

# Monthly Energy Review

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## April 2004



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Energy Information Administration

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International Energy Outlook 2004

# Monthly Energy Review

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# Monthly Energy Review

## April 2004

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

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# Contents

	<b>Page</b>
Energy Plug: <i>International Energy Outlook 2004</i> . . . . .	ix
Section 1. Energy Overview . . . . .	1
Section 2. Energy Consumption by Sector . . . . .	23
Section 3. Petroleum . . . . .	41
Section 4. Natural Gas . . . . .	71
Section 5. Crude Oil and Natural Gas Resource Development . . . . .	81
Section 6. Coal . . . . .	87
Section 7. Electricity . . . . .	95
Section 8. Nuclear Energy . . . . .	117
Section 9. Energy Prices . . . . .	121
Section 10. Renewable Energy . . . . .	141
Section 11. International Petroleum . . . . .	149
Appendix A. Thermal Conversion Factors . . . . .	159
Appendix B. Metric and Other Physical Conversion Factors . . . . .	169
Appendix C. List of Energy Plugs . . . . .	173
Glossary . . . . .	175

# Tables

	Page
<b>Section 1. Energy Overview</b>	
1.1 Energy Overview . . . . .	3
1.2 Energy Production by Source . . . . .	5
1.3 Energy Consumption by Source . . . . .	7
1.4 Energy Net Imports by Source . . . . .	9
1.5 Merchandise Trade Value . . . . .	11
1.6 Cost of Fuels to End Users in Constant (1982-1984) Dollars . . . . .	13
1.7 Overview of U.S. Petroleum Trade . . . . .	15
1.8 Energy Consumption per Dollar of Gross Domestic Product . . . . .	16
1.9 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates . . . . .	17
1.10 Heating Degree-Days by Census Division . . . . .	18
1.11 Cooling Degree-Days by Census Division . . . . .	19
<b>Section 2. Energy Consumption by Sector</b>	
2.1 Energy Consumption by Sector . . . . .	25
2.2 Residential Sector Energy Consumption . . . . .	27
2.3 Commercial Sector Energy Consumption . . . . .	29
2.4 Industrial Sector Energy Consumption . . . . .	31
2.5 Transportation Sector Energy Consumption . . . . .	33
2.6 Electric Power Sector Energy Consumption . . . . .	35
<b>Section 3. Petroleum</b>	
3.1 Petroleum Overview	
3.1a Field Production, Stock Change, Petroleum Products Supplied, and Stocks . . . . .	42
3.1b Imports, Exports, and Net Imports . . . . .	43
3.2 Crude Oil Supply and Disposition	
3.2a Supply . . . . .	46
3.2b Disposition and Stocks . . . . .	47
3.3 Petroleum Imports From	
3.3a Bahrain, Iran, Iraq, and Kuwait . . . . .	48
3.3b Qatar, Saudi Arabia, U.A.E., and Total Persian Gulf . . . . .	49
3.3c Algeria, Ecuador, Gabon, Indonesia, and Libya . . . . .	50
3.3d Nigeria, Venezuela, Total Other OPEC, and Total OPEC . . . . .	51
3.3e Angola, Australia, Bahamas, Brazil, Canada, and China . . . . .	52
3.3f Colombia, Ecuador, Gabon, Italy, Malaysia, and Mexico . . . . .	53
3.3g Netherlands, Netherlands Antilles, Norway, Puerto Rico, Russia, and Spain . . . . .	54
3.3h Trinidad and Tobago, United Kingdom, U.S. Virgin Islands, Other Non-OPEC, Total Non-OPEC, and Total Imports . . . . .	55
3.4 Finished Motor Gasoline Supply and Disposition . . . . .	57
3.5 Distillate Fuel Oil Supply and Disposition . . . . .	59
3.6 Residual Fuel Oil Supply and Disposition . . . . .	61
3.7 Jet Fuel Supply and Disposition . . . . .	63
3.8 Liquefied Petroleum Gases Supply and Disposition . . . . .	65
3.9 Propane and Propylene Supply and Disposition . . . . .	67
3.10 Other Petroleum Products Supply and Disposition . . . . .	68
<b>Section 4. Natural Gas</b>	
4.1 Natural Gas Overview . . . . .	73
4.2 Natural Gas Production . . . . .	74
4.3 Natural Gas Trade by Country . . . . .	75
4.4 Natural Gas Consumption by Sector . . . . .	76
4.5 Natural Gas in Underground Storage . . . . .	77

## Tables (Continued)

	<b>Page</b>
<b>Section 5. Crude Oil and Natural Gas Resource Development</b>	
5.1 Crude Oil and Natural Gas Drilling Activity Measurements. . . . .	83
5.2 Crude Oil and Natural Gas Wells Drilled. . . . .	84
5.3 Maximum U.S. Active Seismic Crew Counts. . . . .	85
<b>Section 6. Coal</b>	
6.1 Coal Overview. . . . .	89
6.2 Coal Consumption by Sector. . . . .	90
6.3 Coal Stocks by Sector. . . . .	91
<b>Section 7. Electricity</b>	
7.1 Electricity Overview. . . . .	97
7.2 Electricity Net Generation	
7.2a Total (All Sectors). . . . .	99
7.2b Electric Power Sector. . . . .	100
7.2c Commercial and Industrial Sectors. . . . .	101
7.3 Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output	
7.3a Total (All Sectors). . . . .	103
7.3b Electric Power Sector. . . . .	104
Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output	
7.3c Commercial and Industrial Sectors. . . . .	105
Consumption of Combustible Fuels for Electricity Generation	
7.3d Total (All Sectors). . . . .	107
7.3e Electric Power Sector. . . . .	108
Estimated Consumption of Selected Combustible Fuels for Electricity Generation	
7.3f Commercial and Industrial Sectors. . . . .	109
7.4 Stocks of Coal and Petroleum: Electric Power Sector. . . . .	111
7.5 Electricity End Use. . . . .	113
<b>Section 8. Nuclear Energy</b>	
8.1 Nuclear Energy Overview. . . . .	119
<b>Section 9. Energy Prices</b>	
9.1 Crude Oil Price Summary. . . . .	123
9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries. . . . .	124
9.3 Landed Costs of Crude Oil Imports From Selected Countries. . . . .	125
9.4 Motor Gasoline Retail Prices, U.S. City Average. . . . .	126
9.5 Refiner Prices of Residual Fuel Oil. . . . .	127
9.6 Refiner Prices of Petroleum Products for Resale. . . . .	128
9.7 Refiner Prices of Petroleum Products to End Users. . . . .	129
9.8 No. 2 Distillate Prices to Residences	
9.8a Northeastern States. . . . .	130
9.8b Selected South Atlantic and Midwestern States. . . . .	131
9.8c Selected Western States and U.S. Average. . . . .	132
9.9 Average Retail Prices of Electricity. . . . .	134
9.10 Cost of Fossil-Fuel Receipts at Electric Generating Plants. . . . .	135
9.11 Natural Gas Prices. . . . .	137

## Tables (Continued)

### Section 10. Renewable Energy

10.1	Renewable Energy Consumption by Source. . . . .	143
10.2	Estimated Renewable Energy Consumption	
10.2a	Residential and Commercial Sectors. . . . .	144
10.2b	Industrial and Transportation Sectors. . . . .	145
	Renewable Energy Consumption	
10.2c	Electric Power Sector and Total . . . . .	146

### Section 11. International Petroleum

11.1	Crude Oil Production	
11.1a	OPEC Members. . . . .	150
11.1b	Persian Gulf Nations, Non-OPEC, and World. . . . .	151
11.2	Petroleum Consumption in OECD Countries. . . . .	155
11.3	Petroleum Stocks in OECD Countries. . . . .	157

### Appendix A. Thermal Conversion Factors

A1.	Approximate Heat Content of Petroleum Products. . . . .	159
A2.	Approximate Heat Content of Crude Oil, Total Petroleum, and Natural Gas Plant Liquids. . . . .	160
A3.	Approximate Heat Content of Petroleum Product Weighted Averages. . . . .	161
A4.	Approximate Heat Content of Natural Gas. . . . .	162
A5.	Approximate Heat Content of Coal and Coal Coke. . . . .	163
A6.	Approximate Heat Rates for Electricity. . . . .	164

### Appendix B. Metric and Other Physical Conversion Factors

B1.	Metric Conversion Factors. . . . .	170
B2.	Metric Prefixes. . . . .	171
B3.	Other Physical Conversion Factors. . . . .	171



# Figures

	Page
<b>Section 1. Energy Overview</b>	
1.1 Energy Overview . . . . .	2
1.2 Energy Production . . . . .	4
1.3 Energy Consumption . . . . .	6
1.4 Energy Net Imports . . . . .	8
1.5 Merchandise Trade Value . . . . .	10
1.6 Cost of Fuels to End Users in Constant (1982-1984) Dollars . . . . .	12
1.7 Overview of U.S. Petroleum Trade . . . . .	14
1.8 Energy Consumption per Dollar of Gross Domestic Product . . . . .	16
1.9 Motor Vehicle Fuel Rates . . . . .	17
<b>Section 2. Energy Consumption by Sector</b>	
2.1 Energy Consumption by Sector . . . . .	24
2.2 Residential Sector Energy Consumption . . . . .	26
2.3 Commercial Sector Energy Consumption . . . . .	28
2.4 Industrial Sector Energy Consumption . . . . .	30
2.5 Transportation Sector Energy Consumption . . . . .	32
2.6 Electric Power Sector Energy Consumption . . . . .	34
<b>Section 3. Petroleum</b>	
3.1 Petroleum	
3.1a Overview and Production . . . . .	44
3.1b Products Supplied, Imports, and Stocks . . . . .	45
3.2 Finished Motor Gasoline . . . . .	56
3.3 Distillate Fuel Oil . . . . .	58
3.4 Residual Fuel Oil . . . . .	60
3.5 Jet Fuel . . . . .	62
3.6 Liquefied Petroleum Gases . . . . .	64
3.7 Propane and Propylene . . . . .	66
<b>Section 4. Natural Gas</b>	
4.1 Natural Gas . . . . .	72
<b>Section 5. Crude Oil and Natural Gas Resource Development</b>	
5.1 Crude Oil and Natural Gas Resource Development Indicators . . . . .	82
<b>Section 6. Coal</b>	
6.1 Coal . . . . .	88
<b>Section 7. Electricity</b>	
7.1 Electricity Overview . . . . .	96
7.2 Electricity Net Generation . . . . .	98
7.3 Consumption of Selected Combustible Fuels	
7.3a For Electricity Generation and Useful Thermal Output . . . . .	102
7.3b For Electricity Generation . . . . .	106
7.4 Stocks of Coal and Petroleum: Electric Power Sector . . . . .	110
7.5 Electricity End Use . . . . .	112
<b>Section 8. Nuclear Energy</b>	
8.1 Nuclear Energy Overview . . . . .	118

# Figures (Continued)

	<b>Page</b>
<b>Section 9. Energy Prices</b>	
9.1 Petroleum Prices. . . . .	122
9.2 Average Retail Prices of Electricity. . . . .	133
9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants. . . . .	133
9.4 Natural Gas Prices. . . . .	136
<b>Section 10. Renewable Energy</b>	
10.1 Renewable Energy Consumption. . . . .	142
<b>Section 11. International Petroleum</b>	
11.1 Crude Oil Production	
11.1a Overview. . . . .	152
11.1b By Selected Country. . . . .	153
11.2 Petroleum Consumption in OECD Countries. . . . .	154
11.3 Petroleum Stocks in OECD Countries. . . . .	156

# Energy Plug

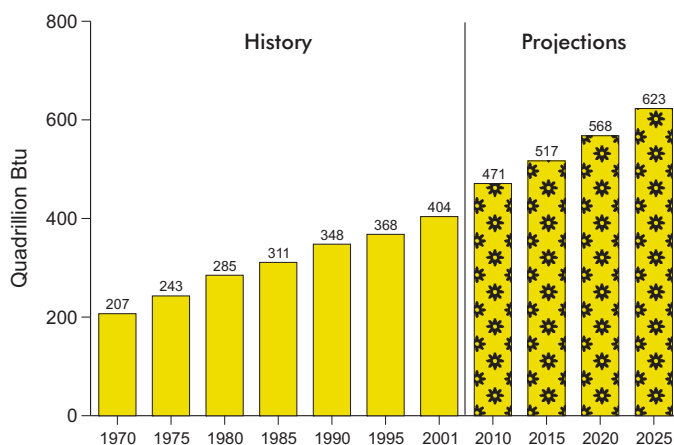


## International Energy Outlook 2004

Global energy consumption is projected to increase by 54 percent from 2001 to 2025 according to the *International Energy Outlook 2004 (IEO2004)*. Petroleum consumption will increase 57 percent over the 24-year forecast period and will remain the world's dominant energy source. The report also projects that consumption of natural gas will grow 67 percent and net electricity consumption will nearly double by 2025.

**Petroleum** demand is projected to increase from 77 million barrels per day in 2001 to 121 million barrels per day in 2025. The United States, China, and other nations of developing Asia are expected to account for nearly 60 percent of the growth in demand. Crude oil prices are projected to moderate after 2004 and then rise slowly to \$27 per barrel (in 2002 dollars) in 2025. The Organization of Petroleum Exporting Countries (OPEC) will provide most of increased production, but increments are forecast in non-OPEC supply, especially from offshore resources in the Caspian Basin, Latin America, and deepwater West Africa.

### World Energy Consumption, 1970-2025



Source: Energy Information Administration.

**Natural gas** is the fastest growing source of primary energy in the *IEO2004* reference case, with consumption projected to increase from 90 trillion cubic feet (Tcf) in 2001 to 151 Tcf in 2025. *IEO2004*'s estimate of natural gas consumption in the final year of the forecast is 25 Tcf lower than last year's as the result of lower assumptions for worldwide economic growth, a slower projected decline in nuclear power generation (which competes with natural gas in the

power sector), and concerns about the ability of natural gas producers to bring resources to market at competitive prices.

**Coal** is expected to continue to dominate many national energy markets in developing Asia. However, with the projected growth in coal consumption averaging 1.5 percent per year through 2025, coal's share of total world energy consumption declines slightly in the forecast, from 24 percent in 2001 to 23 percent in 2025.

**Electricity** use is forecast to grow by an average of 2.3 percent per year worldwide and 3.5 percent per year in the developing world. Robust economic growth in many of the developing nations is expected to boost demand for electricity to run newly purchased home appliances for air conditioning, cooking, space and water heating, and refrigeration.

**Nuclear** electricity generation is projected to increase by 20 percent between 2001 and 2020 and then decline 4 percent through 2025. The nuclear power forecast is higher than in last year's outlook in light of higher capacity utilization rates reported for many existing nuclear facilities and the expectation that fewer retirements of existing plants will occur than previously projected. The largest increase in nuclear generation is expected for the developing world, especially China, South Korea, and India.

**Carbon dioxide emissions** are projected to rise from 24 billion metric tons in 2001 to 37 billion metric tons in 2025. Developing countries account for 61 percent of the projected increase because of large increases in the region's energy use and continuing reliance on coal and other fossil fuels.

**Energy intensity** in the industrialized countries is expected to improve (decrease) by an average of 1.2 percent per year between 2001 and 2025, slightly slower than the 1.4 percent per year improvement for these countries between 1970 and 2001. Energy intensity is expected to improve more rapidly in the developing countries as a result of economic expansion. Energy intensity in Eastern Europe and the former Soviet Union (EE/FSU) is expected to improve by 2.5 percent per year on average and be five times as high as in the industrialized world.

**Carbon dioxide intensity** is projected to decline from 739 metric tons per million 1997 dollars of GDP in 2001 to 566 metric tons per million 1997 dollars of GDP in 2025. The most rapid rates of improvement are projected for the EE/FSU as old and inefficient capital stocks are replaced, and in China primarily as the result of economic growth rather than a switch to less carbon-intensive fuels.

**International Energy Outlook 2004** DOE/EIA-0484(2004); 256 pages, 77 tables, 86 figures. The publication is available on the EIA Web site at <http://www.eia.doe.gov/oiarf/ieo>. Contact the webmaster at [wmaster@eia.doe.gov](mailto:wmaster@eia.doe.gov) or call 202-586-8959 if you have problems. Questions about the contents of the report should be directed to Linda Doman, Office of Integrated Analysis and Forecasting, at [linda.doman@eia.doe.gov](mailto:linda.doman@eia.doe.gov) or 202-586-1041. For general information about energy, contact the National Energy Information Center at [infoctr@eia.doe.gov](mailto:infoctr@eia.doe.gov) or 202-586-8800.

## Section 1. Energy Overview

Energy production during January 2004 totaled 6.0 quadrillion Btu, a 0.1-percent decrease compared with the level of production during January 2003. Production of conventional hydroelectric power increased 28.6 percent; crude oil decreased 3.3 percent; coal decreased 1.8 percent; and natural gas (dry) decreased 0.6 percent, compared with the level of production during January 2003

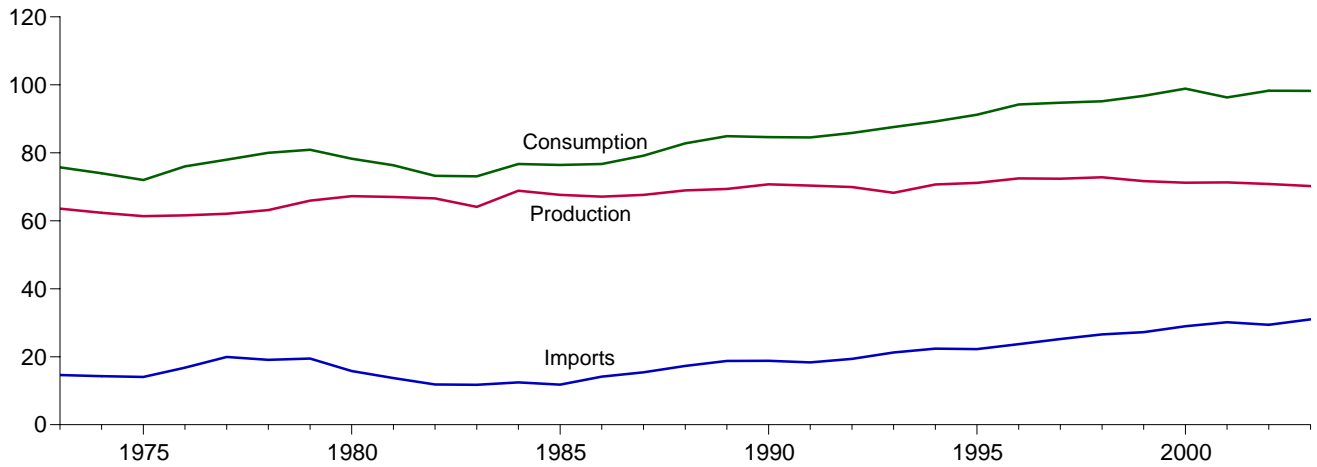
Energy consumption during January 2004 totaled 9.3 quadrillion Btu, a 0.5-percent increase compared with the level of consumption during January 2003. Consumption of natural gas decreased 2.9 percent; petroleum increased 1.8

percent; coal increased 0.6 percent; and nuclear electric power decreased 0.3 percent, compared with the level 1 year earlier.

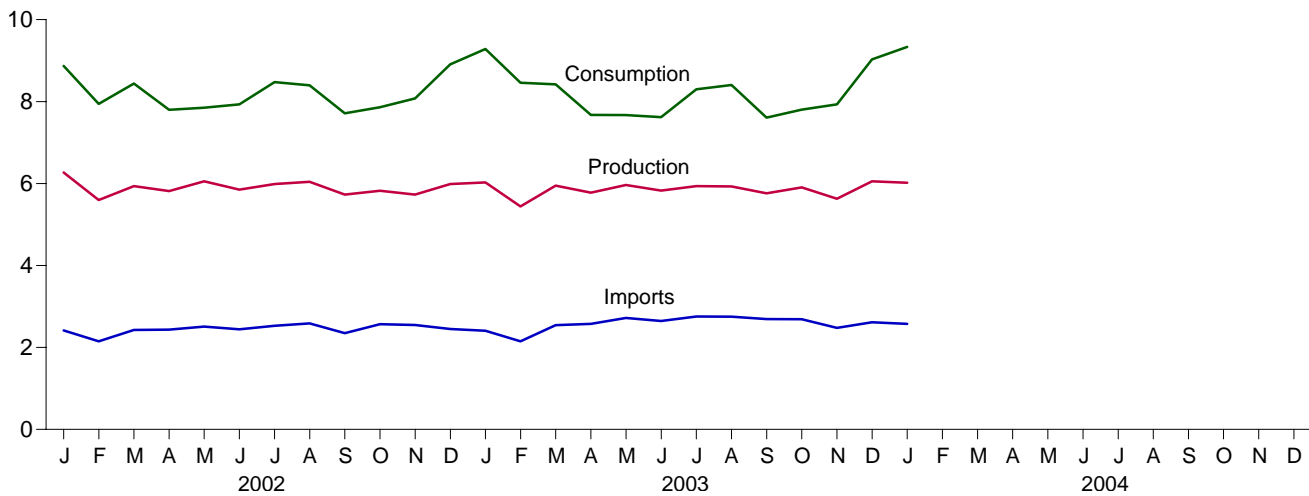
Net imports of energy during January 2004 totaled 2.3 quadrillion Btu, 12.7 percent above the level of net imports 1 year earlier. Petroleum products net imports increased 36.3 percent; coal net exports decreased 32.4 percent; crude oil net imports increased 9.1 percent; and natural gas net imports increased 7.2 percent, compared with the level in January 2003.

**Figure 1.1 Energy Overview**  
(Quadrillion Btu)

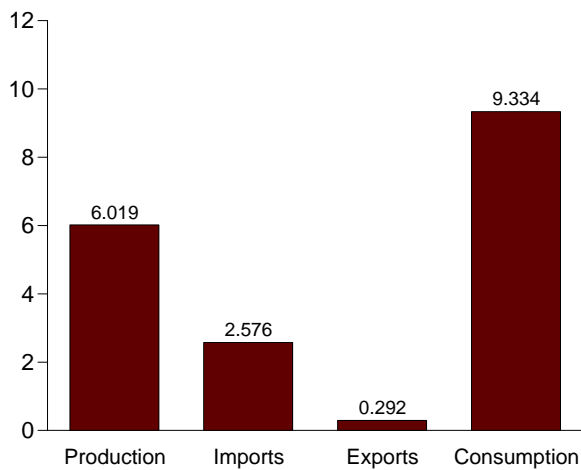
Consumption, Production, and Imports, 1973-2003



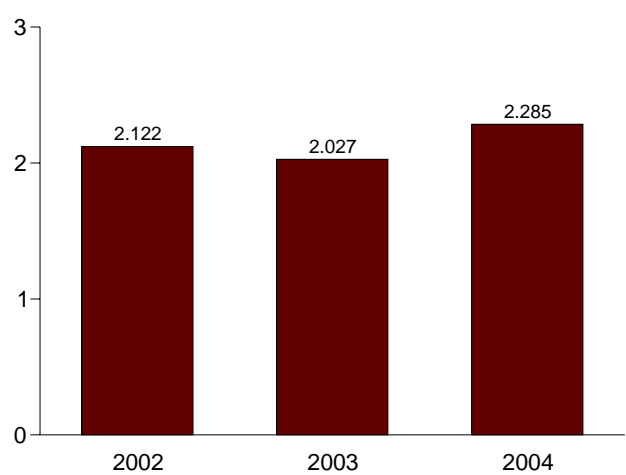
Consumption, Production, and Imports, Monthly



Overview, January 2004



Net Imports, January



Note: Because vertical scales differ, graphs should not be compared.  
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.  
Sources: Tables 1.1 and 1.4.

**Table 1.1 Energy Overview**  
(Quadrillion Btu)

	Production	Imports	Exports	Adjustments <sup>a</sup>	Consumption
1973 Total .....	63.585	14.613	2.033	-0.456	75.708
1974 Total .....	62.372	14.304	2.203	-.482	73.991
1975 Total .....	61.357	14.032	2.323	-1.067	71.999
1976 Total .....	61.602	16.760	2.172	-.178	76.012
1977 Total .....	62.052	19.948	2.052	-1.948	78.000
1978 Total .....	63.137	19.106	1.920	-.337	79.986
1979 Total .....	65.948	19.460	2.855	-1.649	80.903
1980 Total .....	67.241	15.796	3.695	-1.054	78.289
1981 Total .....	67.007	13.719	4.307	-.084	76.335
1982 Total .....	66.574	11.861	4.608	-.594	73.234
1983 Total .....	64.106	11.752	3.693	.900	73.066
1984 Total .....	68.832	12.471	3.786	-.824	76.693
1985 Total .....	67.647	11.781	4.196	1.186	76.417
1986 Total .....	67.087	14.151	4.021	-.495	76.722
1987 Total .....	67.608	15.398	3.812	-.037	79.156
1988 Total .....	68.951	17.296	4.366	.894	82.774
1989 Total .....	69.364	18.766	4.661	1.416	84.886
1990 Total .....	70.729	18.817	4.752	-1.189	84.605
1991 Total .....	70.362	18.335	5.141	.967	84.522
1992 Total .....	69.933	19.372	4.937	1.498	85.866
1993 Total .....	68.262	21.273	4.258	2.303	87.579
1994 Total .....	70.676	22.390	4.061	.243	89.248
1995 Total .....	71.156	22.260	4.511	2.315	91.221
1996 Total .....	72.472	23.702	4.633	2.683	94.224
1997 Total .....	72.389	25.215	4.514	1.637	94.727
1998 Total .....	72.787	26.581	4.299	.078	95.146
1999 Total .....	71.652	27.252	3.715	1.585	96.774
2000 Total .....	71.218	28.974	4.006	2.720	98.906
2001 Total .....	71.310	30.157	3.770	-1.385	96.312
<b>2002</b> January .....	6.268	2.414	.292	.479	8.869
February .....	5.599	2.148	.290	.489	7.946
March .....	5.939	2.428	.267	.340	8.440
April .....	5.817	2.434	.292	-.160	7.800
May .....	6.054	2.511	.294	-.421	7.850
June .....	5.850	2.442	.308	-.053	7.931
July .....	5.989	2.528	.270	.227	8.475
August .....	6.044	2.588	.344	.108	8.396
September .....	5.731	2.350	.301	-.067	7.713
October .....	5.824	2.566	.333	-.194	7.864
November .....	5.728	2.550	.313	.111	8.077
December .....	5.987	2.450	.359	.831	8.909
<b>Total .....</b>	<b>70.830</b>	<b>29.409</b>	<b>3.661</b>	<b>1.690</b>	<b>98.269</b>
<b>2003</b> January .....	6.026	R 2.405	R .378	R 1.231	R 9.284
February .....	5.443	R 2.148	R .300	R 1.170	R 8.461
March .....	5.948	R 2.545	R .317	R .242	8.419
April .....	5.777	R 2.577	R .334	R -.344	R 7.676
May .....	5.965	R 2.719	R .357	R -.657	7.670
June .....	5.827	R 2.645	R .352	R -.502	7.619
July .....	5.938	R 2.756	R .340	R -.057	8.298
August .....	5.929	R 2.751	R .315	R .041	R 8.405
September .....	5.761	R 2.691	R .326	R -.517	R 7.609
October .....	5.905	R 2.690	R .349	R -.443	R 7.803
November .....	R 5.628	R 2.476	R .338	R .166	R 7.932
December .....	R 6.053	R 2.614	R .346	R .708	R 9.029
<b>Total .....</b>	<b>R 70.200</b>	<b>R 31.019</b>	<b>R 4.053</b>	<b>R 1.038</b>	<b>R 98.205</b>
<b>2004</b> January .....	6.019	2.576	.292	1.030	9.334

<sup>a</sup> A balancing item. Includes stock changes, losses, gains, miscellaneous blending components, and unaccounted-for supply.

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.

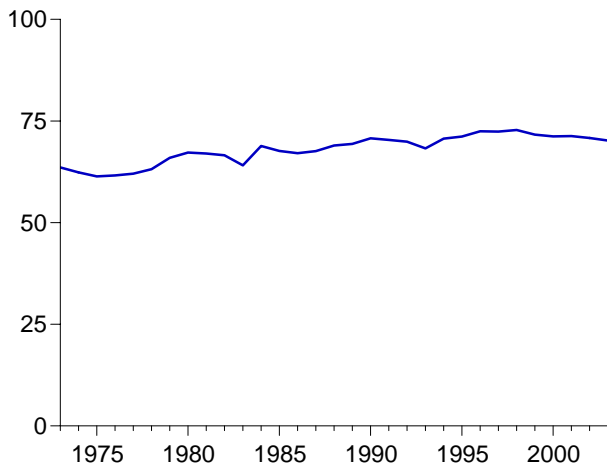
• Geographic coverage is the 50 States and the District of Columbia.

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

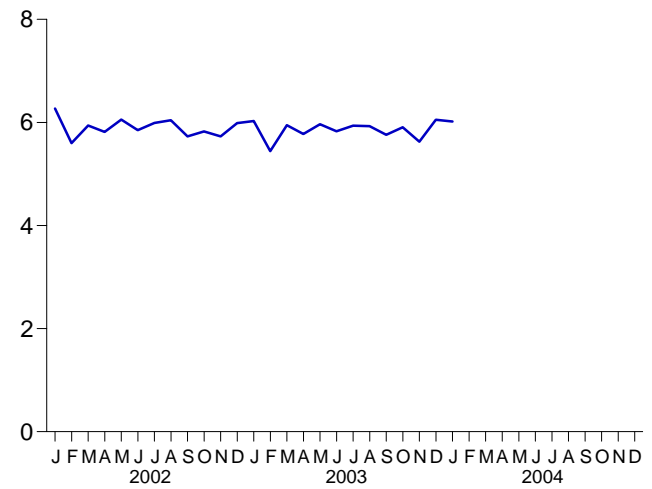
Sources: • **Production:** Table 1.2. • **Consumption:** Table 1.3. • **Imports and Exports:** Tables 3.1b, 4.3, 6.1, 7.1, A2-A6, and Section 2, "Energy Consumption Notes and Sources," Note 5.

**Figure 1.2 Energy Production**  
(Quadrillion Btu)

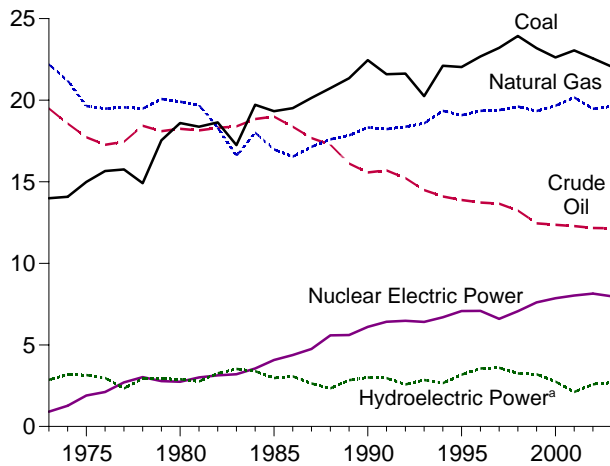
Total, 1973-2003



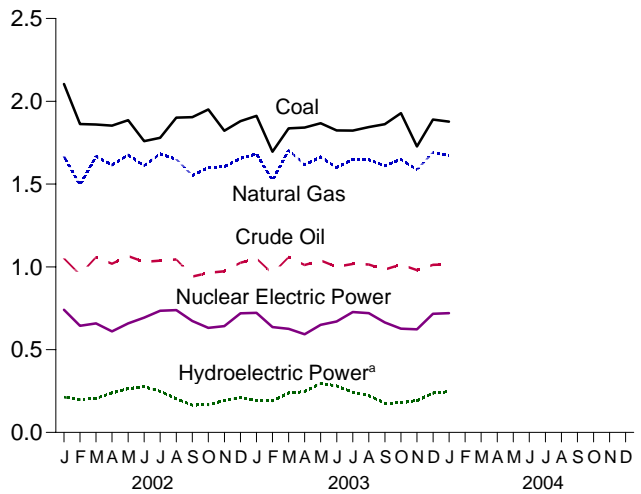
Total, Monthly



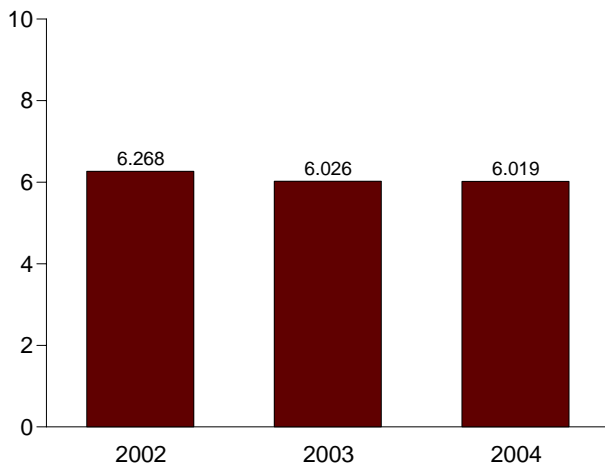
By Major Sources, 1973-2003



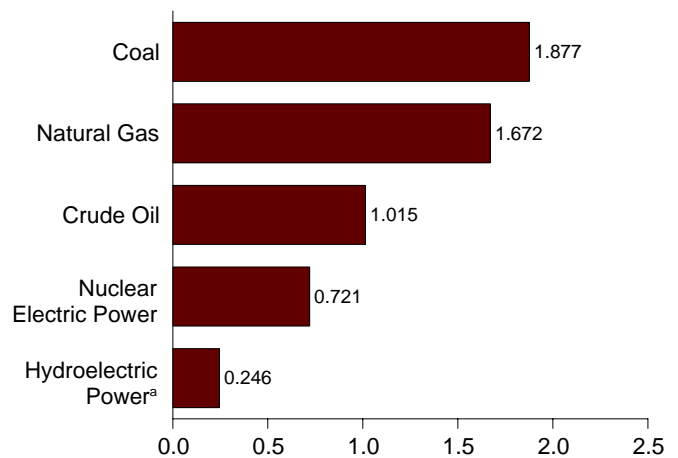
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



<sup>a</sup>Conventional and pumped storage hydroelectric power.  
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 Production by Source**  
(Quadrillion Btu)

	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage <sup>c</sup>	Renewable Energy <sup>a</sup>					Total
	Coal	Natural Gas (Dry)	Crude Oil <sup>b</sup>	Natural Gas Plant Liquids	Total			Conventional Hydroelectric Power	Wood, Waste, Alcohol <sup>d</sup>	Geo-thermal	Solar and Wind	Total	
1973 Total	13.992	22.187	19.493	2.569	58.241	0.910	(e)	2.861	1.529	0.043	NA	4.433	63.585
1974 Total	14.074	21.210	18.575	2.471	56.331	1.272	(e)	3.177	1.540	.053	NA	4.769	62.372
1975 Total	14.989	19.640	17.729	2.374	54.733	1.900	(e)	3.155	1.499	.070	NA	4.723	61.357
1976 Total	15.654	19.480	17.262	2.327	54.723	2.111	(e)	2.976	1.713	.078	NA	4.768	61.602
1977 Total	15.755	19.565	17.454	2.327	55.101	2.702	(e)	2.333	1.838	.077	NA	4.249	62.052
1978 Total	14.910	19.485	18.434	2.245	55.074	3.024	(e)	2.937	2.038	.064	NA	5.039	63.137
1979 Total	17.540	20.076	18.104	2.286	58.006	2.776	(e)	2.931	2.152	.084	NA	5.166	65.948
1980 Total	18.598	19.908	18.249	2.254	59.008	2.739	(e)	2.900	2.485	.110	NA	5.494	67.241
1981 Total	18.377	19.699	18.146	2.307	58.529	3.008	(e)	2.758	2.590	.123	NA	5.471	67.007
1982 Total	18.639	18.319	18.309	2.191	57.458	3.131	(e)	3.266	2.615	.105	NA	5.985	66.574
1983 Total	17.247	16.593	18.392	2.184	54.416	3.203	(e)	3.527	2.831	.129	(s)	6.488	64.106
1984 Total	19.719	18.008	18.848	2.274	58.849	3.553	(e)	3.386	2.880	.165	(s)	6.431	68.832
1985 Total	19.325	16.980	18.992	2.241	57.539	4.076	(e)	2.970	2.864	.198	(s)	6.033	67.647
1986 Total	19.509	16.541	18.376	2.149	56.575	4.380	(e)	3.071	2.841	.219	(s)	6.132	67.087
1987 Total	20.141	17.136	17.675	2.215	57.167	4.754	(e)	2.635	2.823	.229	(s)	5.687	67.608
1988 Total	20.738	17.599	17.279	2.260	57.875	5.587	(e)	2.334	2.937	.217	(s)	5.489	68.951
1989 Total	21.346	17.847	16.117	2.158	57.468	5.602	(e)	2.837	3.062	.317	.077	6.294	69.364
1990 Total	22.456	18.326	15.571	2.175	58.529	6.104	-0.36	3.046	2.662	.336	.089	6.133	70.729
1991 Total	21.594	18.229	15.701	2.306	57.829	6.422	-0.47	3.016	2.702	.346	.093	6.158	70.362
1992 Total	21.629	18.375	15.223	2.363	57.590	6.479	-0.43	2.617	2.847	.349	.094	5.907	69.933
1993 Total	20.249	18.584	14.494	2.408	55.736	6.410	-0.42	2.892	2.804	.364	.097	6.157	68.262
1994 Total	22.111	19.348	14.103	2.391	57.952	6.694	-0.35	2.683	2.939	.338	.104	6.065	70.676
1995 Total	22.029	19.082	13.887	2.442	57.440	7.075	-0.28	3.205	3.068	.294	.102	6.669	71.156
1996 Total	22.684	19.344	13.723	2.530	58.281	7.087	-0.32	3.590	3.127	.316	.104	7.137	72.472
1997 Total	23.211	19.394	13.658	2.495	58.758	6.597	-0.41	3.640	3.006	.325	.104	7.075	72.389
1998 Total	23.935	19.613	13.235	2.420	59.204	7.068	-0.46	3.297	2.835	.328	.101	6.561	72.787
1999 Total	23.186	19.341	12.451	2.528	57.505	7.610	-0.32	3.268	2.885	.331	.115	6.599	71.652
2000 Total	22.623	19.662	12.358	2.611	57.254	7.862	-0.57	2.811	2.907	.317	.123	6.158	71.218
2001 Total	23.053	20.166	12.282	2.547	58.048	8.028	-0.90	2.201	2.678	.311	.134	5.324	71.310
<b>2002</b> January	2.104	1.667	1.051	.211	5.034	.741	-0.08	.221	.238	.029	.013	.501	6.268
February	1.862	1.494	.954	.198	4.508	.644	-0.06	.204	.211	.026	.012	.453	5.599
March	1.860	1.668	1.058	.220	4.805	.658	-0.07	.213	.228	.028	.014	.482	5.939
April	1.853	1.616	1.019	.215	4.703	.610	-0.06	.245	.224	.025	.016	.510	5.817
May	1.886	1.675	1.065	.224	4.850	.658	-0.05	.270	.237	.028	.016	.551	6.054
June	1.760	1.612	1.029	.209	4.610	.693	-0.09	.285	.228	.026	.017	.556	5.850
July	1.780	1.682	1.037	.213	4.713	.735	-0.10	.258	.250	.029	.015	.551	5.989
August	1.901	1.650	1.045	.224	4.820	.739	-0.09	.213	.237	.028	.016	.494	6.044
September	1.905	1.552	.942	.212	4.611	.673	-0.08	.173	.242	.027	.013	.454	5.731
October	1.951	1.600	.964	.217	4.731	.632	-0.07	.174	.253	.028	.013	.468	5.824
November	1.822	1.605	.974	.212	4.612	.642	-0.07	.200	.242	.027	.012	.480	5.728
December	1.880	1.655	1.025	.203	4.764	.720	-0.07	.219	.251	.028	.013	.510	5.987
<b>Total</b>	<b>22.564</b>	<b>19.476</b>	<b>12.163</b>	<b>2.559</b>	<b>56.762</b>	<b>8.145</b>	<b>-0.88</b>	<b>2.675</b>	<b>2.839</b>	<b>.328</b>	<b>.169</b>	<b>6.011</b>	<b>70.830</b>
<b>2003</b> January	1.912	E 1.682	E 1.050	.204	4.848	.723	-0.08	.199	.226	.026	.011	.462	6.026
February	1.695	E 1.523	E .961	.190	4.368	.636	-0.08	.199	.212	.023	.012	.446	5.443
March	1.837	E 1.704	E 1.059	.201	4.801	.626	-0.08	.246	.242	.026	.016	.529	5.948
April	1.842	E 1.617	E 1.011	.191	4.661	.593	-0.06	.253	.235	.024	.017	.528	5.777
May	1.867	E 1.663	E 1.040	.177	4.748	.649	-0.06	.303	.233	.024	.015	.574	5.965
June	1.824	E 1.600	E 1.000	.177	4.601	.670	-0.08	.288	.236	.025	.015	.565	5.827
July	1.823	E 1.649	E 1.018	.191	4.681	.727	-0.08	.250	.248	.025	.015	.537	5.938
August	1.844	E 1.647	E 1.014	.198	4.704	.721	-0.08	.231	.243	.025	.013	.513	5.929
September	1.862	E 1.610	E .984	.198	4.654	.664	-0.08	.184	.228	.025	.014	.451	5.761
October	1.929	E 1.649	E 1.014	.211	4.803	.627	-0.06	.185	.257	.025	.015	.482	5.905
November	1.728	RE 1.587	E .981	.207	R 4.502	.622	-0.07	.200	.271	.025	.015	.511	R 5.628
December	1.890	RE 1.689	E 1.012	.200	R 4.791	R .716	R -.007	R .244	R .263	R .028	R .016	R .552	R 6.053
<b>Total</b>	<b>22.053</b>	<b>RE 19.621</b>	<b>E 12.145</b>	<b>2.343</b>	<b>R 56.163</b>	<b>R 7.975</b>	<b>R -.088</b>	<b>R 2.783</b>	<b>R 2.895</b>	<b>R .300</b>	<b>R .172</b>	<b>R 6.150</b>	<b>R 70.200</b>
<b>2004</b> January	1.877	E 1.672	E 1.015	.209	4.773	.721	-0.10	.256	.236	.028	.015	.535	6.019

<sup>a</sup> End-use consumption and electricity net generation.

<sup>b</sup> Includes lease condensate.

<sup>c</sup> Pumped storage facility production minus energy used for pumping.

<sup>d</sup> Alcohol is ethanol blended into motor gasoline.

<sup>e</sup> Included in conventional hydroelectric power.

R=Revised. E=Estimate. NA=Not available. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • See Note 1 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.

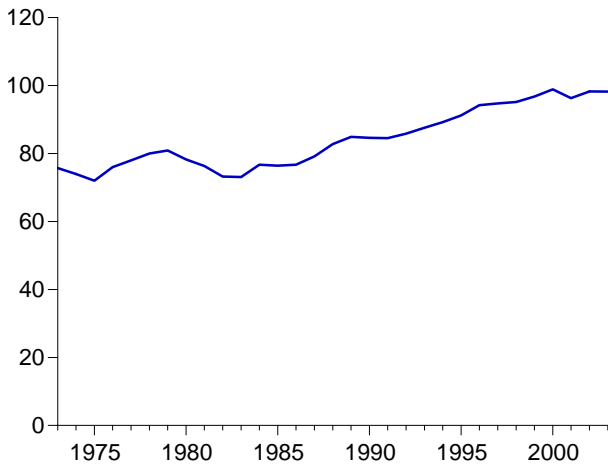
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.

Sources: • Coal: Tables 6.1 and A5. • Natural Gas (Dry): Tables 4.1 and A4. • Crude Oil and Natural Gas Plant Liquids: Tables 3.1a and A2. • Nuclear Electric Power and Hydroelectric Pumped Storage: Tables 7.2a and A6. • Renewable Energy: Table 10.1.

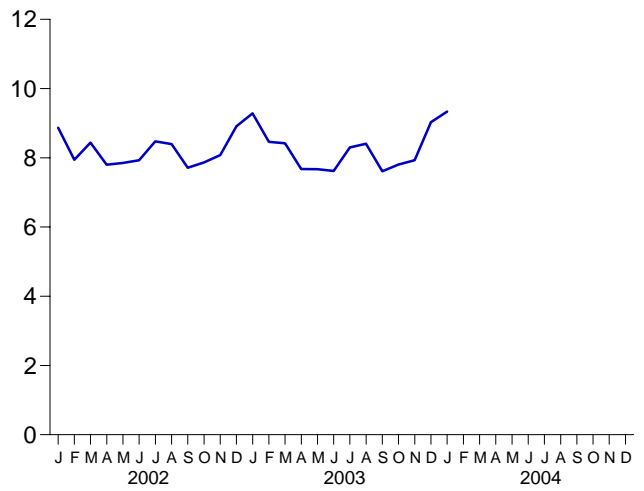


**Figure 1.3 Energy Consumption**  
(Quadrillion Btu)

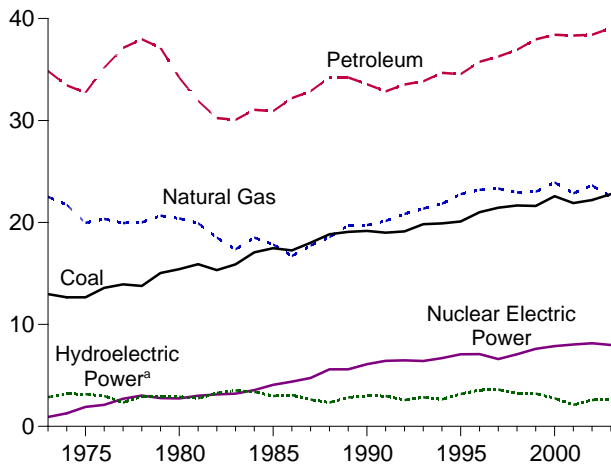
Total, 1973-2003



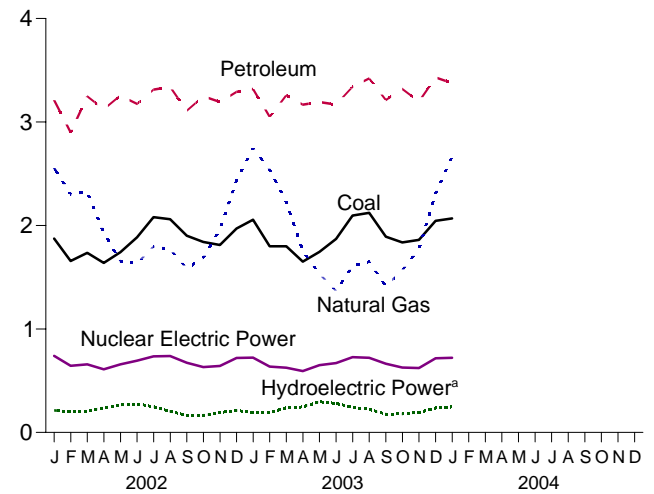
Total, Monthly



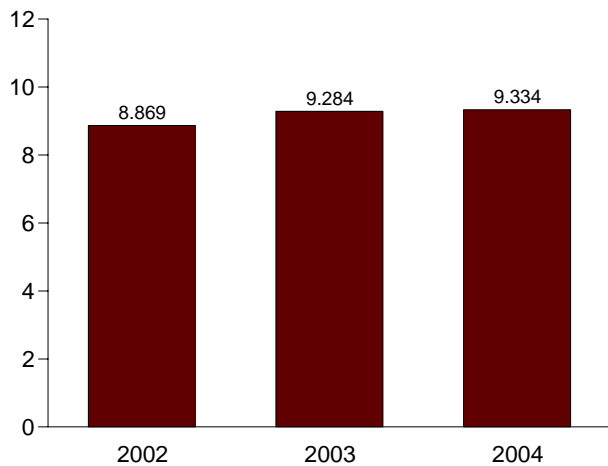
By Major Sources, 1973-2003



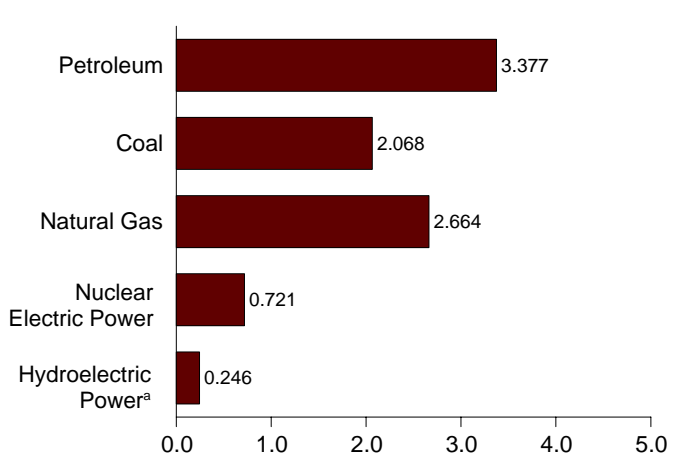
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



<sup>a</sup>Conventional and pumped storage hydroelectric power.  
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.

**Table 1.3 Energy Consumption by Source**  
(Quadrillion Btu)

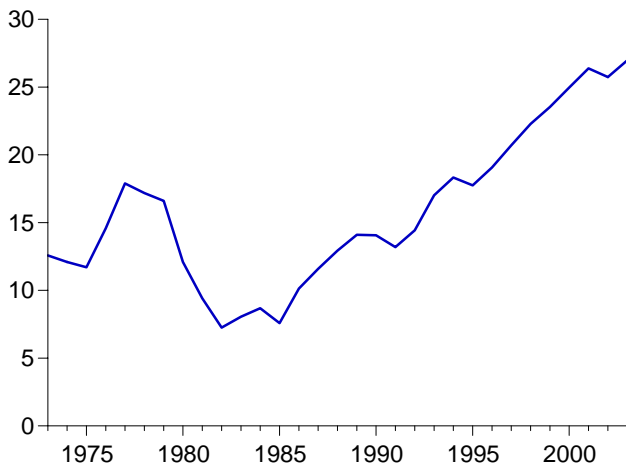
	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage <sup>e</sup>	Renewable Energy <sup>a</sup>					Total <sup>f,g</sup>
	Coal	Natural Gas <sup>b</sup>	Petro-leum <sup>c</sup>	Total <sup>d</sup>			Conventional Hydroelectric Power	Wood, Waste, Alcohol <sup>f</sup>	Geo-thermal	Solar and Wind	Total	
1973 Total	12.971	22.512	34.840	70.316	0.910	(h)	2.861	1.529	0.043	NA	4.433	75.708
1974 Total	12.663	21.732	33.455	67.906	1.272	(h)	3.177	1.540	.053	NA	4.769	73.991
1975 Total	12.663	19.948	32.731	65.355	1.900	(h)	3.155	1.499	.070	NA	4.723	71.999
1976 Total	13.584	20.345	35.175	69.104	2.111	(h)	2.976	1.713	.078	NA	4.768	76.012
1977 Total	13.922	19.931	37.122	70.989	2.702	(h)	2.333	1.838	.077	NA	4.249	78.000
1978 Total	13.766	20.000	37.965	71.856	3.024	(h)	2.937	2.038	.064	NA	5.039	79.986
1979 Total	15.040	20.666	37.123	72.892	2.776	(h)	2.931	2.152	.084	NA	5.166	80.903
1980 Total	15.423	20.394	34.202	69.984	2.739	(h)	2.900	2.485	.110	NA	5.494	78.289
1981 Total	15.908	19.928	31.931	67.750	3.008	(h)	2.758	2.590	.123	NA	5.471	76.335
1982 Total	15.322	18.505	30.231	64.036	3.131	(h)	3.266	2.615	.105	NA	5.985	73.234
1983 Total	15.894	17.357	30.054	63.290	3.203	(h)	3.527	2.831	.129	(s)	6.488	73.066
1984 Total	17.071	18.507	31.051	66.617	3.553	(h)	3.386	2.880	.165	(s)	6.431	76.693
1985 Total	17.478	17.834	30.922	66.221	4.076	(h)	2.970	2.864	.198	(s)	6.033	76.417
1986 Total	17.260	16.708	32.196	66.148	4.380	(h)	3.071	2.841	.219	(s)	6.132	76.722
1987 Total	18.008	17.744	32.865	68.626	4.754	(h)	2.635	2.823	.229	(s)	5.687	79.156
1988 Total	18.846	18.552	34.222	71.660	5.587	(h)	2.334	2.937	.217	(s)	5.489	82.774
1989 Total	19.070	19.712	34.211	73.023	5.602	(h)	2.837	3.062	.317	.077	6.294	84.886
1990 Total	19.173	19.730	33.553	72.460	6.104	-.036	3.046	2.662	.336	.089	6.133	84.605
1991 Total	18.992	20.149	32.845	71.996	6.422	-.047	3.016	2.702	.346	.093	6.158	84.522
1992 Total	19.122	20.835	33.527	73.519	6.479	-.043	2.617	2.847	.349	.094	5.907	85.866
1993 Total	19.835	21.351	33.841	75.055	6.410	-.042	2.892	2.804	.364	.097	6.157	87.579
1994 Total	19.909	21.842	34.670	76.480	6.694	-.035	2.683	2.939	.338	.104	6.065	89.248
1995 Total	20.089	22.784	34.553	77.488	7.075	-.028	3.205	3.068	.294	.102	6.669	91.221
1996 Total	21.002	23.197	35.757	79.979	7.087	-.032	3.590	3.127	.316	.104	7.137	94.224
1997 Total	21.445	23.328	36.266	81.086	6.597	-.041	3.640	3.006	.325	.104	7.075	94.727
1998 Total	21.656	22.936	36.934	81.592	7.068	-.046	3.297	2.835	.328	.101	6.561	95.146
1999 Total	21.623	23.010	37.960	82.650	7.610	-.062	3.268	2.885	.331	.115	6.599	96.774
2000 Total	22.580	23.916	38.404	84.965	7.862	-.057	2.811	2.907	.317	.123	6.158	98.906
2001 Total	21.897	22.861	38.333	83.121	8.028	-.090	2.201	2.678	.311	.134	5.324	96.312
2002 January	1.873	2.555	3.211	7.639	.741	-.008	.221	.238	.029	.013	.501	8.869
February	1.656	2.304	2.899	6.861	.644	-.006	.204	.211	.026	.012	.453	7.946
March	1.736	2.321	3.247	7.312	.658	-.007	.213	.228	.028	.014	.482	8.440
April	1.638	1.932	3.123	6.691	.610	-.006	.245	.224	.025	.016	.510	7.800
May	1.741	1.655	3.256	6.657	.658	-.005	.270	.237	.028	.016	.551	7.850
June	1.886	1.633	3.174	6.696	.693	-.009	.285	.228	.026	.017	.556	7.931
July	2.081	1.797	3.313	7.200	.735	-.010	.258	.250	.029	.015	.551	8.475
August	2.061	1.771	3.337	7.177	.739	-.009	.213	.237	.028	.016	.494	8.396
September	1.900	1.584	3.108	6.601	.673	-.008	.173	.242	.027	.013	.454	7.713
October	1.841	1.688	3.248	6.783	.632	-.007	.174	.253	.028	.013	.468	7.864
November	1.811	1.962	3.193	6.977	.642	-.007	.200	.242	.027	.012	.480	8.077
December	1.970	2.437	3.292	7.702	.720	-.007	.219	.251	.028	.013	.510	8.909
Total	22.195	23.639	38.401	84.297	8.145	-.088	2.675	2.839	.328	.169	6.011	98.269
2003 January	2.056	R 2.743	3.318	R 8.119	.723	-.008	.199	.226	.026	.011	.462	R 9.284
February	1.799	R 2.539	3.050	R 7.402	.636	-.008	.199	.212	.023	.012	.446	R 8.461
March	1.798	2.229	3.259	R 7.289	.626	-.008	.246	.242	.026	.016	.529	8.419
April	1.651	R 1.755	3.168	R 6.577	.593	-.006	.253	.235	.024	.017	.528	R 7.676
May	1.745	1.532	3.192	6.471	.649	-.006	.303	.233	.024	.015	.574	7.670
June	1.870	1.368	3.167	6.409	.670	-.008	.288	.236	.025	.015	.565	7.619
July	2.096	R 1.609	3.340	7.051	.727	-.008	.250	.248	.025	.015	.537	8.298
August	2.122	R 1.649	3.422	R 7.193	.721	-.008	.231	.243	.025	.013	.513	R 8.405
September	1.892	R 1.414	3.212	R 6.522	.664	-.008	.184	.228	.025	.014	.451	R 7.609
October	1.837	R 1.569	3.320	R 6.729	.627	-.006	.185	.257	.025	.015	.482	R 7.803
November	1.860	1.772	3.197	R 6.833	.622	-.007	.200	.271	.025	.015	.511	R 7.932
December	R 2.046	R 2.311	3.430	R 7.793	R .716	R -.007	R .244	R .263	R .028	R .016	R .552	R 9.029
Total	R 22.773	R 22.490	39.074	R 84.388	R 7.975	R -.088	R 2.783	R 2.895	R .300	R .172	R 6.150	R 98.205
2004 January	2.068	F 2.664	3.377	E 8.112	F .721	F -.010	.256	.236	.028	.015	.535	9.334

<sup>a</sup> End-use consumption and electricity net generation.  
<sup>b</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.  
<sup>c</sup> Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel.  
<sup>d</sup> Includes coal coke net imports. See Table 1.4.  
<sup>e</sup> Pumped storage facility production minus energy used for pumping.  
<sup>f</sup> Alcohol (ethanol blended into motor gasoline) is included in both "Petroleum" and "Alcohol," but is counted only once in total energy consumption. See Table 10.1.  
<sup>g</sup> Includes coal coke net imports and electricity net imports, which are not separately displayed. See Table 1.4.

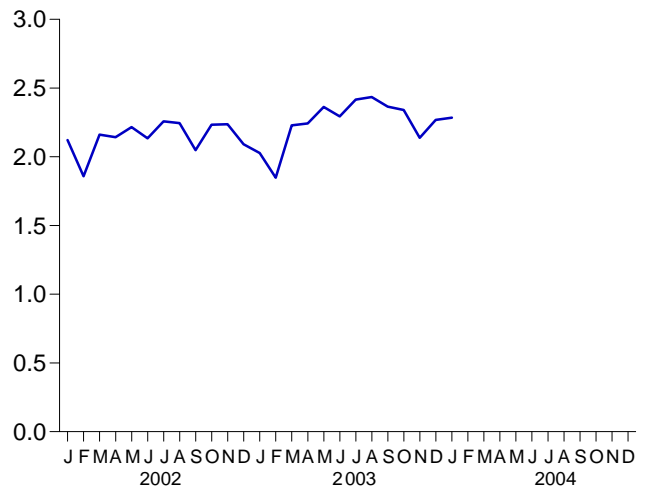
<sup>h</sup> Included in conventional hydroelectric power.  
R=Revised. E=Estimate. NA=Not available. F=Forecast. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.  
Notes: • See Note 2 at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.  
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.  
Sources: • Coal: Tables 6.1 and A5. • Natural Gas: Tables 4.1 and A4. • Petroleum: Tables 3.1a and A3. • Nuclear Electric Power and Hydroelectric Pumped Storage: Tables 7.2a and A6. • Renewable Energy: Table 10.1. • Net Imports of Coal Coke and Electricity: Table 1.4.

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

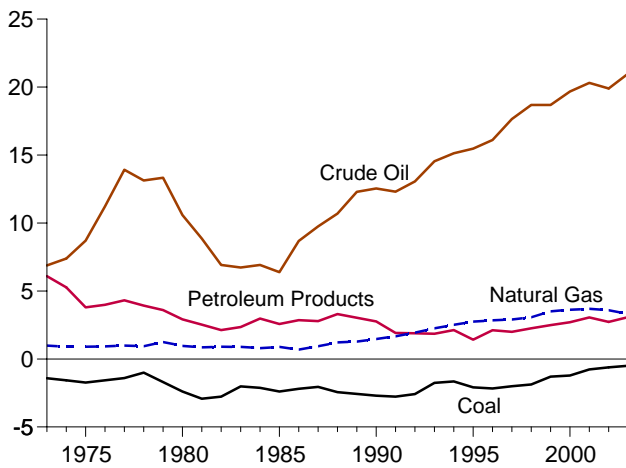
Total, 1973-2003



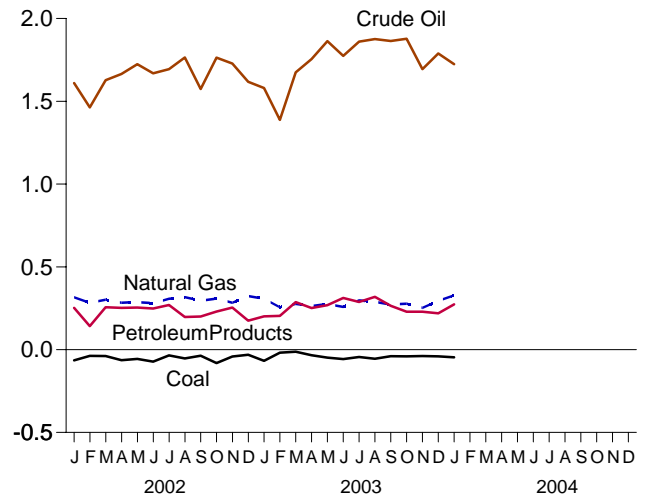
Total, Monthly



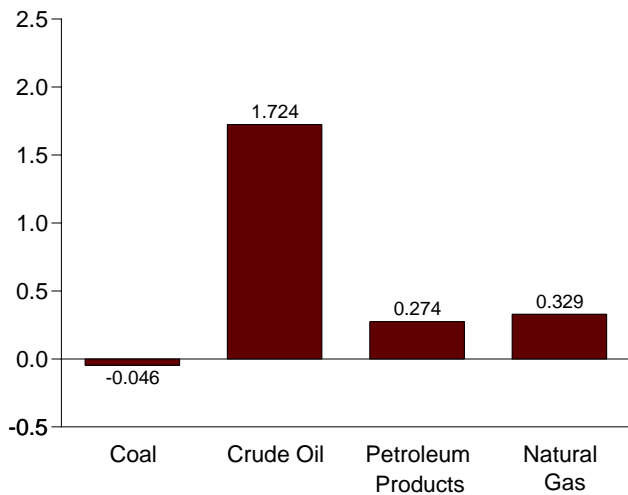
By Major Sources, 1973-2003



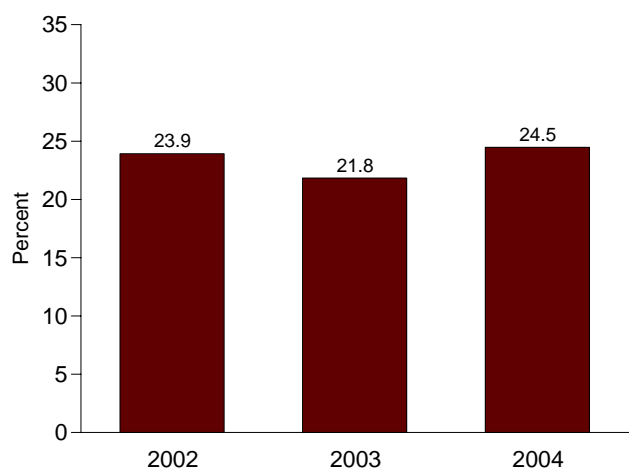
By Major Sources, Monthly



By Major Sources, January 2004



As Share of Consumption, January



Note: Because vertical scales differ, graphs should not be compared.  
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.  
Sources: Tables 1.3 and 1.4.

**Table 1.4 Energy Net Imports by Source**  
(Quadrillion Btu)

	Coal	Coal Coke	Natural Gas	Crude Oil <sup>a</sup>	Petroleum Products <sup>b</sup>	Electricity	Total
1973 Total	-1.422	-0.007	0.981	6.883	6.097	0.049	12.580
1974 Total	-1.568	.056	.907	7.389	5.273	.043	12.101
1975 Total	-1.738	.014	.904	8.708	3.800	.021	11.709
1976 Total	-1.567	(s)	.922	11.221	3.982	.029	14.588
1977 Total	-1.401	.015	.981	13.921	4.321	.059	17.896
1978 Total	-1.004	.125	.941	13.125	3.932	.067	17.186
1979 Total	-1.702	.063	1.243	13.328	3.603	.069	16.605
1980 Total	-2.391	-0.035	.957	10.586	2.912	.071	12.101
1981 Total	-2.918	-0.016	.857	8.854	2.522	.113	9.412
1982 Total	-2.768	-.022	.898	6.917	2.128	.100	7.253
1983 Total	-2.013	-0.016	.885	6.731	2.351	.121	8.059
1984 Total	-2.119	-0.011	.792	6.918	2.970	.135	8.685
1985 Total	-2.389	-0.013	.896	6.381	2.570	.140	7.584
1986 Total	-2.193	-0.017	.686	8.676	2.855	.122	10.130
1987 Total	-2.049	.009	.937	9.748	2.784	.158	11.586
1988 Total	-2.446	.040	1.221	10.698	3.308	.108	12.929
1989 Total	-2.566	.030	1.278	12.296	3.029	.037	14.105
1990 Total	-2.705	.005	1.464	12.536	2.757	.008	14.065
1991 Total	-2.769	.010	1.666	12.308	1.912	.067	13.194
1992 Total	-2.587	.035	1.941	13.065	1.895	.087	14.435
1993 Total	-1.758	.027	2.255	14.542	1.854	.095	17.014
1994 Total	-1.657	.058	2.518	15.131	2.126	.153	18.329
1995 Total	-2.081	.061	2.745	15.469	1.422	.134	17.750
1996 Total	-2.165	.023	2.847	16.108	2.119	.137	19.069
1997 Total	-2.006	.046	2.904	17.648	1.993	.116	20.701
1998 Total	-1.874	.067	3.064	18.684	2.252	.088	22.281
1999 Total	-1.298	.058	3.500	18.686	2.493	.099	23.537
2000 Total	-1.215	.065	3.623	19.676	2.701	.116	24.968
2001 Total	-.771	.029	3.691	20.305	3.056	.075	26.386
2002 January	-.065	(s)	.317	1.610	.252	.009	2.122
February	-.038	.003	.282	1.463	.142	.007	1.859
March	-.038	.008	.302	1.627	.256	.006	2.161
April	-.063	-.001	.283	1.665	.253	.006	2.142
May	-.056	.004	.287	1.724	.254	.003	2.217
June	-.072	.002	.280	1.669	.248	.007	2.134
July	-.035	.009	.307	1.694	.270	.013	2.258
August	-.053	.007	.317	1.765	.197	.011	2.244
September	-.037	.009	.296	1.575	.200	.006	2.049
October	-.081	.006	.309	1.764	.230	.005	2.233
November	-.042	.010	.283	1.728	.254	.004	2.237
December	-.031	.003	.324	1.618	.175	.002	2.091
Total	-.610	.061	3.586	19.901	2.732	.078	25.748
2003 January	-.068	.001	R .307	1.580	.201	.005	R 2.027
February	-.018	.013	R .257	1.387	.204	.004	R 1.848
March	-.012	.004	R .277	1.674	.287	-.001	R 2.229
April	-.033	.004	.263	1.755	.252	.003	2.243
May	-.048	.002	R .276	1.863	.269	.001	R 2.362
June	-.057	.004	R .258	1.775	.313	.001	R 2.293
July	-.045	.005	R .298	1.861	.288	.010	R 2.417
August	-.055	.001	R .288	1.876	.319	.007	R 2.435
September	-.039	.004	R .273	1.864	.265	-.002	R 2.365
October	-.041	.004	R .277	1.878	.229	-.007	R 2.341
November	-.038	.003	R .252	1.694	.230	-.003	R 2.138
December	-.040	.006	R .294	1.789	.220	(s)	R 2.268
Total	-.495	.051	R 3.319	20.996	3.077	.019	R 26.966
2004 January	-.046	.004	F .329	1.724	.274	(s)	2.285

<sup>a</sup> Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

<sup>b</sup> Petroleum products, unfinished oils, pentanes plus, and gasoline blending components.

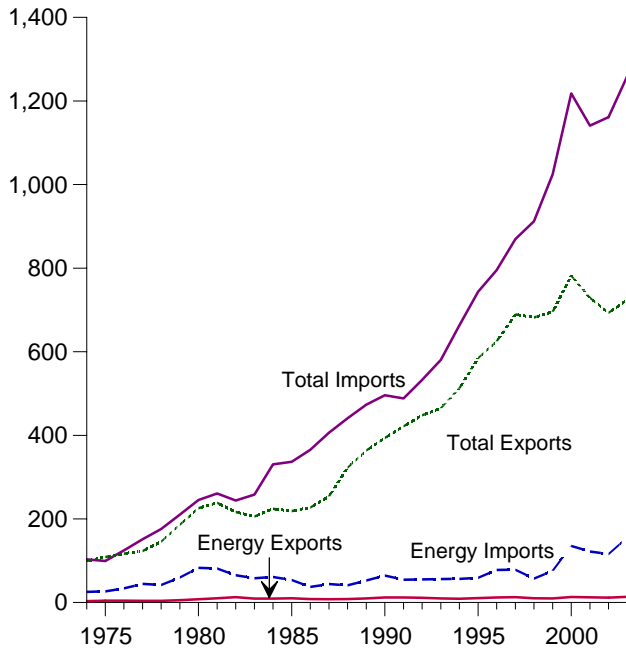
R=Revised. F=Forecast. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • See Notes 3 and 4 at end of section. • Net imports equal imports minus exports. Minus sign indicates exports are greater than imports.

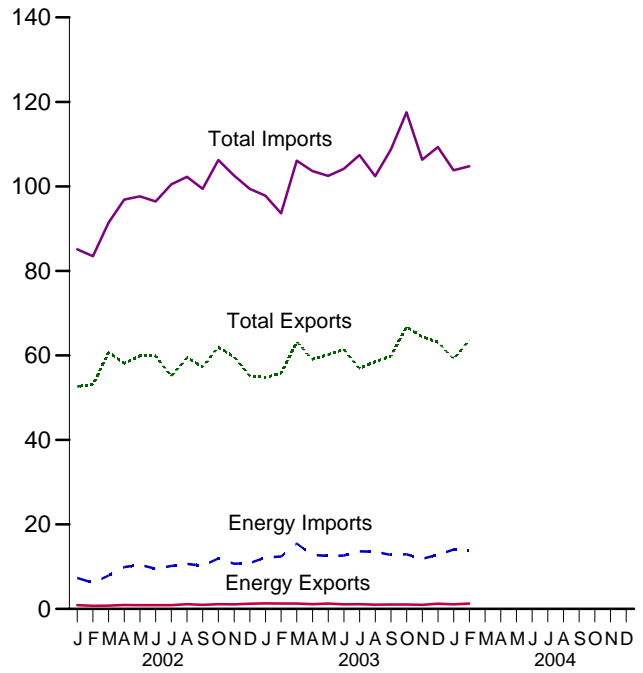
- Totals may not equal sum of components due to independent rounding.
- Geographic coverage is the 50 States and the District of Columbia.  
Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.
- Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke:** Section 2, "Energy Consumption Notes and Sources," Note 5, and Table A5. • **Natural Gas:** Tables 4.1 and A4. • **Crude Oil and Petroleum Products:** Tables 3.1b, A2, and A3. • **Electricity:** Tables 7.1 and A6.

**Figure 1.5 Merchandise Trade Value**  
(Billion Dollars)

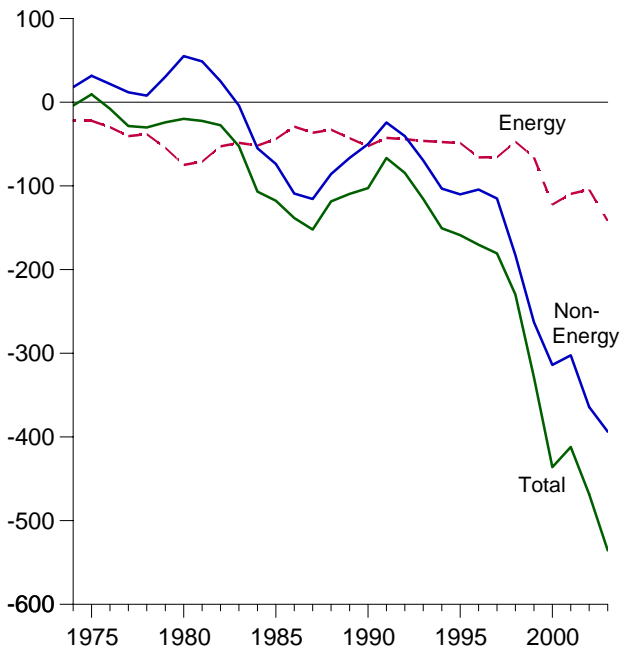
Imports and Exports, 1974-2003



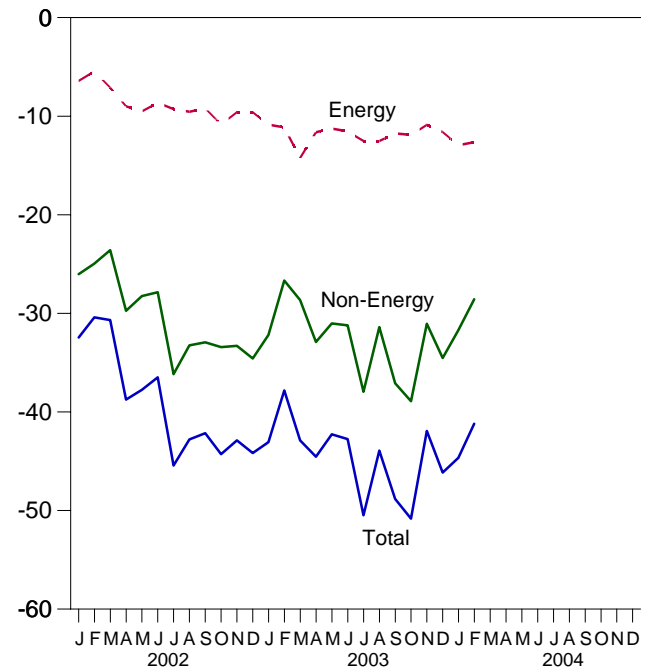
Imports and Exports, Monthly



Trade Balance, 1974-2003



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 1.5.

**Table 1.5 Merchandise Trade Value**  
(Million Dollars)

	Petroleum <sup>a</sup>			Energy <sup>b</sup>			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
<b>1974 Total</b> .....	792	24,668	-23,876	3,444	25,454	-22,010	18,126	99,437	103,321	-3,884
1975 Total .....	907	25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1976 Total .....	998	32,226	-31,228	4,226	33,996	-29,770	21,950	116,794	124,614	-7,820
1977 Total .....	1,276	42,368	-41,093	4,184	44,537	-40,354	12,001	123,182	151,534	-28,353
1978 Total .....	1,561	39,526	-37,965	3,881	42,096	-38,215	8,010	145,847	176,052	-30,205
1979 Total .....	1,914	56,715	-54,801	5,621	59,998	-54,377	30,455	186,363	210,285	-23,922
1980 Total .....	2,833	78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1981 Total .....	3,696	76,659	-72,963	10,279	81,360	-71,081	48,814	238,715	260,982	-22,267
1982 Total .....	5,947	60,458	-54,511	12,729	65,409	-52,680	25,170	216,442	243,952	-27,510
1983 Total .....	4,557	53,217	-48,659	9,500	57,952	-48,452	-3,957	205,639	258,048	-52,409
1984 Total .....	4,470	56,924	-52,454	9,311	60,980	-51,669	-55,033	223,976	330,678	-106,703
1985 Total .....	4,707	50,475	-45,768	9,971	53,917	-43,946	-73,765	218,815	336,526	-117,712
1986 Total .....	3,640	35,142	-31,503	8,115	37,310	-29,195	-109,084	227,159	365,438	-138,279
1987 Total .....	3,922	42,285	-38,363	7,713	44,220	-36,506	-115,613	254,122	406,241	-152,119
1988 Total .....	3,693	38,787	-35,094	8,235	41,042	-32,806	-85,720	322,426	440,952	-118,526
1989 Total .....	5,021	49,704	-44,683	9,869	52,779	-42,910	-66,490	363,812	473,211	-109,399
1990 Total .....	6,901	61,583	-54,682	12,233	64,661	-52,428	-50,068	393,592	496,088	-102,496
1991 Total .....	6,954	51,350	-44,396	12,081	54,629	-42,548	-24,175	421,730	488,453	-66,723
1992 Total .....	6,412	51,217	-44,805	11,254	55,256	-44,002	-40,500	448,164	532,665	-84,501
1993 Total .....	6,215	51,046	-44,831	9,756	55,900	-46,144	-69,425	465,091	580,659	-115,568
1994 Total .....	5,659	50,835	-45,176	8,911	56,391	-47,480	-103,149	512,626	663,256	-150,629
1995 Total .....	6,321	54,368	-48,047	10,358	59,109	-48,751	-110,050	584,742	743,543	-158,801
1996 Total .....	7,984	72,022	-64,038	12,181	78,086	-65,905	-104,309	625,075	795,289	-170,214
1997 Total .....	8,592	71,152	-62,560	12,682	78,277	-65,595	-114,927	689,182	869,704	-180,522
1998 Total .....	6,574	50,264	-43,690	10,251	57,323	-47,072	-182,686	682,138	911,896	-229,758
1999 Total .....	7,118	67,173	-60,055	9,880	75,803	-65,923	-262,898	695,797	1,024,618	-328,821
2000 Total .....	10,192	119,251	-109,059	13,179	135,367	-122,188	-313,916	781,918	1,218,022	-436,104
2001 Total .....	8,868	102,747	-93,879	12,494	121,923	-109,429	-302,470	729,100	1,140,999	-411,899
<b>2002</b> January .....	639	6,348	-5,709	908	7,321	-6,413	-26,031	52,667	85,111	-32,444
February .....	597	5,427	-4,830	744	6,200	-5,456	-24,955	53,061	83,473	-30,411
March .....	593	6,914	-6,321	782	7,878	-7,096	-23,591	60,728	91,415	-30,687
April .....	676	8,907	-8,231	910	9,917	-9,007	-29,738	58,146	96,891	-38,745
May .....	664	9,365	-8,701	903	10,423	-9,520	-28,245	59,884	97,649	-37,765
June .....	603	8,465	-7,862	883	9,522	-8,639	-27,856	59,920	96,415	-36,495
July .....	664	9,086	-8,422	883	10,153	-9,270	-36,170	55,032	100,472	-45,440
August .....	822	9,637	-8,815	1,121	10,667	-9,546	-33,241	59,491	102,277	-42,787
September .....	726	9,119	-8,393	979	10,191	-9,212	-32,939	57,277	99,429	-42,151
October .....	827	10,712	-9,885	1,104	11,961	-10,857	-33,419	61,975	106,251	-44,276
November .....	779	9,328	-8,549	1,085	10,682	-9,597	-33,297	59,671	102,564	-42,894
December .....	979	9,354	-8,375	1,239	10,831	-9,592	-34,577	55,249	99,418	-44,169
<b>Total</b> .....	<b>8,569</b>	<b>102,663</b>	<b>-94,094</b>	<b>11,541</b>	<b>115,748</b>	<b>-104,207</b>	<b>-364,056</b>	<b>693,103</b>	<b>1,161,366</b>	<b>-468,263</b>
<b>2003</b> January .....	1,045	10,396	-9,351	1,310	12,182	-10,872	-32,189	54,745	97,806	-43,061
February .....	956	10,168	-9,212	1,266	12,411	-11,145	-26,674	55,828	93,647	-37,819
March .....	1,005	12,751	-11,746	1,250	15,488	-14,238	-28,647	63,184	106,070	-42,885
April .....	858	11,014	-10,156	1,105	12,740	-11,635	-32,909	59,086	103,630	-44,544
May .....	842	10,450	-9,608	1,287	12,536	-11,249	-31,017	60,210	102,477	-42,266
June .....	808	10,815	-10,007	1,081	12,628	-11,547	-31,213	61,389	104,149	-42,760
July .....	842	11,911	-11,069	1,105	13,629	-12,524	-37,950	56,936	107,410	-50,474
August .....	740	11,560	-10,820	1,007	13,529	-12,522	-31,395	58,515	102,432	-43,917
September .....	788	11,004	-10,216	1,048	12,788	-11,740	-37,091	59,863	108,694	-48,831
October .....	767	11,089	-10,322	1,023	12,923	-11,900	-38,916	66,723	117,539	-50,816
November .....	722	10,166	-9,444	968	11,848	-10,880	-31,050	64,395	106,325	-41,930
December .....	879	11,194	-10,315	1,240	12,860	-11,620	-34,531	63,155	109,306	-46,151
<b>Total</b> .....	<b>10,255</b>	<b>132,520</b>	<b>-122,265</b>	<b>13,691</b>	<b>155,561</b>	<b>-141,870</b>	<b>-393,585</b>	<b>724,030</b>	<b>1,259,485</b>	<b>-535,455</b>
<b>2004</b> January .....	719	11,875	-11,156	1,088	14,029	-12,941	<sup>R</sup> -31,708	<sup>R</sup> 59,151	<sup>R</sup> 103,800	<sup>R</sup> -44,649
February .....	898	11,696	-10,798	1,261	13,899	-12,638	-28,566	63,546	104,750	-41,204
<b>2-Month Total</b> .....	<b>1,617</b>	<b>23,571</b>	<b>-21,954</b>	<b>2,349</b>	<b>27,928</b>	<b>-25,579</b>	<b>-60,274</b>	<b>122,696</b>	<b>208,550</b>	<b>-85,853</b>
<b>2003 2-Month Total</b> .....	<b>2,001</b>	<b>20,564</b>	<b>-18,563</b>	<b>2,576</b>	<b>24,593</b>	<b>-22,017</b>	<b>-58,863</b>	<b>110,572</b>	<b>191,453</b>	<b>-80,881</b>
<b>2002 2-Month Total</b> .....	<b>1,236</b>	<b>11,775</b>	<b>-10,539</b>	<b>1,652</b>	<b>13,521</b>	<b>-11,869</b>	<b>-50,986</b>	<b>105,729</b>	<b>168,584</b>	<b>-62,855</b>

<sup>a</sup> Crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels.

<sup>b</sup> Petroleum, coal, natural gas, and electricity.

R=Revised.

Notes: • Monthly data are not adjusted for seasonal variations. • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding. • The U.S. import statistics reflect both government and

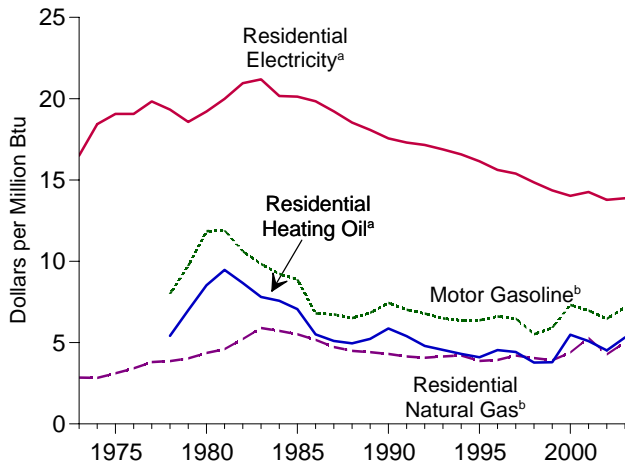
nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

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

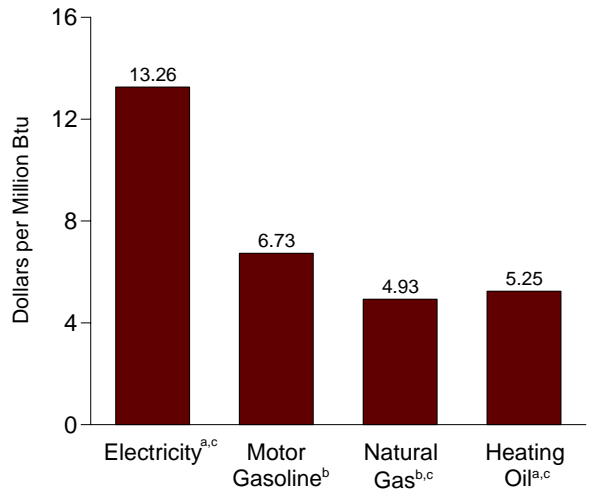
Source: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division. For details, see "Sources for Table 1.5" at the end of this section.

