

# Monthly Energy Review

## READING FILE

April 1995

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Commercial energy use and expenditures

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# Monthly Energy Review

April 1995

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# Electric Utility Fleet Survey 1993, Preliminary Estimates

## Assessing the Market for Alternative-Fuel Vehicles

In 1993, electric utilities with fleets of 10 or more vehicles operated a total of 201,836 fleet vehicles.<sup>1</sup> By fuel type, those fleets consisted of:

- 97 percent (196,241 vehicles) conventional-fuel vehicles, operating on motor gasoline or diesel fuel alone (Table 1)
- 1.9 percent (3,756 vehicles) compressed natural gas (CNG) vehicles, operating on CNG alone or on a combination of CNG and either motor gasoline or diesel fuel

- The remaining 1,839 vehicles operated on methanol, ethanol, electricity, propane, and other alternative fuels. Of those vehicles, 237 were dedicated electric vehicles.

These preliminary estimates are based on data collected by the Energy Information Administration (EIA) on Form EIA-861, "Annual Electric Utility Report," Schedule VII (Fleet Vehicle Information). The survey consisted of a questionnaire mailed to all of the electric utilities operating in the United States in 1993. There are approximately 3,200 electric utilities that file Form EIA-861. Of those, 997 electric utilities had fleets of 10 or more vehicles in 1993 and therefore also completed Schedule VII.

<sup>1</sup>Form EIA-861, Schedule VII was designed so that electric utilities that operated fewer than 10 vehicles were not required to complete the survey. However, a small number of electric utilities submitted data on their fleets of fewer than 10 vehicles. Those data are included in the totals.

The survey was conducted as part of EIA's response to Section 407 of the Energy Policy Act of 1992, which directs

**Table 1. Fleet Vehicles Operated by Electric Utilities, 1993**

Type of Vehicle	Light-Duty Vehicles						Medium- and Heavy-Duty Vehicles (>=8,501 pounds)	All Vehicles
	Passenger Cars	Mini-Vans	Full-Size Vans	Small Pickup Trucks	Large Pickup Trucks	Sport-Utility Vehicles		
<b>Conventional Fuel</b> .....	<b>37,802</b>	<b>7,011</b>	<b>11,567</b>	<b>22,091</b>	<b>37,137</b>	<b>11,134</b>	<b>69,499</b>	<b>196,241</b>
Dedicated Motor Gasoline ..	37,775	6,997	11,003	21,870	34,480	10,358	32,587	155,070
Dedicated Diesel Fuel .....	27	14	564	221	2,657	776	36,912	41,171
<b>Alternative-Fuel</b> .....	<b>641</b>	<b>193</b>	<b>853</b>	<b>593</b>	<b>1,831</b>	<b>535</b>	<b>949</b>	<b>5,595</b>
Compressed Natural Gas ..	348	133	722	373	1,259	494	427	3,756
Dedicated .....	7	5	516	13	212	42	26	821
Dual-Fuel .....	341	128	206	360	1,047	452	401	2,935
Methanol or Ethanol .....	224	26	50	109	358	20	148	935
Dedicated .....	84	15	20	47	222	13	122	523
Dual-Fuel .....	140	11	30	62	136	7	26	412
Electric (dedicated) .....	67	31	50	46	3	4	36	237
Propane .....	2	3	24	64	211	17	337	658
Dedicated .....	1	0	21	52	91	6	318	489
Dual-Fuel .....	1	3	3	12	120	11	19	169
Other Alternative-Fuel (dedicated) .....	0	0	7	1	0	0	1	9
<b>Total Fleet Vehicles</b> .....	<b>38,443</b>	<b>7,204</b>	<b>12,420</b>	<b>22,684</b>	<b>38,968</b>	<b>11,669</b>	<b>70,448</b>	<b>201,836</b>

Note: Vehicles that can consume only one type of fuel are referred to as "dedicated," as opposed to dual-fuel vehicles, which can consume two types of fuels. No dual-fuel vehicles were reported in the electric vehicle or other alternative-fuel vehicle categories.

Source: Energy Information Administration, Form EIA-861, Schedule VII, "Annual Electric Utility Report," 1993.

EIA to collect data that will be useful to those who wish to manufacture, convert, sell, own, or operate alternative-fuel vehicles or facilities.

EIA began to satisfy the requirements of the act by collecting data on fleets operated by alternative-fuel (electricity, propane, and natural gas) providers because they operate most of the alternative-fuel vehicles now in use and are one of the first groups required by the act to buy alternative-fuel vehicles for their fleets.

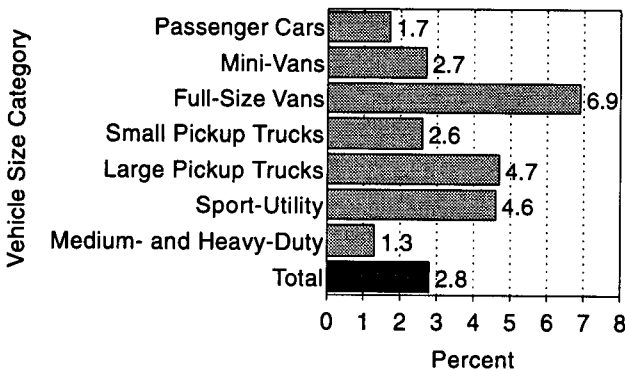
### Electric Utility Fleets

The electric utilities were asked to provide the following information about their fleets: fleet size; distribution of fleet vehicles among size classes; fuel types; alternative-fuel technologies; and fleet-vehicle retirements, acquisitions, and conversions planned for 1994 (as of December 31, 1993).

- Medium- and heavy-duty vehicles represented the largest portion (35 percent) of the electric utility fleets, followed by passenger cars and large pickup trucks.
- In 1993, electric utility fleets operated few alternative-fuel vehicles, with alternative-fuel vehicles representing only 2.8 percent of the total fleet vehicles (Figure 1).
- Although full-size vans represented only 6.2 percent of the electric utilities' fleet vehicles, the full-size van vehicle category had the largest percentage of alternative-fuel vehicles.

The alternative-fuel providers, such as electric utilities, are expected to be among the first to use alternative-fuel vehicles, both because of the Energy Policy Act's mandate to do so

**Figure 1. Alternative-Fuel Vehicles in Electric Utility Fleets by Vehicle Size Category, 1993**  
(Percent of Total Vehicles)



Source: Energy Information Administration, Form EIA-861, Schedule VII, "Annual Electric Utility Report," 1993.

and because of the opportunity to promote their energy source as a transportation fuel. Presently, however, alternative-fuel vehicles other than electric vehicles (for example, natural gas vehicles) are more practical and economical, and electric vehicle technology has not progressed to the point where a variety of vehicle types can be offered. For these reasons, there are very few electric vehicles operating in electric utility fleets.

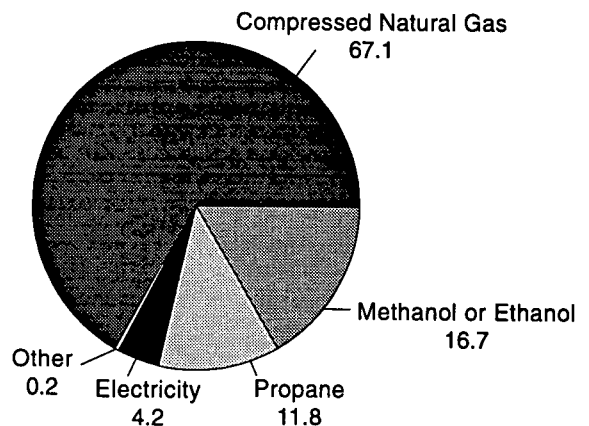
### Alternative-Fuel Vehicles

The electric utilities were also asked to provide detailed information on the use of alternative-fuel vehicles in their fleets:

- Nearly half (43 percent) of the alternative-fuel vehicles in electric utility fleets are pickup trucks.
- More than two-thirds of the alternative-fuel vehicles being operated by electric utilities are fueled by compressed natural gas (Figure 2), possibly due in part to the fact that many electric utilities are opting to operate the more economical natural gas vehicles until electric vehicle technology develops further.
- Only 4.2 percent of the alternative-fuel vehicles being operated by electric utilities are electric vehicles.

In order to supply enough fuel or electric power to get a reasonable travel range out of the alternative-fuel vehicles, more space is taken up by large fuel tanks or batteries. For that reason, most of the alternative-fuel vehicles in electric utility fleets are larger vehicles, such as pickup trucks, which have more space available for the larger tanks and batteries.

**Figure 2. Alternative-Fuel Vehicles in Electric Utility Fleets by Fuel Type, 1993**  
(Percent of Total Alternative-Fuel Vehicles)



Source: Energy Information Administration, Form EIA-861, Schedule VII, "Annual Electric Utility Report," 1993.

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## Highlights:

# Commercial Buildings Energy Consumption and Expenditures 1992

*Commercial Buildings Energy Consumption and Expenditures 1992*, the second report released by the Energy Information Administration (EIA) based on the 1992 Commercial Buildings Energy Consumption Survey (CBECS), presents data on the energy consumption and expenditures of approximately 6,600 randomly sampled commercial buildings. The first report, *Commercial Buildings Characteristics 1992*, included statistics on the number, location, and size of those commercial buildings, as well as some of their energy conservation and management characteristics.

This "Highlights" summarizes EIA's findings on energy consumption and expenditures in the commercial buildings sector as they relate to building location, size, age, and activity. Primary energy consumption, site energy consumption, and energy intensities are also discussed.

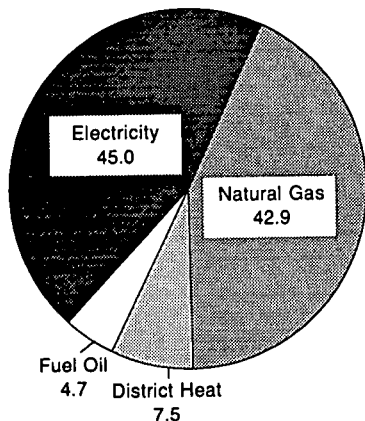
In 1992, 4.8 million commercial buildings in the United States consumed 5.8 quadrillion Btu of electricity, natural gas, fuel oil, and district heat<sup>1</sup> (the four major energy sources), at a cost of \$72.6 billion. Of those 5.8 quadrillion Btu, consumption of electricity accounted for 2.6 quadrillion Btu (45.0 percent<sup>2</sup>), while consumption of natural gas accounted for 2.5 quadrillion Btu (42.9 percent) (Figure 1).

<sup>1</sup>District heat is steam or hot water that circulates from a central plant or utility.

<sup>2</sup>Percents are calculated on the basis of unrounded data.

**Figure 1. Site Energy Consumption by Energy Source, 1992 (Percent)**

**Total Site Energy: 5.8 Quadrillion Btu**



Note: Sum of components does not equal 100 percent due to independent rounding.

Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 8.

The remaining 0.7 quadrillion Btu consumed by commercial buildings was divided between district heat, 0.4 quadrillion Btu (7.5 percent), and fuel oil, 0.3 quadrillion Btu (4.7 percent). By Census region, 33 percent of the energy consumed was in the South, 29 percent in the Midwest, 20 percent in the West, and 19 percent<sup>3</sup> in the Northeast.

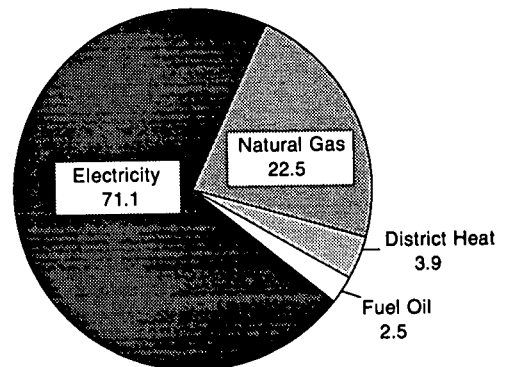
Those numbers, which CBECS gathers from energy suppliers, represent building site or point-of-use consumption. Primary energy consumption, in contrast, represents site consumption of electricity plus the energy lost during generation and delivery of electricity to the various points of use. The primary energy total is about three times the site-consumption total. EIA uses an equivalency factor of 3,412 Btu for 1 kilowatt-hour and estimates that 10,302 Btu are consumed to generate and deliver 1 kilowatt-hour of electricity to a site; 10,302 Btu per kilowatt-hour + 3,412 Btu per kilowatt-hour = 3.02.

EIA estimates, therefore, that because 2.6 quadrillion Btu of electricity were consumed in the commercial buildings sector, total primary electricity consumption was 7.9 quadrillion Btu, with generation and distribution losses equaling 5.3 quadrillion Btu. That 7.9 quadrillion Btu represented 71 percent of 1992 total primary energy consumption of 11.1 quadrillion Btu (Figure 2).

<sup>3</sup>Sum of components does not equal 100 percent due to independent rounding.

**Figure 2. Primary Energy Consumption by Energy Source, 1992 (Percent)**

**Total Primary Energy: 11.1 Quadrillion Btu**



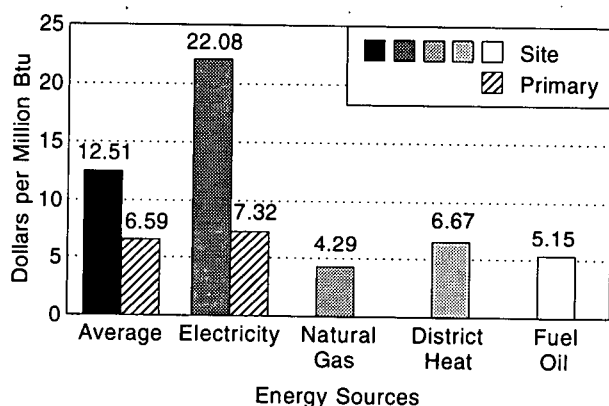
Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 8.

The relationship between primary energy consumption and site energy consumption explains the relatively high cost of electricity per million Btu. In 1992, the site cost of electricity to commercial buildings was slightly over \$22 per million Btu. However, the primary energy cost of electricity per million Btu was \$7.32, a cost comparable to costs of other energy sources, when the cost was calculated on an equivalent basis (Figure 3).

- The average cost of natural gas per million Btu was \$4.29.
- The average cost of district heat per million Btu was \$6.67.
- The average cost of fuel oil per million Btu was \$5.15.
- The site cost per million Btu of the four major energy sources averaged \$12.51, while the primary cost averaged \$6.59 per million Btu.

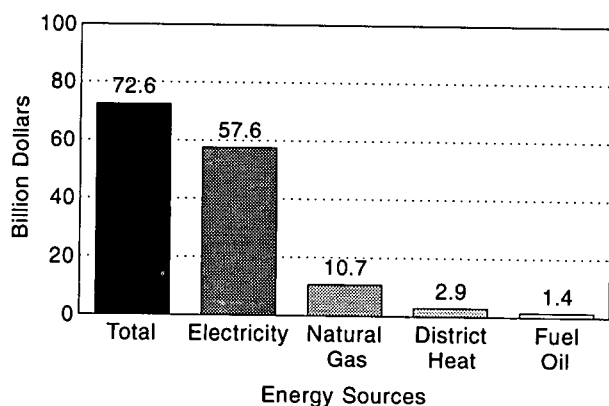
Of the \$72.6 billion expended on energy in commercial buildings, by far the largest amount—\$57.6 billion—was spent for site electricity (Figure 4). Expenditures for natural gas, district heat, and fuel oil accounted for the remainder.

**Figure 3. Energy Expenditures per Million Btu, 1992**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 9.

**Figure 4. Total Energy Expenditures, 1992**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 8.

## Energy Intensities

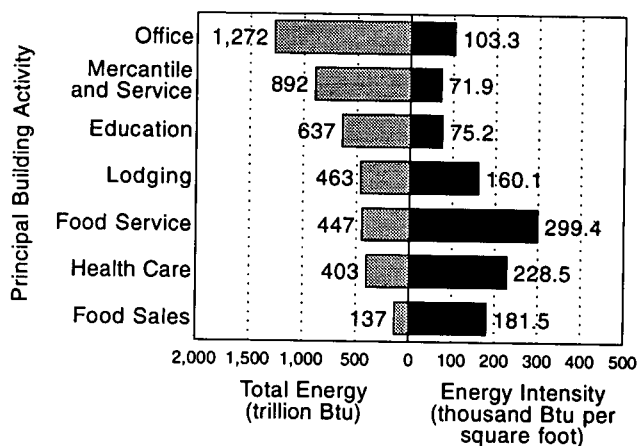
The ratio of energy consumption by all buildings to the total floorspace of those buildings—total energy intensity—provides a common basis for comparing energy consumption by such categories as building size, age, location, and principal activity. The ratio of the energy consumption of buildings using a specific energy source to the actual floorspace of buildings in which that energy source is used—energy source-specific intensity—provides the means to compare the consumption of specific energy sources.

In 1992, the average total energy intensity for commercial buildings was 86 thousand Btu per square foot, at a cost of \$1.07 per square foot. Buildings in the Midwest had the highest average total energy intensity, 97.7 thousand Btu per square foot, while buildings in the Northeast, South, and West had a combined average total energy intensity of 81.3 thousand Btu per square foot.

Among the different building activities, commercial buildings used for office, mercantile and service, and education activities consumed energy less intensively, although the total amount of energy consumed in those buildings was relatively high (Figure 5). Food service, health care, food sales, and lodging buildings had high total energy intensities. Energy consumption for buildings with those activities ranged from 160.1 thousand Btu per square foot for lodging buildings to 299.4 thousand Btu per square foot for food service buildings. The energy expenditures per square foot for buildings with those activities were also relatively higher, ranging from \$1.89 per square foot for lodging buildings to \$3.23 per square foot for food service buildings.

Buildings constructed after 1986 had, on average, lower site energy consumption than buildings constructed in 1986 or earlier (70 thousand Btu per square foot compared with 87 thousand Btu per square foot). However, the increased use of electricity in newer buildings for heating, air-conditioning,

**Figure 5. Total Energy Consumption and Intensities for Selected Principal Building Activities, 1992**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 9.

refrigeration, and office equipment raised the primary energy consumption of those buildings to a level comparable to consumption in older buildings (164 thousand and 163 thousand Btu per square foot, respectively).

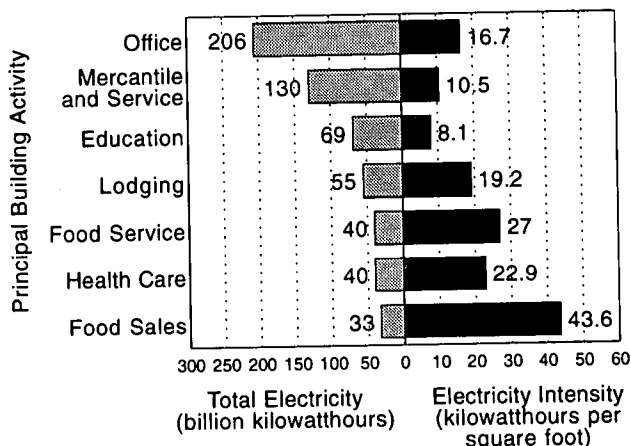
Among the four major sources of energy, fuel oil showed the lowest energy source-specific intensity at 21 thousand Btu per square foot, while natural gas and site electricity had more moderate intensities at 55 thousand Btu per square foot and 39 thousand Btu per square foot, respectively. District heat produced the highest energy source-specific intensity at 83 thousand Btu per square foot.

**Electricity.** Electricity intensity in commercial buildings is largely influenced by building location and activity. Buildings in the West and South Census regions had a higher combined electricity intensity (12.6 kilowatthours per square foot) than buildings in the Midwest and Northeast regions (10.1 kilowatthours per square foot), due primarily to greater use of air-conditioning in the West and South regions.

Electricity consumption was highest in office buildings, although food sales, food service, and health-care buildings showed the highest electricity intensity (Figure 6), due largely to the equipment associated with those activities. All of those buildings were likely to have air-conditioning. Food sales and food service, which account for only 8

percent of commercial buildings, had 44 percent of all walk-in refrigerator or freezer units and 48 percent of the square feet of refrigeration or freezer cases or cabinets.

**Figure 6. Total Electricity Consumption and Intensities for Selected Principal Building Activities, 1992**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 12.

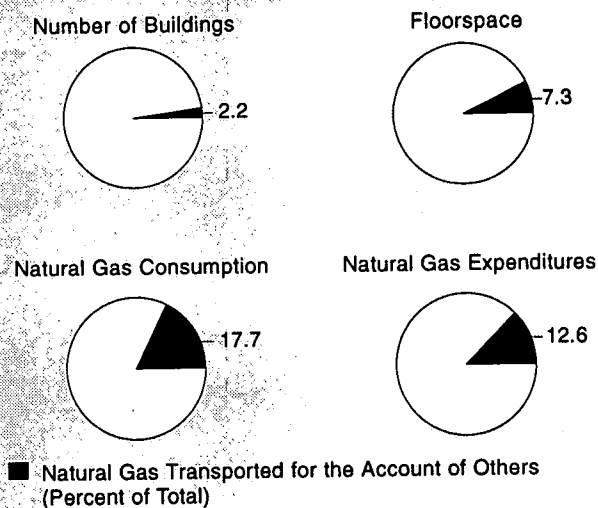
## Other Survey Findings

**Natural gas transported for the account of others.** Natural gas that is purchased directly from a natural gas producer or broker and delivered by a local distribution company is referred to as "natural gas transported for the account of others." Consumption of such natural gas occurred in only 2.2 percent of the commercial buildings that used natural gas in 1992 (Figure 7). Commercial buildings in which natural gas transported for the account of others was consumed, along with natural gas purchased from a local distribution company, represented 17.7 percent of natural gas total consumption but only 12.6 percent of natural gas total expenditures.

Actual consumption of natural gas transported for the account of others represented 14.9 percent of natural gas total consumption and 9.4 percent of natural gas total expenditures among all commercial buildings using any natural gas. Those figures underscore the potential cost-effectiveness of natural gas transported for the account of others for large commercial buildings.

**Demand-side management.** Electricity suppliers reported that almost 46 percent of commercial buildings that were offered a demand-side management (DSM) program participated in DSM programs in 1992. The survey found that while there was no statistically significant difference between the electricity intensities of DSM participants and DSM nonparticipants (11.6 kilowatthours per square foot and 11.5 kilowatthours per square foot, respectively), DSM-participating buildings were, on average, larger.

**Figure 7. Use of Natural Gas Transported for the Account of Others Among Buildings Supplied with Natural Gas, 1992 (Percent)**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 16.

