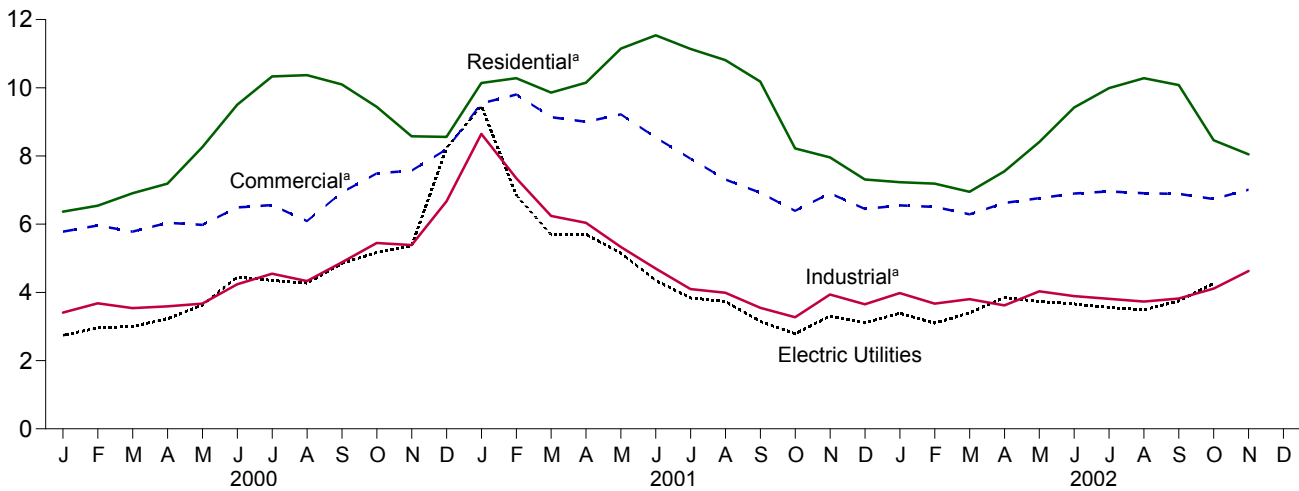
Selected Prices, 1973-2001



Delivered to Consumers, 1973-2001



Delivered to Consumers, Monthly



^aIncludes taxes.

Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Source: Table 9.11.

Table 9.11 Natural Gas Prices

(Prices: Dollars per Thousand Cubic Feet; Share of Volume Delivered: Percentage)

	Wellhead	City Gate	Delivered to Consumers ^{a,b}					Electric Utilities ^d
			Residential ^c	Commercial		Industrial		
				Price ^c	Share of Total Volume Delivered	Price ^c	Share of Total Volume Delivered	
1973 Average	0.22	NA	1.29	0.94	NA	0.50	NA	0.38
1974 Average .....	.30	NA	1.43	1.07	NA	.67	NA	.51
1975 Average .....	.44	NA	1.71	1.35	NA	.96	NA	.77
1976 Average .....	.58	NA	1.98	1.64	NA	1.24	NA	1.06
1977 Average .....	.79	NA	2.35	2.04	NA	1.50	NA	1.32
1978 Average .....	.91	NA	2.56	2.23	NA	1.70	NA	1.48
1979 Average	1.18	NA	2.98	2.73	NA	1.99	NA	1.81
1980 Average	1.59	NA	3.68	3.39	NA	2.56	NA	2.27
1981 Average	1.98	NA	4.29	4.00	NA	3.14	NA	2.89
1982 Average	2.46	NA	5.17	4.82	NA	3.87	85.1	3.48
1983 Average	2.59	NA	6.06	5.59	NA	4.18	80.7	3.58
1984 Average	2.66	3.95	6.12	5.55	NA	4.22	74.7	3.70
1985 Average	2.51	3.75	6.12	5.50	NA	3.95	68.8	3.55
1986 Average	1.94	3.22	5.83	5.08	NA	3.23	59.8	2.43
1987 Average	1.67	2.87	5.54	4.77	93.1	2.94	47.4	2.32
1988 Average	1.69	2.92	5.47	4.63	90.7	2.95	42.6	2.33
1989 Average	1.69	3.01	5.64	4.74	89.1	2.96	36.9	2.43
1990 Average	1.71	3.03	5.80	4.83	86.6	2.93	35.2	2.38
1991 Average	1.64	2.90	5.82	4.81	85.1	2.69	32.7	2.18
1992 Average	1.74	3.01	5.89	4.88	83.2	2.84	30.3	2.36
1993 Average	2.04	3.21	6.16	5.22	83.9	3.07	29.7	2.61
1994 Average	1.85	3.07	6.41	5.44	79.3	3.05	25.5	2.28
1995 Average	1.55	2.78	6.06	5.05	76.7	2.71	24.5	2.02
1996 Average	2.17	3.34	6.34	5.40	77.6	3.42	19.4	2.69
1997 Average	2.32	3.66	6.94	5.80	70.8	3.59	18.1	2.78
1998 Average	1.96	3.07	6.82	5.48	67.0	3.14	16.1	2.40
1999 Average	2.19	3.10	6.69	5.33	66.2	3.10	17.4	2.62
2000 January	2.60	3.27	6.37	5.78	66.5	3.41	18.7	2.74
February	2.73	3.48	6.54	5.96	67.4	3.68	19.4	2.96
March	2.66	3.54	6.91	5.78	62.4	3.54	18.2	3.00
April	2.86	3.72	7.19	6.04	61.2	3.59	18.0	3.23
May	3.04	4.15	8.26	5.98	59.6	3.67	17.0	3.63
June	3.77	5.19	9.50	6.49	56.5	4.24	18.1	4.45
July	3.84	5.20	10.33	6.56	55.5	4.55	17.6	4.35
August	3.73	4.63	10.37	6.09	57.7	4.33	17.1	4.27
September	4.26	5.21	10.10	6.93	56.0	4.88	16.5	4.85
October	4.58	5.66	9.44	7.49	58.5	5.45	16.6	5.17
November	4.40	5.20	8.58	7.57	63.0	5.39	19.8	5.37
December	5.77	6.64	8.56	8.20	67.5	6.67	20.4	8.23
Average	3.69	4.62	7.76	6.59	62.9	4.48	18.1	4.38
2001 January	E 8.06	8.94	10.14	9.54	71.9	8.65	18.3	9.47
February	E 5.84	7.10	10.28	9.80	70.6	7.35	18.0	6.85
March	E 5.15	6.15	9.86	9.14	68.3	6.24	17.1	5.69
April	E 5.21	6.39	10.15	9.00	65.5	6.04	16.5	5.70
May	E 4.56	5.87	11.15	9.22	59.6	5.33	15.3	5.15
June	E 3.88	5.37	11.54	8.54	58.3	4.70	14.8	4.35
July	E 3.39	4.32	11.14	7.92	53.2	4.10	15.8	3.84
August	E 3.23	4.28	10.81	7.31	53.6	3.99	15.3	3.73
September	E 2.55	3.66	10.18	6.92	52.6	3.55	16.1	3.15
October	E 2.40	3.32	8.22	6.39	59.1	3.27	16.1	2.79
November	E 2.74	3.98	7.96	6.91	63.8	3.94	16.7	3.31
December	E 2.38	3.93	7.31	6.45	67.1	3.65	17.2	3.11
Average	E 4.12	5.77	9.63	8.45	64.9	5.19	16.5	4.51
2002 January	E 2.35	4.03	7.23	6.55	66.8	3.98	17.4	3.39
February	E 2.14	3.78	7.19	6.51	65.6	3.67	17.4	3.10
March	E 2.52	3.78	6.95	6.29	65.8	3.80	16.9	3.40
April	E 3.02	4.09	7.55	6.62	61.4	3.62	22.5	3.85
May	E 3.01	4.02	8.41	6.76	57.0	4.03	20.2	3.73
June	E 2.94	4.14	9.42	6.90	R 53.9	3.89	20.7	3.66
July	E 2.89	3.90	9.99	6.96	R 50.3	3.81	18.6	3.56
August	E 2.77	3.59	10.28	6.91	R 49.3	3.73	18.9	3.49
September	E 2.98	4.07	10.08	6.89	R 50.4	3.82	18.2	3.75
October	E 3.35	4.27	8.46	6.74	R 57.4	4.11	17.9	4.26
November	E 3.59	4.65	8.05	7.01	62.5	4.63	19.4	NA
11-Month Average ...	E 2.87	4.03	7.79	6.66	60.8	3.91	18.9	e3.62
2001 11-Month Average ...	E 4.27	6.01	9.97	8.71	64.7	5.34	16.4	e4.67
2000 11-Month Average ...	3.50	4.25	7.58	6.29	62.1	4.24	17.9	e3.99

^a Includes supplemental gaseous fuels.

^b See Note 9 at end of section.

^c Includes taxes.

^d See Note 8 at end of section.

^e The electric utilities year-to-date prices are based on one fewer month than the other year-to-date prices on this table.

R=Revised. NA=Not available. E=Estimate.

Notes: • Prices shown on this page are intended to include all taxes. See Note 9 at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.

Sources: See end of section.

Energy Prices

Note 1. The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the price represented an estimate of the average of posted prices; beginning with February 1976, the price represents an average of actual first purchase prices. The data series was previously called "Actual Domestic Wellhead Price."

Note 2. F.O.B. literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

Note 3. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to April 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

Note 4. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on Energy Information Administration (EIA) Form EIA-14, "Refiners' Monthly Cost Report." Those costs were previously published from data collected on Economic Regulatory Administration (ERA) Form ERA-49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report." Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. The respondents for the two forms are also essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on Form ERA-51, "Transfer Pricing Report," or any crude oil that is not domestic oil. The composite cost is the weighted average of domestic and imported crude oil costs.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on Federal Energy Administration (FEA) Form

FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report," included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

Note 5. Several different series of motor gasoline prices are published in this section. U.S. city average retail prices of motor gasoline are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all Federal, State, and local taxes paid at the time of sale. From 1974-1977, prices were collected in 56 urban areas. From 1978 forward, prices were collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers-about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

Refiner prices of finished motor gasoline for resale and to end users are determined by the EIA in a monthly survey of refiners and gas plant operators (Form EIA-782A). The prices do not include any Federal, State, or local taxes paid at the time of sale. Estimates of prices prior to January 1983 are based on Form FEA-P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices," and also exclude all Federal, State, or local taxes paid at the time of sale. Sales for resale are those made to purchasers who are other-than-ultimate consumers. Sales to end users are sales made directly to the consumer of the product, including bulk consumers (such as agriculture, industry, and utilities) and residential and commercial consumers.

Note 6. Starting in January 1983, Form EIA-782, "Monthly Petroleum Product Sales Report," replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous series were generated for annual data 1978-1982 and for monthly data 1981 and 1982 by estimating the prices that would have been published had Form EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment was made for product and sales type matching and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale and between retail and end user. The resale category continues to include sales among resellers. However, sales to bulk consumers, such as utility, industrial, and commercial accounts previously included in the wholesale category,

are now counted as made to end users. The end-user category continues to include retail sales through company-owned and operated outlets but also includes sales to the bulk consumers such as agriculture, industry, and electric utilities. Additional information may be found in “Estimated Historic Time Series for the EIA-782,” a feature article reprinted from the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

Note 7. Preliminary monthly data are based on submissions from over 250 publicly and privately owned electric utilities reporting on Form EIA-826, “Monthly Electric Utility Sales and Revenue Report With State Distributions.” These utilities are statistically chosen as a cutoff sample from more than 3,000 electric utilities that report annually on Form EIA-861, “Annual Electric Utility Report.” Preliminary annual values are the sum of the monthly revenues divided by the sum of the monthly sales. When final Form EIA-861 annual data become available each year, their ratios to the preliminary Form EIA-826 values are used to derive adjusted final monthly values. Prior to January 1986, only privately owned electric utilities were included in the monthly survey and the sample was chosen using stratification techniques through December 1992.

Note 8. Data for 1973–1982 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974–1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983–1990 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991 forward cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50 megawatts or greater.

Note 9. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all Federal, State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers’ bills are sometimes excluded by the reporting utilities. Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, and electric utility consumers. They do not include the price of natural gas delivered to industrial and commercial consumers on behalf of third parties. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.4. Additional information is available in the EIA *Natural Gas Monthly*, Appendix C.

Table 9.1 Sources **Domestic First Purchase Price**

1973–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, “Crude Petroleum and Petroleum Products” chapter.

1977: Federal Energy Administration (FEA), based on Form FEA-P124, “Domestic Crude Oil Purchaser’s Monthly Report.”

1978 forward: Energy Information Administration (EIA), *Petroleum Marketing Monthly*, March 2003, Table 1.

F.O.B. and Landed Cost of Imports

December 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, “Transfer Pricing Report.”

October–December 1977: EIA, Form FEA-F701-M-0, “Transfer Pricing Report.”

1978 forward: EIA, *Petroleum Marketing Monthly*, March 2003, Table 1.

Refiner Acquisition Cost

1973: EIA estimates. The domestic price was derived by adding estimated transportation costs to the reported domestic first purchase price. The imported price was derived by adding an estimated ocean transport cost to the average “Free Alongside Ship” value published by the U.S. Bureau of the Census.

1974–1976: DOI, BOM, *Minerals Yearbook*, “Crude Petroleum and Petroleum Products” chapter.

1977: January–September, FEA, based on Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report.”

October–December, EIA, based on Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report.”

1978 forward: EIA, *Petroleum Marketing Monthly*, March 2003, Table 1.

Table 9.2 Sources

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, “Transfer Pricing Report.”

October 1977–December 1977: Energy Information Administration (EIA), Form FEA-F701-M-0, “Transfer Pricing Report.”

1978 forward: EIA, *Petroleum Marketing Monthly*, March 2003, Table 24.

Table 9.9 Sources

1973–September 1977: Federal Power Commission (FPC), Form FPC-5, “Monthly Statement of Electric Operating Revenues and Income.”

October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, “Monthly Statement of Electric Operating Revenues and Income.”

March 1980–1982: FERC, Form FERC-5, “Electric Utility Company Monthly Statement.”

1983: Energy Information Administration (EIA), Form EIA-826, “Electric Utility Company Monthly Statement.”

1984–1989: EIA, Form EIA-861, “Annual Electric Utility Report.”

1990 forward: EIA, *Electric Power Monthly*, February 2003, Table 52.

Table 9.10 Sources

1973–July 1977: Federal Power Commission, Form FPC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

June 1977–December 1977: Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

1978 and 1979: Energy Information Administration (EIA), Form FERC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

1980–1989: EIA, *Electric Power Monthly*, April issues.

1990–2001: EIA, *Electric Power Monthly*, February 2003, Table 26.

2002: Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

Table 9.11 Sources

Prices, 1973–1995

Wellhead: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 96.

City Gate, 1984–1987: EIA, *Natural Gas Monthly*, March 1990, Table 4.

City Gate, 1988–1992: EIA, *Natural Gas Monthly*, March 1995, Table 4.

City Gate, 1993–1995: EIA, *Natural Gas Monthly*, December 1999, Table 4.

Delivered to Consumers, 1973–1995: EIA, *Natural Gas Annual 2000*, Table 96.

Prices, 1996 forward

EIA, *Natural Gas Monthly*, February 2003, Table 4.

Share of Total Volume Delivered, Annual

Calculated from EIA, *Natural Gas Annual, Volume 1*, report series, Table 1, “Summary Statistics for Natural Gas in the United States,” as total amount of natural gas delivered to the sector’s consumers minus the amount delivered for the account of others (to derive the amount on system) divided by the total amount delivered to the sector.

Share of Total Volume Delivered, Monthly

EIA, table titled, “Percentage of Total Deliveries Represented by Onsystem Sales, by State,” in the *Natural Gas Monthly* issues as follows:

April 1988–March 1989	Table C-1
April 1989–December 1991	Table 33
January 1992–February 1993	Table 32
March 1993–October 1995	Table 28
November 1995–December 1997	Table 24
January 1998–Present	Table 25

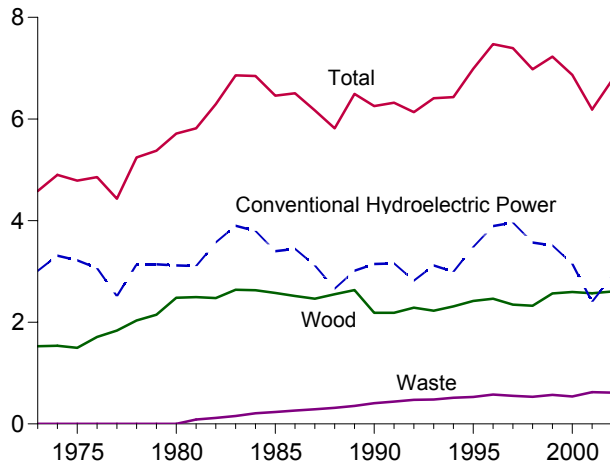
Section 10. Renewable Energy

Beginning with the January 2001 issue of the *Monthly Energy Review (MER)*, previously uncounted portions of renewable energy data (including renewable nonutility generation and all nonelectric energy) were fully incorporated into the *MER* summaries in Sections 1 and 2. The addition of these data into the summaries raised the U.S. energy consumption total by 3 to 4 quadrillion Btu per year in recent years.

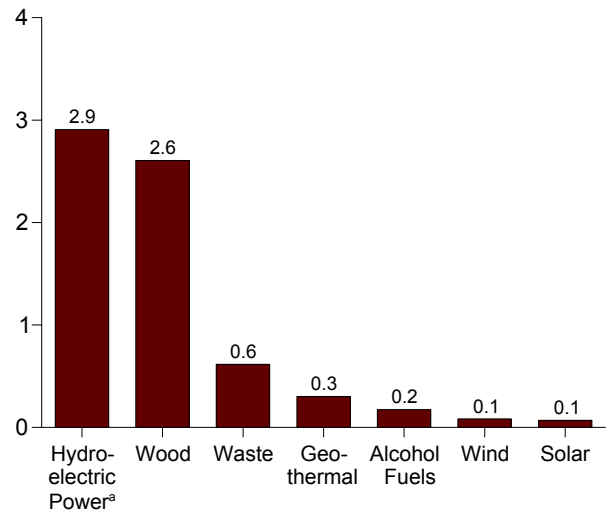
The tables presented in this section organize and summarize the renewable energy data and estimates that are now used in Sections 1 and 2 summary tables. Caution is warranted in using some of the monthly values; in particular, monthly data on Table 10.2 are not available from data collection systems but are estimated instead from daily rates of the annual data.

Figure 10.1 Renewable Energy Consumption
(Quadrillion Btu, Except as Noted)

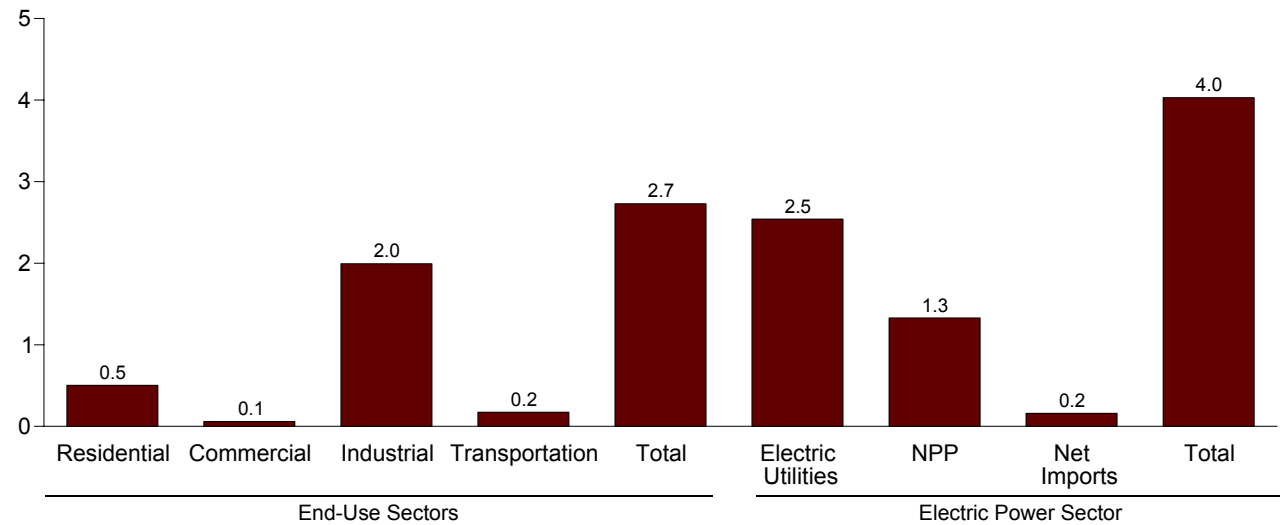
Total and Major Sources, 1973-2002



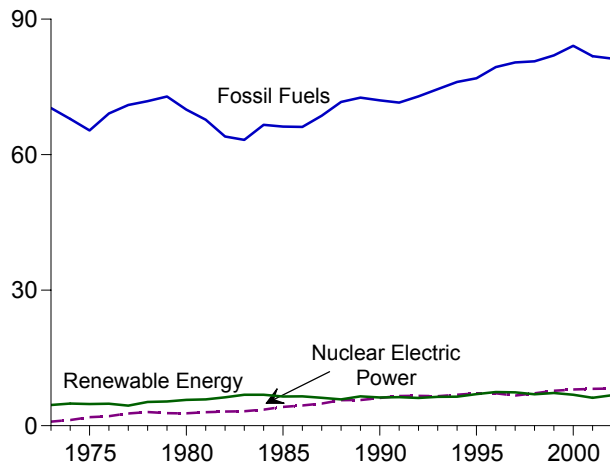
By Source, 2002



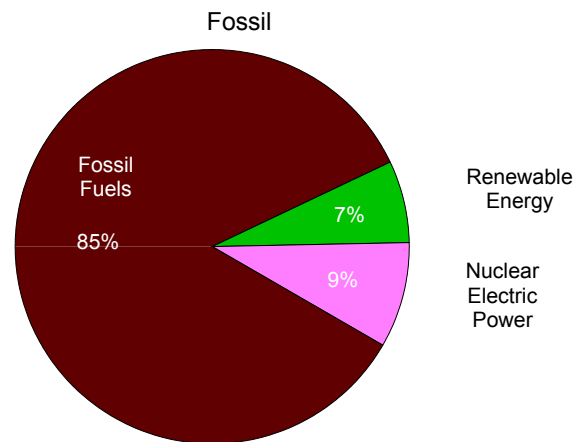
By Sector, 2002



Compared With Other Resources, 1973-2002



As Share of Total Consumption, 2002



NPP=Nonutility Power Producers.
^aConventional hydroelectric power.

Web Page: <http://www.eia.doe.gov/emeu/mer/renew.html>.
Sources: Tables 1.4 and 10.1-10.3b.

Table 10.1 Renewable Energy Consumption by Source
(Trillion Btu)

	Conventional Hydroelectric Power ^{a,b}	Wood ^c	Waste ^d	Alcohol Fuels ^e	Geothermal ^f	Solar ^g	Wind ^h	Total
1973 Total	3,010	1,527	2	NA	43	NA	NA	4,581
1974 Total	3,309	1,538	2	NA	53	NA	NA	4,902
1975 Total	3,219	1,497	2	NA	70	NA	NA	4,788
1976 Total	3,066	1,711	2	NA	78	NA	NA	4,857
1977 Total	2,515	1,837	2	NA	77	NA	NA	4,431
1978 Total	3,141	2,036	1	NA	64	NA	NA	5,243
1979 Total	3,141	2,150	2	NA	84	NA	NA	5,377
1980 Total	E 3,118	2,483	2	NA	110	NA	NA	5,712
1981 Total	E 3,105	2,495	88	7	123	NA	NA	5,818
1982 Total	E 3,572	2,477	119	19	105	NA	NA	6,292
1983 Total	E 3,899	2,639	157	35	129	NA	(s)	6,860
1984 Total	E 3,800	2,629	208	43	165	(s)	(s)	6,845
1985 Total	E 3,398	E 2,576	E 236	E 52	198	(s)	(s)	6,460
1986 Total	E 3,446	E 2,518	E 263	E 60	219	(s)	(s)	6,507
1987 Total	E 3,117	E 2,465	289	69	229	(s)	(s)	6,170
1988 Total	E 2,662	E 2,552	E 315	E 70	217	(s)	(s)	5,817
1989 Total	3,014	E 2,635	354	71	334	59	24	6,492
1990 Total	3,146	E 2,188	408	63	355	63	32	6,254
1991 Total	3,159	E 2,188	440	73	363	66	32	6,320
1992 Total	2,818	E 2,288	473	83	374	67	30	6,134
1993 Total	3,119	2,226	479	97	387	71	31	6,410
1994 Total	2,993	2,314	515	109	391	72	36	6,429
1995 Total	3,481	2,418	531	117	333	73	33	6,987
1996 Total	3,892	2,465	577	84	346	75	35	7,473
1997 Total	3,961	2,348	551	106	322	74	33	7,395
1998 Total	3,569	2,326	533	117	328	74	31	6,977
1999 Total	3,512	2,566	572	122	335	73	46	7,226
2000 January	E 285	E 220	E 45	12	E 27	E 6	4	599
February	E 257	E 207	E 43	10	E 24	E 5	4	550
March	E 298	E 220	E 46	12	E 24	E 6	4	610
April	E 316	E 213	E 44	10	E 25	E 6	5	619
May	E 308	E 217	E 46	12	E 26	E 6	5	620
June	E 286	E 212	E 45	9	E 26	E 6	4	588
July	E 283	E 222	E 46	11	E 27	E 6	4	600
August	E 264	E 220	E 46	12	E 28	E 6	4	581
September	E 217	E 213	E 44	11	E 27	E 6	4	522
October	E 197	E 220	E 46	13	E 28	E 6	5	515
November	E 221	E 213	E 45	13	E 28	E 6	4	530
December	E 219	E 219	E 45	14	E 29	E 6	4	536
Total	E 3,152	E 2,596	E 541	139	E 319	E 70	51	6,868
2001 January	E 208	E 221	E 49	15	E 29	E 5	E 3	530
February	E 191	E 196	E 46	12	E 26	E 5	E 3	479
March	E 225	E 216	E 51	12	E 27	E 6	E 5	543
April	E 205	E 209	E 53	11	E 25	E 6	7	515
May	E 222	E 216	E 53	11	E 24	E 6	E 6	539
June	E 231	E 210	E 52	12	E 25	E 6	7	543
July	E 201	E 219	E 54	11	E 26	E 6	6	525
August	E 211	E 221	E 54	10	E 26	E 6	5	533
September	E 162	E 212	E 52	12	E 26	E 6	4	475
October	E 164	E 220	E 53	16	E 26	E 6	5	489
November	E 167	E 212	E 53	13	E 26	E 6	4	480
December	E 217	E 218	E 55	13	E 27	E 6	4	539
Total	E 2,404	E 2,571	E 624	147	E 312	E 70	E 60	6,189
2002 January	E 240	E 221	E 54	13	E 27	E 6	E 2	562
February	E 222	E 216	E 46	12	E 23	E 5	E 5	529
March	E 229	E 222	E 58	12	E 26	E 6	E 6	558
April	E 268	E 211	E 47	12	E 23	E 6	E 10	578
May	E 287	E 216	E 52	14	E 25	E 6	E 11	611
June	E 307	E 213	E 49	12	E 24	E 6	E 9	620
July	E 286	E 221	E 55	15	E 26	E 6	E 8	617
August	E 235	E 220	E 53	14	E 26	E 6	E 8	563
September	E 187	E 214	E 50	15	E 25	E 6	E 10	506
October	E 183	E 218	E 51	17	E 26	E 6	E 7	507
November	RE 212	RE 212	RE 48	20	RE 25	RE 5	RE 6	R 528
December	E 252	E 221	E 55	19	E 26	E 5	E 2	580
Total	E 2,908	E 2,606	E 616	174	E 303	E 69	84	6,760

^a Hydroelectricity generated by pumped storage is not included in renewable energy.