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

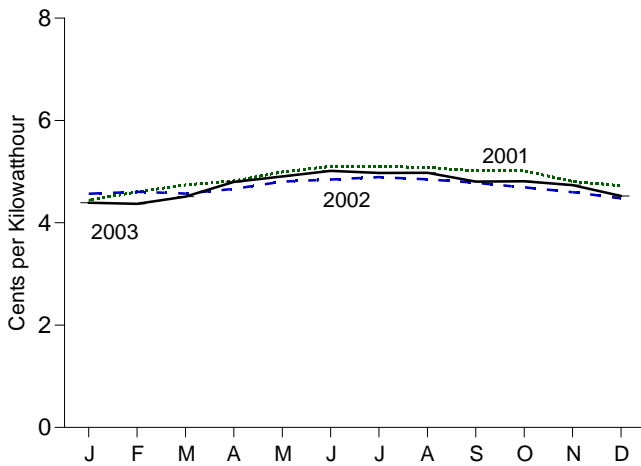
Costs, 1973-2003



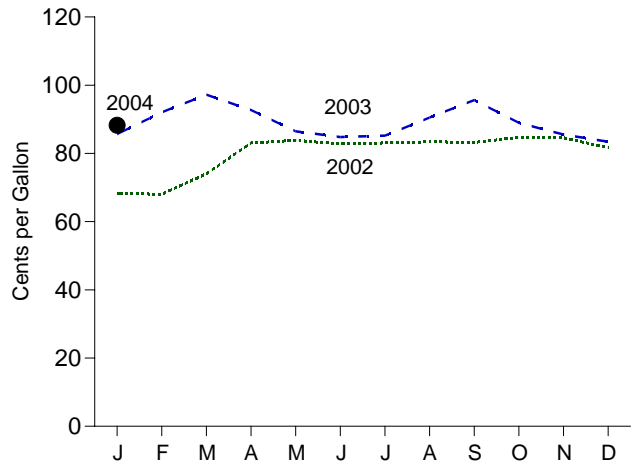
Costs, December 2003



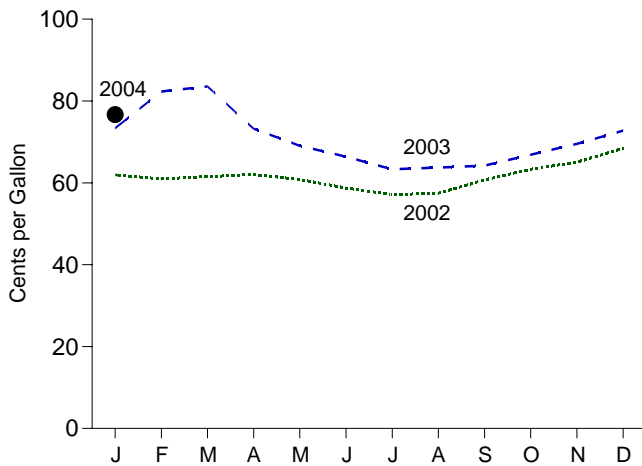
Residential Electricity<sup>a</sup>, Monthly



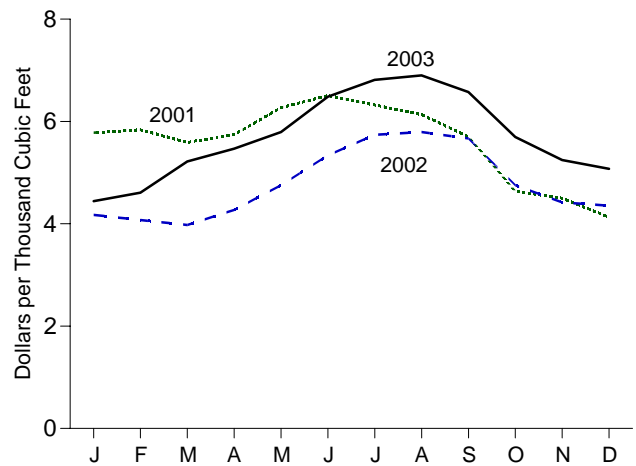
Motor Gasoline<sup>b</sup>, Monthly



Residential Heating Oil<sup>a</sup>, Monthly



Residential Natural Gas<sup>b</sup>, Monthly



<sup>a</sup>Excludes taxes.  
<sup>b</sup>Includes taxes.  
<sup>c</sup>Residential.

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

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

	Consumer Price Index (Urban) <sup>a</sup>	Motor Gasoline <sup>b</sup>		Residential Heating Oil <sup>c</sup>		Residential Natural Gas <sup>d</sup>		Residential Electricity <sup>c</sup>	
	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 Kilowatt-hour	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 Average	172.2	90.8	7.32	76.1	5.49	450.6	4.39	4.79	14.02
2001 Average	177.1	86.4	6.97	70.6	5.09	543.8	5.28	4.87	14.27
2002 January	177.1	68.3	5.51	61.9	4.47	417.3	4.06	4.57	13.39
February	177.8	68.1	5.49	61.0	4.40	407.2	3.96	4.61	13.50
March	178.8	74.0	5.97	61.5	4.44	397.7	3.86	4.57	13.39
April	179.8	83.0	6.70	62.1	4.48	427.1	4.15	4.66	13.66
May	179.8	83.9	6.76	60.8	4.38	475.5	4.62	4.81	14.08
June	179.9	82.8	6.67	58.8	4.24	533.6	5.19	4.85	14.21
July	180.1	83.1	6.70	57.1	4.12	574.1	5.58	4.89	14.34
August	180.7	83.5	6.73	57.4	4.14	579.4	5.63	4.85	14.21
September	181.0	83.3	6.71	60.7	4.38	566.9	5.51	4.78	14.02
October	181.3	84.7	6.83	63.3	4.57	475.5	4.62	4.69	13.76
November	181.3	84.6	6.82	65.1	4.69	441.8	4.29	4.60	13.48
December	180.9	81.6	6.58	68.4	4.93	435.6	4.23	4.68	13.12
Average	179.9	80.1	6.46	62.8	4.52	439.7	4.27	4.70	13.78
2003 January	181.7	85.7	6.91	73.4	5.29	444.1	4.32	4.39	12.87
February	183.1	92.1	7.43	82.3	5.93	461.0	4.48	4.37	12.81
March	184.2	97.2	7.84	83.6	6.02	521.7	5.07	4.51	13.22
April	183.8	92.7	7.48	73.2	5.28	546.8	5.31	4.80	14.06
May	183.5	86.5	6.98	69.0	4.98	579.3	5.63	4.90	14.37
June	183.7	84.8	6.84	66.4	4.79	648.3	6.30	5.01	14.69
July	183.9	85.2	6.87	63.3	4.56	681.3	6.62	4.98	14.58
August	184.6	90.5	7.30	63.8	4.60	<sup>R</sup> 690.1	<sup>R</sup> 6.71	4.98	14.59
September	185.2	95.6	7.71	64.2	4.63	657.7	6.39	4.81	14.08
October	185.0	89.0	7.18	66.9	4.82	569.7	5.54	4.81	14.10
November	184.5	85.5	6.90	69.5	5.01	524.7	5.10	4.74	13.88
December	184.3	83.5	6.73	<sup>R</sup> 72.8	<sup>R</sup> 5.25	507.3	4.93	4.53	13.26
Average	184.0	89.0	7.18	<sup>R</sup> 73.7	5.31	516.3	5.02	4.73	13.87
2004 January	185.2	88.3	7.12	76.7	5.53	NA	NA	NA	NA

<sup>a</sup> Consumer Price Index, All Urban Consumers, All Items, 1982-1984 = 100.0.

<sup>b</sup> Includes taxes.

<sup>c</sup> Excludes taxes.

<sup>R</sup>=Revised. 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>.

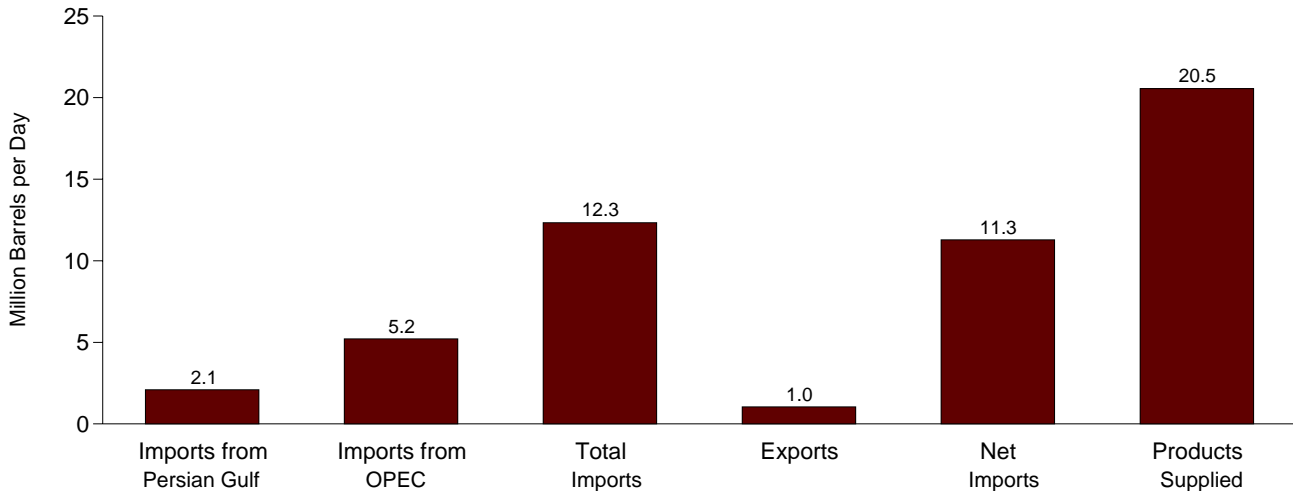
Sources: • **Fuel Prices:** Tables 9.4 (All Types), 9.8c, 9.11, and 9.9, adjusted by the CPI. • **CPI: 1973-2001—Economic Report of the President, February 2004, Table B-60.** • **2002 forward—Council of Economic Advisers, Economic Indicators, March 2004, "Consumer Prices - All Urban Consumers."**

• **Conversion Factors:** Tables A1, A3, A4, and A6.

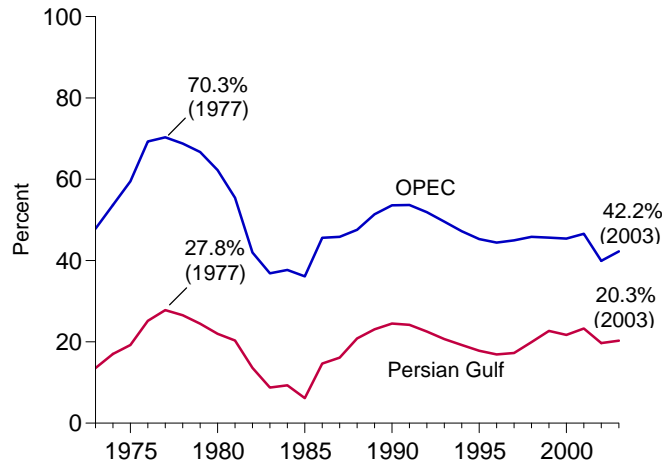


## Figure 1.7 Overview of U.S. Petroleum Trade

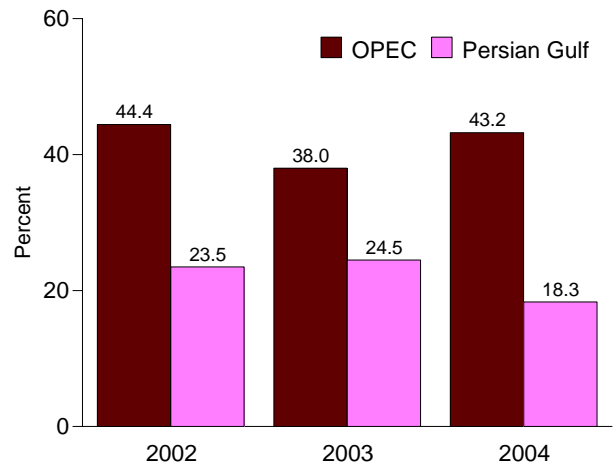
Overview, February 2004



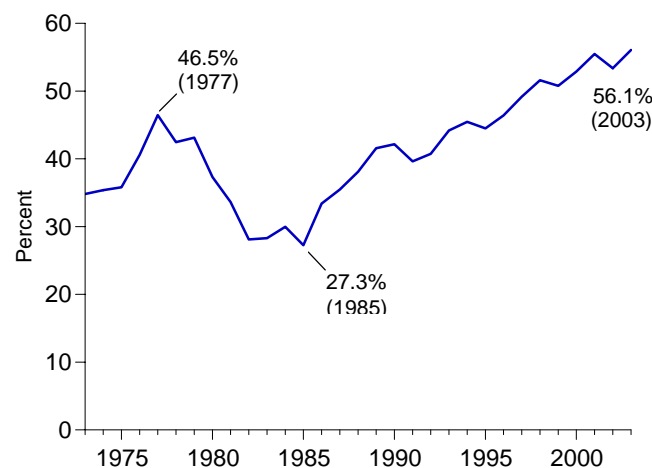
### Imports from OPEC and the Persian Gulf as a Share of Total Imports 1973-2003



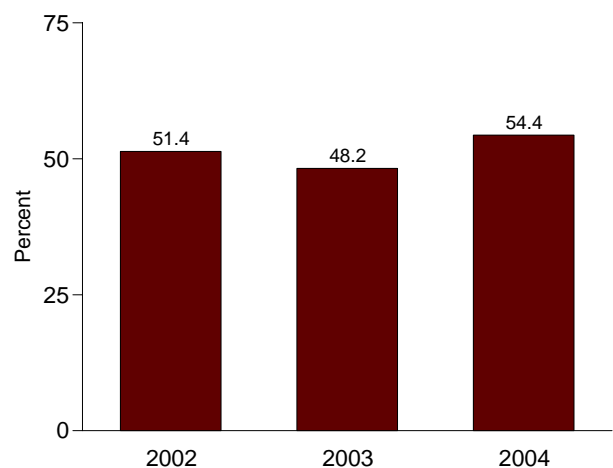
### January and February



### Net Imports as Share of Products Supplied 1973-2003



### January-February

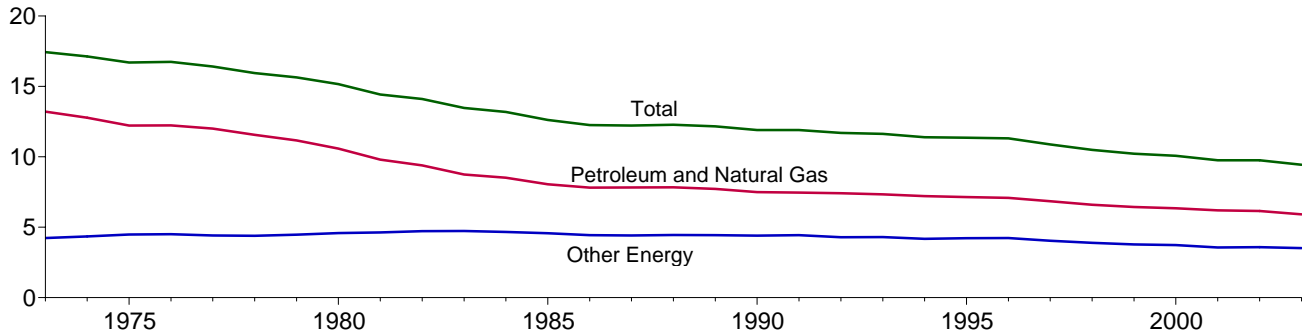


OPEC=Organization of Petroleum Exporting Countries.  
 Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/overview.html>.  
 Source: Table 1.7.



**Figure 1.8 Energy Consumption per Dollar of Gross Domestic Product**  
(Thousand Btu per Chained (2000) Dollar)



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

**Table 1.8 Energy Consumption per Dollar of Gross Domestic Product**

	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Dollar of GDP		
	Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total		Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total
	Quadrillion Btu				Billion Chained (2000) Dollars	Thousand Btu per Chained (2000) Dollar	
1973 Year .....	57.352	18.356	75.708	4,341.5	13.21	4.23	17.44
1974 Year .....	55.187	18.804	73.991	4,319.6	12.78	4.35	17.13
1975 Year .....	52.678	19.321	71.999	4,311.2	12.22	4.48	16.70
1976 Year .....	55.520	20.492	76.012	4,540.9	12.23	4.51	16.74
1977 Year .....	57.053	20.947	78.000	4,750.5	12.01	4.41	16.42
1978 Year .....	57.966	22.021	79.986	5,015.0	11.56	4.39	15.95
1979 Year .....	57.789	23.114	80.903	5,173.4	11.17	4.47	15.64
1980 Year .....	54.596	23.693	78.289	5,161.7	10.58	4.59	15.17
1981 Year .....	51.859	24.476	76.335	5,291.7	9.80	4.63	14.43
1982 Year .....	48.736	24.497	73.234	5,189.3	9.39	4.72	14.11
1983 Year .....	47.411	25.655	73.066	5,423.8	8.74	4.73	13.47
1984 Year .....	49.558	27.135	76.693	5,813.6	8.52	4.67	13.19
1985 Year .....	48.756	27.661	76.417	6,053.7	8.05	4.57	12.62
1986 Year .....	48.904	27.818	76.722	6,263.6	7.81	4.44	12.25
1987 Year .....	50.609	28.547	79.156	6,475.1	7.82	4.41	12.22
1988 Year .....	52.774	30.000	82.774	6,742.7	7.83	4.45	12.28
1989 Year .....	53.923	30.963	84.886	6,981.4	7.72	4.44	12.16
1990 Year .....	53.282	31.323	84.605	7,112.5	7.49	4.40	11.90
1991 Year .....	52.994	31.528	84.522	7,100.5	7.46	4.44	11.90
1992 Year .....	54.362	31.504	85.866	7,336.6	7.41	4.29	11.70
1993 Year .....	55.193	32.386	87.579	7,532.7	7.33	4.30	11.63
1994 Year .....	56.512	32.736	89.248	7,835.5	7.21	4.18	11.39
1995 Year .....	57.338	33.884	91.221	8,031.7	7.14	4.22	11.36
1996 Year .....	58.954	35.270	94.224	8,328.9	7.08	4.23	11.31
1997 Year .....	59.594	35.133	94.727	8,703.5	6.85	4.04	10.88
1998 Year .....	59.869	35.277	95.146	9,066.9	6.60	3.89	10.49
1999 Year .....	60.970	35.804	96.774	9,470.3	6.44	3.78	10.22
2000 Year .....	62.320	36.586	98.906	9,817.0	6.35	3.73	10.07
2001 Year .....	61.194	35.117	96.312	9,866.6	6.20	3.56	9.76
2002 Year .....	62.041	36.228	98.269	10,083.0	6.15	3.59	9.75
2003 Year .....	<sup>R</sup> 61.565	<sup>R</sup> 36.640	<sup>R</sup> 98.205	10,398.0	5.92	3.52	9.44

<sup>a</sup> Coal, nuclear electric power, renewable energy, pumped-storage hydroelectric power, and net imports of coal coke and electricity.

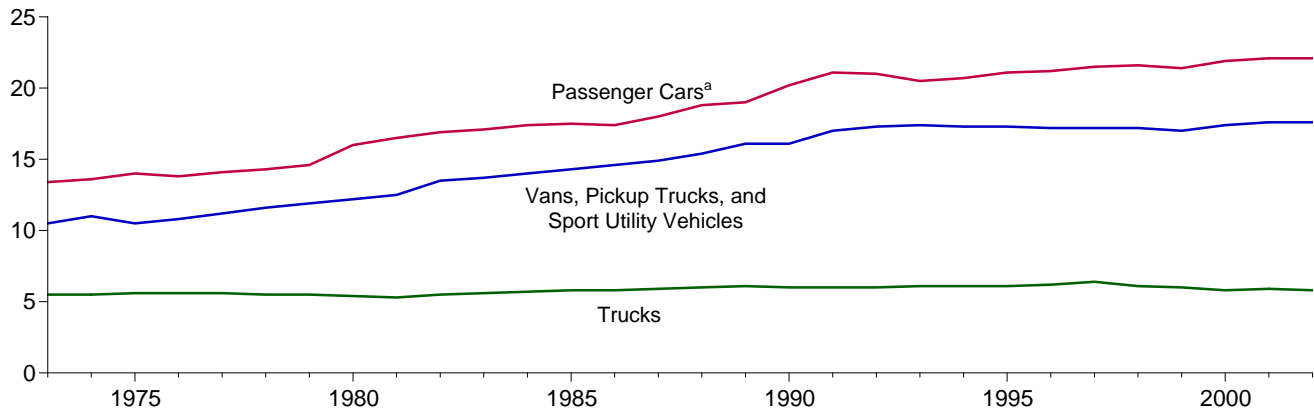
R=Revised.

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/overview.html>.

Sources: • **Energy Consumption:** Table 1.3. • **Gross Domestic Product: 1973-2001**—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, December 2003, Table 7B. **2002**—U.S. Department of Commerce, Bureau of Economic Analysis, *BEA News Release*, March 25, 2004, Table 3, which is available at website [www.bea.doc.gov/bea/newsrel/gdp400p.htm](http://www.bea.doc.gov/bea/newsrel/gdp400p.htm).

**Figure 1.9 Motor Vehicle Fuel Rates**  
(Miles per Gallon)



<sup>a</sup>Motorcycles are included through 1989.

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

Source: Table 1.9.

**Table 1.9 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates**

	Passenger Cars <sup>a</sup>			Vans, Pickup Trucks, and Sport Utility Vehicles <sup>b</sup>			Trucks <sup>c</sup>			All Motor Vehicles <sup>d</sup>		
	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	<sup>a</sup> 10,157	<sup>a</sup> 533	<sup>a</sup> 19.0	11,676	724	16.1	22,926	3,776	6.1	10,932	688	15.9
1990	10,504	520	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	11,831	534	22.1	11,204	636	17.6	26,602	4,477	5.9	11,887	695	17.1
2002 <sup>P</sup>	12,203	551	22.1	11,365	645	17.6	27,062	4,637	5.8	12,172	715	17.0

<sup>a</sup> Through 1989, includes motorcycles.

<sup>b</sup> Includes a small number of trucks with 2 axles and 4 tires, such as step vans.

<sup>c</sup> Single-unit trucks with 2 axles and 6 or more tires, and combination trucks.

<sup>d</sup> Includes buses and motorcycles, which are not shown separately.

P=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 reports, Table VM-1.

**Table 1.10 Heating Degree-Days by Census Division**

Census Divisions	March 1 through March 31					Cumulative July 1 through March 31				
	Normal <sup>a</sup>	2003	2004	Percent Change		Normal <sup>a</sup>	2003	2004	Percent Change	
				Normal to 2004	2003 to 2004				Normal to 2004	2003 to 2004
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	913	934	875	-4	-6	5,715	6,007	5,680	-1	-5
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	827	811	753	-9	-7	5,191	5,415	5,089	-2	-6
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	864	851	739	-14	-13	5,733	5,818	5,377	-6	-8
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	858	847	714	-17	-16	6,055	5,963	5,615	-7	-6
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	373	310	316	-15	2	2,621	2,714	2,568	-2	-5
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	452	383	348	-23	-9	3,324	3,434	3,150	-5	-8
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	263	272	161	-39	-41	2,187	2,276	1,915	-12	-16
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	633	573	463	-27	-19	4,491	4,060	4,124	-8	2
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	416	379	260	-38	-31	2,687	2,358	2,383	-11	1
<b>U.S. Average<sup>b</sup></b> .....	<b>593</b>	<b>564</b>	<b>487</b>	<b>-18</b>	<b>-14</b>	<b>4,004</b>	<b>4,014</b>	<b>3,779</b>	<b>-6</b>	<b>-6</b>

<sup>a</sup> "Normal" is based on calculations of data from 1971 through 2000.

<sup>b</sup> Excludes Alaska and Hawaii.

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 Pages: • See <http://www.eia.doe.gov/emeu/mer/overview.html> for current data. • See <http://www.eia.doe.gov/emeu/aer/overview.html> for historical data.

Sources: See end of section.

**Table 1.11 Cooling Degree-Days by Census Division**

Census Divisions	March 1 through March 31					Cumulative January 1 through March 31				
	Normal <sup>a</sup>	2003	2004	Percent Change		Normal <sup>a</sup>	2003	2004	Percent Change	
				Normal to 2004	2003 to 2004				Normal to 2004	2003 to 2004
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	0	0	0	( <sup>c</sup> )	( <sup>c</sup> )	0	0	0	( <sup>c</sup> )	( <sup>c</sup> )
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	0	0	0	( <sup>c</sup> )	( <sup>c</sup> )	0	0	0	( <sup>c</sup> )	( <sup>c</sup> )
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	1	0	0	( <sup>c</sup> )	( <sup>c</sup> )	1	0	0	( <sup>c</sup> )	( <sup>c</sup> )
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	3	0	1	( <sup>c</sup> )	( <sup>c</sup> )	3	1	1	( <sup>c</sup> )	( <sup>c</sup> )
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	49	79	55	( <sup>c</sup> )	( <sup>c</sup> )	114	113	97	-15	-14
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	19	12	22	( <sup>c</sup> )	( <sup>c</sup> )	32	14	27	( <sup>c</sup> )	( <sup>c</sup> )
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	51	34	68	( <sup>c</sup> )	( <sup>c</sup> )	81	47	84	( <sup>c</sup> )	( <sup>c</sup> )
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	10	12	41	( <sup>c</sup> )	( <sup>c</sup> )	14	14	41	( <sup>c</sup> )	( <sup>c</sup> )
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	4	4	29	( <sup>c</sup> )	( <sup>c</sup> )	7	5	29	( <sup>c</sup> )	( <sup>c</sup> )
<b>U.S. Average<sup>b</sup></b> .....	<b>18</b>	<b>20</b>	<b>26</b>	<b>(<sup>c</sup>)</b>	<b>(<sup>c</sup>)</b>	<b>35</b>	<b>29</b>	<b>36</b>	<b>(<sup>c</sup>)</b>	<b>(<sup>c</sup>)</b>

<sup>a</sup> "Normal" is based on calculations of data from 1971 through 2000.

<sup>b</sup> Excludes Alaska and Hawaii.

<sup>c</sup> 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 Pages: • See <http://www.eia.doe.gov/emeu/mer/overview.html> for current data. • See <http://www.eia.doe.gov/emeu/aer/overview.html> for historical data.

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 electricity net 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 and coal coke net imports), nuclear electric power, pumped-storage hydroelectric power, renewable energy, and net imports of electricity. 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 and 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 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. 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. 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 1.5 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.

1993-2002: “U.S. International Trade in Goods and Services,” Annual Revision.

2003 and 2004: “U.S. International Trade in Goods and Services,” FT-900, monthly.

#### Petroleum Imports

1974-1987: “U.S. Merchandise Trade,” FT900, December issues, 1975-1988.

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

1990-1993: “U.S. Merchandise Trade,” Final Report.

1994-2002: “U.S. International Trade in Goods and Services,” Annual Revision.

2003 and 2004: “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.

1993-2002: “U.S. International Trade in Goods and Services,” Annual Revision.

2003 and 2004: “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.

1992-2002: "U.S. International Trade in Goods and Services," Annual Revision.

2003 and 2004: "U.S. International Trade in Goods and Services," FT-900, monthly.

## **Tables 1.10 and 1.11 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 the 2000 Census 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 January 2004 was 9.3 quadrillion Btu, 1 percent higher than in January 2003.

Residential sector total consumption was 2.6 quadrillion Btu in January 2004, 1 percent above the January 2003 level. The sector accounted for 28 percent of total energy consumption.

Commercial sector total consumption was 1.7 quadrillion Btu in January 2004, 2 percent lower than the January 2003 level. The sector accounted for 18 percent of total energy consumption.

Industrial sector total consumption was 2.8 quadrillion Btu in January 2004, 1 percent higher than the January 2003

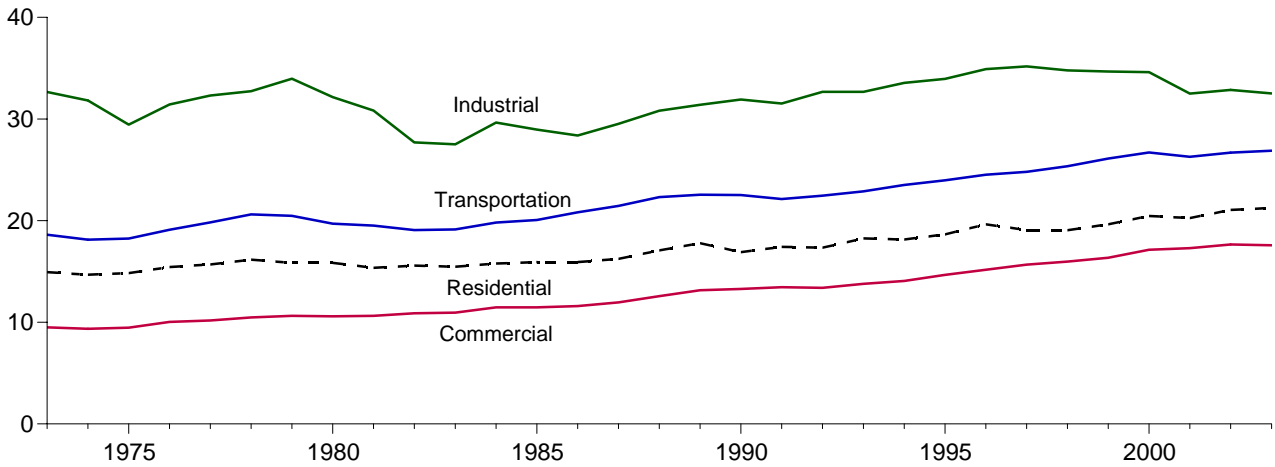
level. The sector accounted for 30 percent of total energy consumption.

Transportation sector total consumption was 2.2 quadrillion Btu in January 2004, 2 percent higher than the January 2003 level. The sector accounted for 23 percent of total energy consumption.

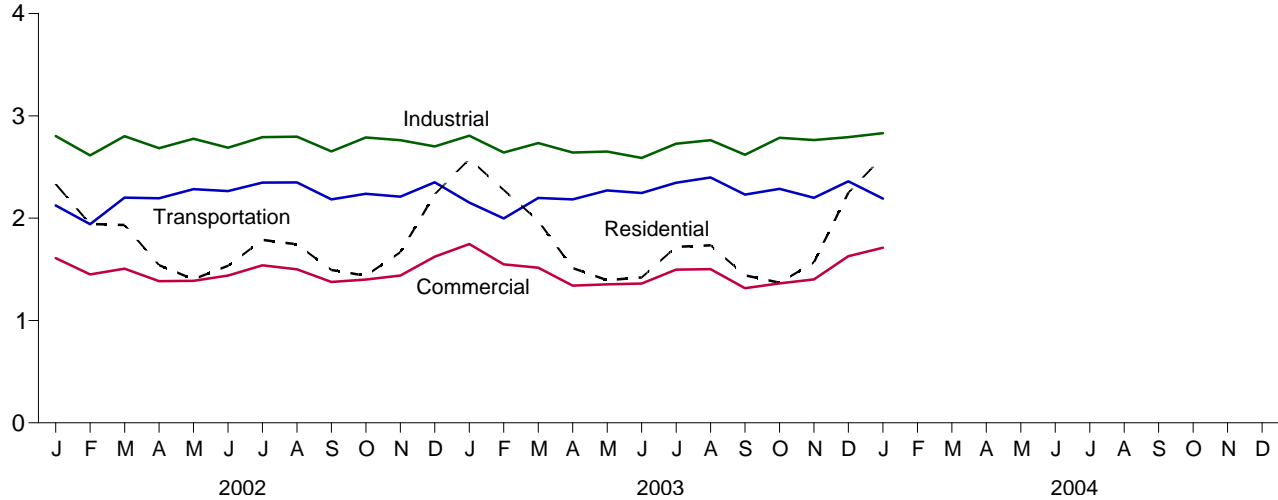
Electric power sector primary consumption was forecast as 3.4 quadrillion Btu in January 2004, 1 percent higher than the January 2003 level. Fossil fuels accounted for 69 percent of all primary energy consumed by the electric power sector; nuclear electric power 21 percent; and renewable energy 10 percent.

**Figure 2.1 Energy Consumption by Sector**  
(Quadrillion Btu)

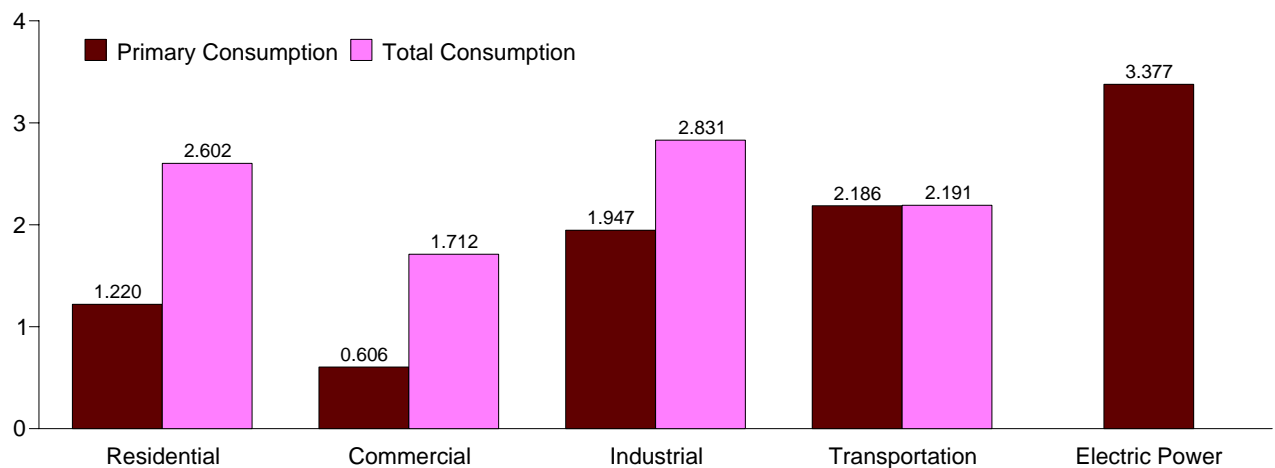
Total Consumption by End-Use Sector, 1973-2003



Total Consumption by End-Use Sector, Monthly



By Sector, January 2004



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.

**Table 2.1 Energy Consumption by Sector**  
(Quadrillion Btu)

	End-Use Sectors								Electric Power Sector <sup>c,d</sup>	Adjustments <sup>e</sup>	Total <sup>b</sup>
	Residential		Commercial <sup>a</sup>		Industrial <sup>b</sup>		Transportation				
	Primary	Total	Primary	Total	Primary	Total	Primary	Total			
<b>1973 Total</b> .....	8.250	14.930	4.381	9.507	24.741	32.653	18.576	18.612	19.753	0.007	75.708
<b>1974 Total</b> .....	7.928	14.683	4.221	9.363	23.816	31.819	18.086	18.119	19.933	.007	73.991
<b>1975 Total</b> .....	8.006	14.842	4.023	9.466	21.454	29.447	18.209	18.244	20.307	.001	71.999
<b>1976 Total</b> .....	8.408	15.441	4.333	10.035	22.685	31.429	19.065	19.099	21.513	.008	76.012
<b>1977 Total</b> .....	8.207	15.689	4.217	10.177	23.193	32.307	19.784	19.820	22.591	.007	78.000
<b>1978 Total</b> .....	8.272	16.156	4.269	10.481	23.277	32.733	20.580	20.615	23.587	.002	79.986
<b>1979 Total</b> .....	7.934	15.842	4.333	10.627	24.211	33.962	20.436	20.471	23.987	.002	80.903
<b>1980 Total</b> .....	7.504	15.848	4.097	10.594	22.673	32.152	19.658	19.696	24.359	-.001	78.289
<b>1981 Total</b> .....	7.103	15.353	3.831	10.638	21.404	30.836	19.469	19.506	24.525	.003	76.335
<b>1982 Total</b> .....	7.163	15.577	3.859	10.880	19.112	27.704	19.032	19.069	24.063	.004	73.234
<b>1983 Total</b> .....	6.834	15.459	3.827	10.952	18.598	27.511	19.098	19.141	24.705	.003	73.066
<b>1984 Total</b> .....	6.992	15.777	3.989	11.463	20.208	29.643	19.761	19.808	25.741	.003	76.693
<b>1985 Total</b> .....	6.992	15.928	3.708	11.465	19.540	28.958	20.023	20.070	26.158	-.004	76.417
<b>1986 Total</b> .....	6.812	15.927	3.647	11.600	19.133	28.375	20.768	20.817	26.359	.003	76.722
<b>1987 Total</b> .....	6.846	16.233	3.738	11.951	20.046	29.519	21.405	21.455	27.124	-.003	79.156
<b>1988 Total</b> .....	7.249	17.069	3.948	12.571	20.958	30.818	22.261	22.312	28.354	.003	82.774
<b>1989 Total</b> .....	7.495	17.774	3.952	13.156	20.888	31.396	22.497	22.551	30.044	.009	84.886
<b>1990 Total</b> .....	6.460	16.900	3.810	13.281	21.235	31.918	22.472	22.526	30.647	-.020	84.605
<b>1991 Total</b> .....	6.692	17.414	3.860	13.458	20.903	31.527	22.069	22.122	30.999	.001	84.522
<b>1992 Total</b> .....	6.883	17.339	3.898	13.394	21.806	32.673	22.406	22.459	30.873	(s)	85.866
<b>1993 Total</b> .....	7.122	18.249	3.892	13.788	21.739	32.669	22.830	22.883	32.006	-.010	87.579
<b>1994 Total</b> .....	6.949	18.135	3.930	14.059	22.376	33.557	23.448	23.503	32.551	-.006	89.248
<b>1995 Total</b> .....	7.022	18.653	4.032	14.665	22.643	33.941	23.905	23.960	33.616	.003	91.221
<b>1996 Total</b> .....	7.556	19.643	4.218	15.161	23.364	34.905	24.456	24.511	34.626	.004	94.224
<b>1997 Total</b> .....	7.088	19.067	4.248	15.679	23.608	35.167	24.753	24.808	35.024	.006	94.727
<b>1998 Total</b> .....	6.462	19.051	3.956	15.964	23.067	34.777	25.301	25.357	36.363	-.003	95.146
<b>1999 Total</b> .....	6.810	19.634	3.984	16.347	22.826	34.679	26.050	26.108	37.097	.006	96.774
<b>2000 Total</b> .....	7.147	20.454	4.192	17.129	22.740	34.616	26.645	26.705	38.181	.002	98.906
<b>2001 Total</b> .....	6.937	20.251	4.038	17.295	21.817	32.492	26.214	26.275	37.306	(s)	96.312
<b>2002</b> January .....	1.050	2.333	.551	1.611	1.968	2.803	2.120	2.124	3.182	-.002	8.869
February .....	.912	1.943	.496	1.451	1.804	2.614	1.938	1.942	2.800	-.004	7.946
March .....	.858	1.934	.467	1.507	1.925	2.801	2.196	2.200	2.997	-.003	8.440
April .....	.580	1.541	.345	1.384	1.804	2.684	2.190	2.194	2.884	-.003	7.800
May .....	.405	1.403	.259	1.387	1.838	2.776	2.280	2.284	3.069	-.001	7.850
June .....	.302	1.535	.210	1.439	1.747	2.689	2.260	2.265	3.408	.004	7.931
July .....	.274	1.788	.205	1.540	1.820	2.793	2.342	2.348	3.826	.007	8.475
August .....	.260	1.744	.203	1.500	1.836	2.797	2.344	2.350	3.747	.006	8.396
September .....	.267	1.494	.204	1.378	1.755	2.653	2.179	2.184	3.305	.003	7.713
October .....	.417	1.438	.271	1.400	1.881	2.789	2.234	2.239	3.062	-.001	7.864
November .....	.664	1.667	.385	1.439	1.871	2.763	2.206	2.210	2.954	-.003	8.077
December .....	.990	2.233	.528	1.624	1.812	2.701	2.347	2.352	3.235	-.002	8.909
<b>Total</b> .....	<b>6.981</b>	<b>21.056</b>	<b>4.123</b>	<b>17.657</b>	<b>22.061</b>	<b>32.861</b>	<b>26.634</b>	<b>26.692</b>	<b>38.467</b>	<b>.003</b>	<b>98.269</b>
<b>2003</b> January .....	<sup>R</sup> 1.214	<sup>R</sup> 2.578	<sup>R</sup> .637	<sup>R</sup> 1.748	<sup>R</sup> 1.931	<sup>R</sup> 2.806	2.148	2.153	3.354	(s)	<sup>R</sup> 9.284
February .....	<sup>R</sup> 1.109	<sup>R</sup> 2.276	.581	1.548	1.831	2.642	1.994	1.998	2.950	-.004	<sup>R</sup> 8.461
March .....	.872	1.974	<sup>R</sup> .479	1.517	<sup>R</sup> 1.865	2.734	2.194	2.198	3.013	-.003	<sup>R</sup> 8.419
April .....	<sup>R</sup> .589	<sup>R</sup> 1.513	.341	1.341	1.757	2.642	2.184	2.184	2.812	-.004	<sup>R</sup> 7.676
May .....	.391	1.394	.245	1.353	1.715	2.652	2.266	2.271	3.053	(s)	<sup>R</sup> 7.670
June .....	.289	1.420	.198	1.361	1.645	2.589	2.241	2.246	3.244	.002	<sup>R</sup> 7.619
July .....	.271	1.719	<sup>R</sup> .200	1.497	1.772	2.729	2.341	2.346	3.709	.006	<sup>R</sup> 8.298
August .....	.262	1.734	<sup>R</sup> .202	<sup>R</sup> 1.503	<sup>R</sup> 1.786	<sup>R</sup> 2.763	2.393	2.398	3.756	.007	<sup>R</sup> 8.405
September .....	.277	1.440	<sup>R</sup> .200	1.315	<sup>R</sup> 1.754	<sup>R</sup> 2.620	2.226	2.231	3.150	.002	<sup>R</sup> 7.609
October .....	.395	1.368	.254	<sup>R</sup> 1.363	<sup>R</sup> 1.862	<sup>R</sup> 2.786	2.282	2.287	3.010	(s)	<sup>R</sup> 7.803
November .....	.588	<sup>R</sup> 1.569	<sup>R</sup> .335	<sup>R</sup> 1.402	<sup>R</sup> 1.851	<sup>R</sup> 2.764	2.194	2.199	2.966	-.001	<sup>R</sup> 7.932
December .....	<sup>R</sup> .971	<sup>R</sup> 2.250	<sup>R</sup> .503	<sup>R</sup> 1.629	<sup>R</sup> 1.887	<sup>R</sup> 2.792	<sup>R</sup> 2.355	<sup>R</sup> 2.360	<sup>R</sup> 3.314	<sup>R</sup> -.001	<sup>R</sup> 9.029
<b>Total</b> .....	<sup>R</sup> <b>7.227</b>	<sup>R</sup> <b>21.245</b>	<sup>R</sup> <b>4.173</b>	<sup>R</sup> <b>17.572</b>	<sup>R</sup> <b>21.655</b>	<sup>R</sup> <b>32.513</b>	<sup>R</sup> <b>26.815</b>	<sup>R</sup> <b>26.872</b>	<sup>R</sup> <b>38.331</b>	<sup>R</sup> <b>.003</b>	<sup>R</sup> <b>98.205</b>
<b>2004</b> January .....	1.220	2.602	.606	1.712	1.947	2.831	2.186	2.191	<sup>F</sup> 3.377	-.002	9.334

<sup>a</sup> Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of Section 7.

<sup>b</sup> Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of Section 7.

<sup>c</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>d</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>e</sup> A balancing item. The sum of primary consumption in the five energy-use

sectors equals the sum of total consumption in the four end-use sectors. However, total energy consumption does not equal the sum of the sectoral components due to the use of sector-specific conversion factors for coal and natural gas.

R=Revised. F=Forecast. (s)=Less than 0.5 trillion Btu.

Notes: • Primary consumption includes coal, natural gas, petroleum, nuclear electric power, hydroelectric power, wood, waste, alcohol fuels, geothermal, solar, wind, coal coke net imports, and electricity net imports. • Total consumption includes primary consumption, electricity retail sales, and electrical system energy losses. • Totals may not equal sum of components due to independent rounding.

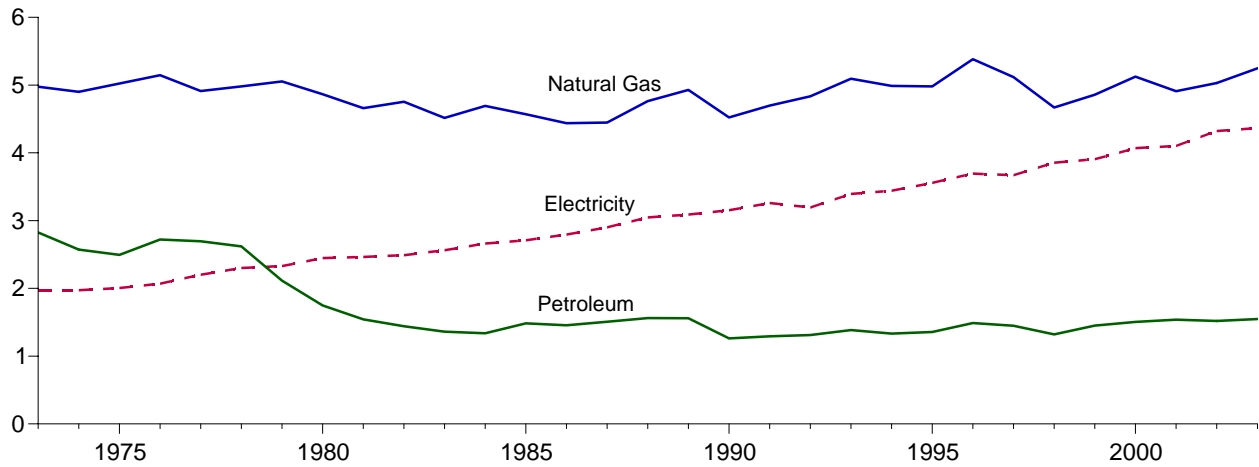
• Geographic coverage is the 50 States and the District of Columbia.

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

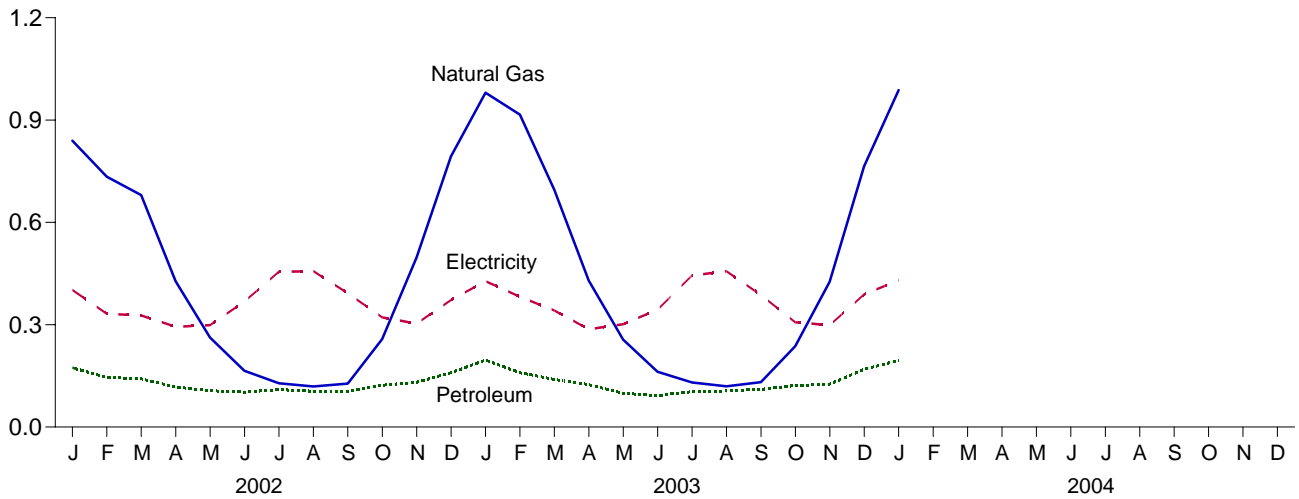
Additional Notes and Sources: See Tables 2.2-2.6 and end of section.

**Figure 2.2 Residential Sector Energy Consumption**  
(Quadrillion Btu)

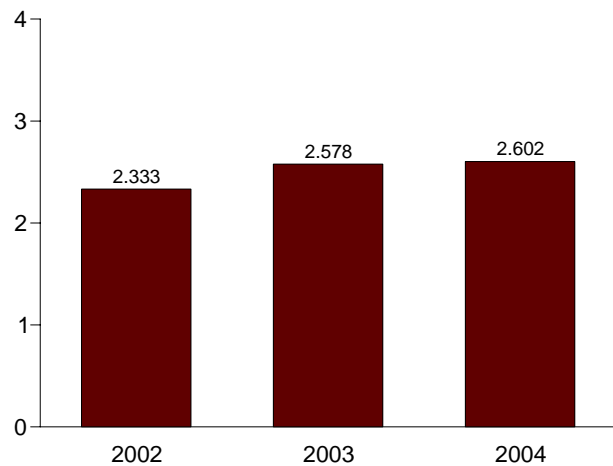
By Major Sources, 1973-2003



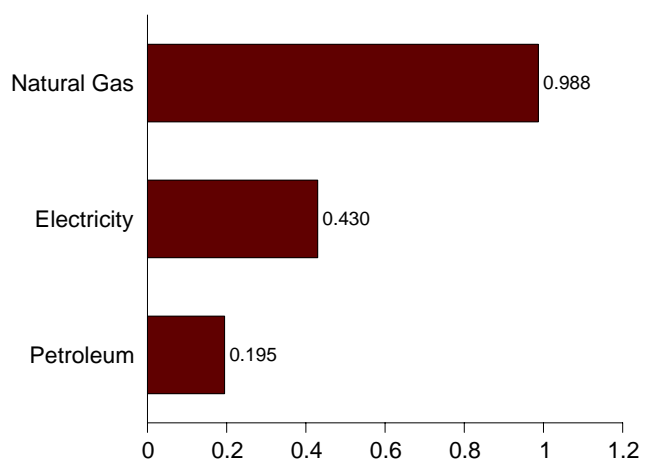
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



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.

**Table 2.2 Residential Sector Energy Consumption**  
(Quadrillion Btu)

	Primary Consumption								Total Primary	Electricity Retail Sales <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total
	Fossil Fuels				Renewable Energy							
	Coal	Natural Gas <sup>a</sup>	Petroleum	Total	Wood	Geo-thermal <sup>b</sup>	Solar <sup>c</sup>	Total				
1973 Total	0.094	4.977	2.825	7.896	0.354	NA	NA	0.354	8.250	1.976	4.703	14.930
1974 Total	.082	4.901	2.573	7.557	.371	NA	NA	.371	7.928	1.973	4.783	14.683
1975 Total	.063	5.023	2.495	7.580	.425	NA	NA	.425	8.006	2.007	4.829	14.842
1976 Total	.059	5.147	2.720	7.927	.482	NA	NA	.482	8.408	2.069	4.963	15.441
1977 Total	.057	4.913	2.695	7.666	.542	NA	NA	.542	8.207	2.202	5.280	15.689
1978 Total	.049	4.981	2.620	7.651	.622	NA	NA	.622	8.272	2.301	5.582	16.156
1979 Total	.037	5.055	2.114	7.206	.728	NA	NA	.728	7.934	2.330	5.578	15.842
1980 Total	.031	4.866	1.748	6.645	.859	NA	NA	.859	7.504	2.448	5.897	15.848
1981 Total	.030	4.660	1.543	6.234	.869	NA	NA	.869	7.103	2.464	5.786	15.353
1982 Total	.032	4.753	1.441	6.226	.937	NA	NA	.937	7.163	2.489	5.925	15.577
1983 Total	.031	4.516	1.362	5.909	.925	NA	NA	.925	6.834	2.562	6.063	15.459
1984 Total	.040	4.692	1.337	6.069	.923	NA	NA	.923	6.992	2.662	6.123	15.777
1985 Total	.039	4.571	1.483	6.093	.899	NA	NA	.899	6.992	2.709	6.227	15.928
1986 Total	.040	4.439	1.457	5.936	.876	NA	NA	.876	6.812	2.795	6.320	15.927
1987 Total	.037	4.449	1.508	5.994	.852	NA	NA	.852	6.846	2.902	6.485	16.233
1988 Total	.037	4.765	1.563	6.364	.885	NA	NA	.885	7.249	3.046	6.774	17.069
1989 Total	.031	4.929	1.560	6.519	.918	.005	.053	.976	7.495	3.090	7.189	17.774
1990 Total	.031	4.523	1.263	5.817	.581	.006	.056	.642	6.460	3.153	7.287	16.900
1991 Total	.025	4.697	1.293	6.015	.613	.006	.058	.677	6.692	3.260	7.463	17.414
1992 Total	.026	4.835	1.311	6.172	.645	.006	.060	.711	6.883	3.193	7.263	17.339
1993 Total	.026	5.095	1.385	6.506	.548	.007	.062	.616	7.122	3.394	7.733	18.249
1994 Total	.021	4.988	1.333	6.342	.537	.006	.064	.607	6.949	3.441	7.746	18.135
1995 Total	.017	4.981	1.356	6.355	.596	.007	.065	.667	7.022	3.557	8.073	18.653
1996 Total	.017	5.383	1.489	6.888	.595	.007	.065	.667	7.556	3.694	8.393	19.643
1997 Total	.016	5.118	1.448	6.582	.433	.008	.065	.506	7.088	3.671	8.308	19.067
1998 Total	.012	4.669	1.322	6.003	.387	.008	.065	.459	6.462	3.856	8.733	19.051
1999 Total	.014	4.858	1.452	6.324	.414	.009	.064	.486	6.810	3.906	8.917	19.634
2000 Total	.011	5.126	1.506	6.643	.433	.009	.061	.503	7.147	4.069	9.238	20.454
2001 Total	.012	4.910	1.539	6.460	.407	.009	.060	.476	6.937	4.103	9.211	20.251
2002 January	.001	.840	.174	1.015	.030	.001	.005	.036	1.050	.402	.881	2.333
February	.001	.734	.145	.880	.027	.001	.004	.032	.912	.332	.699	1.943
March	.001	.680	.141	.822	.030	.001	.005	.036	.858	.327	.749	1.934
April	.001	.428	.117	.546	.029	.001	.005	.034	.580	.294	.666	1.541
May	.001	.263	.106	.370	.030	.001	.005	.036	.405	.299	.699	1.403
June	.001	.165	.102	.268	.029	.001	.005	.034	.302	.368	.865	1.535
July	.001	.128	.110	.239	.030	.001	.005	.036	.274	.455	1.058	1.788
August	.001	.119	.105	.225	.030	.001	.005	.036	.260	.457	1.026	1.744
September	.001	.127	.104	.232	.029	.001	.005	.034	.267	.392	.835	1.494
October	.001	.258	.123	.381	.030	.001	.005	.036	.417	.322	.699	1.438
November	.001	.497	.131	.629	.029	.001	.005	.034	.664	.303	.700	1.667
December	.002	.794	.159	.954	.030	.001	.005	.036	.990	.372	.871	2.233
Total	.012	5.032	1.519	6.562	.350	.010	.058	.419	6.981	4.323	9.752	21.056
2003 January	.001	R .980	.196	R 1.178	.030	.001	.005	.036	R 1.214	.428	.936	R 2.578
February	.001	R .916	.159	R 1.077	.027	.001	.004	.032	R 1.109	.382	.785	R 2.276
March	.001	R .696	.140	.836	.030	.001	.005	.036	.872	.342	.760	1.974
April	.001	R .429	.124	R .555	.029	.001	.005	.034	R .589	.287	.637	R 1.513
May	.001	.256	.099	.355	.030	.001	.005	.036	.391	.301	.702	1.394
June	.001	.162	.092	.255	.029	.001	.005	.034	.289	.344	.787	1.420
July	.001	.131	.104	.235	.030	.001	.005	.036	.271	.444	1.004	1.719
August	.001	.119	.106	.226	.030	.001	.005	.036	.262	.457	1.016	1.734
September	.001	R .132	.110	R .243	.029	.001	.005	.034	.277	.387	.776	1.440
October	.001	.237	.122	R .360	.030	.001	.005	.036	.395	.307	.666	1.368
November	.001	R .426	.126	R .553	.029	.001	.005	.034	.588	.298	.683	R 1.569
December	.002	R .765	R .169	R .936	.030	.001	.005	.036	R .971	R .389	R .890	R 2.250
Total	.012	R 5.249	R 1.548	R 6.809	.350	.010	.058	.419	R 7.227	R 4.367	R 9.650	R 21.245
2004 January	.002	F .988	.195	1.185	.030	.001	.005	.035	1.220	F .430	.952	2.602

<sup>a</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>b</sup> Geothermal heat pump and direct use energy.

<sup>c</sup> Solar thermal direct use and photovoltaic electricity generation. Includes small amounts of commercial sector use.

<sup>d</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>e</sup> See Note 12 at end of section.

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

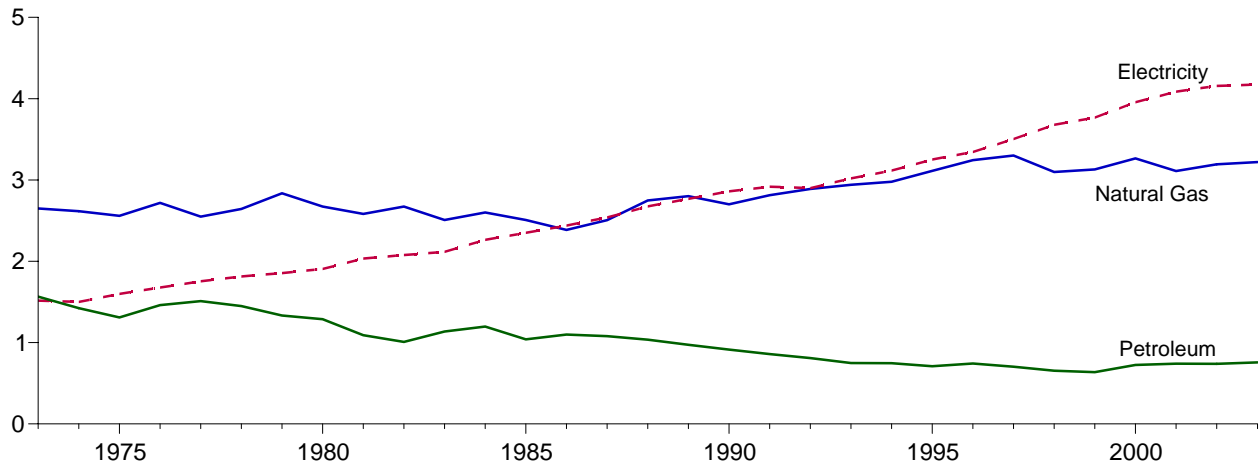
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

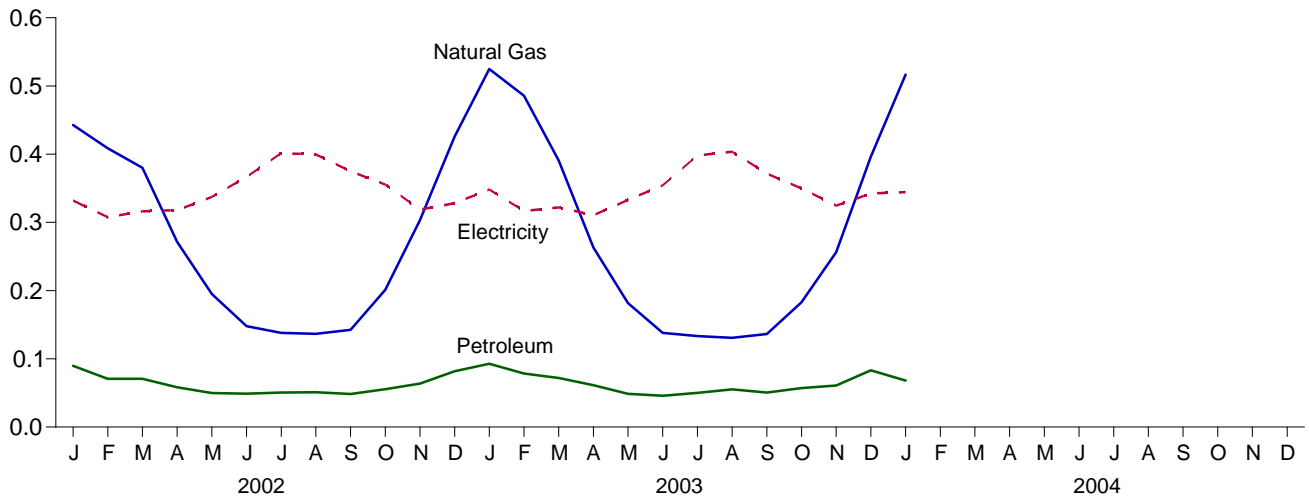
Additional Notes and Sources: See end of section.

**Figure 2.3 Commercial Sector Energy Consumption**  
(Quadrillion Btu)

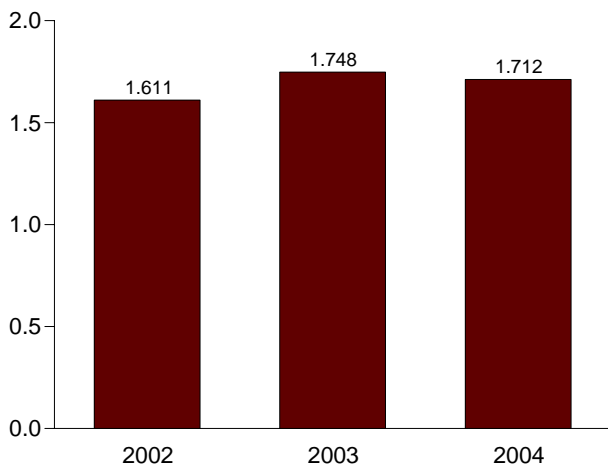
By Major Sources, 1973-2003



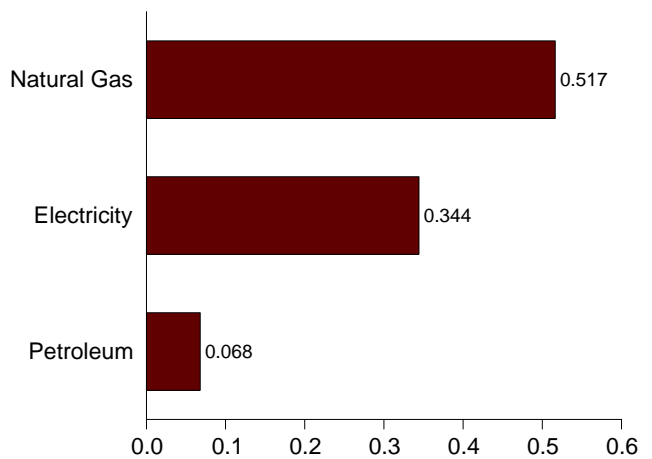
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



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.

**Table 2.3 Commercial Sector Energy Consumption**  
(Quadrillion Btu)

	Primary Consumption								Total Primary	Electricity Retail Sales <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total
	Fossil Fuels				Renewable Energy							
	Coal	Natural Gas <sup>a</sup>	Petroleum	Total	Hydro-power <sup>b</sup>	Wood and Waste	Geo-thermal <sup>c</sup>	Total				
1973 Total	0.160	2.649	1.565	4.374	NA	0.007	NA	0.007	4.381	1.517	3.609	9.507
1974 Total	.175	2.617	1.423	4.214	NA	.007	NA	.007	4.221	1.501	3.640	9.363
1975 Total	.147	2.558	1.310	4.015	NA	.008	NA	.008	4.023	1.598	3.845	9.466
1976 Total	.144	2.718	1.461	4.324	NA	.009	NA	.009	4.333	1.678	4.025	10.035
1977 Total	.148	2.548	1.511	4.207	NA	.010	NA	.010	4.217	1.754	4.206	10.177
1978 Total	.165	2.643	1.450	4.257	NA	.012	NA	.012	4.269	1.813	4.398	10.481
1979 Total	.149	2.836	1.334	4.319	NA	.014	NA	.014	4.333	1.854	4.439	10.627
1980 Total	.115	2.674	1.288	4.076	NA	.021	NA	.021	4.097	1.906	4.591	10.594
1981 Total	.137	2.583	1.090	3.810	NA	.021	NA	.021	3.831	2.033	4.774	10.638
1982 Total	.155	2.673	1.008	3.837	NA	.022	NA	.022	3.859	2.077	4.944	10.880
1983 Total	.162	2.508	1.136	3.805	NA	.022	NA	.022	3.827	2.116	5.008	10.952
1984 Total	.169	2.600	1.198	3.967	NA	.022	NA	.022	3.989	2.264	5.209	11.463
1985 Total	.137	2.508	1.039	3.684	NA	.024	NA	.024	3.708	2.351	5.405	11.465
1986 Total	.135	2.386	1.099	3.620	NA	.027	NA	.027	3.647	2.439	5.515	11.600
1987 Total	.125	2.505	1.079	3.709	NA	.029	NA	.029	3.738	2.539	5.674	11.951
1988 Total	.131	2.748	1.037	3.916	NA	.032	NA	.032	3.948	2.675	5.948	12.571
1989 Total	.115	2.802	.973	3.891	.001	.058	.003	.061	3.952	2.767	6.437	13.156
1990 Total	.124	2.701	.913	3.739	.001	.067	.003	.071	3.810	2.860	6.611	13.281
1991 Total	.116	2.813	.859	3.788	.001	.068	.003	.072	3.860	2.918	6.681	13.458
1992 Total	.117	2.890	.811	3.817	.001	.076	.003	.081	3.898	2.900	6.596	13.394
1993 Total	.117	2.942	.750	3.809	.001	.079	.003	.084	3.892	3.019	6.877	13.788
1994 Total	.118	2.979	.747	3.844	.001	.081	.004	.086	3.930	3.116	7.013	14.059
1995 Total	.117	3.113	.710	3.940	.001	.086	.005	.092	4.032	3.252	7.381	14.665
1996 Total	.122	3.244	.743	4.108	.001	.103	.005	.110	4.218	3.344	7.599	15.161
1997 Total	.129	3.302	.704	4.135	.001	.107	.006	.113	4.248	3.503	7.928	15.679
1998 Total	.093	3.098	.653	3.845	.001	.102	.007	.111	3.956	3.678	8.330	15.964
1999 Total	.103	3.130	.637	3.870	.001	.106	.007	.114	3.984	3.766	8.597	16.347
2000 Total	.092	3.265	.726	4.083	.001	.100	.008	.109	4.192	3.956	8.982	17.129
2001 Total	.097	3.110	.742	3.949	.001	.080	.008	.089	4.038	4.086	9.171	17.295
2002 January	.011	.443	.090	.543	(s)	.007	.001	.007	.551	.332	.728	1.611
February	.010	.409	.071	.489	(s)	.006	.001	.007	.496	.308	.648	1.451
March	.009	.380	.071	.460	(s)	.007	.001	.007	.467	.316	.724	1.507
April	.008	.271	.058	.338	(s)	.007	.001	.007	.345	.318	.721	1.384
May	.006	.195	.050	.251	(s)	.007	.001	.008	.259	.337	.791	1.387
June	.006	.148	.049	.202	(s)	.007	.001	.008	.210	.367	.862	1.439
July	.008	.138	.051	.196	(s)	.008	.001	.008	.205	.401	.933	1.540
August	.007	.137	.051	.194	(s)	.008	.001	.008	.203	.400	.898	1.500
September	.005	.143	.048	.196	(s)	.007	.001	.008	.204	.375	.799	1.378
October	.007	.201	.056	.263	(s)	.007	.001	.008	.271	.355	.773	1.400
November	.010	.304	.064	.377	(s)	.007	.001	.008	.385	.319	.735	1.439
December	.013	.426	.082	.520	(s)	.007	.001	.007	.528	.328	.768	1.624
Total	.098	3.193	.739	4.031	(s)	.084	.009	.093	4.123	4.157	9.377	17.657
2003 January	.012	R .525	.093	R .630	(s)	.007	.001	.007	R .637	.348	.762	R 1.748
February	.010	.486	.078	.574	(s)	.007	.001	.007	.581	.317	.650	1.548
March	.007	.391	.072	.470	(s)	.008	.001	.009	R .479	.322	.716	1.517
April	.008	.263	.061	.333	(s)	.008	.001	.008	.341	.311	.689	1.341
May	.006	.182	.049	.236	(s)	.008	.001	.009	.245	.333	.775	1.353
June	.005	.138	.046	.189	(s)	.008	.001	.008	.198	.354	.809	1.361
July	.007	.133	.050	.191	(s)	.008	.001	.009	R .200	.398	.900	1.497
August	.007	R .131	.055	R .193	(s)	.008	.001	.008	R .202	.403	.897	R 1.503
September	.005	.136	.051	R .192	(s)	.007	.001	.008	R .200	.371	.744	1.315
October	.006	.183	.057	R .246	(s)	.008	.001	.008	.254	.350	.758	R 1.363
November	.009	R .256	.061	R .326	(s)	.007	.001	.008	R .335	.325	.743	R 1.402
December	.014	R .397	R .083	R .494	(s)	R .008	.001	R .009	R .503	R .342	R .784	R 1.629
Total	.098	R 3.220	R .756	R 4.074	.001	R .089	.009	R .099	R 4.173	R 4.174	R 9.224	R 17.572
2004 January	.013	F .517	.068	.598	(s)	F .007	.001	.008	.606	F .344	.762	1.712

<sup>a</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>b</sup> Conventional hydroelectric power.

<sup>c</sup> Geothermal heat pump and direct use energy.

<sup>d</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>e</sup> See Note 12 at end of section.

R=Revised, NA=Not available, 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.

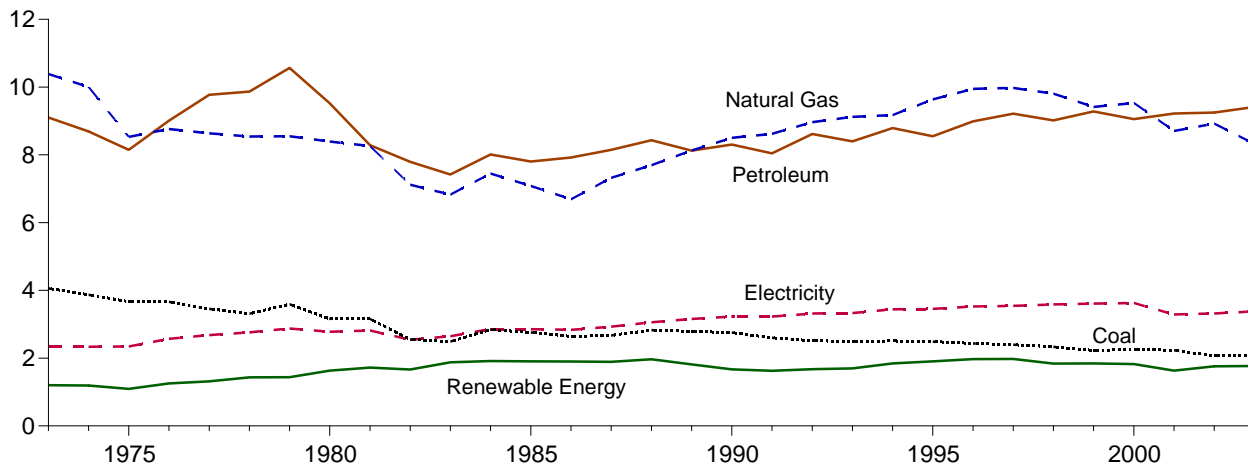
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.

Additional Notes and Sources: See end of section.

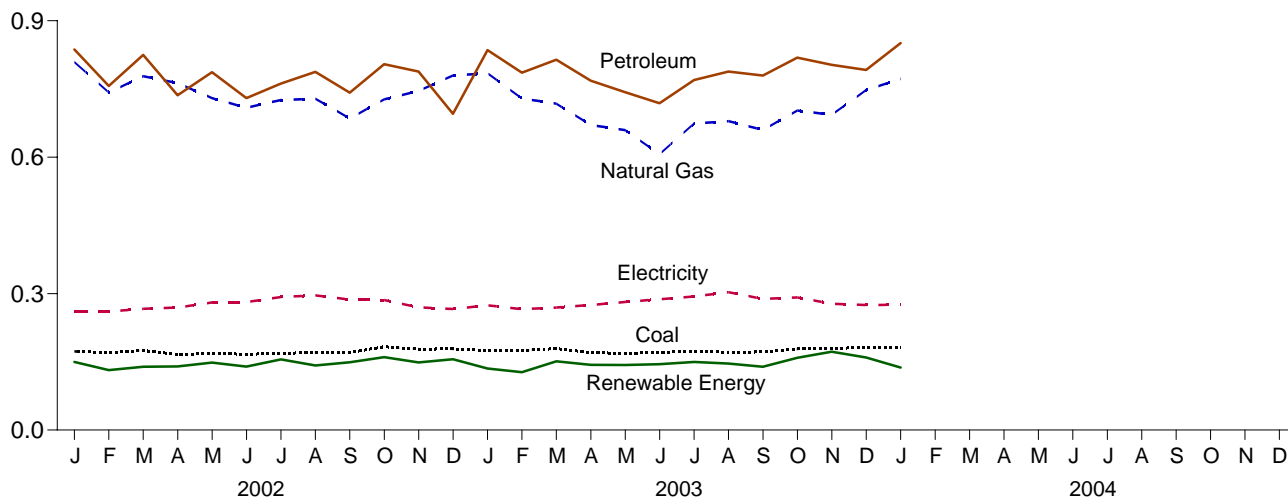


**Figure 2.4 Industrial Sector Energy Consumption**  
(Quadrillion Btu)

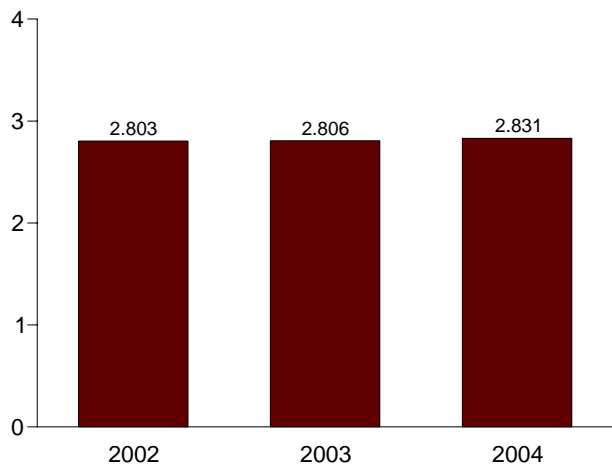
By Major Sources, 1973-2003



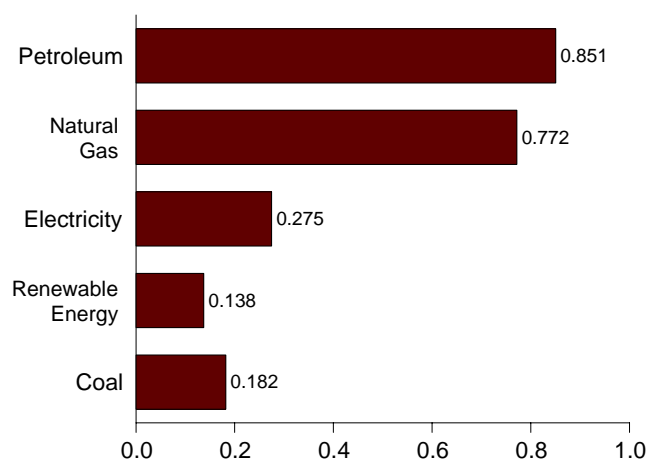
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



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.

**Table 2.4 Industrial Sector Energy Consumption**  
(Quadrillion Btu)

	Primary Consumption								Total Primary	Electricity Retail Sales <sup>g</sup>	Electrical System Energy Losses <sup>h</sup>	Total <sup>b</sup>
	Fossil Fuels				Renewable Energy							
	Coal	Natural Gas <sup>a</sup>	Petroleum	Total <sup>b</sup>	Hydro-power <sup>c</sup>	Wood <sup>d</sup> and Waste <sup>e</sup>	Geo-thermal <sup>f</sup>	Total				
1973 Total	4.057	10.388	9.104	23.541	0.035	1.165	NA	1.200	24.741	2.341	5.571	32.653
1974 Total	3.870	10.004	8.694	22.624	.033	1.159	NA	1.192	23.816	2.337	5.666	31.819
1975 Total	3.667	8.532	8.146	20.359	.032	1.063	NA	1.096	21.454	2.346	5.647	29.447
1976 Total	3.661	8.762	9.010	21.432	.033	1.220	NA	1.253	22.685	2.573	6.171	31.429
1977 Total	3.454	8.635	9.774	21.879	.033	1.281	NA	1.314	23.193	2.682	6.432	32.307
1978 Total	3.314	8.539	9.867	21.845	.032	1.400	NA	1.432	23.277	2.761	6.696	32.733
1979 Total	3.593	8.549	10.568	22.773	.034	1.405	NA	1.439	24.211	2.873	6.878	33.962
1980 Total	3.155	8.395	9.525	21.040	.033	1.600	NA	1.633	22.673	2.781	6.698	32.152
1981 Total	3.157	8.257	8.285	19.682	.033	1.689	NA	1.722	21.404	2.817	6.615	30.836
1982 Total	2.552	7.121	7.794	17.446	.033	1.634	NA	1.667	19.112	2.542	6.050	27.704
1983 Total	2.490	6.826	7.420	16.720	.033	1.845	NA	1.879	18.598	2.648	6.265	27.511
1984 Total	2.842	7.448	8.014	18.292	.033	1.883	NA	1.916	20.208	2.859	6.576	29.643
1985 Total	2.760	7.080	7.805	17.632	.033	1.875	NA	1.908	19.540	2.855	6.563	28.958
1986 Total	2.641	6.690	7.920	17.234	.033	1.866	NA	1.899	19.133	2.834	6.408	28.375
1987 Total	2.673	7.323	8.151	18.155	.033	1.858	NA	1.891	20.046	2.928	6.545	29.519
1988 Total	2.828	7.696	8.430	18.993	.033	1.933	NA	1.965	20.958	3.059	6.801	30.818
1989 Total	2.787	8.131	8.126	19.074	.028	1.784	.002	1.814	20.888	3.158	7.349	31.396
1990 Total	2.756	8.502	8.305	19.568	.031	1.634	.002	1.667	21.235	3.226	7.457	31.918
1991 Total	2.601	8.619	8.047	19.277	.030	1.595	.002	1.626	20.903	3.230	7.394	31.527
1992 Total	2.515	8.967	8.616	20.133	.031	1.640	.002	1.672	21.806	3.319	7.548	32.673
1993 Total	2.496	9.120	8.398	20.042	.030	1.666	.002	1.697	21.739	3.334	7.596	32.669
1994 Total	2.510	9.172	8.792	20.532	.062	1.779	.003	1.844	22.376	3.439	7.742	33.557
1995 Total	2.488	9.637	8.552	20.738	.055	1.847	.003	1.905	22.643	3.455	7.842	33.941
1996 Total	2.434	9.947	8.989	21.393	.061	1.907	.003	1.971	23.364	3.527	8.014	34.905
1997 Total	2.395	9.976	9.214	21.632	.058	1.915	.003	1.976	23.608	3.542	8.017	35.167
1998 Total	2.335	9.806	9.017	21.226	.055	1.784	.003	1.841	23.067	3.587	8.124	34.777
1999 Total	2.227	9.415	9.284	20.983	.049	1.791	.004	1.843	22.826	3.611	8.242	34.679
2000 Total	2.256	9.535	9.055	20.912	.042	1.781	.004	1.828	22.740	3.631	8.245	34.616
2001 Total	2.230	8.708	9.220	20.187	.032	1.593	.005	1.630	21.817	3.290	7.385	32.492
2002 January	.173	.809	.837	1.819	.003	.146	(s)	.150	1.968	.261	.573	2.803
February	.171	.742	.757	1.672	.003	.129	(s)	.132	1.804	.261	.549	2.614
March	.175	.778	.825	1.786	.003	.136	(s)	.139	1.925	.267	.610	2.801
April	.166	.763	.736	1.664	.003	.136	(s)	.140	1.804	.269	.611	2.684
May	.168	.730	.787	1.689	.003	.145	(s)	.148	1.838	.281	.657	2.776
June	.167	.709	.730	1.608	.003	.136	(s)	.139	1.747	.281	.661	2.689
July	.168	.726	.762	1.665	.003	.152	(s)	.155	1.820	.292	.680	2.793
August	.171	.728	.788	1.694	.003	.139	(s)	.142	1.836	.296	.665	2.797
September	.170	.685	.742	1.606	.002	.146	(s)	.149	1.755	.287	.611	2.653
October	.183	.727	.805	1.721	.003	.157	(s)	.160	1.881	.286	.622	2.789
November	.178	.746	.788	1.722	.005	.144	(s)	.149	1.871	.270	.622	2.763
December	.178	.780	.695	1.656	.005	.150	(s)	.156	1.812	.266	.623	2.701
Total	2.068	8.923	9.250	20.302	.039	1.716	.005	1.759	22.061	3.317	7.483	32.861
2003 January	.175	R .785	.835	R 1.796	.004	.131	(s)	.135	R 1.931	.274	.600	R 2.806
February	.175	.729	.786	1.703	.004	.123	(s)	.127	1.831	.266	.546	2.642
March	.179	R .717	.814	R 1.714	.005	.145	(s)	.151	R 1.865	.269	.599	2.734
April	.170	.671	.768	R 1.613	.004	.139	(s)	.143	1.757	.275	.610	2.642
May	.168	.660	.743	1.572	.005	.137	(s)	.143	1.715	.281	.655	2.652
June	.171	.607	.719	1.500	.005	.139	(s)	.145	1.645	.288	.657	2.589
July	.173	R .674	.770	R 1.622	.005	.144	(s)	.150	1.772	.294	.663	2.729
August	.171	R .679	.788	R 1.640	.005	.141	(s)	.146	R 1.786	.303	.674	R 2.763
September	.172	R .660	.779	R 1.615	.004	.134	(s)	.139	R 1.754	.288	.578	R 2.620
October	.178	R .702	.819	R 1.703	.004	.154	(s)	.159	R 1.862	.292	.632	R 2.786
November	.179	R .693	.803	R 1.679	.004	.167	(s)	.172	R 1.851	.278	.635	R 2.764
December	.182	R .747	R .792	R 1.727	.006	R .153	(s)	R .160	R 1.887	R .275	R .630	R 2.792
Total	2.094	R 8.324	R 9.417	R 19.885	.057	R 1.709	.005	R 1.771	R 21.655	R 3.383	R 7.475	R 32.513
2004 January	.182	F .772	.851	1.809	.005	.132	(s)	.138	1.947	F .275	.609	2.831

<sup>a</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>b</sup> Includes coal coke net imports, which are not separately displayed. See Table 1.4.

<sup>c</sup> Conventional hydroelectric power.

<sup>d</sup> Wood, black liquor, and other wood waste.

<sup>e</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>f</sup> Geothermal heat pump and direct use energy.

<sup>g</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>h</sup> See Note 12 at end of section.

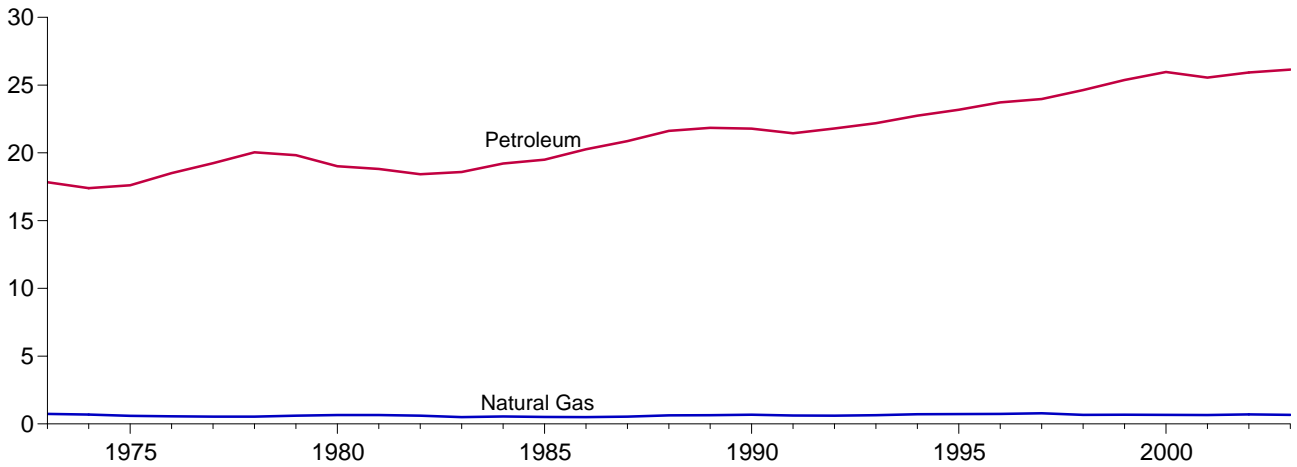
R=Revised. NA=Not available. F=Forecast. (s)=Less than 0.5 trillion Btu. Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

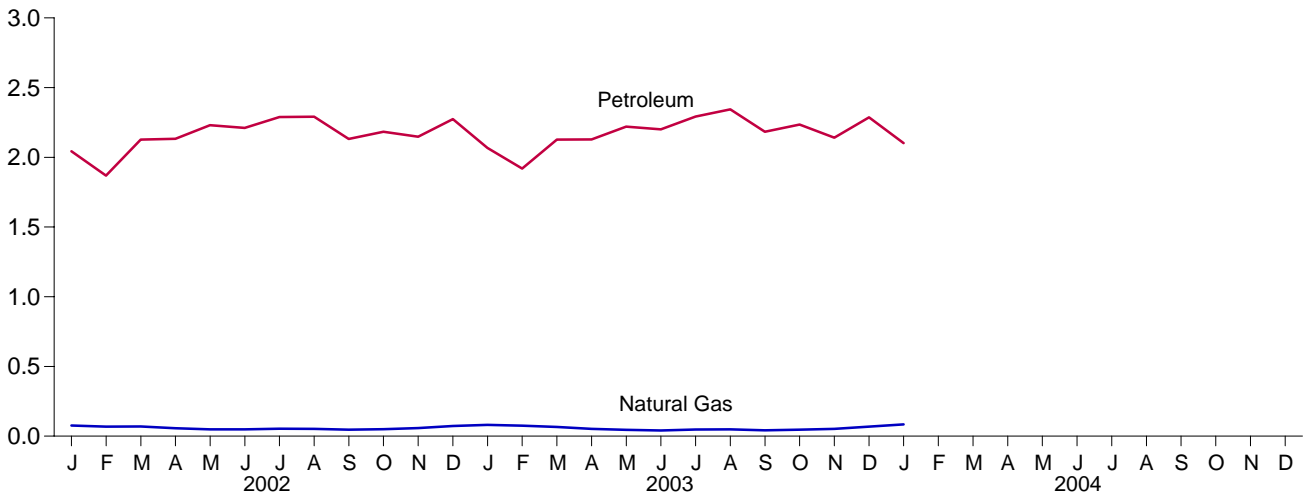
Additional Notes and Sources: See end of section.