**Natural gas.** Natural gas consumption differed by location, size, age, and building activity. While natural gas intensities were higher in the Midwest (60.5 cubic feet per square foot), primarily due to the use of natural gas for space heating, natural gas intensities were low in the Northeast (40.2 cubic feet per square foot). Natural gas intensity was higher in older and in smaller buildings. By building activity, natural gas intensity was highest in the food services (Figure 8), due primarily to the use of natural gas for cooking (86 percent of buildings using natural gas used it for cooking). Food service buildings also tended to be smaller (87 percent are 10,000 square feet or less in size) and had long operating hours (57 percent of food service buildings were open 85 hours per week or more).

**Fuel oil.** Approximately 12 percent of commercial buildings (almost 20 percent of the floorspace) in the United

States used fuel oil in 1992. In commercial buildings, almost all of the fuel oil consumed (96 percent) was for primary or secondary space heating. The Northeast accounted for 71 percent of fuel oil consumption in the commercial buildings sector. About 10 percent of fuel oil consumption occurred in the Midwest and 18 percent occurred in the South (mostly in the South Atlantic division). Fuel oil consumption in the West was negligible. While fuel oil is used most often as a primary space heating fuel in the Northeast, it is more commonly used as a secondary heating source in the South and Midwest regions.

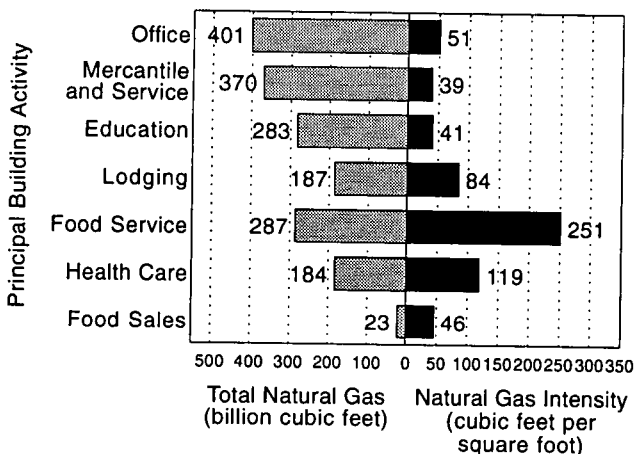
**District heat.** District heat, which is steam or hot water that circulates from a central plant or utility, was used in about 2 percent of commercial buildings, representing 8 percent of the floorspace in 1992.

**Other sources.** Other survey findings include the use of wood in about 2 percent (100 thousand commercial buildings) of CBECS respondents. In 66 percent of those buildings, wood was used for primary heating. Buildings that used wood were generally older, smaller, and located in the Midwest and South.

Less than 1 percent of CBECS respondents reported buildings using solar energy or passive solar features in 1992. Those buildings tended to be smaller, mercantile and service or office buildings located in all four Census regions of the United States.

EIA also found that, while buildings using wood tended to use the major energy sources less intensively (34.6 thousand Btu per square foot compared with the national average of 86 thousand Btu per square foot), buildings using solar energy or passive solar features used the major energy sources more intensively (94.4 thousand Btu per square foot).

**Figure 8. Total Natural Gas Consumption and Intensities for Selected Principal Building Activities, 1992**



Source: Energy Information Administration, *Commercial Buildings Energy Consumption and Expenditures 1992*, DOE/EIA-0318(92) (Washington, DC, April 1995), p. 15.

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EIA gratefully acknowledges the extensive contribution to this "Highlights" of John Burnett, an energy writer on contract to EIA's Office of Energy Markets and End Use.

*Commercial Buildings Energy Consumption and Expenditures 1992*, published in April 1995, provides numerous tables and figures estimating energy consumption and expenditure patterns in the commercial buildings sector. The report may be obtained by using the order form in the back of this publication.



# Section 1. Energy Overview

Energy production during January 1995 totaled 5.9 quadrillion Btu, a 7.0-percent increase from the level of production during January 1994. Coal production increased 18.8 percent, natural gas production fell 0.5 percent, and production of crude oil and natural gas plant liquids decreased 1.0 percent. All other forms of energy production combined were up 12.0 percent from the level of production during January 1994.

Energy consumption during January 1995 totaled 7.9 quadrillion Btu, 4.0 percent below the level of consumption during January 1994. Consumption of

petroleum products fell 4.2 percent, coal consumption was down 5.7 percent, and natural gas consumption decreased 7.5 percent. Consumption of all other forms of energy combined increased 11.0 percent from the level 1 year earlier.

Net imports of energy during January 1995 totaled 1.4 quadrillion Btu, 3.5 percent below the level of net imports 1 year earlier. Net imports of natural gas were down 4.8 percent, and net imports of petroleum increased 0.4 percent. Net exports of coal rose 34.7 percent from the level in 1994.

**Table 1.1 Energy Summary for January 1995**  
(Quadrillion Btu)

	January				
	1995	1995 Daily Rate	1994	1994 Daily Rate	Percent Change <sup>a</sup>
<b>Production<sup>b</sup></b> .....	<b>5.927</b>	<b>0.191</b>	<b>5.541</b>	<b>0.179</b>	<b>7.0</b>
Coal .....	1.944	.063	1.636	.053	18.8
Natural Gas (Dry) .....	1.659	.054	1.667	.054	-.5
Crude Oil <sup>c</sup> and Natural Gas Plant Liquids .....	1.395	.045	1.409	.045	-1.0
Other <sup>d</sup> .....	.929	.030	.829	.027	12.0
<b>Consumption<sup>b</sup></b> .....	<b>7.934</b>	<b>.256</b>	<b>8.262</b>	<b>.267</b>	<b>-4.0</b>
Coal .....	1.713	.055	1.816	.059	-5.7
Natural Gas <sup>e</sup> .....	2.402	.077	2.597	.084	-7.5
Petroleum Products <sup>f</sup> .....	2.858	.092	2.984	.096	-4.2
Other <sup>g</sup> .....	.960	.031	.865	.028	11.0
<b>Net Imports</b> .....	<b>1.372</b>	<b>.044</b>	<b>1.421</b>	<b>.046</b>	<b>-3.5</b>
Coal <sup>h</sup> .....	-1.150	-.005	-1.111	-.004	34.7
Natural Gas .....	.216	.007	.227	.007	-4.8
Petroleum <sup>i</sup> .....	1.274	.041	1.269	.041	.4
Other <sup>j</sup> .....	.031	.001	.036	.001	-12.7

<sup>a</sup> Based on daily rates prior to rounding.

<sup>b</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

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

<sup>d</sup> "Other" is hydroelectric and nuclear electric power, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

<sup>e</sup> Includes supplemental gaseous fuels.

<sup>f</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>g</sup> "Other" is hydroelectric and nuclear electric power; electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy; and net imports of electricity and coal coke.

<sup>h</sup> Minus sign indicates exports are greater than imports.

<sup>i</sup> Crude oil, lease condensate, petroleum products, pentanes plus, unfinished oils, gasoline blending components, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>j</sup> "Other" is net imports of electricity and coal coke.

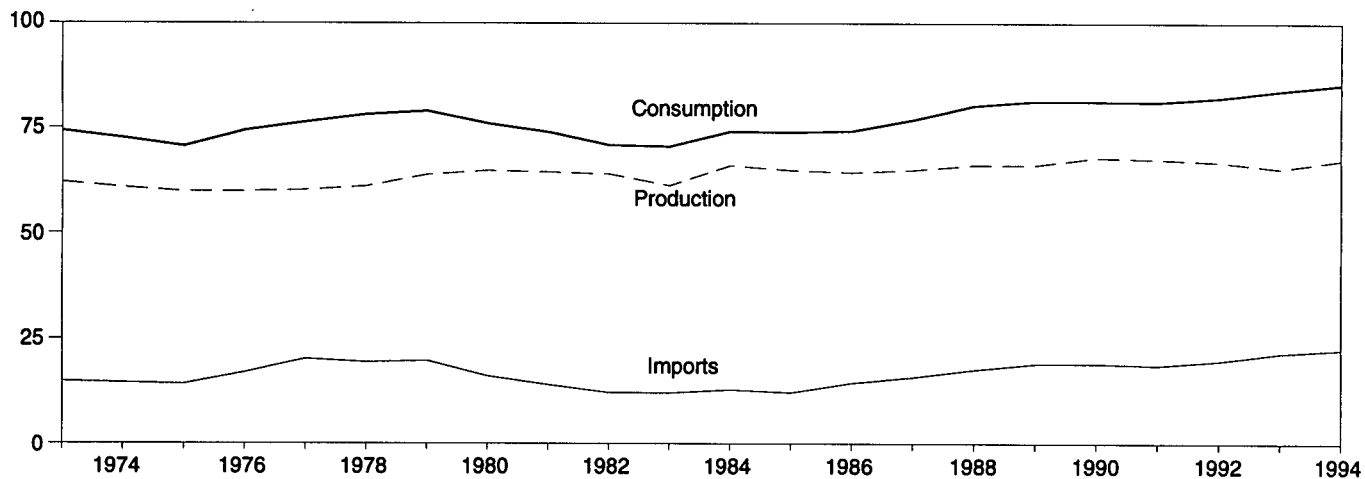
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Sources: Tables 1.3, 1.4, and 1.5.

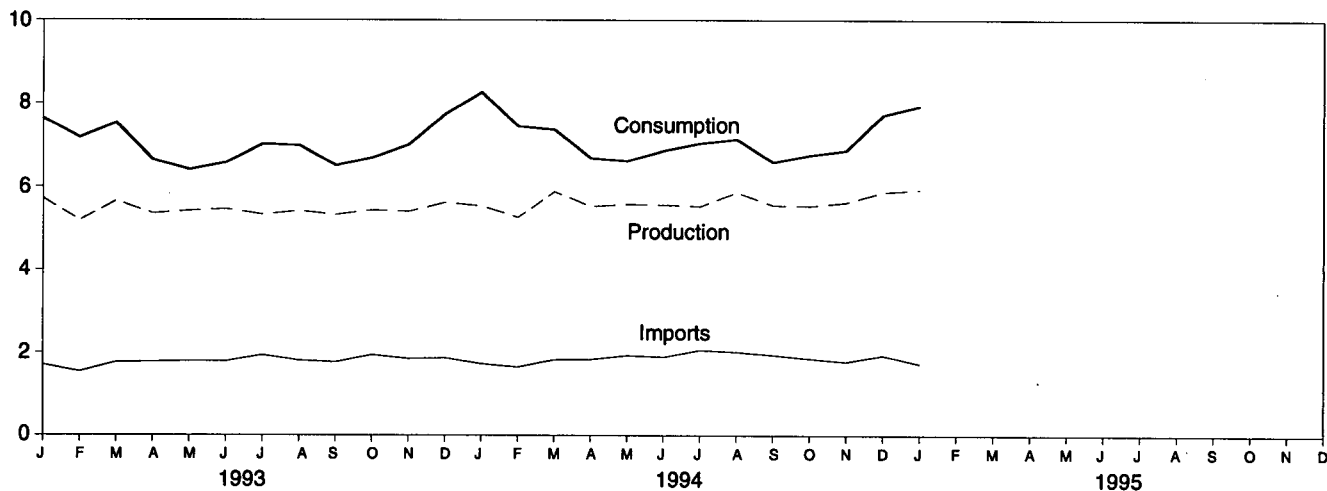
# Figure 1.1 Energy Overview

(Quadrillion Btu)

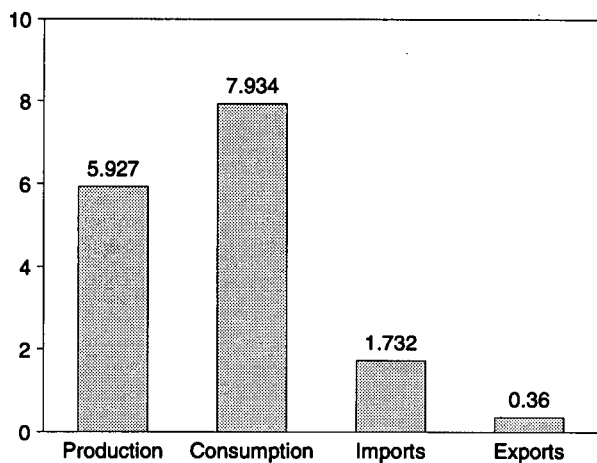
## Consumption, Production, and Imports, 1973-1994



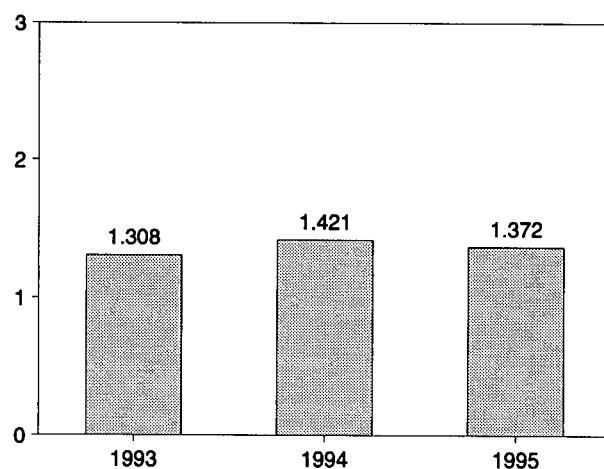
## Consumption, Production, and Imports, Monthly



## Overview, January 1995



## Net Imports, January



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 1.2.

**Table 1.2 Energy Overview**  
(Quadrillion Btu)

	Production <sup>a</sup>	Consumption <sup>a,b</sup>	Imports	Exports	Net Imports
1973 Total .....	62.060	74.282	14.731	2.051	12.680
1974 Total .....	60.835	72.543	14.413	2.223	12.190
1975 Total .....	59.860	70.546	14.111	2.359	11.752
1976 Total .....	59.892	74.362	16.837	2.188	14.648
1977 Total .....	60.219	76.288	20.090	2.071	18.019
1978 Total .....	61.103	78.089	19.254	1.931	17.323
1979 Total .....	63.801	78.898	19.616	2.870	16.746
1980 Total .....	64.761	75.955	15.971	3.723	12.247
1981 Total .....	64.421	73.990	13.975	4.329	9.646
1982 Total .....	63.962	70.848	12.092	4.633	7.460
1983 Total .....	61.279	70.524	12.027	3.717	8.310
1984 Total .....	65.962	74.144	12.767	3.804	8.963
1985 Total .....	64.871	73.981	12.103	4.231	7.872
1986 Total .....	64.350	74.297	14.438	4.055	10.382
1987 Total .....	64.952	76.894	15.764	3.853	11.911
1988 Total .....	66.105	80.218	17.564	4.415	13.149
1989 Total .....	66.129	81.325	18.947	4.765	14.181
1990 Total .....	67.853	81.265	18.987	4.910	14.077
1991 Total .....	67.484	81.116	18.577	5.220	13.357
1992 Total .....	66.853	82.144	19.650	5.017	14.633
1993 January .....	5.714	7.640	1.707	.399	1.308
February .....	5.189	7.175	1.545	.364	1.181
March .....	5.657	7.526	1.762	.347	1.414
April .....	5.354	6.637	1.775	.345	1.430
May .....	5.420	6.406	1.791	.382	1.408
June .....	5.462	6.570	1.786	.411	1.375
July .....	5.327	7.015	1.936	.376	1.560
August .....	5.416	6.981	1.807	.320	1.486
September .....	5.321	6.503	1.765	.339	1.426
October .....	5.435	6.687	1.941	.347	1.595
November .....	5.403	7.000	1.849	.324	1.524
December .....	5.619	7.737	1.867	.395	1.472
Total .....	65.315	83.877	21.530	4.350	17.180
1994 January .....	<sup>R</sup> 5.541	<sup>R</sup> 8.262	1.729	.308	1.421
February .....	<sup>R</sup> 5.260	<sup>R</sup> 7.445	1.653	.270	1.383
March .....	<sup>R</sup> 5.878	<sup>R</sup> 7.366	1.824	.346	1.478
April .....	<sup>R</sup> 5.530	<sup>R</sup> 6.680	1.832	.296	1.536
May .....	<sup>R</sup> 5.581	<sup>R</sup> 6.616	1.929	.323	1.606
June .....	<sup>R</sup> 5.568	<sup>R</sup> 6.864	1.892	.370	1.522
July .....	<sup>R</sup> 5.531	<sup>R</sup> 7.038	2.058	.327	1.732
August .....	<sup>R</sup> 5.860	<sup>R</sup> 7.133	2.016	.358	1.658
September .....	<sup>R</sup> 5.559	<sup>R</sup> 6.587	1.941	.361	1.580
October .....	<sup>R</sup> 5.540	<sup>R</sup> 6.760	1.853	.354	1.499
November .....	<sup>R</sup> 5.626	<sup>R</sup> 6.873	1.780	.355	1.425
December .....	<sup>R</sup> 5.867	<sup>R</sup> 7.722	<sup>R</sup> 1.930	.418	<sup>R</sup> 1.512
Total .....	<sup>R</sup> 67.342	<sup>R</sup> 85.345	<sup>R</sup> 22.437	4.085	<sup>R</sup> 18.352
1995 January .....	5.927	7.934	1.732	.360	1.372

<sup>a</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

<sup>b</sup> The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed

Forces in Europe; and adjustments to account for discrepancies between reporting systems.

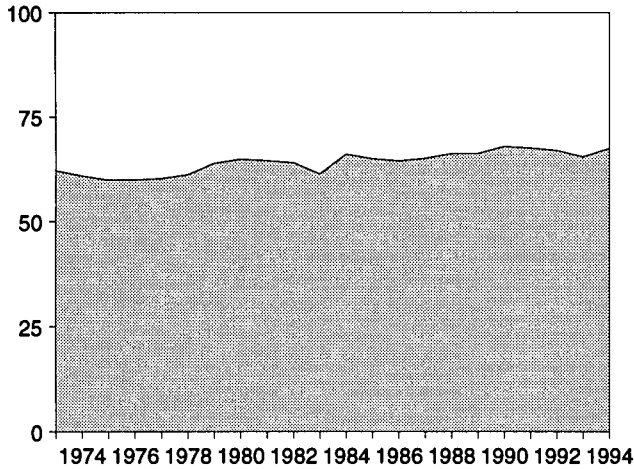
<sup>R</sup>=Revised data.

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.

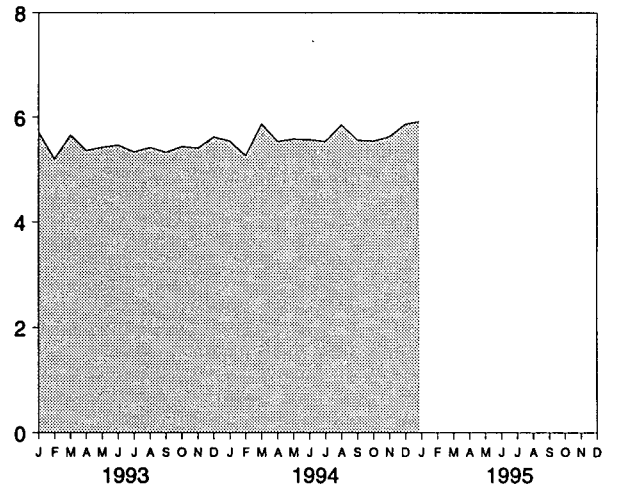
Sources: • **Production:** Table 1.3. • **Consumption:** Table 1.4. • **Imports and Exports:** Tables 3.1b, 4.2, 6.1, A2-A8, and Section 2, "Energy Consumption Notes and Sources," Notes 8 and 9. • **Net Imports:** Table 1.5.

# Figure 1.2 Energy Production (Quadrillion Btu)

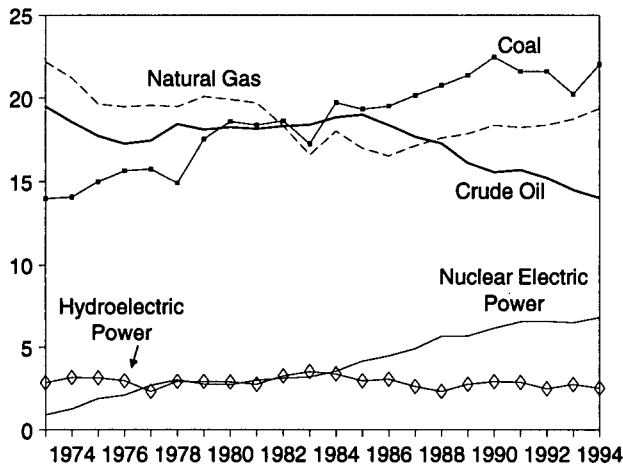
## Total, 1973-1994



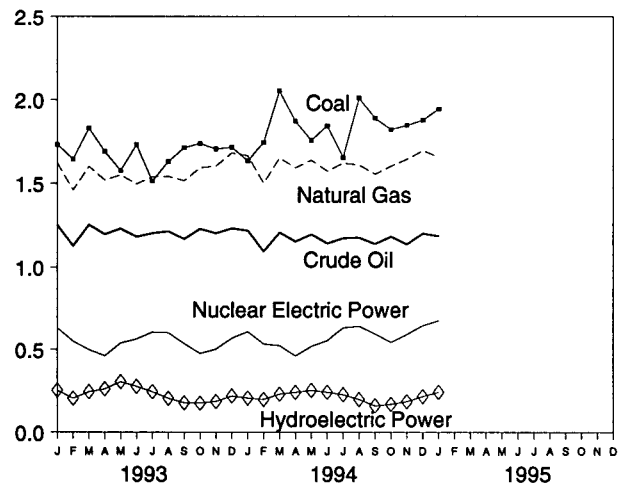
## Total, Monthly



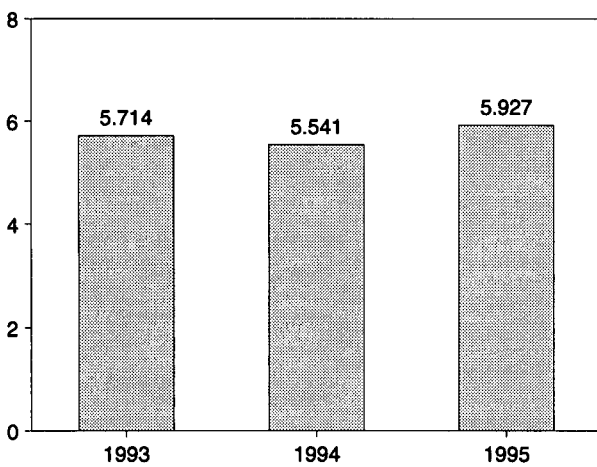
## By Major Sources, 1973-1994



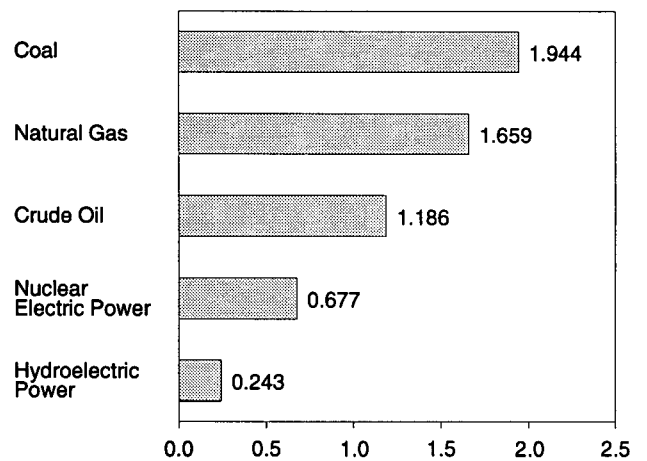
## By Major Sources, Monthly



## Total, January



## By Major Sources, January 1995



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 1.3.