^b Through 1988, includes all electricity net imports. From 1989, includes only the portion of electricity net imports derived from hydroelectric power.

^c Wood, wood waste, black liquor, red liquor, spent sulfite liquor, wood sludge, peat, railroad ties, and utility poles.

^d 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. For 1999 forward, data also include electricity net generation from batteries, chemicals, hydrogen, pitch, sulfur, and purchased steam.

^e Ethanol blended into motor gasoline.

^f Geothermal electricity net generation, heat pump, and direct use energy. From 1989, also includes electricity imports derived from geothermal energy.

^g Solar thermal and photovoltaic electricity net generation, and solar thermal direct use energy.

^h Wind electricity net generation.

R=Revised. NA=Not available. E=Estimate. (s)=Less than 0.5 trillion Btu.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/renew.html>.

Sources: Tables 10.2, 10.3a, and 10.3b.

Table 10.2 Renewable Energy Consumption by End-Use Sector
(Trillion Btu)

	Residential				Commercial			Industrial ^a				Trans- portation	End-Use Total
	Wood ^b	Geo- thermal ^c	Solar ^d	Total	Wood ^b	Geo- thermal ^c	Total	Wood ^e	Waste ^f	Geo- thermal ^c	Total	Alcohol Fuels ^g	
1973 Total	354	NA	NA	354	7	NA	7	1,165	NA	NA	1,165	NA	1,526
1974 Total	371	NA	NA	371	7	NA	7	1,159	NA	NA	1,159	NA	1,537
1975 Total	425	NA	NA	425	8	NA	8	1,063	NA	NA	1,063	NA	1,497
1976 Total	482	NA	NA	482	9	NA	9	1,220	NA	NA	1,220	NA	1,711
1977 Total	542	NA	NA	542	10	NA	10	1,281	NA	NA	1,281	NA	1,833
1978 Total	622	NA	NA	622	12	NA	12	1,400	NA	NA	1,400	NA	2,034
1979 Total	728	NA	NA	728	14	NA	14	1,405	NA	NA	1,405	NA	2,147
1980 Total	859	NA	NA	859	21	NA	21	1,600	NA	NA	1,600	NA	2,480
1981 Total	869	NA	NA	869	21	NA	21	1,602	87	NA	1,689	7	2,586
1982 Total	937	NA	NA	937	22	NA	22	1,516	118	NA	1,634	19	2,612
1983 Total	925	NA	NA	925	22	NA	22	1,690	155	NA	1,845	35	2,827
1984 Total	923	NA	NA	923	22	NA	22	1,679	204	NA	1,883	43	2,871
1985 Total	899	NA	NA	899	24	NA	24	1,645	230	NA	1,875	52	2,850
1986 Total	876	NA	NA	876	27	NA	27	1,610	256	NA	1,866	60	2,829
1987 Total	852	NA	NA	852	29	NA	29	1,576	282	NA	1,858	69	2,808
1988 Total	885	NA	NA	885	32	NA	32	1,625	308	NA	1,933	70	2,920
1989 Total	918	5	53	976	34	3	37	1,394	250	2	1,646	71	2,729
1990 Total	581	6	56	642	37	3	40	1,254	271	2	1,527	63	2,272
1991 Total	613	6	58	677	39	3	42	1,190	275	2	1,467	73	2,259
1992 Total	645	6	60	711	42	3	45	1,233	289	2	1,525	83	2,365
1993 Total	548	7	62	616	44	3	47	1,255	288	2	1,546	97	2,307
1994 Total	537	6	64	607	45	4	49	1,342	318	3	1,663	109	2,428
1995 Total	596	7	65	667	45	5	50	1,402	322	3	1,727	117	2,561
1996 Total	595	7	66	668	49	5	54	1,441	363	3	1,807	84	2,612
1997 Total	433	7	65	506	47	6	53	1,513	338	3	1,854	106	2,518
1998 Total	387	8	65	459	47	7	54	1,564	312	3	1,879	117	2,509
1999 Total	414	8	64	486	51	7	58	1,711	291	4	2,007	122	2,673
2000 January	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	12	228
February	A 34	A 1	A 5	A 40	A 4	A 1	A 5	A 135	A 23	A (s)	A 158	10	212
March	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	12	228
April	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 139	A 23	A (s)	A 163	10	220
May	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	12	228
June	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 139	A 23	A (s)	A 163	9	218
July	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	11	227
August	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	12	229
September	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 139	A 23	A (s)	A 163	11	221
October	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	13	230
November	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 139	A 23	A (s)	A 163	13	223
December	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 144	A 24	A (s)	A 169	14	230
Total	E 433	E 9	E 62	E 503	E 52	E 8	E 60	E 1,702	E 287	E 4	E 1,993	139	2,695
2001 January	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	15	232
February	A 33	A 1	A 5	A 39	A 4	A 1	A 5	A 131	A 22	A (s)	A 153	12	208
March	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	12	229
April	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	11	221
May	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	11	228
June	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	12	222
July	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	11	228
August	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	10	227
September	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	12	222
October	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	16	233
November	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	13	223
December	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	13	230
Total	E 433	E 9	E 62	E 503	E 52	E 8	E 60	E 1,702	E 287	E 4	E 1,993	147	2,703
2002 January	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	13	230
February	A 33	A 1	A 5	A 39	A 4	A 1	A 5	A 131	A 22	A (s)	A 153	12	208
March	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	12	229
April	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	12	222
May	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	14	231
June	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	12	223
July	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	15	232
August	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	14	232
September	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	15	225
October	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	17	234
November	A 36	A 1	A 5	A 41	A 4	A 1	A 5	A 140	A 24	A (s)	A 164	20	230
December	A 37	A 1	A 5	A 43	A 4	A 1	A 5	A 145	A 24	A (s)	A 169	19	236
Total	E 433	E 9	E 62	E 503	E 52	E 8	E 60	E 1,702	E 287	E 4	E 1,993	174	2,729

^a Through 1988, includes industrial sector use of wood and waste to produce both useful thermal output and electricity. From 1989, includes the portion of nonutility power producers' use of renewable energy to produce useful thermal output; excludes the portion used to produce electricity, which is included under "Nonutility Power Producers" on Table 10.3b.

^b Wood only.

^c Geothermal heat pump and direct use energy.

^d Solar thermal direct use and photovoltaic energy. Includes small amounts of commercial sector use.

^e Wood, wood waste, black liquor, red liquor, spent sulfite liquor, wood sludge, peat, railroad ties, and utility poles.

^f 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.

^g Ethanol blended into motor gasoline.

NA=Not available. E=Estimate. (s)=Less than 0.5 trillion Btu. I=Interpolated value. A=Apportioned data: monthly estimates for 2000 and 2001 are created by dividing the annual value by the number of days in the year and then multiplying by the number of days in the month; temporary 2002 monthly estimates are created by dividing the 2001 annual value by 365 and multiplying by the number of days in the month.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: <http://www.eia.doe.gov/mer/renew.html>.

Sources: See end of section.

Table 10.3a Renewable Energy Consumption by the Electric Power Sector (Part 1 of 2)
(Trillion Btu)

	Electric Power Sector						
	Electric Utilities						
	Conventional Hydroelectric Power ^a	Wood ^b	Waste ^c	Geothermal ^d	Solar ^e	Wind ^f	Total
1973 Total	2,827	1	2	43	0	NA	2,873
1974 Total	3,143	1	2	53	0	NA	3,199
1975 Total	3,122	(s)	2	70	0	NA	3,194
1976 Total	2,943	1	2	78	0	NA	3,024
1977 Total	2,301	3	2	77	0	NA	2,383
1978 Total	2,905	2	1	64	0	NA	2,973
1979 Total	2,897	3	2	84	0	NA	2,986
1980 Total	2,867	3	2	110	0	NA	2,982
1981 Total	2,725	3	1	123	0	NA	2,852
1982 Total	3,233	2	1	105	0	NA	3,341
1983 Total	3,494	2	2	129	0	(s)	3,627
1984 Total	3,353	5	4	165	(s)	(s)	3,527
1985 Total	2,937	8	7	198	(s)	(s)	3,150
1986 Total	3,038	5	7	219	(s)	(s)	3,270
1987 Total	2,602	8	7	229	(s)	(s)	2,846
1988 Total	2,302	10	8	217	(s)	(s)	2,536
1989 Total	2,765	10	10	197	(s)	(s)	2,983
1990 Total	2,948	8	13	181	(s)	(s)	3,151
1991 Total	2,923	8	14	170	(s)	(s)	3,114
1992 Total	2,521	8	13	169	(s)	(s)	2,712
1993 Total	2,774	9	11	158	(s)	(s)	2,953
1994 Total	2,549	8	13	145	(s)	(s)	2,714
1995 Total	3,056	7	10	99	(s)	(s)	3,173
1996 Total	3,423	8	12	110	(s)	(s)	3,553
1997 Total	3,535	8	13	115	(s)	(s)	3,670
1998 Total	3,195	7	14	109	(s)	(s)	3,325
1999 Total	3,103	7	14	36	(s)	(s)	3,159
2000 January	241	(s)	1	(s)	(s)	(s)	243
February	214	1	1	(s)	(s)	(s)	216
March	254	1	1	(s)	(s)	(s)	256
April	271	1	1	(s)	(s)	(s)	273
May	261	1	1	(s)	(s)	(s)	263
June	239	1	1	(s)	(s)	(s)	241
July	229	1	1	(s)	(s)	(s)	231
August	209	1	1	(s)	(s)	(s)	211
September	169	1	1	(s)	(s)	(s)	171
October	163	1	1	(s)	(s)	(s)	166
November	182	1	1	(s)	(s)	(s)	184
December	187	1	1	(s)	(s)	(s)	189
Total	2,619	7	14	3	(s)	(s)	2,644
2001 January	176	1	1	(s)	(s)	(s)	178
February	166	1	1	(s)	(s)	(s)	168
March	192	1	1	(s)	(s)	(s)	194
April	164	(s)	1	(s)	(s)	(s)	166
May	179	(s)	1	(s)	(s)	(s)	181
June	193	(s)	1	(s)	(s)	(s)	195
July	170	(s)	1	(s)	(s)	(s)	172
August	181	1	1	(s)	(s)	(s)	184
September	147	1	1	(s)	(s)	(s)	149
October	147	(s)	1	(s)	(s)	(s)	149
November	148	(s)	1	(s)	(s)	(s)	150
December	184	(s)	1	(s)	(s)	(s)	186
Total	2,047	6	13	3	(s)	1	2,070
2002 January	209	(s)	1	(s)	(s)	(s)	211
February	191	(s)	1	(s)	(s)	(s)	193
March	195	1	1	(s)	(s)	(s)	197
April	226	(s)	1	(s)	(s)	(s)	227
May	249	(s)	1	(s)	(s)	(s)	251
June	268	(s)	1	(s)	(s)	(s)	269
July	246	(s)	1	(s)	(s)	(s)	247
August	203	1	1	(s)	(s)	(s)	205
September	163	1	1	(s)	(s)	(s)	166
October	158	1	1	(s)	(s)	(s)	161
November	^R 183	^R 1	1	(s)	(s)	(s)	^R 186
December	227	(s)	1	(s)	(s)	(s)	229
Total	2,518	5	13	4	(s)	2	2,542

^a Through 1989, includes hydroelectricity generated by both conventional and pumped storage facilities; from 1990, includes only conventional hydroelectric generation.

^b Wood, wood waste, black liquor, red liquor, spent sulfite liquor, wood sludge, peat, railroad ties, and utility poles.

^c 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.

^d Geothermal electricity net generation.

^e Solar thermal and photovoltaic electricity net generation.

^f Wind electricity net generation.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/renew.html>.

Sources: Tables 7.3 and A6.

Table 10.3b Renewable Energy Consumption by the Electric Power Sector (Part 2 of 2)
(Trillion Btu)

	Electric Power Sector											Electric Power Sector Total
	Nonutility Power Producers ^a						Electricity Trade ^b					
	Hydro-power ^c	Wood ^d	Waste ^e	Geo-thermal ^f	Solar ^g	Wind ^h	Total	Hydropower ^c		Geo-thermal Imports	Total Net Imports	
Imports								Exports				
1973 Total	35	NA	NA	NA	NA	NA	35	175	27	(i)	148	3,056
1974 Total	33	NA	NA	NA	NA	NA	33	161	28	(i)	133	3,365
1975 Total	32	NA	NA	NA	NA	NA	32	117	53	(i)	64	3,291
1976 Total	33	NA	NA	NA	NA	NA	33	114	25	(i)	89	3,146
1977 Total	33	NA	NA	NA	NA	NA	33	210	29	(i)	182	2,597
1978 Total	32	NA	NA	NA	NA	NA	32	220	15	(i)	204	3,209
1979 Total	34	NA	NA	NA	NA	NA	34	233	23	(i)	211	3,230
1980 Total	E 33	NA	NA	NA	NA	NA	E 33	260	43	(i)	217	3,232
1981 Total	E 33	NA	NA	NA	NA	NA	E 33	379	32	(i)	347	3,232
1982 Total	E 33	NA	NA	NA	NA	NA	E 33	343	37	(i)	306	3,680
1983 Total	E 33	NA	NA	NA	NA	NA	E 33	407	35	(i)	372	4,032
1984 Total	E 33	NA	NA	NA	NA	NA	E 33	441	27	(i)	414	3,974
1985 Total	E 33	NA	NA	NA	NA	NA	E 33	479	52	(i)	428	3,611
1986 Total	E 33	NA	NA	NA	NA	NA	E 33	425	50	(i)	375	3,678
1987 Total	E 33	NA	NA	NA	NA	NA	E 33	544	61	(i)	483	3,362
1988 Total	E 33	NA	NA	NA	NA	NA	E 33	401	73	(i)	328	2,897
1989 Total	90	279	94	117	6	24	609	200	40	11	171	3,763
1990 Total	100	308	124	152	7	32	722	99	(s)	11	110	3,982
1991 Total	99	338	151	167	8	32	794	138	(s)	15	153	4,061
1992 Total	97	360	171	174	7	30	838	201	(s)	19	219	3,769
1993 Total	117	370	180	198	9	31	905	238	11	18	246	4,104
1994 Total	135	382	184	205	8	36	951	309	(s)	27	337	4,002
1995 Total	151	369	199	201	8	33	960	291	17	19	293	4,426
1996 Total	169	372	202	207	9	35	994	306	7	14	313	4,861
1997 Total	183	347	200	191	9	33	963	281	37	(s)	244	4,877
1998 Total	150	321	207	201	9	31	918	269	46	1	225	4,468
1999 Total	202	382	E 267	280	9	46	E 1,186	280	73	1	208	4,553
2000 January	23	35	E 20	25	(s)	4	E 107	i24	i3	j(s)	E 21	371
February	19	33	E 19	22	(s)	4	E 98	i26	i2	j(s)	E 24	338
March	23	34	E 20	22	1	4	E 105	i24	i4	j(s)	E 21	382
April	25	33	E 20	23	1	5	E 106	i25	i5	j(s)	E 20	399
May	24	31	E 20	24	1	5	E 105	i29	i5	j(s)	E 24	391
June	23	33	E 20	24	1	4	E 104	i30	i6	j(s)	E 24	370
July	22	36	E 21	25	1	4	E 109	i35	i3	j(s)	E 32	372
August	23	34	E 21	26	1	4	E 108	i36	i3	j(s)	E 33	352
September	22	33	E 20	25	1	4	E 105	i29	i4	j(s)	E 25	301
October	20	34	E 20	26	1	5	E 105	i18	i4	j(s)	E 14	285
November	19	33	E 20	26	1	4	E 103	i24	i4	j(s)	E 20	307
December	21	33	E 20	27	(s)	4	E 105	i23	i12	j(s)	E 12	306
Total	264	401	E 240	295	9	51	E 1,260	325	56	0	269	4,173
2001 January	17	35	E 24	27	E (s)	3	E 106	i21	i8	0	E 14	298
February	18	28	E 23	24	E (s)	3	E 97	i21	i14	0	E 7	271
March	20	30	E 26	25	E (s)	5	E 106	i22	i9	0	E 13	313
April	25	29	E 28	23	E 1	7	E 112	i24	i7	0	E 17	294
May	22	30	E 27	23	E 1	6	E 109	i28	i8	0	E 20	310
June	21	30	E 27	23	E 1	7	E 109	i23	i7	0	E 17	321
July	15	33	E 29	24	E 1	6	E 108	i22	i6	0	E 16	297
August	12	34	E 28	24	E 1	5	E 105	i24	i6	0	E 18	307
September	10	32	E 27	24	E 1	4	E 98	i12	i7	0	E 5	252
October	10	34	E 27	24	E 1	5	E 100	i11	i4	0	E 7	256
November	11	32	E 28	24	E 1	4	E 99	i14	i5	0	E 8	257
December	15	32	E 29	25	E (s)	4	E 106	i20	i3	0	E 17	309
Total	198	379	E 324	288	9	59	E 1,257	244	85	0	159	3,486
2002 January	14	35	E 28	25	E (s)	2	E 104	i21	i4	0	E 17	332
February	18	48	E 23	22	E (s)	5	E 115	i17	i4	0	E 13	321
March	21	36	E 32	24	E (s)	6	E 119	i21	i8	0	E 13	330
April	29	31	E 22	21	E 1	10	E 115	i21	i8	0	E 14	356
May	31	30	E 26	23	E 1	10	E 122	i15	i8	0	E 7	380
June	25	33	E 24	22	E 1	9	E 115	i20	i6	0	E 14	398
July	17	35	E 30	24	E 1	8	E 115	i27	i3	0	E 24	386
August	11	34	E 28	24	E 1	8	E 105	i26	i5	0	E 21	331
September	12	33	E 25	23	E 1	10	E 103	i17	i5	0	E 12	281
October	14	32	E 25	23	E 1	7	E 102	i15	i5	0	E 10	273
November	R 20	R 32	RE 23	R 23	RE 0	R 6	RE 104	i16	i7	0	E 9	R 298
December	18	35	E 30	24	E (s)	1	E 110	i14	i8	0	E 6	345
Total	230	414	E 317	278	E 8	82	E 1,329	230	70	0	159	4,030

^a Includes the portion of nonutility power producers' use of renewable energy to produce electricity; excludes the portion used to produce useful thermal output, which is included in "Industrial" on Table 10.2.

^b Through 1988, all electricity imports and exports are included in "Hydropower." From 1989, includes only electricity imports and exports derived from hydroelectric power or geothermal energy.

^c Conventional hydroelectric power.

^d Wood, wood waste, black liquor, red liquor, spent sulfite liquor, wood sludge, peat, railroad ties, and utility poles.

^e 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. For 1999 forward, data also include electricity net generation from batteries, chemicals, hydrogen, pitch, sulfur, and purchased steam.

^f Geothermal electricity net generation.

^g Solar thermal and photovoltaic electricity net generation.

^h Wind electricity net generation.

ⁱ Included in "Hydropower Imports."

^j 2000 and 2001 monthly data are estimated by allocating the annual values into the months in proportion to each month's share of the year's total electricity imports or exports (see Table 7.1). Monthly 2002 estimates use the 2001 shares.

R=Revised. NA=Not available. E=Estimate. (s)=Less than 0.5 trillion Btu.

Notes: • Totals may not equal sum of components due to independent rounding.

• Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/renew.html>.

Sources: See end of section.

Renewable Energy

Table 10.2 Sources

Wood, Residential

1973–1979: Energy Information Administration (EIA), *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980–1983*, Table ES1.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 1.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of Biofuels Consumption in the United States During 1987*, Table 2.

1988: Value interpolated.

1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 1.

1990–2000: EIA, *Renewable Energy Annual*, annual reports, Table 6. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2001 forward: EIA, Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), estimates.

Wood, Commercial

1973–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980–1983*, Table ES1.

1984–EIA, CNEAF, estimate.

1985–1992: Values interpolated.

1993–2000: EIA, *Renewable Energy Annual*, annual reports, Table 6. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2001 forward: EIA, CNEAF, estimates.

Wood, Industrial

1973–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980–1983*, Table ES1.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 1.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of Biofuels Consumption in the United States During 1987*, Table 2.

1988: Value interpolated.

1989: American Paper Institute, *Fact Sheet on 1990 Energy Use in the U.S. Pulp and Paper Industry* (July 1991), total pulp and paper industry wood consumption, minus nonutility power producers' use of wood to produce electricity (see Table 10.3b).

1990–2000: EIA, *Renewable Energy Annual*, annual reports, Table 6, total industrial wood consumption, minus nonutility power producers' use of wood to produce electricity (see *MER* Table 10.3b). Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2001 forward: EIA, CNEAF, estimates.

Waste, Industrial

1981: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8, total waste consumption, minus electric utilities' use of waste to produce electricity (see Table 10.3a).

1982 and 1983: EIA, CNEAF, estimates for total waste consumption, minus electric utilities' use of waste to produce electricity (see Table 10.3a).

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8, total waste consumption, minus electric utilities' use of waste to produce electricity (see Table 10.3a).

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8, total waste consumption, minus electric utilities' use of waste to produce electricity (see Table 10.3a).

1988: Value interpolated.

1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8, total waste consumption, minus electric utilities' and nonutility power producers' use of waste to produce electricity (see Tables 10.3a and 10.3b).

1990–2000: EIA, *Renewable Energy Annual*, annual reports, Table 6, total waste consumption, minus electric utilities' and nonutility power producers' use of waste to produce electricity (see *MER* Tables 10.3a and 10.3b). Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2001 forward: EIA, CNEAF, estimates.

Alcohol Fuels

1981: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10.

1982 and 1983: EIA, CNEAF, estimates.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10.

1988: Value interpolated.

1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10.

1990: EIA, *Estimates of U.S. Biomass Energy Consumption 1992*, Table D1.

1991: Value interpolated.

1992: EIA, *Estimates of U.S. Biomass Energy Consumption 1992*, Table D1.

1993 forward: EIA, *Petroleum Supply Monthly (PSM)*, Tables 2 and 28, and *Monthly Energy Review (MER)* Table A1. Ten percent of the "Field Production" of "Oxygenated Finished Motor Gasoline" from *PSM* Table 2 is added to the "Refinery Input of Fuel Ethanol" from *PSM* Table 28. The sum is multiplied by the conversion factor of 3.539 million Btu per barrel as shown in the *MER* Table A1.

Geothermal

1989 forward: John Lund, Oregon Institute of Technology Geothermal Center, unpublished data.

Solar

1989–1991: EIA, CNEAF, estimates.

1992–2000: EIA *Renewable Energy Annual*, annual reports, Table 2. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a and 10.2b.

2001 forward: EIA, CNEAF, estimates.

Table 10.3b Sources**Nonutility Power Producers, Hydropower**

1973–1978: Federal Power Commission (FPC), Form FPC-4, “Monthly Power Plant Report,” for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, “Industrial Electric Generating Capacity,” for all other plants; and Table A6.

1979: FPC, Form FPC-4, “Monthly Power Plant Report,” for plants with generating capacity exceeding 10 megawatts, and EIA estimates for all other plants; and Table A6.

1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979; and Table A6.

1989 forward: Tables 7.4 and A6.

Nonutility Power Producers, All Other Fuels

1989 forward: Tables 7.4 and A6.