**Figure 2.5 Transportation Sector Energy Consumption**  
(Quadrillion Btu)

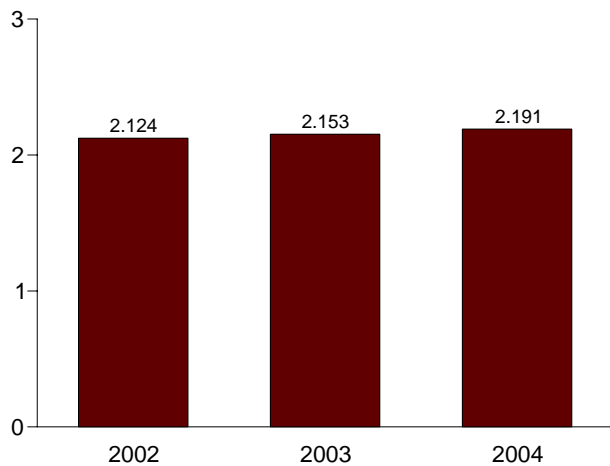
By Major Sources, 1973-2003



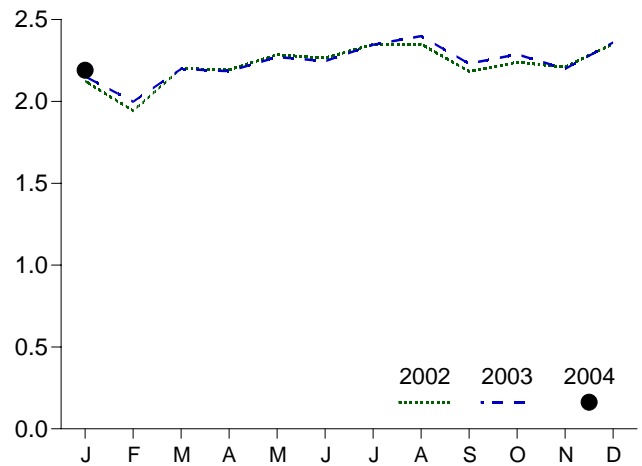
By Major Sources, Monthly



Total, January



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 Retail Sales <sup>c</sup>	Electrical System Energy Losses <sup>d</sup>	Total <sup>b</sup>
	Fossil Fuels				Renewable Energy	Total Primary <sup>b</sup>			
	Coal	Natural Gas <sup>a</sup>	Petroleum	Total	Alcohol Fuels <sup>d</sup>				
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	.024	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 .....	(e)	.539	20.041	20.580	NA	20.580	.010	.024	20.615
1979 Total .....	(e)	.612	19.825	20.436	NA	20.436	.010	.024	20.471
1980 Total .....	(e)	.650	19.008	19.658	NA	19.658	.011	.027	19.696
1981 Total .....	(e)	.658	18.811	19.469	.007	19.469	.011	.026	19.506
1982 Total .....	(e)	.612	18.420	19.032	.019	19.032	.011	.026	19.069
1983 Total .....	(e)	.505	18.593	19.098	.035	19.098	.013	.030	19.141
1984 Total .....	(e)	.545	19.216	19.761	.043	19.761	.014	.033	19.808
1985 Total .....	(e)	.519	19.504	20.023	.052	20.023	.014	.033	20.070
1986 Total .....	(e)	.499	20.269	20.768	.060	20.768	.015	.034	20.817
1987 Total .....	(e)	.535	20.870	21.405	.069	21.405	.016	.035	21.455
1988 Total .....	(e)	.632	21.629	22.261	.070	22.261	.016	.035	22.312
1989 Total .....	(e)	.649	21.848	22.497	.071	22.497	.016	.038	22.551
1990 Total .....	(e)	.680	21.792	22.472	.063	22.472	.016	.037	22.526
1991 Total .....	(e)	.620	21.448	22.069	.073	22.069	.016	.037	22.122
1992 Total .....	(e)	.608	21.798	22.406	.083	22.406	.016	.037	22.459
1993 Total .....	(e)	.645	22.185	22.830	.097	22.830	.016	.037	22.883
1994 Total .....	(e)	.709	22.739	23.448	.109	23.448	.017	.038	23.503
1995 Total .....	(e)	.724	23.181	23.905	.117	23.905	.017	.039	23.960
1996 Total .....	(e)	.737	23.719	24.456	.084	24.456	.017	.038	24.511
1997 Total .....	(e)	.780	23.973	24.753	.106	24.753	.017	.038	24.808
1998 Total .....	(e)	.666	24.635	25.301	.117	25.301	.017	.038	25.357
1999 Total .....	(e)	.675	25.375	26.050	.122	26.050	.017	.040	26.108
2000 Total .....	(e)	.672	25.973	26.645	.139	26.645	.018	.042	26.705
2001 Total .....	(e)	.658	25.556	26.214	.147	26.214	.019	.042	26.275
2002 January .....	(e)	.076	2.043	2.120	.013	2.120	.001	.003	2.124
February .....	(e)	.069	1.869	1.938	.012	1.938	.001	.003	1.942
March .....	(e)	.069	2.127	2.196	.012	2.196	.001	.003	2.200
April .....	(e)	.057	2.132	2.190	.012	2.190	.001	.003	2.194
May .....	(e)	.049	2.231	2.280	.014	2.280	.001	.003	2.284
June .....	(e)	.048	2.212	2.260	.012	2.260	.002	.004	2.265
July .....	(e)	.053	2.289	2.342	.015	2.342	.002	.004	2.348
August .....	(e)	.052	2.292	2.344	.014	2.344	.002	.004	2.350
September .....	(e)	.047	2.132	2.179	.015	2.179	.002	.004	2.184
October .....	(e)	.050	2.184	2.234	.017	2.234	.002	.003	2.239
November .....	(e)	.058	2.148	2.206	.020	2.206	.001	.003	2.210
December .....	(e)	.073	2.274	2.347	.019	2.347	.001	.003	2.352
Total .....	(e)	.702	25.933	26.634	.174	26.634	.018	.040	26.692
2003 January .....	(e)	.081	2.067	2.148	.017	2.148	.001	.003	2.153
February .....	(e)	.075	1.919	1.994	.020	1.994	.001	.003	1.998
March .....	(e)	.066	2.128	2.194	.017	2.194	.001	.003	2.198
April .....	(e)	.052	2.128	2.180	.020	2.180	.001	.003	2.184
May .....	(e)	.046	2.221	2.266	.019	2.266	.001	.003	2.271
June .....	(e)	.041	2.200	2.241	.019	2.241	.002	.004	2.246
July .....	(e)	.048	2.293	2.341	.020	2.341	.002	.004	2.346
August .....	(e)	.049	2.344	2.393	.021	2.393	.002	.004	2.398
September .....	(e)	.042	2.183	2.226	.018	2.226	.002	.003	2.231
October .....	(e)	.047	2.235	2.282	.021	2.282	.002	.003	2.287
November .....	(e)	.053	2.141	2.194	.024	2.194	.001	.003	2.199
December .....	(e)	R .068	R 2.286	R 2.355	.025	R 2.355	R .002	.003	R 2.360
Total .....	(e)	R .669	R 26.146	R 26.815	.239	R 26.815	.018	.040	R 26.872
2004 January .....	(e)	E .084	2.102	2.186	.024	2.186	F .001	.003	2.191

<sup>a</sup> Natural gas consumed in the operation of pipelines (primarily in compressors) and small amounts consumed as vehicle fuel. See Table 4.4.

<sup>b</sup> 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.

<sup>c</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>d</sup> See Note 12 at end of Section.

<sup>e</sup> Since 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

R=Revised. E=Estimate. NA=Not available. F=Forecast. (s)=Less than 0.5 trillion Btu.

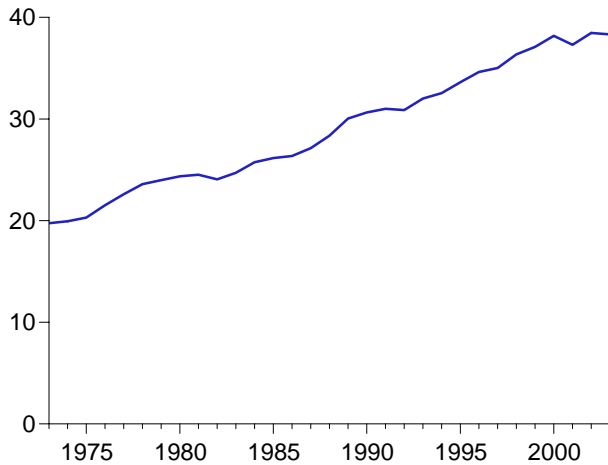
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

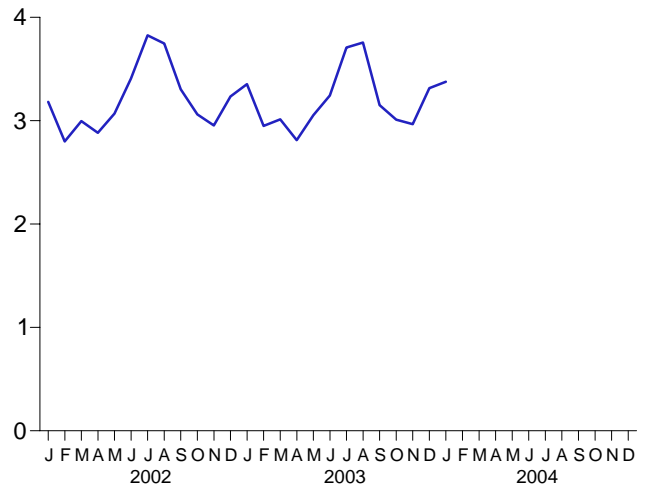
Additional Notes and Sources: See end of section.

**Figure 2.6 Electric Power Sector Energy Consumption**  
(Quadrillion Btu)

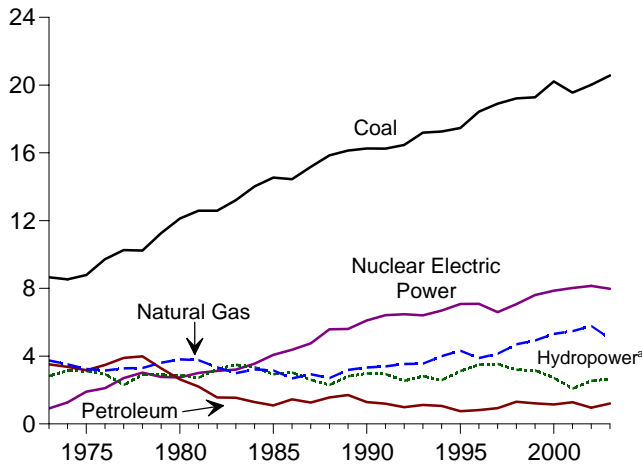
Total, 1973-2003



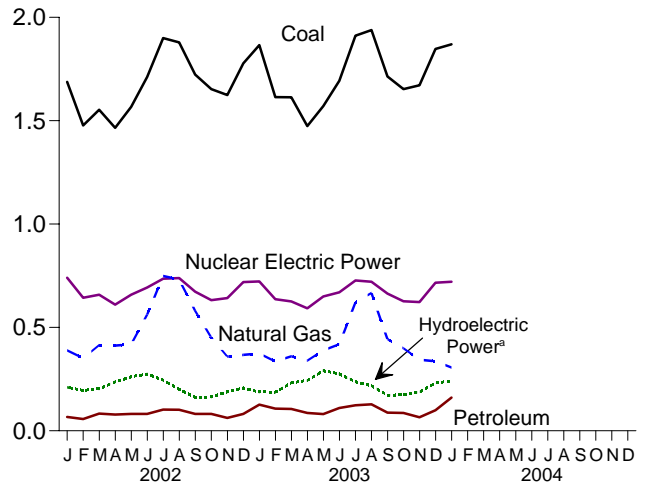
Total, Monthly



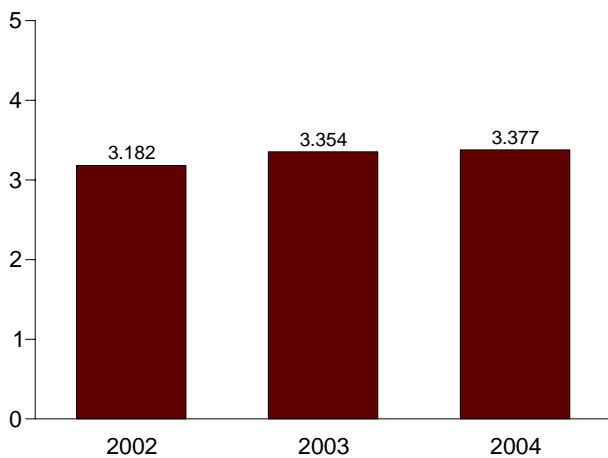
By Major Sources, 1973-2003



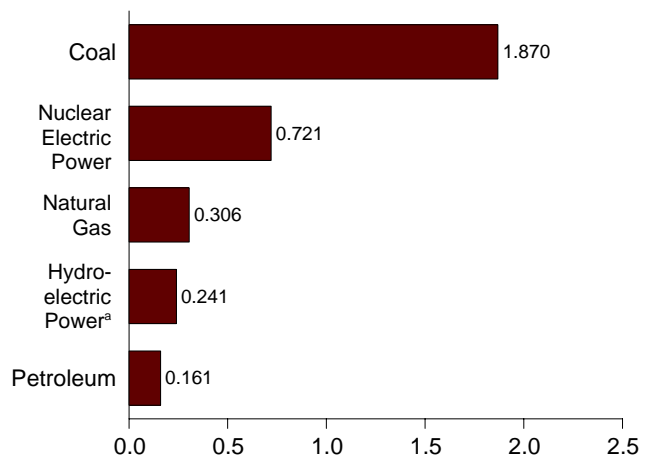
By Major Sources, Monthly



Total, January



By Major Sources, January 2004



<sup>a</sup>Conventional and pumped storage hydroelectric power.  
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)* is 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:** Consumption in the five energy-use sectors (residential, commercial, industrial, transportation, and electric power) consists of fossil fuels (coal, natural gas, and petroleum), some secondary energy derived from fossil fuels (supplemental gaseous fuels and coal coke net imports), nuclear electric power, pumped-storage hydroelectric power, renewable energy, and net imports of electricity. Renewable energy consumption is the end-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, solar thermal direct use and photovoltaic energy and net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind.

**Total Consumption:** In addition to primary consumption in the four end-use sectors (residential, commercial, industrial, and transportation), total consumption also includes retail sales of electricity and electrical system energy losses (see Note 12).

**Note 2. Energy-Use Sectors:** The five major economic sectors—residential, commercial, industrial, transportation, and electric power—are called energy-use sectors in this report. The first four sectors comprise the end-use sectors, that is, the point of final consumption of the energy. Energy

consumption is assigned to the five energy-use sectors, as closely as possible, by the following definitions:

**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. For further explanation see:

<http://www.eia.doe.gov/neic/datadefinitions/Guideforwebres.htm>.

**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. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

**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 (NAICS (North American Industry Classification System) codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); natural gas distribution (NAICS code 2212); and construction (NAICS code 23). 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. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities.

**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. *Note:* Various EIA programs differ in sectoral coverage. For further information see:

<http://www.eia.doe.gov/neic/datadefinitions/Guideforwebtrans.htm>.

**Electric Power Sector**—An energy-consuming sector that consists of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or

electricity and heat, to the public—i.e., North American Industry Classification System 22 plants.

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 power facilities 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, fishing, and hunting 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 5. Coal Coke Net Imports:** Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports. 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: EIA, *Quarterly Coal Report*.

**Note 6. Natural Gas:** See Tables 4.4 and A4. 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. For 1973-1979, annual values for residential and commercial natural gas consumption are allocated to the months in proportion to the monthly sales data 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.

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."

1981-2002: EIA, *Petroleum Supply Annual*.

2003 forward: EIA, *Petroleum Supply Monthly*.

Energy-use allocation procedures by individual product are as follows:

**Aviation Gasoline**—All consumption of aviation gasoline is assigned to the transportation sector.

**Asphalt**—All consumption of asphalt is assigned to the industrial sector.

**Distillate Fuel**—Distillate fuel consumption is assigned to the sectors as follows:

**Distillate Fuel Consumed by the Electric Power Sector, 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 by the electric power sector. See Table 7.3e.

**Distillate Fuel Consumed by End-Use Sectors, Annually Through 2000**—The aggregate end-use amount is total distillate fuel supplied minus the amount consumed for electric power. The end-use total consumed annually is allocated into the individual end-use sectors (residential, commercial, industrial, and transportation) in proportion to each sector's share of "adjusted sales" as reported in EIA's *Fuel Oil and Kerosene Sales (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 to equal EIA distillate fuel product supplied.

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 Consumed by End-Use Sectors, Monthly Through 2000**—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 forward, 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 calculated as the difference between the sum of the estimates for residential, commercial, transportation, and electric power sectors and total distillate fuel consumption.

**Distillate Fuel Consumed by End-Use Sectors, 2001 Forward**—Each month's end-use consumption total is disaggregated into the individual sectors in proportion to the share that each sector held of the total in the same month in 2000. Annual values are the sum of the monthly values.

**Jet Fuel**—Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric power sector. Kerosene-type jet fuel deliveries to the electric power sector 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 product supplied is allocated into the individual end-use sectors (residential, commercial, and industrial) in proportion to each sector's share of "sales" as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172.

Since 1979, the residential sector sales total is directly from the *Sales* reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the commercial sector sales total is directly from the *Sales* reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the industrial sector sales total is the sum of the adjusted sales for industrial, farm, and all other uses. 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 20 percent (in 2001) 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 consumption is assigned to the sectors as follows:

**Residual Fuel Consumed by the Electric Power Sector, 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 by the electric power sector. Source: Table 7.3e

**Residual Fuel Consumed by End-Use Sectors, Annually Through 2000**—The aggregate end-use amount is total residual fuel supplied minus the amount consumed for electric power. The end-use total consumed annually is allocated into the individual end-use sectors (commercial, industrial, and transportation) in proportion to each sector's share of "adjusted sales" as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172). "Adjusted sales" are sales that have been adjusted to equal EIA residual fuel product supplied.

Following are notes on the individual sector groupings:

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 Consumed by End-Use Sectors, Monthly Through 2000**—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 calculated as the difference between the sum of the estimates for commercial, transportation, and electric power sectors and total residual fuel consumption.

**Residual Fuel Consumption by End-Use Sectors, 2001 Forward**—Each month's end-use consumption total is disaggregated into the individual sectors in proportion to the share that each sector held of the total in the same month in 2000. Annual values are the sum of the monthly values.

**Road Oil**—All consumption of road oil 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. Nuclear electric power is included in the electric power sector.

**Note 9. Hydroelectric Pumped Storage:** See Tables 7.2a and A6. Pumped-storage hydroelectric power is included in the electric power sector.

**Note 10. Renewable Energy:** See Tables 10.2a-10.2c. 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: net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind.

**Note 11. Electricity:** End-use consumption of electricity is based on retail sales of electricity in Table 7.5. "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 the retail sales of electricity-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 imports<sup>1</sup> averaged 12.8 million barrels per day in March 2004, 4 percent higher than the previous month's rate and 8 percent higher than the March 2003 rate.

In March 2004, 19.8 million barrels per day of petroleum products were supplied for domestic use, slightly higher than the March 2003 rate. Motor gasoline accounted for 45 percent of the total; distillate fuel oil, 20 percent; and kerosene-type jet fuel, 8 percent.

Motor gasoline product supplied during March 2004 averaged 9.0 million barrels per day, 2 percent higher than the previous month's rate and 4 percent higher than the March 2003 rate. Total motor gasoline stocks were 200 million barrels at the end of March 2004, 3 million barrels below the stock level in the previous month and the same as the level 1 year earlier.

Distillate fuel oil product supplied during March 2004 averaged 4.0 million barrels per day, 7 percent lower than the previous month's rate and slightly lower than the March 2003 rate. Distillate fuel oil ending stocks for March 2004 were 106 million barrels, 5 million barrels below the stock level in the previous month but 7 million barrels above the level 1 year earlier.

Kerosene-type jet fuel product supplied in March 2004 averaged 1.5 million barrels per day, 7 percent lower than the previous month's rate and 1 percent less than the March 2003 rate. Kerosene-type jet fuel stocks measured 35 million barrels at the end of March 2004, 1 million barrels below the stock level in the previous month and 2 million barrels below the stock level 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 December 2003.

<sup>1</sup>Total 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 <sup>a</sup>		Petroleum Products Supplied	Stocks <sup>b</sup>
	Total Domestic <sup>c</sup>	Crude Oil	Natural Gas Plant Liquids	Crude Oil <sup>d</sup>	Petroleum Products		Crude Oil <sup>d</sup> and Petroleum Products
	Thousand Barrels per Day						Million Barrels
<b>1973 Average</b> .....	10,975	9,208	1,738	-11	146	17,308	1,008
<b>1974 Average</b> .....	10,498	8,774	1,688	62	117	16,653	<sup>e</sup> 1,074
<b>1975 Average</b> .....	10,045	8,375	1,633	<sup>e</sup> 17	<sup>e</sup> 15	16,322	1,133
<b>1976 Average</b> .....	9,774	8,132	<sup>f</sup> 1,604	39	-96	17,461	1,112
<b>1977 Average</b> .....	9,913	8,245	1,618	170	378	18,431	1,312
<b>1978 Average</b> .....	10,328	8,707	1,567	78	-172	18,847	1,278
<b>1979 Average</b> .....	10,179	8,552	1,584	148	25	18,513	1,341
<b>1980 Average</b> .....	10,214	8,597	1,573	98	42	17,056	<sup>e</sup> 1,392
<b>1981 Average</b> .....	10,230	8,572	1,609	<sup>e</sup> 290	<sup>e</sup> -130	16,058	1,484
<b>1982 Average</b> .....	10,252	8,649	1,550	136	-283	15,296	<sup>e</sup> 1,430
<b>1983 Average</b> .....	10,299	8,688	1,559	<sup>e</sup> 214	<sup>e</sup> -234	15,231	1,454
<b>1984 Average</b> .....	10,554	8,879	1,630	199	81	15,726	1,556
<b>1985 Average</b> .....	10,636	8,971	1,609	50	-153	15,726	1,519
<b>1986 Average</b> .....	10,289	8,680	1,551	78	124	16,281	1,593
<b>1987 Average</b> .....	10,008	8,349	1,595	128	-87	16,665	1,607
<b>1988 Average</b> .....	9,818	8,140	1,625	1	-29	17,283	1,597
<b>1989 Average</b> .....	9,219	7,613	1,546	86	-129	17,325	1,581
<b>1990 Average</b> .....	8,994	7,355	1,559	-35	142	16,988	1,621
<b>1991 Average</b> .....	9,168	7,417	1,659	-42	32	16,714	1,617
<b>1992 Average</b> .....	8,996	7,171	1,697	-1	-68	17,033	<sup>e</sup> 1,592
<b>1993 Average</b> .....	<sup>g</sup> 8,836	6,847	1,736	81	<sup>e</sup> 70	17,237	<sup>e</sup> 1,647
<b>1994 Average</b> .....	8,645	6,662	1,727	18	-2	17,718	1,653
<b>1995 Average</b> .....	8,626	6,560	1,762	-93	-153	17,725	1,563
<b>1996 Average</b> .....	8,607	6,465	1,830	-124	-28	18,309	1,507
<b>1997 Average</b> .....	8,611	6,452	1,817	51	93	18,620	1,560
<b>1998 Average</b> .....	8,392	6,252	1,759	74	165	18,917	1,647
<b>1999 Average</b> .....	8,107	5,881	1,850	-118	-304	19,519	1,493
<b>2000 Average</b> .....	8,110	5,822	1,911	-70	(s)	19,701	1,468
<b>2001 Average</b> .....	8,054	5,801	1,868	99	227	19,649	1,586
<b>2002</b> January .....	8,068	5,848	1,827	409	-270	19,454	1,591
February .....	8,126	5,871	1,900	443	-951	19,444	1,576
March .....	8,139	5,883	1,901	248	-364	19,676	1,573
April .....	8,215	5,859	1,925	-120	641	19,552	1,588
May .....	8,317	5,924	1,936	222	504	19,728	1,611
June .....	8,206	5,915	1,870	-143	316	19,875	1,616
July .....	8,022	5,770	1,846	-362	190	20,076	1,611
August .....	8,205	5,811	1,937	-139	-328	20,221	1,596
September .....	7,748	5,411	1,898	-687	-56	19,461	1,574
October .....	7,645	5,363	1,875	749	-782	19,678	1,573
November .....	7,949	5,597	1,891	96	85	19,991	1,578
December .....	7,887	5,699	1,760	-234	-751	19,943	1,548
<b>Average</b> .....	<b>8,043</b>	<b>5,746</b>	<b>1,880</b>	<b>40</b>	<b>-145</b>	<b>19,761</b>	<b>1,548</b>
<b>2003</b> January .....	<sup>E</sup> 8,030	<sup>E</sup> 5,842	1,756	-148	-1,348	20,042	1,504
February .....	<sup>E</sup> 8,144	<sup>E</sup> 5,915	1,811	-91	-1,501	20,396	1,460
March .....	<sup>E</sup> 8,037	<sup>E</sup> 5,890	1,730	325	99	19,682	1,473
April .....	<sup>E</sup> 7,900	<sup>E</sup> 5,813	1,704	333	420	19,770	1,495
May .....	<sup>E</sup> 7,795	<sup>E</sup> 5,783	1,531	-97	1,228	19,277	1,530
June .....	<sup>E</sup> 7,724	<sup>E</sup> 5,746	1,577	166	771	19,767	1,558
July .....	<sup>E</sup> 7,749	<sup>E</sup> 5,662	1,650	127	146	20,175	1,567
August .....	<sup>E</sup> 7,735	<sup>E</sup> 5,642	1,709	11	45	20,665	1,569
September .....	<sup>E</sup> 7,931	<sup>E</sup> 5,657	1,761	429	363	20,045	1,592
October .....	<sup>E</sup> 7,862	<sup>E</sup> 5,642	1,820	509	-135	20,049	1,604
November .....	<sup>E</sup> 7,853	<sup>E</sup> 5,637	1,841	-356	167	19,952	1,598
December .....	<sup>E</sup> 7,768	<sup>E</sup> 5,629	1,724	-245	-766	20,716	1,567
<b>Average</b> .....	<sup>E</sup> <b>7,875</b>	<sup>E</sup> <b>5,737</b>	<b>1,717</b>	<b>81</b>	<b>-36</b>	<b>20,044</b>	<b>1,567</b>
<b>2004</b> January .....	<sup>RE</sup> 7,853	<sup>RE</sup> 5,644	<sup>R</sup> 1,803	<sup>R</sup> 199	<sup>R</sup> -692	<sup>R</sup> 20,393	<sup>R</sup> 1,552
February .....	<sup>E</sup> 7,798	<sup>E</sup> 5,584	1,798	380	-549	20,549	1,547
March .....	<sup>E</sup> 7,801	<sup>PE</sup> 5,661	<sup>E</sup> 1,725	<sup>E</sup> 649	<sup>E</sup> -94	<sup>E</sup> 19,763	<sup>E</sup> 1,566
<b>3-Month Average</b> .....	<sup>E</sup> <b>7,818</b>	<sup>PE</sup> <b>5,630</b>	<sup>E</sup> <b>1,775</b>	<sup>E</sup> <b>410</b>	<sup>E</sup> <b>-443</b>	<sup>E</sup> <b>20,228</b>	<sup>E</sup> <b>1,566</b>
<b>2003 3-Month Average</b> .....	<sup>E</sup> <b>8,068</b>	<sup>E</sup> <b>5,881</b>	<b>1,764</b>	<b>33</b>	<b>-897</b>	<b>20,028</b>	<b>1,473</b>
<b>2002 3-Month Average</b> .....	<b>8,110</b>	<b>5,867</b>	<b>1,875</b>	<b>364</b>	<b>-514</b>	<b>19,527</b>	<b>1,573</b>

<sup>a</sup> 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.

<sup>b</sup> Stocks are at end of period. Distillate stocks in the "Northeast Heating Oil Reserve" are not included.

<sup>c</sup> Includes crude oil, natural gas plant liquids, and other liquids.

<sup>d</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>e</sup> See Note 4 at end of section.

<sup>f</sup> See Note 6 at end of section.

<sup>g</sup> 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*, April 2004, Table S1.

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

	Imports			Exports			Net Imports <sup>b</sup>
	Total	Crude Oil <sup>a</sup>	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	<sup>c</sup> 471	235	<sup>c</sup> 236	<sup>c</sup> 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 Average .....	11,871	9,328	2,543	971	20	951	10,900
<b>2002</b> January .....	11,088	8,709	2,380	861	11	850	10,228
February .....	10,904	8,753	2,151	1,175	4	1,170	9,729
March .....	11,198	8,799	2,399	853	8	845	10,345
April .....	11,765	9,301	2,464	890	8	882	10,876
May .....	11,769	9,323	2,446	910	7	903	10,859
June .....	11,753	9,324	2,429	880	5	874	10,873
July .....	11,624	9,184	2,440	839	33	806	10,785
August .....	11,890	9,544	2,346	1,138	9	1,129	10,752
September .....	11,075	8,797	2,278	1,015	7	1,008	10,059
October .....	11,893	9,532	2,361	962	4	958	10,931
November .....	12,268	9,654	2,613	1,026	10	1,016	11,242
December .....	11,100	8,741	2,359	1,272	2	1,270	9,828
<b>Average</b> .....	<b>11,530</b>	<b>9,140</b>	<b>2,390</b>	<b>984</b>	<b>9</b>	<b>975</b>	<b>10,546</b>
<b>2003</b> January .....	11,008	8,547	2,461	1,212	10	1,202	9,796
February .....	10,764	8,303	2,460	1,067	5	1,062	9,697
March .....	11,857	9,055	2,802	1,051	10	1,042	10,806
April .....	12,446	9,807	2,639	1,053	12	1,041	11,394
May .....	12,814	10,078	2,736	1,097	15	1,082	11,717
June .....	12,941	9,951	2,990	1,065	45	1,020	11,875
July .....	12,788	10,059	2,729	976	7	969	11,812
August .....	12,904	10,137	2,767	836	4	833	12,068
September .....	13,042	10,412	2,630	960	3	956	12,082
October .....	12,526	10,159	2,368	970	14	956	11,556
November .....	11,846	9,479	2,367	933	21	911	10,913
December .....	12,011	9,667	2,343	990	4	986	11,021
<b>Average</b> .....	<b>12,254</b>	<b>9,646</b>	<b>2,608</b>	<b>1,017</b>	<b>12</b>	<b>1,005</b>	<b>11,237</b>
<b>2004</b> January .....	<sup>R</sup> 11,727	<sup>R</sup> 9,322	<sup>R</sup> 2,405	<sup>R</sup> 748	<sup>R</sup> 6	<sup>R</sup> 742	<sup>R</sup> 10,979
February .....	12,329	9,258	3,071	1,046	8	1,038	11,283
March .....	<sup>E</sup> 12,791	<sup>E</sup> 9,854	<sup>E</sup> 2,937	<sup>E</sup> 984	<sup>E</sup> 10	<sup>E</sup> 974	<sup>E</sup> 11,807
<b>3-Month Average</b> .....	<sup>E</sup> <b>12,282</b>	<sup>E</sup> <b>9,483</b>	<sup>E</sup> <b>2,799</b>	<sup>E</sup> <b>923</b>	<sup>E</sup> <b>8</b>	<sup>E</sup> <b>915</b>	<sup>E</sup> <b>11,358</b>
<b>2003 3-Month Average</b> .....	<b>11,224</b>	<b>8,646</b>	<b>2,578</b>	<b>1,111</b>	<b>8</b>	<b>1,103</b>	<b>10,113</b>
<b>2002 3-Month Average</b> .....	<b>11,069</b>	<b>8,754</b>	<b>2,315</b>	<b>956</b>	<b>8</b>	<b>948</b>	<b>10,113</b>

<sup>a</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>b</sup> Net imports equals imports minus exports.

<sup>c</sup> 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

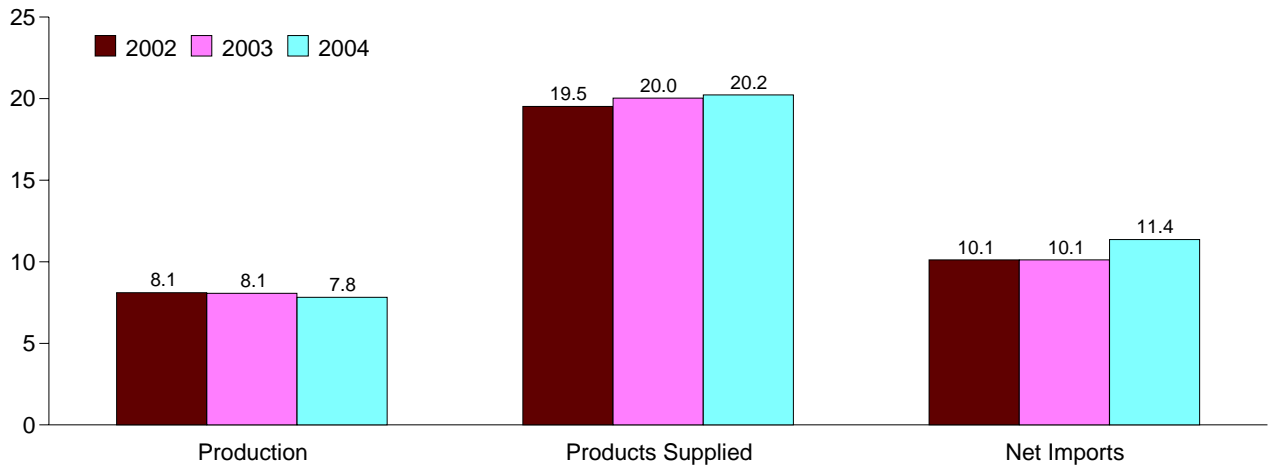
50 States and the District of Columbia.

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

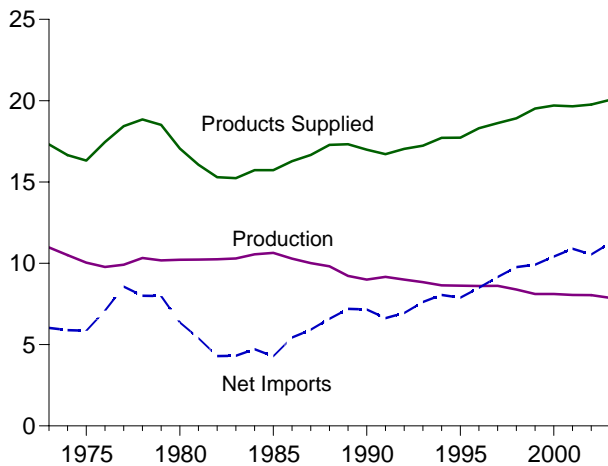
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S1. • 1992 forward: EIA, *Petroleum Supply Monthly*, April 2004, Table S1.

**Figure 3.1a Petroleum Overview and Production**  
(Million Barrels per Day)

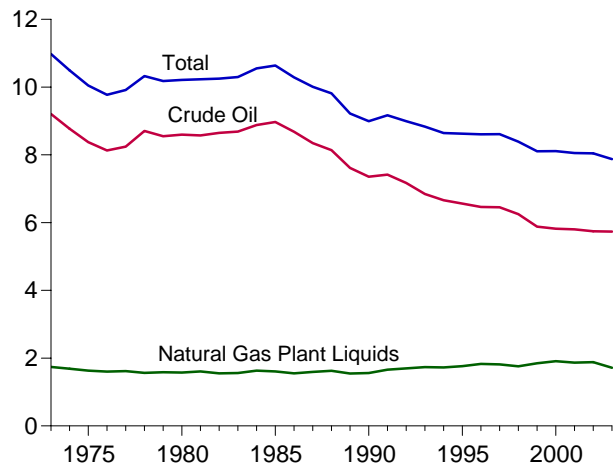
Overview, January-March



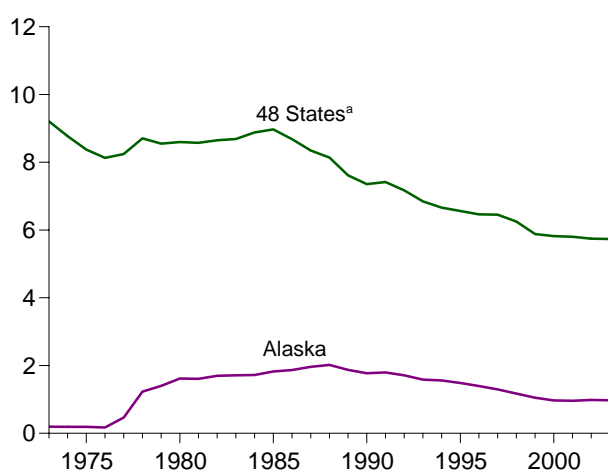
Overview, 1973-2003



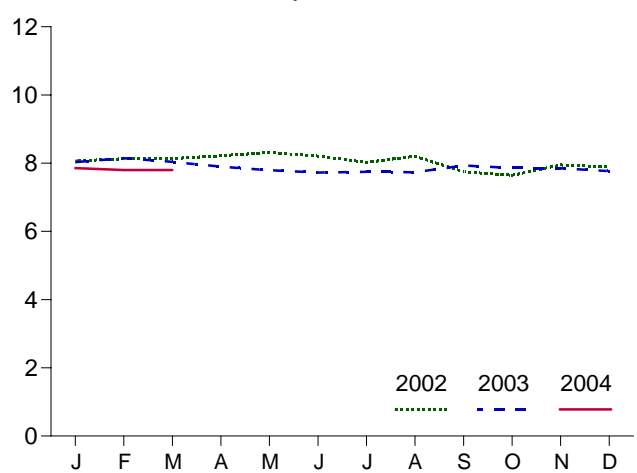
Production, 1973-2003



Crude Oil Production, 1973-2003



Total Production, Monthly

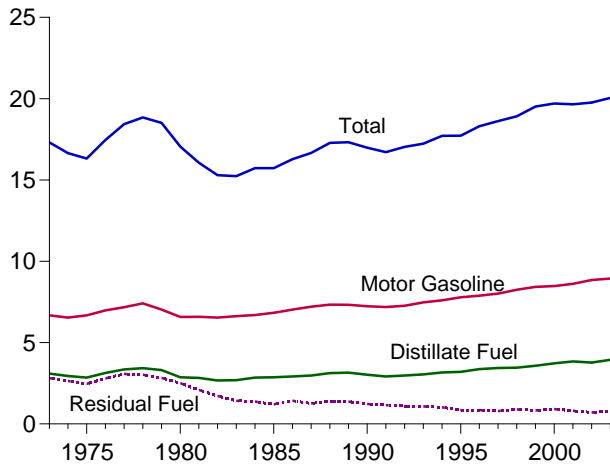


<sup>a</sup>United States excluding Alaska and Hawaii.  
Note: Because vertical scales differ, graphs should not be compared.

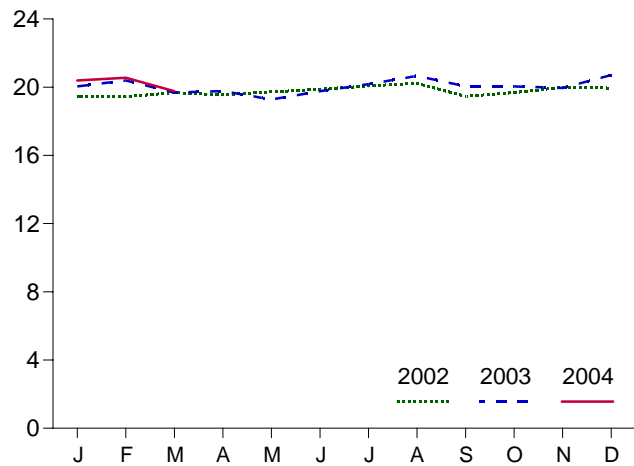
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.  
Sources: Tables 3.1a, 3.1b, and 3.2a.

**Figure 3.1b Petroleum Products Supplied, Imports, and Stocks**  
(Million Barrels per Day, Except as Noted)

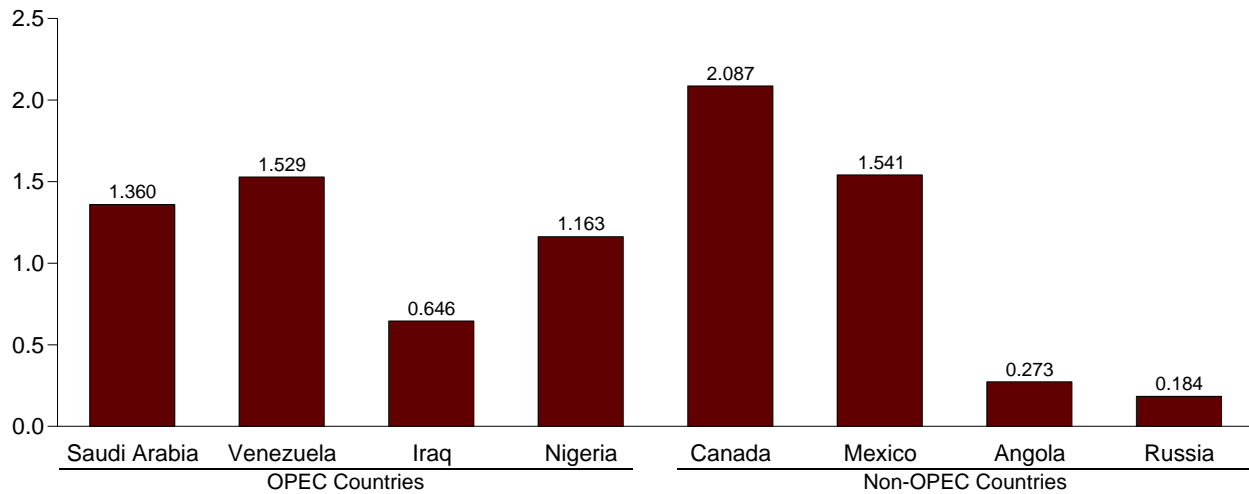
Products Supplied, 1973-2003



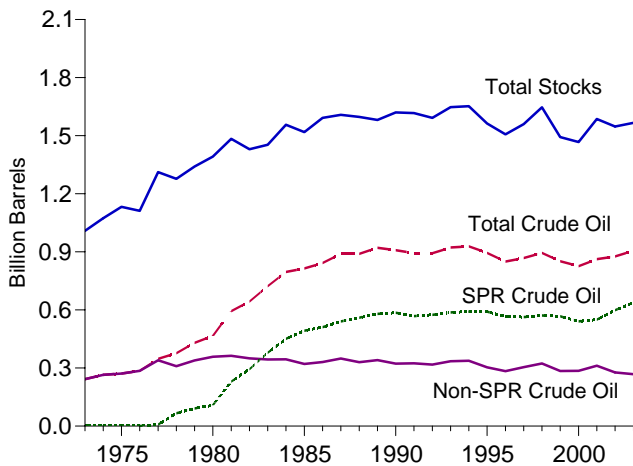
Products Supplied, Monthly



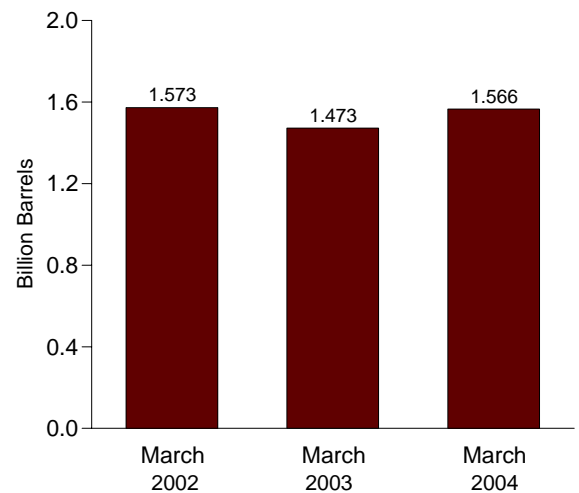
Imports from Selected Countries, February 2004



Stocks, End of Year, 1973-2003



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, 3.3g, 3.4, 3.5, and 3.6.



**Table 3.2a Crude Oil Supply and Disposition: Supply**

	Supply						
	Field Production		Imports			Unaccounted-for Crude Oil <sup>b</sup>	Crude Oil Used Directly <sup>c</sup>
	Total Domestic	Alaskan	Total	SPR <sup>a</sup>	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	<sup>d</sup> -19
1977 Average	8,245	464	6,615	21	6,594	-6	-14
1978 Average	8,707	1,229	6,356	<sup>d</sup> 161	6,195	-57	<sup>d</sup> -15
1979 Average	8,552	1,401	6,519	67	6,452	-11	<sup>d</sup> -14
1980 Average	8,597	1,617	5,263	44	5,219	34	<sup>d</sup> -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 Average	5,801	963	9,328	11	9,318	117	—
2002 January	5,848	1,036	8,709	33	8,675	351	—
February	5,871	1,031	8,753	59	8,694	129	—
March	5,883	1,036	8,799	0	8,799	99	—
April	5,859	1,009	9,301	0	9,301	53	—
May	5,924	1,002	9,323	16	9,307	283	—
June	5,915	1,019	9,324	17	9,307	21	—
July	5,770	931	9,184	0	9,184	146	—
August	5,811	965	9,544	0	9,544	-148	—
September	5,411	886	8,797	0	8,797	-27	—
October	5,363	983	9,532	0	9,532	161	—
November	5,597	908	9,654	34	9,620	10	—
December	5,699	1,010	8,741	34	8,707	228	—
Average	5,746	984	9,140	16	9,124	110	—
2003 January	<sup>E</sup> 5,842	<sup>E</sup> 984	8,547	0	8,547	-190	—
February	<sup>E</sup> 5,915	<sup>E</sup> 1,015	8,303	0	8,303	78	—
March	<sup>E</sup> 5,890	<sup>E</sup> 1,022	9,055	0	9,055	318	—
April	<sup>E</sup> 5,813	<sup>E</sup> 971	9,807	0	9,807	300	—
May	<sup>E</sup> 5,783	<sup>E</sup> 990	10,078	0	10,078	-25	—
June	<sup>E</sup> 5,746	<sup>E</sup> 991	9,951	0	9,951	133	—
July	<sup>E</sup> 5,662	<sup>E</sup> 927	10,059	0	10,059	-39	—
August	<sup>E</sup> 5,642	<sup>E</sup> 945	10,137	0	10,137	-79	—
September	<sup>E</sup> 5,657	<sup>E</sup> 964	10,412	0	10,412	-192	—
October	<sup>E</sup> 5,642	<sup>E</sup> 967	10,159	0	10,159	64	—
November	<sup>E</sup> 5,637	<sup>E</sup> 963	9,479	0	9,479	4	—
December	<sup>E</sup> 5,629	<sup>E</sup> 956	9,667	0	9,667	-194	—
Average	<sup>E</sup> 5,737	<sup>E</sup> 974	9,646	0	9,646	14	—
2004 January	<sup>RE</sup> 5,644	<sup>RE</sup> 976	<sup>R</sup> 9,322	0	<sup>R</sup> 9,322	<sup>R</sup> 55	—
February	<sup>E</sup> 5,584	<sup>E</sup> 933	9,258	0	9,258	256	—
March	<sup>PE</sup> 5,661	<sup>PE</sup> 987	<sup>E</sup> 9,854	<sup>E</sup> 0	<sup>E</sup> 9,854	<sup>E</sup> -212	—
3-Month Average	<sup>PE</sup> 5,630	<sup>PE</sup> 966	<sup>E</sup> 9,483	<sup>E</sup> 0	<sup>E</sup> 9,483	<sup>E</sup> 28	—
2003 3-Month Average	<sup>E</sup> 5,881	<sup>E</sup> 1,007	8,646	0	8,646	68	—
2002 3-Month Average	5,867	1,034	8,754	30	8,724	195	—

<sup>a</sup> Strategic Petroleum Reserve.  
<sup>b</sup> A balancing item.  
<sup>c</sup> Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.  
<sup>d</sup> 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*, April 2004, Table S2.

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

	Disposition						Stocks <sup>a</sup>		
	Crude Losses	Stock Change <sup>b</sup>		Refinery Inputs	Exports	Product Supplied <sup>d</sup>	Total	SPR <sup>c</sup>	Other Primary
		SPR <sup>c</sup>	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	<sup>e</sup> 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	<sup>e</sup> 14	45	52	13,481	287	-	<sup>f</sup> 466	108	<sup>f</sup> 358
1981 Average	5	336	<sup>f</sup> -46	12,470	228	-	594	230	363
1982 Average	3	174	-38	11,774	236	-	<sup>g</sup> 644	294	<sup>g</sup> 350
1983 Average	2	234	<sup>g</sup> -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 Average	0	26	73	15,128	20	0	862	550	312
<b>2002</b> January	0	141	268	14,487	11	0	875	555	320
February	0	191	252	14,306	4	0	887	560	327
March	0	50	198	14,526	8	0	895	561	334
April	0	175	-295	15,325	8	0	891	567	325
May	0	146	77	15,301	7	0	898	571	327
June	0	173	-316	15,397	5	0	894	576	318
July	0	67	-428	15,430	33	0	883	579	304
August	0	121	-260	15,338	9	0	878	582	296
September	0	166	-852	14,861	7	0	858	587	271
October	0	77	672	14,303	4	0	881	590	291
November	0	209	-113	15,155	10	0	884	596	288
December	0	103	-337	14,900	2	0	877	599	278
<b>Average</b>	<b>0</b>	<b>134</b>	<b>-94</b>	<b>14,947</b>	<b>9</b>	<b>0</b>	<b>877</b>	<b>599</b>	<b>278</b>
<b>2003</b> January	0	5	-153	14,337	10	0	872	599	273
February	0	0	-91	14,382	5	0	870	599	270
March	0	0	325	14,929	10	0	880	599	280
April	0	11	322	15,575	12	0	890	600	290
May	0	114	-211	15,919	15	0	887	603	284
June	0	181	-15	15,618	45	0	892	609	283
July	0	125	2	15,549	7	0	896	612	283
August	0	190	-179	15,685	4	0	896	618	278
September	(s)	202	227	15,444	3	0	909	624	284
October	0	210	299	15,342	14	0	925	631	294
November	0	91	-447	15,455	21	0	914	634	280
December	0	154	-399	15,343	4	0	906	638	268
<b>Average</b>	<b>(s)</b>	<b>108</b>	<b>-27</b>	<b>15,303</b>	<b>12</b>	<b>0</b>	<b>906</b>	<b>638</b>	<b>268</b>
<b>2004</b> January	0	<sup>R</sup> 89	<sup>R</sup> 110	<sup>R</sup> 14,816	<sup>R</sup> 6	0	<sup>R</sup> 913	641	271
February	0	197	183	14,711	8	0	924	647	277
March	<sup>E</sup> 0	<sup>E</sup> 160	<sup>E</sup> 489	<sup>E</sup> 14,643	<sup>E</sup> 10	<sup>E</sup> 0	<sup>E</sup> 944	<sup>E</sup> 652	<sup>E</sup> 293
<b>3-Month Average</b>	<sup>E</sup> 0	<sup>E</sup> 148	<sup>E</sup> 262	<sup>E</sup> 14,724	<sup>E</sup> 8	<sup>E</sup> 0	<sup>E</sup> 944	<sup>E</sup> 652	<sup>E</sup> 293
<b>2003 3-Month Average</b>	<b>0</b>	<b>2</b>	<b>31</b>	<b>14,555</b>	<b>8</b>	<b>0</b>	<b>880</b>	<b>599</b>	<b>280</b>
<b>2002 3-Month Average</b>	<b>0</b>	<b>125</b>	<b>239</b>	<b>14,444</b>	<b>8</b>	<b>0</b>	<b>895</b>	<b>561</b>	<b>334</b>

<sup>a</sup> Stocks are at end of period.  
<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.  
<sup>c</sup> Strategic Petroleum Reserve. Crude oil stocks in the SPR include non-U.S. stocks held under foreign or commercial storage agreements.  
<sup>d</sup> Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.  
<sup>e</sup> See Note 6 at end of section.  
<sup>f</sup> Stocks of Alaskan crude oil in transit are included from January 1981 forward. See Note 5 at end of section.  
<sup>g</sup> See Note 4 at end of section.  
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*, April 2004, Table S2.

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

	Persian Gulf <sup>a</sup>							
	Bahrain		Iran		Iraq		Kuwait <sup>b</sup>	
	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	<sup>c</sup> (s)	<sup>c</sup> (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 Average .....	(s)	0	0	0	795	795	250	237
<b>2002</b> January .....	0	0	0	0	988	988	213	207
February .....	0	0	0	0	709	709	290	279
March .....	0	0	0	0	813	813	184	179
April .....	0	0	0	0	619	619	208	201
May .....	0	0	0	0	482	482	182	163
June .....	0	0	0	0	167	167	265	244
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	248	248	199	182
November .....	0	0	0	0	403	403	291	264
December .....	0	0	0	0	394	394	193	190
<b>Average .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>459</b>	<b>459</b>	<b>228</b>	<b>216</b>
<b>2003</b> January .....	4	0	0	0	600	600	166	134
February .....	11	0	0	0	909	909	241	223
March .....	0	0	0	0	637	637	251	220
April .....	0	0	0	0	726	726	284	277
May .....	0	0	0	0	128	128	204	186
June .....	0	0	0	0	0	0	292	274
July .....	0	0	0	0	67	67	169	169
August .....	0	0	0	0	125	125	189	183
September .....	0	0	0	0	362	362	250	248
October .....	0	0	0	0	734	734	168	168
November .....	0	0	0	0	706	706	182	176
December .....	0	0	0	0	678	678	217	211
<b>Average .....</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>470</b>	<b>470</b>	<b>217</b>	<b>205</b>
<b>2004</b> January .....	0	0	0	0	578	578	244	238
February .....	0	0	0	0	646	646	92	80
<b>2-Month Average .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>611</b>	<b>611</b>	<b>171</b>	<b>161</b>
<b>2003 2-Month Average .....</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>747</b>	<b>747</b>	<b>202</b>	<b>177</b>
<b>2002 2-Month Average .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>856</b>	<b>856</b>	<b>250</b>	<b>241</b>

<sup>a</sup> 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.

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

<sup>c</sup> 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*, April 2004, Table S3.

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

	Persian Gulf <sup>a</sup>							
	Qatar		Saudi Arabia <sup>b</sup>		United Arab Emirates		Total <sup>a</sup>	
	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 Average	13	(s)	1,662	1,611	40	21	2,761	2,664
2002 January	9	0	1,456	1,430	5	0	2,670	2,625
February	11	0	1,474	1,445	0	0	2,484	2,434
March	0	0	1,558	1,526	0	0	2,556	2,517
April	0	0	1,556	1,538	16	16	2,400	2,375
May	10	0	1,564	1,520	0	0	2,238	2,165
June	10	0	1,598	1,565	51	51	2,090	2,026
July	44	35	1,392	1,354	18	0	1,999	1,928
August	9	0	1,444	1,411	25	0	1,903	1,826
September	44	37	1,531	1,512	31	17	2,052	2,000
October	40	32	1,690	1,633	0	0	2,177	2,096
November	0	0	1,511	1,474	17	17	2,222	2,158
December	0	0	1,843	1,815	18	16	2,449	2,415
Average	15	9	1,552	1,519	15	10	2,269	2,213
2003 January	0	0	1,858	1,820	90	34	2,718	2,588
February	0	0	1,437	1,397	13	0	2,612	2,530
March	0	0	1,852	1,812	0	0	2,740	2,669
April	0	0	2,081	2,041	40	19	3,131	3,064
May	9	0	2,287	2,226	9	0	2,637	2,540
June	0	0	2,000	1,919	33	17	2,326	2,210
July	14	0	1,900	1,835	19	0	2,170	2,072
August	0	0	1,535	1,475	0	0	1,849	1,783
September	3	0	1,749	1,692	33	33	2,397	2,335
October	0	0	1,457	1,388	0	0	2,359	2,290
November	0	0	1,681	1,664	17	17	2,586	2,564
December	8	0	1,410	1,399	0	0	2,312	2,288
Average	3	0	1,772	1,724	21	10	2,484	2,409
2004 January	0	0	1,477	1,432	0	0	2,300	2,248
February	0	0	1,360	1,295	0	0	2,098	2,021
2-Month Average	0	0	1,421	1,366	0	0	2,202	2,138
2003 2-Month Average	0	0	1,658	1,619	53	18	2,668	2,561
2002 2-Month Average	10	0	1,464	1,437	3	0	2,582	2,534

<sup>a</sup> 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.

<sup>b</sup> 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*, April 2004, Table S3.

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

	Other OPEC <sup>a</sup>									
	Algeria		Ecuador <sup>b</sup>		Gabon <sup>c</sup>		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 Average	278	11	(b)	(b)	(c)	(c)	51	40	0	0
2002 January	265	0	(b)	(b)	(c)	(c)	80	67	0	0
February	248	0	(b)	(b)	(c)	(c)	104	84	0	0
March	347	75	(b)	(b)	(c)	(c)	63	63	0	0
April	366	77	(b)	(b)	(c)	(c)	60	58	0	0
May	343	53	(b)	(b)	(c)	(c)	76	76	0	0
June	293	19	(b)	(b)	(c)	(c)	57	57	0	0
July	160	0	(b)	(b)	(c)	(c)	15	14	0	0
August	183	0	(b)	(b)	(c)	(c)	34	34	0	0
September	249	32	(b)	(b)	(c)	(c)	49	49	0	0
October	239	40	(b)	(b)	(c)	(c)	68	66	0	0
November	226	21	(b)	(b)	(c)	(c)	13	13	0	0
December	245	40	(b)	(b)	(c)	(c)	21	21	0	0
Average	264	30	(b)	(b)	(c)	(c)	53	50	0	0
2003 January	302	39	(b)	(b)	(c)	(c)	25	25	0	0
February	226	0	(b)	(b)	(c)	(c)	15	15	0	0
March	316	40	(b)	(b)	(c)	(c)	10	10	0	0
April	407	77	(b)	(b)	(c)	(c)	46	43	0	0
May	377	81	(b)	(b)	(c)	(c)	10	10	0	0
June	713	282	(b)	(b)	(c)	(c)	11	11	0	0
July	457	86	(b)	(b)	(c)	(c)	0	0	0	0
August	482	192	(b)	(b)	(c)	(c)	66	39	0	0
September	516	243	(b)	(b)	(c)	(c)	35	8	0	0
October	293	86	(b)	(b)	(c)	(c)	133	92	0	0
November	381	162	(b)	(b)	(c)	(c)	71	44	0	0
December	295	69	(b)	(b)	(c)	(c)	23	15	0	0
Average	397	113	(b)	(b)	(c)	(c)	37	26	0	0
2004 January	345	123	(b)	(b)	(c)	(c)	17	14	0	0
February	378	92	(b)	(b)	(c)	(c)	47	44	0	0
2-Month Average	361	108	(b)	(b)	(c)	(c)	32	29	0	0
2003 2-Month Average	266	21	(b)	(b)	(c)	(c)	20	20	0	0
2002 2-Month Average	257	0	(b)	(b)	(c)	(c)	91	75	0	0

<sup>a</sup> 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.

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

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

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*, April 2004, Table S3.

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

	Other OPEC <sup>a</sup>						Total OPEC <sup>b</sup>	
	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 Average	885	842	1,553	1,291	2,768	2,184	5,528	4,848
2002 January	565	540	1,450	1,233	2,359	1,839	5,029	4,465
February	453	426	1,444	1,222	2,249	1,732	4,733	4,165
March	621	590	1,404	1,148	2,435	1,877	4,991	4,394
April	645	584	1,134	1,014	2,206	1,734	4,606	4,108
May	591	576	1,312	1,117	2,323	1,822	4,561	3,987
June	728	702	1,188	958	2,266	1,737	4,356	3,763
July	607	585	1,585	1,341	2,367	1,940	4,366	3,868
August	820	792	1,699	1,514	2,735	2,341	4,638	4,167
September	547	489	1,556	1,302	2,401	1,871	4,452	3,871
October	597	566	1,605	1,453	2,509	2,125	4,686	4,221
November	596	562	1,625	1,453	2,459	2,048	4,682	4,206
December	670	645	778	652	1,715	1,358	4,164	3,774
Average	621	589	1,398	1,201	2,336	1,870	4,605	4,083
2003 January	825	798	406	399	1,558	1,261	4,272	3,850
February	536	494	613	559	1,390	1,068	3,990	3,598
March	1,012	954	1,292	1,139	2,630	2,145	5,371	4,814
April	733	697	1,618	1,383	2,805	2,200	5,936	5,264
May	958	907	1,638	1,391	2,982	2,389	5,619	4,929
June	953	924	1,499	1,258	3,176	2,475	5,502	4,685
July	843	804	1,349	1,220	2,648	2,110	4,818	4,182
August	995	988	1,653	1,434	3,197	2,653	5,045	4,436
September	936	905	1,602	1,362	3,089	2,518	5,486	4,853
October	1,038	979	1,631	1,366	3,096	2,524	5,454	4,814
November	646	622	1,655	1,444	2,754	2,271	5,341	4,835
December	959	938	1,614	1,323	2,891	2,345	5,203	4,633
Average	873	838	1,385	1,193	2,692	2,170	5,175	4,579
2004 January	982	923	1,535	1,298	2,879	2,359	5,179	4,607
February	1,163	1,044	1,529	1,294	3,117	2,473	5,215	4,494
2-Month Average	1,070	982	1,532	1,296	2,994	2,414	5,196	4,552
2003 2-Month Average	688	654	504	475	1,478	1,170	4,138	3,730
2002 2-Month Average	512	486	1,447	1,228	2,307	1,788	4,889	4,323

<sup>a</sup> 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.

<sup>b</sup> 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*, April 2004, Table S3.

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

(Thousand Barrels per Day)

	Non-OPEC <sup>a</sup>											
	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 Average .....	328	321	43	34	10	0	82	13	1,828	1,356	24	13
<b>2002</b> January .....	310	297	41	41	20	0	48	16	1,901	1,307	2	0
February .....	304	290	69	69	26	0	84	52	1,897	1,374	45	42
March .....	321	300	42	42	46	0	131	65	1,844	1,339	4	0
April .....	384	371	66	66	7	0	163	84	2,032	1,497	1	0
May .....	336	336	63	63	19	0	144	77	1,969	1,496	16	15
June .....	475	463	21	21	16	0	149	69	1,914	1,466	51	34
July .....	308	298	43	43	35	0	114	59	1,901	1,359	43	32
August .....	233	220	45	23	47	0	191	119	2,020	1,526	45	34
September .....	342	329	87	65	53	0	90	53	1,883	1,413	16	0
October .....	258	246	67	67	55	0	132	75	2,110	1,578	49	48
November .....	402	390	84	64	37	0	73	17	2,083	1,484	22	21
December .....	317	312	61	51	42	0	66	14	2,090	1,493	15	13
<b>Average .....</b>	<b>332</b>	<b>321</b>	<b>57</b>	<b>51</b>	<b>34</b>	<b>0</b>	<b>116</b>	<b>58</b>	<b>1,971</b>	<b>1,445</b>	<b>26</b>	<b>20</b>
<b>2003</b> January .....	263	245	20	20	31	0	114	48	2,235	1,621	19	16
February .....	265	251	23	23	27	0	110	36	1,971	1,423	15	14
March .....	381	381	20	20	41	0	76	15	1,872	1,406	38	7
April .....	494	482	12	12	35	0	75	17	1,754	1,271	20	6
May .....	356	356	20	20	37	0	67	33	2,119	1,610	22	7
June .....	403	390	44	22	67	0	71	48	1,944	1,505	38	6
July .....	529	517	47	23	18	0	144	63	2,109	1,594	71	25
August .....	483	471	62	41	37	0	198	82	2,131	1,586	21	13
September .....	401	401	84	63	6	0	132	68	2,081	1,538	38	24
October .....	385	373	45	45	25	0	80	17	2,175	1,695	5	5
November .....	203	191	22	22	4	0	93	68	2,178	1,639	29	28
December .....	269	269	0	0	22	0	99	77	2,226	1,663	0	0
<b>Average .....</b>	<b>370</b>	<b>361</b>	<b>33</b>	<b>26</b>	<b>29</b>	<b>0</b>	<b>105</b>	<b>48</b>	<b>2,068</b>	<b>1,547</b>	<b>26</b>	<b>13</b>
<b>2004</b> January .....	277	277	20	20	5	0	136	103	2,185	1,626	12	7
February .....	273	271	23	23	21	0	104	67	2,087	1,490	46	38
<b>2-Month Average .....</b>	<b>276</b>	<b>275</b>	<b>21</b>	<b>21</b>	<b>13</b>	<b>0</b>	<b>121</b>	<b>86</b>	<b>2,138</b>	<b>1,560</b>	<b>28</b>	<b>22</b>
<b>2003 2-Month Average .....</b>	<b>264</b>	<b>248</b>	<b>22</b>	<b>22</b>	<b>29</b>	<b>0</b>	<b>112</b>	<b>42</b>	<b>2,109</b>	<b>1,527</b>	<b>17</b>	<b>15</b>
<b>2002 2-Month Average .....</b>	<b>307</b>	<b>294</b>	<b>54</b>	<b>54</b>	<b>23</b>	<b>0</b>	<b>65</b>	<b>33</b>	<b>1,899</b>	<b>1,339</b>	<b>22</b>	<b>20</b>

<sup>a</sup> 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*, April 2004, Table S3.

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

(Thousand Barrels per Day)

	Non-OPEC <sup>a</sup>											
	Colombia		Ecuador <sup>b</sup>		Gabon <sup>c</sup>		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 Average	296	260	120	113	140	140	40	0	37	15	1,440	1,394
2002 January	260	228	116	83	206	206	30	0	33	14	1,416	1,373
February	352	331	84	77	61	61	26	0	11	0	1,611	1,571
March	242	233	110	104	124	124	54	0	6	0	1,473	1,437
April	291	266	93	75	164	164	38	0	0	0	1,486	1,442
May	210	192	91	82	188	188	36	0	30	22	1,565	1,492
June	229	204	117	105	123	123	16	0	7	0	1,519	1,474
July	224	203	110	93	206	206	22	0	20	11	1,604	1,529
August	239	217	79	79	170	170	24	0	38	29	1,500	1,475
September	275	263	114	102	164	164	24	0	0	0	1,453	1,417
October	255	232	156	151	88	88	34	0	22	17	1,574	1,524
November	270	212	153	148	127	127	40	0	23	12	1,580	1,532
December	289	248	100	100	88	88	58	0	4	0	1,781	1,734
Average	260	235	110	100	143	143	34	0	16	9	1,547	1,500
2003 January	141	120	71	71	113	113	25	0	12	11	1,621	1,566
February	268	240	93	93	168	168	21	0	15	0	1,580	1,495
March	202	146	82	82	98	98	49	0	8	0	1,362	1,320
April	211	170	101	95	135	135	56	0	27	21	1,687	1,657
May	162	133	146	135	129	129	39	0	31	22	1,540	1,496
June	170	146	136	120	140	140	20	0	0	0	1,530	1,472
July	188	161	144	139	98	98	24	0	118	95	1,739	1,689
August	226	206	173	170	144	144	32	0	62	62	1,643	1,600
September	200	182	173	167	102	102	28	0	50	22	1,735	1,700
October	231	186	245	234	141	141	25	0	27	9	1,741	1,687
November	129	102	103	103	142	142	49	0	13	0	1,683	1,611
December	175	168	244	237	161	161	25	0	21	11	1,801	1,765
Average	191	163	143	138	131	131	33	0	32	21	1,639	1,589
2004 January	287	276	197	187	97	97	20	0	24	14	1,615	1,594
February	99	61	223	209	163	163	24	0	0	0	1,541	1,486
2-Month Average	196	172	209	198	129	129	22	0	12	7	1,579	1,542
2003 2-Month Average	202	177	81	81	139	139	23	0	14	6	1,601	1,532
2002 2-Month Average	304	277	101	80	137	137	28	0	22	7	1,509	1,467

<sup>a</sup> 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.

<sup>b</sup> Through 1992, Ecuador was a member of OPEC. See Table 3.3c.

<sup>c</sup> 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*, April 2004, Table S3.



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

	Non-OPEC <sup>a</sup>											
	Netherlands		Netherlands Antilles		Norway		Puerto Rico		Russia <sup>b</sup>		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 Average	43	0	81	0	341	281	4	0	90	0	31	0
2002 January	25	0	120	0	155	135	0	0	61	0	16	0
February	48	0	145	0	264	224	0	0	51	0	10	0
March	77	0	112	0	338	296	0	0	95	12	19	0
April	111	0	94	0	577	523	2	0	192	36	8	0
May	103	0	48	0	519	467	0	0	371	220	23	0
June	69	0	76	0	527	490	0	0	231	78	8	0
July	39	0	51	0	495	448	0	0	220	79	30	0
August	87	0	56	0	478	402	0	0	236	100	29	0
September	21	0	77	0	342	294	0	0	225	104	0	0
October	75	0	71	0	318	308	0	0	295	190	0	0
November	70	0	84	0	409	388	0	0	255	85	19	0
December	61	0	43	0	288	202	0	0	276	108	41	0
Average	66	0	81	0	393	348	(s)	0	210	85	17	0
2003 January	132	0	49	0	210	104	0	0	190	99	12	0
February	79	0	117	0	255	211	0	0	271	121	26	0
March	110	0	64	0	199	147	0	0	255	16	16	0
April	88	0	83	0	248	148	0	0	129	19	17	0
May	76	0	143	0	303	190	0	0	207	142	49	0
June	97	0	59	0	342	211	0	0	510	424	44	0
July	100	0	59	0	231	128	0	0	550	479	16	0
August	92	0	39	0	344	192	0	0	411	288	7	0
September	102	0	46	0	288	214	0	0	275	142	11	0
October	80	0	60	0	296	190	0	0	93	34	10	0
November	91	0	78	0	188	129	0	0	71	0	41	0
December	19	0	71	0	162	116	0	0	72	21	19	0
Average	89	0	72	0	255	164	0	0	253	149	22	0
2004 January	30	0	90	0	241	149	0	0	128	8	0	0
February	121	0	153	0	252	168	0	0	184	11	15	4
2-Month Average	74	0	120	0	246	158	0	0	155	9	7	2
2003 2-Month Average	107	0	81	0	231	155	0	0	228	110	19	0
2002 2-Month Average	36	0	132	0	206	177	0	0	56	0	13	0

<sup>a</sup> 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.

<sup>b</sup> Imports from other republics 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*, April 2004, 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 <sup>a</sup>										Total Imports	
	Trinidad and Tobago		United Kingdom		U.S. Virgin Islands		Other Non-OPEC <sup>b</sup>		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	<sup>c</sup> 4,347	<sup>c</sup> 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 Average	72	51	324	244	268	0	702	244	6,343	4,480	11,871	9,328
2002 January	53	53	366	284	278	0	604	207	6,059	4,244	11,088	8,709
February	84	84	360	279	242	0	398	133	6,171	4,588	10,904	8,753
March	72	68	272	220	198	0	631	164	6,207	4,405	11,198	8,799
April	59	59	454	380	168	0	772	230	7,160	5,193	11,765	9,301
May	71	63	436	351	165	0	804	273	7,208	5,337	11,769	9,323
June	89	76	726	613	236	0	799	346	7,397	5,561	11,753	9,324
July	72	72	529	481	240	0	951	403	7,258	5,316	11,624	9,184
August	58	50	574	480	234	0	872	454	7,252	5,378	11,890	9,544
September	104	76	353	278	231	0	769	367	6,622	4,926	11,075	8,797
October	112	75	582	486	235	0	718	225	7,207	5,311	11,893	9,532
November	102	82	669	632	321	0	762	255	7,586	5,448	12,268	9,654
December	85	55	415	376	281	0	534	173	6,935	4,968	11,100	8,741
Average	80	68	478	405	236	0	720	270	6,925	5,058	11,530	9,140
2003 January	119	73	491	411	179	0	688	181	6,736	4,698	11,008	8,547
February	78	44	474	407	250	0	667	179	6,773	4,706	10,764	8,303
March	105	78	379	299	328	0	799	226	6,486	4,242	11,857	9,055
April	110	82	343	241	245	0	640	189	6,510	4,543	12,446	9,807
May	97	82	519	437	258	0	875	358	7,195	5,149	12,814	10,078
June	50	44	503	373	278	0	992	364	7,439	5,266	12,941	9,951
July	128	98	483	420	351	0	824	348	7,970	5,877	12,788	10,059
August	58	36	379	319	345	0	971	490	7,859	5,701	12,904	10,137
September	124	87	558	487	338	0	786	359	7,556	5,558	13,042	10,412
October	84	60	317	274	306	0	702	396	7,072	5,345	12,526	10,159
November	112	68	300	234	291	0	687	307	6,505	4,644	11,846	9,479
December	112	56	390	261	287	0	634	228	6,808	5,034	12,011	9,667
Average	98	67	428	347	288	0	773	303	7,079	5,067	12,254	9,646
2004 January	85	55	200	126	295	0	606	175	6,549	4,715	11,727	9,322
February	123	75	384	297	279	0	999	402	7,114	4,764	12,329	9,258
2-Month Average	103	65	289	209	287	0	796	285	6,822	4,739	12,018	9,291
2003 2-Month Average	99	59	483	409	213	0	678	180	6,754	4,702	10,892	8,432
2002 2-Month Average	68	68	363	282	261	0	506	172	6,112	4,407	11,001	8,730

<sup>a</sup> 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.

<sup>b</sup> Includes Bahrain, which is shown on Table 3.3a.

<sup>c</sup> 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.

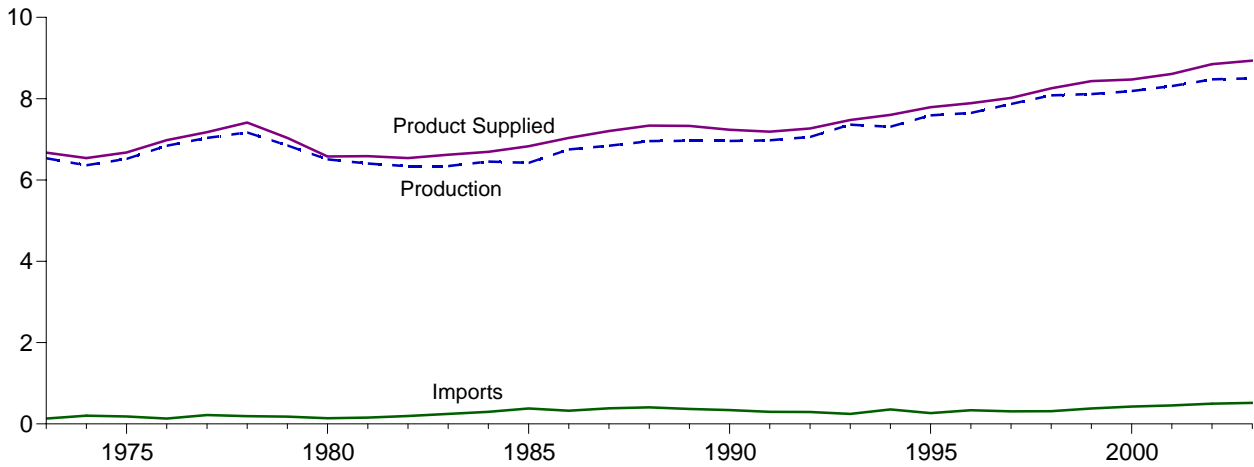
Notes: • Beginning in October 1977, Strategic Petroleum Reserve imports are included. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

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

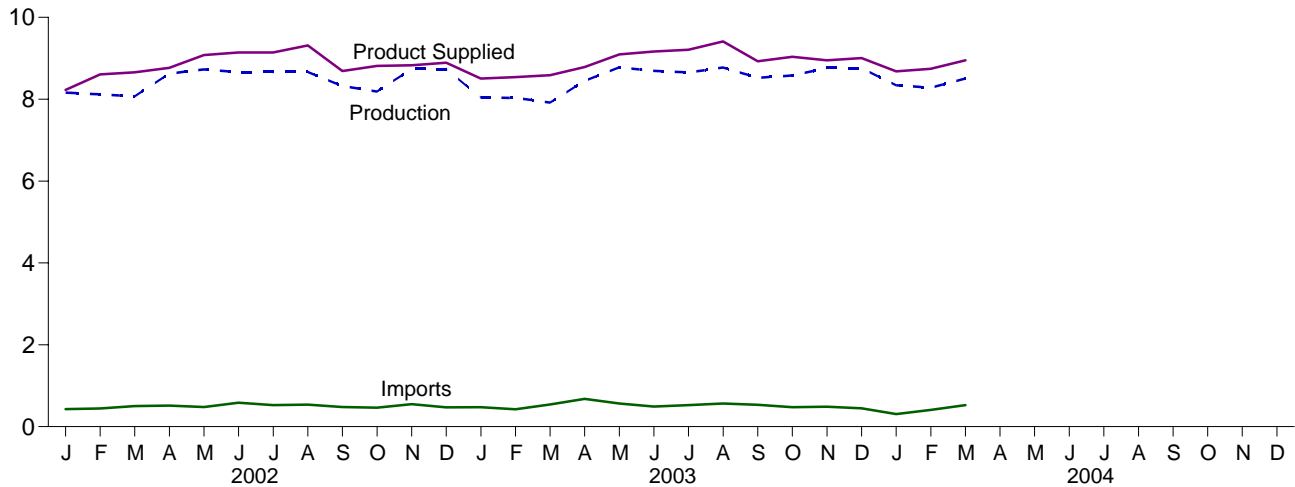
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S3. • 1992 forward: EIA, *Petroleum Supply Monthly*, April 2004, Table S3.

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

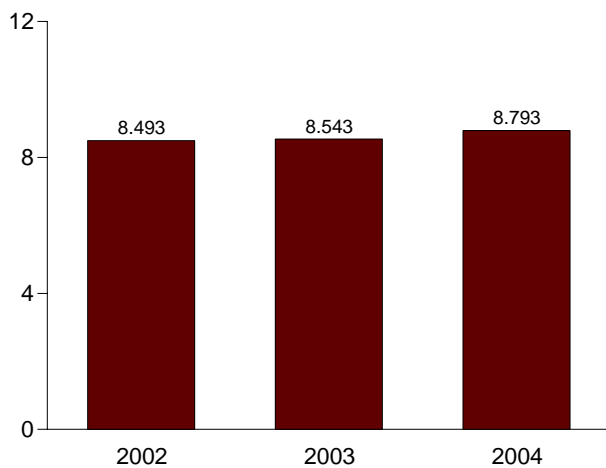
Overview, 1973-2003



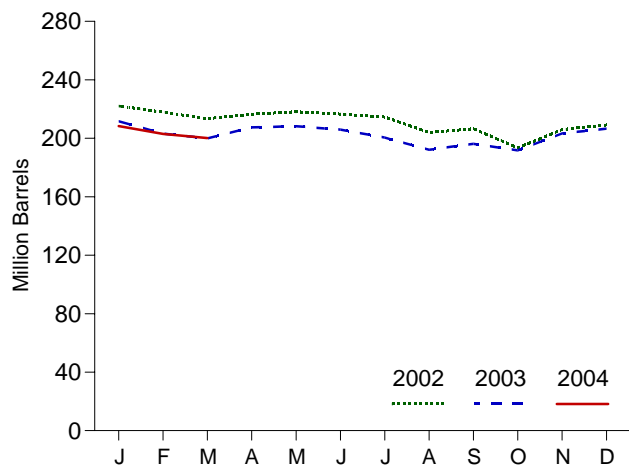
Overview, Monthly



Product Supplied, January-March



Total 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 <sup>a</sup>		Oxygenates Stocks <sup>a</sup>
	Total Production	Imports <sup>b</sup>	Stock Change <sup>b,c</sup>	Exports	Product Supplied	Total <sup>d</sup>	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	<sup>e</sup> 218	NA	NA
1975 Average	6,520	184	<sup>e</sup> 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	<sup>e</sup> 261	NA	NA
1981 Average <sup>f</sup>	6,405	157	<sup>e</sup> -28	2	6,588	253	203	NA
1982 Average	6,338	197	-25	20	6,539	<sup>e</sup> 235	<sup>e</sup> 194	NA
1983 Average	6,340	247	<sup>e</sup> -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	<sup>g</sup> 7,360	247	26	105	<sup>g</sup> 7,476	226	187	<sup>h</sup> 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 Average	8,312	454	23	133	8,610	210	161	13
2002 January	8,160	428	265	96	8,227	222	170	15
February	8,117	442	-149	102	8,607	218	166	14
March	8,072	504	-183	104	8,655	213	160	14
April	8,626	512	239	134	8,766	216	167	14
May	8,729	480	42	88	9,078	218	168	15
June	8,661	586	-25	131	9,140	217	168	15
July	8,665	526	-89	136	9,143	215	165	15
August	8,666	538	-241	133	9,313	204	157	14
September	8,320	480	1	113	8,687	206	157	13
October	8,190	465	-295	135	8,814	194	148	13
November	8,738	548	327	130	8,829	206	158	13
December	8,734	470	124	186	8,893	209	162	12
Average	8,475	498	1	124	8,848	209	162	12
2003 January	8,038	474	-166	175	8,504	212	158	13
February	8,031	425	-227	143	8,540	203	152	14
March	7,917	541	-229	102	8,585	200	145	15
April	8,449	679	232	111	8,785	208	152	14
May	8,780	563	133	113	9,097	208	156	15
June	8,694	490	-90	109	9,165	206	153	14
July	8,653	524	-122	90	9,209	201	150	13
August	8,773	565	-157	84	9,410	192	145	11
September	8,524	534	2	129	8,927	196	145	14
October	8,578	475	-144	159	9,037	192	140	13
November	8,764	489	185	118	8,949	203	146	12
December	8,759	446	29	172	9,004	207	147	11
Average	8,499	517	-46	125	8,937	207	147	11
2004 January	<sup>R</sup> 8,339	<sup>R</sup> 309	<sup>R</sup> -126	<sup>R</sup> 93	<sup>R</sup> 8,680	<sup>R</sup> 208	<sup>R</sup> 143	11
February	8,282	410	-209	159	8,743	203	137	11
March	<sup>E</sup> 8,505	<sup>E</sup> 524	<sup>E</sup> -41	<sup>E</sup> 118	<sup>E</sup> 8,952	<sup>E</sup> 200	<sup>E</sup> 138	NA
3-Month Average	<sup>E</sup> 8,377	<sup>E</sup> 414	<sup>E</sup> -124	<sup>E</sup> 122	<sup>E</sup> 8,793	<sup>E</sup> 200	<sup>E</sup> 138	NA
2003 3-Month Average	7,994	482	-207	140	8,543	200	145	15
2002 3-Month Average	8,116	459	-18	100	8,493	213	160	14

<sup>a</sup> Stocks are at end of period.

<sup>b</sup> From 1981 forward, blending components are excluded.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>d</sup> Includes motor gasoline blending components and gasohol, but excludes oxygenates, which are reported separately.

<sup>e</sup> See Note 4 at end of section.

<sup>f</sup> See Note 2 at end of section.

<sup>g</sup> 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.

<sup>h</sup> See Note 1 at end of section.