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

	Coal	Natural Gas (Dry)	Crude Oil <sup>a</sup>	Natural Gas Plant Liquids	Nuclear Electric Power	Hydroelectric Power <sup>b</sup>	Geothermal Energy	Other <sup>c</sup>	Total <sup>d</sup>
1973 Total	13.993	22.187	19.493	2.569	0.910	2.861	0.043	0.003	62.060
1974 Total	14.074	21.210	18.575	2.471	1.272	3.177	.053	.003	60.835
1975 Total	14.990	19.640	17.729	2.374	1.900	3.155	.070	.002	59.860
1976 Total	15.654	19.480	17.262	2.327	2.111	2.976	.078	.003	59.892
1977 Total	15.755	19.565	17.454	2.327	2.702	2.333	.077	.005	60.219
1978 Total	14.910	19.485	18.434	2.245	3.024	2.937	.064	.003	61.103
1979 Total	17.539	20.076	18.104	2.286	2.776	2.931	.084	.005	63.801
1980 Total	18.597	19.908	18.249	2.254	2.739	2.900	.110	.005	64.761
1981 Total	18.376	19.699	18.146	2.307	3.008	2.758	.123	.004	64.421
1982 Total	18.639	18.319	18.309	2.191	3.131	3.266	.105	.003	63.962
1983 Total	17.246	16.593	18.392	2.184	3.203	3.527	.129	.004	61.279
1984 Total	19.719	18.008	18.848	2.274	3.553	3.386	.165	.009	65.962
1985 Total	19.325	16.980	18.992	2.241	4.149	2.970	.198	.015	64.871
1986 Total	19.510	16.541	18.376	2.149	4.471	3.071	.219	.012	64.350
1987 Total	20.142	17.136	17.675	2.215	4.906	2.635	.229	.016	64.952
1988 Total	20.737	17.599	17.279	2.260	5.661	2.334	.217	.017	66.105
1989 Total	21.345	17.847	16.117	2.158	5.677	2.767	.197	.020	66.129
1990 Total	22.456	18.362	15.571	2.175	6.161	2.926	.181	.021	67.853
1991 Total	21.594	18.229	15.701	2.306	6.579	2.885	.170	.021	67.484
1992 Total	21.593	18.375	15.223	2.363	6.607	2.501	.170	.022	66.853
1993 January	1.732	1.624	1.252	.205	.631	.254	.014	.002	5.714
February	1.645	1.459	1.127	.189	.548	.205	.013	.002	5.189
March	1.829	1.603	1.254	.211	.498	.245	.014	.002	5.657
April	1.691	1.521	1.197	.205	.461	.262	.014	.002	5.354
May	1.577	1.552	1.231	.204	.538	.305	.012	.001	5.420
June	1.731	1.496	1.182	.200	.562	.277	.012	.001	5.462
July	1.514	1.541	1.203	.205	.604	.245	.013	.001	5.327
August	1.631	1.543	1.215	.206	.600	.205	.014	.002	5.416
September	1.712	1.516	1.168	.198	.534	.178	.013	.002	5.321
October	1.738	1.594	1.230	.208	.475	.176	.013	.002	5.435
November	1.705	1.604	1.203	.190	.501	.186	.013	.002	5.403
December	1.715	1.683	1.233	.186	.567	.220	.013	.002	5.619
Total	20.221	18.736	14.494	2.408	6.519	2.757	.158	.021	65.315
1994 January	1.636	1.667	1.219	.190	R .607	.207	.013	.002	R 5.541
February	R 1.744	R 1.502	1.095	.174	R .532	.199	.012	.002	R 5.260
March	R 2.052	R 1.654	1.208	.197	R .523	.231	.012	.002	R 5.878
April	R 1.872	R 1.594	1.154	.192	.461	.242	.012	.002	R 5.530
May	R 1.757	R 1.640	1.197	.202	.518	R .254	.012	.002	R 5.581
June	1.844	R 1.575	1.143	.198	.553	.243	.011	.002	R 5.568
July	R 1.656	R 1.622	1.174	.207	.632	.228	.012	.002	R 5.531
August	R 2.009	R 1.611	1.177	.208	.642	.199	.013	.002	R 5.860
September	R 1.890	R 1.557	1.140	.204	.594	.161	.012	.002	R 5.559
October	R 1.822	R 1.604	1.183	.205	.542	.170	.012	.002	R 5.540
November	R 1.847	R 1.646	1.138	.204	.590	.186	.012	.002	R 5.626
December	R 1.879	R 1.696	1.202	.212	.646	.217	.012	.002	R 5.867
Total	R 22.008	R 19.366	14.030	2.393	R 6.841	R 2.538	.145	.020	R 67.342
1995 January	1.944	1.659	1.186	.209	.677	.243	.009	.001	5.927

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

<sup>b</sup> Electric utility and industrial generation.

<sup>c</sup> "Other" production is electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

<sup>d</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

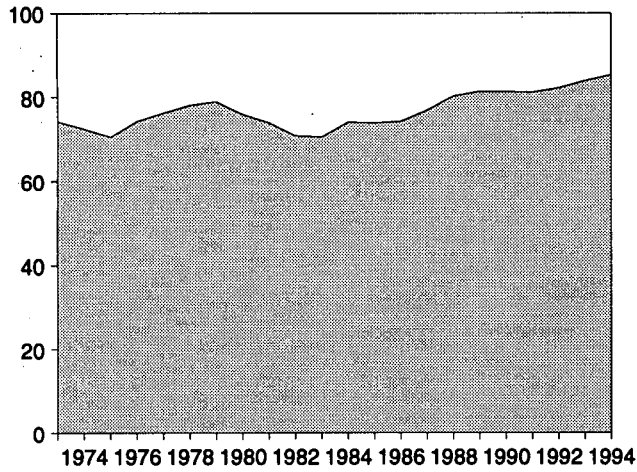
R=Revised data.

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.

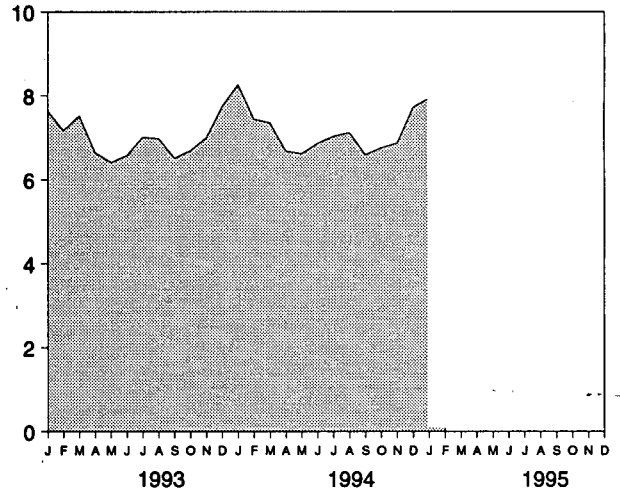
Sources: • Coal: Tables 6.1 and A5-A7. • Natural Gas (Dry): Tables 4.1 and A4. • Crude Oil and Natural Gas Plant Liquids: Tables 3.1a and A2. • Nuclear Electric Power: Tables 7.1 and A8. • Hydroelectric Power: Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A8. • Geothermal Energy and Other: Section 2, "Energy Consumption Notes and Sources," Note 7, and Table A8.

# Figure 1.3 Energy Consumption (Quadrillion Btu)

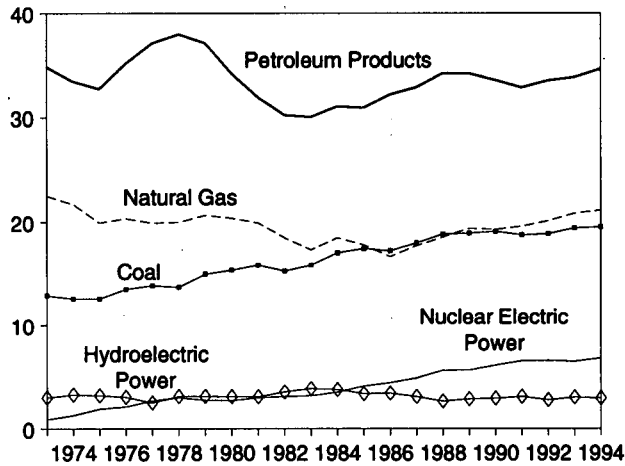
## Total, 1973-1994



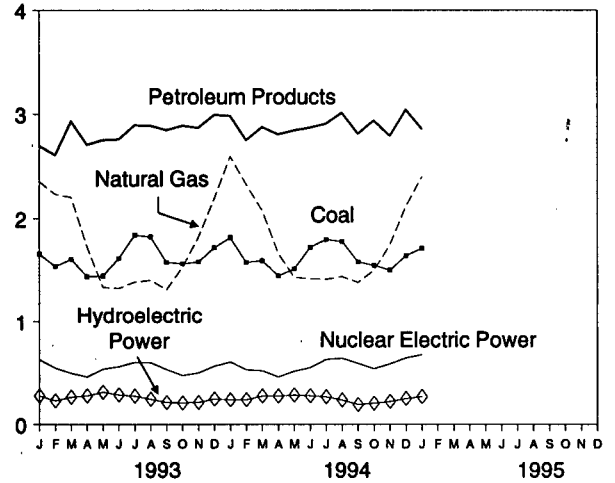
## Total, Monthly



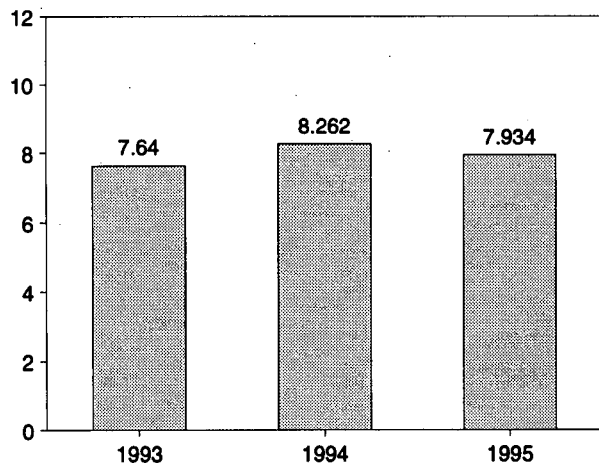
## By Major Sources, 1973-1994



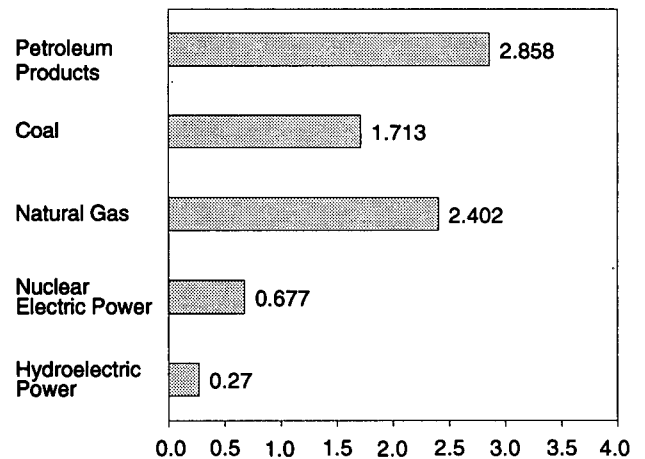
## By Major Sources, Monthly



## Total, January



## By Major Sources, January 1995



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 1.4.

**Table 1.4 Energy Consumption by Source**  
(Quadrillion Btu)

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Nuclear Electric Power	Hydro-electric Power <sup>c</sup>	Geothermal Energy	Other <sup>d</sup>	Total <sup>e</sup>
1973 Total	12.971	22.512	34.840	0.910	3.010	0.043	-0.004	74.282
1974 Total	12.663	21.732	33.455	1.272	3.309	.053	.059	72.543
1975 Total	12.663	19.948	32.731	1.900	3.219	.070	.016	70.546
1976 Total	13.584	20.345	35.175	2.111	3.066	.078	.003	74.362
1977 Total	13.922	19.931	37.122	2.702	2.515	.077	.020	76.288
1978 Total	13.765	20.000	37.965	3.024	3.141	.064	.128	78.089
1979 Total	15.039	20.666	37.123	2.776	3.141	.084	.068	78.898
1980 Total	15.423	20.394	34.202	2.739	3.118	.110	-.031	75.955
1981 Total	15.907	19.928	31.931	3.008	3.105	.123	-.012	73.990
1982 Total	15.322	18.505	30.231	3.131	3.572	.105	-.018	70.848
1983 Total	15.894	17.357	30.054	3.203	3.899	.129	-.012	70.524
1984 Total	17.071	18.507	31.051	3.553	3.800	.165	-.002	74.144
1985 Total	17.478	17.834	30.922	4.149	3.398	.198	.001	73.981
1986 Total	17.261	16.708	32.196	4.471	3.446	.219	-.004	74.297
1987 Total	18.008	17.744	32.865	4.906	3.117	.229	.024	76.894
1988 Total	18.846	18.552	34.222	5.661	2.662	.217	.057	80.218
1989 Total	18.925	19.384	34.211	5.677	2.881	.197	.051	81.325
1990 Total	19.101	19.296	33.553	6.161	2.946	.181	.026	81.265
1991 Total	18.770	19.606	32.845	6.579	3.115	.170	.030	81.116
1992 Total	18.868	20.131	33.527	6.607	2.793	.170	.049	82.144
1993 January	1.660	2.354	2.697	.631	.278	.014	.006	7.640
February	1.540	2.233	2.611	.548	.229	.013	.001	7.175
March	1.609	2.204	2.931	.498	.266	.014	.005	7.526
April	1.442	1.730	2.708	.461	.278	.014	.004	6.637
May	1.448	1.338	2.753	.538	.314	.012	.004	6.406
June	1.618	1.328	2.759	.562	.287	.012	.004	6.570
July	1.840	1.388	2.894	.604	.275	.013	.001	7.015
August	1.823	1.406	2.890	.600	.245	.014	.004	6.981
September	1.580	1.315	2.848	.534	.212	.013	.001	6.503
October	1.566	1.534	2.889	.475	.208	.013	.003	6.687
November	1.584	1.819	2.869	.501	.213	.013	.002	7.000
December	1.720	2.192	2.994	.567	.247	.013	.004	7.737
Total	19.430	20.841	33.841	6.519	3.050	.158	.038	83.877
1994 January	R 1.816	2.597	2.984	R .607	.239	.013	.006	R 8.262
February	R 1.580	2.328	2.752	R .532	.240	.012	.001	R 7.445
March	R 1.596	R 2.077	2.878	R .523	.276	.012	.003	R 7.366
April	R 1.450	R 1.669	2.808	.461	.276	.012	.004	R 6.680
May	R 1.515	R 1.436	2.846	.518	R .286	.012	.003	R 6.616
June	R 1.724	R 1.421	2.872	.553	R .279	.011	.004	R 6.864
July	R 1.799	R 1.416	2.909	.632	.269	.012	.002	R 7.038
August	R 1.781	R 1.443	3.014	.642	.237	.013	.003	R 7.133
September	R 1.584	R 1.386	2.814	.594	.192	.012	.004	R 6.587
October	R 1.551	1.504	2.939	.542	.205	.012	.007	R 6.760
November	R 1.503	1.749	2.793	.590	.223	.012	.001	R 6.873
December	R 1.645	R 2.119	3.043	.646	.252	.012	.004	R 7.722
Total	R 19.544	R 21.145	34.653	R 6.841	2.973	.145	.044	R 85.345
1995 January	1.713	2.402	2.858	.677	.270	.009	.005	7.934

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>c</sup> Electric utility and industrial generation and net imports of electricity.

<sup>d</sup> "Other" consumption is net imports of coal coke and electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

<sup>e</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable

energy used by other sectors is not included.

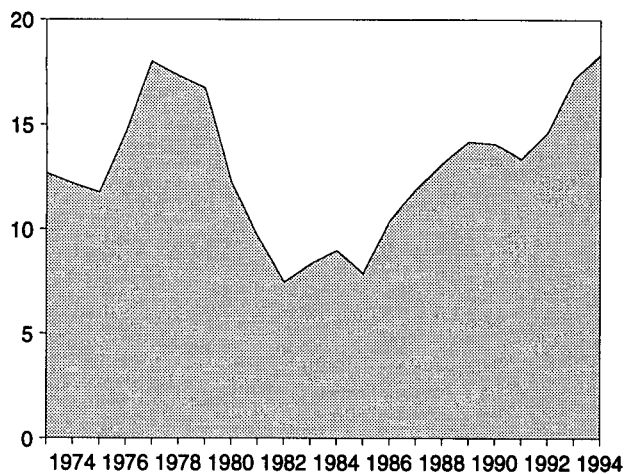
R=Revised data.

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.

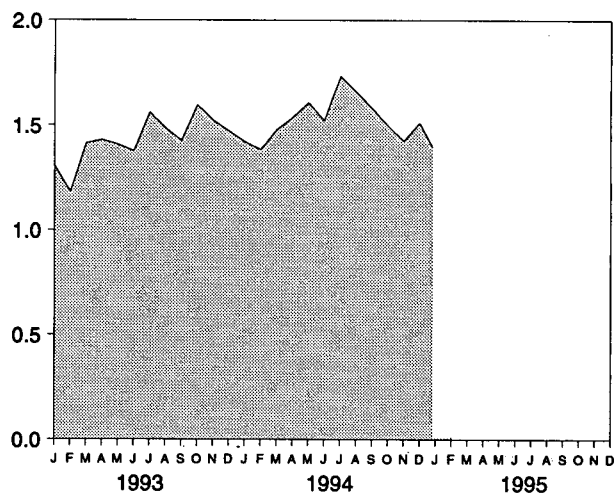
Sources: • Coal: Tables 6.1 and A5-A7. • Natural Gas: Tables 4.2 and A4. • Petroleum: Tables 3.1a and A3. • Nuclear Electric Power: Tables 7.1 and A8. • Hydroelectric Power: Table 7.1; Section 2, "Energy Consumption Notes and Sources," Note 8; and Table A8. • Geothermal Energy and Other: Section 2, "Energy Consumption Notes and Sources," Note 7, and Table A8.

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

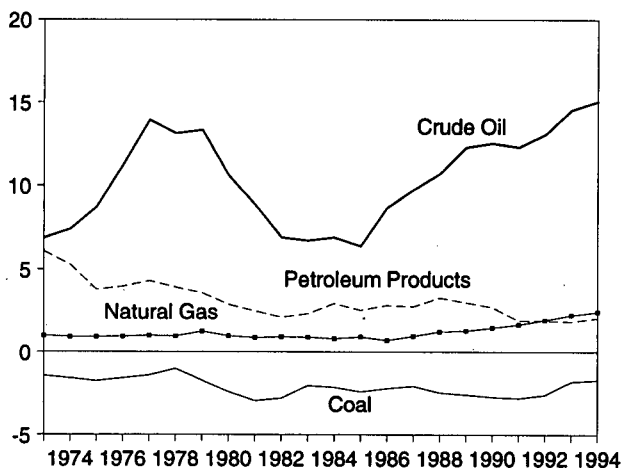
**Total, 1973-1994**



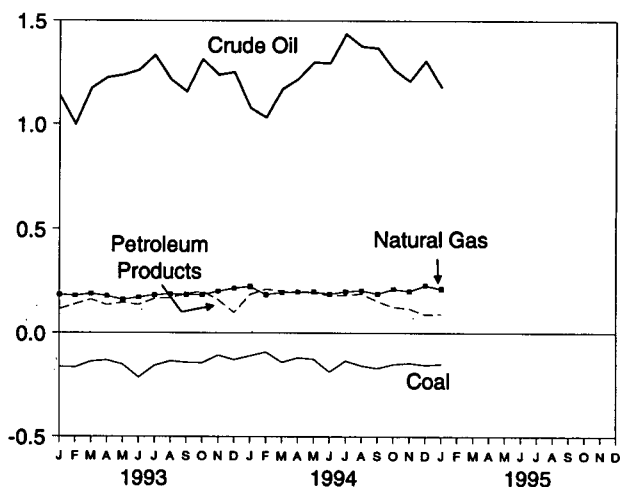
**Total, Monthly**



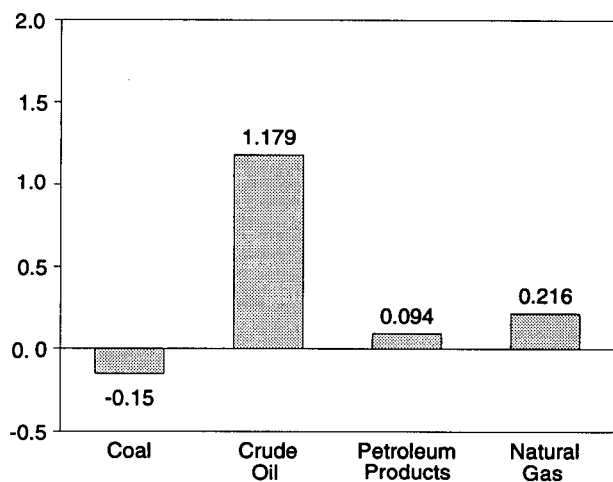
**By Major Sources, 1973-1994**



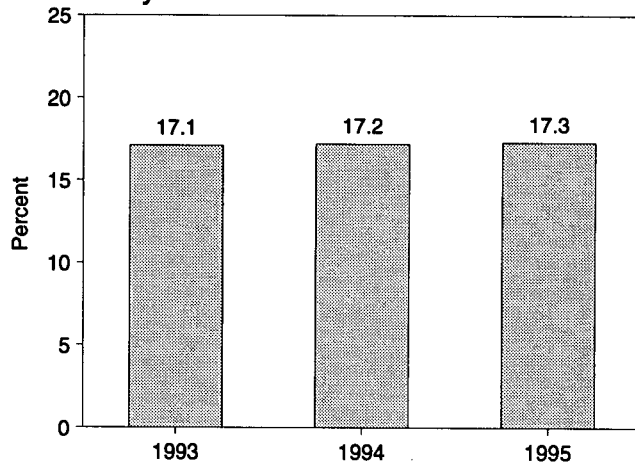
**By Major Sources, Monthly**



**By Major Sources, January 1995**



**As Share of Consumption, January**



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 1.4 and 1.5.