Electricity Trade

1973–1988: Tables 7.1 and A6.

1989–1991: EIA, Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), estimates.

1992–1999: EIA *Renewable Energy Annual*, annual reports, Table 3. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2b.

2000 forward: EIA, CNEAF, estimates.

Section 11. International Energy

Crude Oil Production. World crude oil production during December 2002 was 67 million barrels per day, down 1.8 million barrels per day from the level in the previous month. World crude oil production during 2002 averaged 67 million barrels per day, down 1.1 million barrels per day, compared with production in 2001.

Organization of Petroleum Exporting Countries (OPEC) production during December 2002 averaged 26 million barrels per day, down by 1.8 million barrels per day from the level during the previous month. OPEC production during 2002 averaged 26 million barrels per day, a 7-percent decrease, compared with production in the previous year. During December 2002, production increased in Algeria by 62 thousand barrels per day; both Iran and Nigeria by 50 thousand barrels per day; the United Arab Emirates by 40 thousand barrels per day; Kuwait by 30 thousand barrels per day; and Qatar by 25 thousand barrels per day. Production decreased in Venezuela by 1.9 million barrels per day; Iraq by 70 thousand barrels per day; Saudi Arabia by 50 thousand barrels per day; Indonesia by 20 thousand barrels per day. Production remained unchanged in Libya.

Among the non-OPEC nations, production during December 2002 increased in Mexico by 189 thousand barrels per day; the United States by 102 thousand barrels per day; Canada by 29 thousand barrels per day; and Egypt by 1 thousand barrels per day. Production decreased in Norway by 97 thousand barrels per day; the United Kingdom by 51 thousand barrels per day; Russia by 32 thousand barrels per day; and China by 8 thousand barrels per day.

Petroleum Consumption. In November 2002, consumption in all Organization for Economic Cooperation and Development (OECD) countries was 48.8 million barrels per day, 1 percent¹ higher than the November 2001 rate. Comparing November rates in 2002 and 2001, consumption was higher in 2002 in Japan (+9 percent); South Korea (+4 percent); the United States and Canada (both +3 percent). The November 2002 consumption rate was lower in Germany (-7 percent); France and Italy (both -6 percent); and the United Kingdom (less than -1 percent), compared with the rate 1 year earlier.

Petroleum Stocks. For all OECD countries, petroleum stocks at the end of November 2002 totaled 3.8 billion barrels, 1 percent¹ lower than the ending stock level in November 2001. Stock levels were higher in November 2002 in Canada (+31 percent) and France (+3 percent). Stock levels were lower in South Korea (-19 percent); Italy (-7 percent); Japan (-6 percent); the United Kingdom (-2 percent); Germany (-1 percent); and the United States (less than -1 percent), and compared with levels 1 year earlier.

Nuclear Electricity Generation. Based on *Nucleonics Week*² information for December 2002, all reporting countries with nuclear capacity generated 231.8 gross terawatt-hours (one terawatt-hour equals 1 billion kilowatt-hours) of nuclear-generated electricity.

As of December 31, 2002, there were 439 operable nuclear generating units in the world.

¹Percentage changes are based on unrounded data.

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Table 11.1a World Crude Oil Production: OPEC Members
(Thousand Barrels per Day)

	Algeria	Indonesia	Iran	Iraq	Kuwait ^a	Libya	Nigeria	Qatar	Saudi Arabia ^a	United Arab Emirates	Venezuela	OPEC ^b
1973 Average	1,097	1,339	5,861	2,018	3,020	2,175	2,054	570	7,596	1,533	3,366	30,629
1974 Average	1,009	1,375	6,022	1,971	2,546	1,521	2,255	518	8,480	1,679	2,976	30,351
1975 Average	983	1,307	5,350	2,262	2,084	1,480	1,783	438	7,075	1,664	2,346	26,771
1976 Average	1,075	1,504	5,883	2,415	2,145	1,933	2,067	497	8,577	1,936	2,294	30,327
1977 Average	1,152	1,686	5,663	2,348	1,969	2,063	2,085	445	9,245	1,999	2,238	30,893
1978 Average	1,231	1,635	5,242	2,563	2,131	1,983	1,897	487	8,301	1,831	2,165	29,464
1979 Average	1,224	1,591	3,168	3,477	2,500	2,092	2,302	508	9,532	1,831	2,356	30,581
1980 Average	1,106	1,577	1,662	2,514	1,656	1,787	2,055	472	9,900	1,709	2,168	26,606
1981 Average	1,002	1,605	1,380	1,000	1,125	1,140	1,433	405	9,815	1,474	2,102	22,481
1982 Average	987	1,339	2,214	1,012	823	1,150	1,295	330	6,483	1,250	1,895	18,778
1983 Average	968	1,343	2,440	1,005	1,064	1,105	1,241	295	5,086	1,149	1,801	17,497
1984 Average	1,014	1,412	2,174	1,209	1,157	1,087	1,388	394	4,663	1,146	1,798	17,442
1985 Average	1,037	1,325	2,250	1,433	1,023	1,059	1,495	301	3,388	1,193	1,677	16,181
1986 Average	945	1,390	2,035	1,690	1,419	1,034	1,467	308	4,870	1,330	1,787	18,275
1987 Average	1,048	1,343	2,298	2,079	1,585	972	1,341	293	4,265	1,541	1,752	18,517
1988 Average	1,040	1,342	2,240	2,685	1,492	1,175	1,450	346	5,086	1,565	1,903	20,324
1989 Average	1,095	1,409	2,810	2,897	1,783	1,150	1,716	380	5,064	1,860	1,907	22,071
1990 Average	1,175	1,462	3,088	2,040	1,175	1,375	1,810	406	6,410	2,117	2,137	23,195
1991 Average	1,230	1,592	3,312	305	190	1,483	1,892	395	8,115	2,386	2,375	23,275
1992 Average	1,214	1,504	3,429	425	1,058	1,433	1,943	423	8,332	2,266	2,371	24,398
1993 Average	1,162	1,511	3,540	512	1,852	1,361	1,960	413	8,198	2,159	2,450	25,119
1994 Average	1,180	1,510	3,618	553	2,025	1,378	1,931	415	8,120	2,193	2,588	25,510
1995 Average	1,202	1,503	3,643	560	2,057	1,390	1,993	442	8,231	2,233	2,750	26,004
1996 Average	1,242	1,547	3,686	579	2,062	1,401	2,001	510	8,218	2,278	2,938	26,461
1997 Average	1,277	1,520	3,664	1,155	2,083	1,446	2,332	649	8,562	2,316	3,315	28,320
1998 Average	1,246	1,518	3,634	2,150	2,085	1,390	2,153	696	8,389	2,345	3,167	28,774
1999 Average	1,202	1,472	3,557	2,508	1,898	1,319	2,130	665	7,833	2,169	2,826	27,579
2000 January	1,195	1,417	3,444	2,215	1,962	1,330	2,010	695	7,863	2,264	2,790	27,185
February	1,195	1,388	3,504	2,595	2,015	1,380	2,060	705	7,865	2,269	2,850	27,826
March	1,195	1,388	3,712	2,215	2,040	1,390	2,080	705	7,865	2,320	2,850	27,760
April	1,235	1,417	3,653	2,655	2,100	1,400	2,140	715	8,100	2,400	2,900	28,715
May	1,245	1,446	3,663	3,055	2,100	1,400	2,110	735	8,200	2,400	2,930	29,284
June	1,255	1,446	3,683	2,565	2,150	1,420	2,140	735	8,250	2,299	2,950	28,893
July	1,255	1,446	3,727	2,525	2,170	1,425	2,180	755	8,390	2,340	2,970	29,184
August	1,265	1,446	3,727	2,995	2,173	1,420	2,160	755	8,823	2,400	2,980	30,144
September	1,255	1,446	3,732	2,875	2,170	1,430	2,110	755	8,975	2,410	2,980	30,139
October	1,275	1,417	3,812	3,005	2,210	1,440	2,210	760	8,800	2,431	3,050	30,410
November	1,270	1,407	3,807	2,815	2,215	1,440	2,260	765	8,900	2,436	3,050	30,365
December	1,285	1,412	3,881	1,355	2,210	1,445	2,265	765	8,800	2,441	3,080	28,940
Average	1,244	1,423	3,696	2,571	2,126	1,410	2,144	737	8,404	2,368	2,949	29,072
2001 January	1,280	1,435	3,935	1,735	2,200	1,450	2,285	775	8,700	2,440	3,100	29,335
February	1,250	1,440	3,785	2,195	2,130	1,400	2,255	735	8,320	2,380	3,030	28,920
March	1,250	1,395	3,835	2,855	2,100	1,390	2,285	735	8,300	2,420	3,000	29,565
April	1,235	1,352	3,785	2,930	2,010	1,380	2,210	715	7,950	2,330	2,920	28,817
May	1,250	1,362	3,685	2,905	1,993	1,360	2,140	725	8,000	2,277	2,890	28,587
June	1,270	1,382	3,785	1,105	2,030	1,370	2,205	735	8,050	2,260	2,900	27,092
July	1,280	1,370	3,875	2,145	2,020	1,380	2,140	735	8,250	2,240	2,890	28,325
August	1,280	1,360	3,785	2,875	2,035	1,380	2,207	725	8,070	2,227	2,880	28,824
September	1,250	1,350	3,655	2,673	1,970	1,350	2,360	685	7,800	2,150	2,720	27,963
October	1,230	1,340	3,535	2,911	1,950	1,320	2,350	685	7,670	2,120	2,750	27,861
November	1,240	1,340	3,535	2,805	1,940	1,310	2,350	665	7,670	2,120	2,740	27,715
December	1,240	1,310	3,491	2,025	1,940	1,310	2,290	655	7,600	2,120	2,750	26,731
Average	1,255	1,369	3,724	2,432	2,026	1,367	2,256	714	8,031	2,256	2,880	28,311
2002 January	1,206	1,310	3,385	2,315	1,850	1,260	2,150	625	7,300	2,040	2,630	26,071
February	1,200	1,280	3,365	2,545	1,803	1,280	2,100	625	7,210	2,030	2,600	26,038
March	1,220	1,280	3,385	2,515	1,850	1,290	2,120	635	7,310	2,035	2,620	26,260
April	1,230	1,270	3,375	1,215	1,860	1,300	2,130	655	7,455	2,050	2,530	25,070
May	1,260	1,270	3,395	1,865	1,880	1,310	2,070	675	7,450	2,040	2,730	25,945
June	1,270	1,270	3,415	1,525	1,890	1,320	2,060	665	7,500	2,040	2,735	25,690
July	1,290	1,265	3,425	1,835	1,910	1,330	2,050	675	7,700	2,060	2,735	26,275
August	1,300	1,260	3,440	1,505	1,910	1,330	2,100	685	7,730	2,070	2,765	26,095
September	1,330	1,260	3,485	1,825	1,930	1,350	2,143	695	7,880	2,083	2,955	26,936
October	1,380	1,260	3,535	2,425	1,930	1,350	2,140	725	7,900	2,093	2,980	27,718
November	1,368	1,250	3,535	2,395	1,940	1,350	2,150	730	8,100	2,080	2,972	27,870
December	1,430	1,230	3,585	2,325	1,970	1,350	2,200	755	8,050	2,120	1,050	26,064
Average	1,291	1,267	3,444	2,023	1,894	1,319	2,118	679	7,634	2,062	2,606	26,338

^a Includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone from 1973 through July 1990 and in June 1991. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In December 2002, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 525 thousand barrels per day.

^b Current members of OPEC are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Ecuador and Gabon, which withdrew from OPEC membership at the end of 1992 and 1994, respectively, are excluded from all OPEC totals.

Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Sources: See end of section.

Table 11.1b World Crude Oil Production: Persian Gulf Nations, Non-OPEC, and World
(Thousand Barrels per Day)

	Persian Gulf Nations ^a	Selected Non-OPEC Producers									Total Non-OPEC	World
		Canada	China	Egypt	Mexico	Norway	Former U.S.S.R.	Russia	United Kingdom	United States		
1973 Average	20,668	1,798	1,090	165	465	32	8,324	NA	2	9,208	25,050	55,679
1974 Average	21,282	1,551	1,315	150	571	35	8,912	NA	2	8,774	25,366	55,716
1975 Average	18,934	1,430	1,490	235	705	189	9,523	NA	12	8,375	26,058	52,828
1976 Average	21,514	1,314	1,670	330	831	279	10,060	NA	245	8,132	27,018	57,344
1977 Average	21,725	1,321	1,874	415	981	280	10,603	NA	768	8,245	28,814	59,707
1978 Average	20,606	1,316	2,082	485	1,209	356	11,105	NA	1,082	8,707	30,694	60,158
1979 Average	21,066	1,500	2,122	525	1,461	403	11,384	NA	1,568	8,552	32,094	62,674
1980 Average	17,961	1,435	2,114	595	1,936	528	11,706	NA	1,622	8,597	32,994	59,600
1981 Average	15,245	1,285	2,012	598	2,313	501	11,850	NA	1,811	8,572	33,595	56,076
1982 Average	12,156	1,271	2,045	670	2,748	520	11,912	NA	2,065	8,649	34,703	53,481
1983 Average	11,081	1,356	2,120	727	2,689	614	11,972	NA	2,291	8,688	35,759	53,256
1984 Average	10,784	1,438	2,296	822	2,780	697	11,861	NA	2,480	8,879	37,047	54,489
1985 Average	9,630	1,471	2,505	887	2,745	788	11,585	NA	2,530	8,971	37,801	53,982
1986 Average	11,696	1,474	2,620	813	2,435	870	11,895	NA	2,539	8,680	37,952	56,227
1987 Average	12,103	1,535	2,690	896	2,548	1,022	12,050	NA	2,406	8,349	38,149	56,666
1988 Average	13,457	1,616	2,730	848	2,512	1,158	12,053	NA	2,232	8,140	38,413	58,737
1989 Average	14,837	1,560	2,757	865	2,520	1,554	11,715	NA	1,802	7,613	37,792	59,863
1990 Average	15,278	1,553	2,774	873	2,553	1,704	10,975	NA	1,820	7,355	37,371	60,566
1991 Average	14,741	1,548	2,835	874	2,680	1,890	9,992	NA	1,797	7,417	36,932	60,207
1992 Average	15,970	1,605	2,845	881	2,669	2,229	8,541	7,632	1,825	7,171	35,815	60,213
1993 Average	16,715	1,679	2,890	890	2,673	2,350	-	6,730	1,915	6,847	35,117	60,236
1994 Average	16,964	1,746	2,939	896	2,685	2,521	-	6,135	2,375	6,662	35,481	60,991
1995 Average	17,208	1,805	2,990	920	2,618	2,768	-	5,995	2,489	6,560	36,331	62,335
1996 Average	17,367	1,837	3,131	922	2,855	3,104	-	5,850	2,568	6,465	37,250	63,711
1997 Average	18,470	1,922	3,200	856	3,023	3,143	-	5,920	2,518	6,452	38,100	66,420
1998 Average	19,337	1,981	3,198	834	3,070	3,017	-	5,854	2,616	6,252	38,188	66,962
1999 Average	18,667	1,907	3,195	852	2,906	3,018	-	6,079	2,684	5,881	38,291	65,870
2000												
January	18,481	1,979	3,250	780	3,032	3,233	-	6,239	2,502	5,784	38,847	66,032
February	18,991	1,991	3,280	775	2,897	3,348	-	6,248	2,431	5,852	38,833	66,659
March	18,895	1,892	3,280	769	2,998	3,248	-	6,321	2,462	5,918	38,929	66,689
April	19,661	1,894	3,300	775	3,041	3,052	-	6,309	2,343	5,854	38,638	67,354
May	20,191	1,990	3,250	764	3,040	3,149	-	6,352	2,123	5,847	38,572	67,857
June	19,720	2,020	3,295	759	3,056	2,984	-	6,421	2,248	5,823	38,753	67,646
July	19,945	1,986	3,280	744	2,876	3,398	-	6,495	2,331	5,739	39,090	68,273
August	20,911	1,955	3,205	732	3,162	3,025	-	6,546	2,178	5,789	38,935	69,079
September	20,956	2,007	3,220	727	3,173	3,012	-	6,590	2,128	5,758	38,977	69,116
October	21,055	1,961	3,210	722	2,861	3,247	-	6,711	2,145	5,809	39,147	69,557
November	20,975	2,029	3,206	717	2,965	3,327	-	6,737	2,196	5,833	39,737	70,102
December	19,490	2,021	3,212	714	3,043	3,336	-	6,771	2,218	5,855	39,899	68,839
Average	19,940	1,977	3,249	748	3,012	3,197	-	6,479	2,275	5,822	39,031	68,103
2001												
January	19,820	2,032	3,220	669	3,087	3,230	-	E 6,875	2,338	5,799	39,605	68,940
February	19,580	2,052	3,330	659	3,136	3,057	-	E 6,966	2,279	5,780	39,558	68,478
March	20,280	2,070	3,376	655	3,151	3,128	-	E 6,808	2,323	5,880	39,601	69,166
April	19,755	2,046	3,302	652	3,008	3,203	-	E 6,855	2,318	5,863	39,451	68,268
May	19,620	2,027	3,310	596	3,031	2,939	-	E 6,917	2,262	5,829	38,990	67,577
June	18,000	1,971	3,312	627	3,140	2,928	-	E 6,956	2,128	5,766	38,912	66,004
July	19,300	1,953	3,262	630	3,185	3,262	-	E 7,124	2,234	5,749	39,654	67,979
August	19,752	1,954	3,303	634	3,175	2,872	-	E 7,125	2,211	5,725	39,341	68,165
September	18,968	2,009	3,288	638	3,177	3,154	-	E 7,189	2,230	5,709	39,829	67,792
October	18,906	2,046	3,313	633	2,993	3,256	-	E 7,233	2,361	5,746	39,819	67,680
November	18,770	2,082	3,316	639	3,168	3,124	-	E 7,306	2,280	5,881	40,214	67,929
December	17,866	2,110	3,272	641	3,274	3,249	-	E 7,233	2,418	5,887	40,743	67,474
Average	19,219	2,029	3,300	639	3,127	3,117	-	E 7,049	2,282	5,801	39,644	67,955
2002												
January	17,550	2,107	3,311	627	3,253	3,079	-	E 7,017	2,356	E 5,934	40,321	66,392
February	17,613	2,210	3,342	629	3,142	3,150	-	E 7,094	2,319	E 5,938	40,486	66,524
March	17,765	2,154	3,331	624	3,125	2,787	-	E 7,157	2,341	E 5,914	40,079	66,339
April	16,645	2,194	3,333	630	3,178	3,157	-	E 7,179	2,410	E 5,887	40,711	65,781
May	17,340	2,012	3,365	667	3,136	3,028	-	E 7,184	2,311	E 5,908	40,239	66,184
June	17,070	2,156	3,340	635	3,158	2,918	-	E 7,337	2,286	E 5,887	40,368	66,058
July	17,640	2,196	3,400	628	3,145	3,114	-	E 7,441	2,081	E 5,773	40,380	66,655
August	17,375	2,161	3,388	624	3,214	2,896	-	E 7,574	1,902	E 5,827	40,268	66,363
September	17,933	2,155	3,430	628	3,162	2,752	-	E 7,686	2,189	E 5,378	40,175	67,111
October	18,643	2,239	3,447	625	3,257	2,993	-	E 7,735	2,318	E 5,671	R 41,051	R 68,769
November	18,815	R 2,178	3,379	629	3,080	3,059	-	E 7,753	R 2,299	E 5,792	R 40,894	R 68,764
December	18,839	2,207	3,371	630	3,269	2,962	-	E 7,721	2,248	E 5,894	40,945	67,009
Average	17,772	2,164	3,370	631	3,177	2,990	-	E 7,408	2,254	5,817	40,493	66,830

^a The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Persian Gulf Nations."

R=Revised. NA=Not available. --=Not applicable. E=Estimate.

Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • Monthly data are often preliminary figures and may not

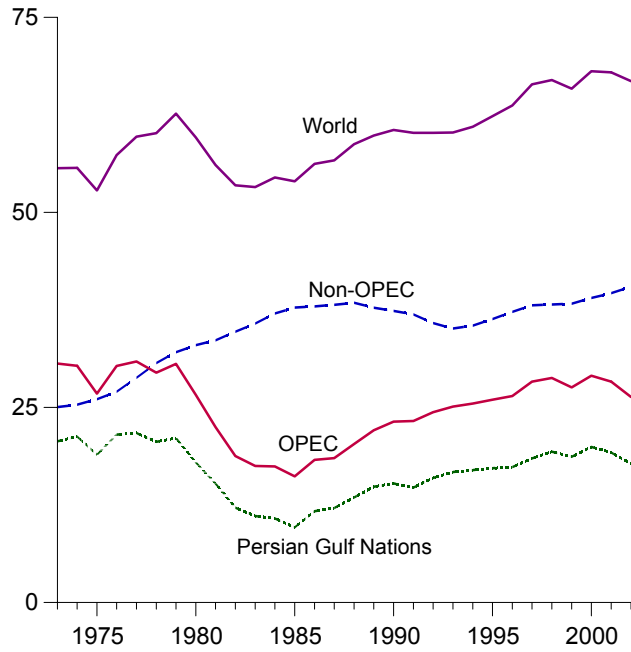
average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

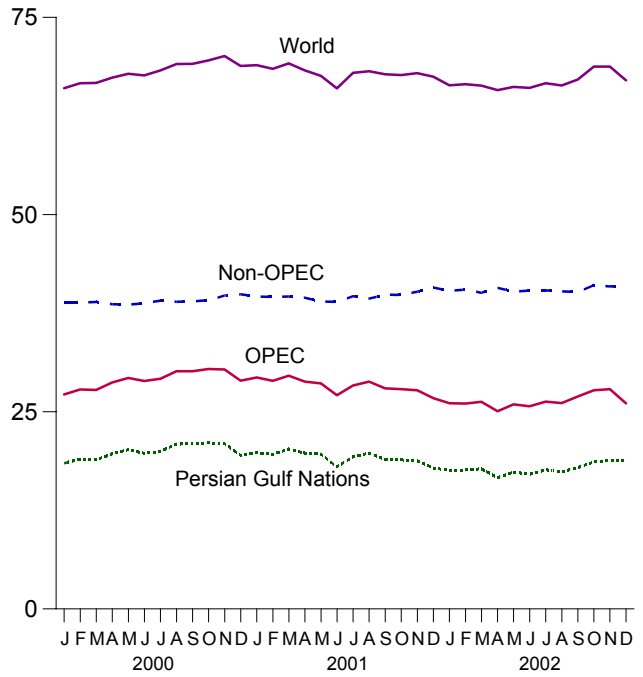
Sources: See end of section.