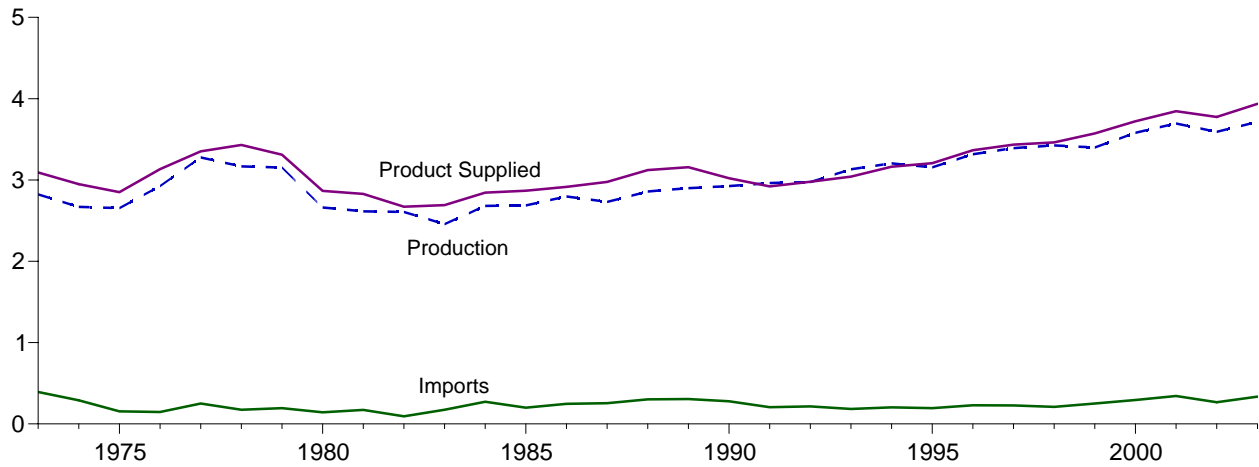
R=Revised. NA=Not available. E=Estimate. (s)=Less than 500 barrels per day.

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

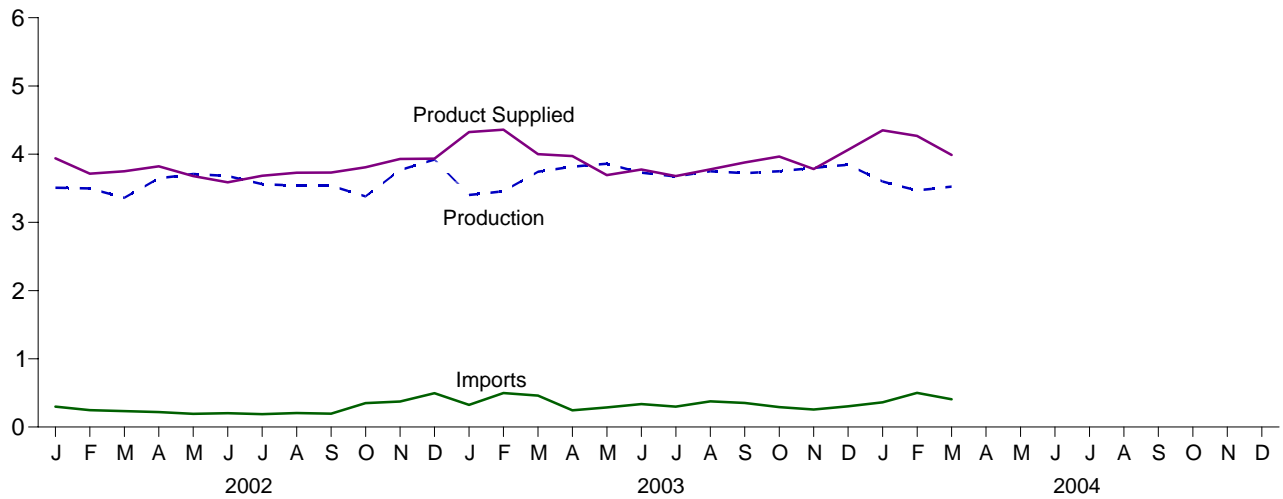
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S4. • 1992 forward: EIA, *Petroleum Supply Monthly*, April 2004, Table S4.

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

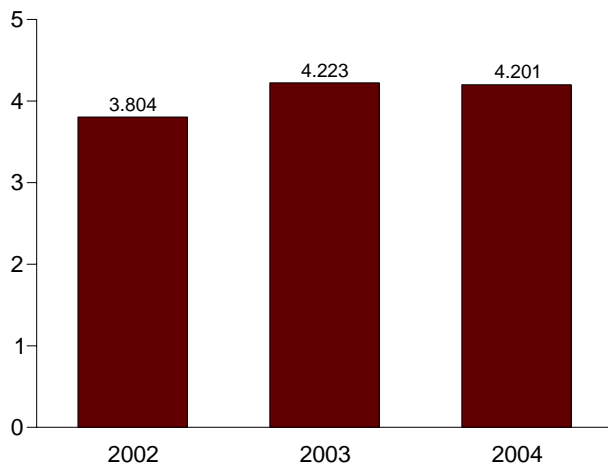
Overview, 1973-2003



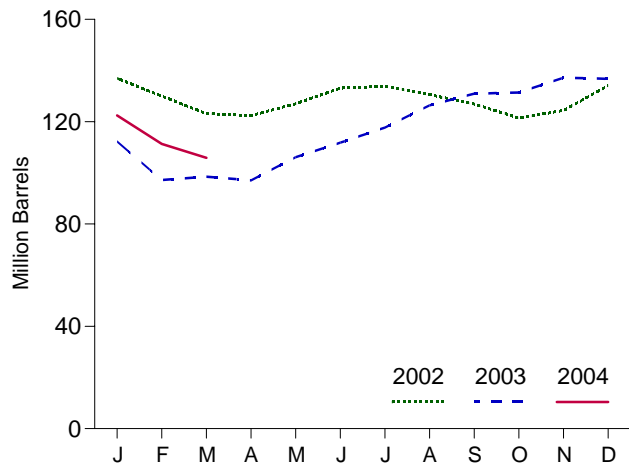
Overview, Monthly



Product Supplied, January-March



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 <sup>a</sup>		
	Total Production	Imports	Crude Oil Used Directly <sup>b</sup>	Stock Change <sup>c</sup>	Exports	Product Supplied <sup>b</sup>	Total	Sulfur Content	
								0.05 Percent or Less <sup>d</sup>	Greater Than 0.05 Percent <sup>d</sup>
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	<sup>e</sup> 10	2	2,948	<sup>f</sup> 200	NA	NA
1975 Average	2,654	155	2	<sup>e,f</sup> -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	<sup>f</sup> 205	NA	NA
1981 Average <sup>g</sup>	2,613	173	10	<sup>f</sup> -38	5	2,829	192	NA	NA
1982 Average	2,606	93	10	-35	74	2,671	<sup>f</sup> 179	NA	NA
1983 Average	2,456	174	-	<sup>f</sup> -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	132	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	<sup>g</sup> 64	<sup>g</sup> 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 Average	3,695	344	-	73	119	3,847	145	82	62
2002 January	3,508	298	-	-244	109	3,940	137	80	57
February	3,498	248	-	-248	279	3,714	130	78	52
March	3,360	234	-	-223	67	3,750	123	74	49
April	3,647	219	-	-23	68	3,821	122	74	48
May	3,709	193	-	149	74	3,679	127	77	50
June	3,679	204	-	203	93	3,587	133	79	54
July	3,561	188	-	22	44	3,683	134	77	57
August	3,538	205	-	-104	119	3,728	131	71	60
September	3,536	196	-	-124	127	3,730	127	68	59
October	3,380	350	-	-175	96	3,808	121	66	56
November	3,768	373	-	99	114	3,929	124	71	53
December	3,922	496	-	312	171	3,934	134	81	53
Average	3,592	267	-	-29	112	3,776	134	81	53
2003 January	3,403	324	-	-717	119	4,325	112	68	44
February	3,455	498	-	-538	132	4,359	97	60	37
March	3,743	460	-	43	161	4,000	99	63	35
April	3,817	246	-	-48	139	3,972	97	66	31
May	3,860	287	-	293	162	3,692	106	72	34
June	3,728	337	-	189	101	3,775	112	74	38
July	3,673	299	-	191	103	3,678	118	75	43
August	3,750	375	-	280	68	3,778	126	76	50
September	3,721	352	-	152	43	3,878	131	77	54
October	3,750	293	-	15	62	3,966	131	73	58
November	3,800	256	-	193	81	3,782	137	79	59
December	3,845	305	-	-14	100	4,064	137	82	55
Average	3,714	335	-	6	106	3,937	137	82	55
2004 January	<sup>R</sup> 3,599	<sup>R</sup> 362	-	<sup>R</sup> -461	<sup>R</sup> 72	<sup>R</sup> 4,350	122	<sup>R</sup> 77	<sup>R</sup> 46
February	3,467	501	-	-385	86	4,268	111	68	43
March	<sup>E</sup> 3,525	<sup>E</sup> 408	-	<sup>E</sup> -196	<sup>E</sup> 140	<sup>E</sup> 3,989	<sup>E</sup> 106	<sup>E</sup> 65	<sup>E</sup> 41
3-Month Average	<sup>E</sup> 3,532	<sup>E</sup> 422	-	<sup>E</sup> -347	<sup>E</sup> 100	<sup>E</sup> 4,201	<sup>E</sup> 106	<sup>E</sup> 65	<sup>E</sup> 41
2003 3-Month Average	3,537	425	-	-399	138	4,223	99	63	35
2002 3-Month Average	3,454	260	-	-238	148	3,804	123	74	49

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

<sup>b</sup> 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.

<sup>c</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>d</sup> By weight.

<sup>e</sup> See Note 6 at end of section.

<sup>f</sup> See Note 4 at end of section.

<sup>g</sup> See Note 3 at end of section.

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

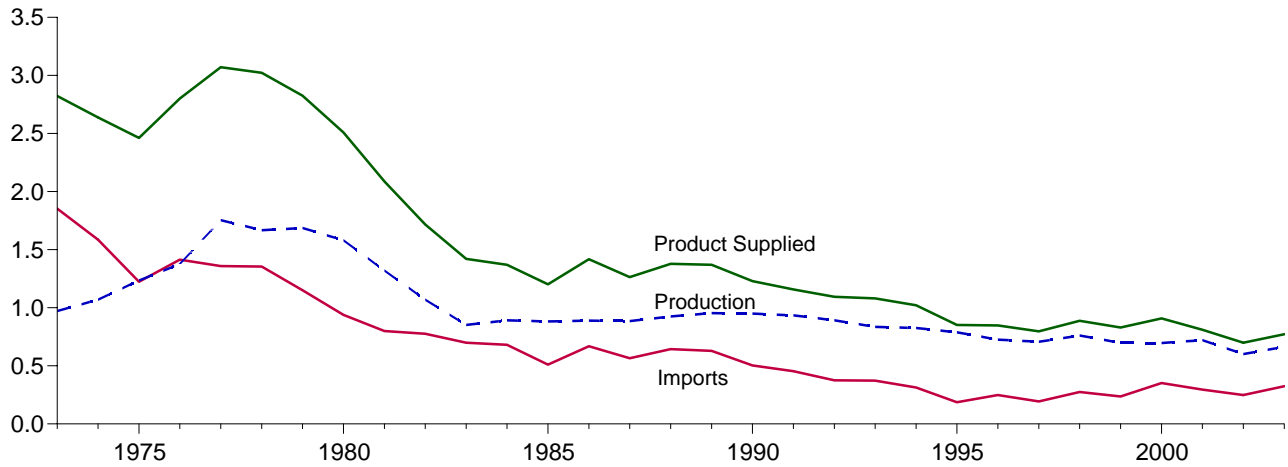
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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*, April 2004, Table S5.

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

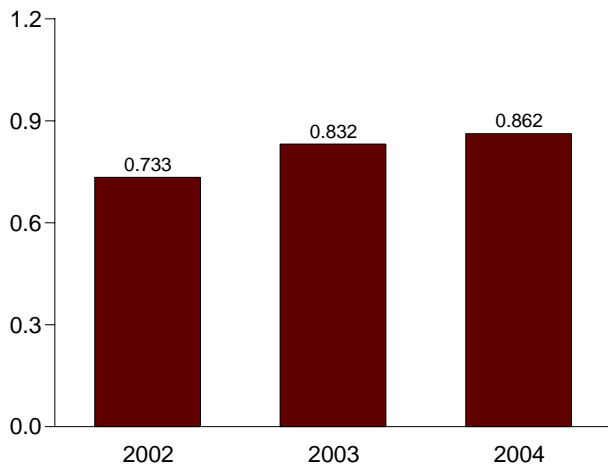
Overview, 1973-2003



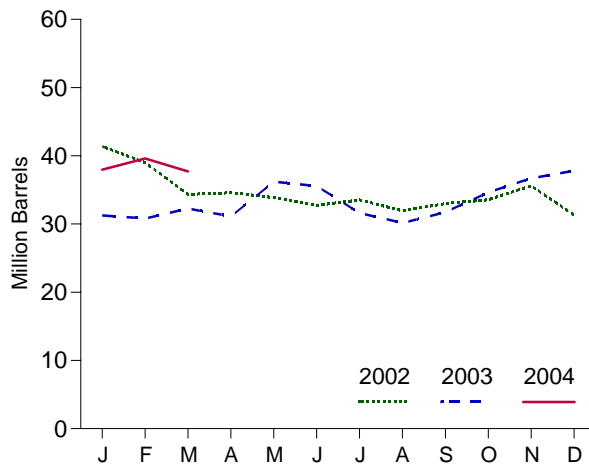
Overview, Monthly



Product Supplied, January-March



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 <sup>c</sup>
	Total Production	Imports	Crude Oil Used Directly <sup>a</sup>	Stock Change <sup>b</sup>	Exports	Product Supplied <sup>a</sup>	
	Thousand Barrels per Day						
1973 Average .....	971	1,853	17	-5	23	2,822	53
1974 Average .....	1,070	1,587	13	17	14	2,639	<sup>d</sup> 60
1975 Average .....	1,235	1,223	15	<sup>d</sup> -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	<sup>d</sup> 92
1981 Average <sup>e</sup> .....	1,321	800	48	<sup>d</sup> -37	118	2,088	78
1982 Average .....	1,070	776	48	-32	209	1,716	<sup>d</sup> 66
1983 Average .....	852	699	-	<sup>d</sup> -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 Average .....	721	295	-	13	191	811	41
<b>2002</b> January .....	625	233	-	10	138	710	41
February .....	613	136	-	-84	171	662	39
March .....	617	225	-	-151	171	821	34
April .....	601	296	-	9	159	730	35
May .....	582	235	-	-23	160	680	34
June .....	540	256	-	-38	165	669	33
July .....	566	245	-	26	171	614	34
August .....	583	249	-	-52	272	612	32
September .....	607	254	-	36	200	625	33
October .....	593	228	-	18	153	650	34
November .....	648	366	-	68	160	786	36
December .....	641	259	-	-138	205	832	31
<b>Average</b> .....	<b>601</b>	<b>249</b>	-	<b>-27</b>	<b>177</b>	<b>700</b>	<b>31</b>
<b>2003</b> January .....	660	280	-	-1	231	710	31
February .....	682	353	-	-16	173	877	31
March .....	653	466	-	47	161	912	32
April .....	634	383	-	-39	247	809	31
May .....	731	318	-	165	195	690	36
June .....	668	284	-	-22	280	694	36
July .....	634	276	-	-128	252	786	32
August .....	663	347	-	-47	154	903	30
September .....	662	237	-	52	191	657	32
October .....	661	310	-	94	164	713	35
November .....	616	319	-	69	163	702	37
December .....	686	322	-	35	155	818	38
<b>Average</b> .....	<b>663</b>	<b>325</b>	-	<b>18</b>	<b>197</b>	<b>772</b>	<b>38</b>
<b>2004</b> January .....	<sup>R</sup> 658	<sup>R</sup> 335	-	<sup>R</sup> 5	<sup>R</sup> 97	<sup>R</sup> 891	<sup>R</sup> 38
February .....	658	433	-	57	163	872	40
March .....	<sup>E</sup> 612	<sup>E</sup> 326	-	<sup>E</sup> -52	<sup>E</sup> 168	<sup>E</sup> 824	<sup>E</sup> 38
<b>3-Month Average</b> .....	<sup>E</sup> <b>643</b>	<sup>E</sup> <b>363</b>	-	<sup>E</sup> <b>2</b>	<sup>E</sup> <b>142</b>	<sup>E</sup> <b>862</b>	<sup>E</sup> <b>38</b>
<b>2003 3-Month Average</b> .....	<b>664</b>	<b>367</b>	-	<b>11</b>	<b>189</b>	<b>832</b>	<b>32</b>
<b>2002 3-Month Average</b> .....	<b>618</b>	<b>200</b>	-	<b>-75</b>	<b>160</b>	<b>733</b>	<b>34</b>

<sup>a</sup> 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.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>c</sup> Stocks are at end of period.

<sup>d</sup> See Note 4 at end of section.

<sup>e</sup> 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.

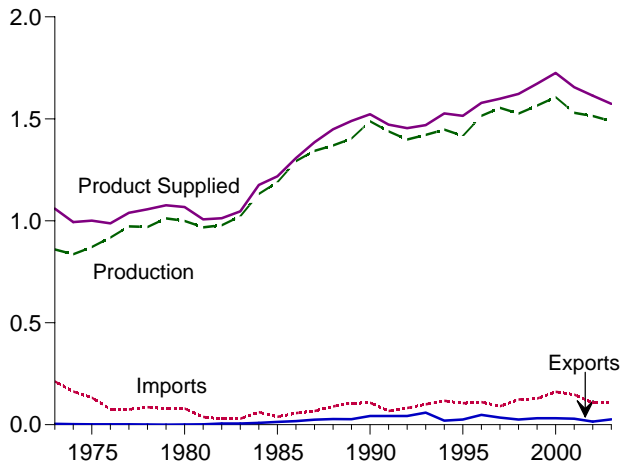
Web Page: <http://www.eia.doe.gov/emeu/mer/petro.html>.

Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S6. • **1992 forward:** EIA, *Petroleum Supply Monthly*, April 2004, Table S6.

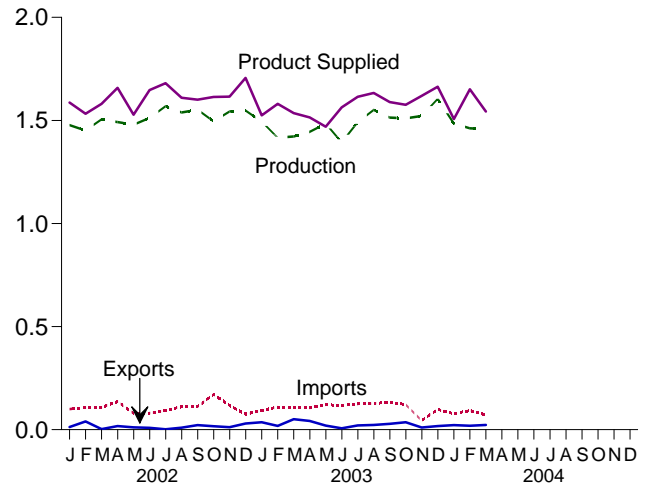


**Figure 3.5 Jet Fuel**  
(Million Barrels Per Day, Except as Noted)

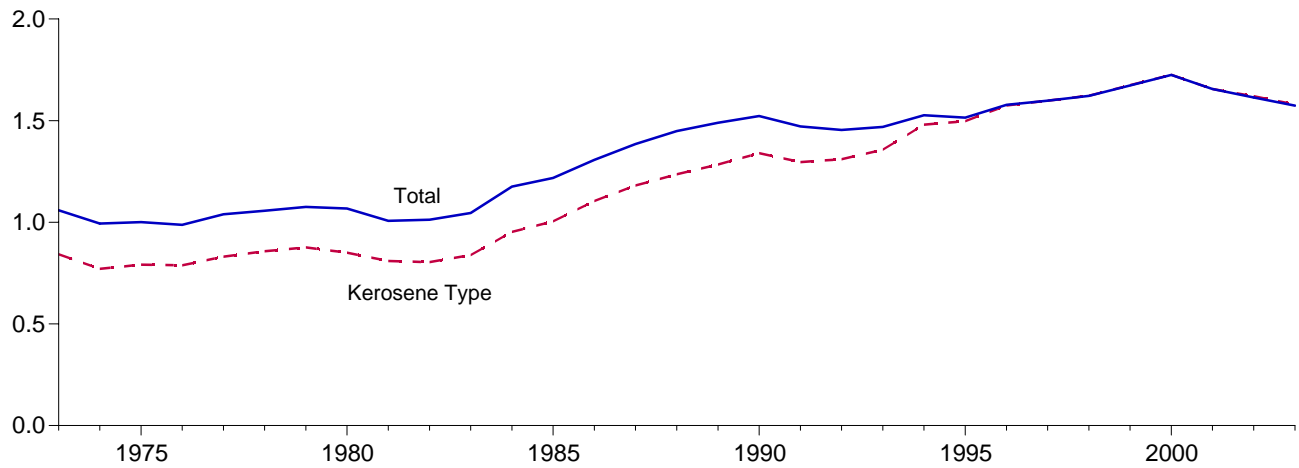
Overview, 1973-2003



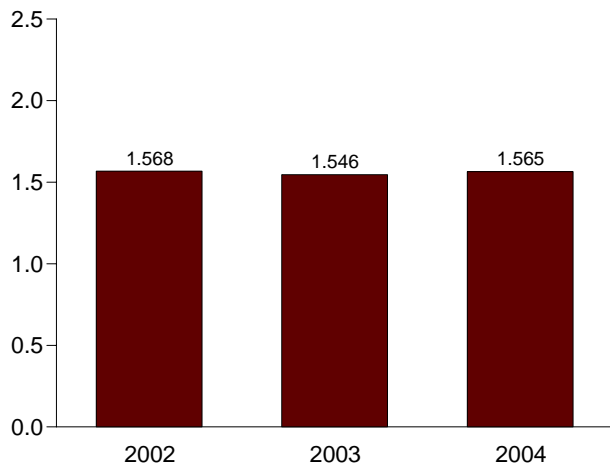
Overview, Monthly



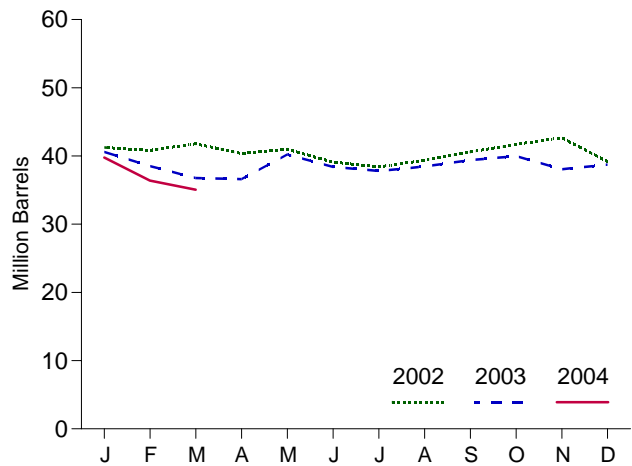
Product Supplied by Type, 1973-2003



Product Supplied, January-March



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 <sup>a</sup>	
	Production		Imports	Stock Change <sup>b</sup>	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	29	24
1975 Average	871	691	133	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	42	36
1981 Average	968	775	38	-4	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	37	31
1983 Average	1,022	817	29	(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 Average	1,530	1,529	148	-7	29	1,655	1,656	42	42
<b>2002</b>									
January	1,477	1,477	99	-23	13	1,587	1,591	41	41
February	1,451	1,451	107	-15	40	1,532	1,532	41	41
March	1,505	1,505	109	31	3	1,581	1,581	42	42
April	1,492	1,491	137	-47	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	-63	9	1,647	1,656	39	39
July	1,569	1,568	92	-22	2	1,680	1,679	38	38
August	1,539	1,538	112	31	10	1,610	1,616	39	39
September	1,552	1,552	111	40	22	1,601	1,609	41	41
October	1,495	1,495	171	36	17	1,614	1,629	42	42
November	1,543	1,543	117	33	12	1,616	1,615	43	43
December	1,548	1,547	75	-113	30	1,706	1,722	39	39
Average	1,514	1,514	107	-8	15	1,614	1,621	39	39
<b>2003</b>									
January	1,495	1,495	94	27	36	1,525	1,524	41	41
February	1,416	1,416	109	-74	19	1,581	1,580	39	38
March	1,422	1,430	107	-56	50	1,535	1,559	37	37
April	1,445	1,445	106	-6	42	1,514	1,522	37	37
May	1,484	1,484	121	117	20	1,469	1,469	40	40
June	1,393	1,393	117	-60	7	1,564	1,564	38	38
July	1,491	1,491	124	-20	20	1,615	1,623	38	38
August	1,551	1,551	127	21	23	1,634	1,650	38	38
September	1,514	1,513	134	31	28	1,589	1,597	39	39
October	1,510	1,510	122	19	36	1,576	1,584	40	40
November	1,522	1,522	44	-64	10	1,620	1,620	38	38
December	1,605	1,605	98	22	18	1,663	1,663	39	39
Average	1,488	1,489	109	-3	26	1,574	1,580	39	39
<b>2004</b>									
January	R 1,484	R 1,484	R 77	R 33	R 22	R 1,507	R 1,506	R 40	R 40
February	1,462	1,462	93	-116	19	1,651	1,651	36	36
March	E 1,457	E 1,457	E 72	E -38	E 23	E 1,543	E 1,543	E 35	E 35
3-Month Average	E 1,468	E 1,468	E 80	E -39	E 21	E 1,565	E 1,565	E 35	E 35
<b>2003 3-Month Average</b>	1,445	1,448	103	-33	36	1,546	1,554	37	37
<b>2002 3-Month Average</b>	1,479	1,479	105	-2	18	1,568	1,569	42	42

<sup>a</sup> Stocks are at end of period.

<sup>b</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>c</sup> See Note 4 at end of section.

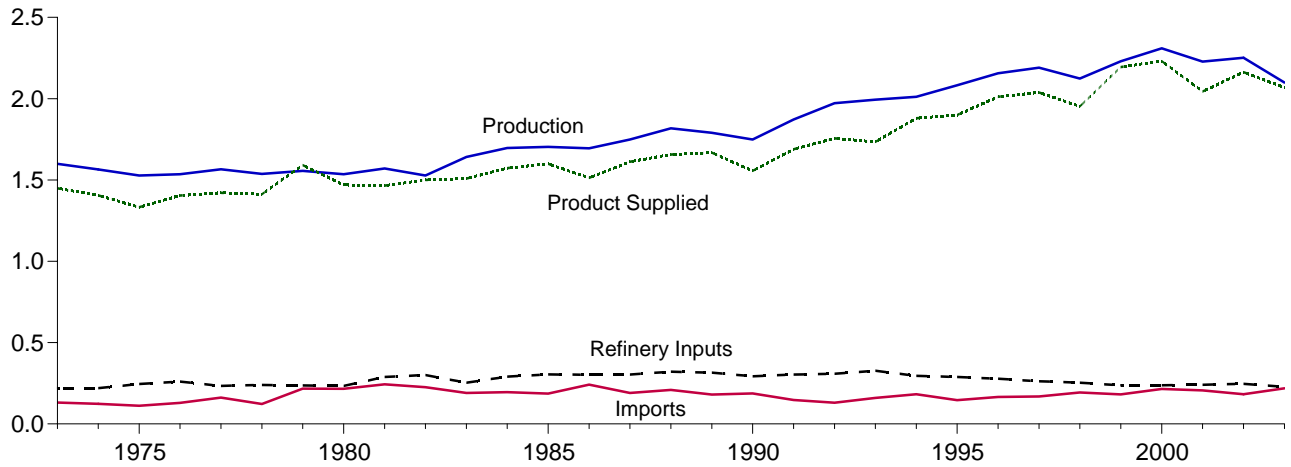
R=Revised. E=Estimate. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

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

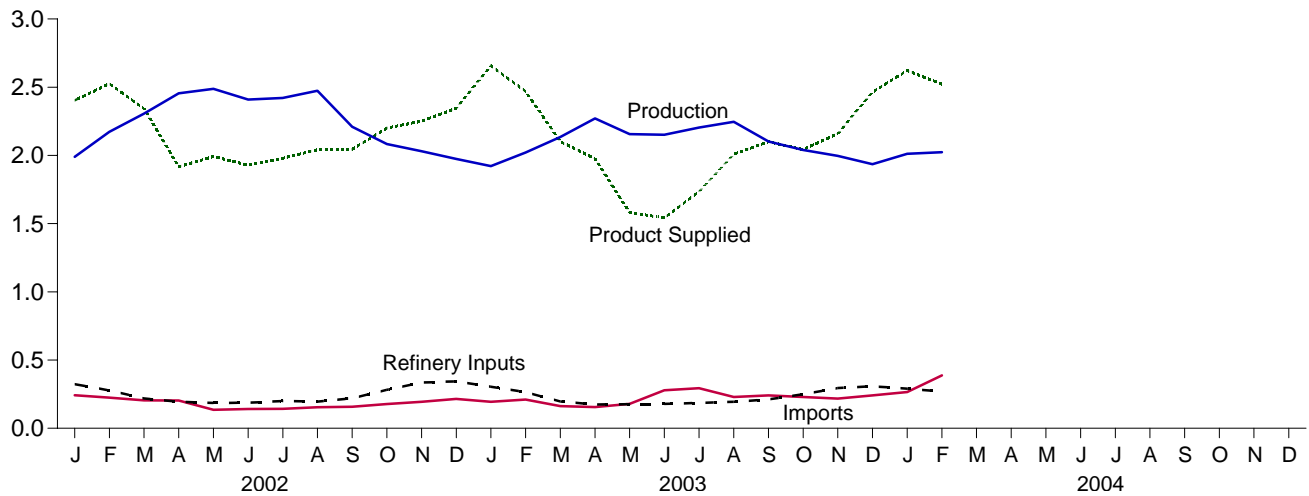
Sources: • 1973-1991: Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S7. • 1992 forward: EIA, *Petroleum Supply Monthly*, April 2004, Table S7.

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

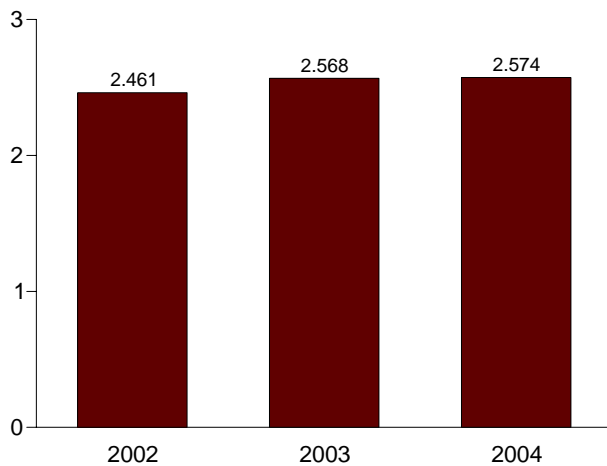
Overview, 1973-2003



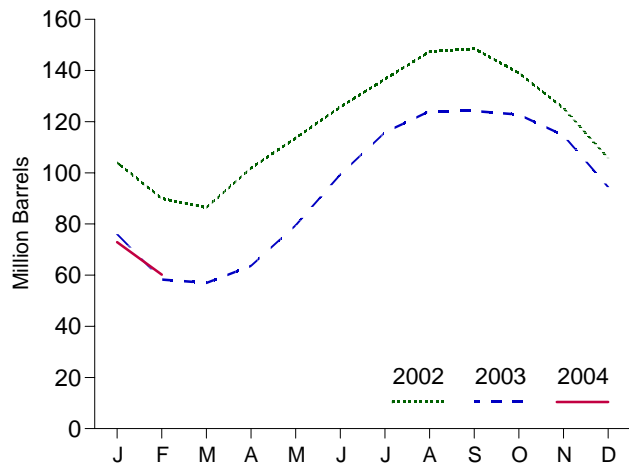
Overview, Monthly



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 3.8.

**Table 3.8 Liquefied Petroleum Gases Supply and Disposition**

	Supply		Disposition				Stocks <sup>b</sup>
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels per Day						
1973 Average .....	1,600	132	35	220	27	1,449	99
1974 Average .....	1,565	123	38	220	25	1,406	<sup>c</sup> 113
1975 Average .....	1,527	112	<sup>c</sup> 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	<sup>c</sup> 132
1979 Average .....	1,556	217	<sup>c</sup> -70	236	15	1,592	111
1980 Average .....	1,535	216	27	233	21	1,469	<sup>c</sup> 120
1981 Average .....	1,571	244	<sup>c</sup> 18	289	42	1,466	135
1982 Average .....	<sup>d</sup> 1,527	226	-111	300	65	1,499	<sup>c</sup> 94
1983 Average .....	1,642	190	<sup>c</sup> -4	253	73	1,509	<sup>c</sup> 101
1984 Average .....	1,697	195	<sup>c</sup> -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 Average .....	2,228	206	105	241	44	2,044	121
<b>2002</b> January .....	1,990	242	-546	323	52	2,403	104
February .....	2,173	225	-500	277	96	2,525	90
March .....	2,306	204	-115	218	64	2,343	86
April .....	2,455	203	516	194	32	1,916	102
May .....	2,488	136	379	186	67	1,992	114
June .....	2,409	141	403	187	31	1,929	126
July .....	2,421	142	353	199	33	1,979	137
August .....	2,475	154	347	195	46	2,041	147
September .....	2,210	158	36	220	67	2,045	149
October .....	2,083	178	-307	282	85	2,201	139
November .....	2,030	195	-458	334	98	2,251	125
December .....	1,974	216	-630	344	131	2,345	106
<b>Average .....</b>	<b>2,252</b>	<b>183</b>	<b>-42</b>	<b>247</b>	<b>67</b>	<b>2,163</b>	<b>106</b>
<b>2003</b> January .....	1,922	194	-959	304	113	2,657	76
February .....	2,021	210	-634	265	130	2,470	58
March .....	2,135	162	-43	197	43	2,101	57
April .....	2,272	156	225	175	51	1,977	64
May .....	2,157	179	510	176	67	1,582	79
June .....	2,151	279	663	179	45	1,542	99
July .....	2,204	294	530	186	47	1,735	116
August .....	2,247	230	269	194	5	2,009	124
September .....	2,103	242	2	212	29	2,101	124
October .....	2,040	230	-47	249	25	2,042	123
November .....	1,997	217	-271	295	31	2,159	115
December .....	1,936	241	-652	307	56	2,465	94
<b>Average .....</b>	<b>2,099</b>	<b>219</b>	<b>-31</b>	<b>228</b>	<b>53</b>	<b>2,068</b>	<b>94</b>
<b>2004</b> January .....	2,011	266	-693	291	58	2,622	73
February .....	2,023	388	-438	270	57	2,522	60
<b>2-Month Average .....</b>	<b>2,017</b>	<b>325</b>	<b>-570</b>	<b>280</b>	<b>58</b>	<b>2,574</b>	<b>60</b>
<b>2003 2-Month Average .....</b>	<b>1,969</b>	<b>202</b>	<b>-804</b>	<b>285</b>	<b>122</b>	<b>2,568</b>	<b>58</b>
<b>2002 2-Month Average .....</b>	<b>2,077</b>	<b>234</b>	<b>-525</b>	<b>301</b>	<b>73</b>	<b>2,461</b>	<b>90</b>

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are at end of period.

<sup>c</sup> See Note 4 at end of section.

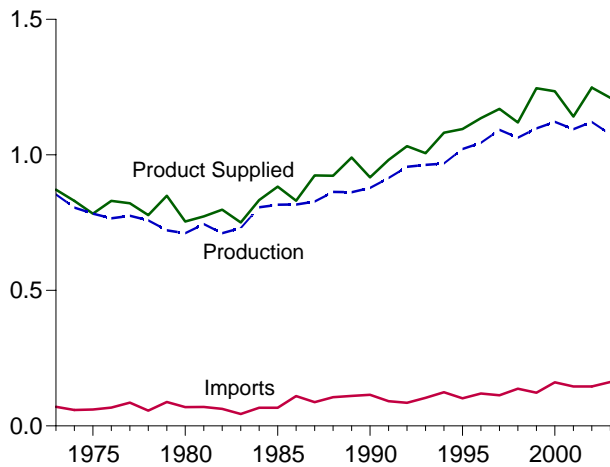
<sup>d</sup> See Note 6 at end of section.

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

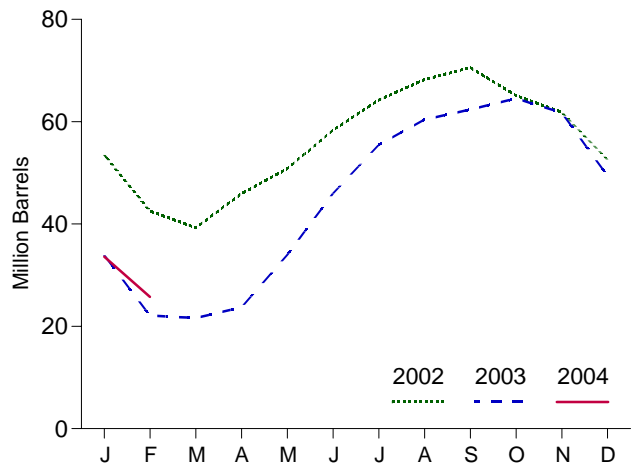
Sources: • **1973-1991:** Energy Information Administration (EIA), *Petroleum Supply Annual 1992, Volume 1*, May 1993, Table S8. • **1992 forward:** EIA, *Petroleum Supply Monthly*, April 2004, Table S9.

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

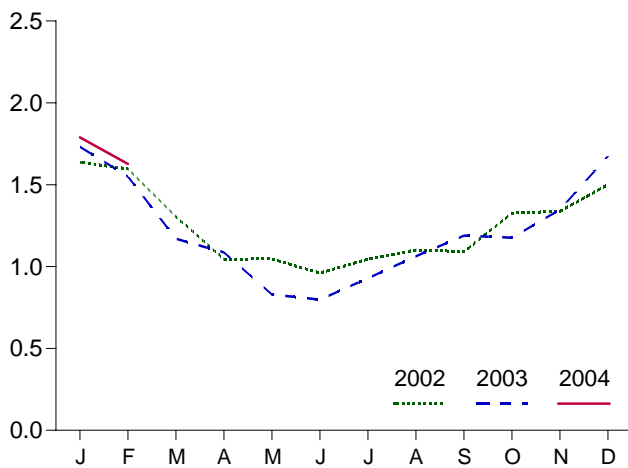
Overview, 1973-2003



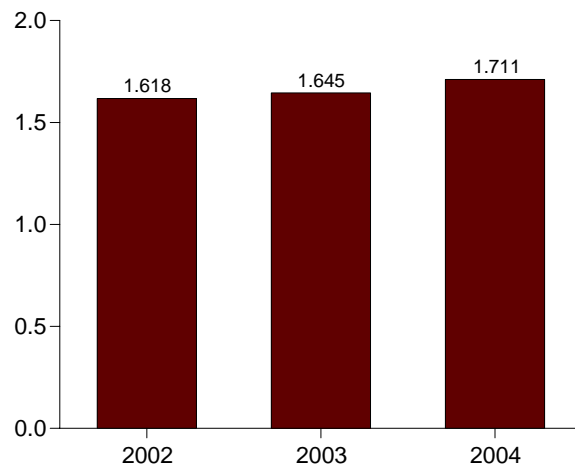
Stocks, End of Month



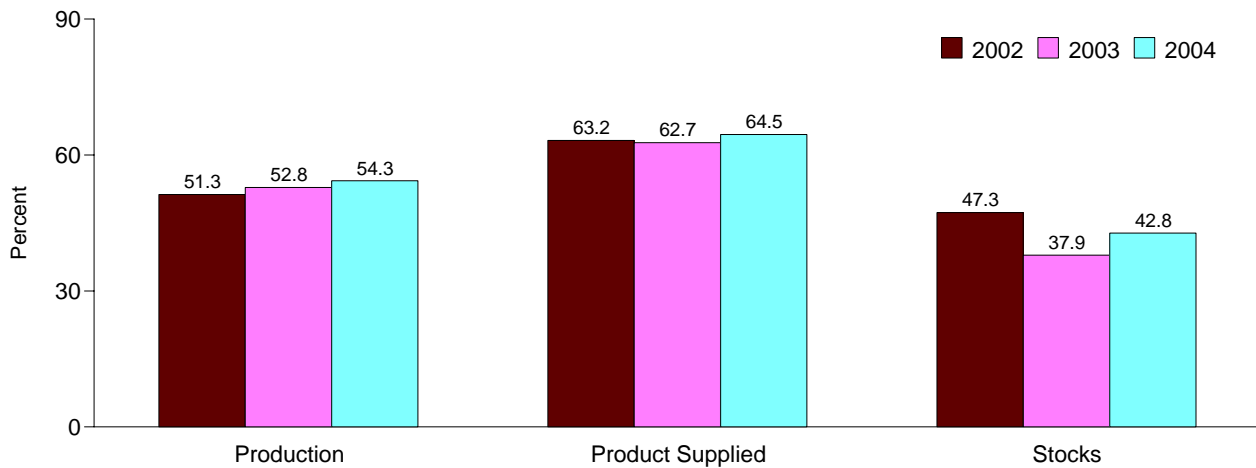
Product Supplied, Monthly



Product Supplied, January-February



Share of Liquefied Petroleum Gases, February



Note: Because vertical scales differ, graphs should not be compared.  
Web Page: <http://www.eia.doe.gov/emeu/mer/propylene.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 <sup>b</sup>
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Product Supplied	
	Thousand Barrels per Day						
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	<sup>c</sup> 87
1979 Average .....	721	88	<sup>c</sup> -61	14	8	849	64
1980 Average .....	711	69	4	12	10	754	<sup>c</sup> 65
1981 Average .....	745	70	<sup>c</sup> 18	5	18	773	76
1982 Average .....	711	63	-59	4	31	798	<sup>c</sup> 54
1983 Average .....	730	44	<sup>c</sup> -24	4	43	751	<sup>c</sup> 48
1984 Average .....	806	67	<sup>c</sup> 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 Average .....	1,095	145	67	0	31	1,142	66
<b>2002</b> January .....	1,082	201	-396	0	42	1,636	53
February .....	1,114	179	-391	0	87	1,597	43
March .....	1,111	147	-106	0	60	1,304	39
April .....	1,135	157	222	0	25	1,046	46
May .....	1,159	87	157	0	43	1,046	51
June .....	1,133	101	252	0	23	960	58
July .....	1,137	120	190	0	22	1,045	64
August .....	1,142	116	129	0	28	1,101	68
September .....	1,091	131	78	0	54	1,091	71
October .....	1,080	144	-176	0	74	1,327	65
November .....	1,143	170	-109	0	85	1,337	62
December .....	1,127	193	-299	0	119	1,501	53
<b>Average .....</b>	<b>1,121</b>	<b>145</b>	<b>-36</b>	<b>0</b>	<b>55</b>	<b>1,248</b>	<b>53</b>
<b>2003</b> January .....	1,063	161	-602	0	95	1,732	34
February .....	1,068	176	-422	0	116	1,550	22
March .....	1,061	124	-15	0	31	1,169	22
April .....	1,080	94	69	0	20	1,086	24
May .....	1,063	119	331	0	22	829	34
June .....	1,046	179	400	0	27	798	46
July .....	1,054	200	307	0	18	929	55
August .....	1,070	154	159	0	3	1,063	60
September .....	1,092	182	66	0	19	1,189	62
October .....	1,088	178	69	0	20	1,176	65
November .....	1,111	167	-93	0	24	1,347	62
December .....	1,115	207	-398	0	46	1,675	49
<b>Average .....</b>	<b>1,076</b>	<b>162</b>	<b>-9</b>	<b>0</b>	<b>36</b>	<b>1,210</b>	<b>49</b>
<b>2004</b> January .....	1,101	227	-509	0	49	1,789	34
February .....	1,099	309	-270	0	51	1,627	26
<b>2-Month Average .....</b>	<b>1,100</b>	<b>267</b>	<b>-394</b>	<b>0</b>	<b>50</b>	<b>1,711</b>	<b>26</b>
<b>2003 2-Month Average .....</b>	<b>1,065</b>	<b>168</b>	<b>-516</b>	<b>0</b>	<b>105</b>	<b>1,645</b>	<b>22</b>
<b>2002 2-Month Average .....</b>	<b>1,097</b>	<b>190</b>	<b>-393</b>	<b>0</b>	<b>63</b>	<b>1,618</b>	<b>43</b>

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are at end of period.

<sup>c</sup> 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 1993, Volume 1*, June 1994, Table S8. • **1992 forward:** EIA, *Petroleum Supply Monthly*, April 2004, Table S8.

**Table 3.10 Other Petroleum Products Supply and Disposition**

	Supply		Disposition				Stocks <sup>b</sup>
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Products Supplied	
	Thousand Barrels per Day						
<b>1973 Average</b> .....	2,833	290	1	750	162	2,211	179
<b>1974 Average</b> .....	2,722	269	25	665	172	2,129	<sup>c</sup> 188
<b>1975 Average</b> .....	2,547	144	<sup>c</sup> -6	537	158	2,001	188
<b>1976 Average</b> .....	2,725	129	(s)	524	172	2,158	188
<b>1977 Average</b> .....	2,939	130	20	514	164	2,371	195
<b>1978 Average</b> .....	3,076	80	-12	492	165	2,511	191
<b>1979 Average</b> .....	3,141	116	24	352	208	2,673	200
<b>1980 Average</b> .....	2,957	130	15	310	197	2,566	<sup>c</sup> 205
<b>1981 Average</b> .....	2,771	188	<sup>c</sup> -42	723	197	2,081	241
<b>1982 Average</b> .....	2,475	305	-68	787	205	<sup>d</sup> 1,857	<sup>c</sup> 216
<b>1983 Average</b> .....	2,437	382	<sup>c</sup> -6	712	236	1,877	<sup>c</sup> 217
<b>1984 Average</b> .....	2,500	503	<sup>c</sup> -32	791	236	2,007	198
<b>1985 Average</b> .....	2,532	550	22	886	227	1,947	206
<b>1986 Average</b> .....	2,704	504	-15	888	291	2,045	201
<b>1987 Average</b> .....	2,737	543	-1	829	264	2,187	200
<b>1988 Average</b> .....	2,773	645	22	799	294	2,303	208
<b>1989 Average</b> .....	2,771	627	12	797	305	2,285	213
<b>1990 Average</b> .....	2,842	705	-32	887	289	2,402	201
<b>1991 Average</b> .....	2,826	675	18	936	277	2,269	208
<b>1992 Average</b> .....	2,928	707	-3	906	263	2,470	<sup>c</sup> 207
<b>1993 Average</b> .....	<sup>e</sup> 3,035	770	<sup>c</sup> -2	1,081	<sup>e</sup> 300	<sup>e</sup> 2,426	206
<b>1994 Average</b> .....	2,973	761	24	861	329	2,518	215
<b>1995 Average</b> .....	3,031	708	-23	958	348	2,457	206
<b>1996 Average</b> .....	3,108	879	-11	1,014	376	2,608	202
<b>1997 Average</b> .....	3,204	945	30	985	402	2,733	213
<b>1998 Average</b> .....	3,253	888	18	1,002	380	2,741	219
<b>1999 Average</b> .....	3,211	943	-64	1,061	338	2,819	196
<b>2000 Average</b> .....	3,154	938	30	991	429	2,642	207
<b>2001 Average</b> .....	3,053	1,095	20	1,013	434	2,681	214
<b>2002</b>							
January .....	2,931	1,079	268	714	441	2,586	223
February .....	3,005	993	45	1,068	482	2,403	224
March .....	3,072	1,123	277	955	436	2,526	232
April .....	3,178	1,097	-53	1,195	472	2,660	231
May .....	3,140	1,322	-64	1,253	503	2,771	229
June .....	3,225	1,162	-164	1,204	445	2,903	224
July .....	3,295	1,246	-100	1,244	420	2,977	221
August .....	3,312	1,088	-309	1,240	550	2,918	211
September .....	3,261	1,078	-45	1,131	479	2,774	210
October .....	3,039	969	-59	1,005	471	2,592	208
November .....	3,109	1,014	16	1,024	503	2,581	209
December .....	3,071	844	-307	1,442	547	2,233	199
<b>Average</b> .....	<b>3,137</b>	<b>1,085</b>	<b>-42</b>	<b>1,123</b>	<b>479</b>	<b>2,662</b>	<b>199</b>
<b>2003</b>							
January .....	3,071	1,095	468	850	526	2,323	213
February .....	2,959	865	-13	803	464	2,570	213
March .....	3,177	1,065	337	830	525	2,549	223
April .....	3,079	1,070	56	930	451	2,712	225
May .....	3,221	1,267	11	1,205	526	2,747	225
June .....	3,051	1,482	91	937	478	3,026	228
July .....	3,233	1,212	-306	1,143	456	3,152	219
August .....	3,170	1,123	-322	1,184	499	2,932	209
September .....	3,388	1,131	124	965	537	2,893	212
October .....	3,172	938	-72	958	510	2,715	210
November .....	3,172	1,043	54	913	507	2,740	212
December .....	3,255	932	-186	1,185	487	2,701	206
<b>Average</b> .....	<b>3,164</b>	<b>1,103</b>	<b>20</b>	<b>994</b>	<b>498</b>	<b>2,756</b>	<b>206</b>
<b>2004</b>							
January .....	2,883	1,056	550	646	400	2,343	223
February .....	2,945	1,246	543	601	554	2,492	239
<b>2-Month Average</b> .....	<b>2,913</b>	<b>1,148</b>	<b>546</b>	<b>625</b>	<b>474</b>	<b>2,415</b>	<b>239</b>
<b>2003 2-Month Average</b> .....	<b>3,018</b>	<b>986</b>	<b>240</b>	<b>828</b>	<b>497</b>	<b>2,440</b>	<b>213</b>
<b>2002 2-Month Average</b> .....	<b>2,966</b>	<b>1,038</b>	<b>162</b>	<b>882</b>	<b>461</b>	<b>2,499</b>	<b>224</b>

<sup>a</sup> A negative number indicates a decrease in stocks and a positive number indicates an increase.

<sup>b</sup> Stocks are at end of period.

<sup>c</sup> See Note 4 at end of section.

<sup>d</sup> See Note 6 at end of section.

<sup>e</sup> 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*, April 2004, 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 January 2004 was forecast as 1.6 trillion cubic feet, 1 percent lower than production during January 2003.

Consumption of natural and supplemental gas in January 2004 was estimated as 2.6 trillion cubic feet, 3 percent lower than the level in January 2003.

Deliveries to residential consumers in January 2004 were forecast as 960 billion cubic feet, 1 percent higher than the previous January's deliveries. Total deliveries to industrial consumers during January 2004 were estimated as 750 billion cubic feet, 2 percent lower than the previous January's level. The electric power sector's use of natural gas in January 2004 was forecast as 300 billion cubic feet, 18

percent lower than the rate in January 2003.

Net imports of natural gas in January 2004 were estimated as 320 billion cubic feet, 7 percent higher than net imports in the previous January.

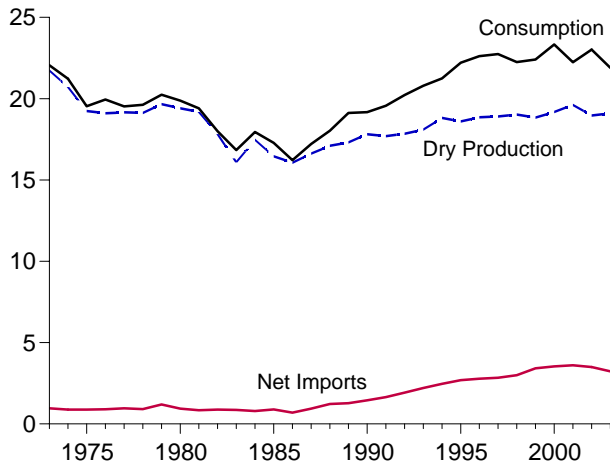
Stocks of working gas<sup>1</sup> in underground natural gas storage reservoirs at the end of January 2004 were 1,751 billion cubic feet, 14 percent higher than the level of stocks available 1 year earlier.

Net withdrawals from underground storage during January 2004 were 811 billion cubic feet, 4 percent less than the amount of net withdrawals during January 2003.

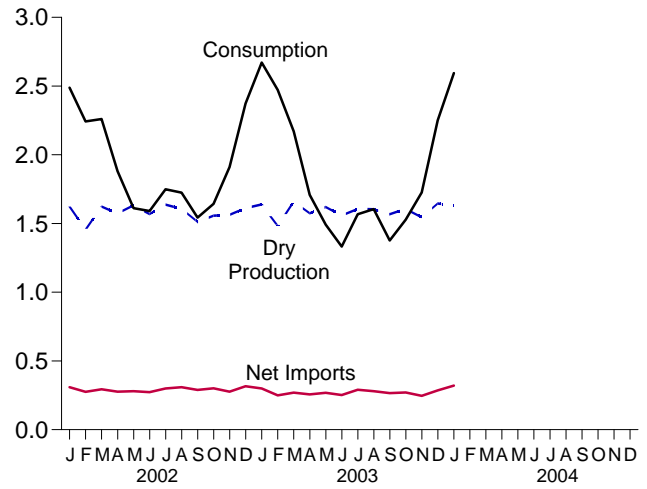
<sup>1</sup>Gas available for withdrawal.

**Figure 4.1 Natural Gas**  
(Trillion Cubic Feet)

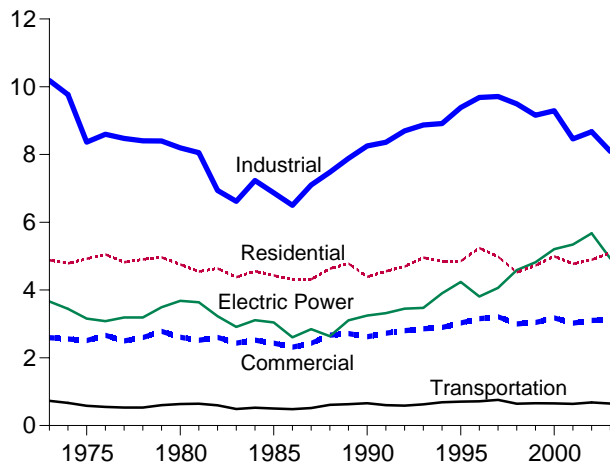
Overview, 1973-2003



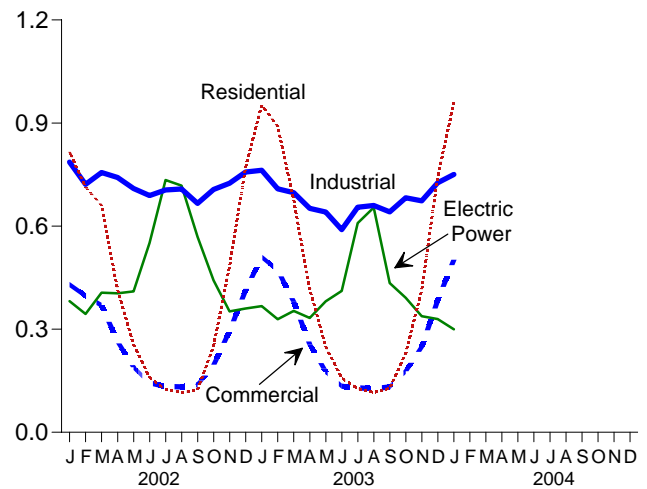
Overview, Monthly



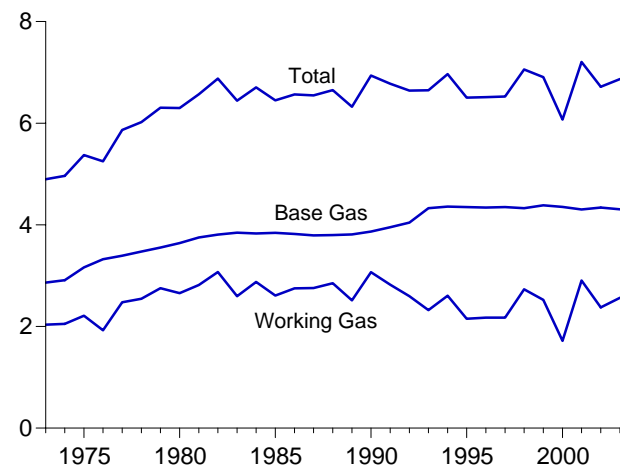
Consumption by Sector, 1973-2003



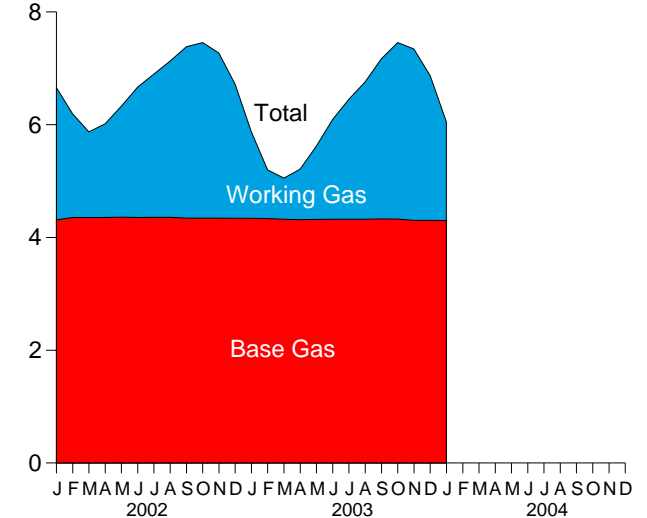
Consumption by Sector, Monthly



Underground Storage, End of Year, 1973-2003



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 <sup>a</sup>	Supplemental Gaseous Fuels <sup>b</sup>	Trade			Net Withdrawals <sup>c</sup>	Balancing Item <sup>d</sup>	Consumption <sup>e</sup>
			Imports	Exports	Net Imports			
1973 Total	f 21,731	NA	1,033	77	956	-442	-196	22,049
1974 Total	f 20,713	NA	959	77	882	-84	-289	21,223
1975 Total	f 19,236	NA	953	73	880	-344	-235	19,538
1976 Total	f 19,098	NA	964	65	899	165	-216	19,946
1977 Total	f 19,163	NA	1,011	56	955	-557	-41	19,521
1978 Total	f 19,122	NA	966	53	913	-120	-287	19,627
1979 Total	f 19,663	NA	1,253	56	1,198	-248	-372	20,241
1980 Total	19,403	155	985	49	936	23	-640	19,877
1981 Total	19,181	176	904	59	845	-297	-500	19,404
1982 Total	17,820	145	933	52	882	-308	d -537	18,001
1983 Total	16,094	132	918	55	864	447	d -703	16,835
1984 Total	17,466	110	843	55	788	-197	-217	17,951
1985 Total	16,454	126	950	55	894	235	-428	17,281
1986 Total	16,059	113	750	61	689	-147	-493	16,221
1987 Total	16,621	101	993	54	939	-6	-444	17,211
1988 Total	17,103	101	1,294	74	1,220	59	-453	18,030
1989 Total	17,311	107	1,382	107	1,275	326	101	9 19,119
1990 Total	17,810	123	1,532	86	1,447	-513	307	9 19,174
1991 Total	17,698	113	1,773	129	1,644	80	27	9 19,562
1992 Total	17,840	118	2,138	216	1,921	173	176	9 20,228
1993 Total	18,095	119	2,350	140	2,210	-36	401	20,790
1994 Total	18,821	111	2,624	162	2,462	-286	139	21,247
1995 Total	18,599	110	2,841	154	2,687	415	396	22,207
1996 Total	18,854	109	2,937	153	2,784	2	860	22,610
1997 Total	18,902	103	2,994	157	2,837	24	871	22,737
1998 Total	19,024	102	3,152	159	2,993	-530	657	22,246
1999 Total	18,832	98	3,586	163	3,422	172	-119	22,405
2000 Total	19,182	90	3,782	244	3,538	829	-305	23,333
2001 Total	19,616	86	3,977	373	3,604	-1,166	99	22,239
<b>2002</b> January	1,623	5	343	34	309	558	-7	2,488
February	1,455	5	306	30	276	474	34	2,243
March	1,624	6	333	38	294	327	10	2,260
April	1,573	4	315	39	276	-129	157	1,881
May	1,631	4	319	39	280	-330	26	1,612
June	1,569	4	318	45	273	-350	94	1,591
July	1,638	5	345	45	300	-248	54	1,749
August	1,607	5	356	47	310	-242	45	1,725
September	1,511	4	336	47	289	-276	13	1,543
October	1,558	5	343	42	301	-89	-132	1,643
November	1,563	6	331	55	276	202	-136	1,911
December	1,612	6	371	55	316	572	-132	2,373
<b>Total</b>	<b>18,964</b>	<b>60</b>	<b>4,015</b>	<b>516</b>	<b>3,499</b>	<b>R 468</b>	<b>R 27</b>	<b>23,018</b>
<b>2003</b> January	E 1,638	E 6	R 359	R 60	R 299	841	R -114	R 2,671
February	E 1,483	E 6	R 309	R 59	R 250	676	R 58	R 2,472
March	E 1,660	E 5	R 324	R 55	R 270	136	R 100	2,170
April	E 1,574	E 4	R 308	R 52	R 257	-158	R 31	R 1,708
May	E 1,620	E 6	R 319	R 50	R 269	-412	R 10	1,492
June	E 1,558	E 5	R 305	R 54	R 252	-470	R -12	1,332
July	E 1,606	E 6	R 341	R 50	R 291	-361	R 27	R 1,567
August	E 1,604	E 6	R 332	R 51	R 280	-309	R 24	R 1,605
September	E 1,568	E 5	R 321	R 55	R 266	-411	R -51	R 1,377
October	E 1,606	E 5	R 331	R 61	R 270	-284	R -70	R 1,527
November	RE 1,545	E 6	R 317	R 71	R 246	86	R -158	R 1,726
December	RE 1,645	RE 6	R 362	R 76	R 286	473	R -160	R 2,251
<b>Total</b>	<b>E 19,106</b>	<b>E 65</b>	<b>R 3,928</b>	<b>R 692</b>	<b>R 3,236</b>	<b>-193</b>	<b>R -314</b>	<b>R 21,899</b>
<b>2004</b> January	F 1,628	F 7	E 381	E 60	E 320	811	-172	E 2,594

<sup>a</sup> "Marketed Production (Wet)" minus "Extraction Loss." See Table 4.2.

<sup>b</sup> See Note 1 at end of section.

<sup>c</sup> For 1980-2002, includes liquefied natural gas stored in above-ground tanks.

<sup>d</sup> See Note 3 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).

<sup>e</sup> See Note 4 at end of section.

<sup>f</sup> May include unknown quantities of nonhydrocarbon gases.

<sup>g</sup> For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector" on Table 4.4. See Note 5 at end of section.

R=Revised. E=Estimate. NA=Not available. 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: • **Dry Gas Production:** Table 4.2. • **Supplemental Gaseous Fuels:** 1980-1997: Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports. 1998 forward: EIA, *Natural Gas Monthly (NGM)*, March 2004, Table 2. • **Trade:** Table 4.3. • **Net Withdrawals:** 1973-1997: EIA, *NGA 2000*, Table 94. 1998 forward: EIA, *NGM*, March 2004, Table 2. • **Consumption:** Table 4.4. • **Balancing Item:** Calculated as consumption minus dry gas production, supplemental gaseous fuels, net imports, and net withdrawals. • **Forecast values:** EIA, Short-Term Integrated Forecasting System. See Note 10 at end of section.

**Table 4.2 Natural Gas Production**  
(Billion Cubic Feet)

	Gross Withdrawals <sup>a</sup>	Repressuring <sup>b</sup>	Nonhydrocarbon Gases Removed <sup>c</sup>	Vented and Flared <sup>d</sup>	Marketed Production <sup>e</sup>	Extraction Loss <sup>f</sup>	Dry Gas Production <sup>g</sup>
1973 Total	24,067	1,171	NA	248	<sup>h</sup> 22,648	917	<sup>h</sup> 21,731
1974 Total	22,850	1,080	NA	169	<sup>h</sup> 21,601	887	<sup>h</sup> 20,713
1975 Total	21,104	861	NA	134	<sup>h</sup> 20,109	872	<sup>h</sup> 19,236
1976 Total	20,944	859	NA	132	<sup>h</sup> 19,952	854	<sup>h</sup> 19,098
1977 Total	21,097	935	NA	137	<sup>h</sup> 20,025	863	<sup>h</sup> 19,163
1978 Total	21,309	1,181	NA	153	<sup>h</sup> 19,974	852	<sup>h</sup> 19,122
1979 Total	21,883	1,245	NA	167	<sup>h</sup> 20,471	808	<sup>h</sup> 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 Total	24,174	3,380	505	91	20,198	1,016	19,182
2001 Total	24,501	3,371	463	97	20,570	954	19,616
<b>2002</b> January	2,062	305	43	9	1,705	82	1,623
February	1,864	289	39	7	1,528	73	1,455
March	2,066	308	44	8	1,706	82	1,624
April	1,986	284	43	8	1,652	79	1,573
May	2,030	264	44	8	1,713	82	1,631
June	1,969	270	43	8	1,648	79	1,569
July	2,038	266	44	8	1,720	83	1,638
August	2,023	281	44	9	1,688	81	1,607
September	1,918	279	43	8	1,588	76	1,511
October	1,982	302	37	8	1,636	78	1,558
November	1,987	298	39	8	1,642	79	1,563
December	2,052	309	40	10	1,693	81	1,612
<b>Total</b>	<b>23,977</b>	<b>3,455</b>	<b>502</b>	<b>99</b>	<b>19,921</b>	<b>957</b>	<b>18,964</b>
<b>2003</b> January	<sup>E</sup> 2,095	<sup>E</sup> 333	<sup>E</sup> 33	<sup>E</sup> 9	<sup>E</sup> 1,721	<sup>E</sup> 83	<sup>E</sup> 1,638
February	<sup>E</sup> 1,905	<sup>E</sup> 310	<sup>E</sup> 30	<sup>E</sup> 8	<sup>E</sup> 1,558	<sup>E</sup> 75	<sup>E</sup> 1,483
March	<sup>E</sup> 2,115	<sup>E</sup> 331	<sup>E</sup> 32	<sup>E</sup> 9	<sup>E</sup> 1,743	<sup>E</sup> 84	<sup>E</sup> 1,660
April	<sup>E</sup> 1,999	<sup>E</sup> 307	<sup>E</sup> 30	<sup>E</sup> 8	<sup>E</sup> 1,654	<sup>E</sup> 79	<sup>E</sup> 1,574
May	<sup>E</sup> 2,042	<sup>E</sup> 302	<sup>E</sup> 30	<sup>E</sup> 9	<sup>E</sup> 1,701	<sup>E</sup> 82	<sup>E</sup> 1,620
June	<sup>E</sup> 1,973	<sup>E</sup> 297	<sup>E</sup> 31	<sup>E</sup> 7	<sup>E</sup> 1,637	<sup>E</sup> 79	<sup>E</sup> 1,558
July	<sup>E</sup> 2,014	<sup>E</sup> 287	<sup>E</sup> 32	<sup>E</sup> 8	<sup>E</sup> 1,687	<sup>E</sup> 81	<sup>E</sup> 1,606
August	<sup>E</sup> 2,027	<sup>E</sup> 302	<sup>E</sup> 33	<sup>E</sup> 8	<sup>E</sup> 1,684	<sup>E</sup> 81	<sup>E</sup> 1,604
September	<sup>E</sup> 1,981	<sup>E</sup> 294	<sup>E</sup> 32	<sup>E</sup> 8	<sup>E</sup> 1,647	<sup>E</sup> 79	<sup>E</sup> 1,568
October	<sup>E</sup> 2,044	<sup>E</sup> 316	<sup>E</sup> 34	<sup>E</sup> 8	<sup>E</sup> 1,687	<sup>E</sup> 81	<sup>E</sup> 1,606
November	<sup>RE</sup> 1,978	<sup>RE</sup> 314	<sup>RE</sup> 33	<sup>E</sup> 7	<sup>RE</sup> 1,623	<sup>E</sup> 78	<sup>RE</sup> 1,545
December	<sup>RE</sup> 2,093	<sup>RE</sup> 322	<sup>RE</sup> 35	<sup>RE</sup> 8	<sup>E</sup> 1,728	<sup>RE</sup> 83	<sup>RE</sup> 1,645
<b>Total</b>	<sup>RE</sup> <b>24,265</b>	<sup>RE</sup> <b>3,716</b>	<sup>RE</sup> <b>385</b>	<sup>RE</sup> <b>95</b>	<sup>RE</sup> <b>20,070</b>	<sup>RE</sup> <b>964</b>	<sup>E</sup> <b>19,106</b>
<b>2004</b> January	<sup>F</sup> 2,064	<sup>F</sup> 303	<sup>F</sup> 43	<sup>F</sup> 9	<sup>F</sup> 1,710	<sup>F</sup> 82	<sup>F</sup> 1,628

<sup>a</sup> Gas withdrawn from gas and oil wells.

<sup>b</sup> The injection of natural gas into oil and gas formations for pressure maintenance and cycling purposes.

<sup>c</sup> See Note 6 at end of section.

<sup>d</sup> 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.

<sup>e</sup> "Gross Withdrawals" minus "Repressuring," "Nonhydrocarbon Gases Removed," and "Vented and Flared." See Note 7 at end of section.

<sup>f</sup> See Note 8 at end of section.

<sup>g</sup> "Marketed Production (Wet)" minus "Extraction Loss."

<sup>h</sup> 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: • **1973-1997:** Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 93. • **1998 forward:** EIA, *Natural Gas Monthly*, March 2004, Table 1. • **Forecast values:** EIA, Short-Term Integrated Forecasting System. See Note 10 at end of section.

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

	Imports							Exports				
	Algeria <sup>a</sup>	Australia <sup>a</sup>	Canada <sup>b</sup>	Mexico <sup>b</sup>	Qatar <sup>a</sup>	Trinidad and Tobago <sup>a</sup>	Other <sup>c</sup>	Total	Canada <sup>b</sup>	Japan <sup>a</sup>	Mexico <sup>b</sup>	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	(s)	904	(s)	56	3	59
1982 Total	55	0	783	95	0	0	(s)	933	(s)	50	2	52
1983 Total	131	0	712	75	0	0	(s)	918	(s)	53	2	55
1984 Total	36	0	755	52	0	0	(s)	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 Total	47	6	3,544	12	46	99	28	3,782	73	66	106	244
2001 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	298	1	0	8	0	306	16	4	11	30
March	0	0	322	0	0	10	0	333	14	6	18	38
April	2	0	298	0	5	10	0	315	13	7	19	39
May	7	0	291	0	6	10	5	319	15	2	23	39
June	5	0	292	0	14	7	0	318	14	6	25	45
July	5	0	323	0	5	11	0	345	12	6	28	45
August	0	0	332	0	3	16	6	356	12	6	29	47
September	0	0	319	0	3	14	0	336	13	6	28	47
October	0	0	316	0	0	22	5	343	10	6	26	42
November	3	0	309	0	0	19	0	331	28	6	21	55
December	3	0	351	0	0	18	0	371	26	6	23	55
Total	27	0	3,785	2	35	151	16	4,015	189	63	263	516
2003 January	0	0	R 336	0	0	23	0	R 359	R 27	4	28	R 60
February	0	0	R 288	0	0	21	0	R 309	R 28	6	25	R 59
March	3	0	R 293	0	2	26	0	R 324	R 32	6	17	R 55
April	11	0	R 276	0	0	19	3	R 308	R 26	6	20	R 52
May	4	0	R 273	0	0	30	11	R 319	R 18	4	29	R 50
June	3	0	R 258	0	0	34	11	R 305	R 20	3	30	R 54
July	5	0	R 283	0	3	44	5	R 341	R 16	7	27	R 50
August	3	0	R 283	0	0	35	11	R 332	R 16	5	30	R 51
September	8	0	R 267	0	6	29	11	R 321	R 21	5	28	R 55
October	11	0	R 273	0	3	38	6	R 331	R 20	8	R 33	R 61
November	3	0	R 270	0	0	40	4	R 317	R 32	6	R 33	R 71
December	3	0	R 322	0	0	37	R 0	R 362	R 38	6	R 32	R 76
Total	53	0	R 3,421	0	14	378	61	R 3,928	R 294	64	R 333	R 692
2004 January	NA	NA	E 341	0	NA	NA	NA	E 381	E 23	5	E 32	E 60

<sup>a</sup> As liquefied natural gas.

<sup>b</sup> 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 9 at end of section.

<sup>c</sup> Indonesia 1986 and 2000; the United Arab Emirates 1996-2000; Malaysia 1999, 2002, and 2003; Nigeria 2000 forward; Oman 2000 forward; and Brunei 2002.

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

Notes: • See Note 9 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: • 1973-1997: Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas."  
• 1998 forward: EIA, *Natural Gas Monthly*, March 2004, Tables 5 and 6; and Department of Energy, Office of Fossil Energy, "Natural Gas Imports and Exports."

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

	End-Use Sectors											Electric Power Sector <sup>e,f</sup>	Total
	Residential	Commercial <sup>a</sup>	Lease and Plant Fuel	Industrial			Transportation			Total			
				Other Industrial		Total	Pipeline Fuel <sup>d</sup>	Vehicle Fuel	Total				
				CHP <sup>b</sup>	Non-CHP <sup>c</sup>						Total		
1973 Total .....	4,879	2,597	1,496	(g)	8,689	8,689	10,185	728	NA	728	3,660	22,049	
1974 Total .....	4,786	2,556	1,477	(g)	8,292	8,292	9,769	669	NA	669	3,443	21,223	
1975 Total .....	4,924	2,508	1,396	(g)	6,968	6,968	8,365	583	NA	583	3,158	19,538	
1976 Total .....	5,051	2,668	1,634	(g)	6,964	6,964	8,598	548	NA	548	3,081	19,946	
1977 Total .....	4,821	2,501	1,659	(g)	6,815	6,815	8,474	533	NA	533	3,191	19,521	
1978 Total .....	4,903	2,601	1,648	(g)	6,757	6,757	8,405	530	NA	530	3,188	19,627	
1979 Total .....	4,965	2,786	1,499	(g)	6,899	6,899	8,398	601	NA	601	3,491	20,241	
1980 Total .....	4,752	2,611	1,026	(g)	7,172	7,172	8,198	635	NA	635	3,682	19,877	
1981 Total .....	4,546	2,520	928	(g)	7,128	7,128	8,055	642	NA	642	3,640	19,404	
1982 Total .....	4,633	2,606	1,109	(g)	5,831	5,831	6,941	596	NA	596	3,226	18,001	
1983 Total .....	4,381	2,433	978	(g)	5,643	5,643	6,621	490	NA	490	2,911	16,835	
1984 Total .....	4,555	2,524	1,077	(g)	6,154	6,154	7,231	529	NA	529	3,111	17,951	
1985 Total .....	4,433	2,432	966	(g)	5,901	5,901	6,867	504	NA	504	3,044	17,281	
1986 Total .....	4,314	2,318	923	(g)	5,579	5,579	6,502	485	NA	485	2,602	16,221	
1987 Total .....	4,315	2,430	1,149	(g)	5,953	5,953	7,103	519	NA	519	2,844	17,211	
1988 Total .....	4,630	2,670	1,096	(g)	6,383	6,383	7,479	614	NA	614	2,636	18,030	
1989 Total .....	4,781	2,718	1,070	914	5,903	h 6,816	7,886	629	NA	629	f,h 3,105	h 19,119	
1990 Total .....	4,391	2,623	1,236	1,055	5,963	h 7,018	8,255	660	(s)	660	h 3,245	h 19,174	
1991 Total .....	4,556	2,729	1,129	1,061	6,170	h 7,231	8,360	601	(s)	602	h 3,316	h 19,562	
1992 Total .....	4,690	2,803	1,171	1,108	6,419	h 7,527	8,698	588	2	590	h 3,448	h 20,228	
1993 Total .....	4,956	2,862	1,172	1,125	6,575	7,700	8,872	624	3	627	3,473	20,790	
1994 Total .....	4,848	2,895	1,124	1,178	6,611	7,790	8,913	685	3	689	3,903	21,247	
1995 Total .....	4,850	3,031	1,220	1,260	6,904	8,164	9,384	700	5	705	4,237	22,207	
1996 Total .....	5,241	3,158	1,250	1,289	7,146	8,435	9,685	711	6	718	3,807	22,610	
1997 Total .....	4,984	3,215	1,203	1,282	7,229	8,511	9,714	751	8	760	4,065	22,737	
1998 Total .....	4,520	2,999	1,173	1,355	6,965	8,320	9,493	635	9	645	4,588	22,246	
1999 Total .....	4,726	3,045	1,079	1,401	6,678	8,079	9,158	645	12	657	4,820	22,405	
2000 Total .....	4,996	3,182	1,151	1,386	6,757	8,142	9,293	642	13	655	5,206	23,333	
2001 Total .....	4,771	3,023	1,119	1,310	6,035	7,344	8,463	625	15	640	5,342	22,239	
2002 January .....	816	430	96	114	577	691	786	73	E 1	74	381	2,488	
February .....	713	397	86	100	535	635	721	66	E 1	67	344	2,243	
March .....	661	369	96	107	553	660	756	66	E 1	67	407	2,260	
April .....	415	264	92	97	552	649	742	54	E 1	56	404	1,881	
May .....	255	190	95	107	507	614	709	46	E 1	47	410	1,612	
June .....	160	144	92	102	495	597	689	46	E 1	47	551	1,591	
July .....	125	134	95	111	499	610	705	50	E 1	52	734	1,749	
August .....	116	133	94	108	506	614	708	50	E 1	51	718	1,725	
September .....	124	139	89	101	476	577	666	44	E 1	45	569	1,543	
October .....	251	195	92	97	517	615	706	47	E 1	49	442	1,643	
November .....	483	295	92	97	535	632	725	55	E 1	57	352	1,911	
December .....	771	414	95	98	564	662	758	69	E 1	71	360	2,373	
Total .....	4,890	3,103	1,114	1,240	6,316	7,557	8,671	667	E 15	682	5,672	23,018	
2003 January .....	R 953	R 510	E 96	106	R 560	R 666	R 762	77	E 1	R 79	367	R 2,671	
February .....	R 890	472	E 87	93	528	621	709	R 72	E 1	73	329	R 2,472	
March .....	676	380	E 98	98	502	600	R 697	63	E 1	64	353	2,170	
April .....	R 417	256	E 93	87	472	R 559	652	R 50	E 1	51	333	R 1,708	
May .....	249	177	E 95	85	461	546	641	43	E 1	45	381	1,492	
June .....	157	134	E 92	93	405	498	590	39	E 1	40	411	1,332	
July .....	127	130	E 94	99	R 462	561	R 655	45	E 1	47	609	R 1,567	
August .....	116	R 127	E 94	104	R 462	R 566	R 660	R 47	E 1	48	654	R 1,605	
September .....	128	132	E 92	83	R 466	R 549	R 641	40	E 1	41	434	R 1,377	
October .....	230	R 178	E 94	98	R 490	R 588	682	44	E 1	46	391	R 1,527	
November .....	R 414	R 249	E 91	95	R 488	R 583	R 674	50	E 1	51	338	R 1,726	
December .....	R 743	R 385	E 97	R 98	R 531	R 630	R 726	R 65	E 1	R 66	R 329	R 2,251	
Total .....	R 5,101	R 3,129	RE 1,123	R 1,138	R 5,829	R 6,967	R 8,090	R 635	E 15	R 650	R 4,930	R 21,899	
2004 January .....	F 960	F 502	F 97	F 103	F 551	F 654	E 750	F 81	E 1	E 82	F 300	E 2,594	

<sup>a</sup> All commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of Section 7. See Table 7.3c for CHP fuel use.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants. See note at end of Section 7.

<sup>c</sup> All industrial sector fuel use other than that in "Lease and Plant Fuel" and "CHP."

<sup>d</sup> Natural gas consumed in the operation of pipelines, primarily in compressors.

<sup>e</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>f</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>g</sup> Included in "Non-CHP."

<sup>h</sup> For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector." See Note 5 at end of section.

R=Revised. E=Estimate. NA=Not available. F=Forecast. (s)=Less than 500 million cubic feet.

Notes: • Data are for natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately. • 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.

**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 <sup>a</sup>	Volume	Percent	Withdrawals	Injections	Net <sup>b,c</sup>
<b>1973 Total</b> .....	2,864	2,034	4,898	305	17.6	1,533	1,974	-442
<b>1974 Total</b> .....	2,912	2,050	4,962	16	.8	1,701	1,784	-84
<b>1975 Total</b> .....	3,162	2,212	5,374	162	7.9	1,760	2,104	-344
<b>1976 Total</b> .....	3,323	1,926	5,250	-286	-12.9	1,921	1,756	165
<b>1977 Total</b> .....	3,391	2,475	5,866	549	28.5	1,750	2,307	-557
<b>1978 Total</b> .....	3,473	2,547	6,020	72	2.9	2,158	2,278	-120
<b>1979 Total</b> .....	3,553	2,753	6,306	207	8.1	2,047	2,295	-248
<b>1980 Total</b> .....	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
<b>1981 Total</b> .....	3,752	2,817	6,569	162	6.1	1,887	2,180	-293
<b>1982 Total</b> .....	3,808	3,071	6,879	255	9.0	2,094	2,399	-305
<b>1983 Total</b> .....	3,847	2,595	6,442	-476	-15.5	2,142	1,700	442
<b>1984 Total</b> .....	3,830	2,876	6,706	281	10.8	2,064	2,252	-188
<b>1985 Total</b> .....	3,842	2,607	6,448	-270	-9.4	2,359	2,128	231
<b>1986 Total</b> .....	3,819	2,749	6,567	142	5.5	1,812	1,952	-140
<b>1987 Total</b> .....	3,792	2,756	6,548	7	.3	1,881	1,887	-6
<b>1988 Total</b> .....	3,800	2,850	6,650	94	3.4	2,244	2,174	69
<b>1989 Total</b> .....	3,812	2,513	6,325	-337	-11.8	2,804	2,491	313
<b>1990 Total</b> .....	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
<b>1991 Total</b> .....	3,954	2,824	6,778	-244	-8.0	2,689	2,608	80
<b>1992 Total</b> .....	4,044	2,597	6,641	-227	-8.0	2,724	2,555	168
<b>1993 Total</b> .....	4,327	2,322	6,649	-275	-10.6	2,717	2,760	-43
<b>1994 Total</b> .....	4,360	2,606	6,966	284	12.2	2,508	2,796	-288
<b>1995 Total</b> .....	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
<b>1996 Total</b> .....	4,341	2,173	6,513	19	.9	2,911	2,906	6
<b>1997 Total</b> .....	4,350	2,175	6,525	2	.1	2,824	2,800	24
<b>1998 Total</b> .....	4,326	2,730	7,056	554	25.5	2,379	2,905	-526
<b>1999 Total</b> .....	4,383	2,523	6,906	-207	-7.6	2,772	2,598	174
<b>2000 Total</b> .....	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
<b>2001 Total</b> .....	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
<b>2002 January</b> .....	4,313	2,344	6,657	1,078	85.2	606	59	546
February .....	4,356	1,838	6,194	925	101.4	520	55	464
March .....	4,355	1,518	5,873	776	104.7	428	108	320
April .....	4,355	1,659	6,014	666	67.1	112	238	-126
May .....	4,361	1,968	6,329	528	36.7	60	381	-322
June .....	4,355	2,308	6,663	426	22.6	56	397	-341
July .....	4,358	2,539	6,896	278	12.3	101	343	-242
August .....	4,357	2,773	7,130	198	7.7	90	325	-236
September .....	4,342	3,042	7,384	97	3.3	71	340	-269
October .....	4,342	3,116	7,458	-28	-9	145	232	-87
November .....	4,344	2,929	7,273	-325	-10.0	322	124	198
December .....	4,340	2,375	6,715	-528	-18.2	627	66	560
<b>Total</b> .....	<b>4,340</b>	<b>2,375</b>	<b>6,715</b>	<b>-528</b>	<b>-18.2</b>	<b>3,138</b>	<b>2,670</b>	<b>468</b>
<b>2003 January</b> .....	4,342	1,534	5,876	-810	-34.5	886	44	841
February .....	4,334	864	5,198	-974	-53.0	723	48	676
March .....	4,324	730	5,054	-788	-51.9	305	169	136
April .....	4,315	896	5,211	-763	-46.0	118	277	-158
May .....	4,322	1,300	5,622	-668	-33.9	41	453	-412
June .....	4,323	1,768	6,091	-540	-23.4	36	506	-470
July .....	4,323	2,129	6,451	-410	-16.1	64	426	-361
August .....	4,324	2,435	6,760	-338	-12.2	62	371	-309
September .....	4,328	2,843	7,171	-199	-6.5	31	441	-411
October .....	4,327	3,130	7,457	14	.5	59	343	-284
November .....	4,305	3,038	7,343	110	3.7	228	142	86
December .....	4,305	2,565	6,869	189	8.0	543	70	473
<b>Total</b> .....	<b>4,305</b>	<b>2,565</b>	<b>6,869</b>	<b>189</b>	<b>8.0</b>	<b>3,095</b>	<b>3,288</b>	<b>-193</b>
<b>2004 January</b> .....	4,301	1,751	6,052	217	14.1	869	59	811

<sup>a</sup> For total underground storage capacity at the end of each calendar year, see Note 8 at end of section.

<sup>b</sup> For 1980-2002, data differ from those shown on Table 4.1, which include liquefied natural gas storage for that period.

<sup>c</sup> 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 2 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. 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 Energy Information Administration (EIA) *Natural Gas Annual (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 2. 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 1980–2001 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 3. 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 Energy Information Administration (EIA) *Natural Gas Monthly NGM*, which was published in July 1985.