**Table 1.5 Energy Net Imports by Source**  
(Quadrillion Btu)

	Coal	Natural Gas	Crude Oil <sup>a</sup>	Petroleum Products <sup>b</sup>	Electricity <sup>c</sup>	Coal Coke	Total
1973 Total .....	-1.422	0.981	6.883	6.097	0.148	-0.007	12.680
1974 Total .....	-1.568	.907	7.389	5.273	.133	.056	12.190
1975 Total .....	-1.738	.904	8.708	3.800	.064	.014	11.752
1976 Total .....	-1.567	.922	11.221	3.982	.089	(s)	14.648
1977 Total .....	-1.401	.981	13.921	4.321	.182	.015	18.019
1978 Total .....	-1.004	.941	13.125	3.932	.204	.125	17.323
1979 Total .....	-1.702	1.243	13.328	3.603	.211	.063	16.746
1980 Total .....	-2.391	.957	10.586	2.912	.217	-.035	12.247
1981 Total .....	-2.918	.857	8.854	2.522	.347	-.016	9.646
1982 Total .....	-2.768	.898	6.917	2.128	.306	-.022	7.460
1983 Total .....	-2.013	.885	6.731	2.351	.372	-.016	8.310
1984 Total .....	-2.119	.792	6.918	2.970	.414	-.011	8.963
1985 Total .....	-2.389	.896	6.381	2.570	.428	-.013	7.872
1986 Total .....	-2.193	.686	8.676	2.855	.375	-.017	10.382
1987 Total .....	-2.049	.937	9.748	2.784	.483	.009	11.911
1988 Total .....	-2.446	1.221	10.698	3.308	.328	.040	13.149
1989 Total .....	-2.566	1.278	12.296	3.029	.113	.030	14.181
1990 Total .....	-2.705	1.464	12.536	2.757	.020	.005	14.077
1991 Total .....	-2.769	1.666	12.308	1.912	.231	.009	13.357
1992 Total .....	-2.587	1.941	13.065	1.895	.292	.027	14.633
1993 January .....	-.163	.187	1.138	.118	.023	.004	1.308
February .....	-.166	.182	.999	.142	.023	(s)	1.181
March .....	-.138	.192	1.172	.164	.021	.003	1.414
April .....	-.132	.181	1.225	.138	.016	.002	1.430
May .....	-.152	.163	1.237	.149	.009	.002	1.408
June .....	-.214	.175	1.260	.140	.010	.003	1.375
July .....	-.157	.186	1.334	.168	.030	(s)	1.560
August .....	-.135	.190	1.216	.173	.040	.002	1.486
September .....	-.142	.188	1.157	.191	.034	-.001	1.426
October .....	-.144	.187	1.314	.204	.032	.001	1.595
November .....	-.108	.204	1.238	.163	.027	(s)	1.524
December .....	-.129	.219	1.251	.102	.028	.002	1.472
Total .....	-1.780	2.255	14.542	1.854	.292	.017	17.180
1994 January .....	-.111	.227	1.080	.189	E .032	.004	1.421
February .....	-.093	.188	1.033	.215	E .040	-.001	1.383
March .....	-.141	.199	1.169	.204	E .045	.002	1.478
April .....	-.120	.201	1.218	.201	E .034	.003	1.536
May .....	-.126	.202	1.300	.197	E .032	.002	1.606
June .....	-.187	.191	1.295	.185	E .035	.003	1.522
July .....	-.134	.203	1.436	.186	E .040	(s)	1.732
August .....	-.157	.208	1.376	.192	E .038	.002	1.658
September .....	-.170	.192	1.368	.156	E .031	.003	1.580
October .....	-.150	.215	1.265	.129	E .035	.005	1.499
November .....	-.145	.205	1.208	.121	E .037	-.001	1.425
December .....	-.154	R .232	1.306	.091	E .035	.002	R 1.512
Total .....	-1.689	R 2.463	15.054	2.065	E .436	.024	R 18.352
1995 January .....	-.150	.216	1.179	.094	E .028	.004	1.372

<sup>a</sup> Crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

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

<sup>c</sup> Assumed to be hydroelectricity and estimated at the average input heat rate for fossil-fuel steam-electric power plant generation, which has ranged from 10.2 thousand Btu to 10.5 thousand Btu per kilowatthour since 1973. Actual heat rates applied in converting kilowatthours to Btu are listed by year in Table A8.

R=Revised data. E=Estimate. (s)=Less than +0.5 trillion Btu and greater

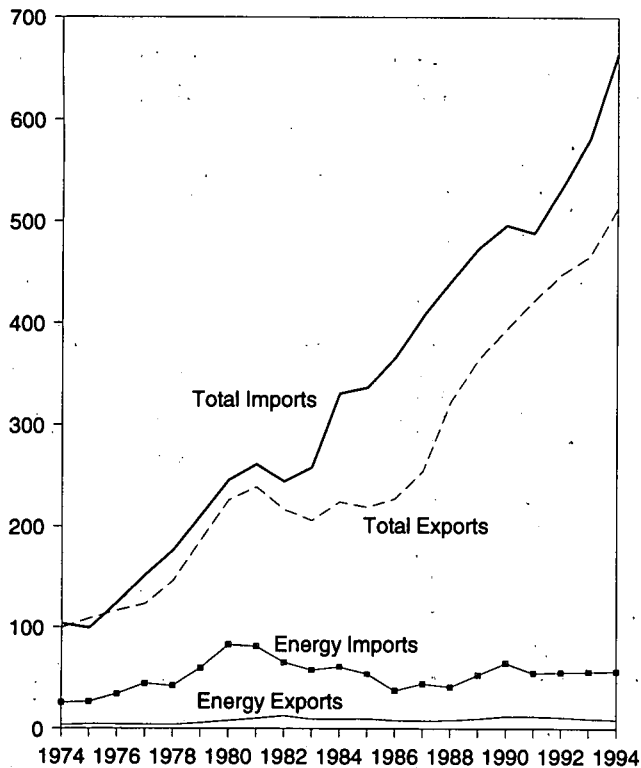
than -0.5 trillion Btu.

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.

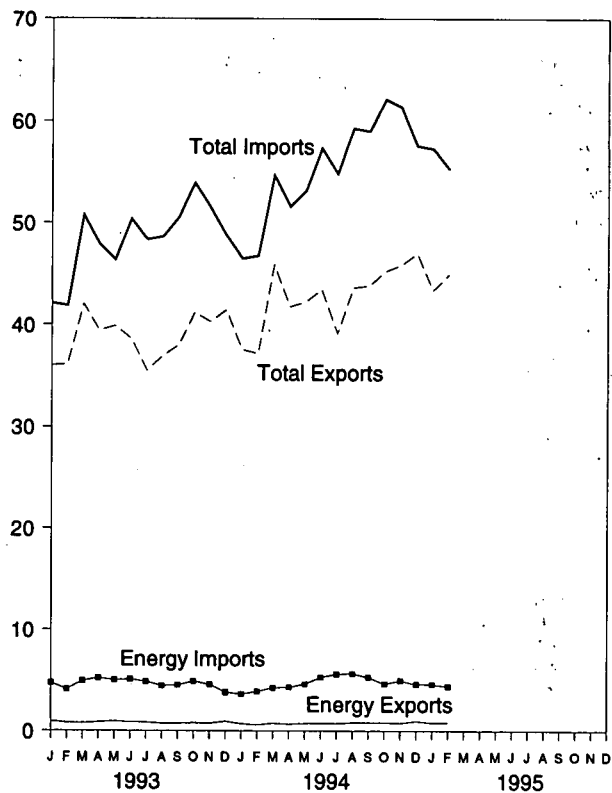
Sources: • Coal: Tables 6.1 and A5-A7. • Natural Gas: Tables 4.2 and A4. • Crude Oil and Petroleum Products: Tables 3.1b and A2. • Electricity: Section 2, "Energy Consumption Notes and Sources," Note 8, and Table A8. • Coal Coke: Section 2, "Energy Consumption Notes and Sources," Note 9, and Table A7.

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

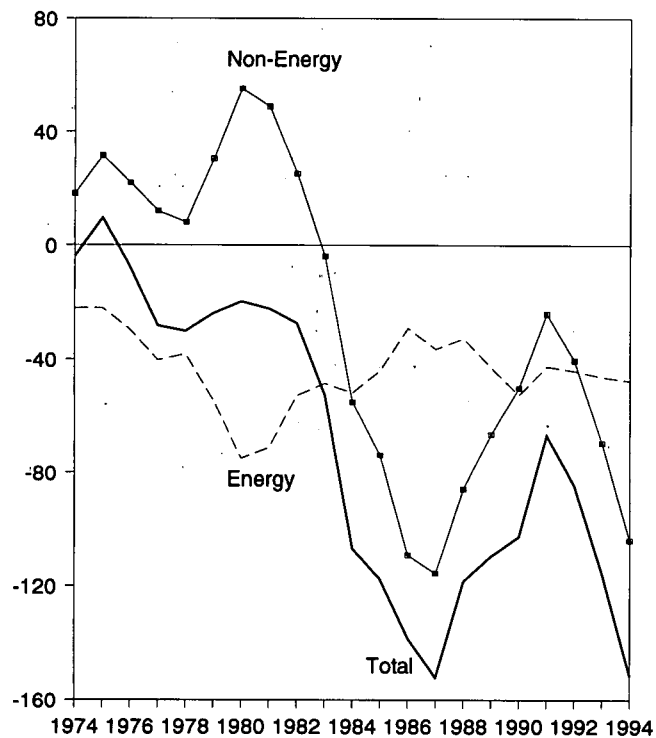
**Imports and Exports, 1974-1994**



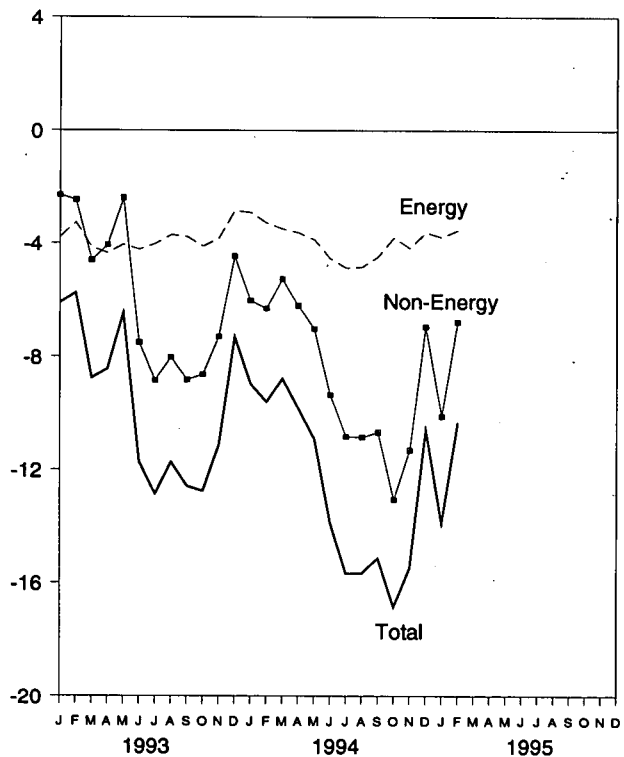
**Imports and Exports, Monthly**



**Trade Balance, 1974-1994**



**Trade Balance, Monthly**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 1.6.

**Table 1.6 Merchandise Trade Value**  
(Million Dollars)

	Petroleum			Energy			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total	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 January	601	4,282	-3,681	923	4,711	-3,788	-2,313	35,958	42,058	-6,101
February	477	3,718	-3,241	807	4,075	-3,268	-2,478	36,070	41,817	-5,746
March	470	4,498	-4,028	753	4,904	-4,151	-4,596	41,999	50,745	-8,747
April	590	4,814	-4,225	844	5,194	-4,350	-4,081	39,421	47,851	-8,431
May	641	4,619	-3,978	939	4,990	-4,051	-2,410	39,870	46,331	-6,461
June	443	4,714	-4,272	843	5,069	-4,226	-7,513	38,624	50,362	-11,738
July	514	4,464	-3,950	819	4,845	-4,026	-8,826	35,465	48,317	-12,852
August	453	4,000	-3,547	714	4,426	-3,712	-8,022	36,876	48,611	-11,735
September	422	4,056	-3,634	712	4,480	-3,769	-8,802	37,956	50,526	-12,570
October	467	4,449	-3,982	761	4,876	-4,115	-8,626	41,148	53,889	-12,742
November	479	4,084	-3,605	720	4,553	-3,833	-7,307	40,294	51,434	-11,140
December	658	3,348	-2,690	922	3,778	-2,856	-4,452	41,412	48,719	-7,307
Total	6,215	51,046	-44,831	9,756	55,900	-46,144	-69,425	465,091	580,659	-115,568
1994 January	452	3,114	-2,662	676	3,603	-2,927	-6,026	37,499	46,451	-8,953
February	366	3,298	-2,932	573	3,860	-3,287	-6,311	37,118	46,716	-9,598
March	452	3,731	-3,279	728	4,229	-3,501	-5,259	45,904	54,663	-8,760
April	416	3,782	-3,366	645	4,276	-3,631	-6,212	41,715	51,558	-9,843
May	480	4,124	-3,644	718	4,594	-3,876	-7,018	42,211	53,105	-10,894
June	416	4,806	-4,390	740	5,269	-4,529	-9,338	43,428	57,295	-13,867
July	446	5,152	-4,706	713	5,571	-4,858	-10,818	39,127	54,803	-15,676
August	497	5,200	-4,703	790	5,624	-4,834	-10,837	43,610	59,281	-15,671
September	482	4,813	-4,331	798	5,269	-4,471	-10,665	43,835	58,972	-15,136
October	524	4,169	-3,645	807	4,614	-3,807	-13,051	45,243	62,100	-16,858
November	476	4,480	-4,004	755	4,930	-4,175	-11,307	45,871	61,352	-15,482
December	644	4,128	-3,484	952	4,574	-3,622	-6,949	46,961	57,533	-10,571
Total	5,648	50,792	-45,144	8,895	56,412	-47,517	-103,791	512,521	663,829	-151,308
1995 January	488	4,129	-3,641	783	4,568	-3,785	<sup>R</sup> -10,108	<sup>R</sup> 43,355	<sup>R</sup> 57,249	<sup>R</sup> -13,893
February	528	3,909	-3,381	798	4,345	-3,547	-6,775	44,962	55,284	-10,322
2-Month Total	1,016	8,037	-7,021	1,581	8,913	-7,332	-16,883	88,318	112,532	-24,215
1994 2-Month Total	818	6,412	-5,594	1,249	7,463	-6,214	-12,337	74,617	93,167	-18,551
1993 2-Month Total	1,079	8,000	-6,922	1,730	8,786	-7,056	-4,791	72,028	83,875	-11,847

R=Revised data.

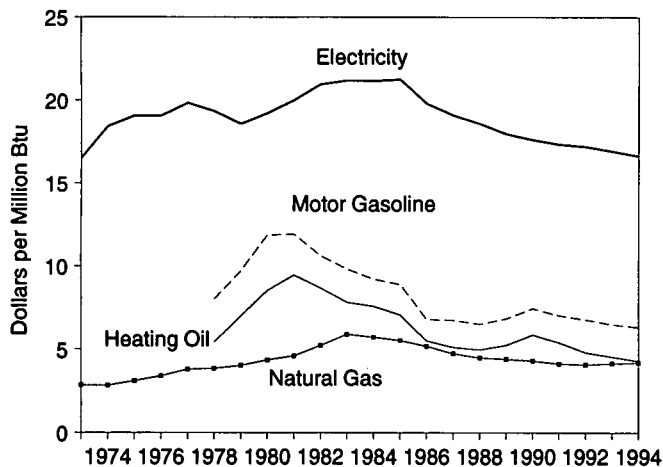
Notes: • Monthly data are not adjusted for seasonal variations. • See Note 5 at end of section. • Totals may not equal sum of components due to independent rounding. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the

U.S. customs territory, which comprises the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

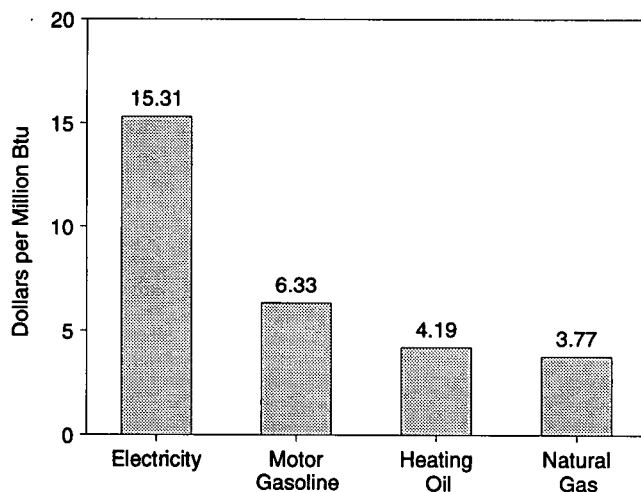
Sources: • U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division. For details, see "Sources for Table 1.6" at the end of this section.

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

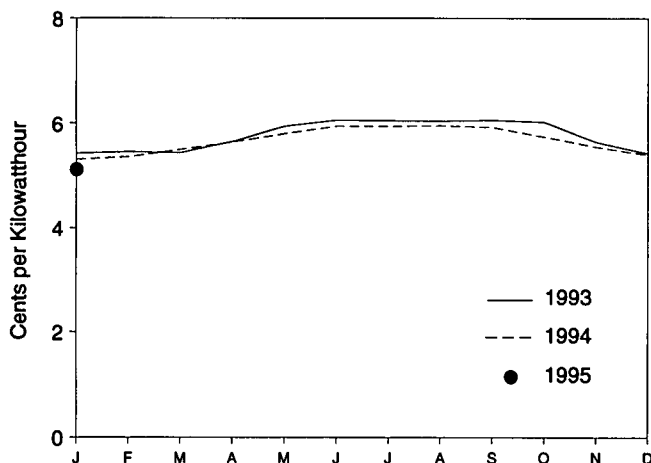
## Costs, 1973-1994



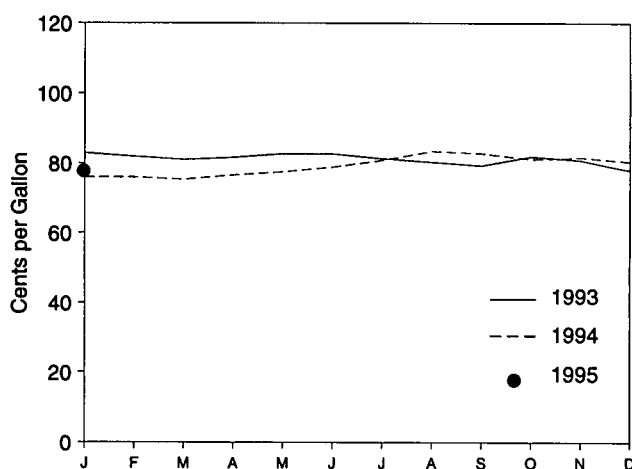
## Costs, January 1995



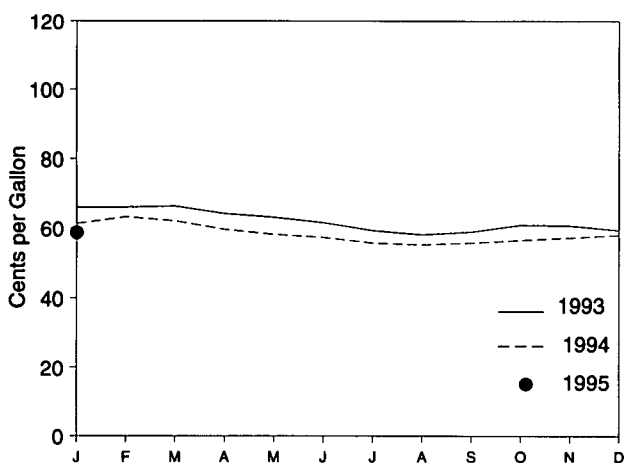
## Electricity, Monthly



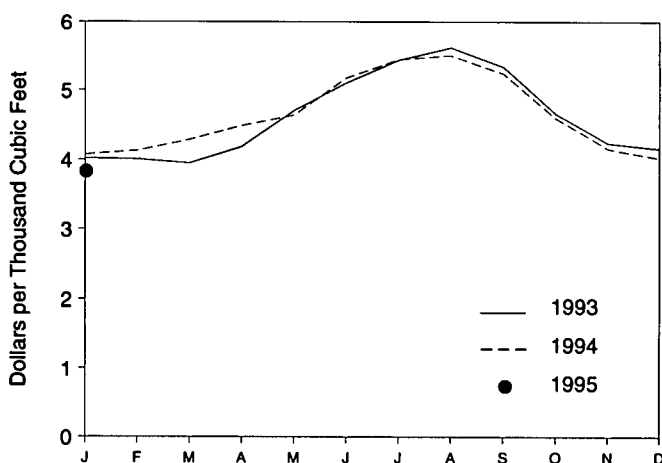
## Motor Gasoline, Monthly



## Heating Oil, Monthly



## Natural Gas, Monthly



Source: Table 1.7.