Figure 11.1 Crude Oil Production
(Million Barrels per Day)

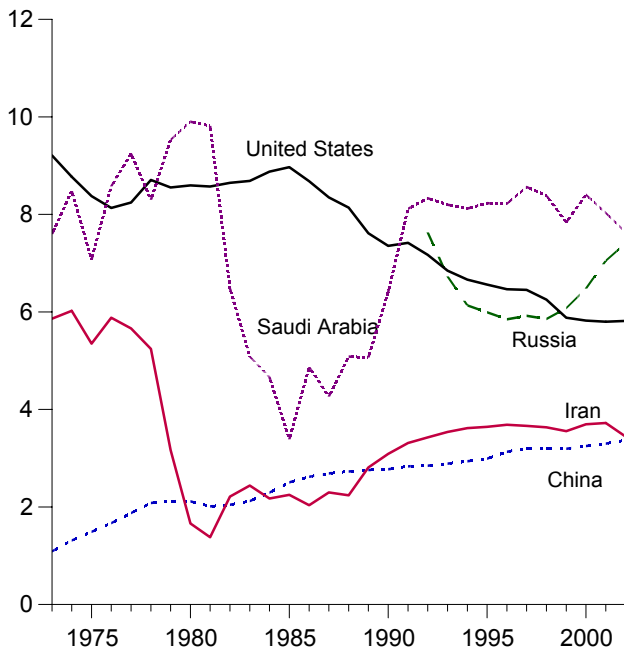
World Production, 1973-2002



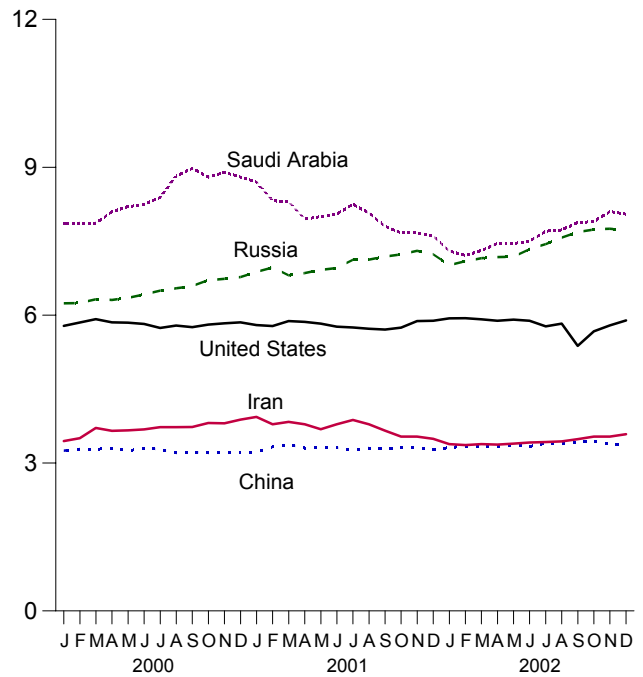
World Production, Monthly



Selected Producers, 1973-2002

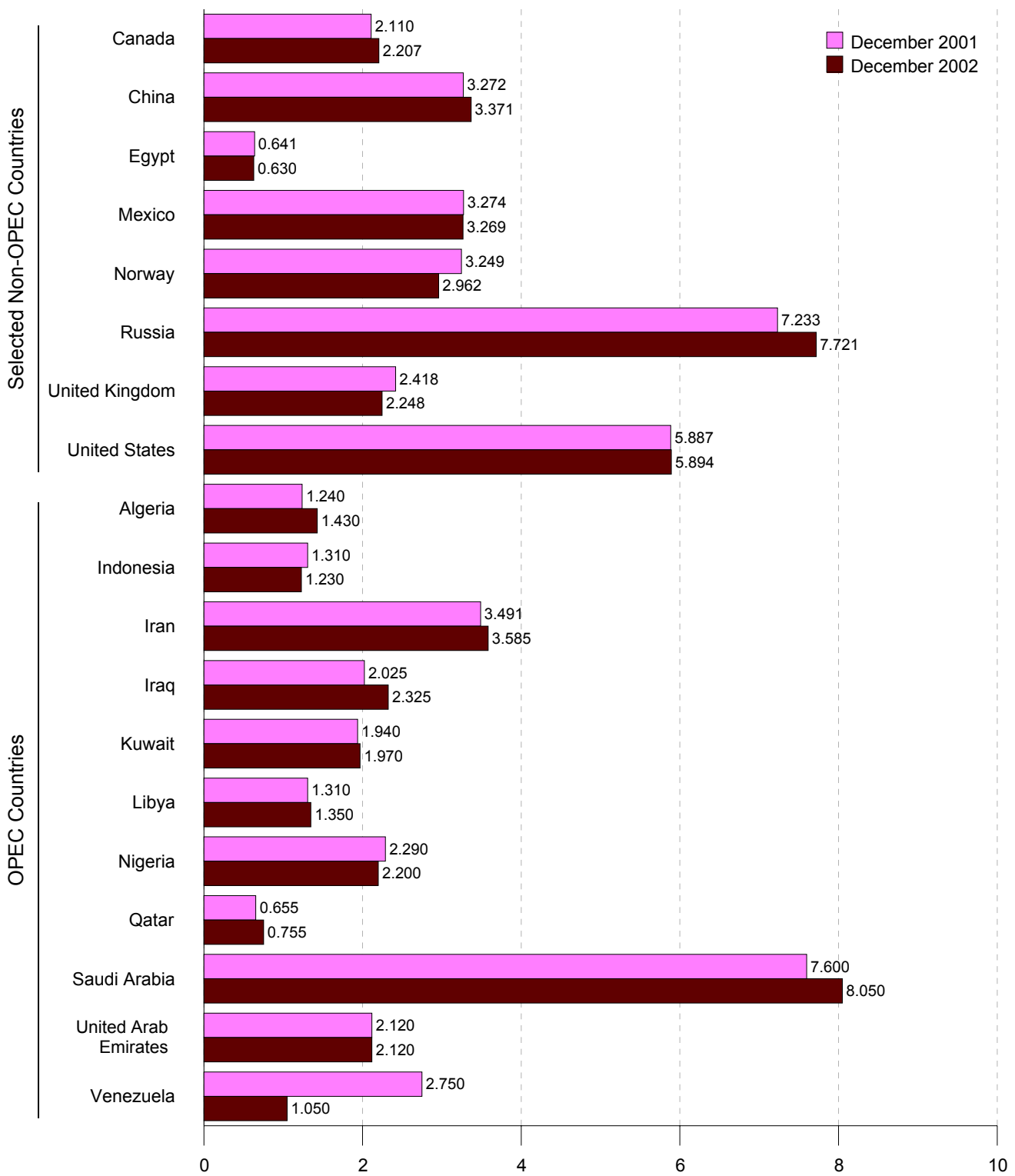


Selected Producers, Monthly



Note: OPEC is the Organization of Petroleum Exporting Countries.
Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.
Sources: Tables 11.1a and 11.1b.

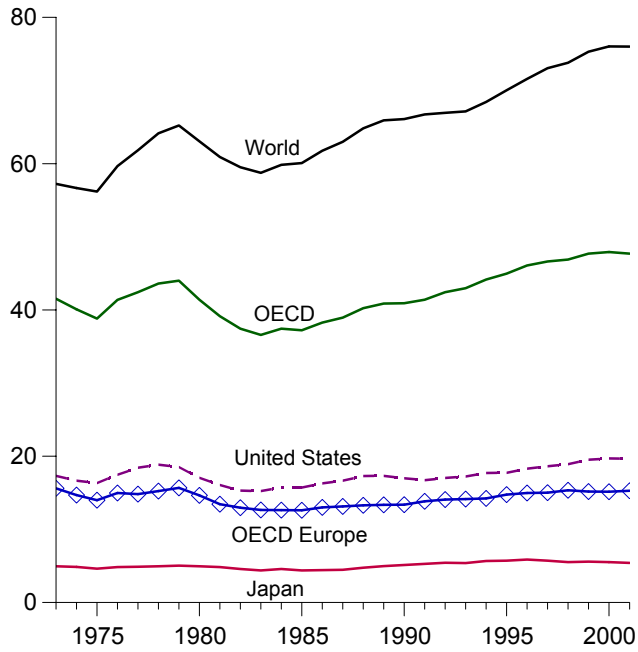
Figure 11.2 Crude Oil Production by Selected Country
(Million Barrels per Day)



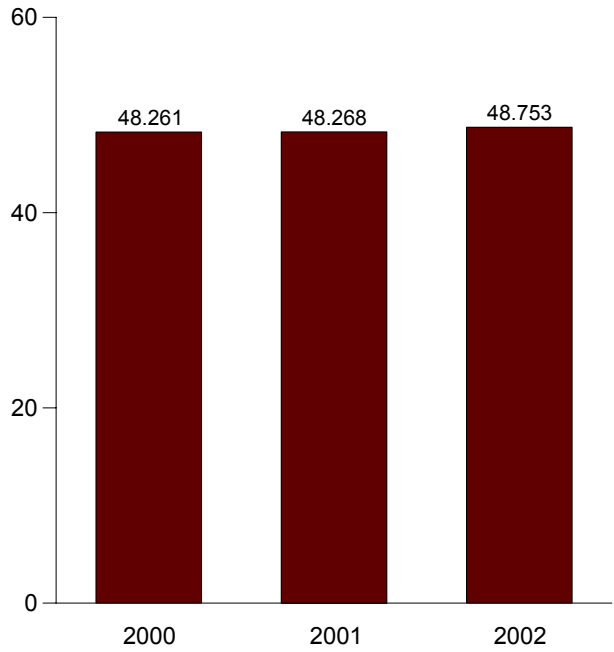
Note: OPEC is the Organization of Petroleum Exporting Countries.
 Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.
 Sources: Tables 11.1a and 11.1b.

Figure 11.3 Petroleum Consumption in OECD Countries
(Million Barrels per Day)

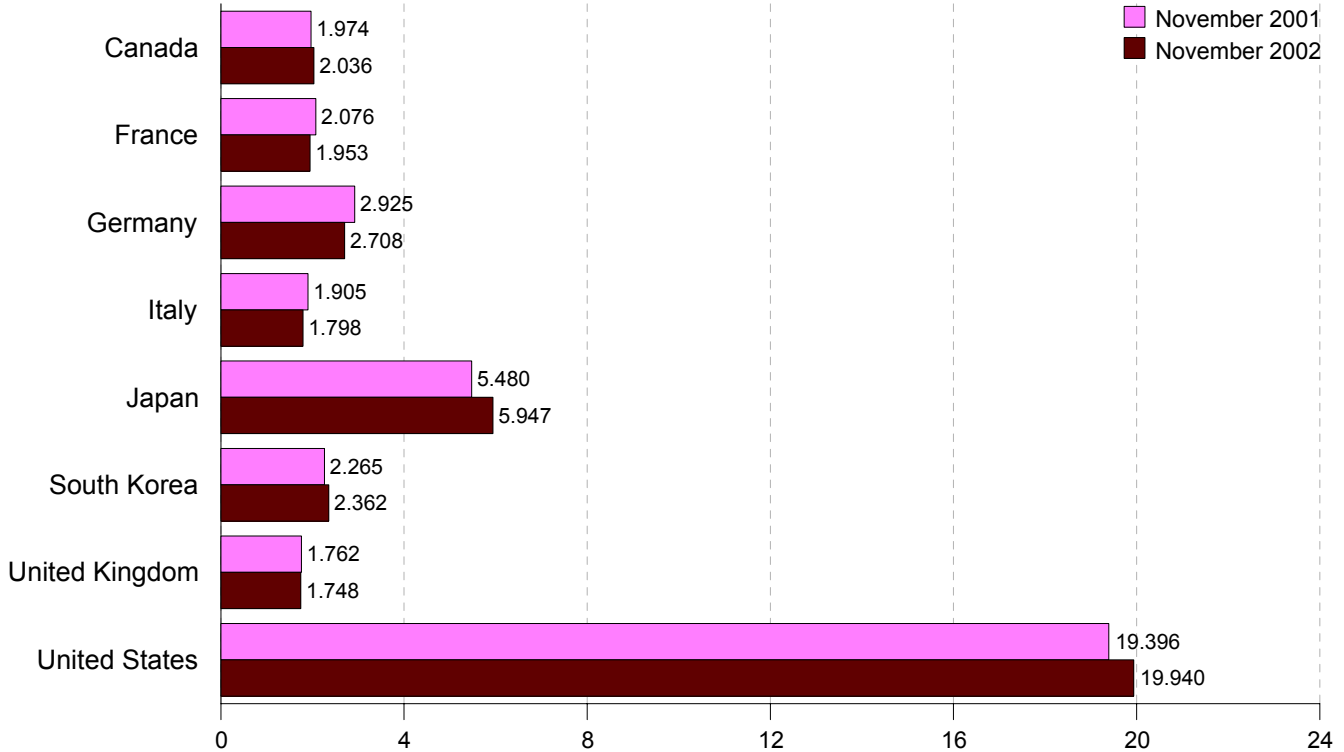
Overview, 1973-2001



OECD Total, November



By Selected OECD Country

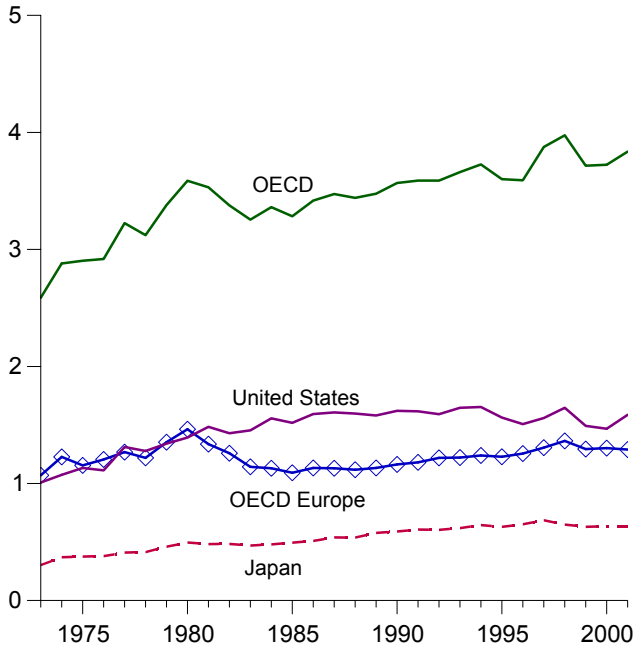


Notes: • OECD is the Organization for Economic Cooperation and Development.
• Because vertical scales differ, graphs should not be compared.

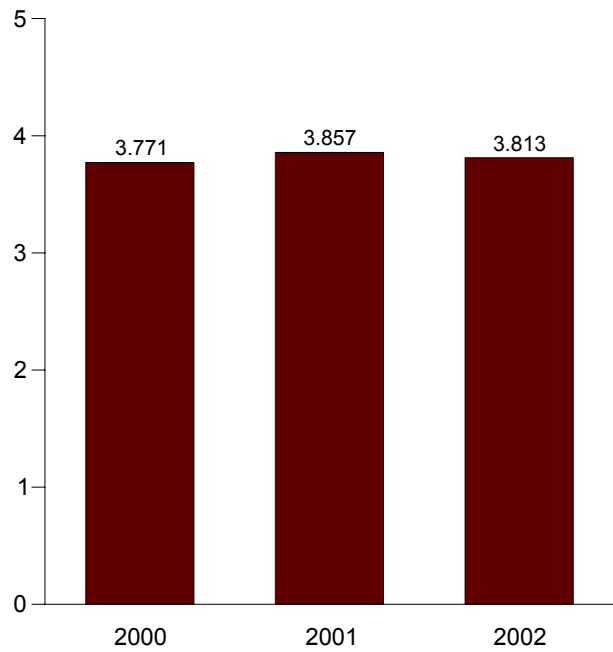
Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.
Source: Table 11.2.

Figure 11.4 Petroleum Stocks in OECD Countries
(Billion Barrels)

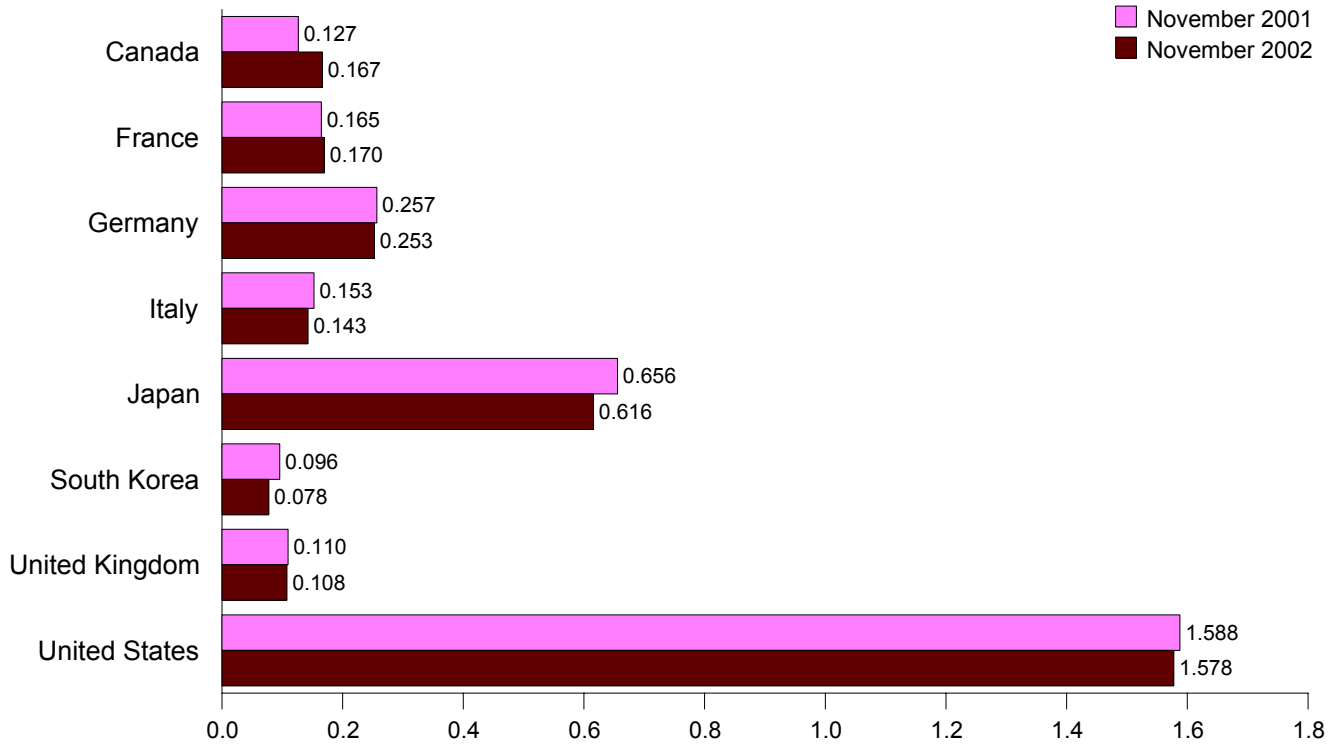
Overview, End of Year, 1973-2001



OECD Stocks, End of Month, November



By Selected OECD Country



Notes: • OECD is the Organization for Economic Cooperation and Development. • Because vertical scales differ, graphs should not be

compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.
Source: Table 11.3.

Table 11.3 Petroleum Stocks in OECD Countries
(Million Barrels)

	Canada	France	Germany ^a	Italy	Japan	South Korea	United Kingdom	United States	OECD Europe ^b	Other OECD ^c	OECD ^d
1973 Year	140	201	181	152	303	NA	156	1,008	1,070	67	2,588
1974 Year	145	249	213	167	370	NA	191	1,074	1,227	64	2,880
1975 Year	174	225	187	143	375	NA	165	1,133	1,154	67	2,903
1976 Year	153	234	208	143	380	NA	165	1,112	1,205	68	2,918
1977 Year	167	239	225	161	409	NA	148	1,312	1,268	68	3,224
1978 Year	144	201	238	154	413	NA	157	1,278	1,219	68	3,122
1979 Year	150	226	272	163	460	NA	169	1,341	1,353	75	3,379
1980 Year	164	243	319	170	495	NA	168	1,392	1,464	72	3,587
1981 Year	161	214	297	167	482	NA	143	1,484	1,337	67	3,531
1982 Year	136	193	272	179	484	NA	125	1,430	1,258	68	3,376
1983 Year	121	153	249	149	470	NA	118	1,454	1,142	68	3,255
1984 Year	128	152	239	159	479	NA	112	1,556	1,130	69	3,362
1985 Year	113	139	233	157	494	NA	123	1,519	1,092	66	3,284
1986 Year	111	127	252	155	509	NA	124	1,593	1,133	72	3,418
1987 Year	126	127	259	169	540	NA	121	1,607	1,130	71	3,474
1988 Year	116	140	266	155	538	NA	112	1,597	1,118	71	3,440
1989 Year	114	138	271	164	577	NA	118	1,581	1,133	71	3,476
1990 Year	121	140	265	172	590	NA	112	1,621	1,163	73	3,568
1991 Year	119	153	288	160	606	NA	119	1,617	1,181	65	3,588
1992 Year	107	146	310	174	603	NA	113	1,592	1,219	67	3,588
1993 Year	105	158	309	163	618	NA	118	1,647	1,221	69	3,661
1994 Year	119	158	312	164	645	NA	115	1,653	1,240	69	3,726
1995 Year	109	159	301	162	630	NA	107	1,563	1,228	71	3,601
1996 Year	103	158	300	152	651	NA	108	1,507	1,256	74	3,591
1997 Year	115	164	298	147	685	88	105	1,560	1,306	122	3,876
1998 Year	118	161	321	153	649	85	109	1,647	1,364	112	3,975
1999 Year	109	163	287	148	629	84	105	1,493	1,294	106	3,715
2000 January	108	166	296	153	622	80	105	1,477	1,287	110	3,684
February	108	167	288	149	613	79	106	1,466	1,281	113	3,661
March	110	170	285	154	606	79	106	1,476	1,278	103	3,652
April	112	171	281	152	618	79	104	1,505	1,259	110	3,684
May	110	172	280	148	634	80	98	1,518	1,247	112	3,701
June	112	174	278	152	632	87	99	1,526	1,263	108	3,728
July	117	171	280	150	639	103	106	1,540	1,280	114	3,791
August	117	171	274	153	639	87	102	1,532	1,272	106	3,753
September	117	173	274	156	627	92	99	1,527	1,283	122	3,767
October	114	170	276	160	642	97	102	1,507	1,277	115	3,752
November	116	171	271	162	645	99	101	1,505	1,283	123	3,771
December	112	174	270	157	634	89	103	1,468	1,302	117	3,723
2001 January	113	168	273	163	628	80	100	1,479	1,292	116	3,707
February	111	172	275	159	620	86	102	1,473	1,293	118	3,701
March	117	171	267	158	636	80	105	1,484	1,292	116	3,724
April	116	171	268	159	646	86	103	1,522	1,283	107	3,761
May	119	171	266	156	647	80	103	1,555	1,280	109	3,790
June	116	171	259	149	641	83	107	1,563	1,278	113	3,794
July	123	164	258	149	636	90	107	1,568	1,271	112	3,801
August	123	168	256	156	647	93	104	1,548	1,284	116	3,812
September	129	167	253	152	654	92	102	1,579	1,282	122	3,858
October	129	170	255	151	670	95	111	1,577	1,281	119	3,872
November	127	165	257	153	656	96	110	1,588	1,276	113	3,857
December	124	167	269	151	634	88	112	1,586	1,290	113	3,836
2002 January	156	164	277	140	631	79	111	1,592	1,303	113	3,874
February	160	167	276	138	620	71	106	1,576	1,306	115	3,848
March	158	163	277	132	630	79	103	1,571	1,282	110	3,830
April	159	164	277	133	624	74	106	1,589	1,275	114	3,834
May	156	173	275	136	626	77	103	1,611	1,287	110	3,867
June	152	170	269	132	634	87	111	1,613	1,288	112	3,885
July	157	169	264	137	633	84	110	1,610	1,279	111	3,873
August	159	171	264	142	633	83	102	1,596	1,275	114	3,861
September	^R 163	174	259	136	627	80	101	1,574	^R 1,258	114	^R 3,817
October	^R 167	^R 176	254	140	628	80	^R 109	1,573	^R 1,282	113	^R 3,843
November	167	170	253	143	616	78	108	1,578	1,260	115	3,813

^a Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

^b "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom, and, for 1997 forward, Czech Republic, Hungary, and Poland.

^c "Other OECD" consists of Australia, New Zealand, and the U.S. Territories, and, for 1997 forward, Mexico.

^d The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, the United States, "OECD Europe" and "Other OECD."

R=Revised. NA=Not available.

Notes: • Stocks are at end of period. • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage,

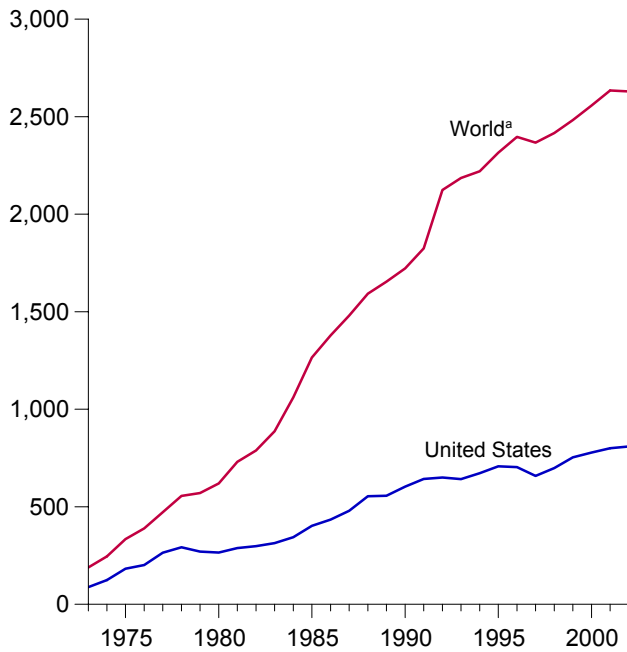
regardless of ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for those in the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Data through 1996 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Sources: • **United States:** Table 3.1a. • **All Other Data:** International Energy Agency, quarterly and monthly computer tapes supporting *Quarterly Oil Statistics and Energy Balances*.