**Note 4. Consumption:** Consumption includes pipeline fuel use, lease and plant fuel use, and deliveries to consuming sectors.

Final data for series other than "Other Industrial CHP" and "Electric Power Sector" 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 5. Consumption, 1989-1992:** Prior to 1993, deliveries to nonutility generators were not separately collected from natural gas companies on Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." As a result, for 1989 through 1992, those volumes are probably included in both the industrial and electric power sectors and double-counted in total consumption. In 1993, 0.28 trillion cubic feet was reported as delivered to nonutility generators.

**Note 6. Nonhydrocarbon Gases Removed:** Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the EIA *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 *NGM*.

#### **Note 7. 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 8. 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 9. 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 10. 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 4.4 Sources**

##### **Residential, Commercial, Lease and Plant Fuel, and Pipeline Fuel**

1973–1997: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 95.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 3.

##### **Other Industrial Total**

1973–1992: EIA, *Natural Gas Annual 2000*, Table 95.

1993–1997: EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 3.

##### **Other Industrial CHP**

Table 7.3c.

##### **Electric Power Sector**

1973–1988: Table 7.3e.

1989 forward: Table 7.3b.

##### **Vehicle Fuel**

Annual Data:

1990 and 1991: EIA, *Natural Gas Annual 2000*, Table 95.

1992–1995: Science Applications International Corporation, "Alternative Transportation Fuels and Vehicles Data Development," unpublished final report prepared for EIA (McLean, VA, July 1996) and U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy.

1996–2002: EIA, Office of Coal, Nuclear, Electric, and Alternative Fuels.

Monthly Estimates: Derived by dividing the annual value by the number of days in the year and then multiplying by the number of days in the month.

**All Other Series:** Calculated.

**Forecast Values:** EIA, Short-Term Integrated Forecasting System. See Note 10.

## 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 and 1997: EIA, *Natural Gas Monthly*, February 2003, Table 9.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 9.

### 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 and 1997: EIA, *Natural Gas Monthly*, February 2003, Table 9.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 9.



## Section 5. Crude Oil and Natural Gas Resource Development

The March 2004 rotary rig count was 1,135, 1 percent higher than the count in February 2004 and 21 percent higher than the count in March 2003. Of the total number of rigs in operation, 1,041 were onshore and 94 were offshore. For March 2004, the number of onshore rigs was up 25 percent but the number of offshore rigs was down 10 percent from the March 2003 count. Rotary rigs drilling for natural gas as a share of total rigs stood at 85 percent in March 2004.

Total footage drilled in March 2004 was 15.7 million feet, 2 percent higher than the footage drilled in February 2004 and up 18 percent from that drilled in March 2003.

The number of exploratory and development crude oil and natural gas wells drilled during March 2004 was 2,348, up 2 percent from the number drilled in February 2004 and

up 18 percent from the number drilled in March 2003. The number of crude oil wells drilled was 494, and the number of natural gas wells was 1,854, 4 percent lower and 26 percent higher, respectively, than their March 2003 levels.

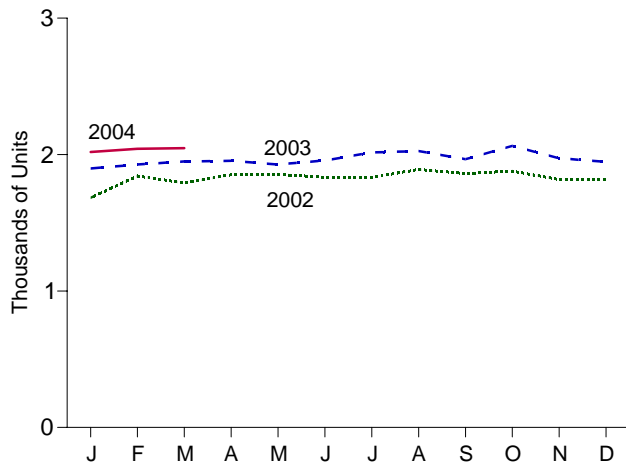
The number of dry holes drilled in March 2004 was 402, up 2 percent from the number drilled in February 2004 and up 17 percent from the number drilled in March 2003.

There were 2.0 thousand well service rigs active in March 2004, less than 1 percent higher than the previous month and 5 percent more than the count a year ago.

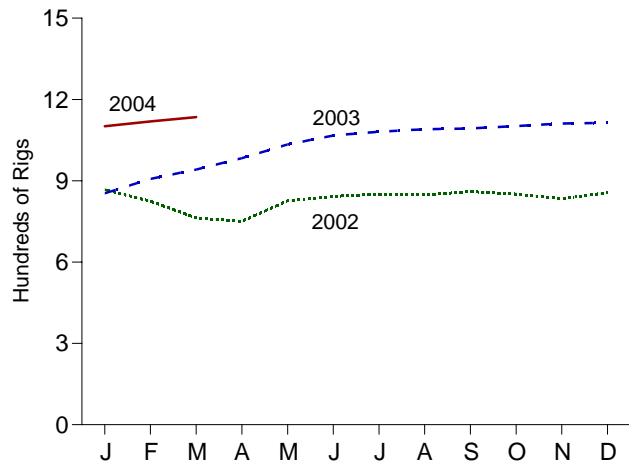
The number of seismic crews active in the 48 States onshore in March 2004 was 35, 7 more than a year earlier. The number of crews active in the 48 States offshore was 10, 1 less than a year earlier. No crews were active in Alaska in March 2004, 2 less than a year ago.

**Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators**

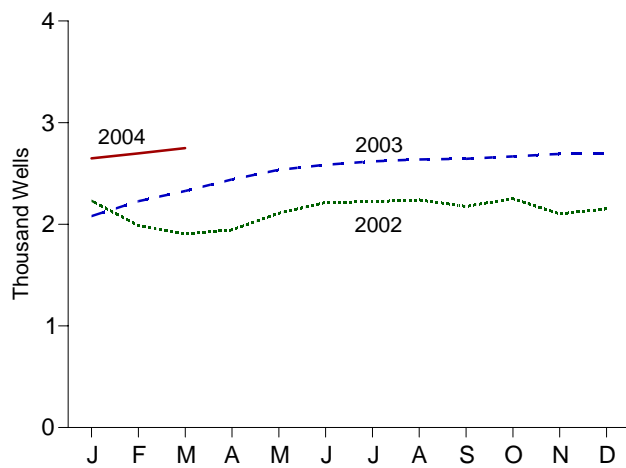
**Active Well Service Rig Count**



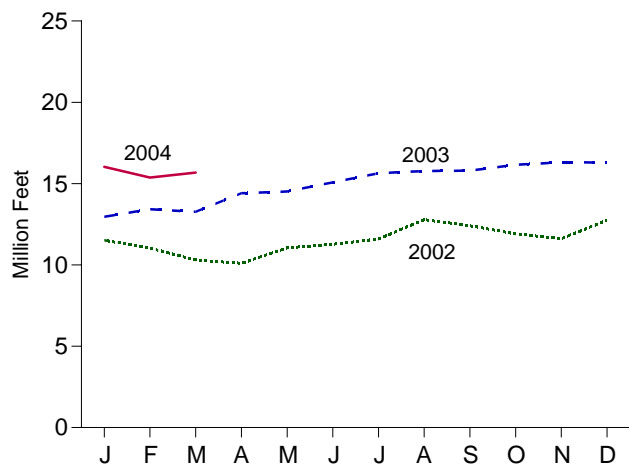
**Rotary Rigs in Operation**



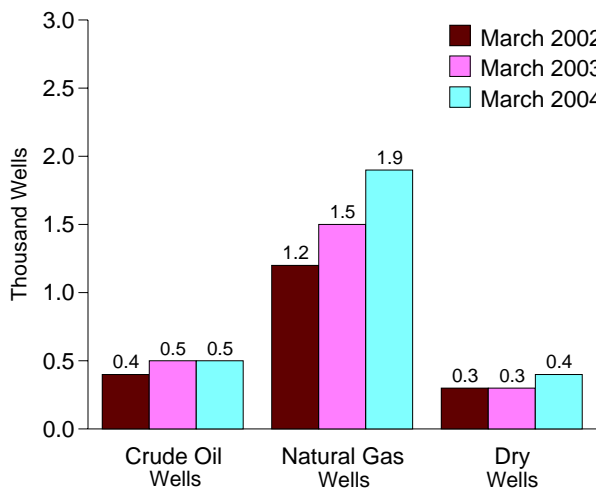
**Wells Drilled**



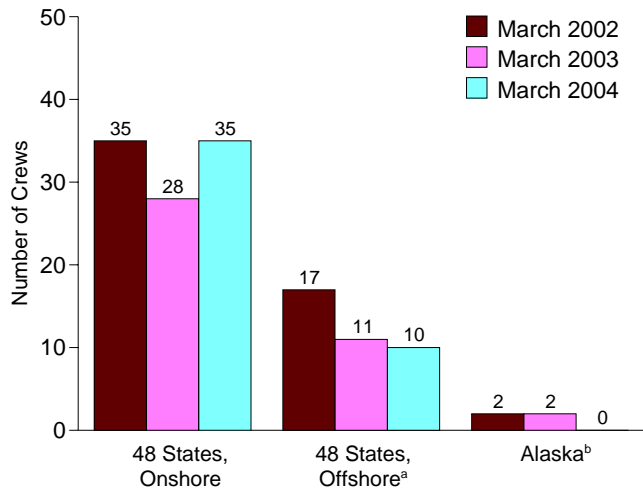
**Footage Drilled**



**Wells Drilled by Type**



**Maximum U.S. Active Seismic Crew Counts**



<sup>a</sup>Federal and State Jurisdiction waters of Gulf of Mexico.  
<sup>b</sup>All 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 <sup>a</sup>					Total Footage Drilled <sup>c</sup>	Active Well Service Rig Count <sup>d</sup>
	By Site		By Objective		Total <sup>b</sup>		
	Onshore	Offshore	Crude Oil	Natural Gas			
	Average						
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 Average .....	1,003	153	217	939	1,156	189,967	NA
<b>2002</b> 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	12,782	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	11,612	1,817
December .....	742	114	137	714	856	12,747	1,821
<b>Average .....</b>	<b>717</b>	<b>113</b>	<b>137</b>	<b>691</b>	<b>830</b>	<b>138,310</b>	<b>1,830</b>
<b>2003</b> January .....	743	111	132	718	854	12,962	1,898
February .....	797	110	153	750	907	13,429	1,928
March .....	836	105	171	767	941	13,269	1,950
April .....	877	106	185	795	983	14,409	1,954
May .....	921	113	167	864	1,034	14,515	1,927
June .....	958	109	152	910	1,067	15,080	1,957
July .....	974	107	153	924	1,081	15,637	2,016
August .....	979	111	153	932	1,090	15,776	2,026
September .....	984	109	154	936	1,093	15,796	1,966
October .....	997	105	158	941	1,102	16,156	2,064
November .....	1,005	106	158	952	1,111	16,307	1,973
December .....	1,010	104	153	959	1,114	16,301	1,946
<b>Average .....</b>	<b>924</b>	<b>108</b>	<b>157</b>	<b>872</b>	<b>1,032</b>	<b>179,637</b>	<b>1,967</b>
<b>2004</b> January .....	1,001	100	143	955	1,101	16,035	2,019
February .....	1,020	99	153	961	1,119	15,373	2,043
March .....	1,041	94	164	968	1,135	15,675	2,047
<b>3-Month Average ...</b>	<b>1,021</b>	<b>98</b>	<b>153</b>	<b>961</b>	<b>1,118</b>	<b>47,083</b>	<b>2,036</b>
<b>2003 3-Month Average ...</b>	<b>789</b>	<b>108</b>	<b>151</b>	<b>743</b>	<b>897</b>	<b>39,660</b>	<b>1,925</b>
<b>2002 3-Month Average ...</b>	<b>693</b>	<b>121</b>	<b>143</b>	<b>669</b>	<b>814</b>	<b>32,847</b>	<b>1,772</b>

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> Values shown are totals.

<sup>d</sup> See Glossary.

NA=Not available.

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	31,555
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	264	609	1,288	2,161	7,094	15,846	2,737	25,677	7,358	16,455	4,025	27,838
2001 Total	322	988	1,458	2,768	7,738	21,095	2,626	31,459	8,060	22,083	4,084	34,227
2002 January	R 15	60	108	R 183	R 513	1,328	207	R 2,048	528	1,388	315	2,231
February	16	72	103	191	418	1,231	148	1,797	434	1,303	251	1,988
March	16	62	96	174	419	1,126	185	1,730	435	1,188	281	1,904
April	29	39	94	162	459	1,142	182	1,783	488	1,181	276	1,945
May	24	48	103	175	447	1,287	199	1,933	471	1,335	302	2,108
June	15	49	86	150	532	1,310	222	2,064	547	1,359	308	2,214
July	22	45	83	150	522	1,323	228	2,073	544	1,368	311	2,223
August	14	59	105	178	540	1,322	200	2,062	554	1,381	305	2,240
September	18	61	106	185	440	1,349	203	1,992	458	1,410	309	2,177
October	16	58	106	180	569	1,300	203	2,072	585	1,358	309	2,252
November	20	56	84	160	519	1,252	171	1,942	539	1,308	255	2,102
December	20	59	106	185	455	1,309	203	1,967	475	1,368	309	2,152
Total	R 225	668	1,180	R 2,073	R 5,833	15,279	2,351	R 23,463	6,058	15,947	3,531	25,536
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
March	19	63	118	200	496	1,406	226	2,128	515	1,469	344	2,328
April	21	65	123	209	536	1,458	238	2,232	557	1,523	361	2,441
May	19	72	129	220	486	1,582	247	2,315	505	1,654	376	2,535
June	17	76	132	225	442	1,667	252	2,361	459	1,743	384	2,586
July	17	76	133	226	444	1,694	255	2,393	461	1,770	388	2,619
August	17	77	134	228	444	1,708	257	2,409	461	1,785	391	2,637
September	17	77	131	225	447	1,716	256	2,419	464	1,793	387	2,644
October	18	78	132	228	458	1,724	258	2,440	476	1,802	390	2,668
November	18	78	134	230	458	1,745	260	2,463	476	1,823	394	2,693
December	17	79	134	230	444	1,758	260	2,462	461	1,837	394	2,692
Total	212	862	1,519	2,593	5,482	19,149	2,927	27,558	5,694	20,011	4,446	30,151
2004 January	16	79	132	227	415	1,750	256	2,421	431	1,829	388	2,648
February	17	79	134	230	444	1,762	261	2,467	461	1,841	395	2,697
March	18	80	136	234	476	1,774	266	2,516	494	1,854	402	2,750
3-Month Total	51	238	402	691	1,335	5,286	783	7,404	1,386	5,524	1,185	8,095
2003 3-Month Total	51	184	337	572	1,323	4,097	644	6,064	1,374	4,281	981	6,636
2002 3-Month Total	47	194	307	548	1,350	3,685	540	5,575	1,397	3,879	847	6,123

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: • 1973-1994: Energy Information Administration (EIA), computations based on well reports submitted to the American Petroleum Institute. • 1995 forward: EIA computations based on well reports submitted to the Information Handling Services Energy Group, Inc.



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

	48 States, Onshore				48 States, Offshore <sup>a</sup>				Alaska <sup>b</sup>				Total
	Dimensions <sup>c</sup>			Total <sup>d</sup>	Dimensions <sup>c</sup>			Total <sup>d</sup>	Dimensions <sup>c</sup>			Total <sup>d</sup>	
	2	3	4		2	3	4		2	3	4		
<b>2000</b>													
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
<b>2001</b>													
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
<b>2002</b>													
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
<b>2003</b>													
January .....	8	19	1	28	8	4	0	12	0	0	0	0	40
February .....	9	20	0	29	8	4	0	12	0	0	0	0	41
March .....	8	20	0	28	7	4	0	11	1	1	0	2	41
April .....	7	20	0	27	7	4	0	11	1	1	0	2	40
May .....	7	17	0	24	8	4	0	12	1	1	0	2	38
June .....	7	18	0	25	8	4	0	12	1	1	0	2	39
July .....	7	21	0	28	7	4	0	11	1	1	0	2	41
August .....	8	22	0	30	7	4	0	11	1	1	0	2	43
September .....	8	22	0	30	7	2	0	9	0	0	0	0	39
October .....	7	24	0	31	5	3	0	8	0	0	0	0	39
November .....	7	24	0	31	4	3	0	7	0	0	0	0	38
December .....	7	25	0	32	5	5	0	10	0	0	0	0	42
<b>2004</b>													
January .....	8	25	0	33	5	5	0	10	0	0	0	0	43
February .....	8	27	0	35	5	5	0	10	0	0	0	0	45
March .....	8	27	0	35	5	5	0	10	0	0	0	0	45

<sup>a</sup> Federal and State Jurisdiction waters of the Gulf of Mexico.

<sup>b</sup> All onshore.

<sup>c</sup> 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.

<sup>d</sup> Includes crews with unknown survey dimension.

Notes: • A "seismic crew" is a group of people, of varying number, engaged in a seismic surveying job. • "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](mailto:william.trapmann@eia.doe.gov)).

## Section 6. Coal

Coal production in March 2004 totaled 93 million short tons, 4 percent higher than in March 2003.

Coal consumed by the electric power sector in January 2004 was forecast as 91 million short tons, slightly higher than the level in January 2003.

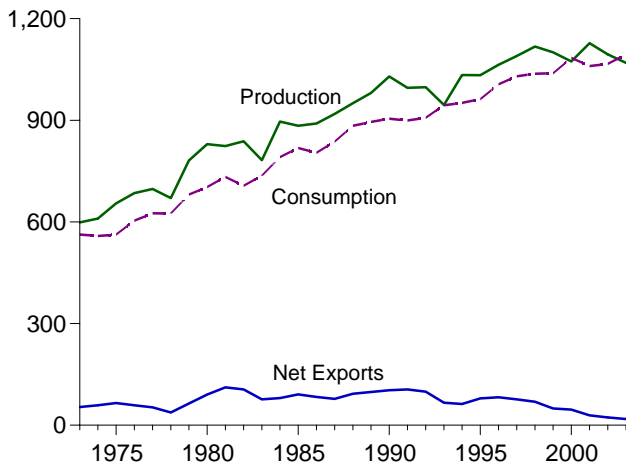
Electric power sector coal stocks were forecast as 115

million short tons at the end of January 2004, 15 percent lower than the level a year earlier.

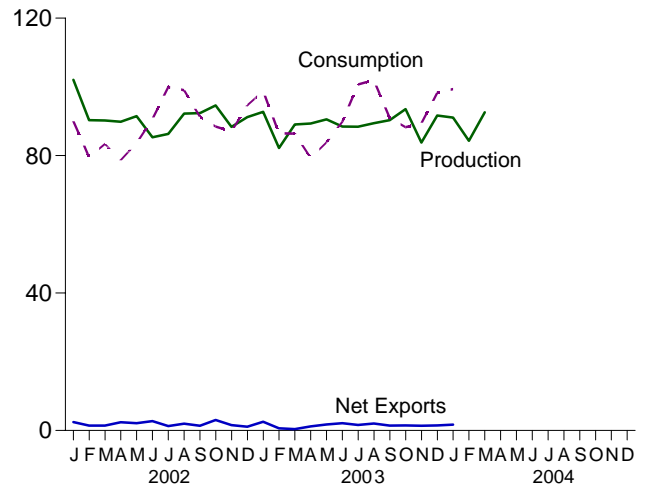
Coal exports in January 2004 totaled 3 million short tons, 6 percent lower than exports in January 2003. Coal imports in January 2004 totaled 2 million short tons, 54 percent higher than imports in January 2003.

**Figure 6.1 Coal**  
(Million Short Tons)

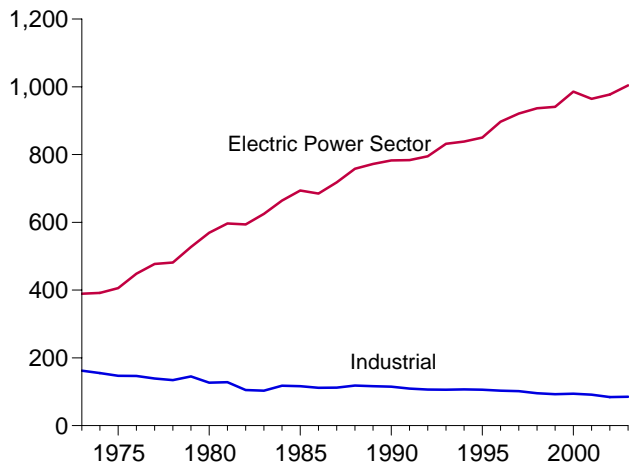
Overview, 1973-2003



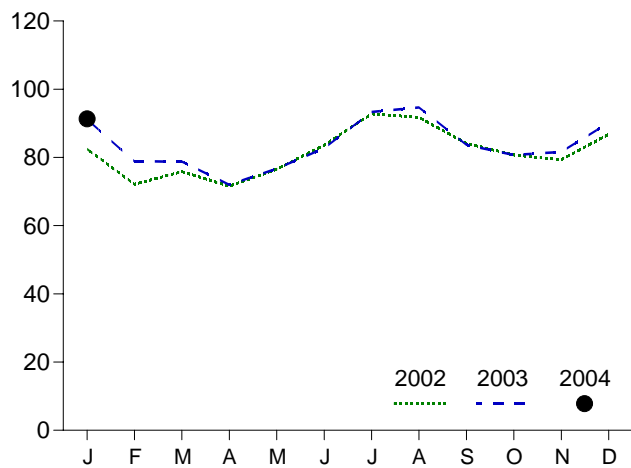
Overview, Monthly



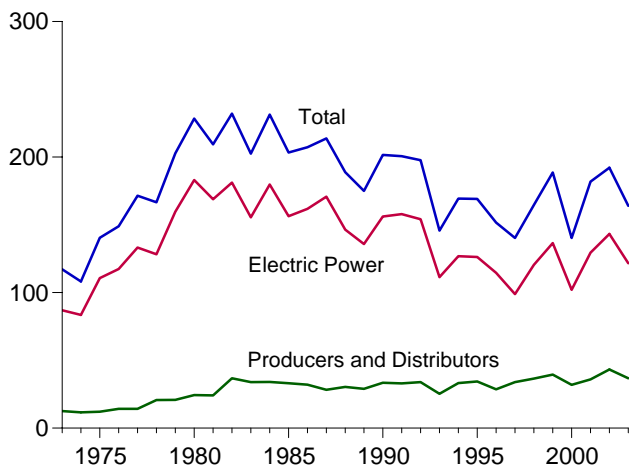
Consumption by Sector, 1973-2003



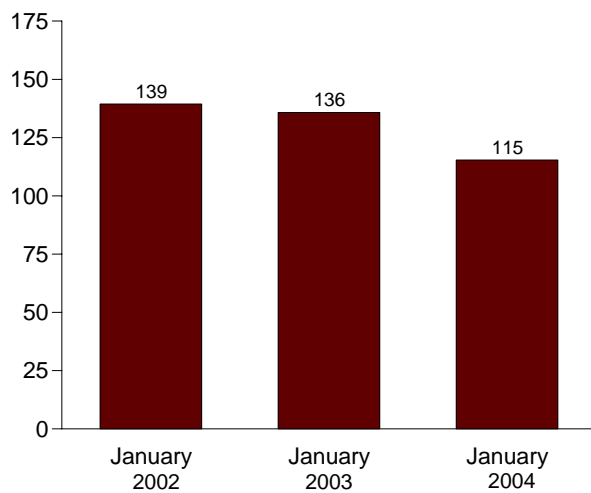
Electric Power Sector Consumption, Monthly



Stocks, End of Year, 1973-2003



Electric Power Sector Stocks, End of Month



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 <sup>a</sup>	Waste Coal <sup>b,c</sup>	Imports	Exports	Stock Change <sup>d</sup>	Losses and Unaccounted for <sup>e</sup>	Consumption
1973 Total .....	598,568	NA	127	53,587	( <sup>f</sup> )	<sup>g</sup> -17,476	562,584
1974 Total .....	610,023	NA	2,080	60,661	-8,918	1,958	558,402
1975 Total .....	654,641	NA	940	66,309	32,154	-5,522	562,640
1976 Total .....	684,913	NA	1,203	60,021	8,508	13,797	603,790
1977 Total .....	697,205	NA	1,647	54,312	22,644	-3,395	625,291
1978 Total .....	670,164	NA	2,953	40,714	-4,938	12,116	625,225
1979 Total .....	781,134	NA	2,059	66,042	36,206	421	680,524
1980 Total .....	829,700	NA	1,194	91,742	25,595	10,827	702,730
1981 Total .....	823,775	NA	1,043	112,541	-18,983	-1,063	732,627
1982 Total .....	838,112	NA	742	106,277	22,614	3,052	706,911
1983 Total .....	782,091	NA	1,271	77,772	-29,453	-1,629	736,672
1984 Total .....	895,921	NA	1,286	81,483	28,716	-4,288	791,296
1985 Total .....	883,638	NA	1,952	92,680	-27,934	2,796	818,049
1986 Total .....	890,315	NA	2,212	85,518	3,953	-1,175	804,231
1987 Total .....	918,762	NA	1,747	79,607	6,461	-2,499	836,941
1988 Total .....	950,265	NA	2,134	95,023	-24,949	-1,316	883,642
1989 Total .....	980,729	1,407	2,851	100,815	-13,744	2,916	895,000
1990 Total .....	1,029,076	3,339	2,699	105,804	26,542	-1,730	904,498
1991 Total .....	995,984	3,950	3,390	108,969	-947	-3,925	899,227
1992 Total .....	997,545	6,287	3,803	102,516	-2,997	461	907,655
1993 Total .....	945,424	8,137	8,181	74,519	-51,943	-4,916	944,081
1994 Total .....	1,033,504	8,227	8,870	71,359	23,617	4,340	951,286
1995 Total .....	1,032,974	8,561	9,473	88,547	-275	632	962,104
1996 Total .....	1,063,856	8,778	8,115	90,473	-17,456	1,411	1,006,321
1997 Total .....	1,089,932	8,096	7,487	83,545	-11,253	3,678	1,029,544
1998 Total .....	1,117,535	8,690	8,724	78,048	24,228	-4,430	1,037,103
1999 Total .....	1,100,431	8,683	9,089	58,476	23,988	-2,906	1,038,647
2000 Total .....	1,073,612	9,089	12,513	58,489	-48,309	938	1,084,095
2001 Total .....	1,127,689	( <sup>c</sup> )	19,787	48,666	41,630	-2,966	1,060,146
<b>2002</b> January .....	102,056	( <sup>c</sup> )	1,439	3,873	4,081	5,537	90,004
February .....	90,311	( <sup>c</sup> )	1,222	2,630	5,364	3,970	79,569
March .....	90,206	( <sup>c</sup> )	1,339	2,749	1,572	3,829	83,395
April .....	89,849	( <sup>c</sup> )	1,208	3,584	11,722	-2,938	78,688
May .....	91,478	( <sup>c</sup> )	1,227	3,330	1,035	4,681	83,658
June .....	85,341	( <sup>c</sup> )	1,422	4,128	-5,678	-2,301	90,613
July .....	86,326	( <sup>c</sup> )	1,573	2,843	-10,022	-4,898	99,977
August .....	92,203	( <sup>c</sup> )	1,555	3,529	-9,241	457	99,012
September .....	92,368	( <sup>c</sup> )	1,526	2,884	-1,726	1,431	91,305
October .....	94,608	( <sup>c</sup> )	1,369	4,407	4,288	-1,186	88,469
November .....	88,352	( <sup>c</sup> )	1,393	2,930	5,490	-5,690	87,016
December .....	91,184	( <sup>c</sup> )	1,602	2,712	3,330	-7,905	94,648
<b>Total .....</b>	<b>1,094,283</b>	<b>(<sup>c</sup>)</b>	<b>16,875</b>	<b>39,601</b>	<b>10,215</b>	<b>-5,012</b>	<b>1,066,355</b>
<b>2003</b> January .....	92,740	( <sup>c</sup> )	1,134	3,680	-13,191	4,594	98,790
February .....	82,207	( <sup>c</sup> )	1,804	2,428	-6,474	1,623	86,434
March .....	89,074	( <sup>c</sup> )	2,017	2,410	3,383	-1,103	86,402
April .....	89,317	( <sup>c</sup> )	2,390	3,571	10,181	-1,358	79,314
May .....	90,550	( <sup>c</sup> )	2,109	3,875	308	4,642	83,834
June .....	88,455	( <sup>c</sup> )	1,894	4,003	-684	-2,827	89,856
July .....	88,398	( <sup>c</sup> )	2,619	4,223	-11,499	-2,427	100,718
August .....	89,451	( <sup>c</sup> )	2,133	4,164	-10,112	-4,431	101,962
September .....	90,304	( <sup>c</sup> )	2,300	3,707	-677	-1,336	90,911
October .....	93,542	( <sup>c</sup> )	2,545	3,997	4,947	-1,108	88,251
November .....	83,794	( <sup>c</sup> )	2,358	3,737	2,118	-9,078	89,375
December .....	91,665	( <sup>c</sup> )	1,742	3,219	<sup>R</sup> -6,651	<sup>R</sup> -1,438	<sup>R</sup> 98,278
<b>Total .....</b>	<b>1,069,496</b>	<b>(<sup>c</sup>)</b>	<b>25,044</b>	<b>43,014</b>	<sup>R</sup> <b>-28,352</b>	<sup>R</sup> <b>-14,247</b>	<sup>R</sup> <b>1,094,126</b>
<b>2004</b> January .....	91,043	( <sup>c</sup> )	1,748	3,447	<sup>E</sup> -9,169	<sup>E</sup> -819	<sup>F</sup> 99,333
February .....	84,299	( <sup>c</sup> )	NA	NA	NA	NA	NA
March .....	92,585	( <sup>c</sup> )	NA	NA	NA	NA	NA
<b>3-Month Total .....</b>	<b>267,927</b>	<b>(<sup>c</sup>)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>2003 3-Month Total .....</b>	<b>264,021</b>	<b>(<sup>c</sup>)</b>	<b>4,954</b>	<b>8,518</b>	<b>-16,283</b>	<b>5,114</b>	<b>271,626</b>
<b>2002 3-Month Total .....</b>	<b>282,573</b>	<b>(<sup>c</sup>)</b>	<b>4,000</b>	<b>9,253</b>	<b>11,017</b>	<b>13,337</b>	<b>252,967</b>

<sup>a</sup> Beginning in 2001, includes bituminous refuse.

<sup>b</sup> Waste coal (including anthracite culm, bituminous gob, fine coal, and lignite waste) consumed by independent power producers. For 1989-2000, waste coal is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

<sup>c</sup> Beginning in 2001, bituminous refuse is included in "Production"; to avoid double counting, waste coal is not counted as a separate supply-side item for 2001 forward.

<sup>d</sup> A negative value indicates a decrease in stocks; a positive value indicates an increase.

<sup>e</sup> "Losses and Unaccounted for" is calculated as the sum of production, imports,

and waste coal, minus exports, stock change, and consumption.

<sup>f</sup> Included in "Losses and Unaccounted for."

<sup>g</sup> Includes stock change.

R=Revised. E=Estimate. NA=Not available. 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. • For methodology used to calculate production, consumption, and stock, see Notes 1, 2, and 3 at end of section.

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

Sources: See end of section.

**Table 6.2 Coal Consumption by Sector**  
(Thousand Short Tons)

	End-Use Sectors										Electric Power Sector <sup>e,f</sup>	Total
	Residential	Commercial			Coke Plants	Industrial			Total	Transportation		
		CHP <sup>a</sup>	Other <sup>b</sup>	Total		Other Industrial		Total				
					CHP <sup>c</sup>	Non-CHP <sup>d</sup>						
1973 Total	4,113	(g)	7,004	7,004	94,101	(h)	68,038	68,038	162,139	116	389,212	562,584
1974 Total	3,653	(g)	7,764	7,764	90,191	(h)	64,903	64,903	155,094	80	391,811	558,402
1975 Total	2,823	(g)	6,587	6,587	83,598	(h)	63,646	63,646	147,244	24	405,962	562,640
1976 Total	2,586	(g)	6,330	6,330	84,704	(h)	61,787	61,787	146,491	12	448,371	603,790
1977 Total	2,507	(g)	6,447	6,447	77,739	(h)	61,463	61,463	139,202	9	477,126	625,291
1978 Total	2,188	(g)	7,323	7,323	71,394	(h)	63,085	63,085	134,479	(h)	481,235	625,225
1979 Total	1,678	(g)	6,710	6,710	77,368	(h)	67,717	67,717	145,085	(h)	527,051	680,524
1980 Total	1,355	(g)	5,097	5,097	66,657	(h)	60,347	60,347	127,004	(h)	569,274	702,730
1981 Total	1,336	(g)	6,085	6,085	61,014	(h)	67,395	67,395	128,409	(h)	596,797	732,627
1982 Total	1,401	(g)	6,839	6,839	40,908	(h)	64,097	64,097	105,005	(h)	593,666	706,911
1983 Total	1,352	(g)	7,096	7,096	37,033	(h)	65,980	65,980	103,013	(h)	625,211	736,672
1984 Total	1,735	(g)	7,395	7,395	44,022	(h)	73,745	73,745	117,767	(h)	664,399	791,296
1985 Total	1,711	(g)	6,068	6,068	41,056	(h)	75,372	75,372	116,429	(h)	693,841	818,049
1986 Total	1,763	(g)	5,904	5,904	35,924	(h)	75,583	75,583	111,508	(h)	685,056	804,231
1987 Total	1,590	(g)	5,324	5,324	36,957	(h)	75,175	75,175	112,132	(h)	717,894	836,941
1988 Total	1,569	(g)	5,561	5,561	41,888	(h)	76,252	76,252	118,140	(h)	758,372	883,642
1989 Total	1,295	1,125	3,747	4,872	40,508	24,867	51,268	76,134	116,643	(h)	772,190	895,000
1990 Total	1,345	1,191	4,189	5,379	38,877	27,781	48,549	76,330	115,207	(h)	782,567	904,498
1991 Total	1,097	1,228	3,769	4,997	33,854	27,021	48,384	75,405	109,259	(h)	783,874	899,227
1992 Total	1,107	1,175	3,871	5,045	32,366	28,244	45,799	74,042	106,408	(h)	795,094	907,655
1993 Total	1,120	1,373	3,729	5,101	31,323	28,886	46,006	74,892	106,215	(h)	831,645	944,081
1994 Total	902	1,344	3,767	5,111	31,740	29,707	45,471	75,179	106,919	(h)	838,354	951,286
1995 Total	755	1,419	3,633	5,052	33,011	29,363	43,693	73,055	106,067	(h)	850,230	962,104
1996 Total	721	1,660	3,625	5,285	31,706	29,434	42,254	71,689	103,395	(h)	896,921	1,006,321
1997 Total	711	1,738	4,015	5,752	30,203	29,853	41,661	71,515	101,718	(h)	921,364	1,029,544
1998 Total	534	1,443	2,879	4,322	28,189	28,553	38,887	67,439	95,628	(h)	936,619	1,037,103
1999 Total	585	1,490	2,803	4,293	28,108	27,763	36,975	64,738	92,846	(h)	940,922	1,038,647
2000 Total	454	1,547	2,126	3,673	28,939	28,031	37,177	65,208	94,147	(h)	985,821	1,084,095
2001 Total	481	1,448	2,441	3,888	26,075	25,755	39,514	65,268	91,344	(h)	964,433	1,060,146
2002 January	54	127	313	440	1,861	2,278	2,946	5,224	7,085	(h)	82,424	90,004
February	47	102	282	384	1,763	1,990	3,240	5,230	6,993	(h)	72,144	79,569
March	45	124	239	363	1,917	2,150	3,097	5,247	7,164	(h)	75,823	83,395
April	40	100	222	322	1,932	2,115	2,721	4,835	6,767	(h)	71,560	78,688
May	30	105	139	245	1,995	2,110	2,750	4,860	6,856	(h)	76,528	83,658
June	28	112	113	225	1,910	2,101	2,785	4,886	6,796	(h)	83,565	90,613
July	39	126	187	313	1,973	2,439	2,448	4,887	6,860	(h)	92,766	99,977
August	34	127	151	279	2,054	2,153	2,739	4,893	6,947	(h)	91,752	99,012
September	25	116	84	200	2,041	2,150	2,745	4,895	6,936	(h)	84,144	91,305
October	33	114	150	264	2,186	2,231	3,041	5,272	7,458	(h)	80,714	88,469
November	49	116	281	397	2,015	2,237	3,016	5,253	7,268	(h)	79,301	87,016
December	65	134	391	525	2,009	2,279	2,986	5,265	7,274	(h)	86,784	94,648
Total	489	1,405	2,551	3,956	23,656	26,232	34,515	60,747	84,403	(h)	977,507	1,066,355
2003 January	60	146	337	484	1,941	2,484	2,713	5,196	7,138	(h)	91,109	98,790
February	50	127	278	405	1,958	2,169	3,014	5,183	7,141	(h)	78,838	86,434
March	37	125	173	298	2,105	2,254	2,939	5,193	7,297	(h)	78,770	86,402
April	42	110	228	338	2,047	2,089	2,805	4,893	6,941	(h)	71,993	79,314
May	30	94	147	241	1,964	1,952	2,934	4,886	6,849	(h)	76,714	83,834
June	26	118	94	212	2,059	2,139	2,761	4,900	6,959	(h)	82,659	89,856
July	37	137	164	301	2,079	2,391	2,585	4,975	7,055	(h)	93,326	100,718
August	37	144	155	299	2,007	2,397	2,574	4,971	6,977	(h)	94,649	101,962
September	24	121	70	192	2,024	1,995	2,982	4,977	7,001	(h)	83,695	90,911
October	29	114	121	235	2,001	2,247	3,028	5,276	7,277	(h)	80,710	88,251
November	46	118	255	373	1,976	2,180	3,181	5,360	7,336	(h)	81,620	89,375
December	72	R 137	R 442	579	2,087	R 2,431	R 2,908	5,340	7,427	(h)	R 90,201	R 98,278
Total	489	R 1,492	R 2,464	3,956	24,248	R 26,728	R 34,423	61,150	85,398	(h)	R 1,004,283	R 1,094,126
2004 January	F 98	F 133	F 365	F 498	F 2,120	F 2,475	F 2,840	F 5,315	F 7,435	(h)	F 91,303	F 99,333

<sup>a</sup> Commercial combined-heat-and-power (CHP) and a small number of commercial electricity-only plants, such as those at hospitals and universities. See note at end of Section 7.

<sup>b</sup> All commercial sector fuel use other than that in "Commercial CHP."

<sup>c</sup> Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants. See note at end of Section 7.

<sup>d</sup> All industrial sector fuel use other than that in "Coke Plants" and "Industrial CHP."

<sup>e</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>f</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>g</sup> Included in "Commercial Other."

<sup>h</sup> Included in "Industrial Non-CHP."

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

Notes: • CHP monthly data are from Table 7.3c; electric power sector monthly data are from Table 7.3b; all other monthly values are estimated. 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. **Forecast values:** Energy Information Administration, Short-Term Integrated Forecasting System. See Note 4 at end of section.

**Table 6.3 Coal Stocks by Sector**  
(Thousand Short Tons)

	Producers and Distributors	End-Use Sectors					Electric Power Sector <sup>b,c</sup>	Total
		Residential and Commercial	Industrial			Total		
			Coke Plants	Other <sup>a</sup>	Total			
1973 Year	12,530	290	6,998	10,370	17,368	17,658	86,967	117,155
1974 Year	11,634	280	6,209	6,605	12,814	13,094	83,509	108,237
1975 Year	12,108	233	8,797	8,529	17,326	17,559	110,724	140,391
1976 Year	14,221	240	9,902	7,100	17,002	17,242	117,436	148,899
1977 Year	14,225	220	12,816	11,063	23,879	24,099	133,219	171,543
1978 Year	20,695	360	8,278	9,048	17,326	17,686	128,225	166,606
1979 Year	20,826	340	10,155	11,777	21,932	22,272	159,714	202,812
1980 Year	24,379	NA	9,067	11,951	21,018	21,018	183,010	228,407
1981 Year	24,149	NA	6,475	9,906	16,381	16,381	168,893	209,423
1982 Year	36,784	NA	4,642	9,479	14,121	14,121	181,132	232,038
1983 Year	33,931	NA	4,346	8,710	13,056	13,056	155,598	202,584
1984 Year	34,090	NA	6,166	11,317	17,483	17,483	179,727	231,300
1985 Year	33,133	NA	3,420	10,438	13,857	13,857	156,376	203,367
1986 Year	32,093	NA	2,992	10,429	13,420	13,420	161,806	207,319
1987 Year	28,321	NA	3,884	10,777	14,662	14,662	170,797	213,780
1988 Year	30,418	NA	3,137	8,768	11,906	11,906	146,507	188,831
1989 Year	29,000	NA	2,864	7,363	10,227	10,227	135,860	175,087
1990 Year	33,418	NA	3,329	8,716	12,044	12,044	156,166	201,629
1991 Year	32,971	NA	2,773	7,061	9,835	9,835	157,876	200,682
1992 Year	33,993	NA	2,597	6,965	9,562	9,562	154,130	197,685
1993 Year	25,284	NA	2,401	6,716	9,117	9,117	111,341	145,742
1994 Year	33,219	NA	2,657	6,585	9,243	9,243	126,897	169,358
1995 Year	34,444	NA	2,632	5,702	8,334	8,334	126,304	169,083
1996 Year	28,648	NA	2,667	5,688	8,355	8,355	114,623	151,627
1997 Year	33,973	NA	1,978	5,597	7,576	7,576	98,826	140,374
1998 Year	36,530	NA	2,026	5,545	7,571	7,571	120,501	164,602
1999 Year	39,475	NA	1,943	5,569	7,511	7,511	<sup>c</sup> 141,604	188,590
2000 Year	31,905	NA	1,494	4,587	6,081	6,081	102,296	140,282
2001 Year	35,900	NA	1,510	6,006	7,516	7,516	138,496	181,912
2002 January	39,548	NA	1,427	5,618	7,045	7,045	139,400	185,992
February	41,589	NA	1,387	5,230	6,616	6,616	143,151	191,356
March	40,284	NA	1,360	4,842	6,202	6,202	146,443	192,929
April	44,961	NA	1,399	4,916	6,314	6,314	153,375	204,651
May	43,946	NA	1,437	4,990	6,427	6,427	155,313	205,686
June	41,288	NA	1,522	5,064	6,586	6,586	152,134	200,008
July	40,496	NA	1,535	5,321	6,856	6,856	142,634	189,985
August	36,489	NA	1,548	5,578	7,125	7,125	137,130	180,745
September	35,662	NA	1,561	5,834	7,395	7,395	135,962	179,019
October	35,191	NA	1,495	5,820	7,315	7,315	140,800	183,307
November	36,954	NA	1,430	5,806	7,236	7,236	144,608	188,797
December	43,257	NA	1,364	5,792	7,156	7,156	141,714	192,127
2003 January	<sup>F</sup> 36,498	NA	1,353	5,314	6,667	6,667	135,771	178,935
February	<sup>F</sup> 37,456	NA	1,341	4,837	6,177	6,177	128,828	172,461
March	<sup>F</sup> 38,994	NA	1,329	4,359	5,688	5,688	131,162	175,844
April	<sup>F</sup> 41,456	NA	1,377	4,297	5,674	5,674	138,895	186,025
May	<sup>F</sup> 36,789	NA	1,426	4,234	5,660	5,660	143,884	186,333
June	<sup>F</sup> 37,678	NA	1,474	4,172	5,646	5,646	142,325	185,649
July	<sup>F</sup> 35,435	NA	1,345	4,407	5,751	5,751	132,964	174,150
August	<sup>F</sup> 32,456	NA	1,215	4,642	5,857	5,857	125,725	164,038
September	<sup>F</sup> 34,973	NA	1,085	4,878	5,963	5,963	122,425	163,360
October	<sup>F</sup> 36,456	NA	1,025	4,824	5,849	5,849	126,002	168,307
November	<sup>F</sup> 38,489	NA	965	4,771	5,736	5,736	126,200	170,425
December	<sup>F</sup> 36,781	NA	905	4,718	5,623	5,623	<sup>R</sup> 121,371	<sup>R</sup> 163,775
2004 January	<sup>F</sup> 33,486	NA	<sup>F</sup> 1,195	<sup>F</sup> 4,532	<sup>F</sup> 5,727	<sup>F</sup> 5,727	<sup>F</sup> 115,392	<sup>F</sup> 154,605

<sup>a</sup> Through 1977, data are for stocks held by the manufacturing and transportation sectors. Beginning in 1978, data are for stocks held at manufacturing plants only.

<sup>b</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>c</sup> Through 1998, data are for stocks at electric utilities only. Beginning in 1999, data also include stocks at independent power producers.

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

Notes: • Stocks are at end of period. • Producer and distributor monthly values

are estimates derived from collected quarterly and annual data; end-use sector monthly values are estimates derived from collected quarterly data; and electric power sector monthly values are data from Table 7.4. 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. **Forecast values:** Energy Information Administration, 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 based on the quarterly values, which are released in March, June, September, and December. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

**Residential and Commercial—**Coal consumption by the residential and commercial sectors is reported to the Energy Information Administration (EIA) for the two sectors combined; EIA estimates the amount consumed by the sectors individually. To create the estimates, it is first assumed that an occupied coal-heated housing unit

consumes fuel at the same Btu rate as an oil-heated housing unit. Then, for the years in which data are available on the number of occupied housing units by heating source (1973-1981 and subsequent odd-numbered years), residential consumption of coal is estimated by the following steps: a ratio is created of the number of occupied housing units heated by coal to the number of occupied housing units heated by oil; that ratio is then multiplied times the Btu quantity of oil consumed by the residential sector to derive an estimate of the Btu quantity of coal consumed by the residential sector; and, finally, the amount estimated as the residential sector consumption is subtracted from the residential and commercial sectors’ combined consumption to derive the commercial sector’s estimated consumption. The 1999 share is applied to 2000 and succeeding years, and the other missing years’ shares are interpolated.

**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 Power Sector—Monthly consumption data for electric power 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 based on the quarterly values, which are released in March, June, September, and December. 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 Power—Monthly stocks data at electric power 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 (EIA), *Weekly Coal Production*.

### Waste Coal

EIA, Form EIA-860B, “Annual Electric Generator Report-Nonutility” and predecessor form.

### Imports and Exports

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

### Stocks Change

Calculated from data in Table 6.3.

### Losses and Unaccounted for

Calculated.

### Consumption

Table 6.2.

## 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 Power**

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

October 1977–1988: EIA, Form EIA-759 (formerly Form FPC-4), “Monthly Power Plant Report.”

1989–2000: Table 7.3b

2001 forward: EIA, Form EIA-906, “Power Plant Report.”

### **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.”

#### **Electric Power**

Table 7.4.

## Section 7. Electricity

**Overview.** In 2003, net generation of electricity totaled 3.8 trillion kilowatthours, down less than 1 percent compared with the total in 2002. Of the total generated, 96 percent came from the electric power sector; 4 percent was generated by combined-heat-and power plants and electricity-only plants in the industrial and commercial sectors. The Nation imported 29 billion kilowatthours and exported 24 billion kilowatthours of electricity in 2003.

**Net Generation.** In January 2004, total net generation of electricity was forecast as 340 billion kilowatthours, 1 percent higher than in January 2003.

**Consumption of Combustible Fuels.** The consumption of coal for electricity generation and useful thermal output by all sectors was forecast as 94 million short tons in January 2004, slightly higher than in January 2003. Total petroleum consumption was forecast as 31 million barrels, 28 percent higher than a year earlier, and natural gas consumption was

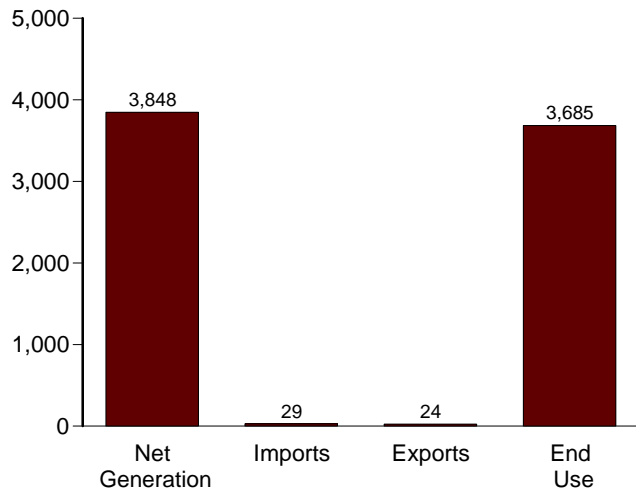
forecast as 409 billion cubic feet, 15 percent lower than a year ago.

**Stocks of Coal and Petroleum.** Stocks of coal held by the electric power sector in January 2004 were forecast as 115 million short tons, 15 percent below the level held a year earlier. Total petroleum was forecast as 51 million barrels in January 2004, 34 percent higher than a year earlier.

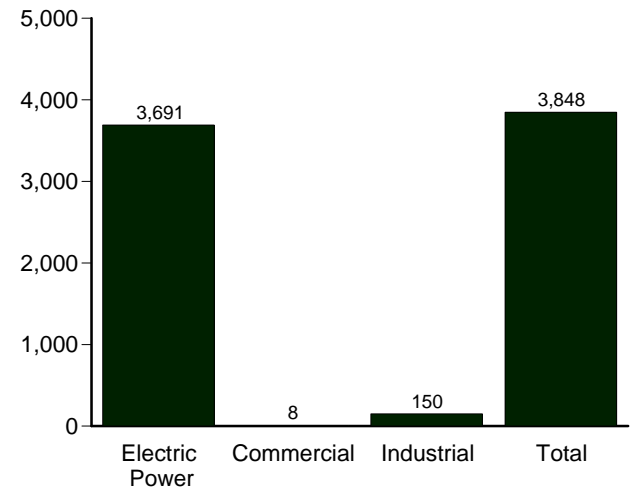
**Retail Sales of Electricity.** Total retail sales of electricity in January 2004 were forecast as 324 billion kilowatthours, slightly higher than sales in January 2003. Sales to residential users in January 2004 were forecast as 126 billion kilowatthours, 1 percent higher than a year ago; commercial sector sales were forecast as 92 billion kilowatthours, 1 percent lower than a year ago; and industrial sector sales were forecast as 81 billion kilowatthours, slightly higher than a year ago.

**Figure 7.1 Electricity Overview**  
(Billion Kilowatthours)

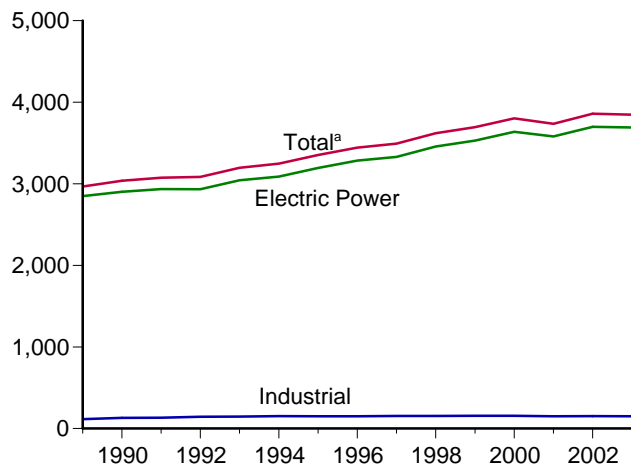
Overview, 2003



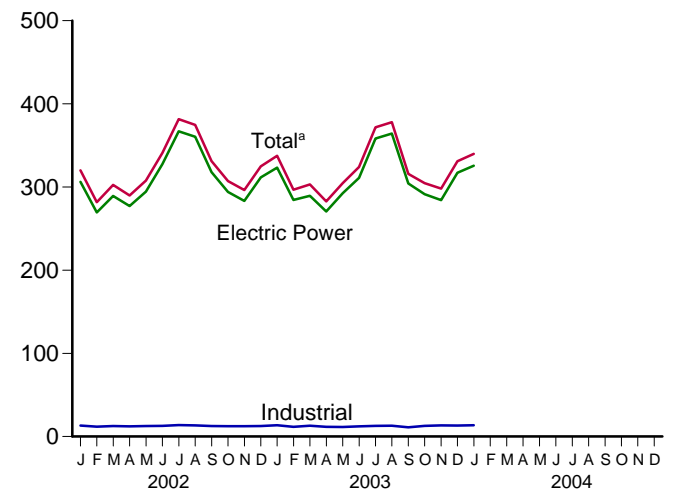
Net Generation, 2003



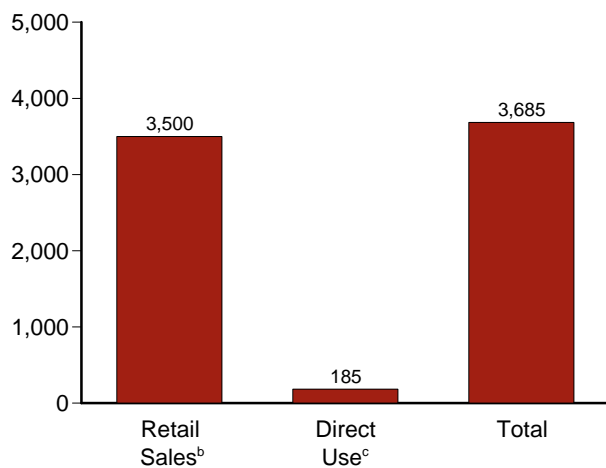
Net Generation by Sector, 1989-2003



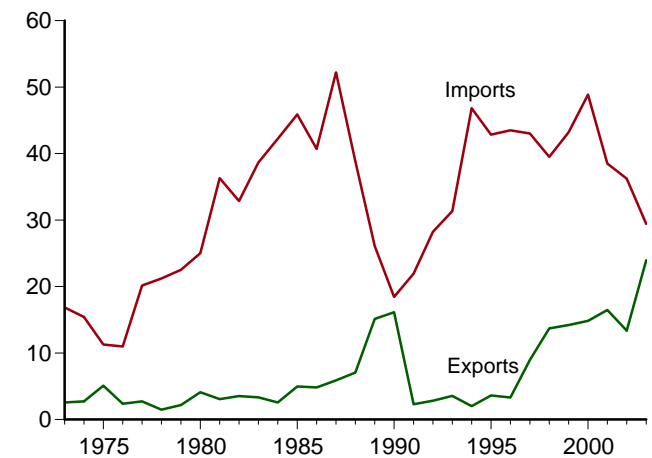
Net Generation by Sector, Monthly



End Use, 2003



Trade, 1973-2003



<sup>a</sup>Includes commercial sector.

<sup>b</sup>Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>c</sup>Commercial and industrial facility use of onsite net electricity generation;

and electricity sales among adjacent or co-located facilities for which revenue information is not available.

Note: Because vertical scales differ, graphs should not be compared.

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

Sources: Table 7.1.

**Table 7.1 Electricity Overview**  
(Billion Kilowatthours)

	Net Generation				Imports <sup>d</sup>	Exports <sup>d</sup>	Losses and Unaccounted for <sup>e</sup>	End Use		
	Electric Power Sector <sup>a</sup>	Commercial Sector <sup>b</sup>	Industrial Sector <sup>c</sup>	Total				Retail Sales <sup>f</sup>	Direct Use <sup>g</sup>	Total
1973 Total	1,861	NA	3	1,864	17	3	165	1,713	NA	1,713
1974 Total	1,867	NA	3	1,870	15	3	177	1,706	NA	1,706
1975 Total	1,918	NA	3	1,921	11	5	180	1,747	NA	1,747
1976 Total	2,038	NA	3	2,041	11	2	194	1,855	NA	1,855
1977 Total	2,124	NA	3	2,127	20	3	197	1,948	NA	1,948
1978 Total	2,206	NA	3	2,209	21	1	211	2,018	NA	2,018
1979 Total	2,247	NA	3	2,251	23	2	200	2,071	NA	2,071
1980 Total	2,286	NA	3	2,290	25	4	216	2,094	NA	2,094
1981 Total	2,295	NA	3	2,298	36	3	184	2,147	NA	2,147
1982 Total	2,241	NA	3	2,244	33	4	187	2,086	NA	2,086
1983 Total	2,310	NA	3	2,313	39	3	198	2,151	NA	2,151
1984 Total	2,416	NA	3	2,419	42	3	173	2,286	NA	2,286
1985 Total	2,470	NA	3	2,473	46	5	190	2,324	NA	2,324
1986 Total	2,487	NA	3	2,490	41	5	158	2,369	NA	2,369
1987 Total	2,572	NA	3	2,575	52	6	164	2,457	NA	2,457
1988 Total	2,704	NA	3	2,707	39	7	161	2,578	NA	2,578
1989 Total	2,848	4	115	2,967	26	15	223	2,647	108	2,755
1990 Total	2,901	6	131	3,038	18	16	214	2,713	114	2,827
1991 Total	2,936	6	133	3,074	22	2	213	2,762	118	2,880
1992 Total	2,934	6	143	3,084	28	3	224	2,763	122	2,886
1993 Total	3,044	7	146	3,197	31	4	236	2,861	128	2,989
1994 Total	3,089	8	151	3,248	47	2	224	2,935	134	3,069
1995 Total	3,194	8	151	3,353	43	4	235	3,013	144	3,157
1996 Total	3,284	9	151	3,444	43	3	237	3,101	146	3,247
1997 Total	3,329	9	154	3,492	43	9	232	3,146	148	3,294
1998 Total	3,457	9	154	3,620	40	14	221	3,264	161	3,425
1999 Total	3,530	9	156	3,695	43	14	229	3,312	183	3,495
2000 Total	3,638	8	157	3,802	49	15	231	3,421	183	3,605
2001 Total	3,580	7	149	3,737	39	16	205	3,370	184	3,554
2002 January	306	1	13	320	3	1	15	292	E 16	308
February	269	(s)	12	282	3	1	5	264	E 14	278
March	289	1	13	303	3	2	21	267	E 16	283
April	277	1	12	290	3	1	18	259	E 15	274
May	295	1	13	308	2	2	24	269	E 16	285
June	328	1	13	341	3	1	30	298	E 15	313
July	367	1	14	382	4	1	32	337	E 16	353
August	360	1	13	375	4	1	24	338	E 16	354
September	318	1	13	331	3	1	8	309	E 15	325
October	294	1	12	307	2	1	10	283	E 16	298
November	283	1	12	296	2	1	20	262	E 15	277
December	312	1	13	325	2	1	26	284	E 16	299
Total	3,698	7	153	3,858	36	13	234	3,463	185	3,647
2003 January	323	1	14	338	3	1	15	308	E 16	324
February	284	1	12	297	3	2	1	283	E 14	297
March	289	1	13	303	3	3	13	274	E 16	290
April	270	1	12	283	3	2	12	256	E 15	271
May	292	1	11	305	3	2	20	269	E 16	285
June	311	1	12	324	3	2	20	289	E 15	305
July	358	1	13	372	4	1	25	334	E 16	349
August	364	1	13	378	4	1	23	341	E 16	357
September	304	1	11	316	2	2	-7	307	E 15	323
October	291	1	13	305	1	3	9	279	E 16	294
November	284	1	13	298	1	2	18	264	E 15	280
December	R 317	1	13	R 331	2	2	R 20	R 295	E 16	R 311
Total	R 3,691	8	150	R 3,848	29	24	R 169	R 3,500	E 185	R 3,685
2004 January	F 326	F 1	F 14	F 340	2	2	F 16	F 308	E 16	F 324

<sup>a</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>b</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of section.

<sup>c</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of section. Through 1988, includes industrial hydroelectric power only.

<sup>d</sup> Electricity transmitted across U.S. borders with Canada and Mexico.

<sup>e</sup> 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.

<sup>f</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>g</sup> Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

R=Revised. E=Estimate. NA=Not available. F=Forecast. (s)=Less than 0.5 billion kilowatthours.

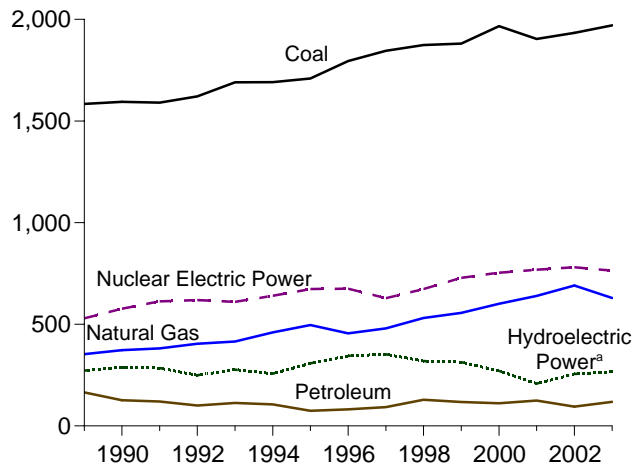
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

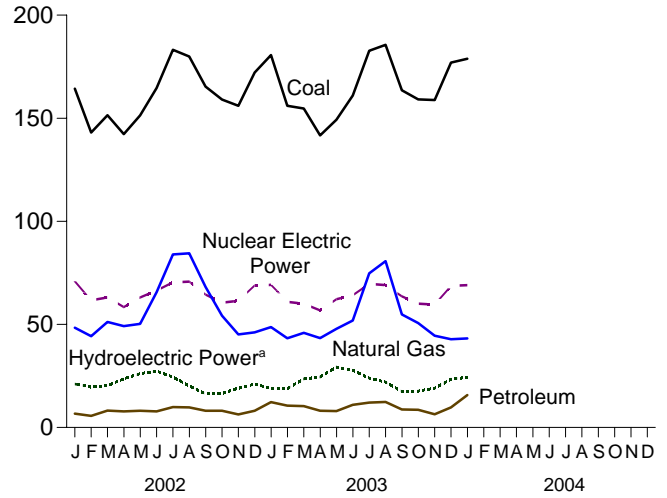
Sources: • **Net Generation:** Tables 7.2a-7.2c. • **Imports and Exports:** See end of section. • **Losses and Unaccounted for:** Calculated as the sum of total net generation and imports minus total end use and exports. • **End Use:** Table 7.5. • **Forecast Values:** Energy Information Administration, Short-Term Integrated Forecasting System. See Note 10 at end of Section 4 for related information.

**Figure 7.2 Electricity Net Generation**  
(Billion Kilowatthours)

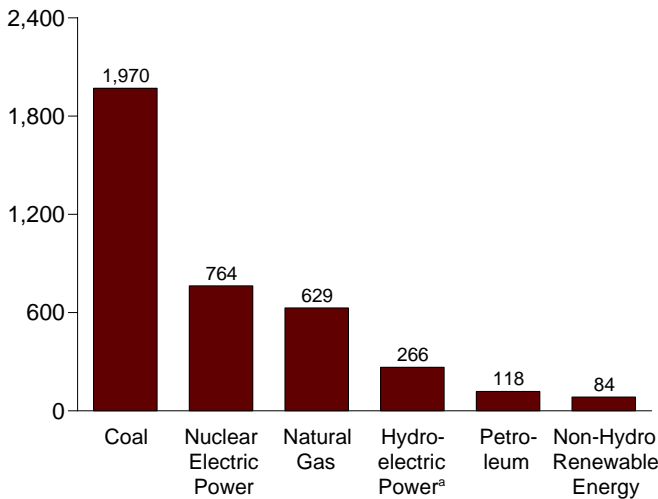
Total (All Sectors), Major Sources, 1989-2003



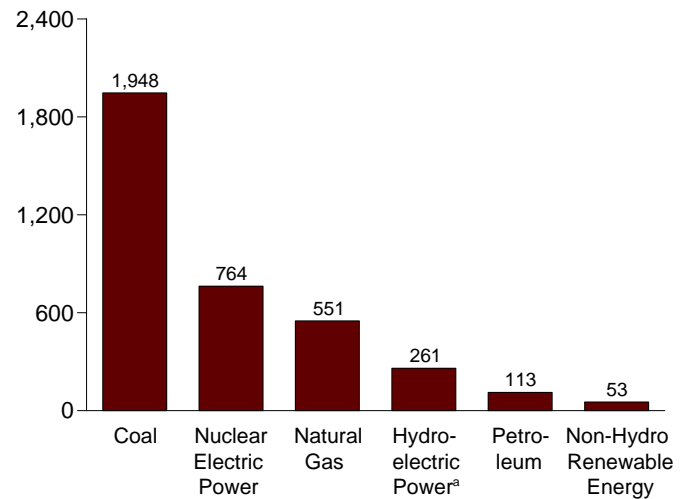
Total (All Sectors), Major Sources, Monthly



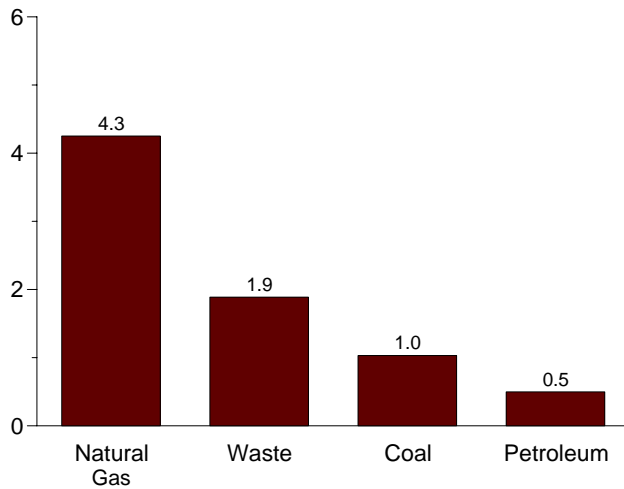
Total (All Sectors), Major Sources, 2003



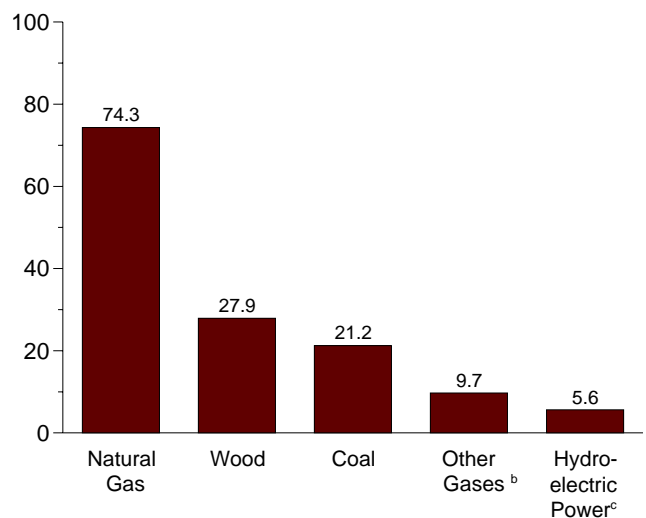
Electric Power Sector, Major Sources, 2003



Commercial Sector, Major Sources, 2003



Industrial Sector, Major Sources, 2003



<sup>a</sup>Conventional and pumped storage hydroelectric power.

<sup>b</sup>Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

<sup>c</sup>Conventional only.

Note: Because vertical scales differ, graphs should not be compared.

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

Sources: Tables 7.2a, 7.2b, and 7.2c.



**Table 7.2b Electricity Net Generation: Electric Power Sector**  
(Million Kilowatthours)

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage <sup>e</sup>	Renewable Energy					Total <sup>i</sup>	
	Coal <sup>a</sup>	Petro-leum <sup>b</sup>	Natural Gas <sup>c</sup>	Other Gases <sup>d</sup>			Conventional Hydro-electric Power	Wood <sup>f</sup>	Waste <sup>g</sup>	Geo-thermal	Solar <sup>h</sup>		Wind
1973 Total	847,651	314,343	340,858	NA	83,479	(j)	272,083	130	198	1,966	NA	NA	1,860,710
1974 Total	828,433	300,931	320,065	NA	113,976	(j)	301,032	69	182	2,453	NA	NA	1,867,139
1975 Total	852,786	289,095	299,778	NA	172,505	(j)	300,047	18	174	3,246	NA	NA	1,917,649
1976 Total	944,391	319,988	294,624	NA	191,104	(j)	283,707	84	182	3,616	NA	NA	2,037,696
1977 Total	985,219	358,179	305,505	NA	250,883	(j)	220,475	308	173	3,582	NA	NA	2,124,323
1978 Total	975,742	365,060	305,391	NA	276,403	(j)	280,419	197	140	2,978	NA	NA	2,206,331
1979 Total	1,075,037	303,525	329,485	NA	255,155	(j)	279,783	300	198	3,889	NA	NA	2,247,372
1980 Total	1,161,562	245,994	346,240	NA	251,116	(j)	276,021	275	158	5,073	NA	NA	2,286,439
1981 Total	1,203,203	206,421	345,777	NA	272,674	(j)	260,684	245	123	5,686	NA	NA	2,294,812
1982 Total	1,192,004	146,797	305,260	NA	282,773	(j)	309,213	196	125	4,843	NA	NA	2,241,211
1983 Total	1,259,424	144,499	274,098	NA	293,677	(j)	332,130	216	163	6,075	NA	3	2,310,285
1984 Total	1,341,681	119,808	297,944	NA	327,634	(j)	321,150	461	425	7,741	5	6	2,416,304
1985 Total	1,402,128	100,202	291,946	NA	383,691	(j)	281,149	743	640	9,325	11	6	2,469,841
1986 Total	1,385,831	136,585	248,508	NA	414,038	(j)	290,844	492	685	10,308	14	4	2,487,310
1987 Total	1,463,781	118,493	272,621	NA	455,270	(j)	249,695	783	694	10,775	10	4	2,572,127
1988 Total	1,540,653	148,900	252,801	NA	526,973	(j)	222,940	936	738	10,300	9	1	2,704,250
1989 Total <sup>k</sup>	1,562,366	159,005	297,295	454	529,355	(j)	269,189	5,582	7,743	14,593	251	2,112	2,848,227
1990 Total	1,572,109	118,864	309,486	621	576,862	-3,508	289,753	7,032	11,500	15,434	367	2,789	2,901,322
1991 Total	1,568,846	112,798	317,773	719	612,565	-4,541	286,019	7,736	13,854	15,966	472	2,951	2,935,561
1992 Total	1,597,714	92,238	334,274	1,212	618,776	-4,177	250,016	8,491	15,924	16,138	400	2,888	2,934,374
1993 Total	1,665,464	105,425	342,222	967	610,291	-4,036	277,524	9,152	16,223	16,789	462	3,006	3,043,897
1994 Total	1,666,276	98,677	385,689	1,092	640,440	-3,378	254,005	9,232	16,984	15,535	487	3,447	3,088,725
1995 Total	1,686,056	68,146	419,179	1,927	673,402	-2,725	305,410	7,597	17,986	13,378	497	3,164	3,194,230
1996 Total	1,771,973	74,783	378,757	1,341	674,729	-3,088	341,159	8,386	17,816	14,329	521	3,234	3,284,141
1997 Total	1,820,762	86,479	399,596	1,533	628,644	-4,040	350,648	8,680	18,485	14,726	511	3,288	3,329,375
1998 Total	1,850,193	122,211	449,293	2,315	673,702	-4,467	317,867	8,608	19,233	14,774	502	3,026	3,457,416
1999 Total	1,858,618	111,539	472,996	1,607	728,254	-6,097	314,663	8,961	19,493	14,827	495	4,488	3,529,982
2000 Total	1,943,111	105,192	517,978	2,028	753,893	-5,539	271,338	8,916	20,307	14,093	493	5,593	3,637,529
2001 Total	1,882,826	119,149	554,940	586	768,826	-8,823	213,749	8,294	19,486	13,741	543	6,737	3,580,053
2002 January	162,521	6,265	40,827	201	70,926	-750	21,498	805	1,665	1,287	11	811	306,171
February	141,430	5,300	37,533	107	61,658	-586	19,912	652	1,481	1,132	24	714	269,476
March	149,724	7,826	43,875	160	63,041	-684	20,732	776	1,688	1,245	44	852	289,322
April	140,498	7,463	42,701	131	58,437	-585	23,929	661	1,562	1,115	46	1,024	277,126
May	149,646	7,767	43,200	128	63,032	-539	26,375	702	1,694	1,216	58	1,078	294,517
June	162,736	7,428	58,686	140	66,372	-863	27,957	749	1,742	1,151	96	1,126	327,553
July	181,001	9,504	76,391	198	70,421	-998	25,196	801	1,840	1,262	86	890	366,980
August	177,962	9,350	76,936	202	70,778	-935	20,806	779	1,836	1,227	75	977	360,351
September	163,497	7,703	61,381	181	64,481	-777	16,839	808	1,699	1,195	53	736	317,976
October	157,195	7,690	47,932	171	60,493	-681	16,828	739	1,624	1,235	31	734	294,096
November	154,172	5,817	38,737	165	61,520	-666	19,282	756	1,619	1,189	28	656	283,374
December	170,231	7,620	39,484	186	68,905	-680	21,138	782	1,732	1,236	4	755	311,516
<b>Total</b>	<b>1,910,613</b>	<b>89,733</b>	<b>607,683</b>	<b>1,970</b>	<b>780,064</b>	<b>-8,743</b>	<b>260,491</b>	<b>9,009</b>	<b>20,180</b>	<b>14,491</b>	<b>555</b>	<b>10,354</b>	<b>3,698,458</b>
2003 January	178,525	11,653	41,058	111	69,211	-760	19,295	820	1,534	1,144	13	558	323,210
February	154,267	10,021	36,778	97	60,942	-774	19,263	700	1,429	1,028	18	692	284,466
March	152,801	9,805	39,085	99	59,933	-797	23,816	754	1,673	1,118	50	1,008	289,424
April	139,899	7,743	37,302	123	56,776	-554	24,577	703	1,657	1,043	60	1,099	270,496
May	147,568	7,541	41,967	105	62,194	-619	29,367	604	1,670	1,035	68	891	292,431
June	159,239	10,500	45,284	94	64,181	-780	27,995	688	1,671	1,092	91	964	311,065
July	180,771	11,630	67,944	92	69,653	-755	24,173	819	1,782	1,099	63	917	358,244
August	183,600	11,895	73,491	90	69,024	-818	22,331	835	1,706	1,096	62	779	364,220
September	161,900	8,346	49,084	94	63,584	-785	17,783	721	1,517	1,086	56	824	304,244
October	157,345	8,111	43,940	112	60,016	-634	17,899	805	1,677	1,077	36	909	291,341
November	157,073	6,064	38,250	110	59,600	-715	19,289	781	1,727	1,085	14	995	284,297
December	<sup>R</sup> 175,019	<sup>R</sup> 9,212	<sup>R</sup> 36,464	<sup>R</sup> 103	<sup>R</sup> 68,612	<sup>R</sup> -677	<sup>R</sup> 23,500	<sup>R</sup> 816	<sup>R</sup> 1,827	<sup>R</sup> 1,246	<sup>R</sup> 4	<sup>R</sup> 1,095	<sup>R</sup> 317,231
<b>Total</b>	<b><sup>R</sup>1,948,007</b>	<b><sup>R</sup>112,522</b>	<b><sup>R</sup>550,647</b>	<b><sup>R</sup>1,230</b>	<b><sup>R</sup>763,725</b>	<b><sup>R</sup>-8,668</b>	<b><sup>R</sup>269,289</b>	<b><sup>R</sup>9,047</b>	<b><sup>R</sup>19,870</b>	<b><sup>R</sup>13,149</b>	<b><sup>R</sup>535</b>	<b><sup>R</sup>10,729</b>	<b><sup>R</sup>3,690,670</b>
2004 January	<sup>F</sup> 176,809	<sup>F</sup> 14,857	<sup>F</sup> 36,088	<sup>F</sup> 148	<sup>F</sup> 69,035	<sup>F</sup> -977	<sup>F</sup> 24,802	<sup>F</sup> 812	<sup>F</sup> 1,695	<sup>F</sup> 1,249	<sup>F</sup> 15	<sup>F</sup> 938	<sup>F</sup> 325,524

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.  
<sup>b</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.  
<sup>c</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.  
<sup>d</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.  
<sup>e</sup> Pumped storage facility production minus energy used for pumping.  
<sup>f</sup> Wood, black liquor, and other wood waste.

<sup>g</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.  
<sup>h</sup> Solar thermal and photovoltaic energy.  
<sup>i</sup> "Total" includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies, which are not separately displayed.  
<sup>j</sup> Included in "Conventional Hydroelectric Power."  
<sup>k</sup> Through 1988, data are for generation at electric utilities only. Beginning in 1989, data also include generation at independent power producers.  
<sup>R</sup>=Revised. <sup>NA</sup>=Not available. <sup>F</sup>=Forecast.  
Notes, Web Page, and Sources: See end of section.



**Table 7.2c Electricity Net Generation: Commercial and Industrial Sectors**  
(Million Kilowatthours)

	Commercial Sector <sup>a</sup>					Industrial Sector <sup>b</sup>							
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Waste <sup>f</sup>	Total <sup>g</sup>	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>h</sup>	Hydro-power <sup>i</sup>	Wood <sup>j</sup>	Waste <sup>k</sup>	Total <sup>k</sup>
1989 Total	736	558	2,155	527	4,251	20,677	4,955	53,179	7,297	2,722	21,557	893	114,828
1990 Total	796	589	3,272	812	5,837	21,107	7,169	60,007	9,641	2,975	25,379	949	130,830
1991 Total	775	413	3,213	883	5,659	21,002	6,540	60,567	10,501	2,844	25,863	927	132,579
1992 Total	749	302	3,867	961	6,228	22,743	7,615	65,933	11,953	2,950	27,916	932	143,280
1993 Total	864	334	4,471	1,018	7,000	23,742	7,028	68,234	11,890	2,871	28,358	1,092	146,294
1994 Total	850	417	4,929	1,162	7,619	23,568	6,808	69,600	12,112	6,028	28,650	983	151,178
1995 Total	998	379	5,162	1,519	8,232	22,372	6,030	71,717	11,943	5,304	28,868	900	151,025
1996 Total	1,051	369	5,249	2,176	9,030	22,172	6,260	71,049	13,015	5,878	28,354	919	151,017
1997 Total	1,040	427	4,725	2,342	8,701	23,214	5,649	75,078	11,814	5,685	28,225	882	154,097
1998 Total	985	383	4,879	2,335	8,748	22,337	6,206	77,085	11,170	5,349	27,693	880	154,132
1999 Total	995	434	4,607	2,393	8,563	21,474	6,088	78,793	12,519	4,758	28,060	686	156,264
2000 Total	1,097	432	4,262	1,985	7,903	22,056	5,597	78,798	11,927	4,135	28,652	839	156,673
2001 Total	995	438	4,434	1,464	7,416	20,135	5,293	79,755	8,454	3,145	26,888	815	149,175
2002 January	85	35	355	111	597	1,752	390	7,231	721	296	2,448	103	13,173
February	70	36	291	92	500	1,548	327	6,484	653	279	2,190	92	11,850
March	84	32	338	110	573	1,677	359	7,001	743	276	2,184	103	12,654
April	66	27	328	117	546	1,741	343	6,118	759	317	2,535	92	12,176
May	69	27	314	145	566	1,691	333	6,761	781	287	2,459	86	12,592
June	83	30	378	141	642	1,848	338	6,567	868	255	2,646	87	12,829
July	101	38	448	145	743	2,092	371	7,079	873	273	2,638	103	13,820
August	102	37	490	157	797	1,891	350	7,051	915	277	2,589	102	13,438
September	88	34	392	153	676	1,782	339	6,388	872	247	2,505	89	12,628
October	78	31	344	138	600	1,827	395	5,925	737	343	2,607	75	12,363
November	78	38	294	142	554	1,804	432	6,131	730	447	2,405	89	12,361
December	88	65	339	120	622	1,872	426	6,277	840	529	2,439	83	12,697
<b>Total</b>	<b>992</b>	<b>431</b>	<b>4,310</b>	<b>1,572</b>	<b>7,415</b>	<b>21,525</b>	<b>4,403</b>	<b>79,013</b>	<b>9,493</b>	<b>3,825</b>	<b>29,643</b>	<b>1,104</b>	<b>152,580</b>
2003 January	90	98	376	132	703	2,017	587	7,250	797	413	2,155	75	13,591
February	86	77	293	121	584	1,710	462	6,220	633	362	1,980	69	11,685
March	85	42	356	168	662	1,804	476	6,460	802	524	2,396	88	13,001
April	81	23	341	171	632	1,696	381	5,698	610	414	2,288	77	11,593
May	66	23	415	168	694	1,663	406	5,472	652	539	2,187	85	11,425
June	83	32	466	165	752	1,686	436	6,150	769	499	2,253	81	12,225
July	100	39	396	164	713	1,890	434	6,468	805	498	2,289	82	12,825
August	103	44	427	161	745	1,892	407	6,748	729	497	2,173	97	12,963
September	87	27	284	152	554	1,602	343	5,465	736	428	1,992	101	11,001
October	79	27	322	171	604	1,738	461	6,342	926	407	2,389	100	12,766
November	82	26	293	146	552	1,669	345	5,973	1,124	440	3,281	102	13,315
December	R 89	R 43	R 284	R 167	R 590	R 1,867	R 497	R 6,062	R 1,125	R 601	R 2,511	R 98	R 13,146
<b>Total</b>	<b>R 1,033</b>	<b>R 499</b>	<b>R 4,252</b>	<b>R 1,888</b>	<b>R 7,785</b>	<b>R 21,233</b>	<b>R 5,235</b>	<b>R 74,308</b>	<b>R 9,707</b>	<b>R 5,621</b>	<b>R 27,895</b>	<b>R 1,053</b>	<b>R 149,534</b>
2004 January	F 92	F 129	F 366	F 138	F 735	F 1,973	F 738	F 6,757	F 1,046	F 524	F 2,106	F 74	F 13,513

<sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of section.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of section.

<sup>c</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>d</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>f</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>g</sup> Includes a small amount of other gases, wood, and other, which are not separately displayed.

<sup>h</sup> Blast furnace gas, propane gas, and other manufactured and waste gases

derived from fossil fuels.

<sup>i</sup> Conventional hydroelectric power.

<sup>j</sup> Wood, black liquor, and other wood waste.

<sup>k</sup> Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies, which are not separately displayed.

R=Revised. F=Forecast.

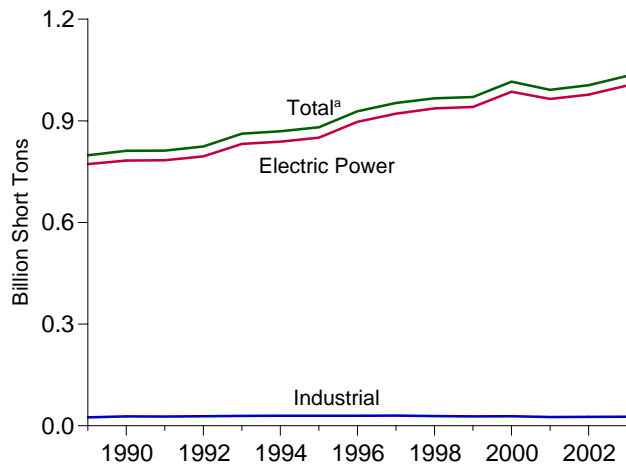
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

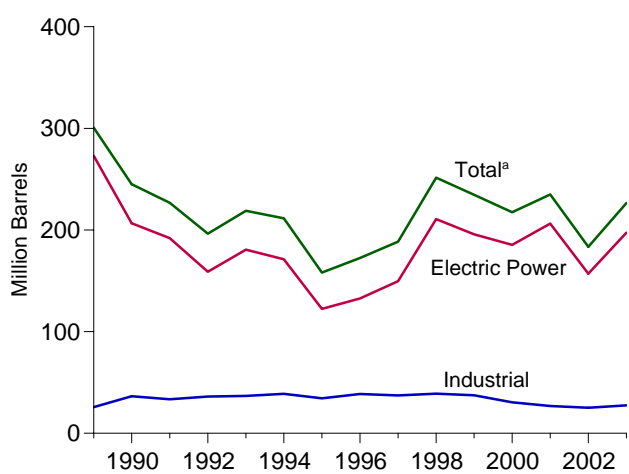
Sources: • 1989-1997: Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000: EIA, Form EIA-860B, "Annual Electric Generator Report-Nonutility." • 2001 and 2002: EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003: EIA, Form EIA-906, "Power Plant Report." • January 2004: EIA, Short-Term Integrated Forecasting System.