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

	Consumer Price Index (Urban) <sup>a</sup>	Motor Gasoline (All Types)		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
	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	7.2	21.16
1985 Average	107.6	111.2	8.89	97.9	7.06	568.8	5.52	7.2	21.25
1986 Average	109.6	84.9	6.79	76.3	5.50	531.9	5.17	6.8	19.79
1987 Average	113.6	84.2	6.74	70.7	5.10	487.7	4.73	6.5	19.09
1988 Average	118.3	81.4	6.51	68.7	4.96	462.4	4.49	6.3	18.58
1989 Average	124.0	85.5	6.83	72.6	5.23	454.8	4.41	6.1	17.96
1990 Average	130.7	93.1	7.44	81.3	5.86	443.8	4.31	6.01	17.60
1991 Average	136.2	87.8	7.02	74.8	5.39	427.3	4.14	5.91	17.32
1992 Average	140.3	84.8	6.78	66.6	4.80	419.8	4.07	5.87	17.19
1993 January	142.6	82.9	6.63	66.1	4.77	401.8	3.91	5.43	15.93
February	143.1	81.9	6.55	66.1	4.77	400.4	3.90	5.46	16.00
March	143.6	81.0	6.48	66.4	4.79	394.8	3.84	5.44	15.94
April	144.0	81.6	6.52	64.3	4.64	418.1	4.07	5.65	16.57
May	144.2	82.7	6.61	63.2	4.56	470.2	4.57	5.94	17.42
June	144.4	82.7	6.61	61.6	4.44	510.4	4.96	6.06	17.76
July	144.4	81.3	6.50	59.3	4.27	543.6	5.29	6.05	17.74
August	144.8	80.3	6.42	58.1	4.19	561.5	5.46	6.04	17.69
September	145.1	79.3	6.34	58.9	4.25	534.1	5.20	6.06	17.77
October	145.7	81.9	6.55	60.9	4.39	466.0	4.53	6.02	17.64
November	145.8	80.8	6.46	60.7	4.38	423.2	4.12	5.64	16.52
December	145.8	77.9	6.23	59.4	4.28	415.6	4.04	5.43	15.92
Average	144.5	81.2	6.49	63.0	4.55	426.3	4.15	5.77	16.92
1994 January	146.2	75.9	6.06	61.3	4.42	407.0	3.96	R 5.31	R 15.56
February	146.7	75.9	6.07	63.3	4.56	412.4	4.01	5.36	R 15.70
March	147.2	75.3	6.02	62.1	4.48	428.0	4.16	R 5.50	R 16.13
April	147.4	76.5	6.12	59.6	4.30	448.4	4.36	5.64	16.54
May	147.5	77.5	6.20	58.2	4.20	463.7	4.51	5.80	16.99
June	148.0	78.9	6.30	57.3	4.13	517.6	5.03	5.94	17.41
July	148.4	80.8	6.46	55.7	4.01	544.5	5.30	5.94	17.42
August	149.0	83.4	6.67	55.2	3.98	550.3	5.35	R 5.95	R 17.45
September	149.4	82.8	6.62	55.7	4.02	524.1	5.10	R 5.92	R 17.36
October	149.5	81.1	6.48	56.5	4.08	459.5	4.47	R 5.74	R 16.82
November	149.7	81.6	6.53	57.2	4.12	415.5	4.04	5.55	16.27
December	149.7	80.4	6.43	R 58.0	R 4.18	402.1	3.91	5.40	15.82
Average	148.2	79.2	6.33	R 59.6	R 4.30	431.8	4.20	5.67	16.63
1995 January	150.3	79.2	6.33	58.2	4.19	387.9	3.77	5.22	15.31

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

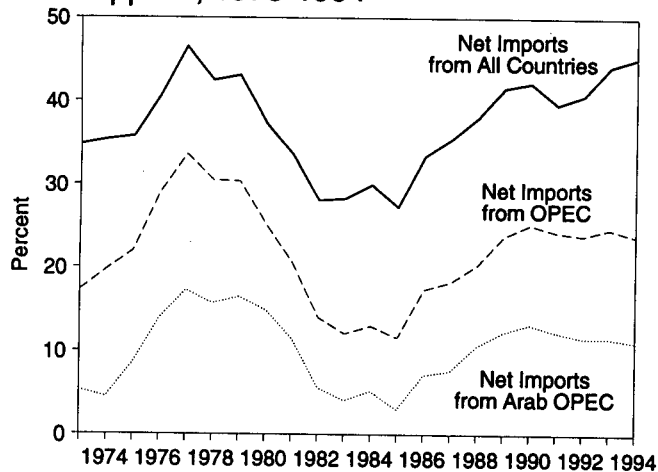
R=Revised data. NA=Not available.

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.

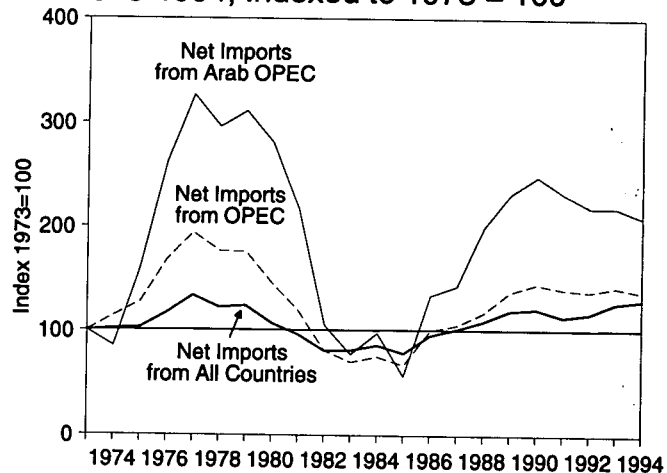
Sources: • **Annual Data:** Annual prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **Monthly Data:** Monthly prices in Tables 9.4 (All Types), 9.8c, 9.11, and 9.9 (Monthly Series), adjusted by the CPI. • **CPI: 1973-1993—***Economic Report of the President*, February 1995, Table B-59. **1994 forward—**Council of Economic Advisers, *Economic Indicators*, March 1995, "Consumer Prices - All Urban Consumers." • **Conversion Factors:** Tables A1, A4, and A8.

# Figure 1.7 U.S. Dependence on Petroleum Net Imports

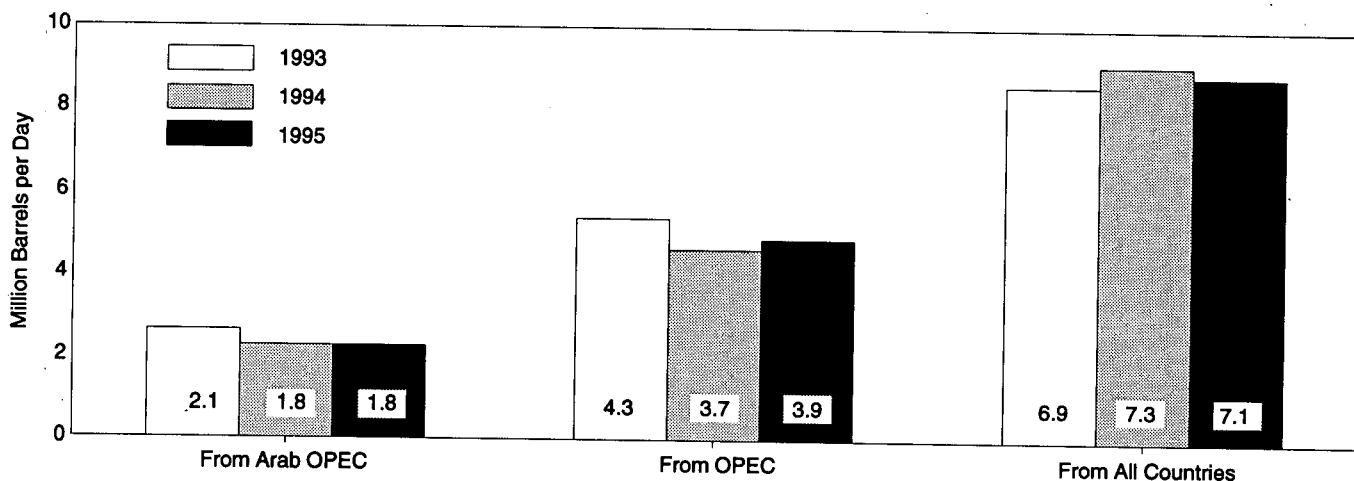
## Net Imports as Share of Products Supplied, 1973-1994



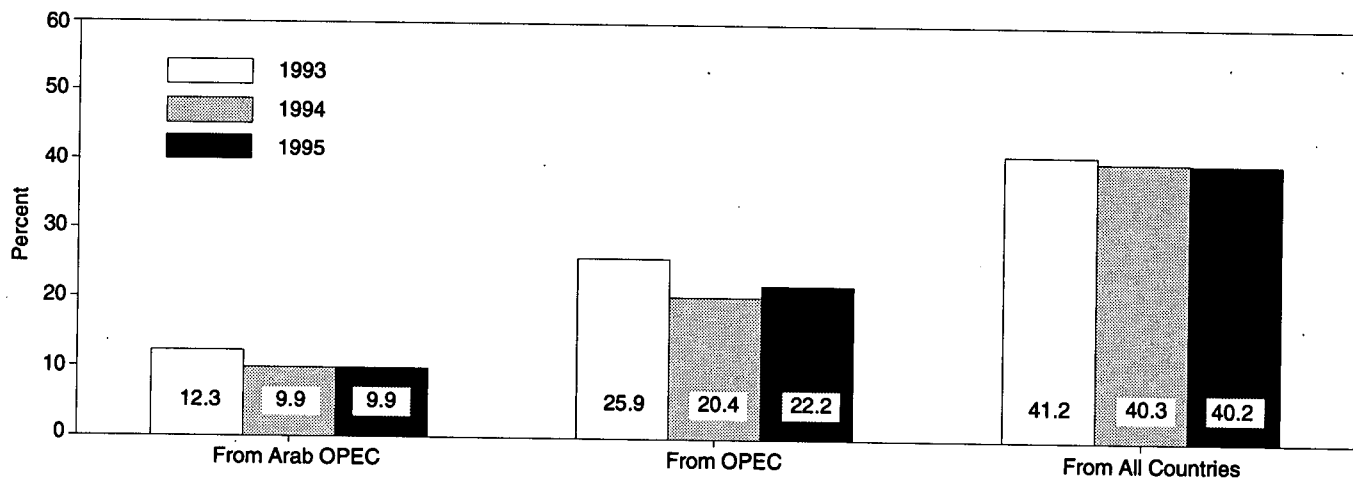
## Net Imports as Share of Products Supplied, 1973-1994, Indexed to 1973 = 100



## Net Imports of Petroleum, January and February



## Net Imports of Petroleum as Share of Products Supplied, January and February



Source: Table 1.8.

**Table 1.8 U.S. Dependence on Petroleum Net Imports**

	Net Imports <sup>a</sup>			Petroleum Products Supplied	Net Imports as Share of U.S. Petroleum Products Supplied		
	From Arab OPEC <sup>b</sup>	From OPEC <sup>c</sup>	From All Countries		From Arab OPEC <sup>b</sup>	From OPEC <sup>c</sup>	From All Countries
	Thousand Barrels per Day				Percent		
1973 Average .....	914	2,991	6,025	17,308	5.3	17.3	34.8
1974 Average .....	752	3,277	5,892	16,653	4.5	19.7	35.4
1975 Average .....	1,382	3,599	5,846	16,322	8.5	22.0	35.8
1976 Average .....	2,423	5,063	7,090	17,461	13.9	29.0	40.6
1977 Average .....	3,184	6,190	8,565	18,431	17.3	33.6	46.5
1978 Average .....	2,962	5,747	8,002	18,847	15.7	30.5	42.5
1979 Average .....	3,056	5,633	7,985	18,513	16.5	30.4	43.1
1980 Average .....	2,549	4,293	6,365	17,056	14.9	25.2	37.3
1981 Average .....	1,844	3,315	5,401	16,058	11.5	20.6	33.6
1982 Average .....	852	2,136	4,298	15,296	5.6	14.0	28.1
1983 Average .....	630	1,843	4,312	15,231	4.1	12.1	28.3
1984 Average .....	817	2,037	4,715	15,726	5.2	13.0	30.0
1985 Average .....	470	1,821	4,286	15,726	3.0	11.6	27.3
1986 Average .....	1,160	2,828	5,439	16,281	7.1	17.4	33.4
1987 Average .....	1,272	3,053	5,914	16,665	7.6	18.3	35.5
1988 Average .....	1,837	3,513	6,587	17,283	10.6	20.3	38.1
1989 Average .....	2,128	4,124	7,202	17,325	12.3	23.8	41.6
1990 Average .....	2,243	4,285	7,161	16,988	13.2	25.2	42.2
1991 Average .....	2,057	4,065	6,626	16,714	12.3	24.3	39.6
1992 Average .....	1,972	4,071	6,938	17,033	11.6	23.9	40.7
1993 January .....	1,978	4,194	6,869	16,173	12.2	25.9	42.5
February .....	2,132	4,477	6,915	17,334	12.3	25.8	39.9
March .....	1,974	4,250	7,315	17,575	11.2	24.2	41.6
April .....	2,181	4,586	7,701	16,781	13.0	27.3	45.9
May .....	2,030	4,273	7,581	16,508	12.3	25.9	45.9
June .....	2,004	4,345	7,905	17,096	11.7	25.4	46.2
July .....	1,914	4,401	8,218	17,357	11.0	25.4	47.3
August .....	1,859	4,036	7,600	17,332	10.7	23.3	43.9
September .....	1,963	3,998	7,629	17,650	11.1	22.6	43.2
October .....	1,961	4,208	8,316	17,323	11.3	24.3	48.0
November .....	1,974	4,142	7,923	17,780	11.1	23.3	44.6
December .....	1,983	4,144	7,394	17,953	11.0	23.1	41.2
Average .....	1,995	4,253	7,618	17,237	11.6	24.7	44.2
1994 January .....	1,861	3,601	6,987	17,924	10.4	20.1	39.0
February .....	1,717	3,805	7,619	18,302	9.4	20.8	41.6
March .....	1,881	3,739	7,564	17,289	10.9	21.6	43.7
April .....	2,095	4,355	8,059	17,428	12.0	25.0	46.2
May .....	2,060	4,351	8,226	17,094	12.1	25.5	48.1
June .....	1,826	4,485	8,396	17,830	10.2	25.2	47.1
July .....	2,111	4,516	8,901	17,474	12.1	25.8	50.9
August .....	1,944	4,479	8,611	18,107	10.7	24.7	47.6
September .....	2,125	4,356	8,635	17,469	12.2	24.9	49.4
October .....	2,018	4,298	7,646	17,656	11.4	24.3	43.3
November .....	1,929	4,147	7,527	17,340	11.1	23.9	43.4
December .....	2,026	4,422	7,653	18,280	11.1	24.2	41.9
Average .....	1,968	4,215	7,986	17,679	11.1	23.8	45.2
1995 January .....	1,625	3,807	6,977	17,167	9.5	22.2	40.6
February .....	1,894	4,096	7,296	18,355	10.3	22.3	39.8
2-Month Average .....	1,753	3,944	7,129	17,731	9.9	22.2	40.2
1994 2-Month Average .....	1,793	3,698	7,287	18,103	9.9	20.4	40.3
1993 2-Month Average .....	2,051	4,328	6,891	16,724	12.3	25.9	41.2

<sup>a</sup> "Net Imports" are imports minus exports. Imports from members of the Organization of Petroleum Exporting Countries (OPEC) exclude indirect imports, which are petroleum products primarily from Caribbean and West European areas and refined from crude oil produced by OPEC.

<sup>b</sup> The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates. Net imports from the Neutral Zone between Kuwait and Saudi Arabia are included in net imports from Arab OPEC.

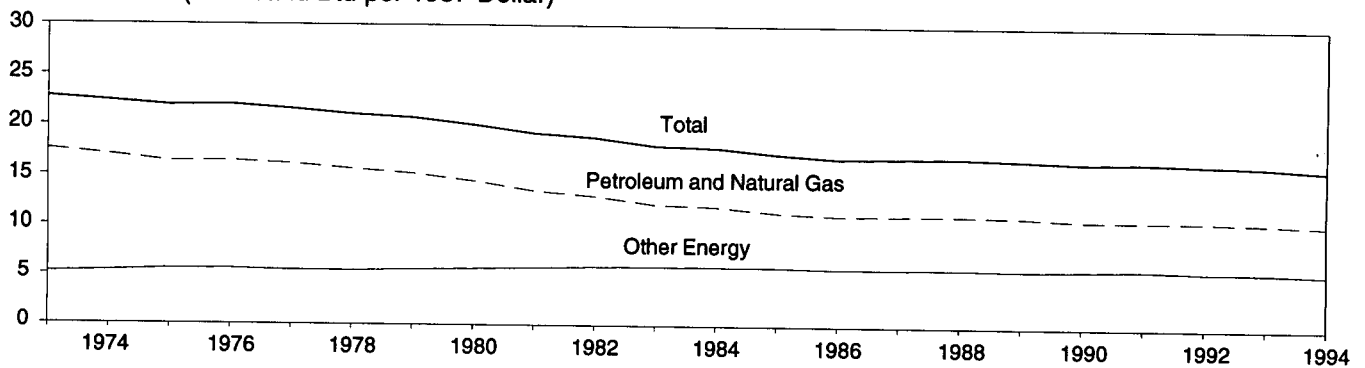
<sup>c</sup> OPEC currently consists of Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. Ecuador was a member of OPEC from 1973-1992; for this period, net imports from Ecuador are included in net

imports from OPEC.

Notes: • Beginning in October 1977, Strategic Petroleum Reserves are included. • Annual averages may not equal average of months due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • Imports: Tables 3.3a-3.3h. • Exports: 1973-1976—U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. 1977-1980—Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual." 1981-1993—EIA, *Petroleum Supply Annual*. 1994—EIA, *Petroleum Supply Monthly*. • Petroleum Products Supplied: Table 3.1a.

**Figure 1.8 Energy Consumption per Dollar of Gross Domestic Product**  
(Thousand Btu per 1987 Dollar)



Source: Table 1.9.

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

	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Dollar of GDP		
	Petroleum and Natural Gas	Other Energy	Total <sup>a</sup>		Petroleum and Natural Gas	Other Energy	Total
	Quadrillion Btu				Billion 1987 Dollars	Thousand Btu per 1987 Dollar	
1973 Year .....	57.352	16.930	74.282	3,268.6	17.55	5.18	22.73
1974 Year .....	55.187	17.356	72.543	3,248.1	16.99	5.34	22.33
1975 Year .....	52.678	17.867	70.546	3,221.7	16.35	5.55	21.90
1976 Year .....	55.520	18.842	74.362	3,380.8	16.42	5.57	22.00
1977 Year .....	57.053	19.236	76.288	3,533.3	16.15	5.44	21.59
1978 Year .....	57.966	20.123	78.089	3,703.5	15.65	5.43	21.09
1979 Year .....	57.789	21.108	78.898	3,796.8	15.22	5.56	20.78
1980 Year .....	54.596	21.359	75.955	3,776.3	14.46	5.66	20.11
1981 Year .....	51.859	22.131	73.990	3,843.1	13.49	5.76	19.25
1982 Year .....	48.736	22.111	70.848	3,760.3	12.96	5.88	18.84
1983 Year .....	47.411	23.114	70.524	3,906.6	12.14	5.92	18.05
1984 Year .....	49.558	24.586	74.144	4,148.5	11.95	5.93	17.87
1985 Year .....	48.756	25.225	73.981	4,279.8	11.39	5.89	17.29
1986 Year .....	48.904	25.393	74.297	4,404.5	11.10	5.77	16.87
1987 Year .....	50.609	26.285	76.894	4,539.9	11.15	5.79	16.94
1988 Year .....	52.774	27.443	80.218	4,718.6	11.18	5.82	17.00
1989 Year .....	53.595	27.731	81.325	4,838.0	11.08	5.73	16.81
1990 Year .....	52.849	28.416	81.265	4,897.3	10.79	5.80	16.59
1991 Year .....	52.452	28.665	81.116	4,867.6	10.78	5.89	16.66
1992 Year .....	53.657	28.487	82.144	4,979.3	10.78	5.72	16.50
1993 1st Quarter .....	55.263	29.322	84.585	5,075.3	10.89	5.78	16.67
1993 2nd Quarter .....	53.750	29.611	83.361	5,105.4	10.53	5.80	16.33
1993 3rd Quarter .....	54.538	29.131	83.668	5,139.4	10.61	5.67	16.28
1993 4th Quarter .....	55.180	28.722	83.902	5,218.0	10.57	5.50	16.08
1993 Year .....	54.682	29.195	83.877	5,134.5	10.65	5.69	16.34
1994 1st Quarter .....	<sup>R</sup> 57.282	29.937	<sup>R</sup> 87.218	5,261.1	10.89	<sup>R</sup> 5.69	<sup>R</sup> 16.58
1994 2nd Quarter .....	<sup>R</sup> 55.713	<sup>R</sup> 30.052	<sup>R</sup> 85.766	5,314.1	<sup>R</sup> 10.48	<sup>R</sup> 5.66	<sup>R</sup> 16.14
1994 3rd Quarter .....	<sup>R</sup> 55.617	<sup>R</sup> 29.171	<sup>R</sup> 84.788	5,367.0	<sup>R</sup> 10.36	<sup>R</sup> 5.44	<sup>R</sup> 15.80
1994 4th Quarter .....	<sup>R</sup> 54.611	<sup>R</sup> 29.044	<sup>R</sup> 83.655	<sup>R</sup> 5,433.8	<sup>R</sup> 10.05	<sup>R</sup> 5.35	<sup>R</sup> 15.40
1994 Year .....	<sup>R</sup> 55.798	<sup>R</sup> 29.547	<sup>R</sup> 85.345	<sup>R</sup> 5,344.0	<sup>R</sup> 10.44	5.53	<sup>R</sup> 15.97

<sup>a</sup> Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, except for small amounts used by electric utilities to generate electricity for distribution.

R=Revised data.

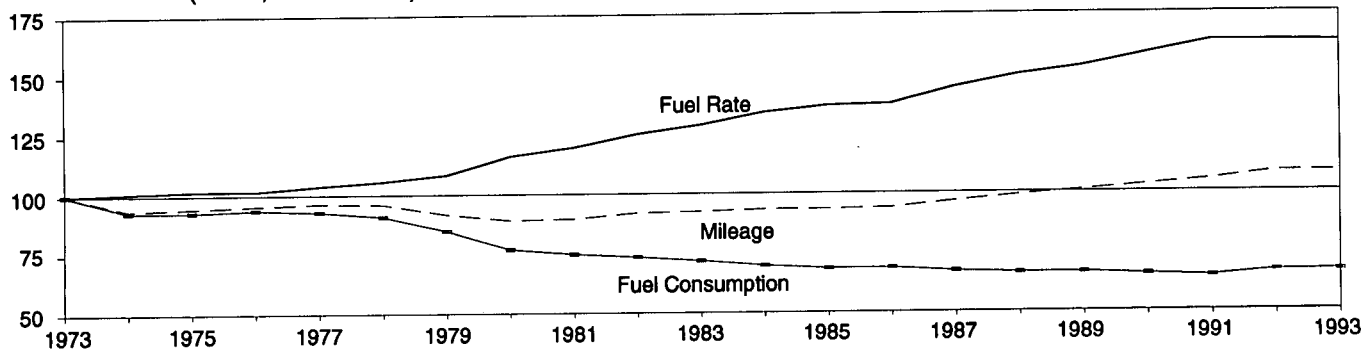
Notes: • Quarterly data are seasonally adjusted and shown at annual rates. • Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding. • Totals may not equal sum of

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

Sources: • **Energy Consumption:** Table 1.4. • **Gross Domestic Product: 1973-1992**—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, September 1994, Table 2. **1993 forward**—U.S. Department of Commerce, Bureau of Economic Analysis, *United States Department of Commerce News*, March 31, 1995, Table 2.