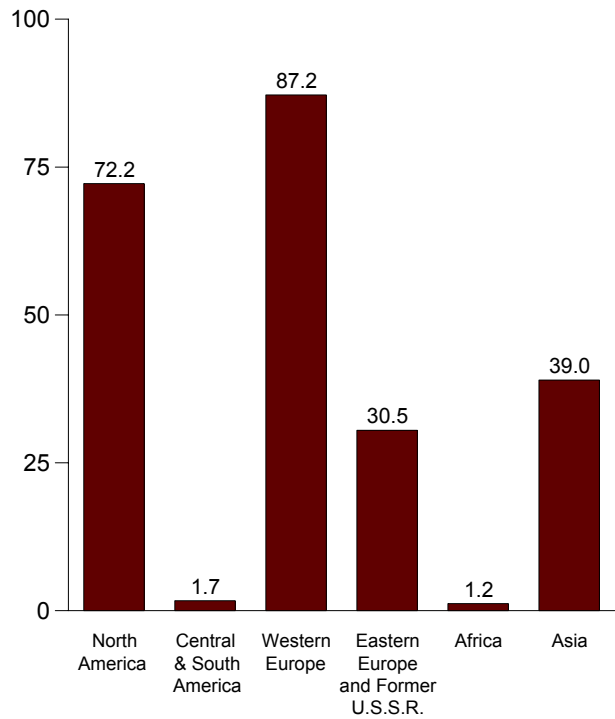
Figure 11.5 Nuclear Electricity Gross Generation
(Billion Kilowatthours)

U.S. and World, 1973-2002

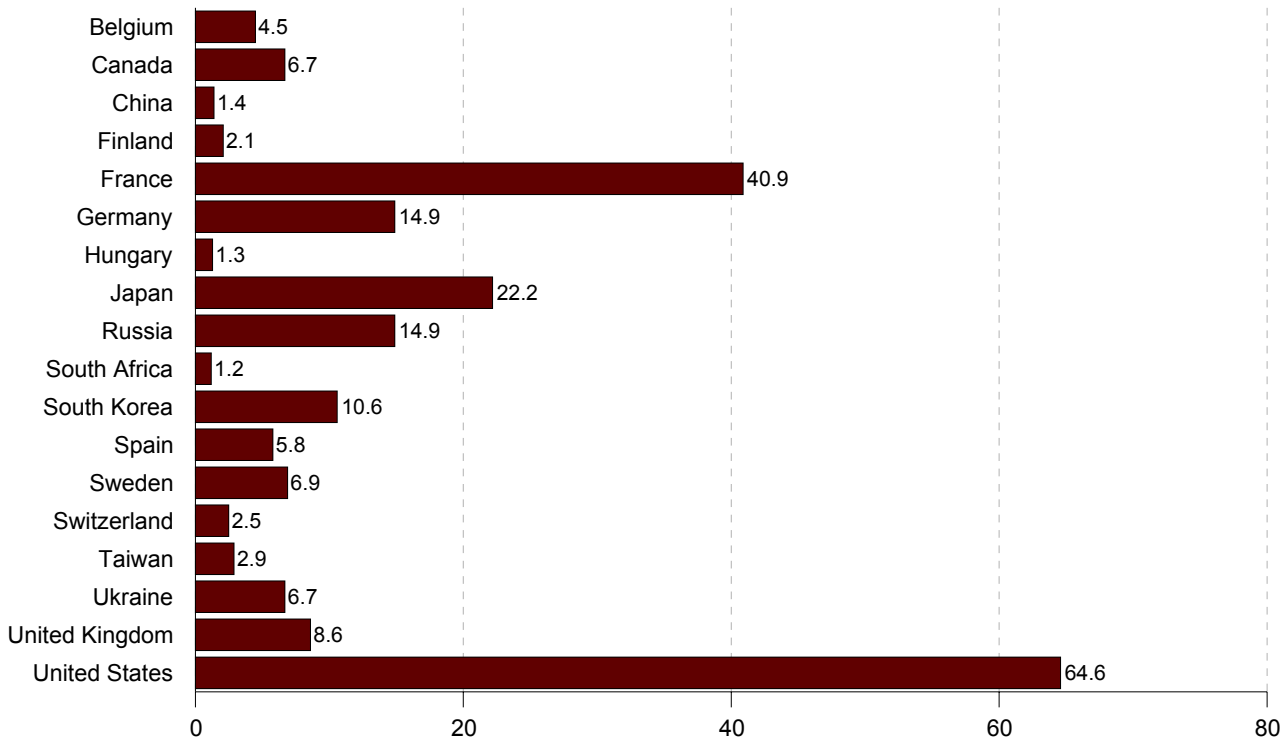


^aEastern Europe and the Former U.S.S.R. are included beginning in 1992.

By Region, December 2002



By Selected Country, December 2002



Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Sources: Tables 11.4a-11.4e.

Table 11.4a Nuclear Electricity Gross Generation: Regions and World
(Billion Kilowatthours)

	North America	Central and South America	Western Europe ^a	Eastern Europe and Former U.S.S.R. ^a	Africa	Asia ^a	World ^{a,b}
1973 Total	103.1	—	73.9	NA	—	12.3	189.3
1974 Total	139.7	1.0	83.9	NA	—	21.4	246.0
1975 Total	195.5	2.5	111.7	NA	—	24.4	334.1
1976 Total	219.8	2.6	126.2	NA	—	40.3	388.9
1977 Total	290.8	1.6	148.1	NA	—	31.5	472.0
1978 Total	325.4	2.9	166.9	NA	—	60.6	555.9
1979 Total	309.0	2.7	184.3	NA	—	74.7	570.7
1980 Total	305.8	2.3	214.2	NA	—	97.4	619.8
1981 Total	331.8	2.8	293.4	NA	—	102.9	730.9
1982 Total	341.2	1.9	321.8	NA	—	123.6	788.5
1983 Total	366.6	3.6	377.2	NA	—	140.1	887.5
1984 Total	397.6	6.6	485.4	NA	4.2	167.7	1,061.5
1985 Total	465.6	9.1	582.8	NA	5.9	202.0	1,265.4
1986 Total	508.8	5.8	631.5	NA	9.3	223.6	1,378.9
1987 Total	560.1	6.2	648.3	NA	6.6	259.5	1,480.7
1988 Total	639.7	5.5	688.1	NA	11.1	248.5	1,592.8
1989 Total	640.2	6.6	732.2	NA	11.7	263.4	1,654.1
1990 Total	681.3	9.4	738.6	NA	8.9	284.3	1,722.5
1991 Total	733.4	9.2	769.7	NA	9.7	303.3	1,825.2
1992 Total	735.2	8.8	787.8	E 267.5	9.9	315.2	b E 2,124.5
1993 Total	744.6	8.1	820.9	E 259.0	7.7	E 345.2	E 2,185.6
1994 Total	787.3	8.2	820.2	E 227.8	10.3	E 366.7	E 2,220.4
1995 Total	816.1	9.6	E 835.7	E 234.9	11.9	E 407.0	E 2,315.1
1996 Total	806.4	9.8	E 879.5	E 261.6	12.5	E 426.4	E 2,396.3
1997 Total	E 752.8	11.1	E 886.5	E 247.1	13.3	E 456.2	E 2,367.0
1998 Total	E 781.0	10.8	E 884.2	E 248.9	14.3	E 477.2	E 2,416.4
1999 Total	E 837.3	E 11.1	E 878.1	E 264.7	13.5	E 478.0	E 2,482.6
2000 January	E 77.7	1.2	E 82.0	E 27.2	1.3	E 40.7	E 230.1
February	E 70.4	1.1	E 76.5	E 25.7	1.3	E 38.0	E 212.9
March	E 69.7	.9	E 80.5	E 26.3	1.1	E 42.9	E 221.4
April	E 63.6	E .8	E 72.7	E 21.4	.8	E 41.5	E 200.9
May	E 69.9	.5	E 69.6	E 20.7	.7	E 41.5	E 202.8
June	E 73.8	.7	E 68.7	E 21.8	1.2	E 40.5	E 206.6
July	E 79.1	.8	E 66.5	E 20.4	1.3	E 43.7	E 211.7
August	E 76.5	E 1.0	E 66.6	E 19.0	1.1	E 43.3	E 207.6
September	E 69.2	.8	E 70.2	E 23.6	1.2	E 39.6	E 204.6
October	E 63.2	.8	E 77.6	E 25.2	1.4	E 40.2	E 208.5
November	E 68.5	1.6	E 78.8	E 25.0	1.2	E 41.6	E 216.7
December	E 78.5	1.4	E 83.5	E 26.0	1.1	E 42.9	E 233.5
Total	E 860.3	E 11.5	E 893.1	E 282.2	13.6	E 496.5	E 2,557.2
2001 January	E 80.0	1.5	86.7	E 27.0	.8	E 41.4	E 237.3
February	E 72.6	1.6	E 76.5	E 26.4	.6	E 39.4	E 217.1
March	E 73.2	1.8	E 79.2	E 26.8	1.1	E 44.6	E 226.6
April	E 65.7	1.3	E 74.2	E 23.2	1.0	E 41.5	E 206.9
May	E 69.8	1.3	E 69.6	E 21.4	1.3	E 39.7	E 203.0
June	E 74.1	E 1.4	E 68.1	E 20.8	1.3	E 39.4	E 205.1
July	E 77.0	2.1	E 70.9	E 20.0	.8	E 42.5	E 213.3
August	E 75.7	2.2	E 72.2	E 21.1	.5	E 45.6	E 217.2
September	E 72.4	2.1	76.0	E 23.5	.7	E 44.8	E 219.5
October	E 69.1	E 2.2	80.9	E 25.8	.5	E 43.6	E 222.0
November	E 68.0	5.5	81.8	E 26.7	1.2	E 42.7	E 225.9
December	E 75.9	2.1	87.7	E 30.1	1.4	E 43.6	E 240.8
Total	E 873.5	E 24.9	E 923.6	E 292.8	11.3	E 508.8	E 2,634.9
2002 January	E 81.4	E 2.0	RE 89.5	E 27.7	1.1	E 41.6	RE 243.2
February	E 70.1	E 1.9	RE 78.4	E 25.4	1.2	E 38.4	RE 215.5
March	E 73.1	1.4	RE 79.8	E 28.8	1.4	E 45.4	RE 229.9
April	E 67.8	1.5	R 76.3	E 22.9	.8	E 41.2	RE 210.3
May	E 67.2	1.4	R 73.5	E 22.2	.7	E 44.9	RE 209.9
June	E 76.3	1.8	R 66.7	E 19.8	.7	E 43.7	RE 208.9
July	E 81.6	1.7	R 73.2	E 18.3	.7	E 47.1	RE 222.5
August	E 81.6	1.4	RE 68.1	E 22.6	1.2	E 49.5	RE 224.4
September	E 75.0	1.6	R 70.8	E 23.3	1.2	E 40.8	RE 212.9
October	E 70.1	1.7	R 78.6	E 20.0	1.2	E 39.0	RE 210.5
November	RE 71.3	1.6	R 79.7	E 21.3	1.2	E 35.0	RE 210.2
December	E 72.2	1.7	87.2	E 30.5	1.2	E 39.0	E 231.8
Total	E 887.7	E 19.6	E 921.8	E 282.8	12.6	E 505.4	E 2,630.0

^a Sum of available data only.

^b There is a discontinuity in this time series between 1991 and 1992; beginning in 1992, includes data for Eastern Europe and the Former U.S.S.R.

R=Revised. NA=Not available. —=Not applicable. E=Estimate.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants

themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for regions may not sum to totals due to independent rounding.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Source: Based on data from *Nucleonics Week*, a copyrighted publication of The McGraw-Hill Publishing Companies, Inc. Used with permission.

Table 11.4b Nuclear Electricity Gross Generation: North, Central, and South America
(Billion Kilowatthours)

	North America				Central and South America		
	Canada	Mexico	United States	Total	Argentina	Brazil	Total
1973 Total	15.3	—	87.8	103.1	—	—	—
1974 Total	15.4	—	124.3	139.7	1.0	—	1.0
1975 Total	13.2	—	182.3	195.5	2.5	—	2.5
1976 Total	18.0	—	201.8	219.8	2.6	—	2.6
1977 Total	26.6	—	264.2	290.8	1.6	—	1.6
1978 Total	33.0	—	292.4	325.4	2.9	—	2.9
1979 Total	38.4	—	270.6	309.0	2.7	—	2.7
1980 Total	40.4	—	265.4	305.8	2.3	—	2.3
1981 Total	43.3	—	288.5	331.8	2.8	—	2.8
1982 Total	42.6	—	298.6	341.2	1.9	0.1	1.9
1983 Total	53.0	—	313.6	366.6	3.4	.2	3.6
1984 Total	53.8	—	343.8	397.6	4.5	2.1	6.6
1985 Total	62.9	—	402.7	465.6	5.8	3.4	9.1
1986 Total	74.6	—	434.1	508.8	5.7	.1	5.8
1987 Total	80.6	—	479.5	560.1	5.2	1.0	6.2
1988 Total	85.6	—	554.1	639.7	5.1	.3	5.5
1989 Total	83.2	—	557.0	640.2	5.0	1.6	6.6
1990 Total	75.8	2.1	603.4	681.3	7.4	2.0	9.4
1991 Total	86.1	4.2	643.0	733.4	7.7	1.4	9.2
1992 Total	81.3	3.9	650.0	735.2	7.1	1.8	8.8
1993 Total	97.6	4.9	642.0	744.6	7.7	.4	8.1
1994 Total	110.7	4.2	672.4	787.3	8.2	.0	8.2
1995 Total	100.4	7.9	707.7	816.1	7.1	2.5	9.6
1996 Total	95.2	7.9	703.3	806.4	7.4	2.4	9.8
1997 Total	84.1	10.4	E 658.3	E 752.8	8.0	3.2	11.1
1998 Total	E 72.7	9.5	E 698.7	E 781.0	7.5	3.3	10.8
1999 Total	E 73.9	10.0	E 753.4	E 837.3	E 7.1	E 4.0	E 11.1
2000 January	7.1	.7	E 69.9	E 77.7	.7	.4	1.2
February	6.3	.6	E 63.6	E 70.4	.7	.4	1.1
March	6.2	.6	E 63.0	E 69.7	.5	.4	.9
April	5.2	.5	E 57.9	E 63.6	E .5	.4	E .8
May	6.0	.5	E 63.4	E 69.9	.5	.0	.5
June	6.1	.6	E 67.0	E 73.8	.7	.0	.7
July	7.2	.8	E 71.1	E 79.1	.7	(s)	.8
August	6.8	.5	E 69.2	E 76.5	E .7	.2	E 1.0
September	5.1	.5	E 63.6	E 69.2	.4	.4	.8
October	5.0	1.0	E 57.3	E 63.2	.3	.5	.8
November	5.9	.9	E 61.7	E 68.5	.5	1.1	1.6
December	7.0	1.0	E 70.6	E 78.5	.2	1.2	1.4
Total	73.8	8.2	E 778.3	E 860.3	E 6.3	5.2	E 11.5
2001 January	7.5	1.0	E 71.4	E 80.0	.5	1.0	1.5
February	E 7.4	.8	E 64.4	E 72.6	.4	1.1	1.6
March	E 7.1	1.0	E 65.1	E 73.2	.5	1.3	1.8
April	5.3	.9	E 59.5	E 65.7	.5	.8	1.3
May	4.5	.4	E 64.9	E 69.8	.5	.8	1.3
June	4.3	.5	E 69.4	E 74.1	.5	E .8	E 1.4
July	4.8	.7	E 71.5	E 77.0	.7	1.4	2.1
August	4.5	.9	E 70.4	E 75.7	.7	1.4	2.2
September	4.3	.8	E 67.2	E 72.4	.7	1.4	2.1
October	4.1	.9	E 64.1	E 69.1	E .7	1.4	E 2.2
November	4.1	.5	E 63.5	E 68.0	.6	4.9	5.5
December	6.2	.5	E 69.2	E 75.9	.7	1.4	2.1
Total	E 64.1	8.7	E 800.6	E 873.5	E 7.0	E 17.8	E 24.9
2002 January	5.9	.9	E 74.6	E 81.4	E .7	E 1.3	E 2.0
February	6.2	.8	E 63.1	E 70.1	E .7	1.2	E 1.9
March	7.0	.9	E 65.3	E 73.1	.7	.6	1.4
April	5.5	1.0	E 61.4	E 67.8	.3	1.1	1.5
May	NA	1.0	E 66.2	E 67.2	NA	1.4	1.4
June	E 5.7	.9	E 69.7	E 76.3	.5	1.3	1.8
July	6.7	.9	E 73.9	E 81.6	.5	1.2	1.7
August	E 6.4	.9	E 74.3	E 81.6	.5	1.0	1.4
September	6.7	.6	E 67.7	E 75.0	.5	1.2	1.6
October	6.1	.5	E 63.5	E 70.1	.5	1.2	1.7
November	6.1	.6	RE 64.6	RE 71.3	.5	1.1	1.6
December	6.7	.9	E 64.6	E 72.2	.5	1.2	1.7
Total	NA	9.7	E 809.0	E 887.7	NA	E 13.8	E 19.6

R=Revised. — =Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in

some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

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Table 11.4c Nuclear Electricity Gross Generation: Western Europe
(Billion Kilowatthours)

	Western Europe											Total ^d
	Belgium	Finland	France	Germany ^a	Italy ^b	Nether-lands	Slovenia	Spain	Sweden	Switzer-land	United Kingdom ^c	
1973 Total	0.0	-	14.7	11.9	3.1	1.1	-	6.5	2.1	6.2	28.2	73.9
1974 Total	.1	-	14.7	12.0	3.4	3.3	-	7.2	2.3	7.0	33.8	83.9
1975 Total	6.8	-	18.3	21.7	3.8	3.3	-	7.5	12.0	7.7	30.5	111.7
1976 Total	10.0	-	15.8	24.5	3.8	3.9	-	7.6	16.0	7.9	36.8	126.2
1977 Total	11.9	2.7	17.9	36.0	3.4	3.7	-	6.5	19.9	8.1	38.1	148.1
1978 Total	12.5	3.3	30.6	35.7	4.5	4.1	-	7.6	23.8	8.3	36.6	166.9
1979 Total	11.4	6.7	39.9	42.2	2.6	3.5	-	6.7	21.0	11.8	38.5	184.3
1980 Total	12.5	7.0	61.2	43.7	2.2	4.2	-	5.2	26.7	14.3	37.2	214.2
1981 Total	12.8	14.5	105.2	53.4	2.7	3.7	-	9.4	37.7	15.2	38.9	293.4
1982 Total	15.6	16.5	108.9	63.4	6.8	3.9	-	8.8	38.8	15.0	44.1	321.8
1983 Total	24.1	17.4	144.2	65.8	5.8	3.6	NA	10.7	40.4	15.5	49.6	377.2
1984 Total	27.7	18.5	191.2	92.6	6.9	3.8	NA	23.1	51.3	16.3	54.1	485.4
1985 Total	34.5	18.8	224.0	125.8	7.0	3.9	NA	28.0	58.6	22.4	59.7	582.8
1986 Total	38.6	18.8	254.3	118.9	8.7	4.2	NA	37.5	69.9	22.5	58.2	631.5
1987 Total	41.9	19.4	265.5	130.2	.2	3.6	NA	41.2	67.2	23.0	56.2	648.3
1988 Total	43.1	19.3	274.9	145.2	.0	3.7	NA	50.4	69.4	22.7	59.4	688.1
1989 Total	41.2	18.8	302.5	149.6	.0	4.0	NA	56.1	65.6	22.8	71.6	732.2
1990 Total	42.7	18.9	314.1	147.2	.0	3.4	NA	54.3	68.2	23.6	66.1	738.6
1991 Total	42.9	19.2	331.4	147.3	.0	3.3	NA	55.6	76.8	22.9	70.4	769.7
1992 Total	43.5	19.0	337.6	158.8	.0	3.8	4.0	55.8	63.5	23.4	78.5	787.8
1993 Total	41.9	19.6	366.7	153.5	.0	3.9	4.0	56.1	61.4	23.3	90.4	820.9
1994 Total	40.6	19.1	359.1	151.1	.0	4.0	4.6	55.1	72.8	24.2	89.5	820.2
1995 Total	41.4	18.9	377.6	154.3	.0	4.0	4.8	54.5	69.9	24.8	E 85.5	E 835.7
1996 Total	43.3	19.5	397.0	161.7	.0	4.2	4.6	59.1	76.2	25.0	E 88.8	E 879.5
1997 Total	47.4	20.9	389.3	170.4	.0	3.1	5.4	E 55.4	E 70.6	25.3	E 98.8	E 886.5
1998 Total	46.1	21.9	384.4	161.0	.0	3.8	5.3	E 58.6	73.8	25.7	E 103.7	E 884.2
1999 Total	49.0	23.0	E 377.4	E 167.8	.0	3.8	4.7	58.9	E 74.5	24.8	E 94.1	E 878.1
2000 January	4.3	2.1	36.2	15.8	.0	.4	.5	E 5.6	7.1	2.5	7.5	E 82.0
February	3.2	1.9	35.3	13.9	.0	.3	.5	5.3	6.8	2.3	7.0	E 76.5
March	4.1	2.1	37.4	13.3	.0	.3	.5	5.2	6.5	2.5	8.6	E 80.5
April	3.7	1.9	34.0	12.9	.0	.3	E .5	4.7	5.3	2.4	E 6.9	E 72.7
May	E 3.9	1.5	32.8	13.9	.0	.4	.0	5.1	3.3	E 2.4	E 6.4	E 69.6
June	E 3.6	1.8	32.8	12.3	.0	.3	.2	5.5	3.0	2.3	7.0	E 68.7
July	3.5	1.8	31.0	14.0	.0	.4	.5	5.6	2.1	1.4	6.2	E 66.5
August	4.0	1.5	31.7	13.2	.0	.3	.5	5.2	2.6	1.1	6.5	E 66.6
September	E 4.1	1.7	33.2	E 13.2	.0	.3	.4	4.2	4.1	2.1	6.9	E 70.2
October	4.5	2.0	35.9	15.3	.0	.2	.5	4.6	5.1	2.5	7.0	E 77.6
November	4.4	2.0	36.5	14.9	.0	.3	.5	5.3	5.4	2.4	E 7.0	E 78.8
December	4.5	2.1	38.4	15.6	.0	.4	.5	5.8	5.8	2.5	7.9	E 83.5
Total	E 47.8	22.5	415.2	E 168.3	.0	3.9	E 5.0	E 62.0	57.2	E 26.3	E 84.9	E 893.1
2001 January	4.5	2.1	40.7	15.9	.0	.4	.5	5.7	7.0	2.5	7.5	86.7
February	3.9	1.9	34.9	14.1	.0	.3	.5	5.0	E 6.6	2.3	E 7.1	E 76.5
March	3.4	2.0	35.4	15.3	.0	.4	.5	4.9	6.9	2.5	E 7.8	E 79.2
April	3.7	2.0	33.1	13.9	.0	.3	.4	4.8	6.2	2.4	E 7.4	E 74.2
May	3.5	1.5	30.4	13.2	.0	.4	.1	5.8	5.8	2.5	6.5	69.6
June	E 3.5	2.0	30.1	12.9	.0	.3	.2	5.3	E 4.9	2.2	6.6	E 68.1
July	3.3	2.0	32.8	13.6	.0	.3	.5	5.7	4.5	1.5	E 6.6	E 70.9
August	E 3.3	1.7	32.4	14.7	.0	.3	.5	5.6	4.9	1.2	7.7	E 72.2
September	3.6	1.7	34.6	14.6	.0	.2	.5	4.9	5.9	2.2	8.0	76.0
October	4.5	2.0	37.5	13.5	.0	.4	.5	5.0	6.9	2.5	8.0	80.9
November	4.1	2.0	38.9	13.5	.0	.3	.5	5.4	6.6	2.4	8.0	81.8
December	4.5	2.0	40.3	16.0	.0	.4	.5	5.7	6.6	2.5	9.1	87.7
Total	E 45.8	22.8	421.1	171.3	.0	4.0	5.3	63.7	E 72.8	26.7	E 90.3	E 923.6
2002 January	4.4	2.0	R 42.1	16.2	.0	.4	.5	5.8	E 6.9	2.5	E 8.6	RE 89.5
February	4.0	1.9	R 36.2	14.1	.0	.3	.4	5.0	E 6.4	2.3	E 8.0	RE 78.4
March	4.3	2.1	R 37.4	14.2	.0	.4	.5	4.4	6.7	2.5	E 7.3	RE 79.8
April	3.8	1.9	R 37.4	12.8	.0	.3	.5	4.4	6.0	2.4	6.8	R 76.3
May	3.6	1.5	R 35.4	13.1	.0	.4	.2	5.0	5.3	2.4	6.8	R 73.5
June	3.8	1.9	R 32.8	13.2	.0	.3	.4	5.3	NA	1.7	7.3	R 66.7
July	3.7	1.8	R 34.7	13.4	.0	.4	.5	5.7	3.9	1.9	E 7.1	R 73.2
August	4.1	1.6	R 32.1	11.9	.0	.3	.5	5.6	E 2.8	1.5	7.5	RE 68.1
September	3.6	1.6	R 33.8	12.1	.0	.2	.5	4.8	5.4	2.4	6.5	R 70.8
October	3.7	1.9	R 36.8	14.7	.0	.2	.5	5.6	5.9	2.5	6.6	R 78.6
November	3.7	2.0	R 38.1	13.9	.0	.3	.5	5.6	6.5	2.4	6.7	R 79.7
December	4.5	2.1	40.9	14.9	.0	.4	.5	5.8	6.9	2.5	8.6	87.2
Total	47.4	22.3	R 437.7	164.6	.0	3.9	5.5	63.0	NA	27.1	E 87.7	E 921.8

^a Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

^b In 1987, Italy's citizens voted for a nuclear power moratorium, which shut down their nuclear power plants indefinitely.

^c Monthly data for the United Kingdom are totals for 4- or 5-week reporting periods, not calendar months.

^d Sum of available data only.

NA=Not available. --=Not applicable. E=Estimate.

Notes: • Net figures are generally less than gross figures by about 5 percent,

the difference being the energy consumed by the generating plants themselves.

- Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

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Table 11.4d Nuclear Electricity Gross Generation: Eastern Europe and Former U.S.S.R.
(Billion Kilowatthours)

	Eastern Europe and Former U.S.S.R.										
	Armenia ^a	Bulgaria	Czech Republic ^b	Hungary	Kazakhstan ^b	Lithuania ^b	Romania	Russia	Slovakia ^b	Ukraine	Total ^c
1973 Total	—	—	—	—	NA	—	—	NA	NA	—	NA
1974 Total	—	NA	—	—	NA	—	—	NA	NA	—	NA
1975 Total	—	NA	—	—	NA	—	—	NA	NA	—	NA
1976 Total	—	NA	—	—	NA	—	—	NA	NA	—	NA
1977 Total	—	NA	—	—	NA	—	—	NA	NA	—	NA
1978 Total	—	NA	—	—	NA	—	—	NA	NA	NA	NA
1979 Total	—	NA	—	—	NA	—	—	NA	NA	NA	NA
1980 Total	NA	NA	—	—	NA	—	—	NA	NA	NA	NA
1981 Total	NA	NA	—	—	NA	—	—	NA	NA	NA	NA
1982 Total	NA	NA	—	—	NA	—	—	NA	NA	NA	NA
1983 Total	NA	NA	—	NA	NA	—	—	NA	NA	NA	NA
1984 Total	NA	NA	—	NA	NA	—	—	NA	NA	NA	NA
1985 Total	NA	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1986 Total	NA	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1987 Total	NA	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1988 Total	NA	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1989 Total	NA	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1990 Total	.0	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1991 Total	.0	NA	NA	NA	NA	NA	—	NA	NA	NA	NA
1992 Total	.0	E 12.2	E 12.9	E 13.8	E 5.5	E 16.4	—	E 125.6	E 11.7	E 74.6	E 267.5
1993 Total	.0	E 14.0	E 13.2	E 13.8	E 4.4	E 12.9	—	E 120.4	E 11.6	E 72.7	E 259.0
1994 Total	.0	E 14.9	E 12.7	E 14.0	E 4.4	E 7.0	—	E 97.7	E 12.7	E 68.4	E 227.8
1995 Total	NA	E 17.2	E 12.8	E 14.0	E 4.4	E 9.7	—	E 98.3	E 12.0	E 70.4	E 234.9
1996 Total	NA	E 18.7	E 13.5	E 14.2	E 1.1	E 13.6	E 1.0	E 108.8	E 11.8	E 80.0	E 261.6
1997 Total	1.4	E 15.5	.0	E 14.0	E 3.3	E 12.1	E 3.9	E 108.1	E 11.0	E 80.8	E 247.1
1998 Total	1.6	E 19.2	E 7.6	E 13.9	NA	E 13.5	E 5.1	E 103.7	E 10.3	E 74.0	E 248.9
1999 Total	E 2.4	E 19.0	E 13.4	E 14.2	NA	E 9.9	E 5.2	E 118.0	E 10.5	E 72.2	E 264.7
2000											
January	.3	E 1.4	E 1.2	1.4	.0	.9	.5	13.2	1.1	7.2	E 27.2
February	.3	E 1.4	1.2	1.3	.0	.6	.5	12.3	1.3	6.7	E 25.7
March	.3	E 1.5	1.1	1.1	.0	.7	.5	12.9	1.3	6.7	E 26.3
April	.3	E 1.5	1.0	1.0	.0	.5	.5	9.8	1.0	5.8	E 21.4
May	.3	E 1.5	1.0	1.0	.0	.5	.5	9.2	1.1	5.4	E 20.7
June	.3	E 1.5	1.0	1.0	.0	.7	.5	9.5	1.4	5.9	E 21.8
July	E .0	E 1.5	1.1	1.0	.0	.6	.4	8.5	1.3	6.0	E 20.4
August	.0	E 1.5	E 1.1	.9	.0	.7	.4	9.8	1.3	3.2	E 19.0
September	.0	E 1.5	E 1.1	1.3	.0	.9	E .5	10.1	1.5	6.7	E 23.6
October	.0	E 1.5	1.2	1.4	.0	.8	.1	10.8	1.6	7.7	E 25.2
November	(s)	E 1.5	1.3	1.3	.0	E .8	.5	10.6	1.7	7.3	E 25.0
December	.3	E 1.5	1.3	1.4	.0	.9	.4	12.2	1.7	6.1	E 26.0
Total	E 1.9	E 18.2	E 13.8	E 14.2	.0	E 8.7	E 5.5	E 128.9	E 16.2	E 74.8	E 282.2
2001											
January	.3	E 1.6	1.3	1.4	.0	.8	.5	12.5	1.5	7.0	E 27.0
February	.2	E 1.6	E 1.4	1.3	.0	.9	.4	11.7	1.7	7.1	E 26.4
March	.2	E 1.6	1.4	1.2	.0	.6	.5	12.4	1.3	7.5	E 26.8
April	.2	E 1.6	1.1	1.1	.0	.5	.5	10.4	1.2	6.6	E 23.2
May	.3	E 1.6	1.1	1.1	.0	.6	.5	9.6	1.2	5.4	E 21.4
June	.2	E 1.6	1.1	1.1	.0	.7	E .5	9.5	1.3	4.7	E 20.8
July	.1	E 1.6	1.1	.9	.0	.8	.5	8.9	1.3	4.9	E 20.0
August	E .1	E 1.6	E 1.1	.9	.0	.8	.1	9.0	1.5	6.0	E 21.1
September	E .1	E 1.6	1.0	1.0	.0	.9	.3	11.1	E 1.5	E 6.0	E 23.5
October	.0	E 1.6	1.4	1.4	.0	E .9	.5	12.2	1.6	6.0	E 25.8
November	.1	E 1.6	1.4	E 1.4	.0	E .9	.5	12.9	1.7	6.0	E 26.7
December	.1	E 1.6	1.3	1.3	.0	1.7	.5	14.3	1.8	7.3	E 30.1
Total	E 2.0	E 19.6	E 14.8	E 14.2	.0	E 10.2	E 5.4	E 134.4	E 17.5	E 74.6	E 292.8
2002											
January	.3	NA	1.3	1.4	.0	1.5	.5	13.6	E 1.8	E 7.3	E 27.7
February	.2	NA	E 1.3	1.2	.0	1.1	.3	12.6	E 1.6	E 7.0	E 25.4
March	.3	2.0	1.3	1.2	.0	1.2	.4	13.2	1.5	7.7	E 28.8
April	.2	1.5	.9	.9	.0	.9	NA	10.3	1.4	6.7	E 22.9
May	.2	1.3	1.0	1.0	.0	.9	.2	9.9	1.6	6.1	E 22.2
June	NA	1.2	.9	1.0	.0	.9	.5	8.5	E .8	5.9	E 19.8
July	NA	NA	NA	1.0	.0	NA	.5	9.7	1.3	5.8	E 18.3
August	NA	1.3	1.0	1.1	.0	.9	.5	10.6	1.4	5.8	E 22.6
September	.2	1.5	1.2	1.1	.0	1.0	.5	10.5	1.5	5.9	E 23.3
October	.1	1.5	1.0	1.4	.0	1.2	.5	12.5	1.7	NA	E 20.0
November	.0	1.9	1.0	1.3	.0	1.5	.5	13.4	1.7	NA	E 21.3
December	.0	2.1	1.3	1.3	.0	1.8	.5	14.9	1.8	6.7	E 30.5
Total	NA	NA	NA	14.0	.0	NA	NA	139.7	E 18.1	NA	E 282.8

^a According to the International Atomic Energy Agency's *Nuclear Power Reactors in the World*, Tables 7 and 10, Vienna, Austria, April 2001, Armenia's two commercial reactors were shut down in 1989. One re-started in 1995 but the other is permanently shut down.

^b The total gross generation estimates for Czech Republic, Kazakhstan, Lithuania, and Slovakia are calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency and published in the Energy Information Administration annual reports **1992 and 1993: World Nuclear Outlook 1994**, December 1994, Table 1. **1994: Nuclear Power Generation and Fuel Cycle Report 1996**, October 1996, Table 1. **1995 and 1996: Nuclear Power Generation and Fuel Cycle Report 1997**, September 1997, Table D4. **1997 forward:** Based on data from *Nucleonics Week*, a copyrighted publication of The McGraw-Hill Publishing Companies, Inc. Used with permission.

^c Sum of available data only.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Source: • **Czech Republic, Kazakhstan, Lithuania, Slovakia, and Eastern European Countries:** See footnote b. • **Bulgaria and Czech Republic:** 2001 annual total is from NucNet, a copyrighted on-line source at info@worldnuclear.org. Used with permission. • **All Other:** Based on data from *Nucleonics Week*, a copyrighted publication of The McGraw-Hill Publishing Companies, Inc. Used with permission.

Table 11.4e Nuclear Electricity Gross Generation: Africa and Asia
(Billion Kilowatthours)

	Africa	Asia						Total ^c
	South Africa ^a	China ^b	India	Japan	Pakistan	South Korea	Taiwan	
1973 Total	—	—	2.5	9.4	0.5	—	—	12.3
1974 Total	—	—	1.9	18.9	.6	—	—	21.4
1975 Total	—	—	2.5	21.3	.5	—	—	24.4
1976 Total	—	—	3.2	36.6	.5	—	—	40.3
1977 Total	—	—	2.8	28.2	.3	0.1	0.1	31.5
1978 Total	—	—	2.3	53.1	.2	2.3	2.7	60.6
1979 Total	—	—	3.2	62.0	(s)	3.2	6.3	74.7
1980 Total	—	—	2.9	82.8	.1	3.5	8.2	97.4
1981 Total	—	—	3.1	86.0	.2	2.9	10.7	102.9
1982 Total	—	—	2.2	104.5	.1	3.8	13.1	123.6
1983 Total	—	—	2.9	109.1	.2	9.0	18.9	140.1
1984 Total	4.2	—	4.1	127.2	.3	11.8	24.3	167.7
1985 Total	5.9	—	4.5	152.0	.3	16.5	28.7	202.0
1986 Total	9.3	—	5.1	164.8	.5	26.1	26.9	223.6
1987 Total	6.6	—	5.5	182.8	.3	37.8	33.1	259.5
1988 Total	11.1	—	6.1	173.6	.2	38.7	29.9	248.5
1989 Total	11.7	—	4.0	183.7	.1	47.2	28.3	263.4
1990 Total	8.9	—	6.3	191.9	.4	52.8	32.9	284.3
1991 Total	9.7	—	5.4	205.8	.4	56.3	35.3	303.3
1992 Total	9.9	—	6.3	218.0	.6	56.4	33.8	315.2
1993 Total	7.7	E 2.6	6.2	243.5	.4	58.1	34.3	E 345.2
1994 Total	10.3	E 14.2	5.0	253.8	.6	58.3	34.8	E 366.7
1995 Total	11.9	E 13.0	8.0	286.1	.5	64.0	35.3	E 407.0
1996 Total	12.5	E 14.3	8.3	293.2	.4	72.5	37.8	E 426.4
1997 Total	13.3	E 11.4	E 11.0	318.0	.4	78.9	36.6	E 456.2
1998 Total	14.3	E 14.5	E 11.2	326.9	.4	87.3	36.9	E 477.2
1999 Total	13.5	E 14.6	13.2	317.4	.1	94.6	38.2	E 478.0
2000 January	1.3	E .9	1.2	25.6	(s)	9.4	3.6	E 40.7
February	1.3	E .7	1.2	24.2	(s)	8.6	3.2	E 38.0
March	1.1	E 1.3	1.2	28.3	.1	8.9	3.1	E 42.9
April	.8	E 1.4	E 1.1	28.0	.1	8.3	2.6	E 41.5
May	.7	E 1.4	E 1.1	27.0	.1	8.8	3.1	E 41.5
June	1.2	E 1.4	1.2	25.9	.1	8.4	3.6	E 40.5
July	1.3	E 1.4	E 1.1	28.2	(s)	9.3	3.6	E 43.7
August	1.1	E 1.5	E 1.1	27.5	.1	9.8	3.5	E 43.3
September	1.2	E 1.4	1.2	24.5	(s)	9.6	2.9	E 39.6
October	1.4	E 1.4	1.4	25.5	.0	8.9	3.0	E 40.2
November	1.2	E 1.1	E 1.2	27.7	.0	8.8	2.8	E 41.6
December	1.1	E .7	E 1.3	27.3	.0	10.1	3.5	E 42.9
Total	13.6	E 14.7	E 14.2	319.8	.4	108.9	38.5	E 496.5
2001 January	.8	E 1.0	1.6	25.0	.2	10.1	3.5	E 41.4
February	.6	E .7	1.6	25.0	.2	9.0	2.9	E 39.4
March	1.1	E .7	E 1.6	30.5	.1	9.0	2.6	E 44.6
April	1.0	E 1.1	E 1.6	27.4	.3	9.5	1.6	E 41.5
May	1.3	E 1.1	E 1.6	25.2	.2	9.1	2.5	E 39.7
June	1.3	E 1.1	E 1.6	24.5	.1	8.5	3.5	E 39.4
July	.8	E 1.4	E 1.6	26.7	.1	9.4	3.3	E 42.5
August	.5	E 1.5	E 1.6	28.4	.1	10.4	3.7	E 45.6
September	.7	E 1.4	E 1.6	E 28.4	.2	E 10.4	2.8	E 44.8
October	.5	E 1.5	E 1.6	E 28.4	.2	9.0	3.0	E 43.6
November	1.2	E 1.4	E 1.6	26.9	.2	9.6	3.1	E 42.7
December	1.4	E .7	E 1.6	28.7	.2	9.4	3.0	E 43.6
Total	11.3	E 13.7	E 19.2	E 324.9	2.2	E 113.3	35.5	E 508.8
2002 January	1.1	E 1.0	E 1.9	25.4	.2	9.6	3.6	E 41.6
February	1.2	E .6	E 1.9	23.5	.3	8.9	3.3	E 38.4
March	1.4	E 1.0	1.7	29.5	.2	9.6	3.3	E 45.4
April	.8	E .7	1.5	27.3	.1	8.6	2.9	E 41.2
May	.7	E 1.4	1.5	28.9	.2	9.9	3.1	E 44.9
June	.7	E 1.4	1.6	26.8	.2	10.1	3.5	E 43.7
July	.7	E 1.5	1.6	29.8	.1	10.5	3.7	E 47.1
August	1.2	E 1.5	1.5	31.5	.2	11.0	3.7	E 49.5
September	1.2	E 1.4	1.5	25.3	.3	9.1	3.2	E 40.8
October	1.2	E 1.5	1.7	22.6	(s)	9.9	3.3	E 39.0
November	1.2	NA	1.8	21.3	(s)	8.9	3.1	E 35.0
December	1.2	E 1.4	1.8	22.2	(s)	10.6	2.9	E 39.0
Total	12.6	NA	E 20.0	314.2	1.9	116.5	39.6	E 505.4

^a South Africa possesses all of Africa's nuclear electricity generation.

^b The total gross generation estimates for China are calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency (IAEA) and are published in the Energy Information Administration annual reports—1993: *World Nuclear Outlook 1994*, December 1994, Table 1. 1994: *Nuclear Power Generation and Fuel Cycle Report 1996*, October 1996, Table 1. 1995 and 1996: *Nuclear Power Generation and Fuel Cycle Report 1997*, September 1997, Table D4. 1997 forward: Based on data from *Nucleonics Week*, a copyrighted publication of The McGraw-Hill Publishing Companies, Inc. Used with permission.

^c Sum of available data only.

Notes: • Net figures are generally less than gross figures by about 5

percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.

Source: • China: See footnote b. • India: 2001 annual total is from NucNet, a copyrighted on-line source at info@worldnuclear.org. Used with permission. • All Other: Based on data from *Nucleonics Week*, a copyrighted publication of The McGraw-Hill Publishing Companies, Inc. Used with permission.

International Energy

Tables 11.1a and 11.1b Sources

United States: See Table 3.1a.

All Other Countries: Monthly Data

2000 forward: *Petroleum Intelligence Weekly, Oil and Gas Journal*, and other industry sources.

All Other Countries: Annual Data

1973–1979: Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8.

1980–2000: Office of Energy Markets and End Use, International Energy Database, April 2002.

2001: Average of monthly data.

World: Monthly Data

2000 forward: EIA, *International Petroleum Monthly*, sum of all countries' monthly data.

World: Annual Data

1973–1979: EIA, *International Energy Annual 1981*, Table 8.

1980–2000: Office of Energy Markets and End Use, International Energy Database, April 2002.

2001: Average of monthly data.

Appendix A. Thermal Conversion Factors

The thermal conversion factors presented in the following tables can be used to estimate the heat content in British thermal units (Btu) of a given amount of energy measured in physical units, such as barrels or cubic feet. For example, 10 barrels of asphalt has a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu per barrel = 66.36 million Btu).

The heat content rates (i.e., thermal conversion factors) provided in this section represent the gross (or upper) energy content of the fuels. Gross heat content rates are applied in all Btu calculations for the *Monthly Energy Review* and are commonly used in energy calculations in the United States; net (or lower) heat content rates are typically used in European energy calculations. The difference between the two rates is the amount of energy that is consumed to vaporize water that is created during the combustion process. Generally, the difference ranges from 2 percent to 10 percent, depending on the specific fuel and its hydrogen content. Some fuels, such as unseasoned

wood, can be more than 40 percent different in their gross and net heat content rates.

In general, the annual thermal conversion factors presented in Tables A1 through A6 are computed from final annual data or from the best available data and labeled "preliminary." Often, the previous year's factor is used as a preliminary value until data become available to calculate the factor appropriate to the year. The source of each factor is described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A6 in this appendix.

Thermal conversion factors for hydrocarbon mixes (Table A1) are weighted averages of the thermal conversion factors for each hydrocarbon included in the mix. For example, in calculating the thermal conversion factor for a 60-40 butane-propane mixture, the thermal conversion factor for butane is weighted 1.5 times the thermal conversion factor for propane.

Table A1. Approximate Heat Content of Petroleum Products
(Million Btu per Barrel)

Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Natural Gasoline and Isopentane	4.620
Aviation Gasoline	5.048	Pentanes Plus	4.620
Butane	4.326	Petrochemical Feedstocks	
Butane-Propane Mixture ^a	4.130	Naptha Less Than 401°F	5.248
Distillate Fuel Oil	5.825	Other Oils Equal to or Greater Than 401°F	5.825
Ethane	3.082	Still Gas	6.000
Ethane-Propane Mixture ^b	3.308	Petroleum Coke	6.024
Isobutane	3.974	Plant Condensate	5.418
Jet Fuel, Kerosene Type	5.670	Propane	3.836
Jet Fuel, Naptha Type	5.355	Residual Fuel Oil	6.287
Kerosene	5.670	Road Oil	6.636
Lubricants	6.065	Special Naphthas	5.248
Motor Gasoline		Still Gas	6.000
Conventional ^c	5.253	Unfinished Oils	5.825
Reformulated ^c	5.150	Unfractionated Stream	5.418
Oxygenated ^c	5.150	Waxes	5.537
Fuel Ethanol ^d	3.539	Miscellaneous	5.796

^a 60 percent butane and 40 percent propane

^b 70 percent ethane and 30 percent propane

^c See Table A3 for motor gasoline annual weighted averages beginning in 1994.

^d Fuel ethanol, which is derived from agricultural feedstocks (primarily corn), is not a petroleum product but is blended into motor gasoline. Its gross heat content (3.539 million Btu per barrel) is used in *Monthly Energy Review* calculations; its net heat content (3.192 million Btu per barrel) is used in the Energy Information Administration's *Renewable Energy Annual* calculations.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Table A2. Approximate Heat Content of Crude Oil, Total Petroleum, and Natural Gas Plant Liquids

(Million Btu per Barrel)

	Crude Oil			Total Petroleum ^a		Natural Gas Plant Liquids Production
	Production	Imports	Exports	Imports	Exports	
1973	5.800	5.817	5.800	5.897	5.752	4.049
1974	5.800	5.827	5.800	5.884	5.774	4.011
1975	5.800	5.821	5.800	5.858	5.748	3.984
1976	5.800	5.808	5.800	5.856	5.745	3.964
1977	5.800	5.810	5.800	5.834	5.797	3.941
1978	5.800	5.802	5.800	5.839	5.808	3.925
1979	5.800	5.810	5.800	5.810	5.832	3.955
1980	5.800	5.812	5.800	5.796	5.820	3.914
1981	5.800	5.818	5.800	5.775	5.821	3.930
1982	5.800	5.826	5.800	5.775	5.820	3.872
1983	5.800	5.825	5.800	5.774	5.800	3.839
1984	5.800	5.823	5.800	5.745	5.850	3.812
1985	5.800	5.832	5.800	5.736	5.814	3.815
1986	5.800	5.903	5.800	5.808	5.832	3.797
1987	5.800	5.901	5.800	5.820	5.858	3.804
1988	5.800	5.900	5.800	5.820	5.840	3.800
1989	5.800	5.906	5.800	5.833	5.857	3.826
1990	5.800	5.934	5.800	5.849	5.833	3.822
1991	5.800	5.948	5.800	5.873	5.823	3.807
1992	5.800	5.953	5.800	5.877	5.777	3.804
1993	5.800	5.954	5.800	5.883	5.779	3.801
1994	5.800	5.950	5.800	5.861	5.779	3.794
1995	5.800	5.938	5.800	5.855	5.746	3.796
1996	5.800	5.947	5.800	5.847	5.736	3.777
1997	5.800	5.954	5.800	5.862	5.734	3.762
1998	5.800	5.953	5.800	5.861	5.720	3.769
1999	5.800	5.942	5.800	5.840	5.699	3.744
2000	5.800	5.959	5.800	5.849	5.658	3.733
2001	5.800	5.976	5.800	5.862	5.752	3.735
2002 ^b	5.800	^R 5.975	5.800	^R 5.865	^R 5.695	^R 3.730

^a Crude oil, including lease condensate, and products.

^b Preliminary.

R=Revised.

Note: Crude oil includes lease condensate.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Table A3. Approximate Heat Content of Petroleum Products, Weighted Averages
(Million Btu per Barrel)

	Consumption						Imports	Exports	Liquefied Petroleum Gases Consumption	Motor Gasoline Consumption
	Residential	Commercial	Industrial	Transportation	Electric Utilities	Total				
1973	5.205	5.749	5.568	5.395	6.245	5.515	5.983	5.752	3.746	5.253
1974	5.196	5.740	5.538	5.394	6.238	5.504	5.959	5.773	3.730	5.253
1975	5.192	5.704	5.528	5.392	6.250	5.494	5.935	5.747	3.715	5.253
1976	5.215	5.726	5.538	5.395	6.251	5.504	5.980	5.743	3.711	5.253
1977	5.213	5.733	5.555	5.400	6.249	5.518	5.908	5.796	3.677	5.253
1978	5.213	5.716	5.553	5.404	6.251	5.519	5.955	5.814	3.669	5.253
1979	5.298	5.769	5.418	5.428	6.258	5.494	5.811	5.864	3.680	5.253
1980	5.245	5.803	5.376	5.440	6.254	5.479	5.748	5.841	3.674	5.253
1981	5.191	5.751	5.313	5.432	6.258	5.448	5.659	5.837	3.643	5.253
1982	5.167	5.751	5.263	5.422	6.258	5.415	5.664	5.829	3.615	5.253
1983	5.022	5.642	5.273	5.415	6.255	5.406	5.677	5.800	3.614	5.253
1984	5.129	5.700	5.223	5.422	6.251	5.395	5.613	5.867	3.599	5.253
1985	5.115	5.660	5.221	5.423	6.247	5.387	5.572	5.819	3.603	5.253
1986	5.130	5.691	5.286	5.427	6.257	5.418	5.624	5.839	3.640	5.253
1987	5.095	5.659	5.253	5.430	6.249	5.403	5.599	5.860	3.659	5.253
1988	5.118	5.657	5.248	5.434	6.250	5.410	5.618	5.842	3.652	5.253
1989	5.057	5.615	5.233	5.440	6.241	5.410	5.641	5.869	3.683	5.253
1990	4.952	5.612	5.272	5.445	6.247	5.411	5.614	5.838	3.625	5.253
1991	4.912	5.591	5.192	5.442	6.248	5.384	5.636	5.827	3.614	5.253
1992	4.943	5.579	5.188	5.445	6.243	5.378	5.623	5.774	3.624	5.253
1993	4.943	5.573	5.200	5.438	6.241	5.379	5.620	5.777	3.606	5.253
1994	4.940	5.583	5.170	5.427	6.231	5.361	5.534	5.777	3.635	^b 5,230
1995	4.928	5.549	5.140	5.419	6.210	5.341	5.483	5.740	3.623	5.215
1996	4.871	5.497	5.136	5.421	6.212	5.336	5.468	5.728	3.613	5.216
1997	4.873	5.463	5.139	5.417	6.220	5.336	5.469	5.726	3.616	5.213
1998	4.844	5.447	5.156	5.416	6.220	5.349	5.462	5.710	3.614	5.212
1999	4.751	5.368	5.115	5.419	6.208	5.328	5.421	5.684	3.616	5.211
2000	4.760	5.395	5.089	5.427	6.193	5.326	5.432	5.651	3.607	5.210
2001	4.760	5.395	5.089	5.427	6.193	5.345	5.443	5.751	3.614	5.210
2002 ^a	4.760	5.395	5.089	5.427	6.193	^R 5.322	^R 5.444	^R 5.694	^R 3.612	^R 5,208

^a Preliminary.

^b Beginning in 1994, the single constant factor is replaced with a quantity-weighted average of motor gasoline's major components. See Table A1.
R=Revised.