**Figure 7.3a Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output**

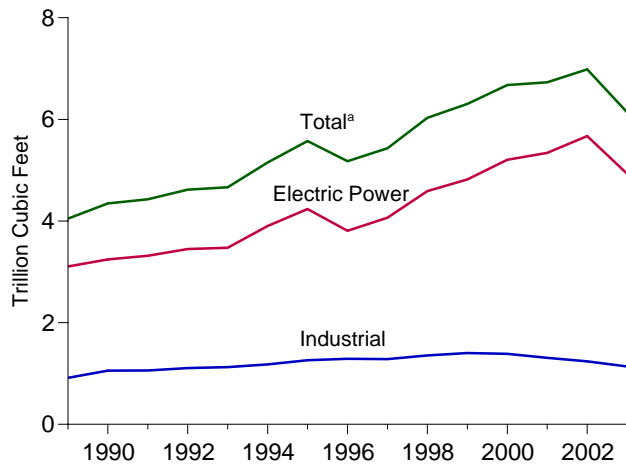
Coal by Sector, 1989-2003



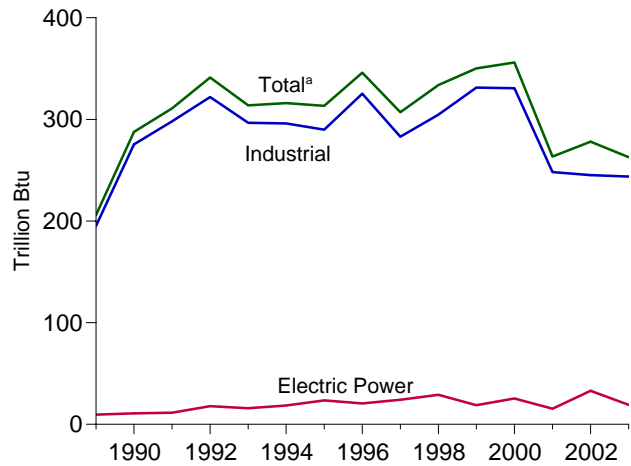
Petroleum by Sector, 1989-2003



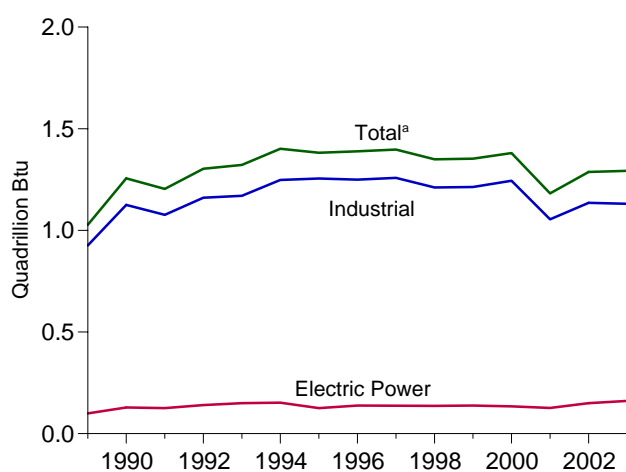
Natural Gas by Sector, 1989-2003



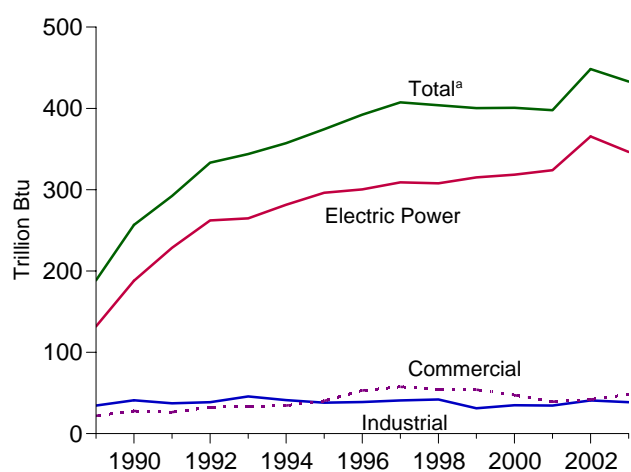
Other Gases<sup>b</sup> by Sector, 1989-2003



Wood by Sector, 1989-2003



Waste by Sector, 1989-2003



<sup>a</sup>Includes commercial sector.

<sup>b</sup>Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Note: Because vertical scales differ, graphs should not be compared.  
Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.  
Sources: Tables 7.3a, 7.3b, and 7.3c.

**Table 7.3a Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Total (All Sectors)**

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>i</sup>	Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>					
		Thousand Barrels				Thousand Short Tons					
<b>1989 Total</b> .....	<b>798,181</b>	<b>29,143</b>	<b>266,211</b>	<b>656</b>	<b>915</b>	<b>300,583</b>	<b>4,049</b>	<b>206</b>	<b>1,028</b>	<b>189</b>	<b>88</b>
<b>1990 Total</b> .....	<b>811,538</b>	<b>20,194</b>	<b>209,314</b>	<b>1,332</b>	<b>2,832</b>	<b>244,998</b>	<b>4,346</b>	<b>288</b>	<b>1,256</b>	<b>257</b>	<b>86</b>
<b>1991 Total</b> .....	<b>812,124</b>	<b>19,591</b>	<b>193,073</b>	<b>1,215</b>	<b>2,566</b>	<b>226,708</b>	<b>4,429</b>	<b>311</b>	<b>1,204</b>	<b>292</b>	<b>114</b>
<b>1992 Total</b> .....	<b>824,512</b>	<b>16,852</b>	<b>160,941</b>	<b>1,695</b>	<b>3,366</b>	<b>196,318</b>	<b>4,618</b>	<b>341</b>	<b>1,303</b>	<b>333</b>	<b>92</b>
<b>1993 Total</b> .....	<b>861,904</b>	<b>19,293</b>	<b>176,992</b>	<b>1,589</b>	<b>4,200</b>	<b>218,873</b>	<b>4,663</b>	<b>314</b>	<b>1,322</b>	<b>344</b>	<b>85</b>
<b>1994 Total</b> .....	<b>869,405</b>	<b>25,177</b>	<b>164,051</b>	<b>1,539</b>	<b>4,157</b>	<b>211,551</b>	<b>5,153</b>	<b>316</b>	<b>1,401</b>	<b>357</b>	<b>92</b>
<b>1995 Total</b> .....	<b>881,012</b>	<b>21,697</b>	<b>112,168</b>	<b>1,322</b>	<b>4,590</b>	<b>158,140</b>	<b>5,574</b>	<b>313</b>	<b>1,382</b>	<b>374</b>	<b>97</b>
<b>1996 Total</b> .....	<b>928,015</b>	<b>22,444</b>	<b>124,607</b>	<b>2,468</b>	<b>4,596</b>	<b>172,499</b>	<b>5,178</b>	<b>346</b>	<b>1,389</b>	<b>392</b>	<b>91</b>
<b>1997 Total</b> .....	<b>952,955</b>	<b>22,893</b>	<b>134,623</b>	<b>526</b>	<b>6,095</b>	<b>188,517</b>	<b>5,434</b>	<b>307</b>	<b>1,397</b>	<b>407</b>	<b>103</b>
<b>1998 Total</b> .....	<b>966,615</b>	<b>30,006</b>	<b>189,267</b>	<b>1,230</b>	<b>6,196</b>	<b>251,486</b>	<b>6,030</b>	<b>334</b>	<b>1,349</b>	<b>404</b>	<b>95</b>
<b>1999 Total</b> .....	<b>970,175</b>	<b>30,616</b>	<b>172,319</b>	<b>1,812</b>	<b>5,989</b>	<b>234,694</b>	<b>6,305</b>	<b>350</b>	<b>1,352</b>	<b>400</b>	<b>101</b>
<b>2000 Total</b> .....	<b>1,015,398</b>	<b>34,572</b>	<b>156,673</b>	<b>2,904</b>	<b>4,669</b>	<b>217,494</b>	<b>6,677</b>	<b>356</b>	<b>1,380</b>	<b>401</b>	<b>109</b>
<b>2001 Total</b> .....	<b>991,635</b>	<b>33,724</b>	<b>177,137</b>	<b>1,418</b>	<b>4,532</b>	<b>234,940</b>	<b>6,731</b>	<b>263</b>	<b>1,182</b>	<b>398</b>	<b>94</b>
<b>2002</b> January .....	84,830	2,073	8,147	295	570	13,365	501	23	109	37	7
February .....	74,236	1,343	6,768	185	566	11,125	449	20	94	33	8
March .....	78,096	2,078	10,451	267	603	15,812	520	22	99	37	8
April .....	73,775	1,904	9,743	259	575	14,779	508	21	100	35	7
May .....	78,744	2,261	9,748	297	634	15,475	523	22	108	37	6
June .....	85,778	1,853	9,761	216	693	15,296	660	24	101	38	6
July .....	95,331	2,849	12,533	309	654	18,963	852	25	116	40	9
August .....	94,033	2,637	12,336	283	709	18,798	833	24	103	40	7
September .....	86,410	1,862	10,086	211	651	15,414	676	25	113	37	9
October .....	83,060	2,172	10,271	261	572	15,563	546	23	120	37	9
November .....	81,654	1,689	8,045	285	533	12,686	454	24	108	37	8
December .....	89,198	2,028	10,747	388	594	16,132	464	25	114	39	7
<b>Total</b> .....	<b>1,005,144</b>	<b>24,749</b>	<b>118,637</b>	<b>3,257</b>	<b>7,353</b>	<b>183,409</b>	<b>6,986</b>	<b>278</b>	<b>1,287</b>	<b>448</b>	<b>93</b>
<b>2003</b> January .....	93,739	5,235	15,522	398	527	23,791	480	21	97	32	4
February .....	81,134	4,228	13,434	542	438	20,395	427	19	92	30	4
March .....	81,148	3,704	13,768	400	395	19,845	457	23	110	36	5
April .....	74,192	1,783	11,277	353	538	16,103	425	20	103	35	5
May .....	78,760	3,192	9,724	465	516	15,963	472	18	99	36	5
June .....	84,916	3,410	13,330	537	624	20,396	510	22	105	36	4
July .....	95,854	2,531	15,918	623	710	22,623	715	23	110	39	4
August .....	97,190	2,265	16,990	494	684	23,171	766	22	106	38	4
September .....	85,811	1,333	11,095	454	658	16,173	522	19	99	34	4
October .....	83,072	1,686	11,055	448	685	16,614	495	23	119	38	4
November .....	83,918	1,248	7,730	269	680	12,649	437	26	133	38	4
December .....	<sup>R</sup> 92,769	<sup>R</sup> 1,992	<sup>R</sup> 12,909	232	<sup>R</sup> 733	<sup>R</sup> 18,800	<sup>R</sup> 433	<sup>R</sup> 28	<sup>R</sup> 119	<sup>R</sup> 40	<sup>R</sup> 5
<b>Total</b> .....	<sup>R</sup> <b>1,032,503</b>	<sup>R</sup> <b>32,608</b>	<sup>R</sup> <b>152,752</b>	<b>5,214</b>	<sup>R</sup> <b>7,190</b>	<sup>R</sup> <b>226,522</b>	<sup>R</sup> <b>6,139</b>	<sup>R</sup> <b>263</b>	<sup>R</sup> <b>1,293</b>	<sup>R</sup> <b>433</b>	<sup>R</sup> <b>51</b>
<b>2004</b> January .....	<sup>F</sup> 93,911	<sup>F</sup> 6,852	<sup>F</sup> 19,117	<sup>F</sup> 372	<sup>F</sup> 840	<sup>F</sup> 30,538	<sup>F</sup> 409	<sup>F</sup> 28	<sup>F</sup> 98	<sup>F</sup> 35	<sup>F</sup> 3

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>b</sup> For 1989-2000, electric utility data are for light oil (fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel).

<sup>c</sup> For 1989-2000, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, and waste oil.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>j</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. F=Forecast.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output at electricity-only and combined-heat-and-power (CHP) 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 sources for Tables 7.3b and 7.3c.

**Table 7.3b Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Electric Power Sector**

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>i</sup>	Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>					
		Thousand Barrels			Thousand Short Tons	Thousand Barrels					
<b>1989 Total</b> .....	<b>772,190</b>	<b>26,156</b>	<b>244,179</b>	<b>10</b>	<b>517</b>	<b>272,931</b>	<b>3,105</b>	<b>9</b>	<b>100</b>	<b>132</b>	<b>3</b>
<b>1990 Total</b> .....	<b>782,567</b>	<b>16,567</b>	<b>184,915</b>	<b>26</b>	<b>1,008</b>	<b>206,550</b>	<b>3,245</b>	<b>11</b>	<b>129</b>	<b>188</b>	<b>(s)</b>
<b>1991 Total</b> .....	<b>783,874</b>	<b>14,359</b>	<b>172,625</b>	<b>59</b>	<b>974</b>	<b>191,911</b>	<b>3,316</b>	<b>11</b>	<b>126</b>	<b>229</b>	<b>4</b>
<b>1992 Total</b> .....	<b>795,094</b>	<b>12,623</b>	<b>138,726</b>	<b>128</b>	<b>1,494</b>	<b>158,948</b>	<b>3,448</b>	<b>18</b>	<b>140</b>	<b>262</b>	<b>5</b>
<b>1993 Total</b> .....	<b>831,645</b>	<b>14,849</b>	<b>152,481</b>	<b>239</b>	<b>2,611</b>	<b>180,625</b>	<b>3,473</b>	<b>16</b>	<b>150</b>	<b>265</b>	<b>5</b>
<b>1994 Total</b> .....	<b>838,354</b>	<b>20,612</b>	<b>138,222</b>	<b>771</b>	<b>2,315</b>	<b>171,178</b>	<b>3,903</b>	<b>19</b>	<b>152</b>	<b>282</b>	<b>3</b>
<b>1995 Total</b> .....	<b>850,230</b>	<b>18,553</b>	<b>90,023</b>	<b>499</b>	<b>2,674</b>	<b>122,447</b>	<b>4,237</b>	<b>24</b>	<b>125</b>	<b>296</b>	<b>2</b>
<b>1996 Total</b> .....	<b>896,921</b>	<b>18,780</b>	<b>99,951</b>	<b>653</b>	<b>2,642</b>	<b>132,593</b>	<b>3,807</b>	<b>20</b>	<b>138</b>	<b>300</b>	<b>2</b>
<b>1997 Total</b> .....	<b>921,364</b>	<b>18,989</b>	<b>113,669</b>	<b>152</b>	<b>3,372</b>	<b>149,668</b>	<b>4,065</b>	<b>24</b>	<b>137</b>	<b>309</b>	<b>1</b>
<b>1998 Total</b> .....	<b>936,619</b>	<b>23,300</b>	<b>166,528</b>	<b>431</b>	<b>4,102</b>	<b>210,769</b>	<b>4,588</b>	<b>29</b>	<b>137</b>	<b>308</b>	<b>2</b>
<b>1999 Total</b> .....	<b>940,922</b>	<b>24,058</b>	<b>152,493</b>	<b>544</b>	<b>3,735</b>	<b>195,769</b>	<b>4,820</b>	<b>19</b>	<b>138</b>	<b>315</b>	<b>1</b>
<b>2000 Total</b> .....	<b>985,821</b>	<b>30,016</b>	<b>138,513</b>	<b>454</b>	<b>3,275</b>	<b>185,358</b>	<b>5,206</b>	<b>25</b>	<b>134</b>	<b>318</b>	<b>1</b>
<b>2001 Total</b> .....	<b>964,433</b>	<b>29,274</b>	<b>159,504</b>	<b>377</b>	<b>3,427</b>	<b>206,291</b>	<b>5,342</b>	<b>15</b>	<b>126</b>	<b>324</b>	<b>0</b>
<b>2002 January</b> .....	82,424	1,838	6,872	92	441	11,007	381	3	13	30	(s)
February .....	72,144	1,137	5,789	45	459	9,265	344	2	10	27	1
March .....	75,823	1,827	9,271	58	486	13,588	407	3	13	30	(s)
April .....	71,560	1,740	8,687	105	464	12,851	404	2	11	28	(s)
May .....	76,528	2,017	8,671	136	523	13,441	410	2	11	30	1
June .....	83,565	1,698	8,746	86	564	13,348	551	2	12	31	1
July .....	92,766	2,613	11,437	173	500	16,721	734	3	13	33	1
August .....	91,752	2,430	11,306	166	562	16,710	718	3	13	33	1
September .....	84,144	1,640	9,031	104	511	13,331	569	3	14	31	1
October .....	80,714	1,921	9,091	93	430	13,255	442	3	13	30	(s)
November .....	79,301	1,343	6,687	79	412	10,171	352	3	13	30	(s)
December .....	86,784	1,672	9,186	132	464	13,308	360	3	14	32	(s)
<b>Total</b> .....	<b>977,507</b>	<b>21,876</b>	<b>104,773</b>	<b>1,267</b>	<b>5,816</b>	<b>156,996</b>	<b>5,672</b>	<b>33</b>	<b>150</b>	<b>365</b>	<b>7</b>
<b>2003 January</b> .....	91,109	4,441	14,061	251	402	20,764	367	2	15	27	(s)
February .....	78,838	3,691	11,984	387	343	17,778	329	2	12	24	(s)
March .....	78,770	3,273	12,320	260	292	17,311	353	2	13	29	(s)
April .....	71,993	1,590	10,123	87	432	13,960	333	2	12	28	(s)
May .....	76,714	2,378	8,778	87	401	13,249	381	1	11	29	(s)
June .....	82,659	3,159	12,227	99	493	17,951	411	1	13	29	(s)
July .....	93,326	2,283	14,758	136	589	20,122	609	1	14	32	(s)
August .....	94,649	2,047	15,767	187	575	20,874	654	2	15	30	(s)
September .....	83,695	1,192	10,255	91	547	14,273	434	2	13	27	(s)
October .....	80,710	1,475	9,724	92	559	14,087	391	2	15	30	(s)
November .....	81,620	1,088	6,671	157	577	10,799	338	2	14	30	(s)
December .....	<sup>R</sup> 90,201	<sup>R</sup> 1,668	<sup>R</sup> 11,402	<sup>R</sup> 124	<sup>R</sup> 588	<sup>R</sup> 16,133	<sup>R</sup> 329	<sup>R</sup> 2	<sup>R</sup> 15	<sup>R</sup> 32	(s)
<b>Total</b> .....	<sup>R</sup> <b>1,004,283</b>	<sup>R</sup> <b>28,285</b>	<sup>R</sup> <b>138,070</b>	<sup>R</sup> <b>1,959</b>	<sup>R</sup> <b>5,797</b>	<sup>R</sup> <b>197,301</b>	<sup>R</sup> <b>4,930</b>	<sup>R</sup> <b>19</b>	<sup>R</sup> <b>161</b>	<sup>R</sup> <b>346</b>	<sup>R</sup> <b>2</b>
<b>2004 January</b> .....	<sup>F</sup> 91,303	<sup>F</sup> 5,557	<sup>F</sup> 17,160	<sup>F</sup> 125	<sup>F</sup> 676	<sup>F</sup> 26,224	<sup>F</sup> 300	<sup>F</sup> 2	<sup>F</sup> 14	<sup>F</sup> 29	<sup>F</sup> 0

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>b</sup> For 1989-2000, electric utility data are for light oil (fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel).

<sup>c</sup> For 1989-2000, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, and waste oil.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>j</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. (s)=Less than 0.5 trillion Btu. F=Forecast.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output at electricity-only and combined-heat-and-power (CHP) plants. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • 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: • **1989-1997:** Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001 and 2002:** EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • **2003:** EIA, Form EIA-906, "Power Plant Report." • **January 2004:** EIA, Short-Term Integrated Forecasting System.

**Table 7.3c Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors**

	Commercial Sector <sup>a</sup>				Industrial Sector <sup>b</sup>						
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Waste <sup>f</sup>	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>f</sup>	Other <sup>i</sup>
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
<b>1989 Total</b> .....	<b>1,125</b>	<b>1,967</b>	<b>30</b>	<b>22</b>	<b>24,867</b>	<b>25,685</b>	<b>914</b>	<b>195</b>	<b>926</b>	<b>35</b>	<b>85</b>
<b>1990 Total</b> .....	<b>1,191</b>	<b>2,056</b>	<b>46</b>	<b>28</b>	<b>27,781</b>	<b>36,392</b>	<b>1,055</b>	<b>275</b>	<b>1,125</b>	<b>41</b>	<b>86</b>
<b>1991 Total</b> .....	<b>1,228</b>	<b>1,337</b>	<b>52</b>	<b>26</b>	<b>27,021</b>	<b>33,460</b>	<b>1,061</b>	<b>298</b>	<b>1,076</b>	<b>37</b>	<b>110</b>
<b>1992 Total</b> .....	<b>1,175</b>	<b>1,235</b>	<b>62</b>	<b>32</b>	<b>28,244</b>	<b>36,135</b>	<b>1,108</b>	<b>322</b>	<b>1,161</b>	<b>39</b>	<b>87</b>
<b>1993 Total</b> .....	<b>1,373</b>	<b>1,515</b>	<b>65</b>	<b>33</b>	<b>28,886</b>	<b>36,733</b>	<b>1,125</b>	<b>297</b>	<b>1,170</b>	<b>46</b>	<b>80</b>
<b>1994 Total</b> .....	<b>1,344</b>	<b>1,625</b>	<b>72</b>	<b>35</b>	<b>29,707</b>	<b>38,748</b>	<b>1,178</b>	<b>296</b>	<b>1,248</b>	<b>41</b>	<b>89</b>
<b>1995 Total</b> .....	<b>1,419</b>	<b>1,245</b>	<b>78</b>	<b>40</b>	<b>29,363</b>	<b>34,448</b>	<b>1,260</b>	<b>290</b>	<b>1,255</b>	<b>38</b>	<b>95</b>
<b>1996 Total</b> .....	<b>1,660</b>	<b>1,246</b>	<b>82</b>	<b>53</b>	<b>29,434</b>	<b>38,661</b>	<b>1,289</b>	<b>325</b>	<b>1,249</b>	<b>39</b>	<b>89</b>
<b>1997 Total</b> .....	<b>1,738</b>	<b>1,584</b>	<b>87</b>	<b>58</b>	<b>29,853</b>	<b>37,265</b>	<b>1,282</b>	<b>283</b>	<b>1,259</b>	<b>41</b>	<b>102</b>
<b>1998 Total</b> .....	<b>1,443</b>	<b>1,807</b>	<b>87</b>	<b>54</b>	<b>28,553</b>	<b>38,910</b>	<b>1,355</b>	<b>305</b>	<b>1,211</b>	<b>42</b>	<b>93</b>
<b>1999 Total</b> .....	<b>1,490</b>	<b>1,613</b>	<b>84</b>	<b>54</b>	<b>27,763</b>	<b>37,312</b>	<b>1,401</b>	<b>331</b>	<b>1,213</b>	<b>31</b>	<b>99</b>
<b>2000 Total</b> .....	<b>1,547</b>	<b>1,615</b>	<b>85</b>	<b>47</b>	<b>28,031</b>	<b>30,520</b>	<b>1,386</b>	<b>331</b>	<b>1,244</b>	<b>35</b>	<b>108</b>
<b>2001 Total</b> .....	<b>1,448</b>	<b>1,832</b>	<b>79</b>	<b>39</b>	<b>25,755</b>	<b>26,817</b>	<b>1,310</b>	<b>248</b>	<b>1,054</b>	<b>35</b>	<b>94</b>
<b>2002 January</b> .....	127	99	6	3	2,278	2,259	114	20	97	4	7
February .....	102	92	5	3	1,990	1,768	100	18	84	3	7
March .....	124	88	6	3	2,150	2,136	107	20	86	4	7
April .....	100	84	6	3	2,115	1,844	97	19	89	3	7
May .....	105	81	5	4	2,110	1,953	107	20	96	3	6
June .....	112	87	6	4	2,101	1,861	102	22	89	3	5
July .....	126	115	7	4	2,439	2,127	111	22	103	3	8
August .....	127	114	8	4	2,153	1,974	108	21	90	3	6
September .....	116	90	7	4	2,150	1,993	101	22	99	3	9
October .....	114	89	6	4	2,231	2,219	97	20	107	3	9
November .....	116	130	5	4	2,237	2,385	97	21	95	4	8
December .....	134	181	6	3	2,279	2,643	98	22	100	4	7
<b>Total</b> .....	<b>1,405</b>	<b>1,250</b>	<b>74</b>	<b>42</b>	<b>26,232</b>	<b>25,163</b>	<b>1,240</b>	<b>245</b>	<b>1,136</b>	<b>41</b>	<b>85</b>
<b>2003 January</b> .....	146	322	6	3	2,484	2,705	106	19	82	3	4
February .....	127	270	5	3	2,169	2,347	93	17	79	3	3
March .....	125	155	6	4	2,254	2,378	98	21	96	3	5
April .....	110	86	5	4	2,089	2,056	87	18	92	3	4
May .....	94	67	6	4	1,952	2,647	85	17	88	3	5
June .....	118	104	7	4	2,139	2,341	93	21	92	3	4
July .....	137	144	7	4	2,391	2,356	99	21	96	3	4
August .....	144	155	8	4	2,397	2,142	104	21	91	3	4
September .....	121	80	5	4	1,995	1,820	83	17	87	4	4
October .....	114	83	6	4	2,247	2,444	98	21	104	4	4
November .....	118	80	5	4	2,180	1,770	95	24	119	4	4
December .....	<sup>R</sup> 137	<sup>R</sup> 163	<sup>R</sup> 5	<sup>R</sup> 4	<sup>R</sup> 2,431	<sup>R</sup> 2,504	<sup>R</sup> 98	<sup>R</sup> 26	<sup>R</sup> 103	<sup>R</sup> 4	<sup>R</sup> 5
<b>Total</b> .....	<sup>R</sup> <b>1,492</b>	<sup>R</sup> <b>1,709</b>	<sup>R</sup> <b>71</b>	<sup>R</sup> <b>48</b>	<sup>R</sup> <b>26,728</b>	<sup>R</sup> <b>27,511</b>	<sup>R</sup> <b>1,138</b>	<sup>R</sup> <b>244</b>	<sup>R</sup> <b>1,131</b>	<sup>R</sup> <b>39</b>	<sup>R</sup> <b>50</b>
<b>2004 January</b> .....	<sup>F</sup> 133	<sup>F</sup> 405	<sup>F</sup> 6	<sup>F</sup> 3	<sup>F</sup> 2,475	<sup>F</sup> 3,910	<sup>F</sup> 103	<sup>F</sup> 26	<sup>F</sup> 83	<sup>F</sup> 3	<sup>F</sup> 3

<sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of section.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of section.

<sup>c</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>d</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>f</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. F=Forecast.

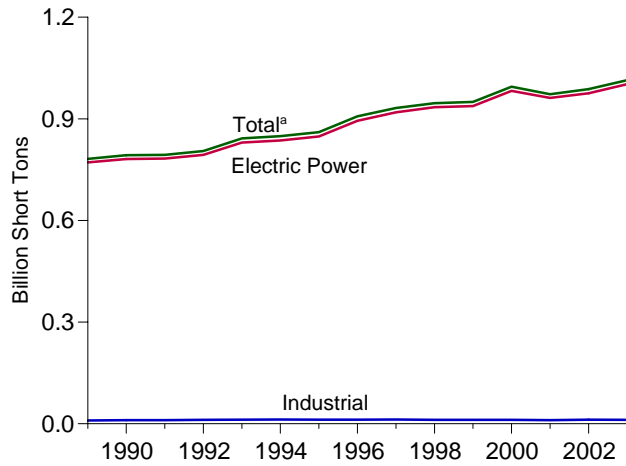
Notes: • Data are for fuels consumed to produce electricity and useful thermal output at electricity-only and combined-heat-and-power (CHP) plants. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

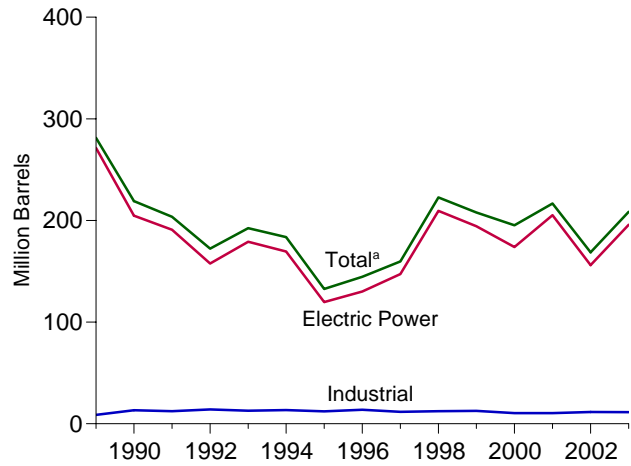
Sources: • **1989-1997:** Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001 and 2002:** EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • **2003:** EIA, Form EIA-906, "Power Plant Report." • **January 2004:** EIA, Short-Term Integrated Forecasting System.

**Figure 7.3b Consumption of Selected Combustible Fuels for Electricity Generation**

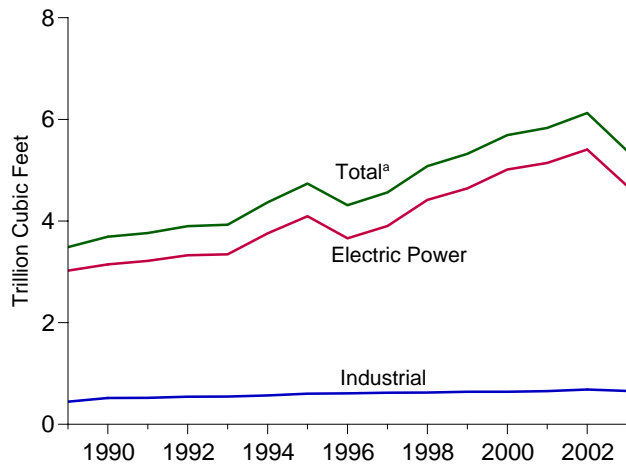
**Coal by Sector, 1989-2003**



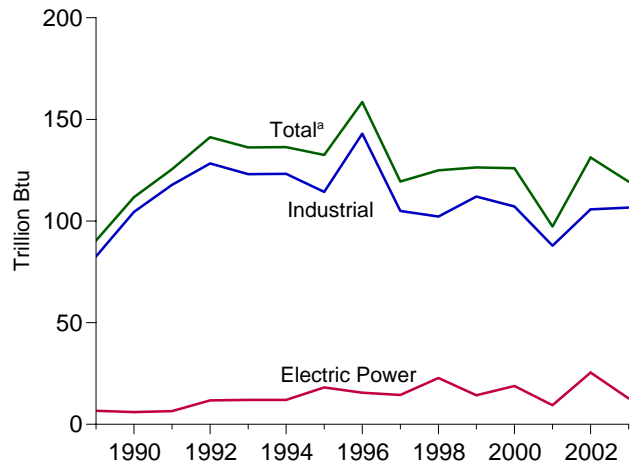
**Petroleum by Sector, 1989-2003**



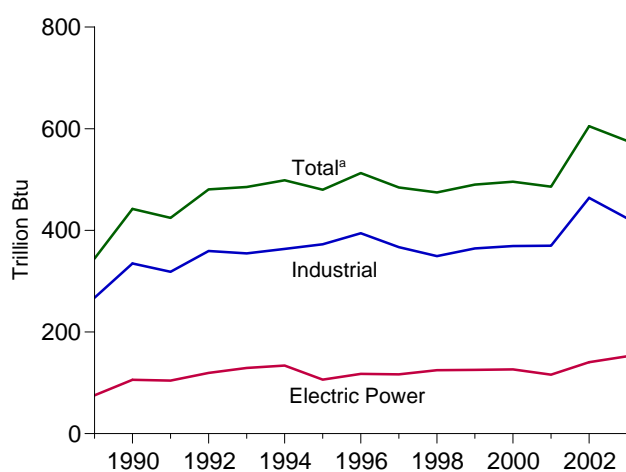
**Natural Gas by Sector, 1989-2003**



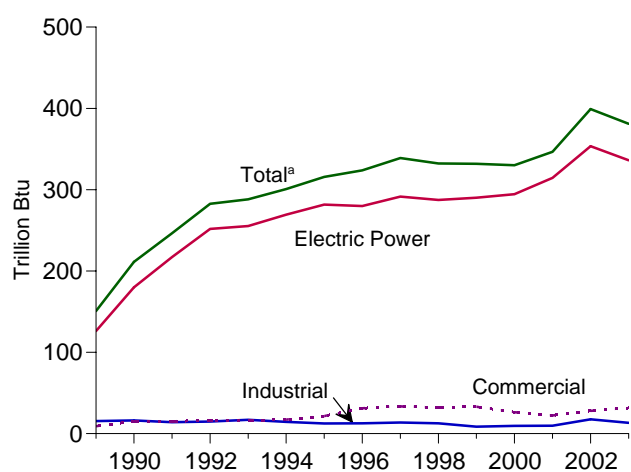
**Other Gases<sup>b</sup> by Sector, 1989-2003**



**Wood by Sector, 1989-2003**



**Waste by Sector, 1989-2003**



<sup>a</sup>Includes commercial sector.

<sup>b</sup>Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Note: Because vertical scales differ, graphs should not be compared.  
 Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.  
 Sources: Tables 7.3d, 7.3e, and 7.3f.

**Table 7.3d Consumption of Combustible Fuels for Electricity Generation: Total (All Sectors)**

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>i</sup>	Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>					
		Thousand Barrels			Thousand Short Tons	Thousand Barrels					
Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
1973 Total	389,212	47,058	513,190	NA	507	562,781	3,660	NA	1	2	NA
1974 Total	391,811	53,128	483,146	NA	625	539,399	3,443	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1976 Total	448,371	41,843	514,077	NA	68	556,261	3,081	NA	1	2	NA
1977 Total	477,126	48,837	574,869	NA	98	624,193	3,191	NA	3	2	NA
1978 Total	481,235	47,520	588,319	NA	398	637,830	3,188	NA	2	1	NA
1979 Total	527,051	30,691	492,606	NA	268	524,636	3,491	NA	3	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1981 Total	596,797	21,313	329,798	NA	139	351,806	3,640	NA	3	1	NA
1982 Total	593,666	15,337	234,434	NA	149	250,517	3,226	NA	2	1	NA
1983 Total	625,211	16,512	228,984	NA	261	246,804	2,911	NA	2	2	NA
1984 Total	664,399	15,190	189,289	NA	252	205,736	3,111	NA	5	4	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1986 Total	685,056	14,326	216,156	NA	313	232,046	2,602	NA	5	7	NA
1987 Total	717,894	15,367	184,011	NA	348	201,116	2,844	NA	8	7	NA
1988 Total	758,372	18,769	229,327	NA	409	250,141	2,636	NA	10	8	NA
1989 Total <sup>k</sup>	781,672	27,733	249,820	303	667	281,192	3,485	90	345	151	39
1990 Total	792,457	18,143	190,849	437	1,914	218,997	3,692	112	442	211	36
1991 Total	793,666	16,564	177,780	380	1,789	203,669	3,765	125	425	247	59
1992 Total	805,140	14,493	144,467	759	2,504	172,241	3,900	141	481	283	40
1993 Total	842,153	16,845	159,059	715	3,169	192,462	3,929	136	485	288	34
1994 Total	848,796	22,365	145,225	929	3,020	183,618	4,367	136	498	301	40
1995 Total	860,594	19,615	95,507	680	3,355	132,578	4,738	133	480	316	42
1996 Total	907,209	20,252	106,055	1,712	3,322	144,626	4,312	159	513	324	37
1997 Total	931,949	20,309	118,741	237	4,086	159,715	4,565	119	484	339	36
1998 Total	946,295	25,062	172,728	549	4,860	222,640	5,081	125	475	332	36
1999 Total	949,802	25,951	158,187	974	4,552	207,871	5,322	126	490	332	41
2000 Total	994,933	31,675	143,381	1,450	3,744	195,228	5,691	126	496	330	46
2001 Total	972,691	31,150	165,312	855	3,871	216,672	5,832	97	486	347	41
2002 January	83,186	1,963	7,271	148	524	12,003	424	11	51	32	4
February	72,845	1,239	6,108	88	527	10,069	381	9	46	29	4
March	76,541	1,943	9,696	112	569	14,594	448	10	48	32	4
April	72,379	1,819	9,044	143	530	13,657	439	10	50	31	3
May	77,322	2,130	9,003	175	590	14,258	453	10	47	33	3
June	84,412	1,788	9,076	119	645	14,209	589	12	50	34	3
July	93,763	2,730	11,793	208	600	17,730	777	13	53	37	5
August	92,604	2,549	11,635	202	660	17,688	759	12	52	37	4
September	84,932	1,759	9,359	135	616	14,333	605	11	52	34	5
October	81,613	2,049	9,453	183	529	14,333	475	11	54	33	5
November	80,234	1,492	7,123	177	498	11,282	385	12	50	33	4
December	87,752	1,825	9,674	204	548	14,442	390	11	50	34	3
Total	987,583	23,286	109,235	1,894	6,836	168,597	6,126	131	605	399	49
2003 January	92,030	4,816	14,529	298	460	21,941	408	10	50	29	2
February	79,659	3,956	12,367	415	388	18,679	365	8	44	26	2
March	79,600	3,427	12,768	320	338	18,203	391	9	49	32	3
April	72,784	1,670	10,478	196	478	14,732	365	8	46	31	2
May	77,505	2,682	9,095	257	453	14,299	417	8	42	32	3
June	83,468	3,270	12,594	297	560	18,960	452	10	46	32	2
July	94,233	2,425	15,076	353	649	21,097	646	9	47	35	2
August	95,573	2,166	16,077	345	611	21,642	697	10	47	34	2
September	84,466	1,267	10,470	273	598	15,001	468	8	43	30	2
October	81,518	1,590	10,245	307	619	15,236	432	11	52	33	2
November	82,392	1,164	6,982	195	625	11,465	374	14	57	33	2
December	R 91,078	R 1,856	R 11,876	R 156	R 659	R 17,182	R 366	R 14	R 53	R 35	R 3
Total	R 1,014,307	R 30,290	R 142,557	R 3,411	R 6,435	R 208,436	R 5,380	R 119	R 576	R 381	R 27
2004 January	F 92,216	F 6,173	F 17,765	F 237	F 751	F 27,931	F 348	F 13	F 45	F 31	F 2

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>b</sup> For 1973-1979, gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data are for light oil (fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel.)

<sup>c</sup> For 1973-1979, steam plant use of petroleum. For 1980-2000, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4.)

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, and waste oil.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from

fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>j</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

<sup>k</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu. F=Forecast.

Notes, Web Page, and Sources: See end of section.

**Table 7.3e Consumption of Combustible Fuels for Electricity Generation:  
Electric Power Sector**

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>i</sup>	Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>					
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons					
1973 Total	389,212	47,058	513,190	NA	507	562,781	3,660	NA	1	2	NA
1974 Total	391,811	53,128	483,146	NA	625	539,399	3,443	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1976 Total	448,371	41,843	514,077	NA	68	556,261	3,081	NA	1	2	NA
1977 Total	477,126	48,837	574,869	NA	98	624,193	3,191	NA	3	2	NA
1978 Total	481,235	47,520	588,319	NA	398	637,830	3,188	NA	2	1	NA
1979 Total	527,051	30,691	492,606	NA	268	524,636	3,491	NA	3	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1981 Total	596,797	21,313	329,798	NA	139	351,806	3,640	NA	3	1	NA
1982 Total	593,666	15,337	234,434	NA	149	250,517	3,226	NA	2	1	NA
1983 Total	625,211	16,512	228,984	NA	261	246,804	2,911	NA	2	2	NA
1984 Total	664,399	15,190	189,289	NA	252	205,736	3,111	NA	5	4	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1986 Total	685,056	14,326	146,156	NA	313	232,046	2,602	NA	5	7	NA
1987 Total	717,894	15,367	184,011	NA	348	201,116	2,844	NA	8	7	NA
1988 Total	758,372	18,769	229,327	NA	409	250,141	2,636	NA	10	8	NA
1989 Total <sup>k</sup>	771,551	26,036	242,708	9	517	271,340	3,024	7	75	126	2
1990 Total	781,301	16,394	183,285	25	1,008	204,745	3,147	6	106	180	(s)
1991 Total	782,653	14,255	171,629	58	974	190,810	3,216	6	104	217	4
1992 Total	793,390	12,469	137,681	118	1,490	157,719	3,325	12	120	252	3
1993 Total	829,851	14,559	151,407	213	2,571	179,034	3,344	12	129	255	3
1994 Total	836,113	20,241	137,198	667	2,256	169,387	3,758	12	134	269	2
1995 Total	847,854	18,066	88,895	441	2,452	119,663	4,094	18	106	282	2
1996 Total	894,400	18,472	98,795	567	2,467	130,168	3,660	16	117	280	2
1997 Total	919,009	18,646	112,423	130	3,201	147,202	3,903	14	117	292	1
1998 Total	934,126	23,166	165,875	411	3,999	209,447	4,416	23	125	287	2
1999 Total	937,888	23,875	151,921	514	3,607	194,345	4,644	14	125	290	1
2000 Total	982,713	29,722	138,047	403	3,155	<sup>R</sup> 183,946	5,014	19	126	294	1
2001 Total	961,523	29,056	159,150	374	3,308	205,119	5,142	9	116	314	0
<b>2002</b> January	82,197	1,832	6,853	89	431	10,928	360	3	12	29	(s)
February	71,972	1,134	5,772	43	450	9,198	324	2	9	26	1
March	75,613	1,823	9,258	57	476	13,515	385	2	12	29	(s)
April	71,377	1,738	8,680	103	456	12,800	384	1	11	28	(s)
May	76,367	2,012	8,658	135	514	13,373	390	2	10	29	1
June	83,393	1,696	8,729	85	552	13,268	529	2	11	30	1
July	92,575	2,611	11,419	170	487	16,637	710	2	12	32	1
August	91,543	2,428	11,289	163	553	16,646	693	3	13	32	1
September	83,958	1,638	9,016	101	507	13,292	546	2	13	30	1
October	80,533	1,918	9,070	91	423	13,194	421	2	12	29	(s)
November	79,132	1,338	6,668	77	405	10,105	330	3	12	29	(s)
December	86,591	1,642	9,164	128	453	13,199	336	2	13	31	(s)
<b>Total</b>	<b>975,251</b>	<b>21,810</b>	<b>104,577</b>	<b>1,243</b>	<b>5,705</b>	<b>156,154</b>	<b>5,408</b>	<b>25</b>	<b>141</b>	<b>353</b>	<b>7</b>
<b>2003</b> January	90,900	4,349	13,974	237	392	20,522	343	1	14	26	(s)
February	78,666	3,641	11,906	364	336	17,589	308	1	11	23	(s)
March	78,581	3,235	12,281	257	280	17,175	332	1	13	28	(s)
April	71,814	1,586	10,084	86	419	13,850	312	1	11	27	(s)
May	76,535	2,376	8,754	86	392	13,178	365	1	10	28	(s)
June	82,496	3,153	12,207	98	485	17,883	394	1	12	28	(s)
July	93,165	2,280	14,690	136	582	20,015	588	1	14	31	(s)
August	94,486	2,044	15,696	186	553	20,690	634	1	14	30	(s)
September	83,551	1,190	10,187	91	539	14,164	416	1	12	26	(s)
October	80,557	1,478	9,706	92	551	14,031	373	1	14	29	(s)
November	81,447	1,075	6,603	157	573	10,699	317	1	13	29	(s)
December	<sup>R</sup> 90,010	<sup>R</sup> 1,655	<sup>R</sup> 11,333	<sup>R</sup> 123	<sup>R</sup> 583	<sup>R</sup> 16,027	<sup>R</sup> 306	<sup>R</sup> 1	<sup>R</sup> 14	<sup>R</sup> 31	<sup>R</sup> (s)
<b>Total</b>	<sup>R</sup> <b>1,002,210</b>	<sup>R</sup> <b>28,062</b>	<sup>R</sup> <b>137,421</b>	<sup>R</sup> <b>1,912</b>	<sup>R</sup> <b>5,685</b>	<sup>R</sup> <b>195,823</b>	<sup>R</sup> <b>4,688</b>	<sup>R</sup> <b>13</b>	<sup>R</sup> <b>152</b>	<sup>R</sup> <b>336</b>	<sup>R</sup> <b>1</b>
<b>2004</b> January	<sup>F</sup> 91,094	<sup>F</sup> 5,512	<sup>F</sup> 17,081	<sup>F</sup> 122	<sup>F</sup> 662	<sup>F</sup> 26,028	<sup>F</sup> 285	<sup>F</sup> 1	<sup>F</sup> 13	<sup>F</sup> 28	<sup>F</sup> 0

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>b</sup> For 1973-1979, gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data are for light oil (fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel.)

<sup>c</sup> For 1973-1979, steam plant use of petroleum. For 1980-2000, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4.)

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, and waste oil.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from

fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>j</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

<sup>k</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>R</sup>=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu. F=Forecast.

Notes, Web Page, and Sources: See end of section.



**Table 7.3f Estimated Consumption of Selected Combustible Fuels for Electricity Generation: Commercial and Industrial Sectors**

	Commercial Sector <sup>a</sup>				Industrial Sector <sup>b</sup>						
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Waste <sup>f</sup>	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Wood <sup>h</sup>	Waste <sup>f</sup>	Other <sup>i</sup>
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
<b>1989 Total</b> .....	<b>414</b>	<b>1,165</b>	<b>18</b>	<b>9</b>	<b>9,707</b>	<b>8,688</b>	<b>444</b>	<b>83</b>	<b>267</b>	<b>15</b>	<b>37</b>
<b>1990 Total</b> .....	<b>417</b>	<b>953</b>	<b>28</b>	<b>15</b>	<b>10,740</b>	<b>13,299</b>	<b>517</b>	<b>104</b>	<b>335</b>	<b>16</b>	<b>36</b>
<b>1991 Total</b> .....	<b>403</b>	<b>576</b>	<b>27</b>	<b>15</b>	<b>10,610</b>	<b>12,283</b>	<b>522</b>	<b>118</b>	<b>318</b>	<b>14</b>	<b>55</b>
<b>1992 Total</b> .....	<b>371</b>	<b>429</b>	<b>33</b>	<b>16</b>	<b>11,379</b>	<b>14,093</b>	<b>542</b>	<b>128</b>	<b>359</b>	<b>15</b>	<b>37</b>
<b>1993 Total</b> .....	<b>404</b>	<b>672</b>	<b>37</b>	<b>16</b>	<b>11,898</b>	<b>12,755</b>	<b>547</b>	<b>123</b>	<b>355</b>	<b>17</b>	<b>31</b>
<b>1994 Total</b> .....	<b>404</b>	<b>694</b>	<b>41</b>	<b>17</b>	<b>12,279</b>	<b>13,537</b>	<b>568</b>	<b>123</b>	<b>364</b>	<b>14</b>	<b>38</b>
<b>1995 Total</b> .....	<b>569</b>	<b>649</b>	<b>43</b>	<b>21</b>	<b>12,171</b>	<b>12,265</b>	<b>601</b>	<b>114</b>	<b>373</b>	<b>13</b>	<b>40</b>
<b>1996 Total</b> .....	<b>656</b>	<b>645</b>	<b>42</b>	<b>31</b>	<b>12,153</b>	<b>13,813</b>	<b>610</b>	<b>143</b>	<b>394</b>	<b>13</b>	<b>35</b>
<b>1997 Total</b> .....	<b>630</b>	<b>790</b>	<b>39</b>	<b>34</b>	<b>12,311</b>	<b>11,723</b>	<b>623</b>	<b>105</b>	<b>367</b>	<b>14</b>	<b>36</b>
<b>1998 Total</b> .....	<b>440</b>	<b>802</b>	<b>41</b>	<b>32</b>	<b>11,728</b>	<b>12,392</b>	<b>625</b>	<b>102</b>	<b>349</b>	<b>13</b>	<b>35</b>
<b>1999 Total</b> .....	<b>481</b>	<b>931</b>	<b>39</b>	<b>33</b>	<b>11,432</b>	<b>12,595</b>	<b>639</b>	<b>112</b>	<b>364</b>	<b>8</b>	<b>39</b>
<b>2000 Total</b> .....	<b>514</b>	<b>823</b>	<b>37</b>	<b>26</b>	<b>11,706</b>	<b>10,459</b>	<b>640</b>	<b>107</b>	<b>369</b>	<b>10</b>	<b>45</b>
<b>2001 Total</b> .....	<b>532</b>	<b>1,023</b>	<b>36</b>	<b>22</b>	<b>10,636</b>	<b>10,530</b>	<b>654</b>	<b>88</b>	<b>370</b>	<b>10</b>	<b>41</b>
<b>2002</b> January .....	46	67	3	2	943	1,008	61	8	39	1	3
February .....	30	64	2	2	843	808	55	8	36	1	3
March .....	42	56	3	2	887	1,022	60	8	36	1	4
April .....	36	49	3	2	966	807	53	8	39	2	3
May .....	36	51	2	3	919	835	61	8	37	1	2
June .....	39	56	3	3	980	885	57	10	39	2	2
July .....	41	71	3	3	1,147	1,022	63	10	41	2	4
August .....	46	73	4	3	1,015	969	62	10	40	2	3
September .....	44	62	3	3	930	979	56	9	39	1	5
October .....	39	59	3	3	1,041	1,080	52	9	42	1	5
November .....	37	92	2	3	1,064	1,084	53	9	38	1	4
December .....	41	135	2	2	1,120	1,108	52	9	37	1	3
<b>Total</b> .....	<b>477</b>	<b>834</b>	<b>33</b>	<b>28</b>	<b>11,855</b>	<b>11,608</b>	<b>685</b>	<b>106</b>	<b>464</b>	<b>18</b>	<b>41</b>
<b>2003</b> January .....	48	228	3	2	1,082	1,192	62	9	36	1	2
February .....	41	186	2	2	952	904	54	7	33	1	2
March .....	40	90	3	3	978	938	56	8	37	1	3
April .....	36	53	3	3	934	829	50	7	35	1	2
May .....	33	46	3	3	937	1,075	49	8	32	1	3
June .....	43	71	4	3	929	1,006	54	10	34	1	2
July .....	50	100	3	3	1,018	983	55	8	34	1	2
August .....	51	100	4	3	1,036	852	59	8	33	1	2
September .....	44	56	2	2	871	781	49	7	31	1	2
October .....	36	57	3	3	925	1,148	56	10	39	1	2
November .....	35	58	3	3	910	708	55	13	43	1	2
December .....	44	<sup>R</sup> 116	<sup>R</sup> 2	<sup>R</sup> 3	<sup>R</sup> 1,025	<sup>R</sup> 1,039	<sup>R</sup> 57	<sup>R</sup> 13	38	1	<sup>R</sup> 3
<b>Total</b> .....	<b>501</b>	<sup>R</sup> <b>1,161</b>	<sup>R</sup> <b>35</b>	<sup>R</sup> <b>32</b>	<sup>R</sup> <b>11,596</b>	<sup>R</sup> <b>11,453</b>	<sup>R</sup> <b>656</b>	<sup>R</sup> <b>107</b>	<b>424</b>	<b>13</b>	<sup>R</sup> <b>25</b>
<b>2004</b> January .....	<sup>F</sup> 45	<sup>F</sup> 286	<sup>F</sup> 3	<sup>F</sup> 2	<sup>F</sup> 1,078	<sup>F</sup> 1,617	<sup>F</sup> 59	<sup>F</sup> 11	<sup>F</sup> 31	<sup>F</sup> 1	<sup>F</sup> 2

<sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of section.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of section.

<sup>c</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

<sup>d</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

<sup>f</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>g</sup> Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

<sup>h</sup> Wood, black liquor, and other wood waste.

<sup>i</sup> Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. F=Forecast.

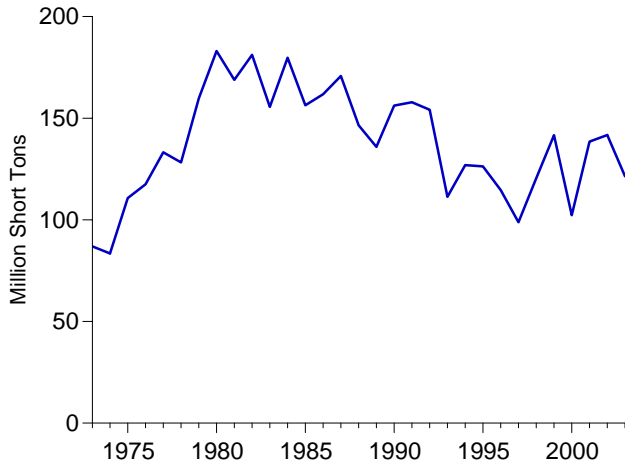
Notes: • Estimates are for fuels consumed to produce electricity; they exclude fuels consumed to produce useful thermal output. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

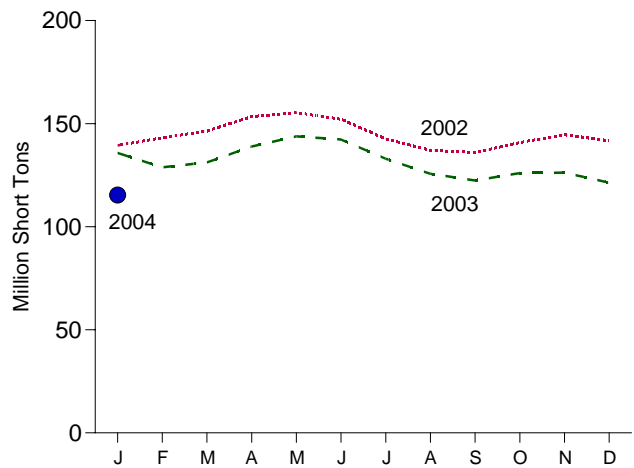
Sources: • **1989-1997:** Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001 and 2002:** EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • **2003:** EIA, Form EIA-906, "Power Plant Report." • **January 2004:** EIA, Short-Term Integrated Forecasting System.

**Figure 7.4 Stocks of Coal and Petroleum: Electric Power Sector**

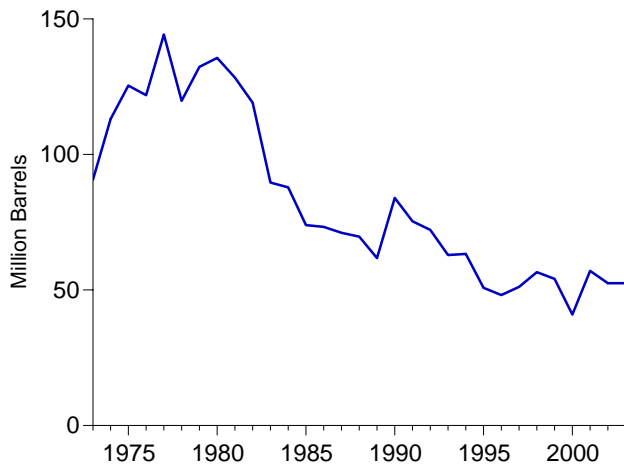
Coal, 1973-2003



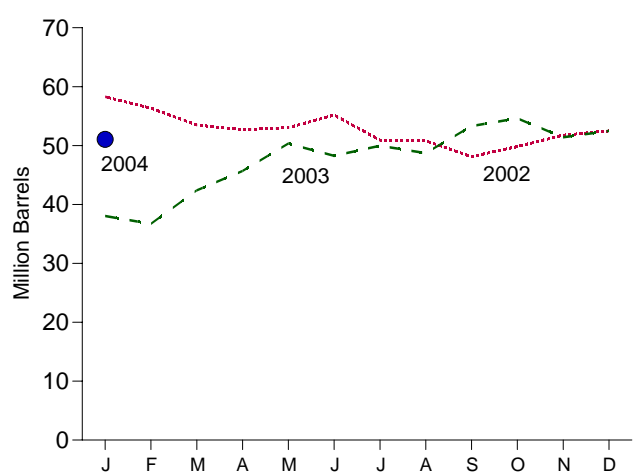
Coal, Monthly



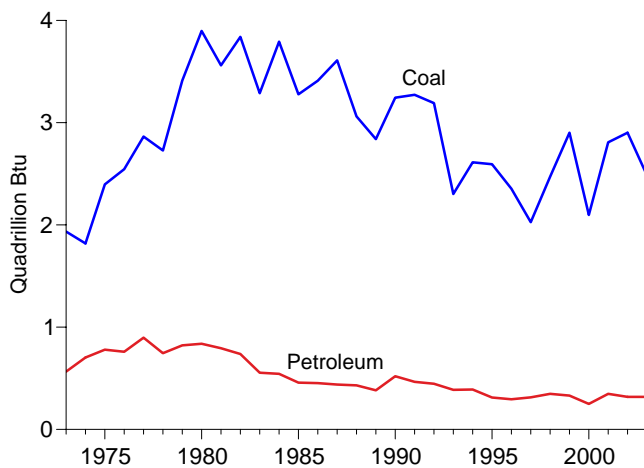
Total Petroleum, 1973-2003



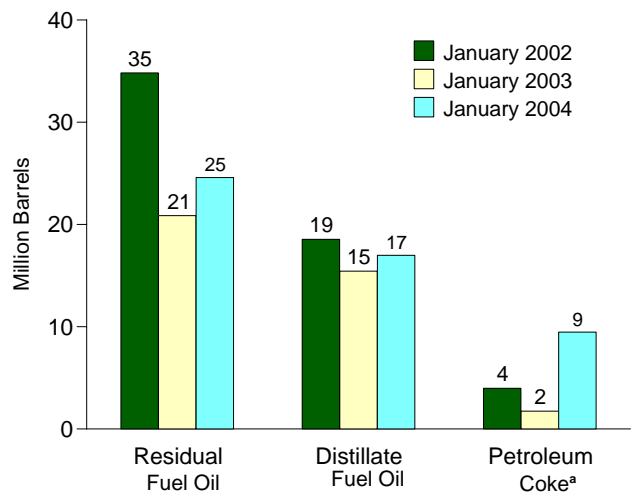
Total Petroleum, Monthly



Coal and Petroleum Stocks, 1973-2003



Petroleum by Type, End of Month



<sup>a</sup>Converted from short tons to barrels by multiplying by 5.  
Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.  
Source: Tables 7.4, A1, and A5.

**Table 7.4 Stocks of Coal and Petroleum: Electric Power Sector**

	Petroleum					Total <sup>e</sup>
	Coal <sup>a</sup>	Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	
<b>1973 Total</b> .....	<b>86,967</b>	<b>10,095</b>	<b>79,121</b>	<b>NA</b>	<b>312</b>	<b>90,776</b>
<b>1974 Total</b> .....	<b>83,509</b>	<b>15,199</b>	<b>97,718</b>	<b>NA</b>	<b>35</b>	<b>113,091</b>
<b>1975 Total</b> .....	<b>110,724</b>	<b>16,432</b>	<b>108,825</b>	<b>NA</b>	<b>31</b>	<b>125,413</b>
<b>1976 Total</b> .....	<b>117,436</b>	<b>14,703</b>	<b>106,993</b>	<b>NA</b>	<b>32</b>	<b>121,857</b>
<b>1977 Total</b> .....	<b>133,219</b>	<b>19,281</b>	<b>124,750</b>	<b>NA</b>	<b>44</b>	<b>144,252</b>
<b>1978 Total</b> .....	<b>128,225</b>	<b>16,386</b>	<b>102,402</b>	<b>NA</b>	<b>198</b>	<b>119,778</b>
<b>1979 Total</b> .....	<b>159,714</b>	<b>20,301</b>	<b>111,121</b>	<b>NA</b>	<b>183</b>	<b>132,338</b>
<b>1980 Total</b> .....	<b>183,010</b>	<b>30,023</b>	<b>105,351</b>	<b>NA</b>	<b>52</b>	<b>135,635</b>
<b>1981 Total</b> .....	<b>168,893</b>	<b>26,094</b>	<b>102,042</b>	<b>NA</b>	<b>42</b>	<b>128,345</b>
<b>1982 Total</b> .....	<b>181,132</b>	<b>23,369</b>	<b>95,515</b>	<b>NA</b>	<b>41</b>	<b>119,090</b>
<b>1983 Total</b> .....	<b>155,598</b>	<b>18,801</b>	<b>70,573</b>	<b>NA</b>	<b>55</b>	<b>89,652</b>
<b>1984 Total</b> .....	<b>179,727</b>	<b>19,116</b>	<b>68,503</b>	<b>NA</b>	<b>50</b>	<b>87,870</b>
<b>1985 Total</b> .....	<b>156,376</b>	<b>16,386</b>	<b>57,304</b>	<b>NA</b>	<b>49</b>	<b>73,933</b>
<b>1986 Total</b> .....	<b>161,806</b>	<b>16,269</b>	<b>56,841</b>	<b>NA</b>	<b>40</b>	<b>73,313</b>
<b>1987 Total</b> .....	<b>170,797</b>	<b>15,759</b>	<b>55,069</b>	<b>NA</b>	<b>51</b>	<b>71,084</b>
<b>1988 Total</b> .....	<b>146,507</b>	<b>15,099</b>	<b>54,187</b>	<b>NA</b>	<b>86</b>	<b>69,714</b>
<b>1989 Total</b> .....	<b>135,860</b>	<b>13,824</b>	<b>47,446</b>	<b>NA</b>	<b>105</b>	<b>61,795</b>
<b>1990 Total</b> .....	<b>156,166</b>	<b>16,471</b>	<b>67,030</b>	<b>NA</b>	<b>94</b>	<b>83,970</b>
<b>1991 Total</b> .....	<b>157,876</b>	<b>16,357</b>	<b>58,636</b>	<b>NA</b>	<b>70</b>	<b>75,343</b>
<b>1992 Total</b> .....	<b>154,130</b>	<b>15,714</b>	<b>56,135</b>	<b>NA</b>	<b>67</b>	<b>72,183</b>
<b>1993 Total</b> .....	<b>111,341</b>	<b>15,674</b>	<b>46,770</b>	<b>NA</b>	<b>89</b>	<b>62,890</b>
<b>1994 Total</b> .....	<b>126,897</b>	<b>16,644</b>	<b>46,344</b>	<b>NA</b>	<b>69</b>	<b>63,333</b>
<b>1995 Total</b> .....	<b>126,304</b>	<b>15,392</b>	<b>35,102</b>	<b>NA</b>	<b>65</b>	<b>50,821</b>
<b>1996 Total</b> .....	<b>114,623</b>	<b>15,216</b>	<b>32,473</b>	<b>NA</b>	<b>91</b>	<b>48,146</b>
<b>1997 Total</b> .....	<b>98,826</b>	<b>15,456</b>	<b>33,336</b>	<b>NA</b>	<b>469</b>	<b>51,138</b>
<b>1998 Total</b> .....	<b>120,501</b>	<b>16,343</b>	<b>37,451</b>	<b>NA</b>	<b>559</b>	<b>56,591</b>
<b>1999 Total</b> <sup>f</sup> .....	<b>141,604</b>	<b>17,995</b>	<b>34,256</b>	<b>NA</b>	<b>372</b>	<b>54,109</b>
<b>2000 Total</b> .....	<b>102,296</b>	<b>15,127</b>	<b>24,748</b>	<b>NA</b>	<b>211</b>	<b>40,932</b>
<b>2001 Total</b> .....	<b>138,496</b>	<b>20,486</b>	<b>34,594</b>	<b>NA</b>	<b>390</b>	<b>57,031</b>
<b>2002</b> January .....	139,400	18,558	34,833	903	798	58,283
February .....	143,151	18,314	32,792	688	912	56,353
March .....	146,443	18,866	28,447	774	1,082	53,500
April .....	153,375	17,693	28,485	787	1,144	52,683
May .....	155,313	18,305	28,241	758	1,149	53,047
June .....	152,134	18,113	30,412	638	1,206	55,190
July .....	142,634	17,206	26,986	692	1,208	50,921
August .....	137,130	17,439	25,697	718	1,393	50,820
September .....	135,962	16,967	22,841	768	1,508	48,117
October .....	140,800	16,838	23,926	731	1,667	49,829
November .....	144,608	16,959	25,127	1,111	1,714	51,767
<b>December</b> .....	<b>141,714</b>	<b>17,413</b>	<b>25,723</b>	<b>800</b>	<b>1,711</b>	<b>52,490</b>
<b>2003</b> January .....	135,771	15,431	20,870	NA	350	38,051
February .....	128,828	14,564	20,621	NA	306	36,713
March .....	131,162	19,849	20,961	NA	315	42,385
April .....	138,895	15,351	22,737	NA	1,519	45,681
May .....	143,884	15,058	26,772	NA	1,702	50,339
June .....	142,325	15,426	24,447	NA	1,675	48,250
July .....	132,964	16,570	25,029	NA	1,672	49,957
August .....	125,725	15,771	24,758	NA	1,638	48,722
September .....	122,425	20,509	24,796	NA	1,601	53,309
October .....	126,002	21,213	25,831	NA	1,514	54,617
November .....	126,200	16,776	26,699	NA	1,585	51,400
<b>December</b> .....	<sup>R</sup> <b>121,371</b>	<sup>R</sup> <b>19,563</b>	<sup>R</sup> <b>25,653</b>	<b>NA</b>	<sup>R</sup> <b>1,455</b>	<sup>R</sup> <b>52,489</b>
<b>2004</b> January .....	<sup>F</sup> 115,392	<sup>F</sup> 16,991	<sup>F</sup> 24,590	NA	<sup>F</sup> 1,895	<sup>F</sup> 51,058

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, and lignite.  
<sup>b</sup> For 1973-1979, gas turbine and internal combustion plant stocks of petroleum. For 1980-2001, electric utility data are for light oil (fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel).  
<sup>c</sup> For 1973-1979, steam plant stocks of petroleum. For 1980-2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).  
<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, and waste oil.  
<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.  
<sup>f</sup> Through 1998, data are for stocks at electric utilities only. Beginning in 1999, data also include stocks at independent power producers.  
<sup>R</sup>=Revised. <sup>NA</sup>=Not available. <sup>F</sup>=Forecast.

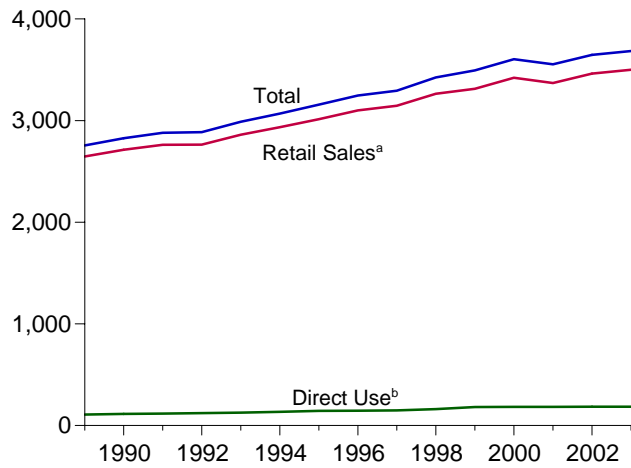
Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

• Stocks are at end of year. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

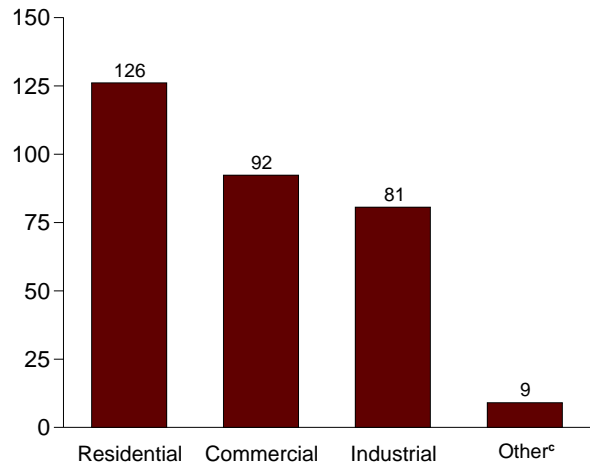
Web Page: <http://www.eia.doe.gov/emeu/mer/elect.html>.  
Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1981:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982-1988:** Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • **1989-1997:** EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001:** EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • **2002-December 2003:** EIA, Form EIA-906, "Power Plant Report." • **January 2004:** EIA, Short-Term Integrated Forecasting System.

**Figure 7.5 Electricity End Use**  
(Billion Kilowatthours)

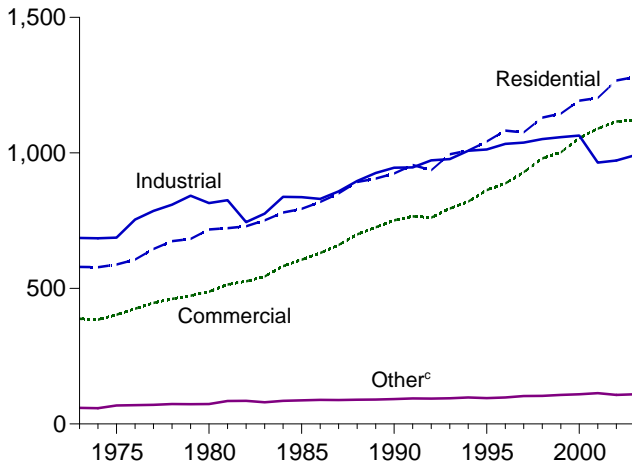
Electricity End Use Overview, 1989-2003



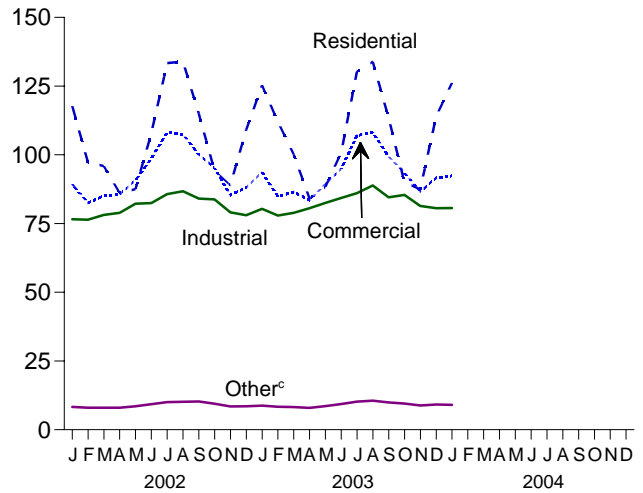
Retail Sales^a by Sector, January 2004



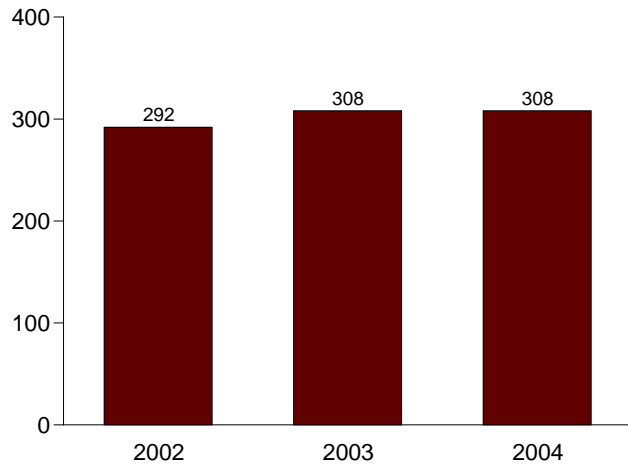
Retail Sales^a by Sector, 1973-2003



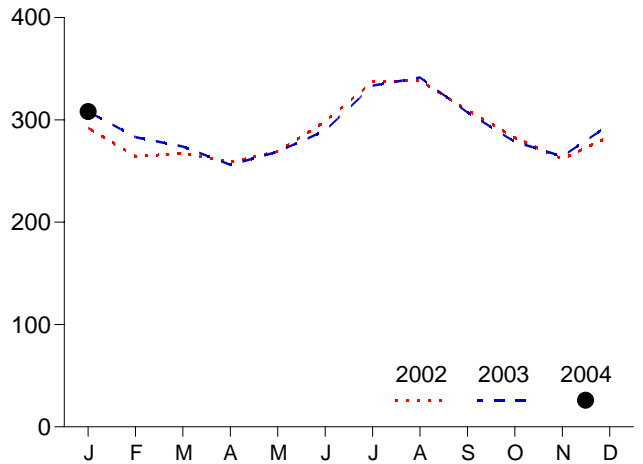
Retail Sales^a by Sector, Monthly



Retail Sales^a Total, January



Retail Sales^a Total, Monthly



<sup>a</sup>Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>b</sup>Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

<sup>c</sup>Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Note: 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)

	Retail Sales <sup>a</sup>					Direct Use <sup>c</sup>	Total
	Residential	Commercial	Industrial	Other <sup>b</sup>	Total		
<b>1973 Total</b> .....	579,231	388,266	686,085	59,326	1,712,909	NA	1,712,909
<b>1974 Total</b> .....	578,184	384,826	684,875	58,039	1,705,924	NA	1,705,924
<b>1975 Total</b> .....	588,140	403,049	687,680	68,222	1,747,091	NA	1,747,091
<b>1976 Total</b> .....	606,452	425,094	754,069	69,631	1,855,246	NA	1,855,246
<b>1977 Total</b> .....	645,239	446,514	786,037	70,571	1,948,361	NA	1,948,361
<b>1978 Total</b> .....	674,466	461,163	809,078	73,215	2,017,922	NA	2,017,922
<b>1979 Total</b> .....	682,819	473,307	841,903	73,070	2,071,099	NA	2,071,099
<b>1980 Total</b> .....	717,495	488,155	815,067	73,732	2,094,449	NA	2,094,449
<b>1981 Total</b> .....	722,265	514,338	825,743	84,756	2,147,103	NA	2,147,103
<b>1982 Total</b> .....	729,520	526,397	744,949	85,575	2,086,441	NA	2,086,441
<b>1983 Total</b> .....	750,948	543,788	775,999	80,219	2,150,955	NA	2,150,955
<b>1984 Total</b> .....	780,092	582,621	837,836	85,248	2,285,796	NA	2,285,796
<b>1985 Total</b> .....	793,934	605,989	836,772	87,279	2,323,974	NA	2,323,974
<b>1986 Total</b> .....	819,088	630,520	830,531	88,615	2,368,753	NA	2,368,753
<b>1987 Total</b> .....	850,410	660,433	858,233	88,196	2,457,272	NA	2,457,272
<b>1988 Total</b> .....	892,866	699,100	896,498	89,598	2,578,062	NA	2,578,062
<b>1989 Total</b> .....	905,525	725,861	925,659	89,765	2,646,809	108,145	2,754,954
<b>1990 Total</b> .....	924,019	751,027	945,522	91,988	2,712,555	114,036	2,826,591
<b>1991 Total</b> .....	955,417	765,664	946,583	94,339	2,762,003	118,033	2,880,036
<b>1992 Total</b> .....	935,939	761,271	972,714	93,442	2,763,365	122,251	2,885,616
<b>1993 Total</b> .....	994,781	794,573	977,164	94,944	2,861,462	127,503	2,988,966
<b>1994 Total</b> .....	1,008,482	820,269	1,007,981	97,830	2,934,563	134,111	3,068,674
<b>1995 Total</b> .....	1,042,501	862,685	1,012,693	95,407	3,013,287	144,063	3,157,350
<b>1996 Total</b> .....	1,082,512	887,445	1,033,631	97,539	3,101,127	145,857	3,246,984
<b>1997 Total</b> .....	1,075,880	928,633	1,038,197	102,901	3,145,610	148,428	3,294,039
<b>1998 Total</b> .....	1,130,109	979,401	1,051,203	103,518	3,264,231	160,897	3,425,128
<b>1999 Total</b> .....	1,144,923	1,001,996	1,058,217	106,952	3,312,087	182,508	3,494,595
<b>2000 Total</b> .....	1,192,446	1,055,232	1,064,239	109,496	3,421,414	183,263	3,604,677
<b>2001 Total</b> .....	1,202,647	1,089,154	964,224	113,756	3,369,781	184,014	3,553,795
<b>2002</b> January .....	117,742	89,366	76,600	8,315	292,023	E 15,693	307,715
February .....	97,309	82,526	76,413	8,028	264,275	E 14,174	278,449
March .....	95,919	85,055	78,122	8,010	267,105	E 15,693	282,798
April .....	86,103	85,549	78,918	8,009	258,578	E 15,186	273,765
May .....	87,494	90,819	82,242	8,501	269,055	E 15,693	284,747
June .....	107,853	98,638	82,432	9,306	298,230	E 15,186	313,416
July .....	133,389	108,091	85,724	10,064	337,268	E 15,693	352,961
August .....	133,951	107,439	86,739	10,183	338,312	E 15,693	354,005
September .....	114,951	100,138	84,107	10,266	309,462	E 15,186	324,648
October .....	94,237	95,188	83,783	9,456	282,665	E 15,693	298,358
November .....	88,926	85,363	79,057	8,464	261,810	E 15,186	276,997
December .....	109,085	88,076	78,032	8,546	283,738	E 15,693	299,431
<b>Total</b> .....	<b>1,266,959</b>	<b>1,116,248</b>	<b>972,168</b>	<b>107,146</b>	<b>3,462,521</b>	<b>184,768</b>	<b>3,647,289</b>
<b>2003</b> January .....	125,307	93,712	80,351	8,743	308,113	E 15,693	323,806
February .....	112,021	84,886	77,901	8,327	283,136	E 14,174	297,310
March .....	100,154	86,482	78,914	8,265	273,816	E 15,693	289,508
April .....	84,102	83,470	80,561	7,924	256,057	E 15,186	271,244
May .....	88,340	89,391	82,495	8,581	268,807	E 15,693	284,500
June .....	100,912	94,911	84,296	9,353	289,472	E 15,186	304,658
July .....	130,254	106,961	86,064	10,232	333,510	E 15,693	349,203
August .....	133,889	108,218	88,825	10,550	341,481	E 15,693	357,174
September .....	113,506	99,408	84,526	9,939	307,379	E 15,186	322,566
October .....	90,044	93,497	85,438	9,525	278,504	E 15,693	294,197
November .....	87,474	86,722	81,374	8,838	264,408	E 15,186	279,595
December .....	<sup>R</sup> 113,903	<sup>R</sup> 91,592	<sup>R</sup> 80,612	<sup>R</sup> 9,176	<sup>R</sup> 295,283	E 15,693	<sup>R</sup> 310,976
<b>Total</b> .....	<b><sup>R</sup> 1,279,907</b>	<b><sup>R</sup> 1,119,250</b>	<b><sup>R</sup> 991,359</b>	<b><sup>R</sup> 109,452</b>	<b><sup>R</sup> 3,499,968</b>	<b><sup>E</sup> 184,768</b>	<b><sup>R</sup> 3,684,736</b>
<b>2004</b> January .....	<sup>F</sup> 126,148	<sup>F</sup> 92,339	<sup>F</sup> 80,651	<sup>F</sup> 9,056	<sup>F</sup> 308,194	<sup>E</sup> 15,650	<sup>F</sup> 323,844

<sup>a</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>b</sup> Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

<sup>c</sup> Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

R=Revised. E=Estimate. NA=Not available. 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: **Retail Sales:** • **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-December 2003:** EIA, *Electric Power Monthly*, March 2004, Table 5.1. • **January 2004:** EIA, Short-Term Integrated Forecasting System (STIFS). **Direct Use, Annual:** • **1989-1997:** EIA, Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001 and 2002:** EIA, Form EIA-861, "Annual Electric Power Industry Report." **2003:** Same value as 2002. **Direct Use, Monthly:** Estimates are derived by dividing the annual value by the number of days in the year and then multiplying by the number of days in the month. (To derive monthly estimates for the current year, the previous year's value is used in the calculation.)

## Electricity

### Note. Classification of Power Plants Into Energy-Use Sectors

The Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas extraction); 23 (construction); 31-33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, "Annual Electric Generator Report," asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the universal list at: [www.census.gov/epcd/naics02/naicod02.htm](http://www.census.gov/epcd/naics02/naicod02.htm).

### Table 7.1 Sources: Imports and Exports of Electricity

#### Electricity Trade With Canada and Mexico, 1973-1989:

1973–September 1977: Unpublished Federal Power Commission data.

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

1981: Department of Energy (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."

#### Electricity Trade with Canada, 1990 Forward:

National Energy Board of Canada, data for total sales (firm and interruptible; which exclude non-revenue, inadvertent, and service) from Canada to the United States, and data for total purchases (which exclude non-revenue, inadvertent, and service) by Canada from the United States.

#### Electricity Trade with Mexico, 1990 Forward:

DOE, Fossil Energy, Office of Fuels Programs, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

#### Table 7.2a Notes:

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

District of Columbia.

#### Table 7.2a Web Page:

[Http://www.eia.doe.gov/emeu/mer/elect.html](http://www.eia.doe.gov/emeu/mer/elect.html).

#### Table 7.2a Sources:

See sources for Tables 7.2b and 7.2c.

#### Table 7.2b Notes:

• The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

#### Table 7.2b Web Page:

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

#### Table 7.2b Sources:

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

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report-Nonutility."

2001 and 2002: EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report."

2003: EIA, Form EIA-906, "Power Plant Report."

January 2004: EIA, Short-Term Integrated Forecasting System.

#### Table 7.3d Notes:

• Data are for fuels consumed to produce electricity; they exclude fuels consumed to produce useful thermal output. Consumption for electricity generation at combined-heat-and-power (CHP) plants is estimated. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

#### Table 7.3d Web Page:

[Http://www.eia.doe.gov/emeu/mer/elect.html](http://www.eia.doe.gov/emeu/mer/elect.html).

#### Table 7.3d Sources:

See sources for Tables 7.3e and 7.3f.

**Table 7.3e Notes:**

• Data are for fuels consumed to produce electricity; they exclude fuels consumed to produce useful thermal output. Consumption for electricity generation at combined-heat-and-power (CHP) plants is estimated. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

**Table 7.3e Web Page:**

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

**Table 7.3e Sources:**

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

October 1977-1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982-1988: Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989-1997: EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report."

1998-2000: EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report-Nonutility."

2001 and 2002: EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report."

2003: EIA, Form EIA-906, "Power Plant Report."

January 2004: EIA, Short-Term Integrated Forecasting System.

## Section 8. Nuclear Energy

U.S. nuclear electricity net generation during January 2004 was forecast as 69 net terawatthours (billion kilowatthours) of electricity, slightly lower than the level in January 2003.

Nuclear units generated at a forecast average capacity factor of 94.1 percent in January 2004, 0.3 percentage point lower than the capacity factor in January 2003.

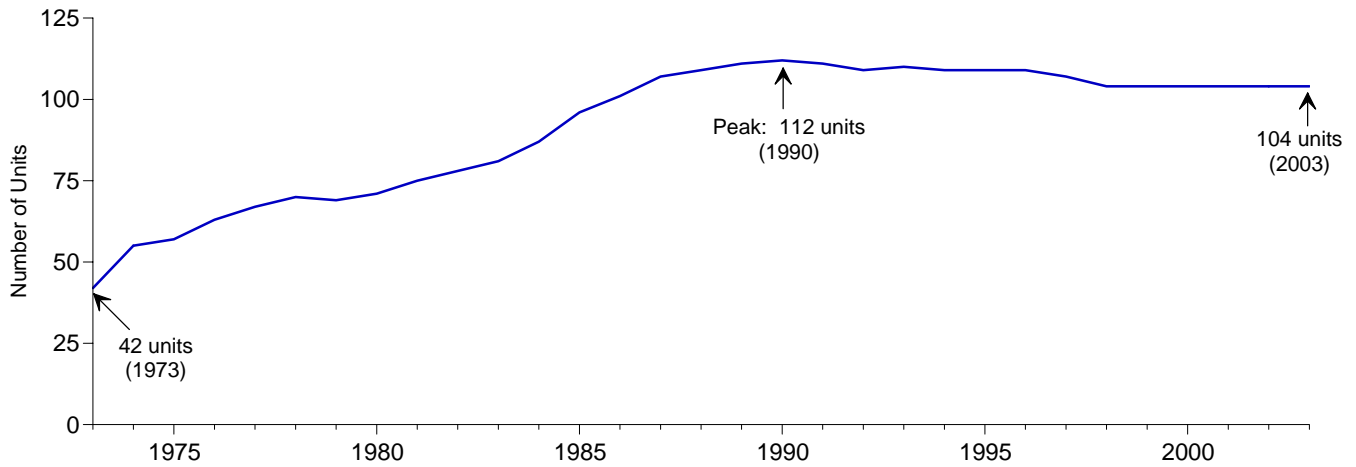
The nuclear share of total electricity net generation in January 2004 was forecast as 20.3 percent, compared with 20.5 percent 1 year earlier.

On January 31, 2004, there were 104 operable nuclear generating units in the United States, with a collective net summer capacity of 98.7 million kilowatts of electricity.