**Figure 1.9 Passenger Car Efficiency**

(Index, 1973 = 100)



**Table 1.10 Passenger Car Efficiency**

	Mileage		Fuel Consumption		Fuel Rate	
	Miles per Car	Index 1973=100.0	Gallons per Car	Index 1973=100.0	Miles per Gallon	Index 1973=100.0
1973 .....	10,256	100.0	771	100.0	13.30	100.0
1974 .....	9,606	93.7	716	92.9	13.42	100.9
1975 .....	9,690	94.5	716	92.9	13.52	101.7
1976 .....	9,785	95.4	723	93.8	13.53	101.7
1977 .....	9,879	96.3	716	92.9	13.80	103.8
1978 .....	9,835	95.9	701	90.9	14.04	105.6
1979 .....	9,403	91.7	653	84.7	14.41	108.3
1980 .....	9,141	89.1	591	76.7	15.46	116.2
1981 .....	9,186	89.6	576	74.7	15.94	119.8
1982 .....	9,428	91.9	566	73.4	16.65	125.2
1983 .....	9,475	92.4	553	71.7	17.14	128.9
1984 .....	9,558	93.2	536	69.5	17.83	134.1
1985 .....	9,560	93.2	525	68.1	18.20	136.8
1986 .....	9,608	93.7	526	68.2	18.27	137.4
1987 .....	9,878	96.3	514	66.7	19.20	144.4
1988 .....	10,121	98.7	509	66.0	19.87	149.4
1989 .....	10,332	100.7	509	66.0	20.31	152.7
1990 .....	10,548	102.8	502	65.1	21.02	158.0
1991 .....	10,757	104.9	496	64.3	21.69	163.1
1992 .....	11,100	108.2	512	66.4	21.68	163.0
1993 <sup>a</sup> .....	11,099	108.2	513	66.5	21.64	162.7

<sup>a</sup> Preliminary data.

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

Sources: Indices are prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal

Highway Statistics Division. • 1973-1985: *Highway Statistics Summary to 1985*, Table VM-201A. • 1986 forward: *Highway Statistics*, annual, Table VM-1.

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

Census Divisions	March 1 through March 31					Cumulative July 1 through March 31				
	Normal <sup>a</sup>	1994	1995	Percent Change		Normal <sup>a</sup>	1994	1995	Percent Change	
				Normal to 1995	1994 to 1995				Normal to 1995	1994 to 1995
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	919	919	841	-8.5	-8.5	5,706	6,130	5,222	-8.5	-14.8
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	821	859	711	-13.4	-17.2	5,124	5,451	4,596	-10.3	-15.7
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	868	854	768	-11.5	-10.1	5,678	6,025	5,122	-9.8	-15.0
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	865	757	790	-8.7	4.4	5,965	6,260	5,375	-9.9	-14.1
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	379	357	315	-16.9	-11.8	2,670	2,697	2,344	-12.2	-13.1
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	455	443	370	-18.7	-16.5	3,335	3,448	2,905	-12.9	-15.7
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	277	245	283	2.2	15.5	2,221	2,262	1,871	-15.8	-17.3
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	677	552	619	-8.6	12.1	4,578	4,455	4,212	-8.0	-5.5
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	432	331	396	-8.3	19.6	2,671	2,540	2,624	-1.8	3.3
<b>U.S. Average<sup>b</sup></b> .....	611	577	543	-11.1	-5.9	4,051	4,193	3,659	-9.7	-12.7

<sup>a</sup> "Normal" is based on calculations of data from 1961 through 1990.

<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).

Sources: See end of section.

**Table 1.12 Cooling Degree-Days by Census Division**

Census Divisions	March 1 through March 31					Cumulative January 1 through March 31				
	Normal <sup>a</sup>	1994	1995	Percent Change		Normal <sup>a</sup>	1994	1995	Percent Change	
				Normal to 1995	1994 to 1995				Normal to 1995	1994 to 1995
<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	0	( <sup>c</sup> )	( <sup>c</sup> )	3	0	0	( <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 .....	47	53	52	( <sup>c</sup> )	( <sup>c</sup> )	104	115	89	-14.4	-22.6
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	19	3	9	( <sup>c</sup> )	( <sup>c</sup> )	30	4	9	( <sup>c</sup> )	( <sup>c</sup> )
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	47	28	39	( <sup>c</sup> )	( <sup>c</sup> )	70	32	46	( <sup>c</sup> )	( <sup>c</sup> )
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	8	1	1	( <sup>c</sup> )	( <sup>c</sup> )	10	1	1	( <sup>c</sup> )	( <sup>c</sup> )
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	3	0	0	( <sup>c</sup> )	( <sup>c</sup> )	6	0	0	( <sup>c</sup> )	( <sup>c</sup> )
<b>U.S. Average<sup>b</sup></b> .....	16	13	14	( <sup>c</sup> )	( <sup>c</sup> )	30	24	21	( <sup>c</sup> )	( <sup>c</sup> )

<sup>a</sup> "Normal" is based on calculations of data from 1961 through 1990.

<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).

Sources: See end of section.



# Energy Summary Notes

**1. Energy Production:** Production of energy includes production of coal, crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydroelectric power, and electricity generated from nuclear power. Production also includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A.

**2. Energy Consumption:** Consumption of energy includes consumption of coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial production of hydroelectric power, net imports of electricity (assumed to be hydroelectricity), net imports of coal coke, and electricity generated from nuclear power. Consumption also includes electricity generated for distribution from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A.

**3. Energy Imports:** Energy imports include imports of coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), petroleum products, natural gas, electricity (assumed to be hydroelectricity), and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. For further information on electricity, see "Note for imports and exports of electricity" under Note 8 of Section 2, Energy Consumption Section Notes and Sources.

**4. Energy Exports:** Energy exports include coal, crude oil, petroleum products, natural gas, electricity produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived by using the conversion factors provided in Appendix A. For more information on electricity, see "Note for imports and exports of electricity" under Note 8 of Section 2, Energy Consumption Section Notes and Sources.

**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.

## Sources for Table 1.6

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

• **Petroleum Exports—1974-1987:** "U.S. Exports," FT410, December issues. **1988:** "Report on U.S. Merchandise Trade, 1988 Final Revisions." **1989:** "Report on U.S. Merchandise Trade, 1989 Revisions." **1990:** "U.S. Merchandise Trade, 1990 Final Report." **1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992. **1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993. **1993:** "U.S. International Trade in Goods and Services, Annual Revision for 1993." **1994:** "U.S. International Trade in Goods and Services," FT900, monthly.

• **Petroleum Imports—1974-1987:** "U.S. Merchandise Trade," FT900, December issues, 1975-1988. **1988:** "Report on U.S. Merchandise Trade, 1988 Final Revisions." **1989:** "Report on U.S. Merchandise Trade, 1989 Revisions." **1990:** "U.S. Merchandise Trade, 1990 Final Report." **1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992, and "U.S. Merchandise Trade, October 1992," December 17, 1992, page 3. **1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993. **1993:** "U.S. International Trade in Goods and Services, Annual Revision for 1993." **1994:** "U.S. International Trade in Goods and Services," FT900, monthly.

• **Energy Exports and Imports—1974-1987:** U.S. merchandise trade press releases and database printouts for adjustments. **1988:** January-July, monthly FT900 supplement, 1989 issues. August-December, monthly FT900, 1989 issues. **1989:** Monthly FT900, 1990 issues. **1990:** "U.S. Merchandise Trade, 1990 Final Report." **1991:** "U.S. Merchandise Trade, 1991 Final Report," May 13, 1992, and "U.S. Merchandise Trade, October 1992," December 17, 1992, page 3. **1992:** "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993.

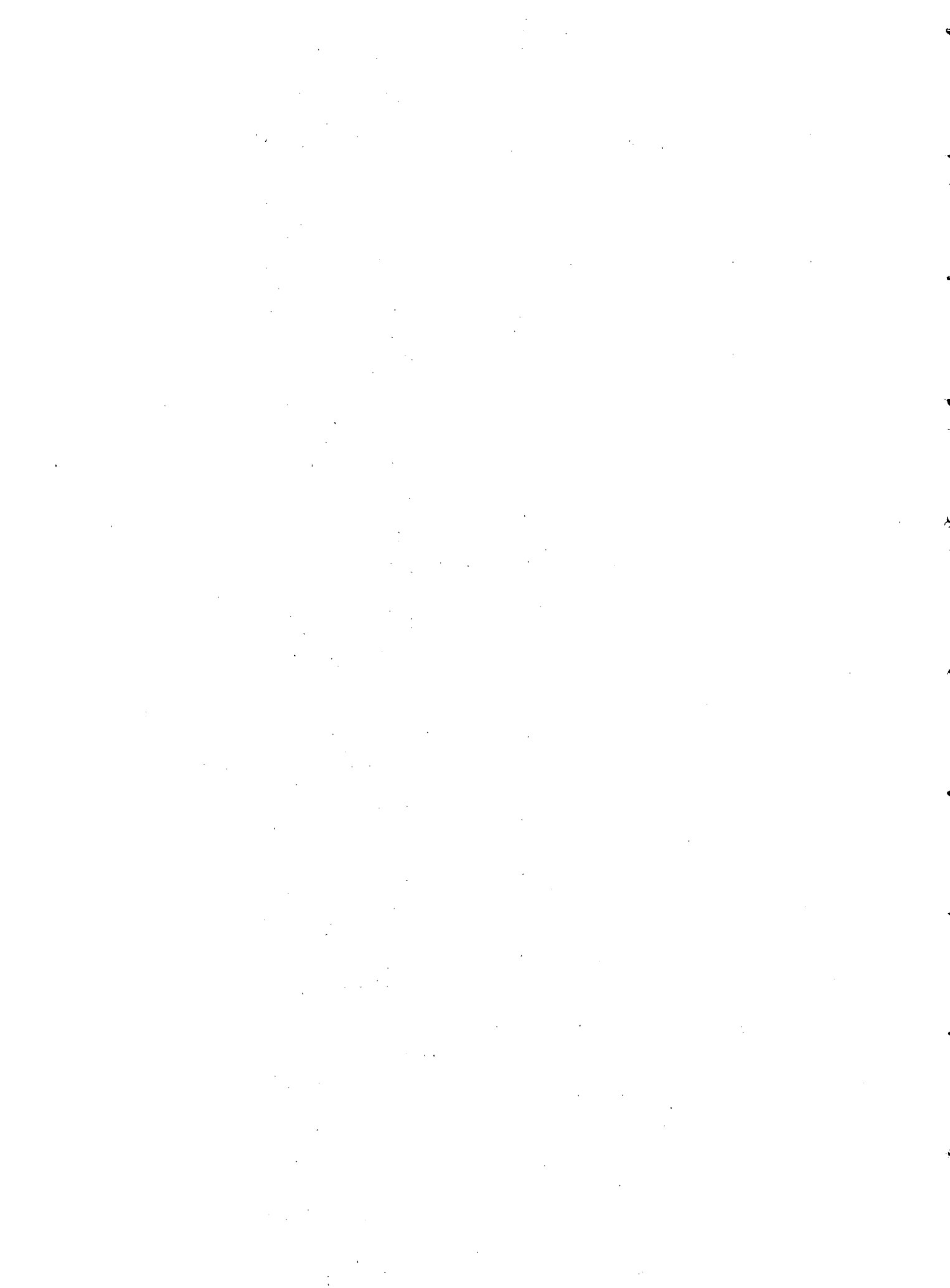
1993: "U.S. International Trade in Goods and Services, Annual Revision for 1993." 1994: "U.S. International Trade in Goods and Services," FT900, monthly.

• **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. 1991-1992: "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993. 1993: "U.S. International Trade in Goods and Services, Annual Revision for 1993." 1994: "U.S. International Trade in Goods and Services," FT900, monthly.

• **Petroleum Balance, Energy Balance, and Non-Energy Balance—**Calculated by the Energy Information Administration.

## Sources for Tables 1.11 and 1.12

• There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Analysis Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for 1990 by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-1 (heating degree-days) and 5-2 (cooling degree-days) developed by the National Climatic Center, Asheville, NC, which compiles data from some 8,000 weather stations.



## Section 2. Energy Consumption

U.S. total energy consumption in January 1995 was 7.9 quadrillion Btu. Petroleum products accounted for 36 percent<sup>1</sup> of the energy consumed in January 1995, while natural gas accounted for 30 percent and coal accounted for 22 percent.

Residential and commercial sector consumption was 3.3 quadrillion Btu in January 1995, down 10 percent from the January 1994 level. The sector accounted for 42 percent of January 1995 total consumption, down 3 percentage points from its 45-percent share in January 1994.

Industrial sector consumption was 2.7 quadrillion Btu in January 1995, down slightly from the January 1994 level. The industrial sector accounted for 34 percent of January 1995 total consumption, up 1 percentage point from its 33-percent share in 1994.

Transportation sector consumption of energy was 1.9 quadrillion Btu in January 1995, up 1 percent from the January 1994 level. The sector accounted for 24 percent of January 1995 total consumption, up 1 percentage point from its 23-percent share in January 1994.

Electric utility consumption of energy totaled 2.7 quadrillion Btu in January 1995, down 3 percent from the January 1994 level. Coal contributed 55 percent of the energy consumed by electric utilities in January 1995, while nuclear electric power contributed 25 percent; hydroelectric 10 percent; natural gas 8 percent; petroleum 2 percent; and geothermal, wood, waste, wind, photovoltaic, and solar thermal energy, less than 1 percent.

**Table 2.1 Energy Consumption Summary for January 1995**  
(Quadrillion Btu)

Energy Source	End-Use Sectors				Electric Utilities	Total
	Residential and Commercial	Industrial	Transportation	Total <sup>a</sup>		
Coal .....	0.016	0.220	( <sup>b</sup> )	0.235	1.478	1.713
Natural Gas <sup>c</sup> .....	1.259	.867	.074	2.199	.203	2.402
Petroleum Products <sup>d</sup> .....	.238	.743	1.832	2.812	.046	2.858
Nuclear Electric Power .....	-	-	-	-	.677	.677
Hydroelectric Power <sup>e</sup> .....	-	.003	-	.003	.267	.270
Geothermal .....	-	-	-	-	.009	.009
Net Imports of Coal Coke .....	-	.004	-	.004	-	.004
Other <sup>f</sup> .....	-	-	-	-	.001	.001
<b>Primary Consumption</b> .....	<b>1.514</b>	<b>1.837</b>	<b>1.906</b>	<b>5.254</b>	<b>2.680</b>	<b>7.934</b>
Electricity .....	.588	.278	.001	.867	-	-
<b>Net Consumption</b> .....	<b>2.102</b>	<b>2.115</b>	<b>1.907</b>	<b>6.121</b>	-	-
Electrical System Energy Losses .....	1.229	.581	.002	1.813	-	-
<b>Total Consumption<sup>g</sup></b> .....	<b>3.331</b>	<b>2.696</b>	<b>1.909</b>	<b>7.934</b>	-	-

<sup>a</sup> Totals for coal and natural gas may not equal sum of sectors due to the use of sector-specific conversion factors.

<sup>b</sup> Small amounts of coal consumed for transportation are reported as industrial sector consumption.

<sup>c</sup> Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.

<sup>d</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>e</sup> Includes net imports of electricity.

<sup>f</sup> "Other" is electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

<sup>g</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

- =Not applicable. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

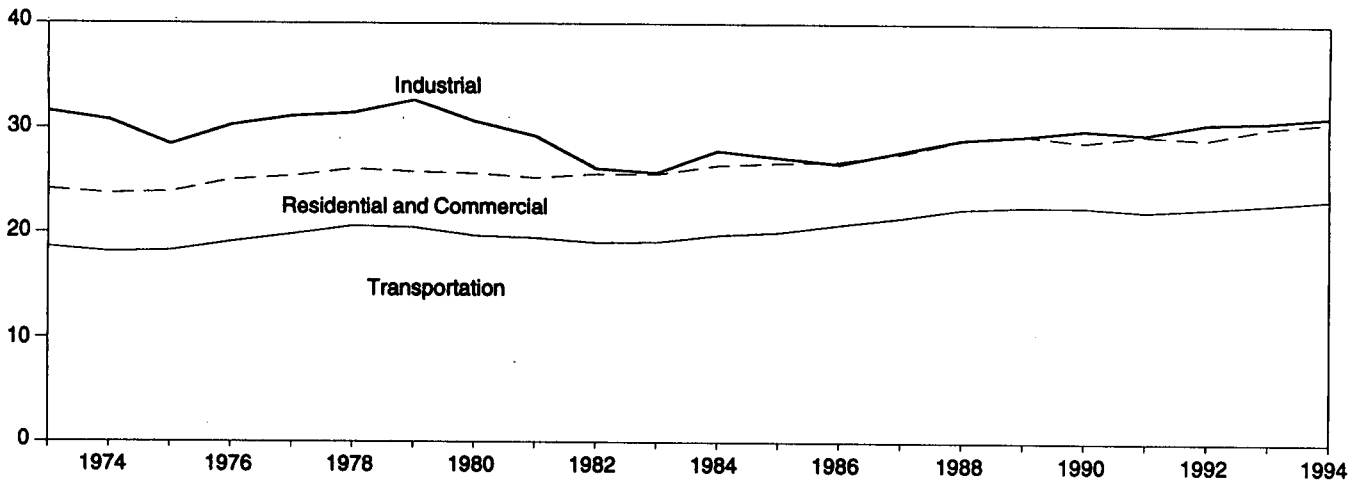
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

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

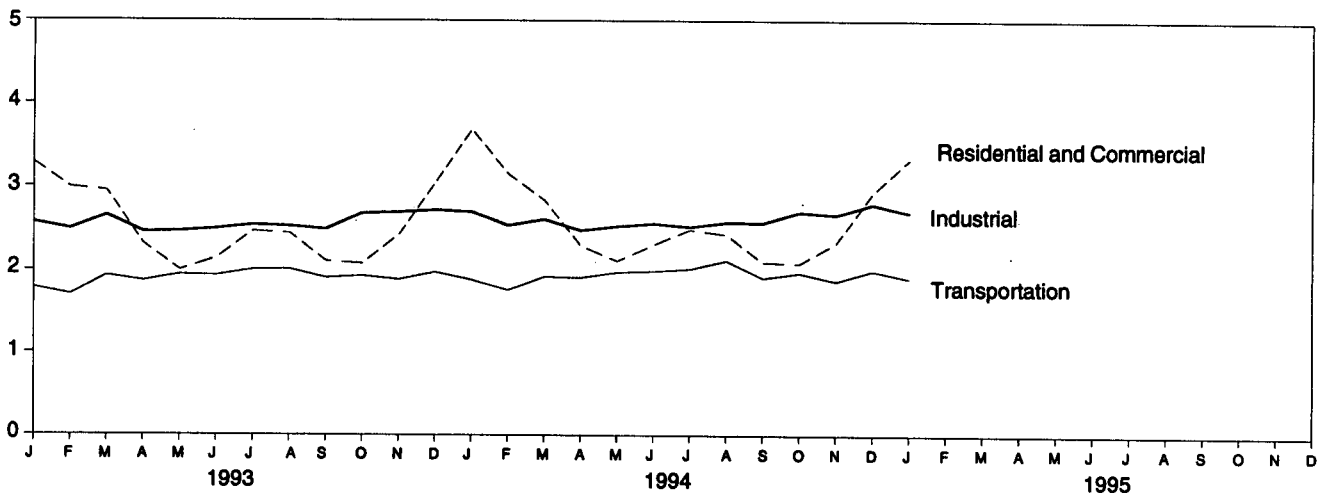
<sup>1</sup>Percentage changes are based on numbers in the following tables.