Note: Weighted averages of the products included in each category are calculated by using heat content values shown in Table A1.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Table A4. Approximate Heat Content of Natural Gas
(Btu per Cubic Foot)

	Production		Consumption			Imports	Exports
	Dry	Marketed	Sectors Other Than Electric Utilities	Electric Utilities	Total		
1973	1,021	1,093	1,020	1,024	1,021	1,026	1,023
1974	1,024	1,097	1,024	1,022	1,024	1,027	1,016
1975	1,021	1,095	1,020	1,026	1,021	1,026	1,014
1976	1,020	1,093	1,019	1,023	1,020	1,025	1,013
1977	1,021	1,093	1,019	1,029	1,021	1,026	1,013
1978	1,019	1,088	1,016	1,034	1,019	1,030	1,013
1979	1,021	1,092	1,018	1,035	1,021	1,037	1,013
1980	1,026	1,098	1,024	1,035	1,026	1,022	1,013
1981	1,027	1,103	1,025	1,035	1,027	1,014	1,011
1982	1,028	1,107	1,026	1,036	1,028	1,018	1,011
1983	1,031	1,115	1,031	1,030	1,031	1,024	1,010
1984	1,031	1,109	1,030	1,035	1,031	1,005	1,010
1985	1,032	1,112	1,031	1,038	1,032	1,002	1,011
1986	1,030	1,110	1,029	1,034	1,030	997	1,008
1987	1,031	1,112	1,031	1,032	1,031	999	1,011
1988	1,029	1,109	1,029	1,028	1,029	1,002	1,018
1989	1,031	1,107	1,031	1,030	1,031	1,004	1,019
1990	1,031	1,105	1,030	1,034	1,031	1,012	1,018
1991	1,030	1,108	1,031	1,024	1,030	1,014	1,022
1992	1,030	1,110	1,031	1,022	1,030	1,011	1,018
1993	1,027	1,106	1,028	1,022	1,027	1,020	1,016
1994	1,028	1,105	1,029	1,022	1,028	1,022	1,011
1995	1,027	1,106	1,027	1,025	1,027	1,021	1,011
1996	1,027	1,109	1,027	1,024	1,027	1,022	1,011
1997	1,026	1,107	1,027	1,019	1,026	1,023	1,011
1998	1,031	1,109	1,033	1,019	1,031	1,023	1,011
1999	1,027	1,107	1,028	1,019	1,027	1,022	1,006
2000	1,025	1,107	1,026	1,020	1,025	1,023	1,006
2001	1,028	1,105	1,029	1,020	1,028	1,023	1,010
2002 ^a	1,028	1,105	1,029	1,020	1,028	1,023	1,010

^a Preliminary.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Table A5. Approximate Heat Content of Coal and Coal Coke
(Million Btu per Short Ton)

	Coal									Coal Coke	
	Production	Consumption						Imports	Exports		Imports and Exports
		End-Use Sectors			Electric Power Sector		Total				
		Residential and Commercial	Industrial		Electric Utilities	Other Power Producers ^b					
Coke Plants	Other ^a										
1973	23.376	22.831	26.780	22.586	22.246	NA	23.057	25.000	26.596	24.800	
1974	23.072	22.479	26.778	22.419	21.781	NA	22.677	25.000	26.700	24.800	
1975	22.897	22.261	26.782	22.436	21.642	NA	22.506	25.000	26.562	24.800	
1976	22.855	22.774	26.781	22.530	21.679	NA	22.498	25.000	26.601	24.800	
1977	22.597	22.919	26.787	22.322	21.508	NA	22.265	25.000	26.548	24.800	
1978	22.248	22.466	26.789	22.207	21.275	NA	22.017	25.000	26.478	24.800	
1979	22.454	22.242	26.788	22.452	21.364	NA	22.100	25.000	26.548	24.800	
1980	22.415	22.543	26.790	22.690	21.295	NA	21.947	25.000	26.384	24.800	
1981	22.308	22.474	26.794	22.585	21.085	NA	21.713	25.000	26.160	24.800	
1982	22.239	22.695	26.797	22.712	21.194	NA	21.674	25.000	26.223	24.800	
1983	22.052	22.775	26.798	22.691	21.133	NA	21.576	25.000	26.291	24.800	
1984	22.010	22.844	26.799	22.543	21.101	NA	21.573	25.000	26.402	24.800	
1985	21.870	22.646	26.798	22.020	20.959	NA	21.366	25.000	26.307	24.800	
1986	21.913	22.947	26.798	22.198	21.084	NA	21.462	25.000	26.292	24.800	
1987	21.922	23.404	26.799	22.381	21.136	NA	21.517	25.000	26.291	24.800	
1988	21.823	23.571	26.799	22.360	20.900	NA	21.328	25.000	26.299	24.800	
1989	21.765	23.650	26.800	22.347	20.848	21.474	21.268	25.000	26.160	24.800	
1990	21.822	23.137	26.799	22.457	20.929	20.539	21.324	25.000	26.202	24.800	
1991	21.681	23.114	26.799	22.460	20.755	19.933	21.131	25.000	26.188	24.800	
1992	21.682	23.105	26.799	22.250	20.787	18.983	21.107	25.000	26.161	24.800	
1993	21.418	22.994	26.800	22.123	20.639	19.040	20.947	25.000	26.335	24.800	
1994	21.394	23.112	26.800	22.068	20.673	19.485	20.979	25.000	26.329	24.800	
1995	21.326	23.118	26.800	21.950	20.495	19.471	20.815	25.000	26.180	24.800	
1996	21.322	23.011	26.800	22.105	20.525	19.427	20.826	25.000	26.174	24.800	
1997	21.296	22.494	26.800	22.172	20.548	19.596	20.836	25.000	26.251	24.800	
1998	21.418	22.620	27.426	23.164	20.513	20.143	20.868	25.000	26.800	24.800	
1999	21.070	23.880	27.426	22.489	20.401	20.718	20.753	25.000	26.081	24.800	
2000 ^c	21.072	23.880	27.426	22.489	20.401	20.718	20.753	25.000	26.117	24.800	
2001 ^c	20.905	23.880	27.426	22.489	20.401	20.718	20.753	25.000	26.000	24.800	
2002 ^c	20.905	23.880	27.426	22.489	20.401	20.718	20.753	25.000	26.000	24.800	

^a Includes transportation.

^b Nonutility wholesale producers of electricity, and nonutility cogeneration plants that are not included in the end-use sectors.

^c Preliminary.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Table A6. Approximate Heat Rates for Electricity
(Btu per Kilowatthour)

	Electricity Net Generation			Electricity Consumption
	Fossil-Fueled Steam-Electric Plants ^a	Nuclear Steam-Electric Plants	Geothermal Energy Plants ^b	
1973	10,389	10,903	21,674	3,412
1974	10,442	11,161	21,674	3,412
1975	10,406	11,013	21,611	3,412
1976	10,373	11,047	21,611	3,412
1977	10,435	10,769	21,611	3,412
1978	10,361	10,941	21,611	3,412
1979	10,353	10,879	21,545	3,412
1980	10,388	10,908	21,639	3,412
1981	10,453	11,030	21,639	3,412
1982	10,454	11,073	21,629	3,412
1983	10,520	10,905	21,290	3,412
1984	10,440	10,843	21,303	3,412
1985	10,447	10,813	21,263	3,412
1986	10,446	10,799	21,263	3,412
1987	10,419	10,776	21,263	3,412
1988	10,324	10,743	21,096	3,412
1989	10,432	10,724	21,096	3,412
1990	10,402	10,680	21,096	3,412
1991	10,436	10,740	20,997	3,412
1992	10,342	10,678	20,914	3,412
1993	10,309	10,682	20,914	3,412
1994	10,316	10,676	20,914	3,412
1995	10,312	10,658	20,914	3,412
1996	10,340	10,623	20,960	3,412
1997	10,357	10,623	20,960	3,412
1998	10,346	10,623	21,017	3,412
1999	10,346	10,623	21,017	3,412
2000 ^c	10,346	10,623	21,017	3,412
2001 ^c	10,346	10,623	21,017	3,412
2002 ^c	10,346	10,623	21,017	3,412

^a Used as the thermal conversion factor for hydroelectric power generation, and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

^b Used as the thermal conversion factor for geothermal energy consumed at electric utilities.

^c Preliminary.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: See "Thermal Conversion Factor Source Documentation," which follows this table.

Thermal Conversion Factor Source Documentation

Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

Asphalt. The Energy Information Administration (EIA) adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Aviation Gasoline. EIA adopted the Bureau of Mines thermal conversion factor of 5.048 million Btu per barrel for "Gasoline, Aviation" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

Butane. EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Butane-Propane Mixture. EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See *Butane and Propane*.

Crude Oil, Exports. Assumed by EIA to be 5.800 million Btu per barrel or equal to the thermal conversion factor for crude oil produced in the United States. See **Crude Oil and Lease Condensate, Production**.

Crude Oil, Imports. Calculated annually by EIA by weighting the thermal conversion factor of each type of crude oil imported by the quantity imported. Thermal conversion factors for each type were calculated on a foreign country basis through 1996, by determining the average American Petroleum Institute (API) gravity of crude imported from each foreign country from Form ERA-60 in 1977, or for 1997 and later, by determining the weighted average API gravity from the Form EIA-814, and converting average API gravity to average Btu content by using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

Crude Oil and Lease Condensate, Production. EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

Crude Oil and Petroleum Products, Exports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product exported and crude oil exported weighted by the quantity of each petroleum

product and crude oil exported. See **Crude Oil, Exports and Petroleum Products, Exports**.

Crude Oil and Petroleum Products, Imports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product and each type of crude oil imported weighted by the quantity of each petroleum product and each type of crude oil imported. See **Crude Oil, Imports and Petroleum Products, Imports**.

Distillate Fuel Oil. EIA adopted the Bureau of Mines thermal conversion factor of 5.825 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950."

Ethane. EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Ethane-Propane Mixture. EIA calculated 3.308 million Btu per barrel based on an assumed mixture of 70 percent ethane and 30 percent propane. See **Ethane and Propane**.

Fuel Ethanol Blended Into Motor Gasoline. EIA adopted the thermal conversion factor of 3.539 million Btu per barrel published in "Oxygenate Flexibility for Future Fuels," a paper presented by William J. Piel of the ARCO Chemical Company at the National Conference on Reformulated Gasolines and Clean Air Act Implementation, Washington, D.C., October 1991.

Isobutane. EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Jet Fuel, Kerosene Type. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel for "Jet Fuel, Commercial" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

Jet Fuel, Naphtha Type. EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel for "Jet Fuel, Military" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

Kerosene. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

Liquefied Petroleum Gases. • 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, *Crude Petroleum and Petroleum Products, 1956*, Table 4 footnote, constant value of 4.011 million Btu per barrel. • 1967 forward: Calculated annually by EIA as a weighted average by multiplying the quantity consumed of each of the component products by each product's conversion factor, listed in this appendix, and dividing the sum of those heat contents by the sum of the quantities consumed. The component products are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. Quantities consumed are from: 1967 through 1980: EIA, Energy Data Reports, *Petroleum Statement, Annual*, Table 1. 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

Lubricants. EIA adopted the thermal conversion factor of 6.065 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Miscellaneous Products. EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Motor Gasoline. • 1960 through 1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for "Gasoline, Motor Fuel" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics. • 1994 forward: EIA calculated national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (shown in appendix Table C1). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in the Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, Fuel Economy Impact Analysis of Reformulated Gasoline.

Natural Gas Plant Liquids, Production. Calculated annually by EIA as the average of the thermal conversion factors of each natural gas plant liquid produced weighted by the quantity of each natural gas plant liquid produced.

Natural Gasoline. EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Pentanes Plus. EIA assumed the thermal conversion factor to be 4.620 million Btu per barrel or equal to that for natural gasoline. See **Natural Gasoline**.

Petrochemical Feedstocks, Naphtha Less Than 401 Degrees Fahrenheit. Assumed by EIA to be 5.248 million Btu per barrel, equal to the thermal conversion factor for special naphthas. See **Special Naphthas**.

Petrochemical Feedstocks, Oils Equal to or Greater Than 401 Degrees Fahrenheit. Assumed by EIA to be 5.825 million Btu per barrel, equal to the thermal conversion factor for distillate fuel oil. See **Distillate Fuel Oil**.

Petrochemical Feedstocks, Still Gas. Assumed by EIA to be 6.000 million Btu per barrel, equal to the thermal conversion factor for still gas. See **Still Gas**.

Petroleum Coke. EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30.120 million Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

Petroleum Products, Total Consumption. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed, weighted by the quantity of each petroleum product consumed.

Petroleum Products, Consumption by Electric Utilities. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed at electric utilities, weighted by the quantity of each petroleum product consumed at electric utilities. The quantity of petroleum consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

Petroleum Products, Consumption by Industrial Users. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed in the industrial sector, weighted by the estimated quantity of each petroleum product consumed in the industrial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

Petroleum Products, Consumption by Residential and Commercial Users. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential and commercial sector, weighted by the estimated quantity of each petroleum product consumed in the residential and commercial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

Petroleum Products, Consumption by Transportation Users. Calculated annually by EIA as the average of the

thermal conversion factor for all petroleum products consumed in the transportation sector, weighted by the estimated quantity of each petroleum product consumed in the transportation sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

Petroleum Products, Exports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product, weighted by the quantity of each petroleum product exported.

Petroleum Products, Imports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported, weighted by the quantity of each petroleum product imported.

Plant Condensate. Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

Propane. EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Residual Fuel Oil. EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

Road Oil. EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, which was assumed to be equal to that of asphalt (see **Asphalt**) and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*.

Special Naphthas. EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, which was assumed to be equal to that of total gasoline (aviation and motor) factor and was first published in the *Petroleum Statement, Annual, 1970*.

Still Gas. EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel and first published in the *Petroleum Statement, Annual, 1970*.

Unfinished Oils. EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see Distillate Fuel Oil) and first published in the *Annual Report to Congress, Volume 3, 1977*.

Unfractionated Stream. EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see **Plant Condensate**) and first published in the *Annual Report to Congress, Volume 2, 1981*.

Waxes. EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Approximate Heat Content of Natural Gas

Natural Gas, Total Consumption. 1973-1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity of natural gas consumed. The heat content and quantity consumed are from Form EIA-176. Published sources are: 1980-1989: EIA, *Natural Gas Annual 1992, Volume 2*, Table 15. 1990-1992: EIA, *Natural Gas Annual 1992, Volume 2*, Table 16. 1993 forward: 1992 value used as an estimate.

Natural Gas, Consumption by Electric Utilities. Calculated annually by EIA by dividing the total heat content of natural gas received at electric utilities by the total quantity received at electric utilities. The heat contents and receipts are from Form FERC-423 and predecessor forms.

Natural Gas, Consumption by Sectors Other Than Electric Utilities. Calculated annually by EIA by dividing the heat content of all natural gas consumed less the heat content of natural gas consumed at electric utilities by the quantity of all natural gas consumed less the quantity of natural gas consumed at electric utilities. Data are from Forms EIA-176, FERC-423, EIA-759, and predecessor forms.

Natural Gas, Exports. Calculated annually by EIA by dividing the heat content of exported natural gas by the quantity of natural gas exported, both reported on Form FPC-14.

Natural Gas, Imports. Calculated annually by EIA by dividing the heat content of imported natural gas by the quantity of natural gas imported, both reported on Form FPC-14.

Natural Gas Production, Dry. Assumed by EIA to be equal to the thermal conversion factor for the consumption of dry natural gas. See **Natural Gas Total Consumption**.

Natural Gas Production, Marketed (Wet). Calculated annually by EIA by adding the heat content of dry natural gas production and the total heat content of natural gas plant liquids production and dividing this sum by the total quantity of marketed (wet) natural gas production.

Approximate Heat Content of Coal and Coal Coke

Coal, Total Consumption. Calculated annually by EIA by dividing the sum of the heat content of coal (including anthracite culm and waste coal) consumption by the total tonnage.

Coal, Consumption by Electric Utilities. Calculated annually by EIA by dividing the sum of the heat content of coal (including anthracite culm and waste coal) received at electric utilities by the sum of the tonnage received.

Coal, Consumption by Other Power Producers. Calculated annually by dividing the total heat content of coal (including anthracite culm and waste coal) consumed by other power producers by their total consumption tonnage.

Coal, Consumption by the Electric Power Sector. Calculated annually by dividing the total heat content of coal (including anthracite culm and waste coal) by total consumption tonnage of the electric power sector.

Coal, Consumption by End-Use Sectors. Calculated annually by EIA by dividing the sum of the heat content of coal (including anthracite culm and waste coal) consumed by the end-use sectors by the sum of the total tonnage.

Coal, Exports. Calculated annually by EIA by dividing the sum of the heat content of coal exported by the sum of the total tonnage.

Coal, Imports. Calculated annually by EIA by dividing the sum of the heat content of coal imported by the sum of the total tonnage.

Coal, Production. Calculated annually by EIA by dividing the sum of the total heat content of coal (including some anthracite culm) produced by the sum of the total tonnage.

Coal Coke, Imports and Exports. EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

Approximate Heat Rates for Electricity

Fossil-Fueled Steam-Electric Plant Generation. There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, wood and waste, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA uses data from Form EIA-767 to calculate a rate factor that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. 1973-1991: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Electric Plant Cost and Power Production Expenses 1991*, Table 9. 1992 forward: Unpublished factors calculated on the basis of data from Form EIA-767.

Geothermal Energy Plant Generation. 1973-1981: Calculated annually by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12. 1982 forward: Estimated annually by EIA on the basis of an informal survey of relevant plants.

Nuclear Steam-Electric Plant Generation. 1973-1991: Calculated annually by EIA by dividing the total heat content consumed in nuclear generating units by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation are reported on Form FERC-1, "Annual Report of Major Electric Utilities, Licenses, and Others"; Form EIA-412, "Annual Report of Public Electric Utilities"; and predecessor forms. The factors, beginning with 1982 data, are published in the following EIA reports—1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. 1983-1991: *Electric Plant Cost and Power Production Expenses 1991*, Table 13. 1992 forward: Calculated annually by EIA by dividing the total heat content of the steam leaving the nuclear generating units to generate electricity by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported in Nuclear Regulatory Commission, *Licensed Operating Reactors—Status Summary Report*.

Appendix B. Metric and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. However, because U.S. commerce involves other nations, most of which use metric units of measure, the U.S. Government is committed to the transition to the metric system, as stated in the Metric Conversion Act of 1975 (Public Law 94-168), amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), and Executive Order 12770 of July 25, 1991.

The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. customary units. For example, 500 short

tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

Table B1. Metric Conversion Factors

Type of Unit	U.S. Unit	<i>multiplied by</i>	Conversion Factor	<i>equals</i>	Metric Unit
Mass	short tons (2,000 lb)	x	0.907 184 7	=	metric tons (t)
	long tons	x	1.016 047	=	metric tons (t)
	pounds (lb)	x	.453 592 37 ^a	=	kilograms (kg)
	pounds uranium oxide (lb U ₃ O ₈)	x	0.384 647 ^b	=	kilograms uranium (kgU)
	ounces, avoirdupois (avdp oz)	x	28.349 52	=	grams (g)
Volume	barrels of oil (bbl)	x	0.158 987 3	=	cubic meters (m ³)
	cubic yards (yd ³)	x	0.764 555	=	cubic meters (m ³)
	cubic feet (ft ³)	x	0.028 316 85	=	cubic meters (m ³)
	U.S. gallons (gal)	x	3.785 412	=	liters (L)
	ounces, fluid (fl oz)	x	29.573 53	=	milliliters (mL)
	cubic inches (in ³)	x	16.387 06	=	milliliters (mL)
Length	miles (mi)	x	1.609 344 ^a	=	kilometers (km)
	yards (yd)	x	0.914 4 ^a	=	meters (m)
	feet (ft)	x	0.304 8 ^a	=	meters (m)
	inches (in)	x	2.54 ^b	=	centimeters (cm)
Area	acres	x	0.404 69	=	hectares (ha)
	square miles (mi ²)	x	2.589 988	=	square kilometers (km ²)
	square yards (yd ²)	x	0.836 127 4	=	square meters (m ²)
	square feet (ft ²)	x	0.092 903 04 ^a	=	square meters (m ²)
	square inches (in ²)	x	6.451 6 ^b	=	square centimeters (cm ²)
Temperature	degrees Fahrenheit (°F)	x	5/9 (after subtracting 32) ^{a,c}	=	degrees Celsius (°C)
Energy	British thermal units (Btu)	x	1,055.055 852 62 ^{a,d}	=	joules (J)
	calories (cal)	x	4.186 8 ^a	=	joules (J)
	kilowatthours (kWh)	x	3.6 ^a	=	megajoules (MJ)

^aExact conversion.

^bCalculated by the Energy Information Administration.

^cTo convert degrees Celsius (°C) to degrees Fahrenheit (°F) exactly, multiply by 9/5, then add 32.

^dThe Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, contact Dr. Barry Taylor at Building 221, Room B610, National Institute of Standards and Technology, Gaithersburg, MD 20899, or on telephone number 301-975-4220.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 27, 1993), pp. 9-11, 13, and 16. • National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

Table B2. Metric Prefixes

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10 ¹	deka	da	10 ⁻¹	deci	d
10 ²	hecto	h	10 ⁻²	centi	c
10 ³	kilo	k	10 ⁻³	milli	m
10 ⁶	mega	M	10 ⁻⁶	micro	μ
10 ⁹	giga	G	10 ⁻⁹	nano	n
1,0 ¹²	tera	T	10 ⁻¹²	pico	p
1,0 ¹⁵	peta	P	10 ⁻¹⁵	femto	f
1,0 ¹⁸	exa	E	10 ⁻¹⁸	atto	a
1,0 ²¹	zetta	Z	10 ⁻²¹	zepto	z
1,0 ²⁴	yotta	Y	10 ⁻²⁴	yocto	y

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, The International System of Units (SI), NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p.10.

Table B3. Other Physical Conversion Factors

Energy Source	Original Unit	<i>multiplied</i> by	Conversion Factor	equals	Final Unit
Petroleum	barrels (bbl)	x	42 ^a	=	U.S. gallons (gal)
Coal	short tons	x	2,000 ^a	=	pounds (lb)
	long tons	x	2,240 ^a	=	pounds (lb)
	metric tons (t)	x	1,000 ^a	=	kilograms (kg)
Wood	ords (cd)	x	1.25 ^b	=	shorts tons
	ords (cd)	x	128 ^a	=	cubic feet (ft ³)

^aExact conversion.

^bCalculated by the Energy Information Administration.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.

Appendix C. Carbon Dioxide Emission Factors for Coal

Table C1 presents U.S. average carbon dioxide emission factors for coal by sector. The factors measure the emissions produced during the combustion of coal and were derived by the Energy Information Administration (EIA) from 5,426 sample analyses in EIA's Coal Analysis File.

The factors are ratios of the carbon dioxide emitted to the heat content of the coal burned, assuming complete combustion. Factors vary according to the rank and geographic origin of the coal. Sectoral factors reflect the rank and origin of the coal consumed in the sector.

Table C1. Average Carbon Dioxide Emission Factors for Coal by Sector
(Pounds of Carbon Dioxide per Million Btu)

Year	Residential and Commercial	Industrial			U.S. Average ^b
		Coke Plants ^a	Other Coal	Electric Utilities	
1980	210.6	205.8	205.9	206.7	206.5
1981	212.0	205.8	205.9	206.9	206.7
1982	210.4	205.7	206.0	207.0	206.9
1983	209.2	205.5	205.9	207.1	207.0
1984	209.5	205.6	206.2	207.1	207.0
1985	209.3	205.6	206.4	207.3	207.1
1986	209.2	205.4	206.5	207.3	207.1
1987	209.4	205.2	206.4	207.3	207.2
1988	209.1	205.3	206.4	207.6	207.3
1989	209.7	205.3	206.6	207.5	207.3
1990	209.5	206.2	206.8	207.6	207.4
1991	210.2	206.2	206.9	207.7	207.5
1992	211.2	206.2	207.1	207.7	207.6
1993	209.9	206.2	207.2	207.8	207.7
1994	209.8	206.3	207.2	207.9	207.8
1995	210.2	206.4	207.2	208.1	207.9
1996	209.5	206.5	207.0	208.1	208.0
1997	210.2	206.6	207.2	208.2	208.0
1998	209.7	206.7	206.9	204.4	206.9
1999	208.8	206.7	207.0	204.6	204.8

^aNo allowances have been made for carbon retained in non-energy coal chemical byproducts from the carbonization process.

^bWeighted average. The weights used are consumption values by sector.

Web Page: <http://www.eia.doe.gov/emeu/mer/append.html>.

Source: Energy Information Administration, Office of Coal, Nuclear and Alternate Fuels.

Appendix D. List of Energy Plugs

Energy Plugs are synopses of products that have been released recently by the Energy Information Administration. They appear on a regular basis at the front of the *Monthly Energy Review*. Following is a list of the Energy Plug titles that have been published over the past four years. For a

complete list of all features that have appeared in the *Monthly Energy Review* since the first article was published in March 1975, go to the Energy Plug web site at: <http://www.eia.doe.gov/emeu/plugs/plugsrgt.html>.

Title	Cover Date
2003	
<i>Annual Energy Outlook 2003</i>	January 2003
<i>Performance Profiles of Major Energy Producers 2001</i>	February 2003
2002	
<i>Performance Profiles of Major Energy Producers 2000</i>	January 2002
<i>Voluntary Reporting of Greenhouse Gases 2000</i>	February 2002
<i>Analysis of Corporate Average Fuel Economy Standards for Light Trucks and Increased Alternative Fuel Use</i>	March 2002
<i>Summer 2002 Motor Gasoline Outlook</i>	April 2002
<i>International Energy Outlook 2002</i>	April 2002
<i>Weekly Natural Gas Storage Report</i>	May 2002
<i>International Energy Annual 2000</i>	May 2002
<i>Delivered Energy Consumption Projections by Industry</i>	June 2002
<i>Uranium Industry Annual 2001</i>	June 2002
<i>Biomass for Electricity Generation</i>	July 2002
<i>Measuring Changes in Energy Efficiency</i>	July 2002
<i>Foreign Direct Investment in U.S. Energy in 2000</i>	August 2002
<i>U.S. Natural Gas Markets: Relationship Between Henry Hub Spot Prices and U.S. Wellhead Prices</i>	August 2002
<i>Diesel Fuel Price Pass-through</i>	September 2002
<i>Winter Fuels Outlook: 2002-2003</i>	October 2002
<i>Annual Energy Review 2001</i>	November 2002
<i>Renewable Energy Annual 2001</i>	December 2002
2001	
<i>Energy Education Resources</i>	January 2001
<i>Impact of Interruptible Natural Gas Service on Northeast Heating Oil Demand</i>	February 2001
<i>Performance Profiles of Major Energy Producers 1999</i>	February 2001
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<i>Performance Profiles of Major Energy Producers 1997</i>	January 1999
<i>State Energy Data Report 1996</i>	February 1999
<i>State Electricity Profiles</i>	March 1999
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<i>International Energy Outlook 1999</i>	April 1999
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<i>The U.S. Coal Industry in the 1990s: Low Prices and Record Production</i>	September 1999
<i>Issues in Midterm Analysis and Forecasting 1999</i>	October 1999
<i>1999-2000 Winter Fuels Outlook</i>	November 1999
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Glossary

Alcohol Fuels: See **Fuel Ethanol**.