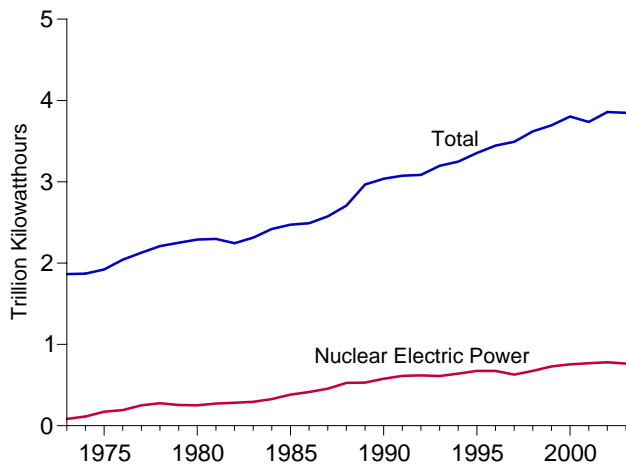


## Figure 8.1 Nuclear Energy Overview

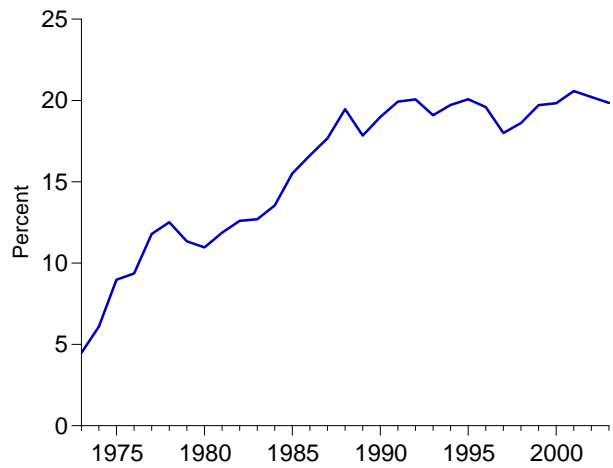
Operable Units, End of Year, 1973-2003



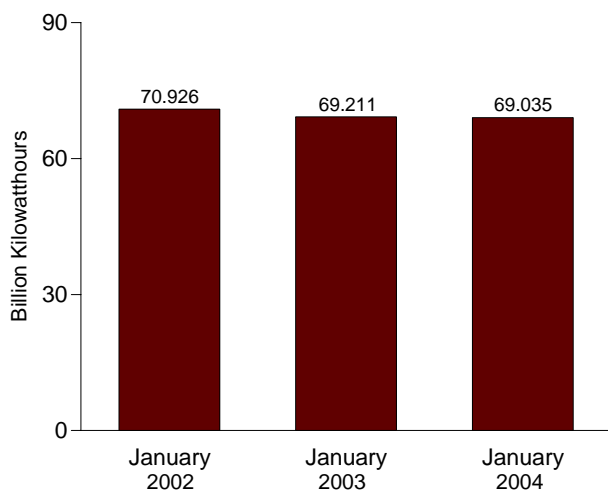
Electricity Net Generation, 1973-2003



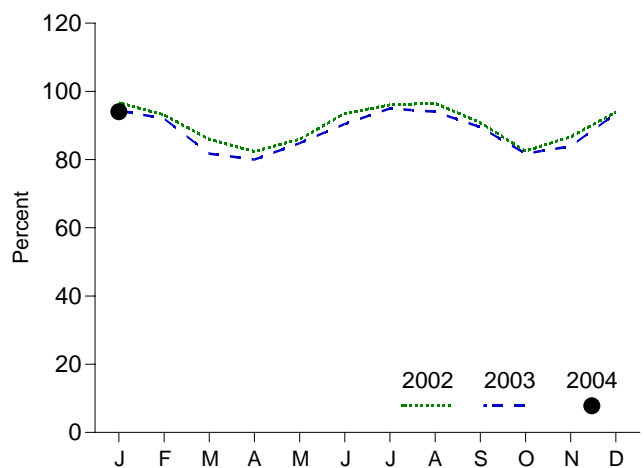
Nuclear Share of Electricity Net Generation, 1973-2003



Nuclear Electricity Net Generation



Capacity Factor, Monthly



Web Page: <http://www.eia.doe.gov/emeu/mer/nuclear.html>.  
Sources: Table 7.1 and 8.1.

**Table 8.1 Nuclear Energy Overview**

	Total Operable Units <sup>a,b</sup>	Net Summer Capacity of Operable Units <sup>b,c</sup>	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Capacity Factor <sup>d</sup>
	Number	Million Kilowatts	Million Kilowatthours	Percent	
1973 Year .....	42	22.683	83,479	4.5	53.5
1974 Year .....	55	31.867	113,976	6.1	47.8
1975 Year .....	57	37.267	172,505	9.0	55.9
1976 Year .....	63	43.822	191,104	9.4	54.7
1977 Year .....	67	46.303	250,883	11.8	63.3
1978 Year .....	70	50.824	276,403	12.5	64.5
1979 Year .....	69	49.747	255,155	11.3	58.4
1980 Year .....	71	51.810	251,116	11.0	56.3
1981 Year .....	75	56.042	272,674	11.9	58.2
1982 Year .....	78	60.035	282,773	12.6	56.6
1983 Year .....	81	63.009	293,677	12.7	54.4
1984 Year .....	87	69.652	327,634	13.5	56.3
1985 Year .....	96	79.397	383,691	15.5	58.0
1986 Year .....	101	85.241	414,038	16.6	56.9
1987 Year .....	107	93.583	455,270	17.7	57.4
1988 Year .....	109	94.695	526,973	19.5	63.5
1989 Year .....	111	98.161	529,355	17.8	62.2
1990 Year .....	112	99.624	576,862	19.0	66.0
1991 Year .....	111	99.589	612,565	19.9	70.2
1992 Year .....	109	98.985	618,776	20.1	70.9
1993 Year .....	110	99.041	610,291	19.1	70.5
1994 Year .....	109	99.148	640,440	19.7	73.8
1995 Year .....	109	99.515	673,402	20.1	77.4
1996 Year .....	109	100.784	674,729	19.6	76.2
1997 Year .....	107	99.716	628,644	18.0	71.1
1998 Year .....	104	97.070	673,702	18.6	78.2
1999 Year .....	104	97.411	728,254	19.7	85.3
2000 Year .....	104	97.860	753,893	19.8	88.1
2001 Year .....	104	98.159	768,826	20.6	89.4
2002 January .....	104	98.564	70,926	22.2	96.7
February .....	104	98.564	61,658	21.9	93.1
March .....	104	98.564	63,041	20.8	86.0
April .....	104	98.564	58,437	20.2	82.4
May .....	104	98.564	63,032	20.5	86.0
June .....	104	98.564	66,372	19.5	93.5
July .....	104	98.564	70,421	18.5	96.0
August .....	104	98.564	70,778	18.9	96.5
September .....	104	98.564	64,481	19.5	90.9
October .....	104	98.564	60,493	19.7	82.5
November .....	104	98.564	61,520	20.8	86.7
December .....	104	98.564	68,905	21.2	94.0
Year .....	104	98.564	780,064	20.2	90.4
2003 January .....	104	98.564	69,211	20.5	94.4
February .....	104	98.564	60,942	20.5	92.0
March .....	104	98.564	59,933	19.8	81.7
April .....	104	98.564	56,776	20.1	80.0
May .....	104	98.564	62,194	20.4	84.8
June .....	104	98.564	64,181	19.8	90.4
July .....	104	98.564	69,653	18.7	95.0
August .....	104	98.657	69,024	18.3	94.0
September .....	104	98.657	63,584	20.1	89.5
October .....	104	98.657	60,016	19.7	81.8
November .....	104	98.657	59,600	20.0	83.9
December .....	104	98.657	<sup>R</sup> 68,612	<sup>R</sup> 20.7	<sup>R</sup> 93.5
Year .....	104	98.657	<sup>R</sup> 763,725	<sup>R</sup> 19.8	<sup>R</sup> 88.4
2004 January .....	104	98.657	<sup>F</sup> 69,035	<sup>F</sup> 20.3	<sup>F</sup> 94.1

<sup>a</sup> Total of nuclear generating units holding full-power licenses, or equivalent permission to operate, at the end of the period—see Note 1 at end of section. Although Browns Ferry 1 was shut down in 1985, the unit has remained fully licensed and thus has continued to be counted as operable during the shutdown; 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. For additional information on nuclear generating units, see *Annual Energy Review 2002*, October 2003, Table 9.1.

<sup>b</sup> At end of period.

<sup>c</sup> For the definition of "Net Summer Capacity," see Note 2(a) at end of section.

<sup>d</sup> For an explanation of the method of calculating the capacity factor, see Note 2 at end of section.

R=Revised. F=Forecast.

Notes: • See Note 1 at end of section for discussion of reactor unit coverage. • 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.

## Nuclear Energy

**Note 1.** A reactor is generally defined as operable 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 counted as operable during 1989. 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 Capacity—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 capacity 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

**Total Operable Units and Net Summer Capacity 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. For a list of currently operable units, see: [http://eia.doe.gov/cneaf/nuclear/page/nuc\\_reactors/operational.html](http://eia.doe.gov/cneaf/nuclear/page/nuc_reactors/operational.html).

**Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation:** See Table 7.2a for actual data. The forecast value is derived from EIA's Short-Term Integrated Forecasting System. See Note 10 at end of Section 4 for related information.

**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 Note 10 at end of Section 4 for related information.

## Section 9. Energy Prices

**Crude Oil.** The average price of domestic crude oil at the wellhead was \$30.32 per barrel in January 2004, 7 percent above the level of January 2003. The refiner acquisition cost of imported crude oil in January 2004 was \$30.38 per barrel, slightly higher than the January 2003 level. The average cost of domestic crude oil in January 2004 was \$32.05, 5 percent more than the January 2003 average.

**Motor Gasoline.** The national city average retail price of unleaded regular gasoline at all types of stations was \$1.67 per gallon in February 2004, 2 percent higher than the price in February 2003. The price of unleaded premium gasoline averaged \$1.86 in February 2004, 2 percent higher than the price in February 2003.

**Residual Fuel Oil.** The average price, excluding taxes, of residual fuel oil sold to end users in January 2004 was 71 cents per gallon, 7 percent higher than the previous month's price but 5 percent lower than the January 2003 average. The average resale price, excluding taxes, of residual fuel oil in January 2004 was 69 cents, 11 percent higher than the December 2003 price but 5 percent lower than the price 1 year earlier.

**Aviation Fuel.** The average price, excluding taxes, of kerosene-type jet fuel sold to end users in January 2004 was \$1.00 per gallon, 8 percent higher than the previous month's average price and 9 percent higher than the January 2003 average price.

**No. 2 Distillate Fuel Oil.** The January 2004 national average price, excluding taxes, of heating oil sold to residential customers was \$1.42 per gallon, 6 percent higher than the December 2003 price and 7 percent higher than the January 2003 price. The average price of No. 2 fuel oil sold to all end users was \$1.03 cents per gallon in January 2004, 8 percent higher than the December 2003 price and 6 percent higher than the price 1 year earlier.

**Electricity.** The average retail price of electricity sold to all ultimate consumers in the United States in December 2003 (latest month for which data are available) was 7.15 cents per kilowatthour, 2 percent higher than the average price in December 2002. The price of electricity sold to residential consumers in December 2003 averaged 8.34 cents per kilowatthour, 3 percent higher than the December 2002 price. The price of electricity sold to commercial consumers averaged 7.80 cents per kilowatthour in December 2003, 2 percent higher than the December 2002 price. The price of electricity sold to other consumers was 6.64 cents per kilowatthour, 4 percent lower than the December 2002 price. The price of electricity sold to industrial users in December 2003 averaged 4.78 cents per kilowatthour, 1 percent higher than the price 1 year earlier.

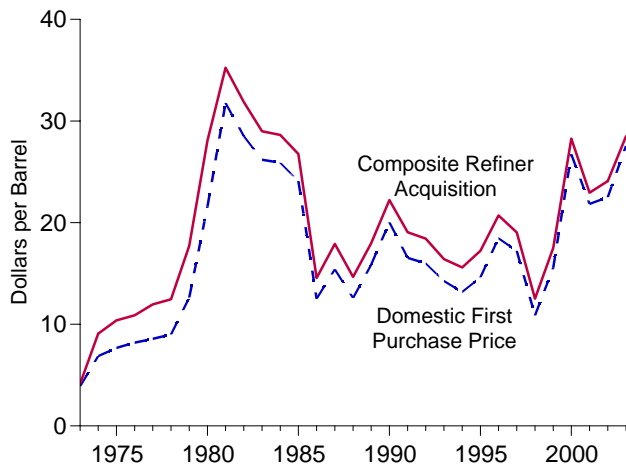
Beginning with January 1986, new series of national average price estimates were based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national averages.

**Natural Gas.** The average wellhead price of natural gas for December 2003 (latest month for which data are available) was estimated as \$5.08 per thousand cubic feet, 28 percent higher than the December 2002 price.

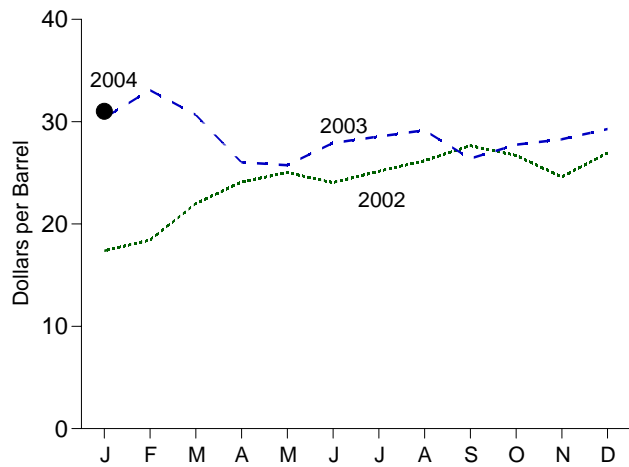
The average price of natural gas delivered to the electric power sector was \$4.67 per thousand cubic feet in November 2003 (latest month for which data are available), 7 percent higher than the November 2002 price. The average price of natural gas used by residential consumers in December 2003 was \$9.35 per thousand cubic feet, 19 percent higher than the December 2002 price. The average price of natural gas used by commercial consumers in December 2003 was \$8.44 per thousand cubic feet, 18 percent higher than the December 2002 price. The average price of natural gas used by industrial consumers in December 2003 was \$5.76 per thousand cubic feet, 17 percent above the December 2002 price.

**Figure 9.1 Petroleum Prices**

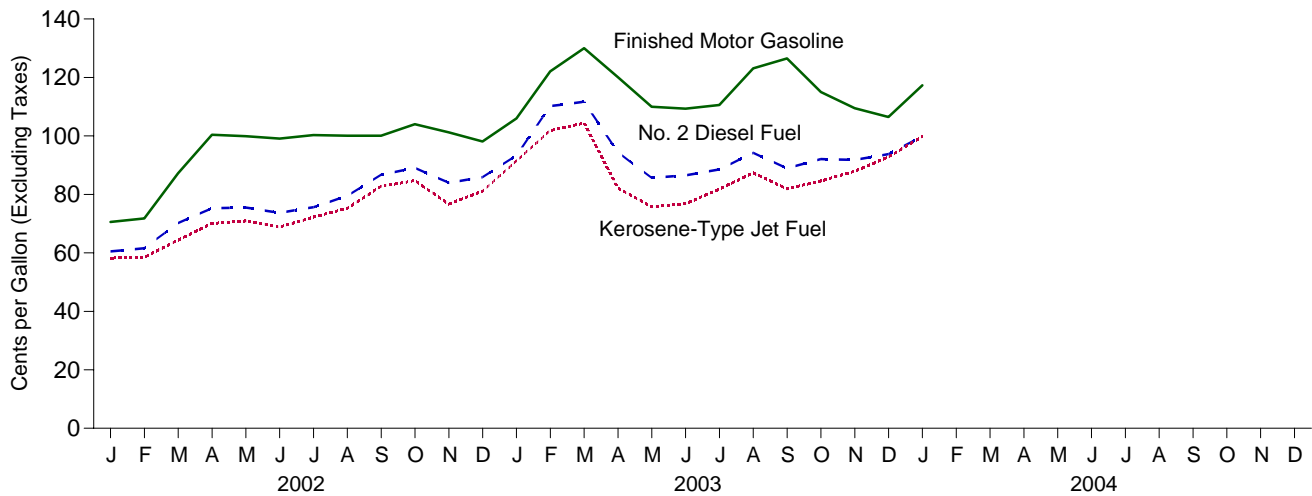
Crude Oil Prices, 1973-2003



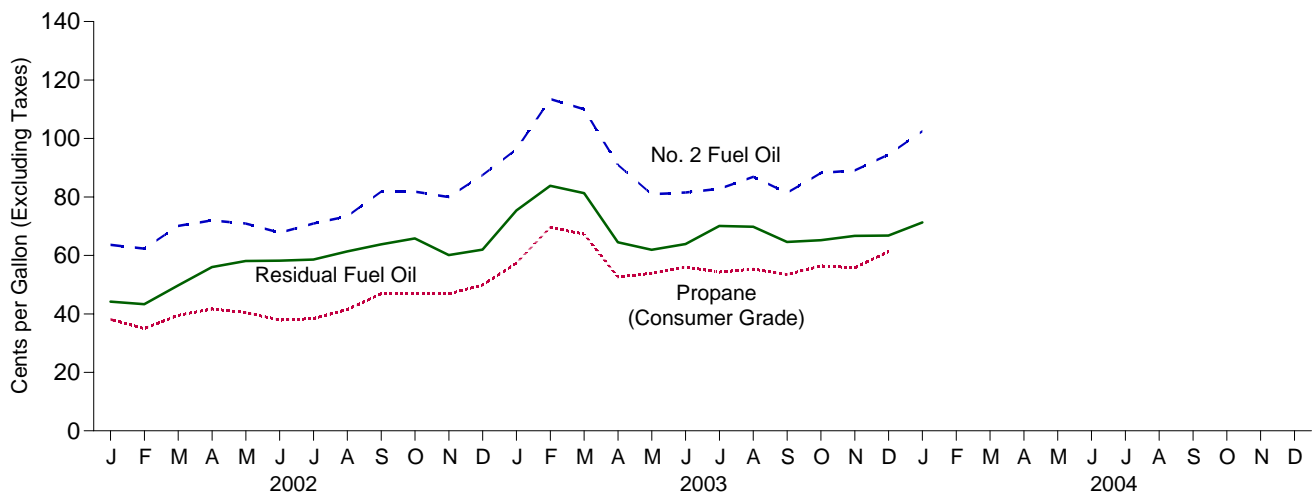
Composite Refiner Acquisition Cost, Monthly



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 <sup>b</sup>	F.O.B. Cost of Imports <sup>c</sup>	Landed Cost of Imports <sup>d</sup>	Refiner Acquisition Cost <sup>a</sup>		
				Domestic	Imported	Composite
1973 Average .....	3.89	<sup>e</sup> 5.21	<sup>e</sup> 6.41	<sup>E</sup> 4.17	<sup>E</sup> 4.08	<sup>E</sup> 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 Average .....	26.72	26.27	27.53	29.11	27.70	28.26
2001 Average .....	21.84	20.46	21.82	24.33	22.00	22.95
2002 January .....	15.89	16.01	17.29	17.84	17.04	17.38
February .....	16.93	17.67	19.17	18.70	18.24	18.43
March .....	20.28	21.60	22.24	21.61	22.29	22.00
April .....	22.52	23.04	24.15	24.26	23.98	24.10
May .....	23.51	23.16	24.49	25.78	24.44	25.03
June .....	22.59	22.63	23.95	24.81	23.45	24.05
July .....	23.51	23.72	25.01	25.37	24.99	25.16
August .....	24.76	24.57	25.93	26.87	25.68	26.19
September .....	26.08	25.80	26.78	28.40	27.14	27.66
October .....	25.29	24.32	25.58	27.82	25.99	26.70
November .....	23.38	22.42	24.22	26.02	23.68	24.60
December .....	25.29	25.86	27.08	27.25	26.68	26.93
Average .....	22.51	22.63	23.91	24.65	23.71	24.10
2003 January .....	28.35	29.16	30.34	30.47	30.32	30.38
February .....	31.85	29.78	31.33	33.98	32.42	33.08
March .....	30.09	26.32	28.86	32.68	29.31	30.68
April .....	25.46	22.75	25.21	28.54	24.52	26.03
May .....	24.96	23.49	25.39	26.75	25.15	25.74
June .....	26.83	25.35	27.36	29.07	27.22	27.92
July .....	27.53	26.11	27.73	29.54	27.95	28.55
August .....	27.94	26.87	28.01	30.28	28.50	29.15
September .....	25.23	24.10	25.91	27.75	25.66	26.39
October .....	26.52	26.06	27.37	28.43	27.32	27.75
November .....	27.21	<sup>R</sup> 26.03	<sup>R</sup> 27.68	29.55	27.47	28.28
December .....	<sup>R</sup> 28.54	<sup>R</sup> 26.82	<sup>R</sup> 28.74	30.27	28.63	29.28
Average .....	27.56	<sup>R</sup> 25.87	<sup>R</sup> 27.68	29.76	27.71	28.50
2004 January .....	30.32	27.88	30.35	32.05	30.38	31.01

<sup>a</sup> See Note 4 at end of section.

<sup>b</sup> See Note 1 at end of section.

<sup>c</sup> See Note 2 at end of section.

<sup>d</sup> See Note 3 at end of section.

<sup>e</sup> Based on October, November, and December data only.

<sup>R</sup>=Revised. <sup>E</sup>=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 <sup>a</sup>	Total OPEC <sup>b</sup>	Total Non-OPEC
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average <sup>c</sup>	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	( <sup>d</sup> )	11.44	11.82	10.87	NA	11.04	10.88	11.34	10.62
1976 Average	12.02	( <sup>d</sup> )	12.22	13.08	11.62	W	11.39	11.65	12.23	11.70
1977 Average	13.29	( <sup>d</sup> )	13.42	14.44	12.38	14.11	12.63	12.56	13.29	12.97
1978 Average	13.32	( <sup>d</sup> )	13.24	14.05	12.70	13.82	12.38	12.77	13.31	13.23
1979 Average	19.85	( <sup>d</sup> )	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	( <sup>d</sup> )	33.01	38.31	32.60	36.06	28.95	33.00	35.17	35.12
1982 Average	31.86	( <sup>d</sup> )	28.08	35.13	33.73	33.42	23.74	33.55	33.48	30.58
1983 Average	28.14	( <sup>d</sup> )	25.20	29.81	27.53	29.91	21.48	27.70	28.46	27.20
1984 Average	27.46	( <sup>d</sup> )	26.39	29.51	27.67	28.87	24.23	27.48	27.79	27.45
1985 Average	26.30	( <sup>d</sup> )	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	12.18	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 Average	27.90	29.04	25.39	28.70	24.62	27.21	24.45	24.72	25.56	26.77
2001 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	W	13.49	17.46	15.79	16.17
February	18.76	19.28	15.91	20.73	21.11	W	14.84	19.77	17.61	17.71
March	22.65	23.88	20.21	24.39	23.42	W	19.31	23.08	21.49	21.67
April	24.36	25.57	22.42	25.66	23.17	W	20.02	23.38	22.48	23.38
May	24.49	26.11	22.83	W	23.19	24.52	19.90	22.78	22.26	23.72
June	22.93	24.30	22.05	24.39	23.55	23.24	20.50	23.56	22.26	22.84
July	24.63	W	22.50	26.01	25.12	25.39	21.71	24.99	23.46	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	25.31	28.56	24.67	28.41	23.98	24.71	25.09	26.30
October	26.57	27.03	23.68	27.28	23.46	28.20	21.59	23.06	22.88	25.29
November	23.58	24.14	20.63	24.93	25.12	25.10	20.18	24.58	22.36	22.46
December	28.75	27.75	24.25	29.98	26.75	W	23.41	26.64	26.53	25.51
Average	24.09	24.64	21.60	25.38	23.92	24.50	20.13	23.38	22.18	22.93
2003 January	31.59	32.94	28.32	31.76	27.76	31.66	W	27.81	29.08	29.21
February	33.49	35.25	28.44	33.64	26.67	32.97	28.50	27.17	28.65	30.53
March	29.34	31.28	24.98	30.82	24.87	28.78	22.83	25.09	25.39	26.99
April	24.81	24.85	21.54	25.27	21.01	W	21.00	21.12	21.84	23.41
May	25.63	25.13	22.58	27.03	22.56	25.28	21.61	22.61	22.80	24.00
June	26.66	27.63	24.39	27.79	26.55	W	22.98	26.47	24.90	25.67
July	27.83	W	25.64	29.14	25.54	W	24.51	25.58	26.63	26.43
August	28.76	28.97	25.88	30.08	26.22	29.42	24.87	25.99	26.33	27.20
September	26.41	27.44	23.33	27.36	23.82	W	22.76	23.80	23.79	24.35
October	29.47	28.91	23.77	30.02	W	W	23.77	26.29	25.84	26.21
November	28.94	W	24.92	R 29.78	R 27.69	29.32	23.75	R 26.87	R 26.09	25.99
December	R 29.58	R 30.02	R 25.56	R 30.60	R 27.45	W	R 25.71	R 27.86	R 27.21	R 26.55
Average	R 28.24	R 28.89	24.83	R 29.40	R 25.00	28.76	R 23.81	R 25.20	R 25.37	R 26.22
2004 January	W	33.14	26.71	31.38	W	W	26.24	27.11	27.32	28.29

<sup>a</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

<sup>b</sup> Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. Ecuador is included in the data through 1992 and Gabon through 1995.

<sup>c</sup> Based on October, November, and December data only.

<sup>d</sup> 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 9.3 Landed Costs of Crude Oil Imports From Selected Countries**  
(Dollars per Barrel)

	Selected Countries								Persian Gulf Nations <sup>a</sup>	Total OPEC <sup>b</sup>	Total Non-OPEC
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average <sup>c</sup> .....	W	5.33	W	NA	9.08	5.37	NA	5.99	5.91	6.85	5.64
1974 Average .....	12.48	11.48	W	W	13.16	11.63	NA	11.25	12.21	12.49	11.81
1975 Average .....	11.81	12.84	( <sup>d</sup> )	12.61	12.70	12.50	NA	12.36	12.64	12.70	12.70
1976 Average .....	12.71	13.36	( <sup>d</sup> )	12.64	13.81	13.06	W	11.89	13.03	13.32	13.35
1977 Average .....	14.04	14.13	( <sup>d</sup> )	13.82	15.29	13.69	14.83	13.11	13.85	14.35	14.42
1978 Average .....	14.07	14.41	( <sup>d</sup> )	13.56	14.88	13.94	14.53	12.84	14.01	14.34	14.38
1979 Average .....	21.06	20.22	( <sup>d</sup> )	20.77	22.97	18.95	22.97	17.65	20.42	21.29	22.10
1980 Average .....	34.76	30.11	W	31.77	37.15	29.80	35.68	25.92	30.59	33.56	33.99
1981 Average .....	36.84	32.32	( <sup>d</sup> )	33.70	39.66	34.20	37.29	29.91	34.61	36.60	36.14
1982 Average .....	33.08	27.15	( <sup>d</sup> )	28.63	36.16	34.99	34.25	24.93	34.94	34.81	31.47
1983 Average .....	29.31	25.63	( <sup>d</sup> )	25.78	30.85	29.27	30.87	22.94	29.37	29.84	28.08
1984 Average .....	28.49	26.56	( <sup>d</sup> )	26.85	30.36	29.20	29.45	25.19	29.07	29.06	28.14
1985 Average .....	27.39	25.71	( <sup>d</sup> )	25.63	28.96	24.72	28.36	24.43	25.50	26.86	26.53
1986 Average .....	14.09	13.43	12.85	12.17	15.29	12.84	14.63	11.52	12.92	13.46	13.52
1987 Average .....	18.20	17.04	18.43	16.69	19.32	16.81	18.78	15.76	17.47	17.64	17.66
1988 Average .....	14.48	13.50	14.47	12.58	15.88	13.37	15.82	13.66	13.51	14.18	13.96
1989 Average .....	18.36	16.81	18.10	16.35	19.19	17.34	18.74	16.78	17.37	17.78	17.54
1990 Average .....	21.51	20.48	22.34	19.64	23.33	21.82	22.65	20.31	20.55	21.23	20.98
1991 Average .....	19.90	17.16	19.55	15.89	21.39	17.22	21.37	15.92	17.34	18.08	17.93
1992 Average .....	19.36	17.04	18.46	15.60	20.78	17.48	20.63	15.13	17.58	17.81	17.67
1993 Average .....	17.40	15.27	16.54	14.11	18.73	15.40	17.92	13.39	15.26	15.68	15.78
1994 Average .....	16.36	14.83	15.80	14.09	17.21	15.11	16.64	13.12	15.00	15.08	15.29
1995 Average .....	17.66	16.65	17.45	16.19	18.25	16.84	17.91	14.81	16.78	16.61	16.95
1996 Average .....	21.86	19.94	22.02	19.64	21.95	20.49	20.88	18.59	20.45	20.14	20.47
1997 Average .....	20.24	17.63	19.71	17.30	20.64	17.52	20.64	16.35	17.44	17.73	18.45
1998 Average .....	13.37	11.62	13.26	11.04	14.14	11.16	13.55	10.16	11.18	11.46	12.22
1999 Average .....	18.37	17.54	18.09	16.12	17.63	17.48	18.26	15.58	17.37	16.94	17.51
2000 Average .....	29.57	26.69	29.68	26.03	30.04	26.58	29.26	26.05	26.77	27.29	27.80
2001 Average .....	25.13	20.72	25.88	19.37	26.55	20.98	25.32	19.81	20.73	21.52	22.17
<b>2002</b> January .....	20.03	15.64	19.86	14.87	20.41	19.02	W	15.07	18.02	17.57	16.95
February .....	19.70	18.00	20.33	16.29	21.57	21.99	20.83	16.49	20.67	19.68	18.58
March .....	22.99	20.05	24.54	20.38	24.33	24.01	23.72	20.82	23.31	22.79	21.72
April .....	25.24	23.37	26.22	22.90	26.47	24.18	25.35	22.02	24.06	24.03	24.26
May .....	25.52	23.97	25.85	23.45	26.56	24.48	25.93	21.92	24.33	24.11	24.78
June .....	24.48	23.15	24.99	22.61	25.55	24.61	25.12	22.30	24.48	23.98	23.93
July .....	26.06	24.38	25.99	23.09	26.89	25.97	26.36	23.34	25.77	25.06	24.98
August .....	26.99	25.63	27.00	24.21	27.75	26.67	27.00	24.43	26.51	25.94	25.92
September .....	28.93	26.00	29.77	25.76	29.44	25.93	28.20	25.45	25.97	26.37	27.16
October .....	27.75	25.16	28.07	24.14	28.59	25.02	28.90	23.06	24.92	24.73	26.30
November .....	25.06	23.24	25.28	21.24	26.53	26.37	26.96	22.02	25.86	24.53	23.92
December .....	30.65	24.53	28.42	24.63	30.58	28.20	29.38	25.09	27.91	28.07	26.32
<b>Average .....</b>	<b>25.43</b>	<b>22.98</b>	<b>25.28</b>	<b>22.09</b>	<b>26.45</b>	<b>24.77</b>	<b>26.35</b>	<b>21.93</b>	<b>24.13</b>	<b>23.83</b>	<b>23.97</b>
<b>2003</b> January .....	33.28	27.91	34.11	28.71	33.40	30.56	32.89	29.38	30.22	30.79	29.99
February .....	35.83	30.10	36.79	29.28	35.65	29.25	34.74	30.80	29.85	30.73	31.93
March .....	32.00	29.93	32.73	26.20	34.29	26.23	31.32	26.51	27.01	28.24	29.52
April .....	27.77	26.06	26.15	22.24	29.54	24.47	28.23	23.33	24.27	24.86	25.63
May .....	27.39	24.98	26.85	23.15	28.33	25.36	26.75	23.42	25.11	25.28	25.51
June .....	28.52	26.91	29.35	25.09	29.49	28.21	29.58	25.06	28.10	27.38	27.33
July .....	29.60	26.88	30.17	26.08	30.40	27.54	29.83	26.11	27.50	27.58	27.85
August .....	30.04	27.48	30.24	26.37	31.10	27.08	30.52	26.23	26.93	27.70	28.27
September .....	27.99	25.18	28.13	23.76	29.04	25.81	28.95	24.09	25.88	25.98	25.85
October .....	31.07	25.57	29.88	24.37	30.38	28.23	31.14	25.48	28.01	27.76	26.97
November .....	30.57	25.06	30.38	25.54	31.45	29.13	31.60	25.85	28.61	28.36	26.95
December .....	R 31.60	26.16	R 32.63	R 26.29	R 32.51	R 30.26	31.46	R 27.70	R 30.07	R 29.78	R 27.79
<b>Average .....</b>	<b>R 30.13</b>	<b>26.77</b>	<b>R 30.55</b>	<b>25.49</b>	<b>R 31.06</b>	<b>R 27.44</b>	<b>30.62</b>	<b>R 25.70</b>	<b>R 27.50</b>	<b>R 27.68</b>	<b>R 27.68</b>
<b>2004</b> January .....	33.87	29.37	34.85	27.89	33.59	31.12	W	28.91	30.67	30.78	29.99

<sup>a</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

<sup>b</sup> Current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. Ecuador is included in the data through 1992 and Gabon through 1995.

<sup>c</sup> Based on October, November, and December data only.

<sup>d</sup> No data reported.

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

Notes: • See Note 3 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: • **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*, April 2004, Table 25.



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

	Leaded Regular	Unleaded Regular	Unleaded Premium	All Types <sup>a</sup>
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 <sup>b</sup> .....	131.1	137.8	<sup>c</sup> 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 Average .....	NA	151.0	169.3	156.3
2001 Average .....	NA	146.1	165.7	153.1
<b>2002</b> 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
<b>Average</b> .....	<b>NA</b>	<b>135.8</b>	<b>155.6</b>	<b>144.1</b>
<b>2003</b> January .....	NA	147.3	166.6	155.7
February .....	NA	164.1	182.8	168.6
March .....	NA	174.8	192.4	179.1
April .....	NA	165.9	184.6	170.4
May .....	NA	154.2	172.9	158.7
June .....	NA	151.4	170.0	155.8
July .....	NA	152.4	171.0	156.7
August .....	NA	162.8	180.8	167.1
September .....	NA	172.8	191.1	177.1
October .....	NA	160.3	178.9	164.6
November .....	NA	153.5	172.4	157.8
December .....	NA	149.4	168.6	153.8
<b>Average</b> .....	<b>NA</b>	<b>159.1</b>	<b>177.7</b>	<b>163.8</b>
<b>2004</b> January .....	NA	159.2	177.9	163.5
February .....	NA	167.2	185.8	171.5

<sup>a</sup> Also includes types of motor gasoline not shown separately.

<sup>b</sup> 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.

<sup>c</sup> 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 Average .....	62.7	70.8	51.2	56.6	56.6	60.2
2001 Average .....	52.3	64.2	42.8	49.2	47.6	53.1
<b>2002</b> January .....	40.4	51.8	33.7	41.6	38.2	44.2
February .....	37.1	52.2	33.7	40.9	35.9	43.3
March .....	46.0	53.5	40.5	48.3	43.7	49.7
April .....	53.8	59.4	48.0	55.0	51.2	56.0
May .....	56.3	63.5	52.1	56.6	54.5	58.1
June .....	53.5	61.4	53.3	57.2	53.4	58.2
July .....	55.7	63.2	50.9	56.8	53.7	58.6
August .....	60.6	67.4	55.8	59.2	58.4	61.4
September .....	60.1	67.8	56.8	62.6	58.7	63.8
October .....	65.1	72.7	54.5	63.7	60.7	65.8
November .....	59.1	73.6	58.2	54.8	58.7	60.1
December .....	67.6	73.9	59.7	56.6	64.1	62.0
<b>Average</b> .....	<b>54.6</b>	<b>64.0</b>	<b>50.8</b>	<b>54.4</b>	<b>53.0</b>	<b>56.9</b>
<b>2003</b> January .....	79.5	86.1	NA	70.9	72.2	75.4
February .....	93.9	95.6	74.8	77.0	85.8	83.8
March .....	88.1	97.4	62.5	72.3	77.2	81.3
April .....	60.0	78.1	52.2	59.4	56.6	64.5
May .....	62.6	74.9	53.9	58.8	57.7	61.9
June .....	62.4	71.9	54.5	60.0	57.6	63.9
July .....	65.0	74.5	58.4	67.7	61.3	70.1
August .....	66.9	75.4	60.1	67.3	63.0	69.8
September .....	62.2	72.0	57.2	61.2	59.2	64.6
October .....	65.0	70.7	57.2	62.8	60.1	65.2
November .....	67.0	76.7	58.8	62.2	62.2	66.7
December .....	66.5	79.3	<sup>R</sup> 54.5	60.7	<sup>R</sup> 62.2	66.8
<b>Average</b> .....	<b>72.4</b>	<b>80.5</b>	<sup>R</sup> <b>58.8</b>	<b>65.2</b>	<sup>R</sup> <b>65.6</b>	<b>70.0</b>
<b>2004</b> January .....	75.4	83.7	57.5	64.7	68.8	71.3

R=Revised. NA=Not available.

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*, April 2004, Table 19.

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

	Finished Motor Gasoline <sup>a</sup>	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 Average .....	96.3	133.0	88.0	96.9	88.6	89.8	59.5
2001 Average .....	88.6	125.6	76.3	82.1	75.6	78.4	54.0
<b>2002</b> January .....	61.2	97.5	57.2	61.9	57.6	54.6	37.4
February .....	62.8	99.8	57.1	61.1	57.8	56.7	36.4
March .....	78.4	105.1	63.9	69.8	64.5	66.6	39.7
April .....	87.1	118.9	69.1	70.5	68.3	70.9	41.6
May .....	85.9	114.4	69.6	71.1	68.4	70.6	40.8
June .....	85.6	116.7	67.8	69.4	66.0	68.2	37.9
July .....	87.8	118.9	71.4	73.2	68.9	71.0	37.5
August .....	87.4	115.5	73.8	76.4	71.3	75.7	41.5
September .....	88.9	119.2	81.5	85.5	78.3	83.4	47.1
October .....	93.0	123.7	84.5	88.5	79.6	85.7	48.9
November .....	85.0	116.1	75.1	81.3	74.8	78.7	49.4
December .....	85.9	113.2	79.9	87.9	80.8	82.0	53.3
<b>Average .....</b>	<b>82.8</b>	<b>114.6</b>	<b>71.6</b>	<b>75.2</b>	<b>69.4</b>	<b>72.4</b>	<b>43.1</b>
<b>2003</b> January .....	94.6	124.9	89.5	97.8	89.5	89.2	60.5
February .....	110.0	130.2	102.8	118.6	107.8	108.1	72.8
March .....	112.6	135.8	101.7	110.3	104.5	102.1	69.1
April .....	99.7	126.8	82.6	86.1	82.4	86.7	53.9
May .....	93.8	121.7	75.1	74.5	75.5	79.3	54.3
June .....	95.6	NA	77.0	77.5	76.8	81.1	57.5
July .....	98.1	129.1	81.4	82.8	78.9	83.8	55.9
August .....	110.2	139.7	86.3	88.2	83.7	88.9	58.5
September .....	102.5	134.9	80.9	82.7	77.4	80.7	56.6
October .....	98.2	131.3	83.9	91.5	84.2	87.1	59.7
November .....	94.3	124.4	87.1	89.4	84.2	86.5	58.7
December .....	93.9	124.4	<sup>R</sup> 90.7	97.0	88.6	89.2	<sup>R</sup> 64.8
<b>Average .....</b>	<b>100.2</b>	<b>129.0</b>	<b>87.2</b>	<b>94.9</b>	<b>87.9</b>	<b>88.3</b>	<b>60.7</b>
<b>2004</b> January .....	104.9	135.3	99.9	111.0	97.0	96.2	71.9

<sup>a</sup> See Note 5 at end of section.

NA=Not available. 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*, April 2004, Table 4.

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

	Finished Motor Gasoline <sup>a</sup>	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 Average .....	110.6	130.6	89.9	112.3	92.7	93.5	60.3
2001 Average .....	103.2	132.3	77.5	104.5	82.9	84.2	50.6
2002 January .....	70.6	111.8	58.2	98.0	63.6	60.5	38.1
February .....	71.8	110.6	58.5	99.6	62.3	61.6	35.0
March .....	87.2	122.6	64.4	101.3	70.1	70.2	39.5
April .....	100.4	129.8	70.1	87.3	72.0	75.3	41.7
May .....	99.9	128.9	70.9	91.5	70.9	75.5	40.5
June .....	99.1	127.3	68.8	83.6	67.8	73.7	37.9
July .....	100.3	139.2	72.2	80.7	70.9	75.6	38.4
August .....	100.1	136.9	75.3	79.8	73.4	79.5	41.5
September .....	100.1	139.1	82.8	99.1	81.8	86.7	46.9
October .....	104.0	143.0	84.7	111.1	81.8	89.1	47.1
November .....	101.2	141.8	76.7	104.4	80.0	84.0	46.9
December .....	98.1	139.8	81.1	115.2	87.5	85.9	49.9
Average .....	94.7	128.8	72.1	99.0	73.7	76.2	41.9
2003 January .....	106.0	139.7	91.5	121.0	96.3	93.3	57.4
February .....	122.1	W	101.8	137.4	113.5	110.2	69.6
March .....	130.0	W	104.4	138.7	110.0	111.7	67.3
April .....	120.1	W	82.2	127.9	91.0	94.4	52.6
May .....	110.0	139.8	75.8	NA	80.9	85.7	53.9
June .....	109.3	145.1	76.8	90.8	81.5	86.5	56.0
July .....	110.6	151.9	81.8	89.8	82.8	88.5	54.3
August .....	123.1	162.2	87.4	100.7	86.9	94.2	55.3
September .....	126.5	158.9	81.9	NA	81.4	88.9	53.5
October .....	115.0	150.8	84.6	117.2	88.2	92.1	56.4
November .....	109.5	W	87.9	120.9	89.1	91.8	55.8
December .....	106.5	<sup>R</sup> 146.6	<sup>R</sup> 92.8	NA	94.5	<sup>R</sup> 93.8	<sup>R</sup> 61.3
Average .....	115.6	<sup>R</sup> 149.3	87.3	122.4	93.2	94.3	57.6
2004 January .....	117.3	W	99.8	132.5	102.5	99.9	NA

<sup>a</sup> See Note 5 at end of section.

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

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*, April 2004, 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 Average .....	129.7	128.1	125.5	127.3	125.9	129.1	144.2	140.4	122.4
2001 Average .....	121.7	125.6	126.1	122.1	123.6	123.9	136.3	131.4	115.9
<b>2002</b> January .....	109.5	113.2	117.9	107.4	112.1	108.3	121.5	113.8	102.9
February .....	108.6	114.1	117.6	106.9	110.9	106.6	119.9	113.4	100.2
March .....	112.2	110.1	116.2	111.2	107.7	109.1	119.0	117.0	104.6
April .....	111.4	109.7	117.7	114.0	112.0	109.6	120.0	121.0	106.6
May .....	111.5	108.4	118.1	113.6	109.8	108.9	117.6	119.6	104.3
June .....	110.1	104.6	114.0	110.9	106.1	110.6	115.9	116.7	102.8
July .....	109.5	101.4	111.5	111.3	105.6	106.4	114.2	113.4	95.2
August .....	107.7	102.2	112.1	112.5	107.7	107.3	NA	114.7	96.1
September .....	111.2	106.0	114.3	113.7	110.6	110.7	116.6	120.7	101.4
October .....	116.7	111.4	117.6	116.2	110.5	112.0	120.1	123.6	106.6
November .....	115.4	113.4	117.9	118.5	114.4	115.5	125.1	127.5	111.3
December .....	119.4	118.1	120.5	125.0	120.8	121.5	130.1	135.4	117.5
<b>Average .....</b>	<b>112.9</b>	<b>111.9</b>	<b>117.2</b>	<b>114.1</b>	<b>112.4</b>	<b>111.8</b>	<b>121.8</b>	<b>122.0</b>	<b>106.4</b>
<b>2003</b> January .....	127.9	127.4	126.5	135.4	132.3	130.9	138.7	146.5	127.5
February .....	142.5	145.0	138.9	153.8	151.8	149.7	156.1	167.4	147.7
March .....	147.0	148.4	144.0	153.0	151.4	152.5	160.0	170.9	153.7
April .....	130.1	132.6	131.9	136.3	131.7	134.0	141.6	146.2	131.4
May .....	125.2	126.4	125.7	132.8	124.0	127.5	137.1	135.6	124.0
June .....	124.9	121.4	122.1	129.6	119.9	125.9	130.0	133.9	NA
July .....	121.3	118.6	120.3	126.5	117.3	120.6	128.2	128.5	105.6
August .....	120.6	119.1	121.0	127.4	NA	120.8	125.3	NA	108.7
September .....	121.5	119.5	121.3	126.0	120.6	123.3	129.5	126.2	110.8
October .....	122.8	120.4	126.0	126.2	121.1	123.7	132.6	132.8	116.7
November .....	124.2	122.0	126.9	129.8	127.3	129.0	137.5	137.2	121.7
December .....	<sup>R</sup> 129.4	<sup>R</sup> 126.1	<sup>R</sup> 129.0	<sup>R</sup> 134.8	133.1	132.9	<sup>R</sup> 142.5	<sup>R</sup> 145.0	<sup>R</sup> 128.6
<b>Average .....</b>	<sup>R</sup> <b>131.5</b>	<b>131.3</b>	<sup>R</sup> <b>130.9</b>	<b>138.7</b>	<sup>R</sup> <b>134.5</b>	<b>135.5</b>	<b>143.6</b>	<sup>R</sup> <b>149.2</b>	<sup>R</sup> <b>130.4</b>
<b>2004</b> January .....	135.5	136.2	135.6	142.8	143.4	141.7	149.0	152.5	138.0

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*, April 2004, 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 Average	127.0	W	135.1	126.9	125.1	122.0	NA	120.7	109.5	117.1	115.6
2001 Average	123.4	143.1	134.2	120.2	113.9	116.0	NA	113.3	112.1	118.0	112.2
<b>2002</b> January	114.2	W	115.8	101.7	96.7	94.2	102.2	91.7	87.0	97.0	91.2
February	111.0	W	115.1	99.9	95.7	94.3	101.8	95.7	84.4	95.9	91.6
March	113.0	W	117.6	102.2	99.5	101.4	103.6	93.9	85.0	100.3	94.0
April	116.2	129.2	118.9	100.7	101.5	103.1	108.3	94.9	84.7	105.3	102.0
May	106.1	NA	114.2	97.2	102.3	100.6	106.4	W	83.7	106.4	102.6
June	100.5	111.5	111.5	97.1	101.6	96.9	107.0	W	NA	101.7	101.7
July	98.2	W	109.4	98.0	101.5	95.3	106.8	W	96.6	102.0	101.9
August	99.5	W	110.9	100.2	102.4	100.5	107.4	W	NA	103.3	105.2
September	111.2	W	116.4	103.1	107.1	107.1	113.1	W	101.2	112.3	111.1
October	114.8	129.2	120.1	108.7	111.1	114.5	120.9	W	105.6	118.0	116.6
November	119.8	W	124.7	111.1	113.7	115.8	122.2	114.0	111.9	120.2	114.9
December	129.1	W	131.3	120.2	121.1	119.5	124.7	121.0	111.0	121.5	117.0
<b>Average</b>	<b>116.4</b>	<b>W</b>	<b>120.1</b>	<b>105.7</b>	<b>105.4</b>	<b>105.8</b>	<b>110.9</b>	<b>102.5</b>	<b>97.5</b>	<b>107.3</b>	<b>105.1</b>
<b>2003</b> January	138.4	W	141.4	130.5	131.7	129.4	130.7	130.3	125.0	127.1	122.0
February	161.7	W	159.9	146.4	155.5	144.8	148.5	146.7	134.9	137.0	136.5
March	167.5	W	166.8	142.5	155.9	141.2	148.9	142.4	130.1	140.5	136.7
April	142.3	NA	146.4	126.4	130.9	126.4	131.8	W	115.1	125.5	120.9
May	129.8	NA	136.7	117.4	116.5	115.8	121.0	W	108.1	117.5	114.5
June	125.8	127.6	129.4	119.1	113.7	113.3	114.5	W	105.5	115.3	115.6
July	119.1	124.3	124.4	117.5	109.9	111.5	114.1	W	NA	112.1	114.9
August	117.2	W	125.6	119.0	113.8	114.4	120.0	106.0	114.9	114.2	116.3
September	121.7	W	127.2	119.7	112.3	114.4	120.0	W	114.0	117.3	113.9
October	125.6	W	134.0	121.9	117.2	120.4	122.5	W	116.5	122.1	120.4
November	130.0	W	136.7	122.7	119.3	122.2	125.8	112.7	117.7	122.7	118.9
December	<sup>R</sup> 139.8	W	<sup>R</sup> 143.2	<sup>R</sup> 128.3	<sup>R</sup> 128.9	125.3	<sup>R</sup> 126.3	<sup>R</sup> 123.0	119.9	<sup>R</sup> 123.6	<sup>R</sup> 119.9
<b>Average</b>	<sup>R</sup> <b>143.5</b>	<b>W</b>	<b>146.1</b>	<sup>R</sup> <b>130.1</b>	<b>130.4</b>	<b>128.3</b>	<b>132.3</b>	<b>120.2</b>	<b>120.9</b>	<b>128.8</b>	<b>122.9</b>
<b>2004</b> January	146.6	NA	152.8	138.3	137.2	132.2	133.2	130.0	125.4	128.8	125.4

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*, April 2004, 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 Average .....	117.0	144.5	136.8	133.7	131.1
2001 Average .....	103.8	133.6	121.1	137.7	125.0
<b>2002</b> January .....	74.7	108.9	93.7	114.0	109.7
February .....	74.5	108.2	94.4	114.5	108.4
March .....	82.2	117.0	104.3	110.4	110.0
April .....	92.6	124.1	108.0	111.8	111.6
May .....	90.0	124.9	107.5	104.6	109.3
June .....	89.0	122.4	103.9	106.0	105.7
July .....	88.0	117.7	NA	102.7	102.9
August .....	89.9	117.0	107.6	105.8	103.8
September .....	96.6	124.2	115.5	110.0	109.9
October .....	103.4	128.5	118.5	110.5	114.8
November .....	103.5	131.2	119.3	113.0	118.0
December .....	103.0	131.2	118.0	113.9	123.8
<b>Average</b> .....	<b>91.9</b>	<b>120.4</b>	<b>106.0</b>	<b>108.7</b>	<b>112.9</b>
<b>2003</b> January .....	107.2	137.1	124.5	116.7	133.3
February .....	126.5	156.1	144.6	121.1	150.7
March .....	133.9	179.5	158.8	137.4	153.9
April .....	121.0	154.8	131.2	131.1	134.6
May .....	111.3	143.0	121.6	123.5	126.7
June .....	NA	143.3	126.6	128.2	122.0
July .....	118.6	139.1	132.4	124.5	116.4
August .....	123.3	144.2	133.6	127.2	117.7
September .....	111.9	137.0	119.2	NA	118.9
October .....	NA	135.1	116.9	NA	123.7
November .....	122.6	141.8	123.5	NA	128.3
December .....	<sup>R</sup> 120.2	<sup>R</sup> 147.2	125.6	<sup>R</sup> 126.9	<sup>R</sup> 134.1
<b>Average</b> .....	<b>119.8</b>	<b>148.9</b>	<b>130.8</b>	<sup>R</sup> <b>125.5</b>	<sup>R</sup> <b>135.6</b>
<b>2004</b> January .....	118.4	149.3	129.1	129.1	142.0

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.

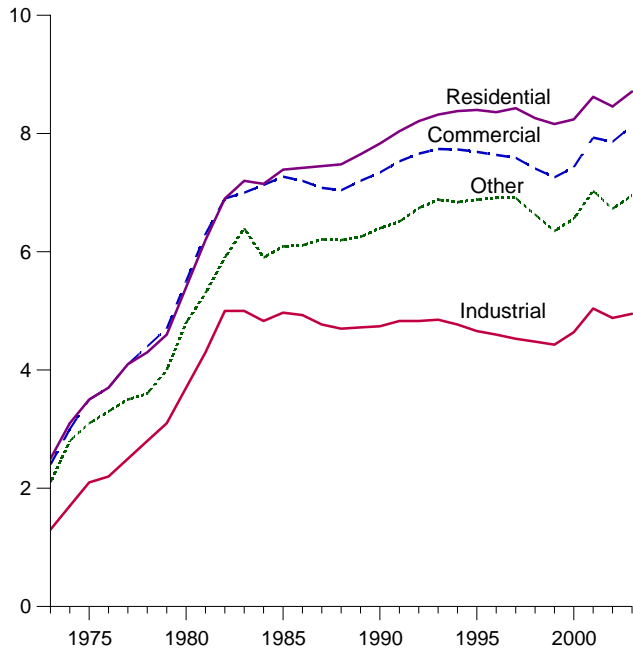
See Note 6 at end of section.

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

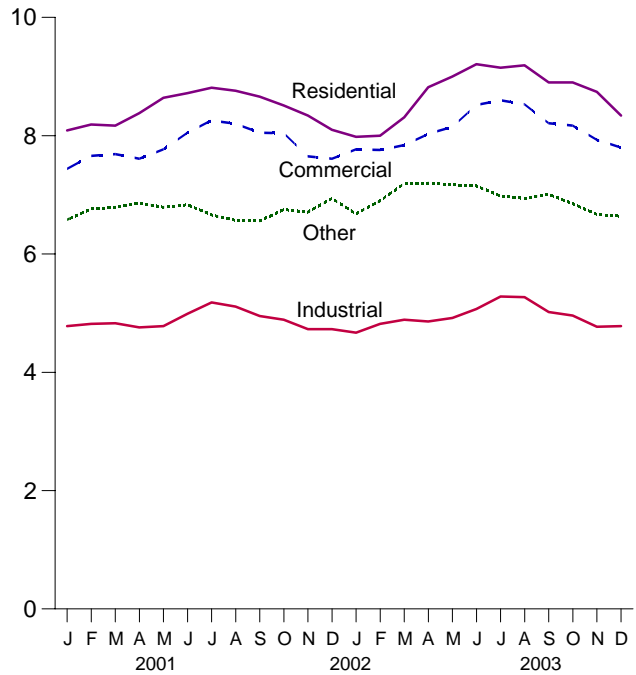
Source: EIA, *Petroleum Marketing Monthly*, April 2004, Table 18.

**Figure 9.2 Average Retail Prices of Electricity**  
(Cents per Kilowatthour)

By Sector, 1973-2003



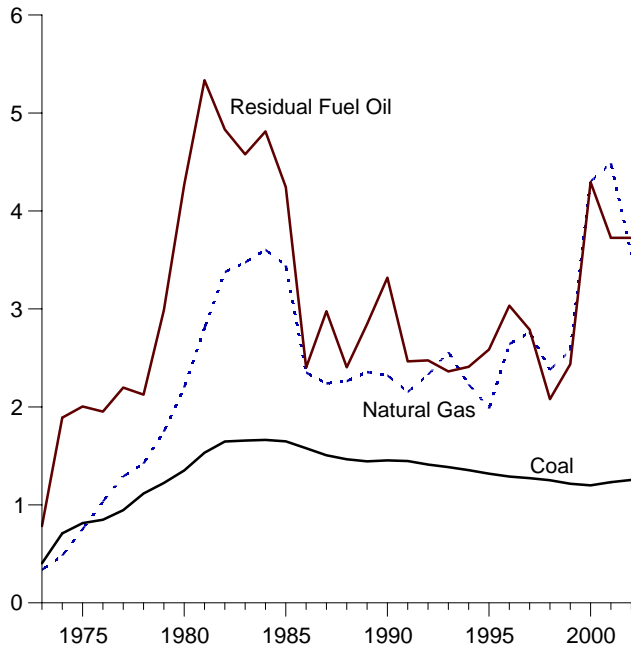
By Sector, Monthly



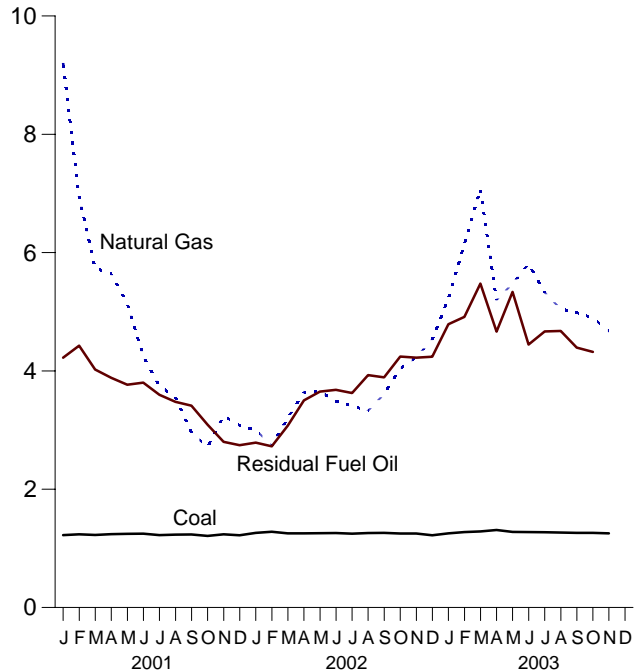
Note: Excludes taxes.  
Web Page: <http://www.eia.doe.gov/emeu/mer/prices.html>.  
Source: Table 9.9.

**Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants**  
(Dollars per Million Btu)

Costs, 1973-2002



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 Average Retail Prices of Electricity**  
(Cents per Kilowatthour, Excluding Taxes)

	Residential	Commercial	Industrial	Other <sup>a</sup>	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	6.64
2000 Average .....	8.24	7.43	4.64	6.56	6.81
<b>2001</b> January .....	7.78	7.36	4.99	6.63	6.90
February .....	8.09	7.54	4.83	6.91	6.93
March .....	8.35	7.70	4.87	6.95	7.05
April .....	8.52	7.73	4.87	6.98	7.06
May .....	8.87	7.74	4.99	7.09	7.20
June .....	9.08	8.10	5.18	7.08	7.56
July .....	9.06	8.39	5.48	7.23	7.86
August .....	9.02	8.35	5.40	7.18	7.82
September .....	8.94	8.23	5.25	6.92	7.62
October .....	8.91	8.30	5.01	7.31	7.46
November .....	8.53	7.76	4.75	7.04	7.05
December .....	8.35	7.68	4.78	7.00	7.08
<b>Average .....</b>	<b>8.62</b>	<b>7.93</b>	<b>5.04</b>	<b>7.03</b>	<b>7.32</b>
<b>2002</b> January .....	8.09	7.44	4.78	6.58	6.98
February .....	8.19	7.66	4.82	6.76	7.01
March .....	8.17	7.69	4.83	6.79	7.00
April .....	8.38	7.61	4.76	6.86	6.97
May .....	8.64	7.77	4.78	6.79	7.11
June .....	8.72	8.05	4.99	6.83	7.41
July .....	8.81	8.26	5.18	6.66	7.65
August .....	8.76	8.20	5.11	6.57	7.58
September .....	8.66	8.05	4.95	6.56	7.38
October .....	8.51	8.04	4.89	6.75	7.22
November .....	8.34	7.65	4.73	6.71	6.97
December .....	8.10	7.61	4.73	6.94	6.99
<b>Average .....</b>	<b>8.46</b>	<b>7.86</b>	<b>4.88</b>	<b>6.73</b>	<b>7.21</b>
<b>2003</b> January .....	7.98	7.77	4.67	6.68	7.02
February .....	8.00	7.76	4.82	6.90	7.02
March .....	8.31	7.84	4.89	7.19	7.14
April .....	8.82	8.03	4.86	7.20	7.27
May .....	9.00	8.15	4.92	7.17	7.40
June .....	9.21	8.52	5.07	7.15	7.71
July .....	9.15	8.60	5.28	6.98	7.91
August .....	9.19	8.53	5.27	6.94	7.89
September .....	8.90	8.21	5.02	7.01	7.55
October .....	8.90	8.17	4.96	6.85	7.38
November .....	8.74	7.93	4.77	6.67	7.18
December .....	8.34	7.80	4.78	6.64	7.15
<b>Average .....</b>	<b>8.71</b>	<b>8.13</b>	<b>4.95</b>	<b>6.95</b>	<b>7.40</b>

<sup>a</sup> 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 energy service provider 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: • **1973-September 1977:** Federal Power Commission, 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*, March 2004, Table 5.3.

**Table 9.10 Cost of Fossil-Fuel Receipts at Electric Generating Plants**  
(Cents per Million Btu)

	Coal	Petroleum		Natural Gas <sup>c</sup>	All Fossil Fuels <sup>d</sup>
		Residual Fuel Oil <sup>a</sup>	Total <sup>b</sup>		
1973 Average .....	40.5	78.5	80.0	33.8	47.6
1974 Average .....	70.9	189.0	191.0	48.2	91.4
1975 Average .....	81.4	200.5	202.3	75.2	104.4
1976 Average .....	84.8	195.2	199.0	103.4	111.9
1977 Average .....	94.7	219.8	224.9	129.1	129.7
1978 Average .....	111.6	212.5	219.1	142.2	141.1
1979 Average .....	122.4	298.8	307.2	174.9	163.9
1980 Average .....	135.1	426.7	435.1	219.9	192.8
1981 Average .....	153.2	533.4	542.5	280.5	225.6
1982 Average .....	164.7	483.2	492.2	337.6	224.9
1983 Average .....	165.6	457.8	462.8	347.4	220.6
1984 Average .....	166.4	481.2	486.3	360.3	219.1
1985 Average .....	164.8	424.4	431.7	344.4	209.4
1986 Average .....	157.9	240.1	243.7	235.1	175.0
1987 Average .....	150.6	297.6	301.1	224.0	170.6
1988 Average .....	146.6	240.5	243.9	226.3	164.3
1989 Average .....	144.5	284.6	289.3	235.5	167.5
1990 Average .....	145.5	331.9	335.3	232.1	168.8
1991 Average .....	144.7	246.5	252.7	215.3	160.2
1992 Average .....	141.2	247.5	251.4	232.8	158.9
1993 Average .....	138.5	236.2	237.3	256.0	159.4
1994 Average .....	135.5	240.9	242.3	223.0	152.5
1995 Average .....	131.8	258.6	256.6	198.4	145.2
1996 Average .....	128.9	303.4	302.6	264.1	151.8
1997 Average .....	127.3	278.8	273.0	276.0	152.0
1998 Average .....	125.2	207.9	202.1	238.1	143.5
1999 Average .....	121.6	243.6	235.9	257.4	143.8
2000 Average .....	120.0	429.4	417.9	430.2	173.5
<b>2001</b> January .....	122.3	422.3	457.7	920.7	214.1
February .....	123.9	442.6	441.4	694.7	189.1
March .....	122.6	402.4	401.1	573.8	178.3
April .....	123.9	388.4	388.6	563.7	191.9
May .....	124.5	376.7	378.6	514.2	186.3
June .....	124.8	380.1	369.7	425.1	178.3
July .....	122.5	359.7	349.2	374.3	176.4
August .....	123.3	347.7	331.2	355.8	169.6
September .....	123.4	341.3	316.0	295.5	156.4
October .....	121.0	309.0	287.5	271.5	142.2
November .....	123.7	280.0	268.8	324.1	145.1
December .....	122.0	274.5	256.1	307.6	141.7
<b>Average</b> .....	<b>123.2</b>	<b>372.6</b>	<b>369.3</b>	<b>448.7</b>	<b>173.0</b>
<b>2002</b> January <sup>e</sup> .....	126.2	278.7	254.7	300.1	150.5
February .....	128.0	272.6	242.1	273.6	148.8
March .....	125.4	307.5	267.7	320.4	151.1
April .....	125.3	350.2	316.4	363.8	148.1
May .....	125.7	365.0	329.9	365.1	152.0
June .....	126.0	368.0	334.3	348.6	151.2
July .....	124.7	362.7	329.0	341.0	150.7
August .....	126.0	393.0	346.4	333.0	152.7
September .....	126.3	389.0	338.2	360.6	146.9
October .....	125.2	424.3	374.4	404.2	152.7
November .....	125.1	422.4	395.6	423.2	156.8
December .....	122.0	424.1	388.4	453.0	155.5
<b>Average</b> .....	<b>125.5</b>	<b>372.6</b>	<b>334.3</b>	<b>356.0</b>	<b>151.5</b>
<b>2003</b> January .....	125.3	479.0	437.4	522.8	209.0
February .....	127.6	491.4	489.5	614.2	237.6
March .....	128.6	547.6	546.2	706.9	261.0
April .....	131.1	466.4	434.4	519.8	218.2
May .....	127.9	533.5	473.7	547.7	226.8
June .....	127.6	444.5	426.8	580.8	229.9
July .....	127.3	466.7	427.8	532.5	242.3
August .....	126.8	467.6	405.9	504.5	233.3
September .....	126.1	439.5	374.7	498.6	214.9
October .....	126.3	432.2	380.7	489.6	204.2
November .....	125.5	NA	350.7	467.1	195.0
<b>11-Month Average</b> .....	<b>127.2</b>	<b>NA</b>	<b>439.2</b>	<b>541.3</b>	<b>225.1</b>
<b>2002 11-Month Average</b> .....	<b>125.8</b>	<b>366.6</b>	<b>328.2</b>	<b>348.5</b>	<b>151.1</b>
<b>2001 11-Month Average</b> .....	<b>123.3</b>	<b>377.4</b>	<b>375.3</b>	<b>457.2</b>	<b>175.8</b>

<sup>a</sup> For 1973-2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

<sup>b</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil. For 1973-1982, data do not include refined motor oil, bunker oil, and liquefied petroleum gas. For 1973-1989, data do not include petroleum coke.

<sup>c</sup> Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately. Data for all years except 2002 also include a small amount of blast furnace gas and other gases derived from fossil fuels.

<sup>d</sup> Includes a small amount of blast furnace gas and other gases derived from

fossil fuels.

<sup>e</sup> Through 2001, data are for electric utilities only. Beginning in 2002, data also include independent power producers, and electric generating plants in the commercial and industrial sectors. See Note 8 at end of section for plant coverage. NA=Not available.

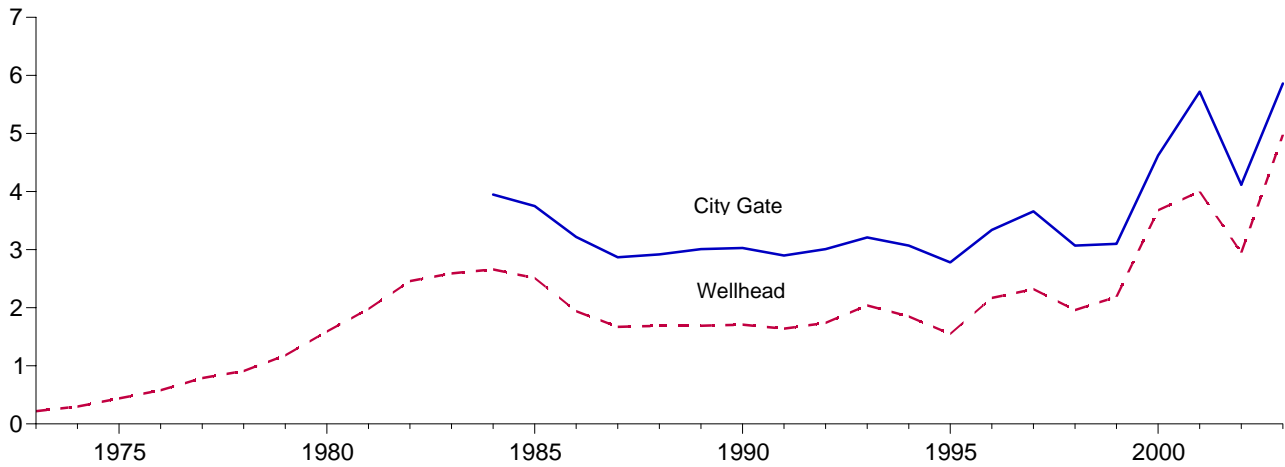
Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • Geographic coverage is the 50 States and the District of Columbia.

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

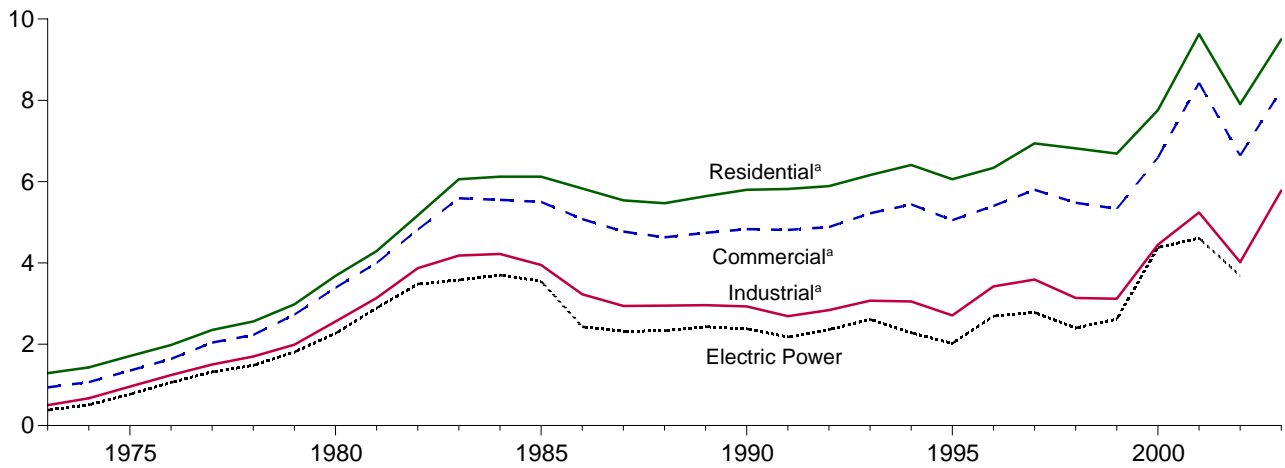
Sources: See end of section.

**Figure 9.4 Natural Gas Prices**  
(Dollars per Thousand Cubic Feet)

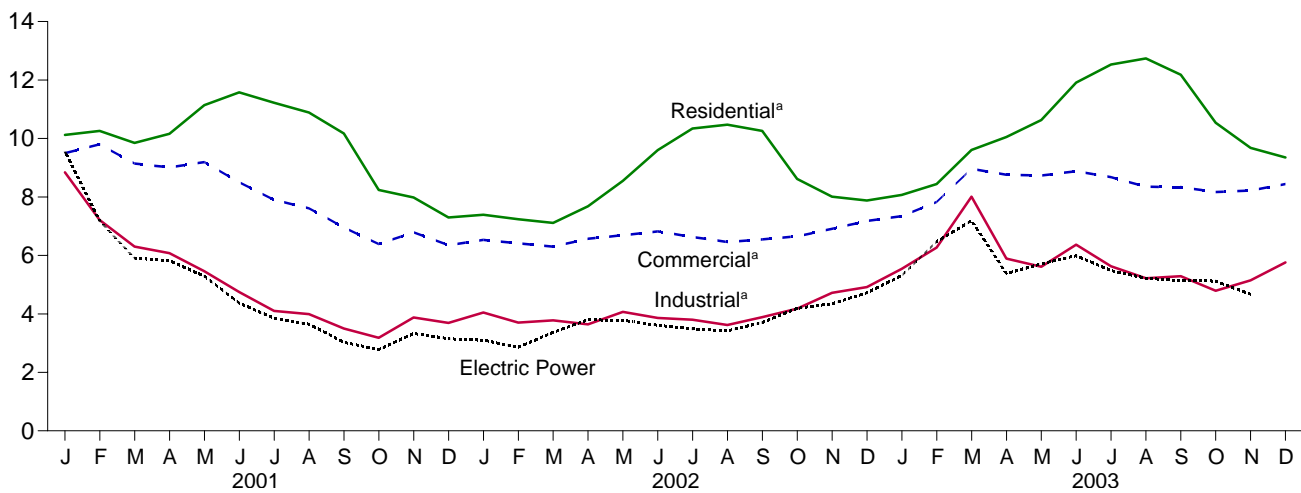
Selected Prices, 1973-2003



Consuming Sectors, 1973-2003



Consuming Sectors, Monthly



<sup>a</sup>Includes 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**  
(Dollars per Thousand Cubic Feet)

	Wellhead Price	City Gate Price	Consuming Sectors <sup>a</sup>							
			Residential		Commercial <sup>b</sup>		Industrial <sup>c</sup>		Electric Power <sup>d</sup>	
			Price <sup>e</sup>	Percentage of Sector <sup>f</sup>	Price <sup>e</sup>	Percentage of Sector <sup>f</sup>	Price <sup>e</sup>	Percentage of Sector <sup>f</sup>	Price	Percentage of Sector
1973 Average	0.22	NA	1.29	NA	0.94	NA	0.50	NA	0.38	92.1
1974 Average	.30	NA	1.43	NA	1.07	NA	.67	NA	.51	92.7
1975 Average	.44	NA	1.71	NA	1.35	NA	.96	NA	.77	96.1
1976 Average	.58	NA	1.98	NA	1.64	NA	1.24	NA	1.06	96.2
1977 Average	.79	NA	2.35	NA	2.04	NA	1.50	NA	1.32	97.1
1978 Average	.91	NA	2.56	NA	2.23	NA	1.70	NA	1.48	98.0
1979 Average	1.18	NA	2.98	NA	2.73	NA	1.99	NA	1.81	96.1
1980 Average	1.59	NA	3.68	NA	3.39	NA	2.56	NA	2.27	96.9
1981 Average	1.98	NA	4.29	NA	4.00	NA	3.14	NA	2.89	97.6
1982 Average	2.46	NA	5.17	NA	4.82	NA	3.87	85.1	3.48	92.6
1983 Average	2.59	NA	6.06	NA	5.59	NA	4.18	80.7	3.58	93.9
1984 Average	2.66	3.95	6.12	NA	5.55	NA	4.22	74.7	3.70	94.4
1985 Average	2.51	3.75	6.12	NA	5.50	NA	3.95	68.8	3.55	94.0
1986 Average	1.94	3.22	5.83	NA	5.08	NA	3.23	59.8	2.43	91.7
1987 Average	1.67	2.87	5.54	NA	4.77	93.1	2.94	47.4	2.32	91.6
1988 Average	1.69	2.92	5.47	NA	4.63	90.7	2.95	42.6	2.33	89.6
1989 Average	1.69	3.01	5.64	99.9	4.74	89.1	2.96	36.9	2.43	88.6
1990 Average	1.71	3.03	5.80	99.3	4.83	86.6	2.93	35.2	2.38	89.2
1991 Average	1.64	2.90	5.82	99.2	4.81	85.1	2.69	32.7	2.18	93.2
1992 Average	1.74	3.01	5.89	99.1	4.88	83.2	2.84	30.3	2.36	93.2
1993 Average	2.04	3.21	6.16	99.1	5.22	83.9	3.07	29.7	2.61	93.4
1994 Average	1.85	3.07	6.41	99.1	5.44	79.3	3.05	25.5	2.28	93.5
1995 Average	1.55	2.78	6.06	99.1	5.05	76.7	2.71	24.5	2.02	92.0
1996 Average	2.17	3.34	6.34	99.1	5.40	77.6	3.42	19.4	2.69	92.2
1997 Average	2.32	3.66	6.94	98.8	5.80	70.8	3.59	18.1	2.78	91.0
1998 Average	1.96	3.07	6.82	97.7	5.48	67.0	3.14	16.1	2.40	82.5
1999 Average	2.19	3.10	6.69	95.2	5.33	66.1	3.12	18.8	2.62	75.3
2000 Average	3.68	4.62	7.76	92.6	6.59	63.9	4.45	19.8	4.38	64.3
2001 January	6.82	8.91	10.12	NA	9.50	72.9	8.84	23.5	9.55	41.6
February	5.08	7.08	10.26	NA	9.80	71.8	7.21	23.2	7.18	38.4
March	4.37	6.10	9.85	NA	9.14	69.2	6.30	22.0	5.91	40.9
April	4.52	6.30	10.16	NA	9.01	66.5	6.08	21.0	5.82	48.2
May	4.36	5.77	11.14	NA	9.19	61.0	5.46	19.5	5.29	48.7
June	3.79	5.38	11.58	NA	8.50	59.6	4.75	19.2	4.37	44.5
July	3.35	4.03	11.22	NA	7.90	54.6	4.10	20.2	3.85	45.8
August	3.33	4.32	10.89	NA	7.61	53.9	3.99	19.6	3.65	41.4
September	2.93	3.66	10.17	NA	6.96	54.0	3.50	19.8	3.03	42.1
October	2.78	3.37	8.24	NA	6.39	60.1	3.18	20.3	2.78	36.9
November	3.41	4.02	7.98	NA	6.79	65.0	3.88	20.2	3.33	33.4
December	3.42	3.90	7.30	NA	6.35	68.1	3.69	20.7	3.15	35.4
Average	4.00	5.72	9.63	92.3	8.43	66.0	5.24	20.8	4.61	41.9
2002 January	2.50	3.79	7.39	NA	6.53	80.8	4.05	20.1	<sup>d</sup> 3.10	<sup>d</sup> 80.8
February	2.19	3.76	7.24	NA	6.41	81.2	3.70	20.4	2.86	87.4
March	2.40	3.84	7.11	NA	6.30	82.3	3.78	20.0	3.37	86.1
April	2.94	4.21	7.68	NA	6.57	77.8	3.64	26.1	3.80	84.4
May	2.94	4.07	8.55	NA	6.89	74.1	4.07	23.8	3.78	81.8
June	2.96	4.15	9.60	NA	6.82	74.4	3.86	25.4	3.61	78.7
July	2.92	3.95	10.34	NA	6.63	72.7	3.80	23.8	3.49	74.5
August	2.76	3.67	10.47	NA	6.46	73.3	3.62	22.4	3.42	78.6
September	2.97	3.99	10.26	NA	6.55	71.0	3.89	22.4	3.71	79.1
October	3.24	4.32	8.62	NA	6.65	74.7	4.18	21.6	4.19	81.0
November	3.59	4.65	8.01	NA	6.91	79.5	4.72	21.7	4.35	84.9
December	3.96	4.74	7.88	NA	7.18	80.7	4.92	23.0	4.72	88.2
Average	2.95	4.12	7.91	NA	6.64	78.4	4.02	22.5	3.68	81.1
2003 January	<sup>E</sup> 4.47	<sup>E</sup> 5.31	8.07	NA	7.34	79.1	5.54	<sup>R</sup> 21.0	5.31	83.8
February	<sup>E</sup> 5.45	<sup>R</sup> 5.86	8.44	NA	7.83	79.6	6.27	21.8	6.47	83.5
March	<sup>E</sup> 6.69	<sup>R</sup> 7.60	9.61	NA	8.96	<sup>R</sup> 80.0	8.01	<sup>R</sup> 21.4	7.19	86.1
April	<sup>E</sup> 4.71	5.61	10.05	NA	8.76	76.6	5.89	21.2	5.38	89.8
May	<sup>E</sup> 4.97	5.66	10.63	NA	8.73	73.5	5.61	20.4	5.71	88.5
June	<sup>E</sup> 5.35	6.40	11.91	NA	8.88	72.4	6.37	19.9	5.99	83.0
July	<sup>E</sup> 4.91	5.82	12.53	NA	8.68	71.2	5.63	25.7	5.48	79.1
August	<sup>E</sup> 4.72	<sup>R</sup> 5.48	<sup>R</sup> 12.74	NA	8.35	<sup>R</sup> 73.4	<sup>R</sup> 5.22	<sup>R</sup> 23.6	5.22	78.1
September	<sup>E</sup> 4.58	<sup>R</sup> 5.58	12.18	NA	8.34	<sup>R</sup> 72.4	<sup>R</sup> 5.29	<sup>R</sup> 23.0	5.14	85.7
October	<sup>E</sup> 4.43	<sup>R</sup> 5.25	10.54	NA	8.17	73.0	<sup>R</sup> 4.79	23.3	5.12	78.5
November	<sup>E</sup> 4.34	<sup>R</sup> 5.53	9.68	NA	<sup>R</sup> 8.22	<sup>R</sup> 77.3	<sup>R</sup> 5.15	<sup>R</sup> 22.3	4.67	83.6
December	<sup>E</sup> 5.08	5.91	9.35	NA	8.44	79.6	5.76	23.3	NA	NA
Average	<sup>E</sup> 4.98	<sup>E</sup> 5.86	<sup>E</sup> 9.50	NA	<sup>E</sup> 8.26	<sup>E</sup> 77.2	<sup>E</sup> 5.78	<sup>E</sup> 22.2	NA	NA

<sup>a</sup> See Note 9 at end of section.  
<sup>b</sup> Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of Section 7.  
<sup>c</sup> Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of Section 7.  
<sup>d</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers. See Note 8 at end of section for plant coverage.  
<sup>e</sup> Includes taxes.

<sup>f</sup> The percentage of the sector's consumption in Table 4.4 for which price data are available.  
R=Revised. NA=Not available. E=Estimate.  
Notes: • Prices are for natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately. • Prices 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 April 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 regulated 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 regulated electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991–2001 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50 megawatts or greater. Data for 2002 forward cover the aforementioned regulated generating plants plus unregulated generating plants (independent power producers, as well as combined-heat-and-power generating plants and electricity-only plants in the commercial and industrial sector) whose total facility fossil-fueled nameplate generating capacity is 50 or more megawatts, regardless of unit type.

**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 power 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*, April 2004, 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*, April 2004, 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*, April 2004, 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*, April 2004, Table 24.

## Table 9.10 Sources

1973–September 1977: Federal Power Commission, Form FPC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

October 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.

1990–2000: EIA, *Electric Power Monthly*, March 2003, Table 26.

2001 forward: EIA, *Electric Power Monthly*, April 2004, Table 4.1; Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants"; and EIA, Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report."

## Table 9.11 Sources

### Wellhead Price:

1973–1997: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 96.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 4.

### City Gate Price:

1984–1987: EIA, *Natural Gas Monthly*, March 1990, Table 4; 1988–1992: EIA, *Natural Gas Monthly*, March 1995, Table 4;

1993–1997: EIA, *Natural Gas Monthly*, December 1999, Table 4.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 4.

### Residential, Commercial, and Industrial Sector Prices:

1973–1997: EIA, *Natural Gas Annual 2001*, Table 96.

1998 forward: EIA, *Natural Gas Monthly*, March 2004, Table 4.

### Percentage of Residential, Commercial, and Industrial Sectors, 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.

### Percentage of Commercial, and Industrial Sectors, 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

### Electric Power Sector Price:

1973–1997: EIA, *Natural Gas Annual 2000*, Table 96.  
1998–2001: EIA, *Natural Gas Monthly*, December 2003, Table 4.

2002 and 2003: Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants," and EIA, Form EIA-423 "Monthly Cost and Quality of Fuels for Electric Plants Report."

### Percentage of Electric Power Sector:

1973–2001: Calculated by EIA as the quantity of natural gas receipts reported on FERC Form-423, "Monthly Report on Cost and Quantity of Fuels for Electric Utility Plants" (and predecessor forms) divided by the quantity of natural gas consumed in the electric power sector, as shown on *Monthly Energy Review* Table 7.3b. Natural gas receipts, 1973–1975: Federal Power Commission, "Annual Summary of Cost and Quality of Steam-Electric Plant Fuels," 1973 edition (page ii), 1974 edition (page ii), and 1975 edition (Table 3); 1976–1981: EIA, *Electric Power Annual*, November 1982, Table 68; 1982–1985: EIA, *Electric Power Annual 1986*, September 1987, Table 16; 1986–1995: EIA, *Electric Power Monthly*, December 1996, Table 26; 1996–2000: EIA, *Electric Power Monthly*, March 2002, Table 26; and 2001: EIA, *Electric Power Monthly*, March 2004, Table 4.1.

2002 and 2003: Calculated by EIA as the quantity of natural gas receipts reported on FERC Form-423, "Monthly Report on Cost and Quantity of Fuels for Electric Utility Plants" (and published in EIA, *Electric Power Monthly*, March 2004, Table 4.1), and Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report," divided by the quantity of natural gas consumed in the electric power sector, as shown on *Monthly Energy Review* Table 7.3b.

## Section 10. Renewable Energy

**Sources.** The Nation consumed 6.1 quadrillion Btu of renewable energy in 2003, accounting for 6 percent<sup>1</sup> of total energy consumption during the year. At 2.8 quadrillion Btu, conventional hydroelectric power was the largest component of the renewable energy total, measuring 45 percent of the total. Wood was the next largest component at 2.1 quadrillion Btu and 34 percent of the total. Waste, the third largest component of the renewable energy total, contributed 0.6 quadrillion Btu in 2003, a 9-percent share of the total.

**Electric Power Sector.** In 2003, the electric power sector consumed 3.6 quadrillion Btu of renewable energy resources, 1.1 quadrillion Btu more than all of the end-use sectors combined and a share of 59 percent of the total. Conventional hydroelectric power recorded 2.7 quadrillion Btu in 2003, for 75 percent of the electric power sector total. Waste, at 0.3 quadrillion Btu, was the second largest

source consumed for electricity generation, followed by geothermal and wood.

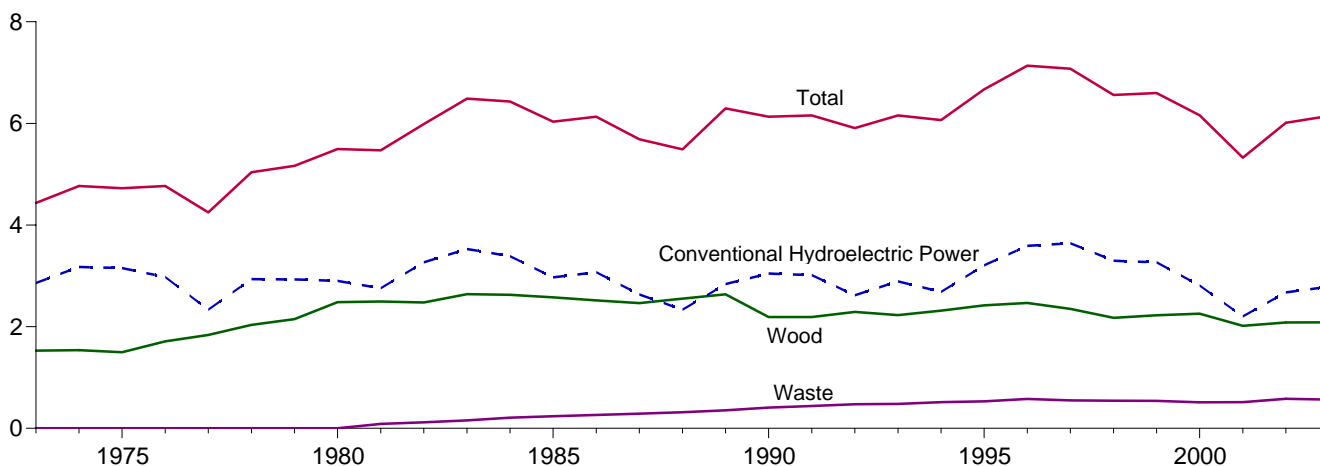
**End-Use Sectors.** Of the end-use sectors, the industrial sector was the largest consumer of renewable energy in 2003. Industrial facilities used 1.8 quadrillion Btu of renewable energy in 2003, 87 percent in the form of wood. The residential sector was the next largest end-use sector in the use of renewable energy, consuming 0.4 quadrillion Btu--84 percent in the form of wood, 14 percent solar, and 2 percent geothermal. The transportation sector consumed renewable energy in the form of alcohol fuels used in the blending of motor gasoline; in 2003, alcohol fuel use was 0.2 quadrillion Btu. The commercial sector used 0.1 quadrillion Btu in 2003, 48 percent of it as waste and 41 percent as wood.