**Figure 2.1 Energy Consumption by End-Use Sector**  
(Quadrillion Btu)

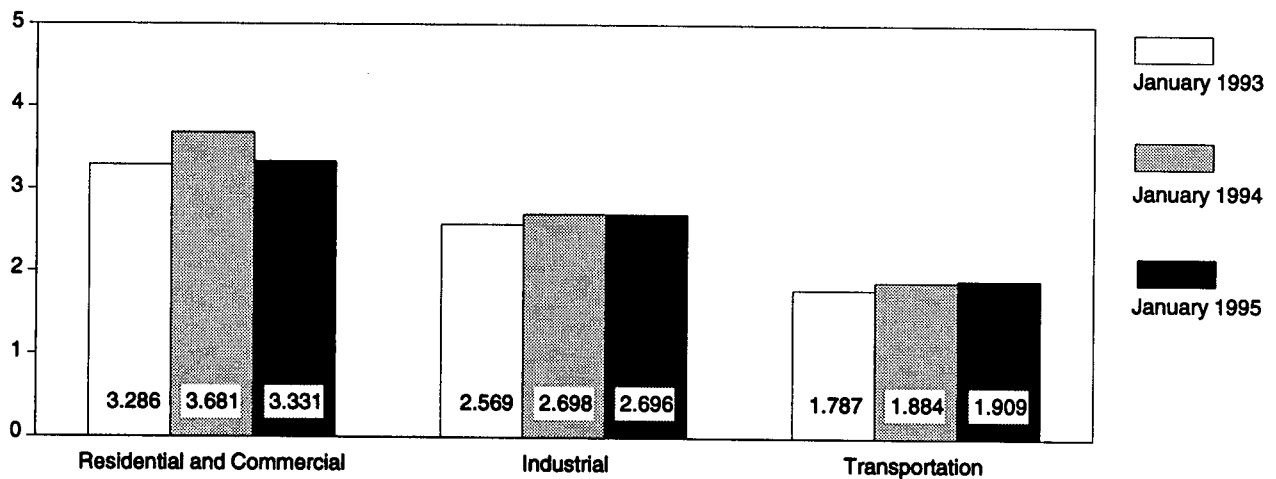
**Overview, 1973-1994**



**Overview, Monthly**



**Overview, January**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 2.2.

**Table 2.2 Energy Consumption by End-Use Sector**  
(Quadrillion Btu)

	Residential and Commercial		Industrial		Transportation		Net	Total <sup>a</sup>
	Net	Total	Net	Total	Net	Total		
1973 Total .....	15.766	24.143	25.917	31.528	18.584	18.605	60.274	74.282
1974 Total .....	15.246	23.725	24.994	30.694	18.095	18.117	58.341	72.543
1975 Total .....	15.200	23.899	22.737	28.402	18.219	18.244	56.157	70.546
1976 Total .....	15.997	25.018	24.038	30.236	19.076	19.101	59.119	74.362
1977 Total .....	15.828	25.384	24.593	31.077	19.794	19.819	60.223	76.288
1978 Total .....	16.023	26.084	24.637	31.392	20.589	20.611	61.251	78.089
1979 Total .....	15.709	25.808	25.679	32.616	20.447	20.472	61.836	78.898
1980 Total .....	15.075	25.655	23.854	30.606	19.669	19.695	58.597	75.955
1981 Total .....	14.541	25.241	22.533	29.240	19.480	19.507	56.556	73.990
1982 Total .....	14.629	25.629	20.020	26.145	19.043	19.069	53.697	70.848
1983 Total .....	14.395	25.627	19.401	25.759	19.109	19.135	52.907	70.524
1984 Total .....	14.964	26.474	21.184	27.867	19.773	19.801	55.923	74.144
1985 Total .....	14.839	26.704	20.520	27.214	20.036	20.067	55.391	73.981
1986 Total .....	14.791	26.852	20.101	26.630	20.781	20.812	55.676	74.297
1987 Total .....	15.146	27.623	21.116	27.826	21.419	21.448	57.678	76.894
1988 Total .....	16.004	28.925	22.085	28.986	22.274	22.305	60.366	80.218
1989 Total .....	16.261	29.404	22.272	29.353	22.530	22.561	61.070	81.325
1990 Total .....	15.568	28.786	22.841	29.936	22.504	22.535	60.921	81.265
1991 Total .....	15.986	29.424	22.549	29.570	22.090	22.120	60.626	81.116
1992 Total .....	16.090	29.100	23.498	30.577	22.432	22.461	62.025	82.144
1993 January .....	2.081	3.286	2.007	2.569	1.785	1.787	5.871	7.640
February .....	1.946	2.986	1.965	2.490	1.700	1.702	5.609	7.175
March .....	1.859	2.947	2.085	2.650	1.928	1.931	5.871	7.526
April .....	1.380	2.315	1.916	2.456	1.866	1.868	5.159	6.637
May .....	1.012	2.000	1.858	2.464	1.943	1.945	4.811	6.406
June .....	<sup>R</sup> 982	<sup>R</sup> 2,140	<sup>R</sup> 1,855	<sup>R</sup> 2,494	<sup>R</sup> 1,933	<sup>R</sup> 1,935	<sup>R</sup> 4,771	<sup>R</sup> 6,570
July .....	1.058	2.466	1.894	2.539	2.003	2.006	4.960	7.015
August .....	1.058	2.442	1.887	2.524	2.008	2.011	4.958	6.981
September .....	1.013	2.108	<sup>R</sup> 1,951	2.489	1.903	1.906	4.868	6.503
October .....	1.078	2.079	2.107	2.679	1.928	1.930	5.111	6.687
November .....	1.398	2.422	2.105	2.692	1.884	1.886	<sup>R</sup> 5,387	7,000
December .....	1.870	3.043	2.124	2.719	1.974	1.976	<sup>R</sup> 5,966	7,737
Total .....	16.734	30.231	23.756	30.766	22.856	22.883	63.341	83.877
1994 January .....	<sup>R</sup> 2,376	<sup>R</sup> 3,681	<sup>R</sup> 2,121	<sup>R</sup> 2,698	1.882	1.884	6.378	<sup>R</sup> 8,262
February .....	<sup>R</sup> 2,082	<sup>R</sup> 3,151	<sup>R</sup> 2,025	<sup>R</sup> 2,536	1.759	1.761	5.863	<sup>R</sup> 7,445
March .....	<sup>R</sup> 1,749	<sup>R</sup> 2,838	<sup>R</sup> 2,035	<sup>R</sup> 2,609	<sup>R</sup> 1,919	1.922	<sup>R</sup> 5,701	<sup>R</sup> 7,366
April .....	<sup>R</sup> 1,320	2,294	<sup>R</sup> 1,921	2,478	1,910	1,912	5,148	<sup>R</sup> 6,680
May .....	<sup>R</sup> 1,074	<sup>R</sup> 2,113	<sup>R</sup> 1,909	<sup>R</sup> 2,528	1,975	1,977	<sup>R</sup> 4,956	<sup>R</sup> 6,616
June .....	<sup>R</sup> 1,039	<sup>R</sup> 2,308	1,907	<sup>R</sup> 2,562	1,990	1,992	<sup>R</sup> 4,937	<sup>R</sup> 6,864
July .....	<sup>R</sup> 1,098	<sup>R</sup> 2,491	<sup>R</sup> 1,900	<sup>R</sup> 2,524	2,018	2,020	<sup>R</sup> 5,019	<sup>R</sup> 7,038
August .....	1,094	<sup>R</sup> 2,431	<sup>R</sup> 1,933	<sup>R</sup> 2,579	2,118	2,121	<sup>R</sup> 5,148	<sup>R</sup> 7,133
September .....	<sup>R</sup> 1,006	<sup>R</sup> 2,101	<sup>R</sup> 2,008	<sup>R</sup> 2,573	1,911	1,913	<sup>R</sup> 4,924	<sup>R</sup> 6,587
October .....	<sup>R</sup> 1,063	<sup>R</sup> 2,087	<sup>R</sup> 2,111	<sup>R</sup> 2,701	1,971	1,973	<sup>R</sup> 5,143	<sup>R</sup> 6,760
November .....	<sup>R</sup> 1,307	<sup>R</sup> 2,331	<sup>R</sup> 2,076	2,669	1,874	1,876	<sup>R</sup> 5,253	<sup>R</sup> 6,873
December .....	<sup>R</sup> 1,768	<sup>R</sup> 2,930	<sup>R</sup> 2,201	<sup>R</sup> 2,796	<sup>R</sup> 1,998	2,000	<sup>R</sup> 5,963	<sup>R</sup> 7,722
Total .....	<sup>R</sup> 16,976	<sup>R</sup> 30,755	<sup>R</sup> 24,148	<sup>R</sup> 31,254	23,325	23,353	<sup>R</sup> 64,432	<sup>R</sup> 85,345
1995 January .....	2.102	3.331	2.115	2.696	1.907	1.909	6.121	7.934

<sup>a</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, 3.0 quadrillion Btu of renewable energy consumed by U.S. electric utilities to generate electricity for distribution is included, but an estimated 3.0 quadrillion Btu of renewable energy used by other sectors is not included.

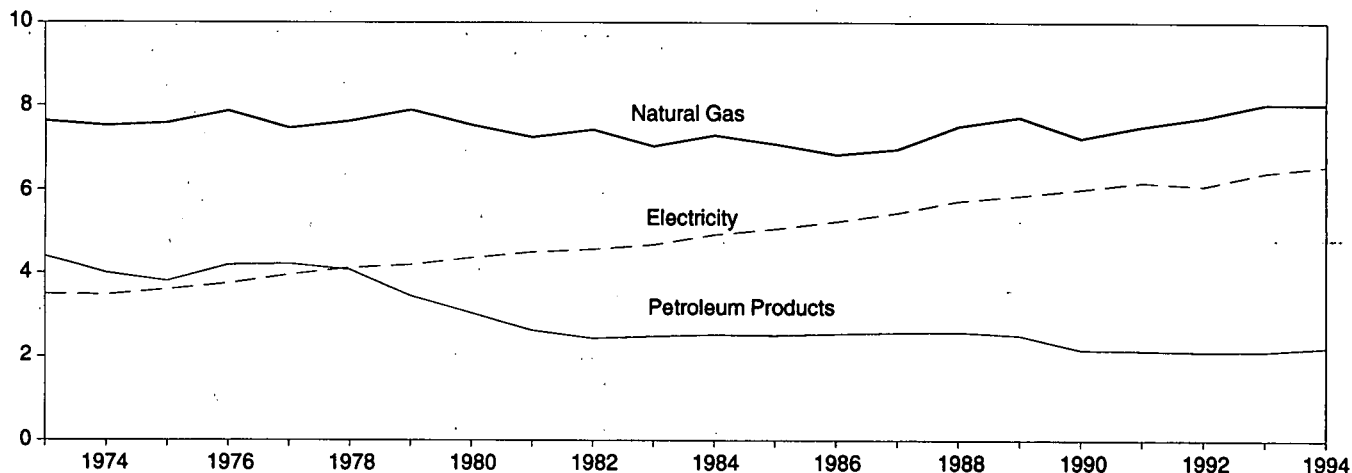
R=Revised data.

Notes: • Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors for natural gas and coal. • Geographic coverage is the 50 States and the District of Columbia. Additional Notes and Sources: See end of section.

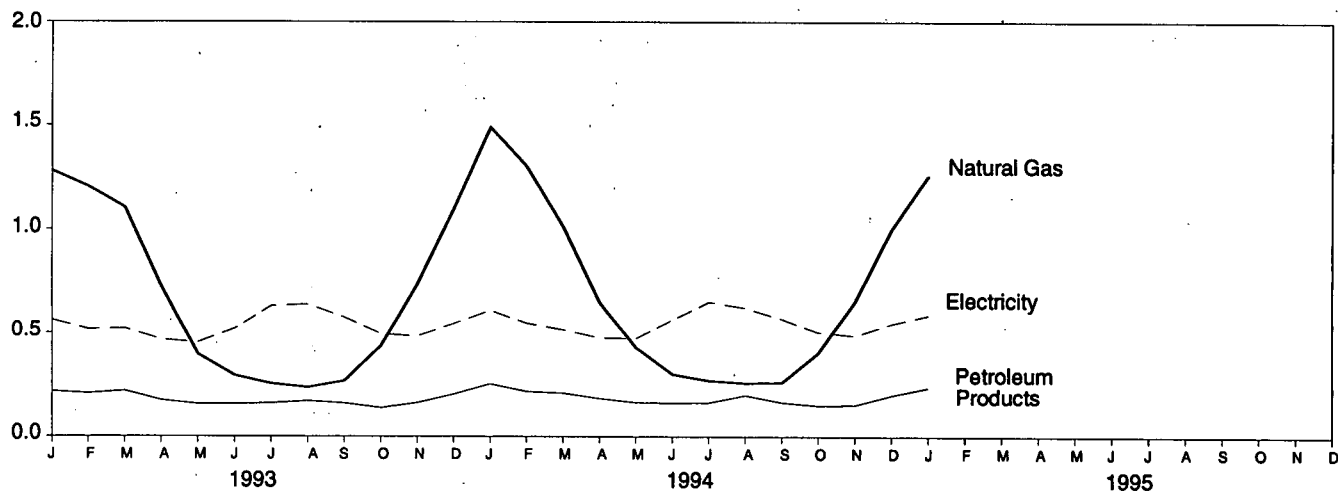
# Figure 2.2 Residential and Commercial Energy Consumption

(Quadrillion Btu)

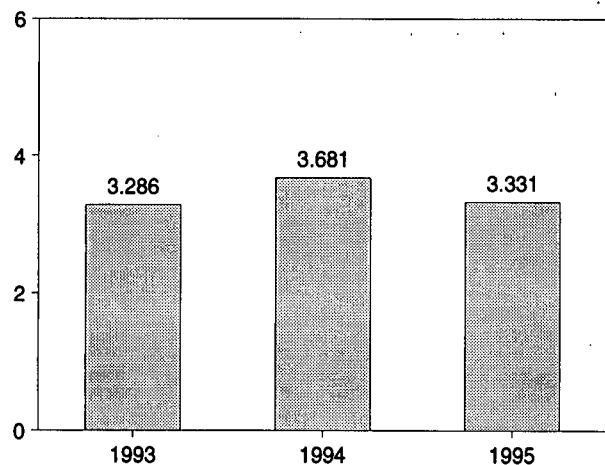
## By Major Sources, 1973-1994



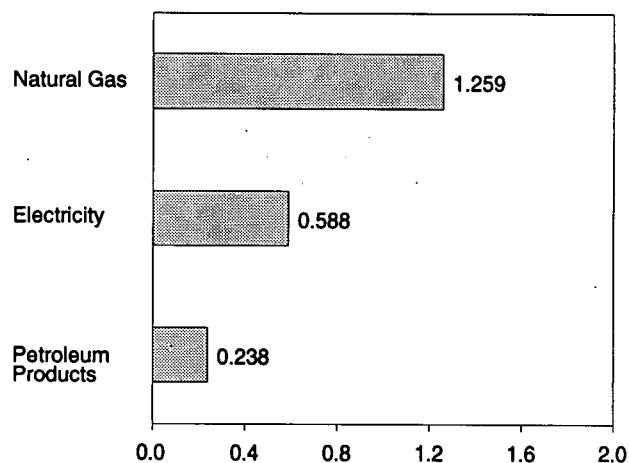
## By Major Sources, Monthly



## Total, January



## By Major Sources, January 1995



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 2.3.



**Table 2.3 Residential and Commercial Energy Consumption**  
(Quadrillion Btu)

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	0.254	7.626	4.391	12.270	3.495	15.766	8.377	24.143
1974 Total	.257	7.518	3.996	11.771	3.475	15.246	8.480	23.725
1975 Total	.209	7.581	3.805	11.595	3.604	15.200	8.700	23.899
1976 Total	.203	7.866	4.181	12.250	3.747	15.997	9.021	25.018
1977 Total	.205	7.461	4.206	11.873	3.955	15.828	9.556	25.384
1978 Total	.214	7.624	4.070	11.908	4.116	16.023	10.061	26.084
1979 Total	.187	7.891	3.448	11.525	4.184	15.709	10.100	25.808
1980 Total	.145	7.540	3.035	10.721	4.355	15.075	10.580	25.655
1981 Total	.167	7.243	2.634	10.043	4.497	14.541	10.700	25.241
1982 Total	.187	7.427	2.449	10.063	4.566	14.629	11.000	25.629
1983 Total	.192	7.024	2.498	9.715	4.680	14.395	11.232	25.627
1984 Total	.209	7.292	2.535	10.036	4.928	14.964	11.510	26.474
1985 Total	.176	7.079	2.522	9.777	5.061	14.839	11.865	26.704
1986 Total	.176	6.825	2.555	9.556	5.235	14.791	12.061	26.852
1987 Total	.162	6.954	2.587	9.703	5.443	15.146	12.477	27.623
1988 Total	.168	7.513	2.600	10.280	5.724	16.004	12.920	28.925
1989 Total	.146	7.731	2.525	10.402	5.859	16.261	13.143	29.404
1990 Total	.156	7.225	2.173	9.553	6.015	15.568	13.218	28.786
1991 Total	.141	7.510	2.154	9.805	6.180	15.986	13.439	29.424
1992 Total	.142	7.726	2.126	9.993	6.096	16.090	13.010	29.100
1993 January	.015	1.281	.219	1.516	.565	2.081	1.204	3.286
February	.015	1.204	.209	1.428	.518	1.946	1.040	2.986
March	.012	1.104	.221	1.337	.522	1.859	1.088	2.947
April	.014	.724	.176	.914	.466	1.380	.935	2.315
May	.007	.395	.157	.559	.453	1.012	.987	2.000
June	.010	.295	R .157	R .461	.521	R .982	R 1.157	R 2.140
July	.010	.256	.161	.427	.632	1.058	1.408	2.466
August	.009	.238	.172	.419	.639	1.058	1.384	2.442
September	.007	.269	.161	.436	.577	1.013	1.095	2.108
October	.009	.435	.138	.583	.495	1.078	1.002	2.079
November	.015	.738	.163	.916	.483	1.398	1.024	2.422
December	.021	1.098	.205	1.324	.546	1.870	R 1.174	3.043
Total	.143	8.039	2.136	10.318	6.416	16.734	13.497	30.231
1994 January	.020	1.489	.255	R 1.765	R .611	R 2.376	R 1.305	R 3.681
February	.016	1.300	.218	R 1.534	R .548	R 2.082	R 1.069	R 3.151
March	.012	1.013	.210	1.235	R .515	R 1.749	R 1.089	R 2.838
April	R .011	R .649	.185	R .845	R .475	R 1.320	R .974	2.294
May	R .008	R .429	.165	R .602	.472	R 1.074	R 1.039	R 2.113
June	R .009	R .302	.162	R .474	R .565	R 1.039	R 1.269	R 2.308
July	.011	R .272	R .164	R .447	R .652	R 1.098	R 1.393	R 2.491
August	.009	R .260	.201	R .470	R .624	1.094	R 1.337	R 2.431
September	.007	R .263	.166	.436	R .570	R 1.006	R 1.095	R 2.101
October	R .008	.403	R .150	R .560	R .503	R 1.063	R 1.024	R 2.087
November	R .013	.655	R .153	R .820	R .486	R 1.307	R 1.025	R 2.331
December	R .019	R 1.002	R .201	R 1.222	.546	R 1.768	R 1.162	R 2.930
Total	R .142	R 8.037	R 2.230	R 10.409	R 6.567	R 16.976	R 13.780	R 30.755
1995 January	.016	1.259	.238	1.514	.588	2.102	1.229	3.331

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>c</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, an estimated 0.7 quadrillion Btu of renewable energy consumed by the U.S. residential and commercial

sectors (primarily the residential sector) is not included.

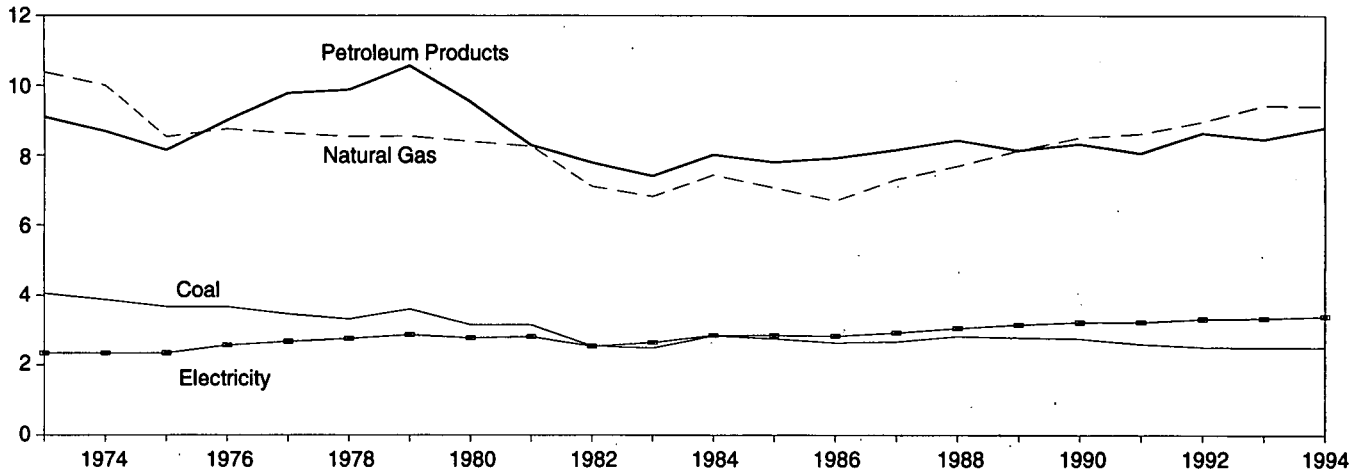
R=Revised data.

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

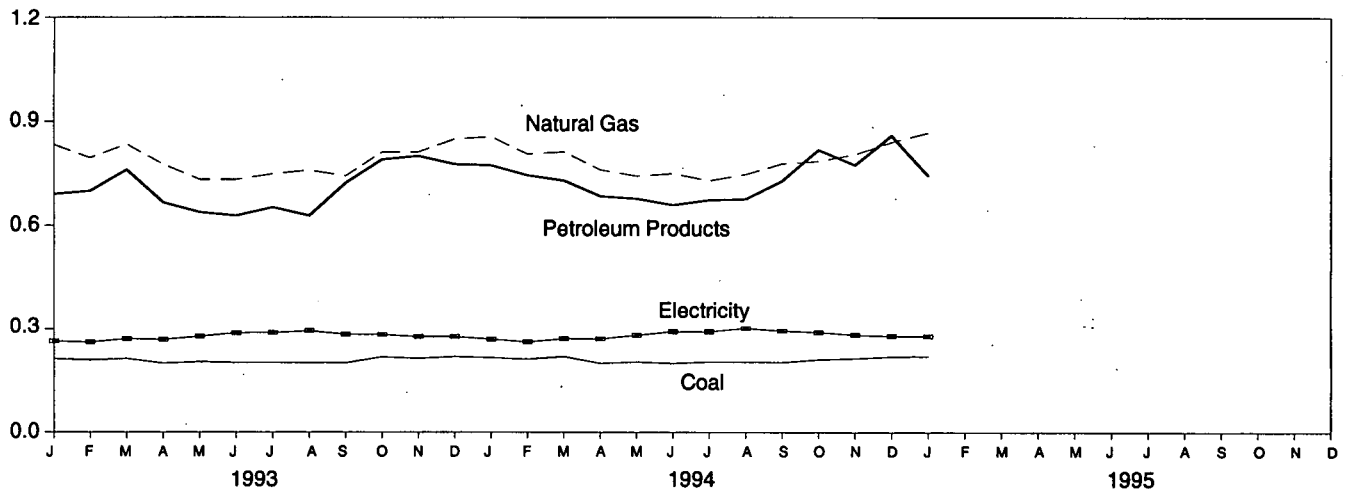
Additional Notes and Sources: See end of section.

# Figure 2.3 Industrial Energy Consumption (Quadrillion Btu)

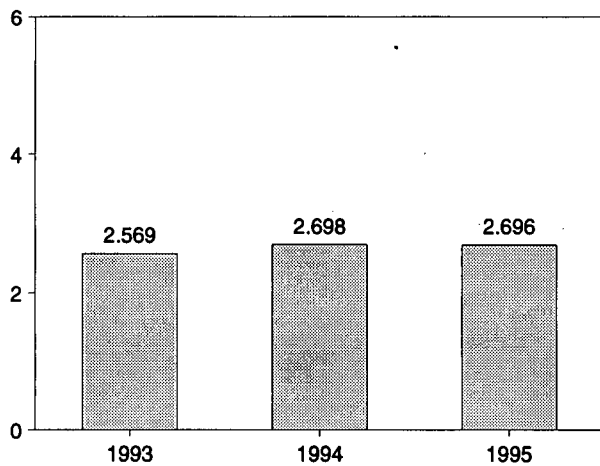
## By Major Sources, 1973-1994



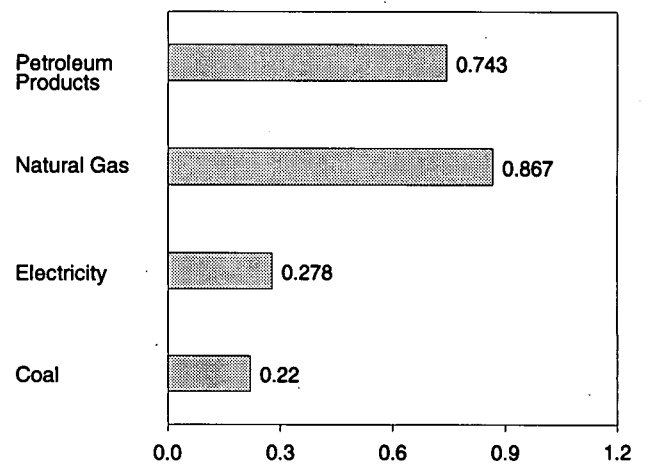
## By Major Sources, Monthly



## Total, January



## By Major Sources, January 1995



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 2.4.