Anthracite: The highest rank of coal. 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. It is used primarily for residential and commercial space heating. 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 1980s 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 Culm: Waste from Pennsylvania anthracite preparation plants, consisting of coarse rock fragments containing as much as 30 percent small-sized coal; sometimes defined as including very fine coal particles called silt. Its heat value ranges from 8 to 17 million Btu per short ton.

Asphalt: A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition 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.

ASTM: The American Society for Testing and Materials.

Aviation Gasoline Blending Components: Naphthas that are used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, and reformate). Excludes oxygenates (alcohols and ethers), butane, and pentanes plus.

Aviation Gasoline, Finished: All special grades of gasoline used in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

Barrel (Petroleum): A unit of volume equal to 42 U.S. gallons.

Base (Cushion) Gas: The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

Bituminous Coal: A dense, black coal, often with well-defined bands of bright and dull material. Bituminous coal is the most abundant coal in active U.S. mining regions. It is 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. 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).

British Thermal Unit (Btu): The quantity of heat needed to raise the temperature of 1 pound of water by 1° F at or near 39.2° F. See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net**.

Bunker Oil: Fuels supplied to ships and aircraft in international transportation, irrespective of the flag of the carrier, consisting primarily of residual, distillate, and jet fuel oils.

Butane: A normally gaseous straight-chain or branched-chain hydrocarbon (C₄H₁₀). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

Isobutane: A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.

Normal Butane: A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

Butylene: An olefinic hydrocarbon (C₄H₈) recovered from refinery processes.

Capacity Factor: The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been

produced at continuous full-power operation during the same period.

Chained Dollars: A measure used to express real prices. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is more closely related to any given period and is therefore subject to less distortion over time.

CIF: See **Cost, Insurance, Freight**.

City Gate: A point or measuring station at which a distribution gas utility receives gas from a natural gas pipeline company or transmission system.

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.

Coal Coke: See **Coke, Coal**.

Coal Rank: The classification of coals according to their degree of progressive alteration from lignite to anthracite. In the U.S. classification, the ranks 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 the period.

Cogenerator: A generating facility that produces electricity and another form of useful energy (such as heat or steam) used for industrial, commercial, heating, or cooling purposes. See **Nonutility Power Producers**.

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° F 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 (coal) has a heating value of 24.8 million Btu per ton.

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 (42 U.S. gallons each) per short ton. Coke (petroleum) has a heating value of 6.024 million Btu per barrel.

Coking Coal: Bituminous coal suitable for making coke. See **Coke, Coal**.

Commercial Sector: An energy-consuming sector that consists of service-providing facilities of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes **institutional living quarters**. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment.

Completion: The 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.

Constant Dollars: See **Chained Dollars**.

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.

Conventional Hydroelectric Power: Hydroelectric power that is not generated by **pumped storage**.

Conversion Factor: A number that translates units of one system into corresponding values of another system. Conversion factors can be used to translate physical units of measure for various fuels into Btu equivalents. See **British Thermal Unit**.

Cost, Insurance, Freight (CIF): A sales transaction in which the seller pays for the transportation and insurance of the goods to the port of destination specified by the buyer.

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; and 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 f.o.b. Price: The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

Crude Oil (Including Lease Condensate): A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

Crude Oil Landed Cost: The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. The cost does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

Crude Oil Refinery Input: The total crude oil put into processing units at refineries.

Crude Oil Stocks: Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

Crude Oil Used Directly: Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

Cubic Foot (Natural Gas): A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60° F.

Degree-Day Normals: Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1961–1990). The averages may be simple degree-day normals or population-weighted degree-day normals.

Degree-Days, Cooling (CDD): A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specified reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use.

Degree-Days, Heating (HDD): A measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree-days are summed to create a heating degree-day measure for a specified reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use.

Degree-Days, Population-Weighted: Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute State population-weighted degree-days, each State is divided into from one to nine climatically homogeneous divisions, which are assigned weights based on the ratio of the population of the division to the total population of the State. Degree-day readings for each division are multiplied by the corresponding population weight for each division and those products are then summed to arrive at the State population-weighted degree-day figure. To compute national population-weighted degree-days, the Nation is divided into nine Census regions, each comprising from three to eight States, which are assigned weights based on the ratio of the population of the region to the total population of the Nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

Design Electrical Rating, Net: The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

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.

Distillate Fuel Oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation.

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 Production: See **Natural Gas (Dry) Production**.

Electrical System Energy Losses: The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

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 **kilowatts** (kW) or megawatts (MW), by which generators, turbines, transformers, transmission circuits, stations, and systems are rated.

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: The total amount of electric energy produced by generating units and measured at the generating terminal in **kilowatthours** (kWh) or megawatthours (MWh).

Electricity Generation, Net: The amount of **gross electricity 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.

Electricity Sales: The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities,

sales to railroads and railways, and interdepartmental sales.

Electric Power: The rate at which electric energy is transferred. Electric power is measured by capacity and is commonly expressed in **kilowatts** (kW) or megawatts (MW).

Electric Power Plant: A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric Power Sector: An energy-consuming sector that consists of all utility and nonutility facilities and equipment used to generate, transmit, and/or distribute electricity. See **Electric Utility** and **Nonutility Power Producer**.

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**.

End-Use Sectors: The **residential, commercial, industrial, and transportation** sectors of the economy.

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.

Energy Consumption: The use of energy as a source of heat or power or as an input in the manufacturing process.

Energy-Use Sectors: A group of major energy-consuming components of U.S. society developed to measure and analyze energy use. The sectors most commonly referred to in EIA are: **residential, commercial, industrial, transportation, and electric power**.

Ethane: A normally gaseous straight-chain hydrocarbon (C₂H₆). It is a colorless, paraffinic gas that boils at a

temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

Ethanol: See **Fuel Ethanol**.

Ethylene: An olefinic hydrocarbon (C₂H₄) recovered from refinery processes or petrochemical processes.

Exploratory Well: A well drilled to find and produce oil or gas in an area previously considered an unproductive area, to find a new reservoir in a known field (i.e., one previously found to be producing oil or gas in another reservoir), or to extend the limit of a known oil or gas reservoir.

Exports: Shipments of goods from the 50 States and the District of Columbia to foreign countries and to Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

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.

f.a.s.: See **Free Alongside Ship**.

Federal Energy Administration (FEA): A predecessor of the Energy Information Administration.

Federal Energy Regulatory Commission (FERC): The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

Federal Power Commission (FPC): The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the Department of Energy was created. Its functions were divided between the Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

First Purchase Price: The marketed first sales price of domestic crude oil, consistent with the removal price defined by the provisions of the Windfall Profits Tax on Domestic Crude Oil (Public Law 96-223, Sec. 4998 (c)).

Flared Natural Gas: Natural gas burned in flares on the base site or at gas processing plants.

f.o.b.: See **Free on Board**.

Footage Drilled: Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

Former U.S.S.R.: See **U.S.S.R.**

Fossil Fuel: An energy source formed in the Earth's crust from decayed organic material, such as **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.

Free Alongside Ship (f.a.s.): 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.

Free on Board (f.o.b.): A sales transaction in which the seller makes the product available at a given port and price and the buyer pays for the transportation and insurance.

Fuel Ethanol: An anhydrous, denatured aliphatic alcohol (C₂H₅OH) intended for motor gasoline blending. See **Oxygenates**.

Full-Power Operation: Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

Gasohol: A blend of finished motor gasoline containing 10 percent or less alcohol (generally ethanol but sometimes methanol). See **Motor Gasoline**, **Oxygenated**.

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, one or more combustion chambers where liquid or gaseous fuel is burned and 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.)

Geothermal Energy: Hot water or steam extracted from geothermal reservoirs in the earth's crust and used for geothermal heat pumps, water heating, or electricity generation.

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

GT/IC: Gas turbine and internal combustion plants.

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. It is also referred to as the higher heating value. Btu conversion factors typically used in EIA 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. Also referred to as the lower heating value. Btu conversion factors typically used in EIA represent gross heat content.

Heavy Oil: The fuel oils remaining after the lighter oils have been distilled off during the refining process. Except for start-up and flame stabilization, virtually all petroleum used in steam-electric power plants is heavy oil.

Household: A family, an individual, or a group of up to nine unrelated persons occupying the same housing unit. "Occupy" means that the housing unit is the person's usual or permanent place of residence.

Hydrocarbon: An organic chemical compound of hydrogen and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (methane, the primary 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 Plant: A plant in which the turbine generators are driven by falling water.

Hydroelectric Pumped Storage: Hydroelectricity that is generated 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.

Imports: Receipts of goods into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

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**.

Industrial Sector: An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing; agriculture, forestry, and fisheries; mining; and construction. Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products.

Injections (Natural Gas): Natural gas injected into storage reservoirs.

Institutional Living Quarters: Space provided by a business or organization for long-term housing of individuals whose reason for shared residence is their association with the business or organization. Such quarters commonly have both individual and group living spaces, and the business or organization is responsible for some aspects of resident life beyond the simple provision of living quarters. Examples include prisons; nursing homes and other long-term medical care facilities; military barracks; college dormitories; and convents and monasteries.

Internal Combustion Electric Power Plant: A power plant in which the prime mover is an internal combustion engine. Diesel or gas-fired engines are the principal types

used in electric power plants. The plant is usually operated during periods of high demand for electricity.

Isobutane: A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams. See **Butane**.

Isobutylene: An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Isopentane: A saturated branched-chain hydrocarbon 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.

Jet Fuel, Kerosene-Type: A kerosene-based product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. Fuel specifications are provided in ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It is used primarily for commercial turbojet and turboprop aircraft engines.

Jet Fuel, Naphtha-Type: A fuel in the heavy naphtha boiling range, with an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290° to 470° F and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used by the military for turbojet and turboprop engines.

Kerosene: A petroleum distillate having a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

Kilowatt: A unit of electrical power equal to 1,000 watts.

Kilowatthour (kWh): A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000 watts) of power expended for 1 hour. One kilowatthour is equivalent to 3,412 Btu. See **Watthour**.

Landed Costs: 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).

Lease and Plant Fuel: Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and used as fuel in natural gas processing plants.

Lease Condensate: A mixture consisting primarily of pentanes and heavier hydrocarbons, which is recovered as a liquid from natural gas in lease or field separation facilities. Note: This category excludes natural gas liquids, such as butane and propane, which are recovered at natural gas processing plants or facilities.

Light Oil: Lighter fuel oils distilled off during the refining process. Virtually all petroleum used in internal combustion and gas-turbine engines is light oil.

Lignite: The lowest rank of coal. Often referred to as brown coal, it is 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 14 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Liquefied Natural Gas (LNG): Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260° F at atmospheric pressure.

Liquefied Petroleum Gases (LPG): Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

Low-Power Testing: The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

Lubricants: Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

Marketed Production: Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

Metallurgical Coal: Coking coal and pulverized coal consumed in making steel.

Methane: A colorless, flammable, odorless, hydrocarbon gas (CH₄) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

Methyl Tertiary Butyl Ether (MTBE): An ether, (CH₃)₃COCH₃, intended for motor gasoline blending. See **Oxygenates**.

Methanol: A light, volatile alcohol (CH₃OH) eligible for motor gasoline blending. See **Oxygenates**.

Miscellaneous Petroleum Products: All finished petroleum products not classified elsewhere—for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

Motor Gasoline Blending: Mechanical mixing of motor gasoline blending components and oxygenates as 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: Naphtha (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 (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, hydrogens, and oxygenates.

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. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122°F to 158°F at the 10-percent recovery point to 365°F to 374°F 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, as well as oxygenates, are not counted in data

on finished motor gasoline until the blending components are blended into the gasoline.

Motor 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.

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 **Motor Gasoline Grades**.

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 **Motor Gasoline Grades**.

Premium Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than 90. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Motor Gasoline, Oxygenated: 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. 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.

Motor Gasoline, Reformulated: 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 Retail Prices: Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population.

Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-service).

Motor Gasoline (Total): For stock level data, a sum including finished motor gasoline stocks plus stocks of motor gasoline blending components but excluding stocks of oxygenates.

MTBE: See **Methyl Tertiary Butyl Ether**.

Nameplate Capacity: The maximum design production capacity specified by the manufacturer of a processing unit or the maximum amount of a product that can be produced running the manufacturing unit at full capacity.

Naphtha: A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

Natural Gas: A gaseous mixture of hydrocarbon compounds, primarily methane, used as a fuel for electricity generation and in a variety of ways in buildings, and as raw material input and fuel for industrial processes.

Natural Gas, Dry: 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.

Natural Gas (Dry) 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.

Natural Gas Marketed Production: Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operations; and quantities vented and flared.

Natural Gas Plant Liquids (NGPL): Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the Gas

Processors Association and the American Society for Testing and Material as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Natural Gas Wellhead Price: The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing States and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to State production, severance, and similar charges.

Natural Gasoline: A mixture of hydrocarbons (mostly pentanes and heavier) extracted from natural gas that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane, which is a saturated branch-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

Net Summer Capability: The maximum output, commonly expressed in **kilowatts (kW)** or megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand. This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

Neutral Zone: A 6,200 square-mile area shared equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 8 trillion cubic feet of natural gas.

Nonhydrocarbon Gases: Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

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.

Nuclear Electric Power: Electricity generated by an electric power plant whose turbines are driven by steam generated in a reactor by heat from the fissioning of nuclear fuel.

Nuclear Electric Power Plant: A single-unit or multiunit 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 the nuclear fission chain can be initiated, maintained, and controlled so that energy is released at a specific rate. The reactor includes fissionable material (fuel), such as uranium or plutonium; fertile material; moderating material (unless it is a fast reactor); a heavy-walled pressure vessel; shielding to protect personnel; provision for heat removal; and control elements and instrumentation.

Octane Rating: A number used to indicate gasoline's anti-knock performance in motor vehicle engines. The two recognized laboratory engine test methods for determining the antiknock rating of gasolines are the Research method and the Motor method. 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.

Offshore: That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

Oil: See **Crude Oil**.

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.

Operable Unit (Nuclear): In the United States, a nuclear generating unit that has completed low-power testing and been issued a full-power operating license by the Nuclear Regulatory Commission, or equivalent permission to operate.

Organization for Economic Cooperation and Development (OECD): Members are Australia, Austria, Belgium, Canada, Denmark, Faeroe Islands, Finland, France, Germany, Greece, Greenland, Hawaiian Trade Zone, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States and its territories (Guam, Puerto Rico, and the Virgin Islands). In addition, Czech Republic, Hungary, Poland, and South Korea joined the OECD in 1996.

Organization of Petroleum Exporting Countries (OPEC): Countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Oxygenates: Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. Ethanol, MTBE, and methanol are common oxygenates.

PAD Districts: Petroleum Administration for Defense Districts. Geographic aggregations of the 50 States and the District of Columbia into five districts for the Petroleum Administration for Defense in 1950. The districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which were established in 1942.

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

Petrochemical Feedstocks: Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

Petroleum: A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

Petroleum Coke: See **Coke**, **Petroleum**.

Petroleum Coke, Catalyst: The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

Petroleum Coke, Marketable: Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or may be further purified by calcining.

Petroleum Consumption: The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus quantity and net additions are a minus quantity) and exports.

Petroleum Imports: Imports of petroleum into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of

foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

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 miscellaneous products.

Petroleum Products Supplied: An approximate measure of consumption. It measures the disappearance of the products from primary sources, i.e., refineries, blending plants, and bulk terminals. In general, products supplied in any given period is computed as follows: field production, plus imports, plus unaccounted-for crude oil (plus net receipts when calculated on a PAD District basis) minus stock change, minus crude oil losses, minus refinery inputs, and minus exports. See also **Petroleum Consumption**.

Petroleum Stocks, Primary: For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

Photovoltaic Energy: Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

Pipeline Fuel: Gas consumed in the operation of pipelines, primarily in compressors.

Plant Condensate: One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquid at gas inlet separators or scrubbers in processing plants.

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.

Primary Consumption: Includes consumption of coal, natural gas, petroleum, nuclear electric power, hydroelectric power, wood, waste, alcohol fuels, geothermal, solar, wind, net imports of coal coke, and net imports of electricity.

Propane: A normally gaseous straight-chain hydrocarbon (C_3H_8). It is a colorless paraffinic gas that boils at a temperature of $-43.67^\circ F$. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

Propylene: An olefinic hydrocarbon (C_3H_6) recovered from refinery or petrochemical processes.

Pumped Storage: See **Hydroelectric Pumped Storage**.

Refiner Acquisition Cost of Crude Oil: The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

Refinery (Petroleum): An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, for example, the **fossil fuels**, of which there is a finite supply). Renewable sources of energy include **conventional hydroelectric power, wood, waste, alcohol fuels, geothermal, solar, and wind**.

Repressuring: The injection of a pressurized fluid (such as air, gas, or water) into oil and gas reservoir formations to effect greater ultimate recovery.

Residential Sector: An energy-consuming sector that consists of living quarters for private **households**. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes **institutional living quarters**.

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, for electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

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.

Short Ton (Coal): A unit of weight equal to 2,000 pounds.

SIC: See **Standard Industrial Classification**.

Small Power Producer: Under the Public Utility Regulatory Policies Act, a small power production facility (small power producer) generates electricity by using waste or renewable energy (biomass, 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**.

Solar Energy: See **solar thermal energy** and **photo-voltaic energy**.

Solar Thermal Energy: The radiant energy of the sun that can be converted into other forms of energy, such as heat or **electricity**. Electricity produced from solar energy heats a medium that powers an electricity-generating device.

Special Naphthas: All finished products within the naphtha boiling ranges that are used as paint thinner, cleaners or solvents. Those products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, 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.

Spent Liquor: The liquid residue left after an industrial process; can be a component of waste materials used as fuel.

Standard Industrial Classification (SIC): A set of codes developed by the Office of Management and Budget which categorizes industries into groups with similar economic activities.

Startup Test Phase of Nuclear Power Plant: A nuclear power plant that has been licensed by the Nuclear Regulatory Commission to operate but is still in the initial testing phase, during which the production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer and places it in commercial operation status. A request is then submitted to the appropriate utility rate commission to include the power plant in the rate base calculation.

Steam Coal: All nonmetallurgical coal.

Steam-Electric Power Plant: 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 gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. It is used primarily as refinery fuel and petrochemical feedstock.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

Subbituminous Coal: A coal that ranges in properties from those of lignite to those of bituminous coal. It may be dull, dark brown or black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. It is used primarily as fuel for steam-electric power generation. 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 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Supplemental Gaseous Fuels: Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Synthetic Natural Gas (SNG): A manufactured product chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons. It may easily be substituted for, or interchanged with, pipeline quality natural gas. Also referred to as substitute natural gas.

Thermal Conversion Factor: See **Conversion Factor**.

Transportation Sector: An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not

transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use.

Unaccounted-for Crude Oil: Arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production and imports, less changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

Unfinished Oils: All oils requiring further refinery processing except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils and residuum.

Unfractionated Stream: Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

Underground Storage: The storage of natural gas in underground reservoirs at a different location from which it was produced.

United States: Unless otherwise noted, "United States" in this publication means the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

Useful Thermal Output: The thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical generation.

U.S.S.R.: The Union of Soviet Socialist Republics consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. As a political entity, the U.S.S.R. ceased to exist as of December 31, 1991.

Vented Natural Gas: Gas released into the air on the base site or at processing plants.

Vessel Bunkering: 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.

Waste Energy: Industrial, agricultural, and urban refuse used to generate electricity, such as 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.

Watt (W): The unit of electrical power equal to 1 ampere under a pressure of 1 volt. A watt is equal to 1/746 horsepower.

Watt-hour (Wh): The electrical energy unit of measure equal to 1 watt of power supplied to, or taken from, an electric circuit steadily for 1 hour.

Waxes: Solid or semisolid material derived from petroleum distillates or residues. 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. Waxes are used primarily as industrial coating for surface protection.

Wellhead Price: The value of crude oil or natural gas at the mouth of the well.

Well Servicing Unit: Truck-mounted equipment generally used for downhole services after a well is drilled. Services include well and recompletions, maintenance, repairs, workovers, and well plugging and abandonments. Jobs range from minor operations, such as pulling the rods and rod pumps out of an oil well, replacing the pump and rerunning the assemblage into the well, to major workovers, such as milling out and repairing collapsed casing. Well depth and characteristics determine the type of equipment used.

Wind Energy: The kinetic energy of wind converted into mechanical energy by wind turbines (e.g., blades rotating from a hub) that drive generators to produce electricity.

Withdrawals (Natural Gas): Total volume of gas withdrawn during the applicable reporting period.

Wood Energy: Wood and wood products used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, black liquor, red liquor, spent sulfite liquor, wood sludge, peat, railroad ties, and utility poles.

Working Gas: The gas in a reservoir that is in addition to the base (cushion) gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any given season.

Energy Forecast Resources

...from the Energy Information Administration



The items described below are available on EIA's Web site at www.eia.doe.gov under Forecasts. Some items are also available in hard copy. For more information on these and other EIA products, contact the National Energy Information Center (NEIC) at infoctr@eia.doe.gov or 202-586-8800.

Annual Energy Outlook

Midterm forecasts of U.S. energy supply, demand, and prices through 2025, based on EIA's National Energy Modeling System (NEMS). The NEMS is documented in *National Energy Modeling System: An Overview* and numerous publications detailing the assumptions, computational methodology, and estimation techniques for individual NEMS modules.

Annual Energy Outlook Forecast Evaluation

Evaluation of the projections published in the *Annual Energy Outlook (AEO)*. Compares the projections from the *AEO 1982* through the *AEO 2002* with actual historical values and presents the reasons and rationales for significant differences.

Short-Term Energy Outlook

U.S. energy and international oil forecasts for the coming 18 months. Updated monthly. Includes the "Summer Fuels Outlook" in April and the "Winter Fuels Outlook" in October.

International Energy Outlook

Projections of international energy supply, demand, and prices through 2020. The projection models and assumptions are found in a related document, the World Energy Projection System Model.

U.S. Natural Gas Markets: Mid-Term Prospects for Natural Gas Supply

Recent trends in U.S. natural gas markets and future market prospects. Examines the impact of drilling on supply, the potential for imports of liquefied natural gas (LNG), the impacts of removing limitations on access to Federal lands and offshore areas, and data improvements that would support a better understanding of natural gas markets.

Biomass for Electricity Generation

Examines issues affecting the use of biomass for electricity generation. Discusses the methodology and assumptions in the National Energy Modeling System to account for various types of biomass. Estimates biomass availability at various prices in 2020.

Analysis of H.R. 4, S. 1766, and S. 517 Provisions

Includes these service reports: "The Effects of the Alaska Oil and Natural Gas Provisions of H.R. 4 and S. 1766 on U.S. Energy Markets"; "Impact of Renewable Fuels Standard/MTBE Provisions of S. 1766"; "Impacts of a 10-Percent Renewable Portfolio Standard"; "Impacts of Energy Research and Development (S. 1766 Sections 1211-1245, and Corresponding Sections of H.R. 4) With Analyses of Price-Anderson Act and Hydroelectric Relicensing"; "Analysis of Corporate Average Fuel Economy (CAFE) Standards for Light Trucks and Increased Alternative Fuel Use"; and "Analysis of Efficiency Standards for Air Conditioners, Heat Pumps, and Other Products."

Environmental Resources and Data

....from the Energy Information Administration

The items described below are available on EIA's Web site at <http://www.eia.doe.gov> under Environment. Some items are also available in hard copy. For more information on these and other EIA products, contact the National Energy Information Center at infoctr@eia.doe.gov or 202-586-8800.

Voluntary Reporting of Greenhouse Gases 2001

Data on greenhouse gas emission reductions and carbon sequestration from the Voluntary Reporting of Greenhouse Gases Program. Also contains an analysis of the effect of legislation and government policy on reported emissions and emission reductions.

Emissions of Greenhouse Gases in the United States 2001

Annual inventory of human-caused greenhouse gas emissions in the United States.

Annual Energy Outlook 2003

Projections through 2025 of energy supply, demand, and prices, including projected emissions of carbon, sulfur dioxide, and nitrogen oxide from energy use and electricity generation.

Reducing Emissions of Sulfur Dioxide, Nitrogen Oxides, and Mercury From Electric Power Plants

Cost impacts of three alternative scenarios reducing electric power sector emissions of the above pollutants.

Analysis of Strategies for Reducing Multiple Emissions From Electric Power Plants

Impacts of imposing caps on power sector emissions of nitrogen oxides, sulfur dioxide, mercury, and carbon dioxide, with and without a renewable portfolio standard. In two volumes.

Analysis of Strategies for Reducing Multiple Emissions From Electric Power Plants With Advanced Technology Scenarios

Costs and impacts of a set of emission control limits for electricity generators under four different technology cases.

International Energy Annual 2001

Compendium of international energy data, including data on world carbon emissions from the consumption and flaring of fossil fuels.

International Energy Outlook 2002

Projections of international energy supply, demand, and prices through 2020; chapter on Environmental Issues and World Energy Use includes world carbon emissions projections through 2020.

Alternative Fueled Vehicles in Use and Alternative Fueled Consumption Through 2001

Estimates of the number of alternative-fueled vehicles in use in the United States by fuel, census region, State, and weight category, and of consumption of alternative transportation fuels.