<sup>1</sup>A small amount of alcohol fuel (ethanol blended into motor gasoline) is both fossil fuel (as petroleum) and renewable energy and is counted in both those subtotals but counted only once in total energy consumption.

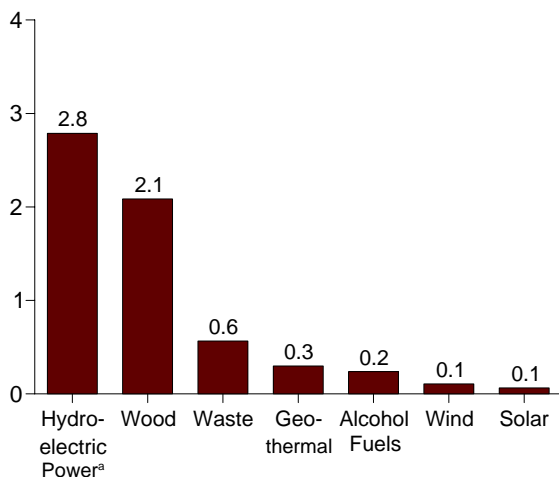


**Figure 10.1 Renewable Energy Consumption**  
(Quadrillion Btu)

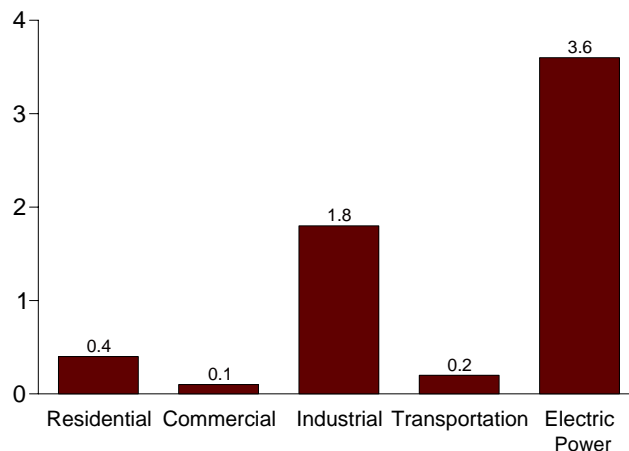
Total and Major Sources, 1973-2003



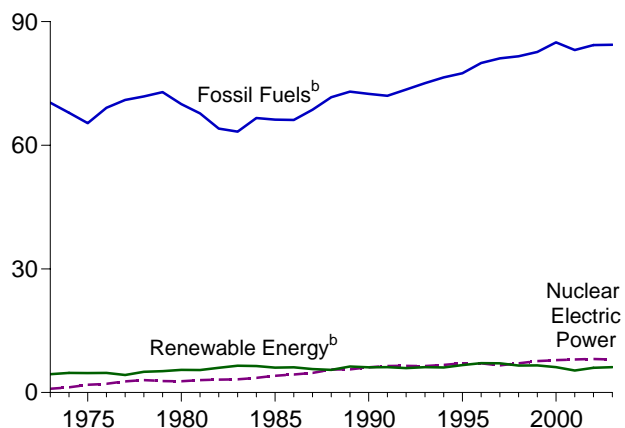
By Source, 2003



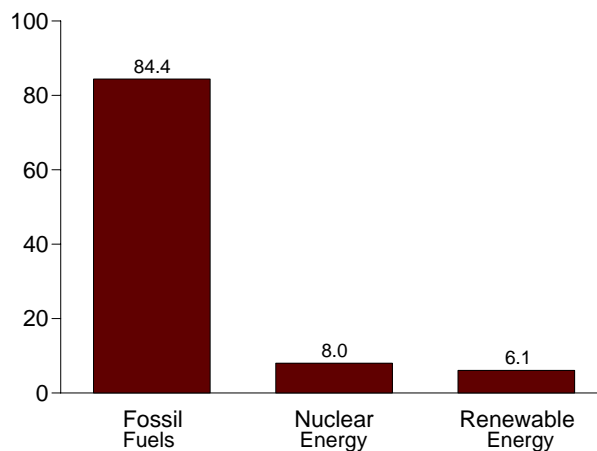
By Sector, 2003



Compared With Other Resources, 1973-2003



Compared With Other Resources, 2003



<sup>a</sup>Conventional hydroelectric power.

<sup>b</sup>A small amount of alcohol (ethanol blended into motor gasoline) is both fossil fuel (as petroleum) and renewable energy and is counted in both

those subtotals but counted only once in total energy consumption.  
Web Page: <http://www.eia.doe.gov/emeu/mer/renew.html>.  
Sources: Tables 1.3 and 10.1-10.2c.

**Table 10.1 Renewable Energy Consumption by Source**  
(Trillion Btu)

	Conventional Hydroelectric Power <sup>a</sup>	Wood <sup>b</sup>	Waste <sup>c</sup>	Alcohol Fuels <sup>d</sup>	Geothermal <sup>e</sup>	Solar <sup>f</sup>	Wind <sup>g</sup>	Total
1973 Total	2,861	1,527	2	NA	43	NA	NA	4,433
1974 Total	3,177	1,538	2	NA	53	NA	NA	4,769
1975 Total	3,155	1,497	2	NA	70	NA	NA	4,723
1976 Total	2,976	1,711	2	NA	78	NA	NA	4,768
1977 Total	2,333	1,837	2	NA	77	NA	NA	4,249
1978 Total	2,937	2,036	1	NA	64	NA	NA	5,039
1979 Total	2,931	2,150	2	NA	84	NA	NA	5,166
1980 Total	2,900	2,483	2	NA	110	NA	NA	5,494
1981 Total	2,758	2,495	88	7	123	NA	NA	5,471
1982 Total	3,266	2,477	119	19	105	NA	NA	5,985
1983 Total	3,527	2,639	157	35	129	NA	(s)	6,488
1984 Total	3,386	2,629	208	43	165	(s)	(s)	6,431
1985 Total	2,970	2,576	236	52	198	(s)	(s)	6,033
1986 Total	3,071	2,518	263	60	219	(s)	(s)	6,132
1987 Total	2,635	2,465	289	69	229	(s)	(s)	5,687
1988 Total	2,334	2,552	315	70	217	(s)	(s)	5,489
1989 Total	2,837	2,637	354	71	317	55	22	6,294
1990 Total	3,046	2,191	408	63	336	60	29	6,133
1991 Total	3,016	2,190	440	73	346	63	31	6,158
1992 Total	2,617	2,290	473	83	349	64	30	5,907
1993 Total	2,892	2,228	479	97	364	66	31	6,157
1994 Total	2,683	2,315	515	109	338	69	36	6,065
1995 Total	3,205	2,420	531	117	294	70	33	6,669
1996 Total	3,590	2,467	577	84	316	71	33	7,137
1997 Total	3,640	2,350	551	106	325	70	34	7,075
1998 Total	3,297	2,175	542	117	328	70	31	6,561
1999 Total	3,268	2,224	540	122	331	69	46	6,599
2000 Total	2,811	2,257	511	139	317	66	57	6,158
2001 Total	2,201	2,017	514	147	311	65	68	5,324
<b>2002</b> January	221	177	49	13	29	5	8	501
February	204	155	43	12	26	5	7	453
March	213	167	49	12	28	5	9	482
April	245	166	46	12	25	5	10	510
May	270	175	48	14	28	6	11	551
June	285	167	49	12	26	6	11	556
July	258	184	52	15	29	6	9	551
August	213	171	52	14	28	6	10	494
September	173	178	48	15	27	5	7	454
October	174	188	48	17	28	5	7	468
November	200	174	48	20	27	5	7	480
December	219	182	50	19	28	5	8	510
<b>Total</b>	<b>2,675</b>	<b>2,083</b>	<b>582</b>	<b>174</b>	<b>328</b>	<b>64</b>	<b>105</b>	<b>6,011</b>
<b>2003</b> January	199	165	44	17	26	5	6	462
February	199	153	40	20	23	5	7	446
March	246	177	48	17	26	5	10	529
April	253	169	46	20	24	5	11	528
May	303	167	47	19	24	6	9	574
June	288	170	47	19	25	6	10	565
July	250	178	50	20	25	6	9	537
August	231	174	49	21	25	6	8	513
September	184	165	45	18	25	5	8	451
October	185	187	50	21	25	5	9	482
November	200	199	49	24	25	5	10	511
December	<sup>R</sup> 244	<sup>R</sup> 186	<sup>R</sup> 52	<sup>R</sup> 25	<sup>R</sup> 28	<sup>R</sup> 5	<sup>R</sup> 11	<sup>R</sup> 552
<b>Total</b>	<sup>R</sup> <b>2,783</b>	<sup>R</sup> <b>2,089</b>	<sup>R</sup> <b>567</b>	<sup>R</sup> <b>239</b>	<sup>R</sup> <b>300</b>	<sup>R</sup> <b>64</b>	<sup>R</sup> <b>109</b>	<sup>R</sup> <b>6,150</b>
<b>2004</b> January	256	165	46	24	28	5	9	535

<sup>a</sup> Hydroelectricity generated by pumped storage is not included in renewable energy.

<sup>b</sup> Wood, black liquor, and other wood waste.

<sup>c</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>d</sup> Ethanol blended into motor gasoline.

<sup>e</sup> Geothermal electricity net generation, heat pump, and direct use energy.

<sup>f</sup> Solar thermal and photovoltaic electricity net generation, and solar thermal

direct use energy.

<sup>g</sup> 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 10.2a, 10.2b, and 10.2c.

**Table 10.2a Estimated Renewable Energy Consumption:  
Residential and Commercial Sectors**  
(Trillion Btu)

	Residential Sector				Commercial Sector <sup>a</sup>				
	Wood <sup>b</sup>	Geothermal <sup>c</sup>	Solar <sup>d</sup>	Total	Hydropower <sup>e</sup>	Wood <sup>b</sup>	Waste <sup>f</sup>	Geothermal <sup>c</sup>	Total
1973 Total .....	354	NA	NA	354	NA	7	NA	NA	7
1974 Total .....	371	NA	NA	371	NA	7	NA	NA	7
1975 Total .....	425	NA	NA	425	NA	8	NA	NA	8
1976 Total .....	482	NA	NA	482	NA	9	NA	NA	9
1977 Total .....	542	NA	NA	542	NA	10	NA	NA	10
1978 Total .....	622	NA	NA	622	NA	12	NA	NA	12
1979 Total .....	728	NA	NA	728	NA	14	NA	NA	14
1980 Total .....	859	NA	NA	859	NA	21	NA	NA	21
1981 Total .....	869	NA	NA	869	NA	21	NA	NA	21
1982 Total .....	937	NA	NA	937	NA	22	NA	NA	22
1983 Total .....	925	NA	NA	925	NA	22	NA	NA	22
1984 Total .....	923	NA	NA	923	NA	22	NA	NA	22
1985 Total .....	899	NA	NA	899	NA	24	NA	NA	24
1986 Total .....	876	NA	NA	876	NA	27	NA	NA	27
1987 Total .....	852	NA	NA	852	NA	29	NA	NA	29
1988 Total .....	885	NA	NA	885	NA	32	NA	NA	32
1989 Total .....	918	5	53	976	1	36	22	3	61
1990 Total .....	581	6	56	642	1	39	28	3	71
1991 Total .....	613	6	58	677	1	41	26	3	72
1992 Total .....	645	6	60	711	1	44	32	3	81
1993 Total .....	548	7	62	616	1	46	33	3	84
1994 Total .....	537	6	64	607	1	46	35	4	86
1995 Total .....	596	7	65	667	1	46	40	5	92
1996 Total .....	595	7	65	667	1	50	53	5	110
1997 Total .....	433	8	65	506	1	49	58	6	113
1998 Total .....	387	8	65	459	1	48	54	7	111
1999 Total .....	414	9	64	486	1	52	54	7	114
2000 Total .....	433	9	61	503	1	53	47	8	109
2001 Total .....	407	9	60	476	1	41	39	8	89
2002 January .....	30	1	5	36	(s)	4	3	1	7
February .....	27	1	4	32	(s)	3	3	1	7
March .....	30	1	5	36	(s)	4	3	1	7
April .....	29	1	5	34	(s)	3	3	1	7
May .....	30	1	5	36	(s)	4	4	1	8
June .....	29	1	5	34	(s)	3	4	1	8
July .....	30	1	5	36	(s)	4	4	1	8
August .....	30	1	5	36	(s)	4	4	1	8
September .....	29	1	5	34	(s)	3	4	1	8
October .....	30	1	5	36	(s)	4	4	1	8
November .....	29	1	5	34	(s)	3	4	1	8
December .....	30	1	5	36	(s)	4	3	1	7
<b>Total .....</b>	<b>350</b>	<b>10</b>	<b>58</b>	<b>419</b>	<b>(s)</b>	<b>42</b>	<b>42</b>	<b>9</b>	<b>93</b>
2003 January .....	30	1	5	36	(s)	4	3	1	7
February .....	27	1	4	32	(s)	3	3	1	7
March .....	30	1	5	36	(s)	4	4	1	9
April .....	29	1	5	34	(s)	3	4	1	8
May .....	30	1	5	36	(s)	4	4	1	9
June .....	29	1	5	34	(s)	3	4	1	8
July .....	30	1	5	36	(s)	4	4	1	9
August .....	30	1	5	36	(s)	4	4	1	8
September .....	29	1	5	34	(s)	3	4	1	8
October .....	30	1	5	36	(s)	4	4	1	8
November .....	29	1	5	34	(s)	3	4	1	8
December .....	30	1	5	36	(s)	4	R 4	1	R 9
<b>Total .....</b>	<b>350</b>	<b>10</b>	<b>58</b>	<b>419</b>	<b>1</b>	<b>41</b>	<b>R 48</b>	<b>9</b>	<b>R 99</b>
2004 January .....	30	1	5	35	(s)	3	F 3	1	8

<sup>a</sup> Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of Section 7.

<sup>b</sup> Wood, black liquor, and other wood waste.

<sup>c</sup> Geothermal heat pump and direct use energy.

<sup>d</sup> Solar thermal direct use energy and photovoltaic electricity generation. Small amounts of commercial sector use are included in the residential sector.

<sup>e</sup> Conventional hydroelectric power.

<sup>f</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

R=Revised. F=Forecast. 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: See end of section.

**Table 10.2b Estimated Renewable Energy Consumption:  
Industrial and Transportation Sectors**  
(Trillion Btu)

	Industrial Sector <sup>a</sup>					Transportation Sector
	Hydropower <sup>b</sup>	Wood <sup>c</sup>	Waste <sup>d</sup>	Geothermal <sup>e</sup>	Total	Alcohol Fuels <sup>f</sup>
1973 Total .....	35	1,165	NA	NA	1,200	NA
1974 Total .....	33	1,159	NA	NA	1,192	NA
1975 Total .....	32	1,063	NA	NA	1,096	NA
1976 Total .....	33	1,220	NA	NA	1,253	NA
1977 Total .....	33	1,281	NA	NA	1,314	NA
1978 Total .....	32	1,400	NA	NA	1,432	NA
1979 Total .....	34	1,405	NA	NA	1,439	NA
1980 Total .....	33	1,600	NA	NA	1,633	NA
1981 Total .....	33	1,602	87	NA	1,722	7
1982 Total .....	33	1,516	118	NA	1,667	19
1983 Total .....	33	1,690	155	NA	1,879	35
1984 Total .....	33	1,679	204	NA	1,916	43
1985 Total .....	33	1,645	230	NA	1,908	52
1986 Total .....	33	1,610	256	NA	1,899	60
1987 Total .....	33	1,576	282	NA	1,891	69
1988 Total .....	33	1,625	308	NA	1,965	70
1989 Total .....	28	1,584	200	2	1,814	71
1990 Total .....	31	1,442	192	2	1,667	63
1991 Total .....	30	1,410	185	2	1,626	73
1992 Total .....	31	1,461	179	2	1,672	83
1993 Total .....	30	1,484	181	2	1,697	97
1994 Total .....	62	1,580	199	3	1,844	109
1995 Total .....	55	1,652	195	3	1,905	117
1996 Total .....	61	1,683	224	3	1,971	84
1997 Total .....	58	1,731	184	3	1,976	106
1998 Total .....	55	1,603	180	3	1,841	117
1999 Total .....	49	1,620	171	4	1,843	122
2000 Total .....	42	1,636	145	4	1,828	139
2001 Total .....	32	1,443	150	5	1,630	147
2002 January .....	3	131	15	(s)	150	13
February .....	3	115	14	(s)	132	12
March .....	3	121	15	(s)	139	12
April .....	3	122	14	(s)	140	12
May .....	3	131	14	(s)	148	14
June .....	3	123	14	(s)	139	12
July .....	3	138	14	(s)	155	15
August .....	3	124	14	(s)	142	14
September .....	2	132	14	(s)	149	15
October .....	3	142	15	(s)	160	17
November .....	5	128	15	(s)	149	20
December .....	5	134	16	(s)	156	19
Total .....	39	1,541	175	5	1,759	174
2003 January .....	4	117	14	(s)	135	17
February .....	4	110	13	(s)	127	20
March .....	5	131	15	(s)	151	17
April .....	4	125	14	(s)	143	20
May .....	5	123	14	(s)	143	19
June .....	5	125	14	(s)	145	19
July .....	5	130	14	(s)	150	20
August .....	5	126	15	(s)	146	21
September .....	4	120	15	(s)	139	18
October .....	4	139	16	(s)	159	21
November .....	4	152	15	(s)	172	24
December .....	6	<sup>R</sup> 138	15	(s)	<sup>R</sup> 160	25
Total .....	57	<sup>R</sup> 1,536	<sup>R</sup> 173	5	<sup>R</sup> 1,771	239
2004 January .....	5	118	14	(s)	138	24

<sup>a</sup> Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of Section 7.

<sup>b</sup> Conventional hydroelectric power.

<sup>c</sup> Wood, black liquor, and other wood waste.

<sup>d</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>e</sup> Geothermal heat pump and direct use energy.

<sup>f</sup> Ethanol blended into motor gasoline.

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: See end of section.

**Table 10.2c Renewable Energy Consumption: Electric Power Sector and Total**  
(Trillion Btu)

	Electric Power Sector <sup>a,b</sup>							Renewable Energy Consumption Total
	Hydropower <sup>c</sup>	Wood <sup>d</sup>	Waste <sup>e</sup>	Geothermal <sup>f</sup>	Solar <sup>g</sup>	Wind <sup>h</sup>	Total	
1973 Total	2,827	1	2	43	NA	NA	2,873	4,433
1974 Total	3,143	1	2	53	NA	NA	3,199	4,769
1975 Total	3,122	(s)	2	70	NA	NA	3,194	4,723
1976 Total	2,943	1	2	78	NA	NA	3,024	4,768
1977 Total	2,301	3	2	77	NA	NA	2,383	4,249
1978 Total	2,905	2	1	64	NA	NA	2,973	5,039
1979 Total	2,897	3	2	84	NA	NA	2,986	5,166
1980 Total	2,867	3	2	110	NA	NA	2,982	5,494
1981 Total	2,725	3	1	123	NA	NA	2,852	5,471
1982 Total	3,233	2	1	105	NA	NA	3,341	5,985
1983 Total	3,494	2	2	129	NA	(s)	3,627	6,488
1984 Total	3,353	5	4	165	(s)	(s)	3,527	6,431
1985 Total	2,937	8	7	198	(s)	(s)	3,150	6,033
1986 Total	3,038	5	7	219	(s)	(s)	3,270	6,132
1987 Total	2,602	8	7	229	(s)	(s)	2,846	5,687
1988 Total	2,302	10	8	217	(s)	(s)	2,536	5,489
1989 Total	<sup>b</sup> 2,808	<sup>b</sup> 100	<sup>b</sup> 132	<sup>b</sup> 308	<sup>b</sup> 3	<sup>b</sup> 22	<sup>b</sup> 3,372	6,294
1990 Total	3,014	129	188	326	4	29	3,689	6,133
1991 Total	2,985	126	229	335	5	31	3,710	6,158
1992 Total	2,586	140	262	338	4	30	3,360	5,907
1993 Total	2,861	150	265	351	5	31	3,662	6,157
1994 Total	2,620	152	282	325	5	36	3,420	6,065
1995 Total	3,149	125	296	280	5	33	3,889	6,669
1996 Total	3,528	138	300	300	5	33	4,305	7,137
1997 Total	3,581	137	309	309	5	34	4,375	7,075
1998 Total	3,241	137	308	311	5	31	4,032	6,561
1999 Total	3,218	138	315	312	5	46	4,034	6,599
2000 Total	2,768	134	318	296	5	57	3,579	6,158
2001 Total	2,169	126	324	289	6	68	2,982	5,324
2002 January	218	13	30	27	(s)	8	296	501
February	201	10	27	24	(s)	7	270	453
March	210	13	30	26	(s)	9	288	482
April	242	11	28	23	(s)	10	316	510
May	267	11	30	26	1	11	345	551
June	283	12	31	24	1	11	362	556
July	255	13	33	27	1	9	337	551
August	211	13	33	26	1	10	293	494
September	170	14	31	25	1	7	248	454
October	170	13	30	26	(s)	7	247	468
November	195	13	30	25	(s)	7	270	480
December	214	14	32	26	(s)	8	293	510
Total	2,636	150	365	305	6	105	3,567	6,011
2003 January	195	15	27	24	(s)	6	267	462
February	195	12	24	22	(s)	7	260	446
March	241	13	29	23	1	10	317	529
April	249	12	28	22	1	11	322	528
May	297	11	29	22	1	9	368	574
June	283	13	29	23	1	10	358	565
July	245	14	32	23	1	9	324	537
August	226	15	30	23	1	8	302	513
September	180	13	27	23	1	8	251	451
October	181	15	30	23	(s)	9	258	482
November	195	14	30	23	(s)	10	272	511
December	<sup>R</sup> 238	<sup>R</sup> 15	32	<sup>R</sup> 26	(s)	<sup>R</sup> 11	322	<sup>R</sup> 552
Total	<sup>R</sup> 2,725	<sup>R</sup> 161	346	<sup>R</sup> 276	5	<sup>R</sup> 109	<sup>R</sup> 3,623	<sup>R</sup> 6,150
2004 January	<sup>F</sup> 251	<sup>F</sup> 14	<sup>F</sup> 29	<sup>F</sup> 26	<sup>F</sup> (s)	<sup>F</sup> 9	<sup>F</sup> 330	535

<sup>a</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>b</sup> Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

<sup>c</sup> Conventional hydroelectric power.

<sup>d</sup> Wood, black liquor, and other wood waste.

<sup>e</sup> Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

<sup>f</sup> Geothermal electricity net generation.

<sup>g</sup> Solar thermal and photovoltaic electricity net generation.

<sup>h</sup> Wind electricity net generation.

R=Revised. NA=Not available. 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/renew.html>.

Sources: **Wood and Waste • 1973-1988:** Table 7.3d. • **1989 forward:** Table 7.3b. **Hydropower, Geothermal, Solar, and Wind:** Tables 7.2b and A6. **Electric Power Sector Total:** Calculated as the sum of the individual fuels. **Renewable Energy Consumption Total:** Table 10.1. **Forecast values:** Energy Information Administration, Short-Term Integrated Forecasting System. See Note 10 at end of Section 4 for more information about forecast values.

## Renewable Energy

### Tables 10.2a and 10.2b 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.

1990–2001: EIA, *Renewable Energy Annual*, annual reports, Table 6. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2002 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.

1993–2001: EIA, *Renewable Energy Annual*, annual reports, Table 6. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a.

2002 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).

1990–2001: EIA, *Renewable Energy Annual 2001* (November 2002), Table B1, and CNEAF staff for subsequent data updates.

2002 forward: EIA, CNEAF, estimates.

## Waste, Commercial

Table 7.3c

#### 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).

1990–2001: EIA, *Renewable Energy Annual 2001* (November 2002), Table B1, and CNEAF staff for subsequent data updates.

2002 forward: EIA, CNEAF, estimates.

#### Hydroelectric, Commercial

Hydroelectric total (all sectors) from Table 7.2a minus electric power sector hydroelectric from Table 7.2b minus industrial sector hydroelectric from Table 7.2c, times the fossil-fueled steam-electric plants heat rate from Table A6.

#### Hydroelectric, Industrial

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 7.2c and A6.

#### 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 Geoheat Center, unpublished data.

### **Solar**

1989–1991: EIA, CNEAF, estimates.

1992–2001: EIA *Renewable Energy Annual*, annual reports, Table 2. Includes revisions published in the EIA, *Annual Energy Review 2000*, Table 10.2a and 10.2b.

2002 forward: EIA, CNEAF, estimates.

## Section 11. International Petroleum

**Crude Oil Production.** World crude oil production during January 2004 was 72 million barrels per day, up 0.2 million barrels per day from the level in the previous month.

Organization of Petroleum Exporting Countries (OPEC) production during January 2004 averaged 29 million barrels per day, up 0.2 million barrels per day from the level in the previous month. During January 2004, production increased in Iraq by 150 thousand barrels per day; Nigeria by 70 thousand barrels per day; and Saudi Arabia by 40 thousand barrels per day. Production decreased in Venezuela by 50 thousand barrels per day and Indonesia by 10 thousand barrels per day. Production remained unchanged in Iran, the United Arab Emirates, Kuwait, Algeria, Libya, and Qatar.

Among the non-OPEC nations, production during January 2004 increased in Russia by 93 thousand barrels per day; the United States by 15 thousand barrels per day; and Canada by 14 thousand barrels per day. Production decreased in the United Kingdom by 149 thousand barrels per day; Mexico by 38 thousand barrels per day; Norway by 30 thousand barrels per day; and China by 24 thousand barrels per day.

Production remained unchanged in Egypt.

**Petroleum Consumption.** In December 2003, consumption in all Organization for Economic Cooperation and Development (OECD) countries was 50.5 million barrels per day, 1 percent<sup>1</sup> higher than the December 2002 rate. Comparing December rates in 2003 and 2002, consumption was higher in 2003 in France (+13 percent); Canada (+5 percent); the United States (+4 percent); and the United Kingdom (+3 percent). The December 2003 consumption rate was lower in Japan (-7 percent); South Korea (-3 percent); Germany (-2 percent); and Italy (-1 percent), compared with the rate 1 year earlier.

**Petroleum Stocks.** For all OECD countries, petroleum stocks at the end of December 2003 totaled 3.9 billion barrels, 3 percent<sup>1</sup> higher than the ending stock level in December 2002. Stock levels were higher in December 2003 in Canada (+12 percent); South Korea (+11 percent); France (+6 percent); the United Kingdom and Germany (both +5 percent); Japan (+3 percent); and the United States (+1 percent). Stock levels were lower in Italy (-2 percent), compared with levels 1 year earlier.

<sup>1</sup>Percentage changes are based on unrounded data.

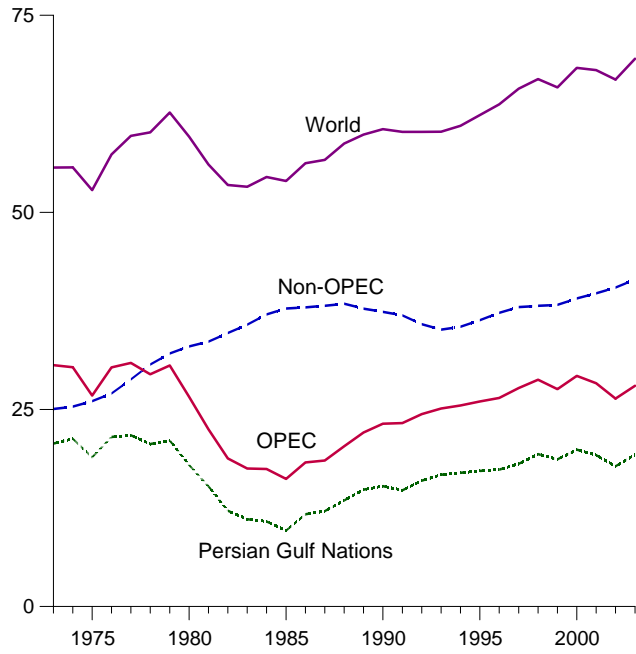




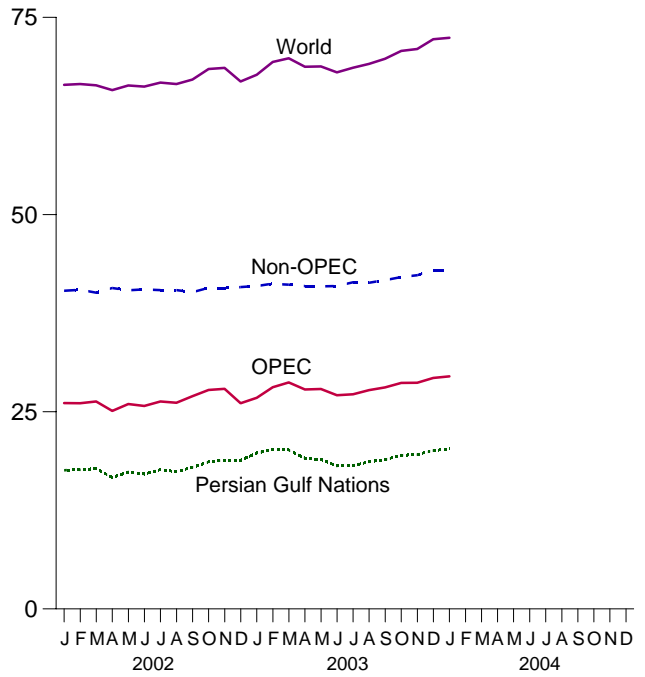


**Figure 11.1a Crude Oil Production Overview**  
(Million Barrels per Day)

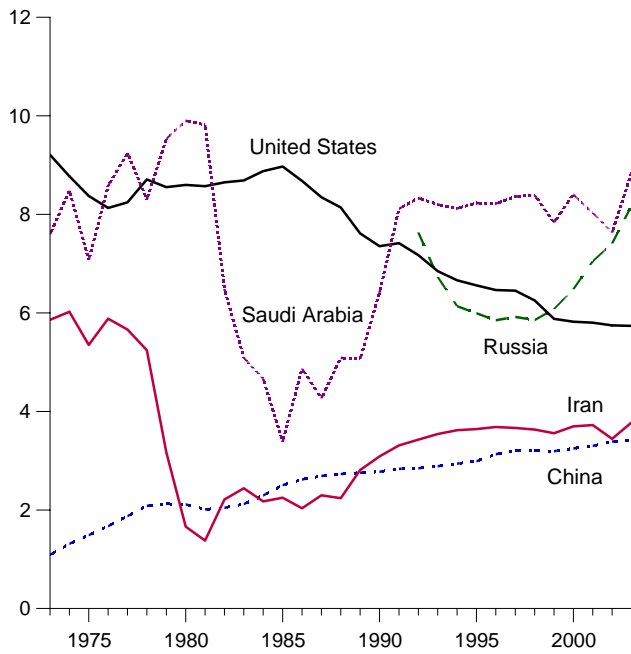
World Production, 1973-2003



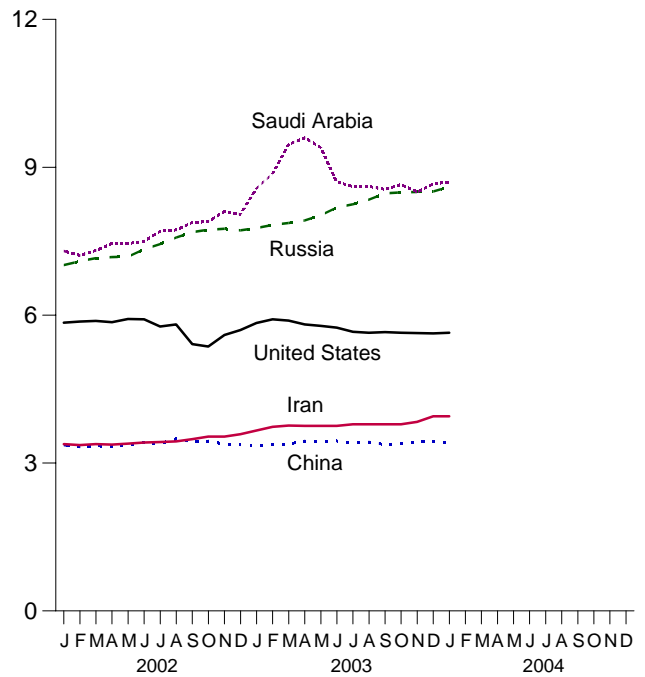
World Production, Monthly



Selected Producers, 1973-2003

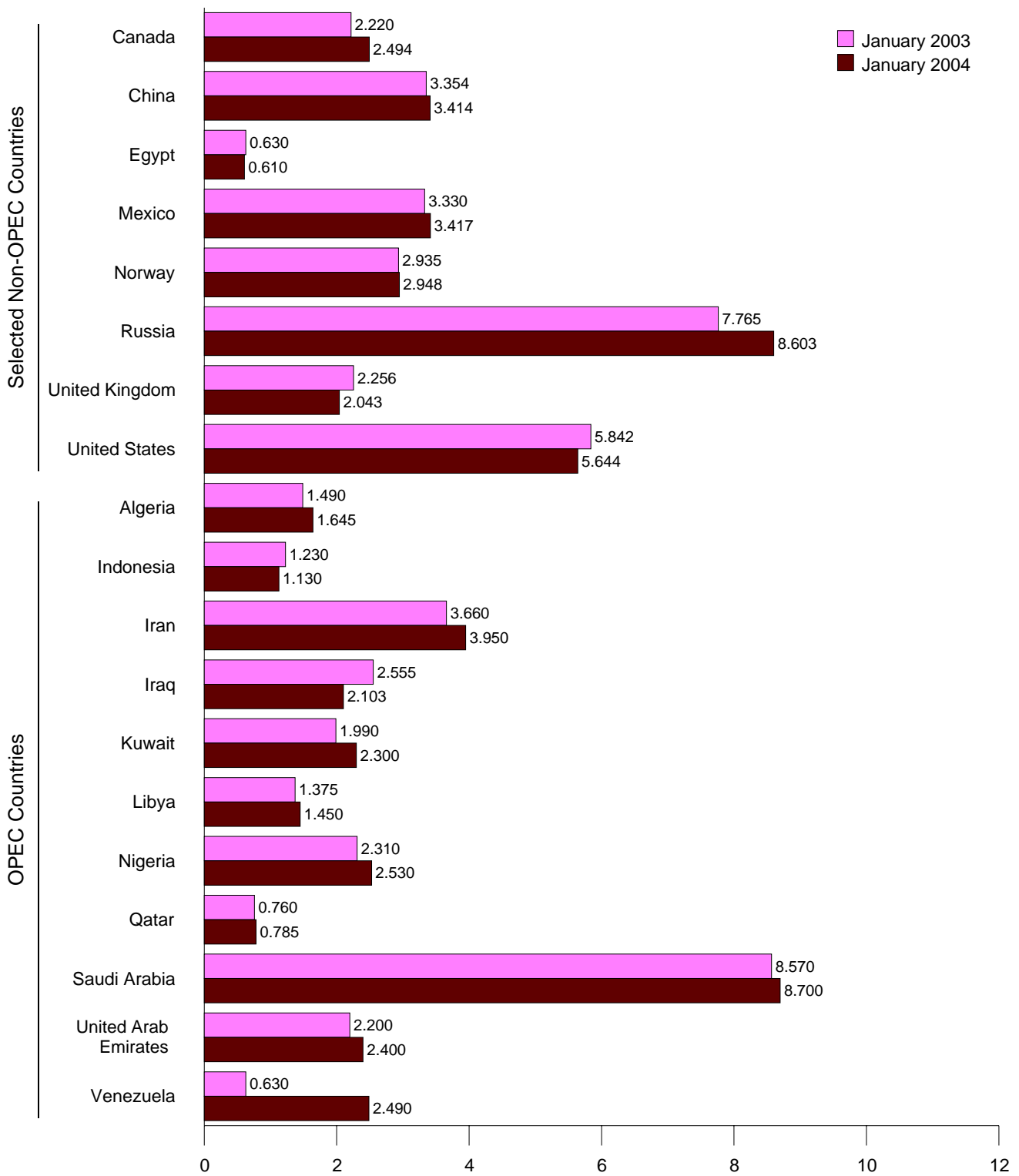


Selected Producers, Monthly



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.

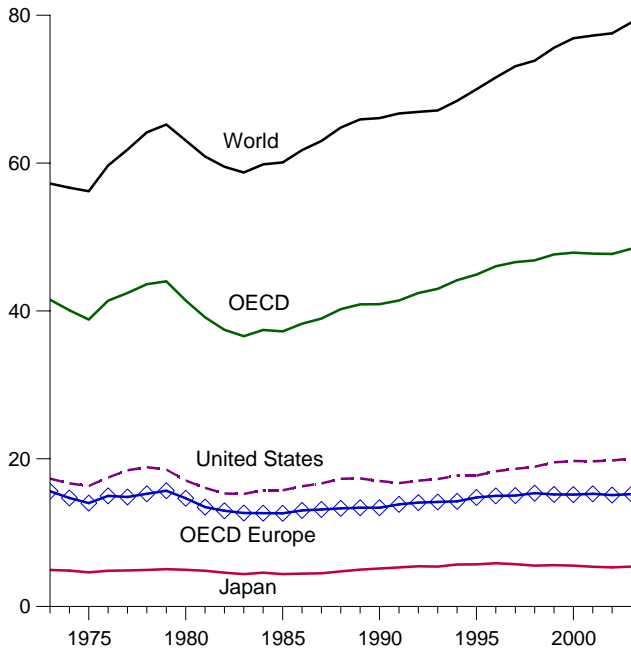
**Figure 11.1b Crude Oil Production by Selected Country**  
(Million Barrels per Day)



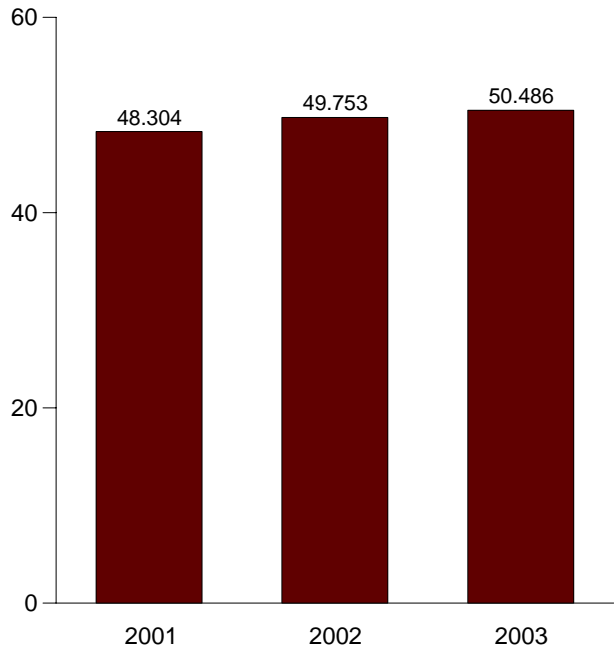
Note: OPEC is the Organization of Petroleum Exporting Countries.  
 Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.  
 Sources: Tables 11.1a and 11.1b.

**Figure 11.2 Petroleum Consumption in OECD Countries**  
(Million Barrels per Day)

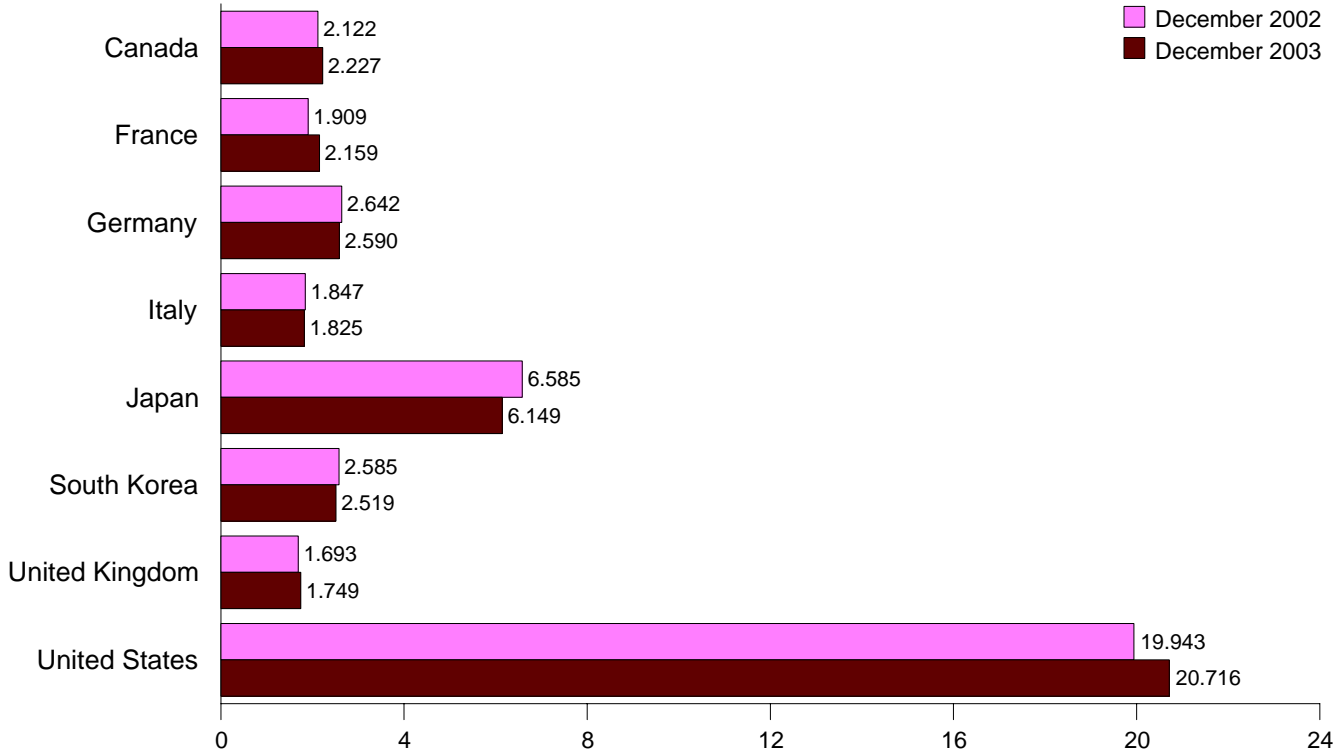
Overview, 1973-2003



OECD Total, December



By Selected OECD Country



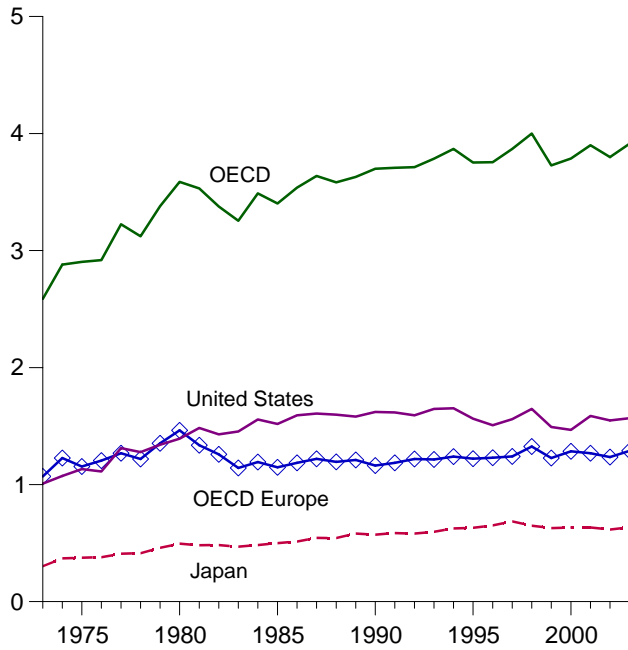
Notes: • OECD is the Organization for Economic Cooperation and Development.  
• Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/inter.html>.  
Source: Table 11.2.

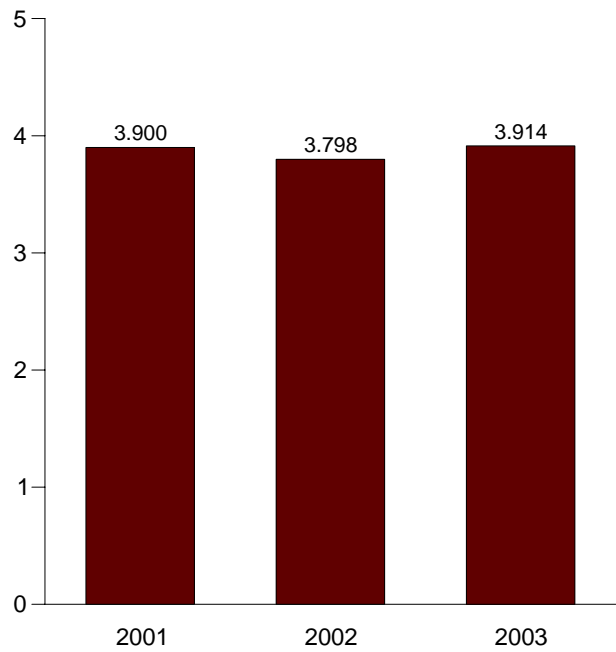


**Figure 11.3 Petroleum Stocks in OECD Countries**  
(Billion Barrels)

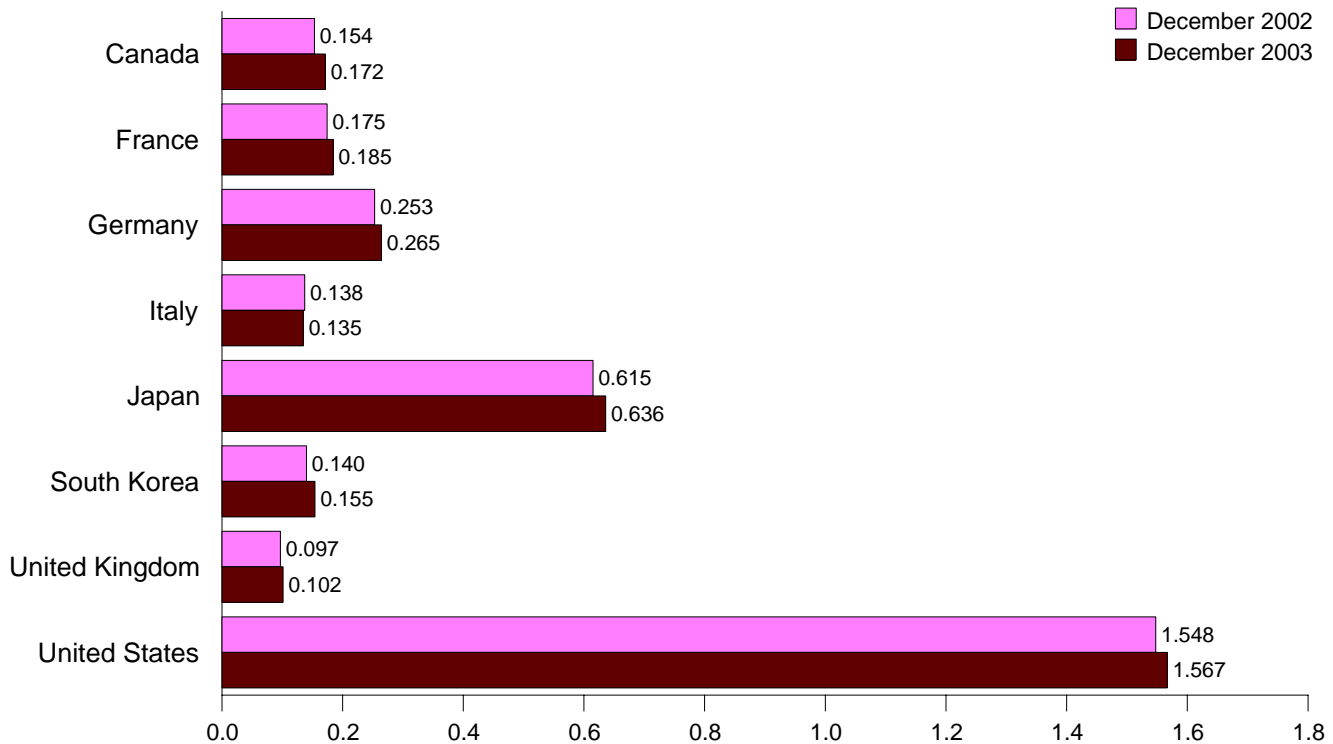
Overview, End of Year, 1973-2003



OECD Stocks, End of Month, December



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.





# International Petroleum

## Tables 11.1a and 11.1b Sources

**United States:** See Table 3.1a.

### **All Other Countries: Monthly Data**

2002 forward: Energy Information Administration (EIA), *International Petroleum Monthly*.

### **All Other Countries: Annual Data**

1973–1979: Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8.

1980–2002: Office of Energy Markets and End Use, International Energy Database, February 2004.

2003: Average of monthly data.

### **World: Monthly Data**

2002 forward: EIA, *International Petroleum Monthly*, sum of all countries' monthly data.

### **World: Annual Data**

1973–1979: EIA, *International Energy Annual 1981*, Table 8.

1980–2002: Office of Energy Markets and End Use, International Energy Database, February 2004.

2003: 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. See **British Thermal Unit (Btu)** in the Glossary for more information.

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.

In general, the annual thermal conversion factors presented in Tables A2 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.

**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 <sup>a</sup>	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 <sup>b</sup>	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 <sup>c</sup>	5.253	Unfinished Oils	5.825
Reformulated <sup>c</sup>	5.150	Unfractionated Stream	5.418
Oxygenated <sup>c</sup>	5.150	Waxes	5.537
Fuel Ethanol <sup>d</sup>	3.539	Miscellaneous	5.796

<sup>a</sup> 60 percent butane and 40 percent propane

<sup>b</sup> 70 percent ethane and 30 percent propane

<sup>c</sup> See Table A3 for motor gasoline annual weighted averages beginning in 1994.

<sup>d</sup> 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 Petroleum Production, Imports, and Exports**  
(Million Btu per Barrel)

	Production		Imports			Exports		
	Crude Oil	Natural Gas Plant Liquids	Crude Oil	Petroleum Products	Total	Crude Oil	Petroleum Products	Total
1973 .....	5.800	4.049	5.817	5.983	5.897	5.800	5.752	5.752
1974 .....	5.800	4.011	5.827	5.959	5.884	5.800	5.773	5.774
1975 .....	5.800	3.984	5.821	5.935	5.858	5.800	5.747	5.748
1976 .....	5.800	3.964	5.808	5.980	5.856	5.800	5.743	5.745
1977 .....	5.800	3.941	5.810	5.908	5.834	5.800	5.796	5.797
1978 .....	5.800	3.925	5.802	5.955	5.839	5.800	5.814	5.808
1979 .....	5.800	3.955	5.810	5.811	5.810	5.800	5.864	5.832
1980 .....	5.800	3.914	5.812	5.748	5.796	5.800	5.841	5.820
1981 .....	5.800	3.930	5.818	5.659	5.775	5.800	5.837	5.821
1982 .....	5.800	3.872	5.826	5.664	5.775	5.800	5.829	5.820
1983 .....	5.800	3.839	5.825	5.677	5.774	5.800	5.800	5.800
1984 .....	5.800	3.812	5.823	5.613	5.745	5.800	5.867	5.850
1985 .....	5.800	3.815	5.832	5.572	5.736	5.800	5.819	5.814
1986 .....	5.800	3.797	5.903	5.624	5.808	5.800	5.839	5.832
1987 .....	5.800	3.804	5.901	5.599	5.820	5.800	5.860	5.858
1988 .....	5.800	3.800	5.900	5.618	5.820	5.800	5.842	5.840
1989 .....	5.800	3.826	5.906	5.641	5.833	5.800	5.869	5.857
1990 .....	5.800	3.822	5.934	5.614	5.849	5.800	5.838	5.833
1991 .....	5.800	3.807	5.948	5.636	5.873	5.800	5.827	5.823
1992 .....	5.800	3.804	5.953	5.623	5.877	5.800	5.774	5.777
1993 .....	5.800	3.801	5.954	5.620	5.883	5.800	5.777	5.779
1994 .....	5.800	3.794	5.950	5.534	5.861	5.800	5.777	5.779
1995 .....	5.800	3.796	5.938	5.483	5.855	5.800	5.740	5.746
1996 .....	5.800	3.777	5.947	5.468	5.847	5.800	5.728	5.736
1997 .....	5.800	3.762	5.954	5.469	5.862	5.800	5.726	5.734
1998 .....	5.800	3.769	5.953	5.462	5.861	5.800	5.710	5.720
1999 .....	5.800	3.744	5.942	5.421	5.840	5.800	5.684	5.699
2000 .....	5.800	3.733	5.959	5.432	5.849	5.800	5.651	5.658
2001 .....	5.800	3.735	5.976	5.443	5.862	5.800	5.751	5.752
2002 .....	5.800	3.729	5.971	5.451	5.863	5.800	5.687	5.688
2003 <sup>P</sup> .....	5.800	3.739	5.971	5.445	5.859	5.800	5.745	5.746
2004 <sup>P</sup> .....	5.800	3.739	5.971	5.445	5.859	5.800	5.745	5.746

P=Preliminary.

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 Consumption**  
(Million Btu per Barrel)

	Total Petroleum <sup>a</sup>						Liquefied Petroleum Gases	Motor Gasoline
	End-Use Sectors				Electric Power Sector <sup>b</sup>	Total		
	Residential	Commercial	Industrial	Transportation				
1973 .....	5.205	5.749	5.568	5.395	6.245	5.515	3.746	5.253
1974 .....	5.196	5.740	5.538	5.394	6.238	5.504	3.730	5.253
1975 .....	5.192	5.704	5.528	5.392	6.250	5.494	3.715	5.253
1976 .....	5.215	5.726	5.538	5.395	6.251	5.504	3.711	5.253
1977 .....	5.213	5.733	5.555	5.400	6.249	5.518	3.677	5.253
1978 .....	5.213	5.716	5.553	5.404	6.251	5.519	3.669	5.253
1979 .....	5.298	5.769	5.418	5.428	6.258	5.494	3.680	5.253
1980 .....	5.245	5.803	5.376	5.440	6.254	5.479	3.674	5.253
1981 .....	5.191	5.751	5.313	5.432	6.258	5.448	3.643	5.253
1982 .....	5.167	5.751	5.263	5.422	6.258	5.415	3.615	5.253
1983 .....	5.022	5.642	5.273	5.415	6.255	5.406	3.614	5.253
1984 .....	5.129	5.700	5.223	5.422	6.251	5.395	3.599	5.253
1985 .....	5.115	5.660	5.221	5.423	6.247	5.387	3.603	5.253
1986 .....	5.130	5.691	5.286	5.427	6.257	5.418	3.640	5.253
1987 .....	5.095	5.659	5.253	5.430	6.249	5.403	3.659	5.253
1988 .....	5.118	5.657	5.248	5.434	6.250	5.410	3.652	5.253
1989 .....	5.057	5.619	5.234	5.440	6.240	5.410	3.683	5.253
1990 .....	4.950	5.617	5.272	5.444	6.244	5.411	3.625	5.253
1991 .....	4.912	5.590	5.190	5.442	6.246	5.384	3.614	5.253
1992 .....	4.942	5.577	5.188	5.445	6.238	5.378	3.624	5.253
1993 .....	4.942	5.571	5.195	5.438	6.230	5.379	3.606	5.253
1994 .....	4.936	5.580	5.165	5.426	6.213	5.361	3.635	<sup>c</sup> 5.230
1995 .....	4.925	5.546	5.133	5.419	6.188	5.341	3.623	5.215
1996 .....	4.869	5.494	5.129	5.421	6.195	5.336	3.613	5.216
1997 .....	4.870	5.459	5.133	5.417	6.199	5.336	3.616	5.213
1998 .....	4.842	5.440	5.149	5.414	6.210	5.349	3.614	5.212
1999 .....	4.749	5.349	5.105	5.415	6.205	5.328	3.616	5.211
2000 .....	4.754	5.388	5.072	5.423	6.189	5.326	3.607	5.210
2001 .....	4.824	5.422	5.120	5.421	6.195	5.345	3.614	5.210
2002 .....	<sup>E</sup> 4.824	<sup>E</sup> 5.422	<sup>E</sup> 5.120	<sup>E</sup> 5.421	<sup>E</sup> 6.195	5.324	3.613	5.208
2003 .....	<sup>E</sup> 4.824	<sup>E</sup> 5.422	<sup>E</sup> 5.120	<sup>E</sup> 5.421	<sup>E</sup> 6.195	<sup>P</sup> 5.341	<sup>P</sup> 3.629	<sup>P</sup> 5.206
2004 .....	<sup>E</sup> 4.824	<sup>E</sup> 5.422	<sup>E</sup> 5.120	<sup>E</sup> 5.421	<sup>E</sup> 6.195	<sup>P</sup> 5.341	<sup>P</sup> 3.629	<sup>P</sup> 5.206

<sup>a</sup> Petroleum products supplied, including natural gas plant liquids and crude oil burned directly as fuel.

<sup>b</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>c</sup> There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a factor that is a quantity-weighted average of motor gasoline's major components. See Table A1.

E=Estimate. P=Preliminary.

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
	Marketed	Dry	End-Use Sectors	Electric Power Sector <sup>a</sup>	Total		
1973 .....	1,093	1,021	1,020	1,024	1,021	1,026	1,023
1974 .....	1,097	1,024	1,024	1,022	1,024	1,027	1,016
1975 .....	1,095	1,021	1,020	1,026	1,021	1,026	1,014
1976 .....	1,093	1,020	1,019	1,023	1,020	1,025	1,013
1977 .....	1,093	1,021	1,019	1,029	1,021	1,026	1,013
1978 .....	1,088	1,019	1,016	1,034	1,019	1,030	1,013
1979 .....	1,092	1,021	1,018	1,035	1,021	1,037	1,013
1980 .....	1,098	1,026	1,024	1,035	1,026	1,022	1,013
1981 .....	1,103	1,027	1,025	1,035	1,027	1,014	1,011
1982 .....	1,107	1,028	1,026	1,036	1,028	1,018	1,011
1983 .....	1,115	1,031	1,031	1,030	1,031	1,024	1,010
1984 .....	1,109	1,031	1,030	1,035	1,031	1,005	1,010
1985 .....	1,112	1,032	1,031	1,038	1,032	1,002	1,011
1986 .....	1,110	1,030	1,029	1,034	1,030	997	1,008
1987 .....	1,112	1,031	1,031	1,032	1,031	999	1,011
1988 .....	1,109	1,029	1,029	1,028	1,029	1,002	1,018
1989 .....	1,107	1,031	1,031	1,028	1,031	1,004	1,019
1990 .....	1,105	1,029	1,030	1,027	1,029	1,012	1,018
1991 .....	1,108	1,030	1,031	1,025	1,030	1,014	1,022
1992 .....	1,110	1,030	1,031	1,025	1,030	1,011	1,018
1993 .....	1,106	1,027	1,028	1,025	1,027	1,020	1,016
1994 .....	1,105	1,028	1,029	1,025	1,028	1,022	1,011
1995 .....	1,106	1,026	1,027	1,021	1,026	1,021	1,011
1996 .....	1,109	1,026	1,027	1,020	1,026	1,022	1,011
1997 .....	1,107	1,026	1,027	1,020	1,026	1,023	1,011
1998 .....	1,109	1,031	1,033	1,024	1,031	1,023	1,011
1999 .....	1,107	1,027	1,028	1,022	1,027	1,022	1,006
2000 .....	1,107	1,025	1,026	1,021	1,025	1,023	1,006
2001 .....	1,105	1,028	1,029	1,025	1,028	1,023	1,010
2002 .....	1,105	1,027	1,029	1,020	1,027	1,023	1,010
2003 <sup>E</sup> .....	1,105	1,027	1,029	1,020	1,027	1,023	1,010
2004 <sup>E</sup> .....	1,105	1,027	1,029	1,020	1,027	1,023	1,010

<sup>a</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

E=Estimate.

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 <sup>b</sup>			
		Residential and Commercial	Industrial		Total				
Coke Plants	Other <sup>a</sup>								
1973	23.376	22.831	26.780	22.586	22.246	23.057	25.000	26.596	24.800
1974	23.072	22.479	26.778	22.419	21.781	22.677	25.000	26.700	24.800
1975	22.897	22.261	26.782	22.436	21.642	22.506	25.000	26.562	24.800
1976	22.855	22.774	26.781	22.530	21.679	22.498	25.000	26.601	24.800
1977	22.597	22.919	26.787	22.322	21.508	22.265	25.000	26.548	24.800
1978	22.248	22.466	26.789	22.207	21.275	22.017	25.000	26.478	24.800
1979	22.454	22.242	26.788	22.452	21.364	22.100	25.000	26.548	24.800
1980	22.415	22.543	26.790	22.690	21.295	21.947	25.000	26.384	24.800
1981	22.308	22.474	26.794	22.585	21.085	21.713	25.000	26.160	24.800
1982	22.239	22.695	26.797	22.712	21.194	21.674	25.000	26.223	24.800
1983	22.052	22.775	26.798	22.691	21.133	21.576	25.000	26.291	24.800
1984	22.010	22.844	26.799	22.543	21.101	21.573	25.000	26.402	24.800
1985	21.870	22.646	26.798	22.020	20.959	21.366	25.000	26.307	24.800
1986	21.913	22.947	26.798	22.198	21.084	21.462	25.000	26.292	24.800
1987	21.922	23.404	26.799	22.381	21.136	21.517	25.000	26.291	24.800
1988	21.823	23.571	26.799	22.360	20.900	21.328	25.000	26.299	24.800
1989	21.765	23.650	26.800	22.347	20.898	21.307	25.000	26.160	24.800
1990	21.822	23.137	26.799	22.457	20.779	21.197	25.000	26.202	24.800
1991	21.681	23.114	26.799	22.460	20.730	21.120	25.000	26.188	24.800
1992	21.682	23.105	26.799	22.250	20.709	21.068	25.000	26.161	24.800
1993	21.418	22.994	26.800	22.123	20.677	21.010	25.000	26.335	24.800
1994	21.394	23.112	26.800	22.068	20.589	20.929	25.000	26.329	24.800
1995	21.326	23.118	26.800	21.950	20.543	20.880	25.000	26.180	24.800
1996	21.322	23.011	26.800	22.105	20.547	20.870	25.000	26.174	24.800
1997	21.296	22.494	26.800	22.172	20.518	20.830	25.000	26.251	24.800
1998	21.418	21.620	27.426	23.164	20.516	20.881	25.000	26.800	24.800
1999	21.070	23.880	27.426	22.489	20.490	20.818	25.000	26.081	24.800
2000	21.072	25.020	27.426	22.433	20.511	20.828	25.000	26.117	24.800
2001	20.443	24.905	27.426	23.209	20.279	20.655	25.000	25.998	24.800
2002 <sup>P</sup>	20.620	24.836	27.426	23.361	20.479	20.814	25.000	26.062	24.800
2003 <sup>E</sup>	20.620	24.836	27.426	23.361	20.479	20.814	25.000	26.062	24.800
2004 <sup>E</sup>	20.620	24.836	27.426	23.361	20.479	20.814	25.000	26.062	24.800

<sup>a</sup> Includes transportation.

<sup>b</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

P=Preliminary. E=Estimate.

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 <sup>e</sup>
	Fossil-Fueled Steam-Electric Plants <sup>a,b</sup>	Nuclear Steam-Electric Plants <sup>c</sup>	Geothermal Energy Plants <sup>d</sup>	
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	10,622	21,263	3,412
1986 .....	10,446	10,579	21,263	3,412
1987 .....	10,419	10,442	21,263	3,412
1988 .....	10,324	10,602	21,096	3,412
1989 .....	10,432	10,583	21,096	3,412
1990 .....	10,402	10,582	21,096	3,412
1991 .....	10,436	10,484	20,997	3,412
1992 .....	10,342	10,471	20,914	3,412
1993 .....	10,309	10,504	20,914	3,412
1994 .....	10,316	10,452	20,914	3,412
1995 .....	10,312	10,507	20,914	3,412
1996 .....	10,340	10,503	20,960	3,412
1997 .....	10,213	10,494	20,960	3,412
1998 .....	10,197	10,491	21,017	3,412
1999 .....	10,226	10,450	21,017	3,412
2000 .....	10,201	10,429	21,017	3,412
2001 .....	<sup>b</sup> 10,146	10,442	21,017	3,412
2002 <sup>P</sup> .....	10,119	10,442	21,017	3,412
2003 <sup>E</sup> .....	10,119	10,442	21,017	3,412
2004 <sup>E</sup> .....	10,119	10,442	21,017	3,412

<sup>a</sup> Through 2000, used as the thermal conversion factor for wood and waste electricity net generation at electric utilities. For all years, used as the thermal conversion factor for hydroelectric, solar, and wind electricity net generation.  
<sup>b</sup> Through 2000, heat rates are for electric utilities only. Beginning in 2001, heat rates are for the electric power sector, which comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.  
<sup>c</sup> Used as the thermal conversion factor for nuclear electricity net generation.  
<sup>d</sup> Used as the thermal conversion factor for geothermal electricity net generation.  
<sup>e</sup> Used as the thermal conversion factor for electricity retail sales, and electricity imports and exports.  
P=Preliminary. E=Estimate.  
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.** 1973 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: 1973 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.** 1973 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 quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (shown in appendix Table A1). 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 the Electric Power Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the electric power sector, weighted by the quantity of each petroleum product consumed at by the electric power sector.

**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.

**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.

**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.

**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 the Electric Power Sector.** Calculated annually by EIA by dividing the total heat content of natural gas consumed by the electric power sector by the total quantity received by the electric power sector.

**Natural Gas, Consumption by the End-Use Sectors.** Calculated annually by EIA by dividing the heat content of all natural gas consumed less the heat content of natural gas consumed by the electric power sector by the quantity of all natural gas consumed less the quantity of natural gas consumed by the electric power sector.

**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 waste coal) consumption by the total tonnage.

**Coal, Consumption by the Electric Power Sector.** Calculated annually by dividing the total heat content of coal (including 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 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 and, for 2001 forward, bituminous refuse) 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 used data from Form EIA-767, "Steam-Electric Plant Operation and Design Report," 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 kilowatt-hour of electricity produced, regardless of the generation process, is 3,412 Btu. 1973-1988: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published in EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9. 1989 forward: Calculated annually by EIA by using the heat rate reported on Form EIA-860, "Annual Electric Generator Report" (and predecessor forms EIA-860A, EIA-860B, and EIA-867), and the generation on Form EIA-906, "Power Plant Report" (and predecessor forms).

**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 for 1982 through 1984 were published in the following EIA reports-1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. 1983 and 1984: *Electric Plant Cost and Power Production Expenses 1991*, Table 13. 1985 forward: Calculated annually by EIA by using the heat rate reported on Form EIA-860, "Annual Electric Generator Report," and the generation reported on Form EIA-906, "Power Plant Report" (and predecessor forms).

## 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		Equivalent in	Metric Units
<b>Mass</b>	1 short ton (2,000 lb)	=	0.907 184 7	metric tons (t)
	1 long ton	=	1.016 047	metric tons (t)
	1 pound (lb)	=	0.453 592 37 <sup>a</sup>	kilograms (kg)
	1 pound uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	=	0.384 647 <sup>b</sup>	kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52	grams (g)
<b>Volume</b>	1 barrel of oil (bbl)	=	0.158 987 3	cubic meters (m <sup>3</sup> )
	1 cubic yard (yd <sup>3</sup> )	=	0.764 555	cubic meters (m <sup>3</sup> )
	1 cubic foot (ft <sup>3</sup> )	=	0.028 316 85	cubic meters (m <sup>3</sup> )
	1 U.S. gallon (gal)	=	3.785 412	liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53	milliliters (mL)
	1 cubic inch (in <sup>3</sup> )	=	16.387 06	milliliters (mL)
<b>Length</b>	1 mile (mi)	=	1.609 344 <sup>a</sup>	kilometers (km)
	1 yard (yd)	=	0.914 4 <sup>a</sup>	meters (m)
	1 foot (ft)	=	0.304 8 <sup>a</sup>	meters (m)
	1 inch (in)	=	2.54 <sup>a</sup>	centimeters (cm)
<b>Area</b>	1 acre	=	0.404 69	hectares (ha)
	1 square mile (mi <sup>2</sup> )	=	2.589 988	square kilometers (km <sup>2</sup> )
	1 square yard (yd <sup>2</sup> )	=	0.836 127 4	square meters (m <sup>2</sup> )
	1 square foot (ft <sup>2</sup> )	=	0.092 903 04 <sup>a</sup>	square meters (m <sup>2</sup> )
	1 square inch (in <sup>2</sup> )	=	6.451 6 <sup>a</sup>	square centimeters (cm <sup>2</sup> )
<b>Energy</b>	1 British thermal unit (Btu) <sup>c</sup>	=	1,055.055 852 62 <sup>a</sup>	joules (J)
	1 calorie (cal)	=	4.186 8 <sup>a</sup>	joules (J)
	1 kilowatthour (kWh)	=	3.6 <sup>a</sup>	megajoules (MJ)
<b>Temperature<sup>d</sup></b>	32 degrees Fahrenheit (°F)	=	0 <sup>a</sup>	degrees Celsius (°C)
	212 degrees Fahrenheit (°F)	=	100 <sup>a</sup>	degrees Celsius (°C)

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

<sup>c</sup>The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

<sup>d</sup>To convert degrees Fahrenheit (°F) to degrees Celsius (°C) exactly, subtract 32, then multiply by 5/9.

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, see <http://physics.nist.gov/cuu/Units/index.html>.

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 1993), pp. 9-11, 13, and 16. • U.S. Department of Commerce, 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 <sup>1</sup>	deka	da	10 <sup>-1</sup>	deci	d
10 <sup>2</sup>	hecto	h	10 <sup>-2</sup>	centi	c
10 <sup>3</sup>	kilo	k	10 <sup>-3</sup>	milli	m
10 <sup>6</sup>	mega	M	10 <sup>-6</sup>	micro	μ
10 <sup>9</sup>	giga	G	10 <sup>-9</sup>	nano	n
10 <sup>12</sup>	tera	T	10 <sup>-12</sup>	pico	p
10 <sup>15</sup>	peta	P	10 <sup>-15</sup>	femto	f
10 <sup>18</sup>	exa	E	10 <sup>-18</sup>	atto	a
10 <sup>21</sup>	zetta	Z	10 <sup>-21</sup>	zepto	z
10 <sup>24</sup>	yotta	Y	10 <sup>-24</sup>	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		Equivalent in Final Units
<b>Petroleum</b>	1 barrel (bbl)	=	42 <sup>a</sup> U.S. gallons (gal)
<b>Coal</b>	1 short ton	=	2,000 <sup>a</sup> pounds (lb)
	1 long ton	=	2,240 <sup>a</sup> pounds (lb)
	1 metric ton (t)	=	1,000 <sup>a</sup> kilograms (kg)
<b>Wood</b>	1 cord (cd)	=	1.25 <sup>b</sup> shorts tons
	1 cord (cd)	=	128 <sup>a</sup> cubic feet (ft <sup>3</sup> )

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated 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. 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 few 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 the Energy Plug web site at: <http://www.eia.doe.gov/emeu/plugs/plugsrgt.html>.

<b>Title</b>	<b>Cover Date</b>
<b>2004</b>	
<i>Annual Energy Outlook 2004</i> .....	January 2004
<i>Natural Gas Annual 2002</i> .....	February 2004
<i>Analysis of Restricted Natural Gas Supply Cases</i> .....	March 2004
<i>Performance Profiles of Major Energy Producers 2002</i> .....	March 2004
<b>2003</b>	
<i>Annual Energy Outlook 2003</i> .....	January 2003
<i>Performance Profiles of Major Energy Producers 2001</i> .....	February 2003
<i>Voluntary Reporting of Greenhouse Gases 2001</i> .....	March 2003
<i>Electric Power Annual 2001</i> .....	April 2003
<i>International Energy Outlook 2003</i> .....	May 2003
<i>Uranium Industry Annual 2002</i> .....	June 2003
<i>Residential Energy Consumption Special Topics</i> .....	July 2003
<i>New Reactor Designs</i> .....	August 2003
<i>Foreign Direct Investment in U.S. Energy in 2001</i> .....	September 2003
<i>Annual Energy Review 2002</i> .....	October 2003
<i>Annual Coal Report 2002</i> .....	November 2003
<i>Renewable Energy Annual 2002</i> .....	December 2003
<b>2002</b>	
<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
<i>Renewable Energy 2000: Issues and Trends</i> .....	March 2001
<i>Summer 2001 Motor Gasoline Outlook</i> .....	April 2001
<i>International Energy Outlook 2001</i> .....	April 2001
<i>State Energy Data Report 1999: Consumption Estimates</i> .....	May 2001
<i>The Transition to Ultra-Low-Sulfur Diesel Fuel: Effects on Prices and Supply</i> .....	May 2001
<i>Energy Market Maps</i> .....	June 2001
<i>Coal Industry Annual 1999</i> .....	July 2001
<i>Annual Energy Review 2000</i> .....	August 2001
<i>World Energy "Areas To Watch"</i> .....	August 2001
<i>Electric Power Annual 2000, Volume I</i> .....	September 2001
<i>Winter Fuels Outlook: 2001-2002</i> .....	October 2001
<i>Fuel Oil and Kerosene Sales 2000</i> .....	October 2001
<i>The Majors' Shift to Natural Gas</i> .....	October 2001
<i>Annual Energy Outlook 2002, Early Release</i> .....	November 2001
<i>Emissions of Greenhouse Gases in the United States 2000</i> .....	November 2001
<i>State Energy Price and Expenditure Report 1999</i> .....	November 2001
<i>Energy Education Resources</i> .....	December 2001
<i>U.S. Natural Gas Markets: Mid-Term Prospects for Natural Gas Supply</i> .....	December 2001

**2000**

<i>Inventory of Nonutility Electric Power Plants in the United States 1998</i> .....	January 2000
<i>The Changing Structure of the Electric Power Industry 1999: Mergers and Other Corporate Combinations</i> .....	January 2000
<i>International Energy Annual 1998</i> .....	February 2000
<i>Performance Profiles of Major Energy Producers 1998</i> .....	February 2000
<i>OPEC Revenues Fact Sheet</i> .....	March 2000
<i>Country Analysis Brief: Iran</i> .....	March 2000
<i>International Energy Outlook 2000</i> .....	April 2000
<i>Outlook for Biomass Ethanol Production and Demand</i> .....	April 2000
<i>Summer 2000 Motor Gasoline Outlook</i> .....	May 2000
<i>State Energy Price and Expenditure Report 1997</i> .....	June 2000
<i>Energy Consumption and Renewable Energy Development Potential on Indian Lands</i> .....	June 2000
<i>Annual Energy Review 1999</i> .....	July 2000
<i>A Primer on Gasoline Prices</i> .....	August 2000
<i>Long-Term World Oil Supply: A Resource Base/Production Path Analysis</i> .....	August 2000
<i>U.S. Carbon Dioxide Emissions From Energy Sources: 1999 Flash Estimate</i> .....	September 2000
<i>The Electric Transmission Network: A Multi-Region Analysis</i> .....	September 2000
<i>Propane Prices: What Consumers Should Know</i> .....	October 2000
<i>Winter Fuels Outlook: 2000-2001</i> .....	October 2000
<i>Advance Summary: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 1999 Annual Report</i> .....	October 2000
<i>Residential Natural Gas Prices: What Consumers Should Know</i> .....	November 2000
<i>The Changing Structure of the Electric Power Industry 2000: An Update</i> .....	November 2000
<i>Annual Energy Outlook 2001 Early Release</i> .....	December 2000
<i>Residential Heating Oil Prices: What Consumers Should Know</i> .....	December 2000

# Glossary

**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 will be used for blending or compounding into finished aviation gasoline (e.g., straight run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

**Aviation Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline.

**Barrel (Petroleum):** A unit of volume equal to 42 U.S. gallons.

**Base 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.

**Black Liquor (Pulping Liquor):** The alkaline spent liquor removed from the digesters in the process of chemically pulping wood. After evaporation, the liquor is burned as a fuel in a recovery furnace that permits the recovery of certain basic chemicals.

**British Thermal Unit (Btu):** The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit). See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net**.

**Butane:** A normally gaseous straight-chain or branched-chain hydrocarbon (C<sub>4</sub>H<sub>10</sub>). 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 (C<sub>4</sub>H<sub>8</sub>) 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 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.

**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**.

**Combined-Heat-and-Power (CHP) Plant:** A plant designed to produce both heat and electricity from a single heat source. Note: This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

**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. It also includes sewage treatment facilities. 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. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

**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 generated from flowing water that is not created by **hydroelectric 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.

**Crude 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.

**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. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.

**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 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 **hydro-electric pumped-storage** plants is regarded as electricity for station service and is deducted from gross generation.

**Electricity-Only Plant:** A plant designed to produce electricity only. See also **Combined-Heat-and-Power (CHP) Plant**.

**Electricity Retail Sales:** The amount of electricity sold to customers purchasing electricity for their own use and not for resale.

**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 electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public—i.e., North American Industry Classification System 22 plants. See also **Combined-Heat-and-Power (CHP) Plant**, **Electricity-Only Plant**, **Electric Utility**, and **Independent Power Producer**.

**Electric Utility:** A corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Included are investor-owned electric utilities, municipal and State utilities, Federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and corporately aligned with companies that own distribution facilities are also included. Note: Due to the issuance of FERC Order 888 that required traditional electric utilities to functionally unbundle their generation, transmission, and distribution operations, "electric utility" currently has inconsistent interpretations from State to State.

**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 Service Provider:** An energy entity that provides service to a retail or end-use customer.

**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 (C<sub>2</sub>H<sub>6</sub>). 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:** An anhydrous denatured aliphatic alcohol intended for gasoline blending. See Oxygenates.

**Ethylene:** An olefinic hydrocarbon (C<sub>2</sub>H<sub>4</sub>) 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 within the 50 States and the District of Columbia to U.S. possessions and territories or to foreign countries.

**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.

**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. (Free on Board):** A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

**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.

**Fuel Ethanol:** An anhydrous, denatured aliphatic alcohol (C<sub>2</sub>H<sub>5</sub>OH) 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 alcohol (generally ethanol but sometimes methanol) at a concentration between 5.7 percent and 10 percent by volume. See **Motor Gasoline**, **Oxygenated**.

**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.

**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 U.S. possessions and territories or from foreign countries.

**Independent Power Producer:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an **electric utility**.

**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 (NAICS (North American Industry Classification System) codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); natural gas distribution (NAICS code 2212); and construction (NAICS code 23). 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. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities.

**Injections (Natural Gas):** Natural gas injected into storage reservoirs.

**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 (Natural Gas):** 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.

**Methane:** A colorless, flammable, odorless, hydrocarbon gas (CH<sub>4</sub>) 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, (CH<sub>3</sub>)<sub>3</sub>COCH<sub>3</sub>, intended for motor gasoline blending. See **Oxygenates**.

**Methanol:** A light, volatile alcohol (CH<sub>3</sub>OH) 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**.

**NAICS (North American Industry Classification System)** A coding system developed jointly by the United States, Canada, and Mexico to classify businesses and industries according to the type of economic activity in which they are engaged. NAICS replaces the Standard Industrial Classification (SIC) codes. For additional information on NAICS, go to <http://www.census.gov/epcd/www/naics.html>.

**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 Capacity:** 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.

**Nuclear Electric Power (Nuclear Power):** Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

**Nuclear 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 a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

**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**.

**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, Methyl Tertiary Butyl Ether (MTBE), Ethyl Tertiary Butyl Ether (ETBE), 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 broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

**Petroleum Coke:** See **Coke, Petroleum**.

**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:** Same as **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<sub>3</sub>H<sub>8</sub>). It is a colorless paraffinic gas that boils at a temperature of -43.67° 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<sub>3</sub>H<sub>6</sub>) recovered from refinery or petrochemical processes.

**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. For further explanation see

<http://www.eia.doe.gov/neic/datadefinitions/Guideforwebres.htm>.

**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 (Standard Industrial Classification):** A set of codes developed by the U.S. Office of Management and Budget which categorizes industries into groups with similar

economic activities. Replaced by NAICS (North American Industry Classification System).

**Solar Energy:** See **Solar Thermal Energy** and **Photovoltaic Energy**.

**Solar Thermal Energy:** The radiant energy of the sun that can be converted into other forms of energy, such as heat or **electricity**.

**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.

**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.

**Stocks:** See **Coal Stocks**, **Crude Oil Stocks**, or **Petroleum Stocks, Primary**.

**Strategic Petroleum Reserve (SPR):** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Supplemental Gaseous Fuels:** Synthetic natural gas, propane-air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

**Synthetic Natural Gas (SNG):** (Also referred to as substitute natural gas) A manufactured product, chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons that may easily be substituted for or interchanged with pipeline-quality 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. *Note:* Various EIA programs differ in sectoral coverage. For further information see <http://www.eia.doe.gov/neic/datadefinitions/Guideforwebtrans.htm>.

**Unaccounted-for Crude Oil:** Represents the 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 minus 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:** The 50 States and the District of Columbia. *Note:* The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 States and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States."

**Useful Thermal Output:** The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, 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 production 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:** Municipal solid waste, landfill gas, methane, digester gas, liquid acetonitrile waste, tall oil, waste alcohol,

medical waste, paper pellets, sludge waste, solid byproducts, tires, agricultural byproducts, closed loop biomass, fish oil, and straw used as fuel.

**Watt (W):** The unit of electrical power equal to one ampere under a pressure of one volt. A watt is equal to 1/746 horsepower.

**Watthour (Wh):** The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

**Waxes:** Solid or 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.

**Wind Energy:** Kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.

**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, and spent pulping liquor.

**Working Gas:** The volume of gas in a reservoir that is in addition to the base 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 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](http://www.eia.doe.gov) under Forecasts. The *Annual Energy Outlook* is 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](mailto:infoctr@eia.doe.gov) or 202-586-8800.

## ***Annual Energy Outlook***

Forecasts of U.S. energy supply, demand, and prices through 2025, based on EIA's National Energy Modeling System (NEMS). The NEMS is summarized in *National Energy Modeling System: An Overview, Assumptions to the Annual Energy Outlook*, and numerous publications detailing the computational methodology and estimation techniques for individual NEMS modules.

## ***Annual Energy Outlook Forecast Evaluation***

Yearly evaluation of the accuracy of the *Annual Energy Outlook (AEO)*. Compares the projections from the *AEO 1982* through the *AEO 2003* with actual historical values and presents the reasons for significant differences.

## ***Short-Term Energy Outlook***

U.S. energy and international oil forecasts for the coming 12 to 24 months. Updated monthly. Includes the "Summer Motor Gasoline Outlook" in April and the "Winter Fuels Outlook" in October.

## ***International Energy Outlook***

Projections of international energy supply, demand, and prices through 2025. The projection models and assumptions are found in a related document, the *World Energy Projection System Model Documentation*.

## ***The Global Liquefied Natural Gas Market: Status and Outlook***

Recent trends and future prospects in the global liquefied natural gas (LNG) market. The report analyzes existing trading patterns, pricing, industry costs, and global factors that are contributing to increased LNG trade. Evaluates future prospects in the LNG market, including existing and emerging LNG consumers, new or increased sources of supply, shipping capacity, and changes in contractual arrangements. Presents the outlook for U.S. natural gas and LNG to 2010 and beyond.

## ***Special Reports***

Reports and papers include: "Analysis of Restricted Natural Gas Supply Cases;" "Analysis of Oil and Gas Production in the Arctic National Wildlife Refuge;" "Summary Impacts of Modeled Provisions of the 2003 Conference Energy Bill;" "Analysis of Five Selected Tax Provisions of the Conference Energy Bill of 2003;" "Analyses of Selected Provisions of Proposed Energy Legislation: 2003" (H.R.6.EH and H.R.6.EAS); "Analysis of S. 485, the Clear Skies Act of 2003, and S. 843, the Clean Air Planning Act of 2003;" "Analysis of S.139, the Climate Stewardship Act of 2003;" "Analysis of a 10-Percent Renewable Portfolio Standard;" and "Status and Impacts of State MTBE Bans."