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

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Hydro-electric Power	Net Imports of Coal Coke	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	4.057	10.388	9.104	0.035	-0.007	23.576	2.341	25.917	5.611	31.528
1974 Total	3.870	10.004	8.694	.033	.056	22.657	2.337	24.994	5.700	30.694
1975 Total	3.667	8.532	8.146	.032	.014	20.391	2.346	22.737	5.665	28.402
1976 Total	3.661	8.762	9.010	.033	(s)	21.465	2.573	24.038	6.198	30.236
1977 Total	3.454	8.635	9.774	.033	.015	21.911	2.682	24.593	6.484	31.077
1978 Total	3.314	8.539	9.867	.032	.125	21.876	2.761	24.637	6.755	31.392
1979 Total	3.593	8.549	10.568	.034	.063	22.807	2.873	25.679	6.936	32.616
1980 Total	3.155	8.395	9.525	.033	-.035	21.073	2.781	23.854	6.752	30.606
1981 Total	3.157	8.257	8.285	.033	-.016	19.715	2.817	22.533	6.707	29.240
1982 Total	2.552	7.121	7.794	.033	-.022	17.479	2.542	20.020	6.125	26.145
1983 Total	2.490	6.826	7.420	.033	-.016	16.753	2.648	19.401	6.359	25.759
1984 Total	2.842	7.448	8.014	.033	-.011	18.325	2.859	21.184	6.683	27.867
1985 Total	2.760	7.080	7.805	.033	-.013	17.665	2.855	20.520	6.694	27.214
1986 Total	2.640	6.690	7.920	.033	-.017	17.267	2.834	20.101	6.529	26.630
1987 Total	2.673	7.323	8.150	.033	.009	18.188	2.928	21.116	6.710	27.826
1988 Total	2.828	7.696	8.430	.033	.040	19.026	3.059	22.085	6.901	28.986
1989 Total	2.787	8.131	8.133	.033	.030	19.113	3.158	22.272	7.082	29.353
1990 Total	2.756	8.502	8.319	.033	.005	19.615	3.226	22.841	7.095	29.936
1991 Total	2.601	8.619	8.057	.033	.009	19.319	3.230	22.549	7.021	29.570
1992 Total	2.515	8.967	8.638	.033	.027	20.180	3.319	23.498	7.079	30.577
1993 January	.213	.833	.690	.003	.004	1.743	.264	2.007	.562	2.569
February	.209	.795	.699	.003	(s)	1.704	.261	1.965	.524	2.490
March	.213	.834	.760	.003	.003	1.814	.271	2.085	.566	2.650
April	.200	.776	.666	.003	.002	1.647	.269	1.916	.540	2.456
May	.204	.732	.638	.003	.002	1.580	.278	1.858	.606	2.464
June	.202	.732	.628	.003	.003	1.568	.288	1.855	.639	2.494
July	.202	.748	.652	.003	(s)	1.605	.289	1.894	.645	2.539
August	.202	.759	.628	.002	.002	1.593	.294	1.887	.637	2.524
September	.201	.742	.722	.002	-.001	1.667	.284	1.951	.539	2.489
October	.218	.812	.790	.002	.001	1.824	.283	2.107	.572	2.679
November	.214	.812	.800	.002	(s)	1.828	.277	2.105	.587	2.692
December	.219	.849	.776	.002	.002	1.847	.277	2.124	.595	2.719
Total	2.496	9.423	8.453	.032	.017	20.422	3.334	23.756	7.010	30.766
1994 January	R .216	.855	.773	.003	.004	R 1.851	R .270	R 2.121	R .577	R 2.698
February	R .212	.806	.744	.003	-.001	R 1.763	R .262	R 2.025	R .511	R 2.536
March	R .219	R .812	R .729	.003	.002	R 1.764	R .271	R 2.035	R .574	R 2.609
April	R .200	.760	.684	.003	.003	R 1.650	R .271	R 1.921	R .557	2.478
May	R .204	.742	.677	.003	.002	R 1.628	R .281	R 1.909	R .619	R 2.528
June	R .200	R .749	R .659	.003	.003	R 1.615	R .292	R 1.907	R .655	R 2.562
July	R .204	.729	.673	.003	(s)	R 1.609	R .292	R 1.900	R .624	R 2.524
August	R .204	R .747	.676	.002	.002	R 1.632	R .302	R 1.933	R .646	R 2.579
September	R .203	.778	.728	.002	.003	R 1.714	R .294	R 2.008	R .565	R 2.573
October	R .211	.785	.818	.002	.005	R 1.821	R .290	R 2.111	R .591	R 2.701
November	R .214	R .805	R .774	.002	-.001	R 1.794	R .282	R 2.076	R .593	2.669
December	R .219	R .840	R .859	.002	.002	R 1.922	.279	R 2.201	.594	R 2.796
Total	R 2.506	R 9.407	R 8.794	.032	.024	R 20.762	R 3.386	R 24.148	R 7.105	R 31.254
1995 January	.220	.867	.743	.003	.004	1.837	.278	2.115	.581	2.696

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>c</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, an estimated 2.3 quadrillion Btu of renewable energy consumed by the U.S. industrial sector (primarily the pulp and paper industry) is not included.

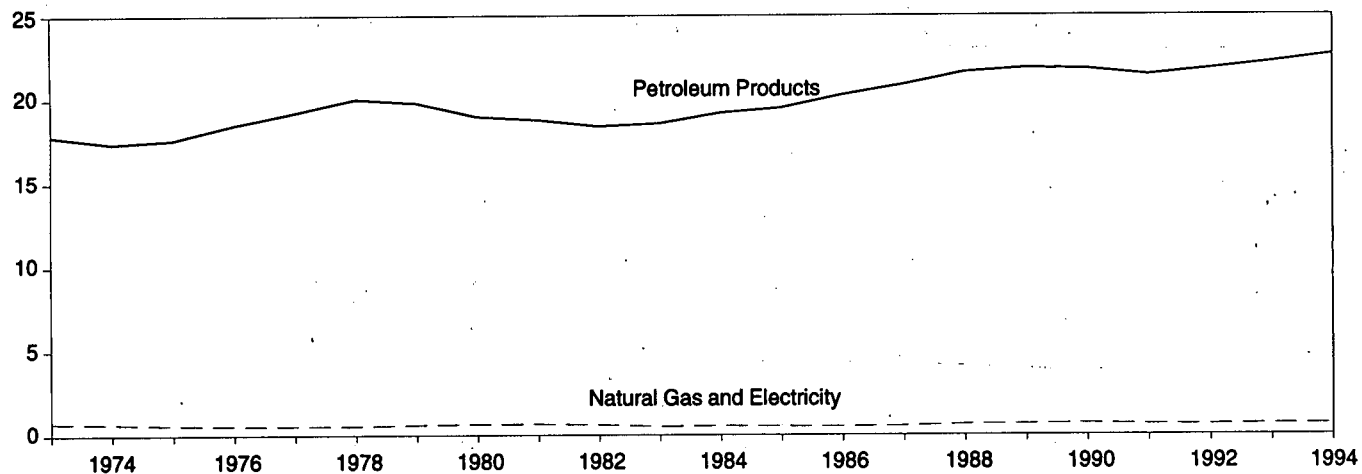
R=Revised data. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

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

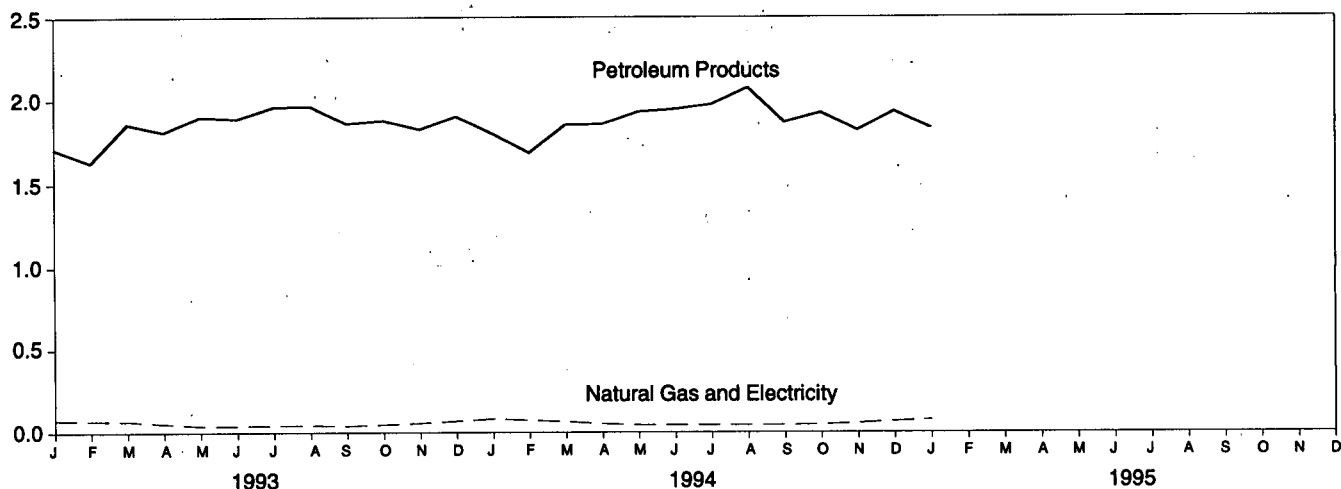
Additional Notes and Sources: See end of section.

**Figure 2.4 Transportation Energy Consumption**  
(Quadrillion Btu)

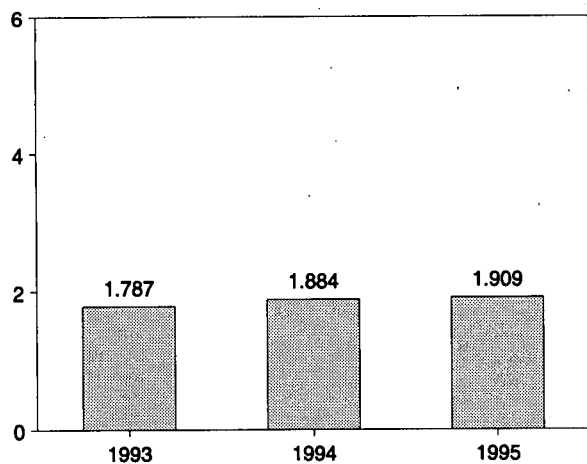
By Major Sources, 1973-1994



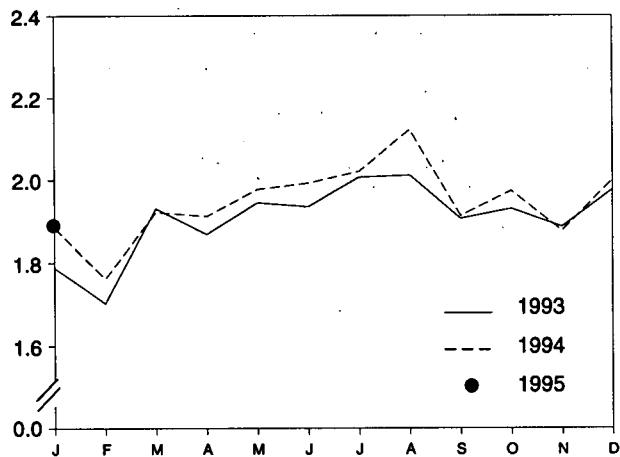
By Major Sources, Monthly



Total, January



Total, Monthly



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 2.5.

**Table 2.5 Transportation Energy Consumption**  
(Quadrillion Btu)

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Primary Consumption	Electricity	Net Consumption	Electrical System Energy Losses	Total Consumption <sup>c</sup>
1973 Total	0.003	0.743	17.831	18.576	0.008	18.584	0.020	18.605
1974 Total	.002	.685	17.399	18.086	.009	18.095	.022	18.117
1975 Total	.001	.595	17.614	18.209	.010	18.219	.025	18.244
1976 Total	(s)	.559	18.506	19.065	.010	19.076	.025	19.101
1977 Total	(s)	.543	19.241	19.784	.010	19.794	.025	19.819
1978 Total	(d)	.539	20.041	20.580	.009	20.589	.022	20.611
1979 Total	(d)	.612	19.825	20.436	.010	20.447	.025	20.472
1980 Total	(d)	.650	19.008	19.658	.011	19.669	.026	19.695
1981 Total	(d)	.658	18.811	19.469	.011	19.480	.026	19.507
1982 Total	(d)	.612	18.420	19.032	.011	19.043	.026	19.069
1983 Total	(d)	.505	18.593	19.098	.011	19.109	.026	19.135
1984 Total	(d)	.545	19.216	19.761	.012	19.773	.028	19.801
1985 Total	(d)	.519	19.504	20.024	.013	20.036	.030	20.067
1986 Total	(d)	.499	20.369	20.768	.013	20.781	.031	20.812
1987 Total	(d)	.535	20.371	21.406	.013	21.419	.029	21.448
1988 Total	(d)	.632	20.229	22.260	.014	22.274	.031	22.305
1989 Total	(d)	.649	21.668	22.517	.014	22.530	.031	22.561
1990 Total	(d)	.680	21.810	22.490	.014	22.504	.031	22.535
1991 Total	(d)	.620	21.456	22.076	.014	22.090	.030	22.120
1992 Total	(d)	.606	21.812	22.418	.014	22.432	.029	22.461
1993 January	(d)	.074	1.710	1.784	.001	1.785	.002	1.787
February	(d)	.070	1.629	1.699	.001	1.700	.002	1.702
March	(d)	.069	1.859	1.927	.001	1.928	.002	1.931
April	(d)	.053	1.812	1.865	.001	1.866	.002	1.868
May	(d)	.040	1.902	1.942	.001	1.943	.002	1.945
June	(d)	.040	1.891	1.931	.001	1.933	.002	1.935
July	(d)	.042	1.960	2.002	.001	2.003	.003	2.006
August	(d)	.043	1.965	2.007	.001	2.008	.003	2.011
September	(d)	.040	1.862	1.902	.001	1.903	.002	1.906
October	(d)	.047	1.880	1.927	.001	1.928	.002	1.930
November	(d)	.056	1.827	1.883	.001	1.884	.002	1.886
December	(d)	.068	1.904	1.972	.001	1.974	.002	1.976
Total	(d)	.642	22.201	22.842	.013	22.856	.028	22.883
1994 January	(d)	.080	1.801	1.881	.001	1.882	.002	1.884
February	(d)	.072	1.687	1.758	.001	1.759	.002	1.761
March	(d)	.064	1.854	<sup>R</sup> 1.918	.001	<sup>R</sup> 1.919	.002	1.922
April	(d)	.051	1.857	1.909	.001	1.910	.002	1.912
May	(d)	.044	1.930	1.974	.001	1.975	.002	1.977
June	(d)	.044	1.945	1.989	.001	1.990	.003	1.992
July	(d)	.044	1.973	2.017	.001	2.018	.003	2.020
August	(d)	.044	2.073	2.117	.001	2.118	.003	2.121
September	(d)	.043	1.867	1.910	.001	1.911	.002	1.913
October	(d)	.046	1.924	1.970	.001	1.971	.002	1.973
November	(d)	.054	1.819	1.873	.001	1.874	.002	1.876
December	(d)	.065	1.931	<sup>R</sup> 1.997	.001	<sup>R</sup> 1.998	.002	2.000
Total	(d)	<sup>R</sup> .651	<sup>R</sup> 22.661	23.312	.013	23.325	.028	23.353
1995 January	(d)	.074	1.832	1.906	.001	1.907	.002	1.909

<sup>a</sup> Pipeline fuel only, including supplemental gaseous fuels.

<sup>b</sup> Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds.

<sup>c</sup> Due to a lack of consistent historical data, some renewable energy sources are not included. For example, in 1992, an estimated 0.1 quadrillion Btu of renewable energy consumed by the U.S. transportation sector is not included.

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

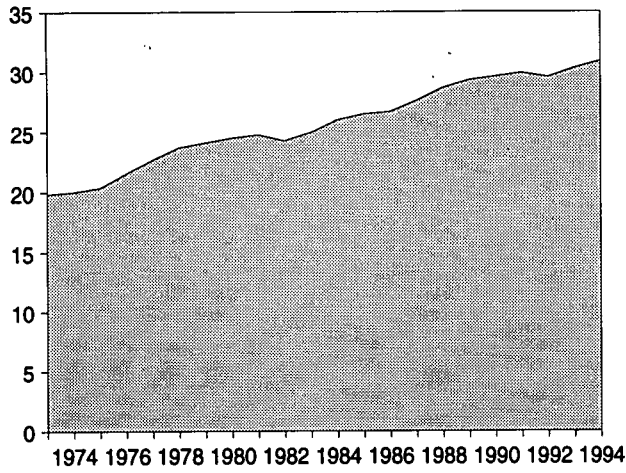
R=Revised data. (s)=Less than 0.5 trillion Btu.

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

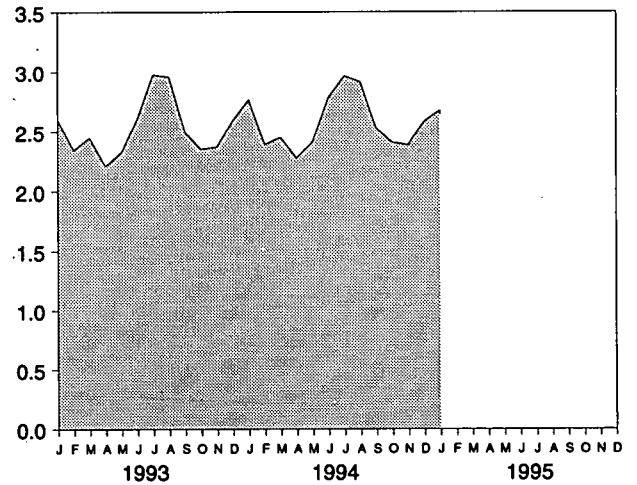
Additional Notes and Sources: See end of section.

**Figure 2.5 Energy Input at Electric Utilities**  
(Quadrillion Btu)

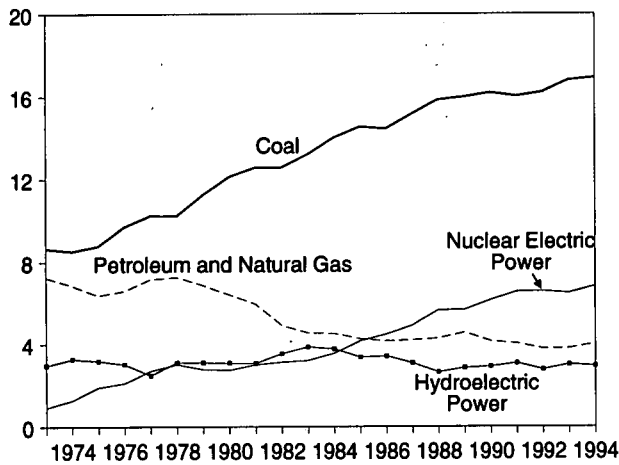
**Total, 1973-1994**



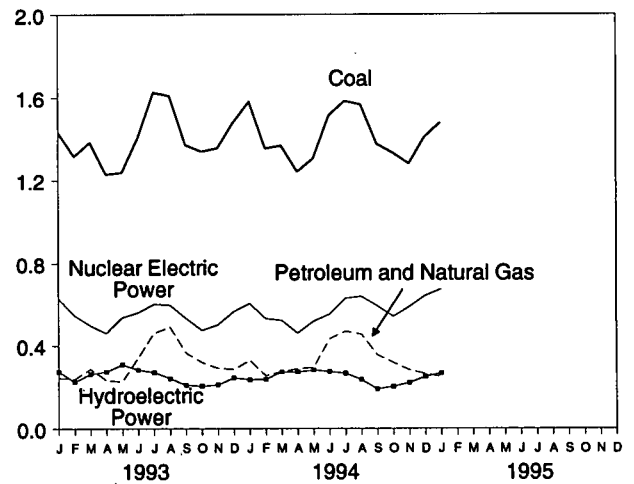
**Total, Monthly**



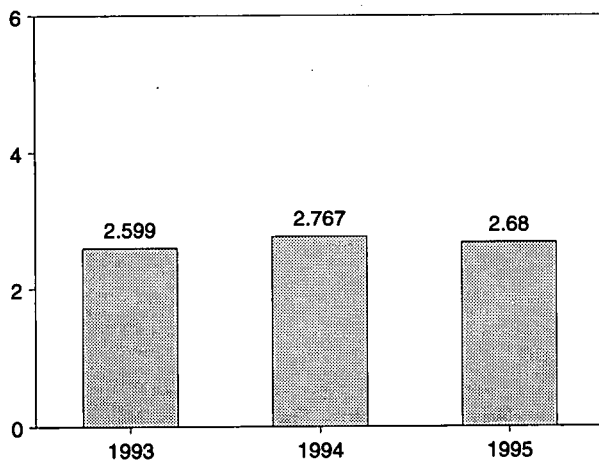
**By Major Sources, 1973-1994**



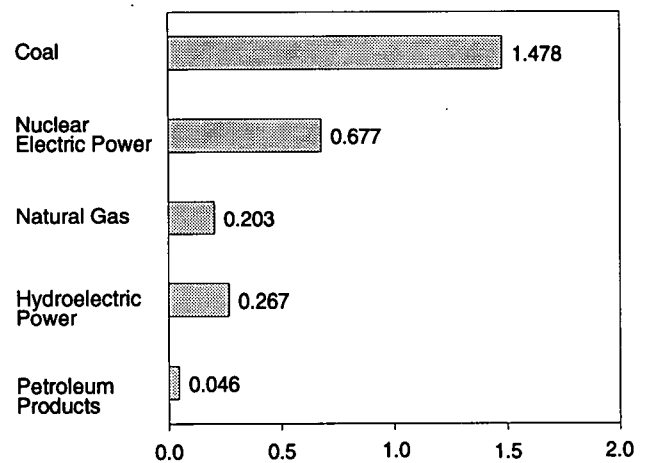
**By Major Sources, Monthly**



**Total, January**



**By Major Sources, January 1995**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 2.6.

**Table 2.6 Energy Input at Electric Utilities**  
(Quadrillion Btu)

	Coal	Natural Gas <sup>a</sup>	Petroleum Products <sup>b</sup>	Nuclear Electric Power	Hydro-electric Power <sup>c</sup>	Geothermal Energy	Other <sup>d</sup>	Total
1973 Total .....	8.658	3.748	3.515	0.910	2.975	0.043	0.003	19.852
1974 Total .....	8.534	3.519	3.365	1.272	3.276	.053	.003	20.022
1975 Total .....	8.786	3.240	3.166	1.900	3.187	.070	.002	20.350
1976 Total .....	9.720	3.152	3.477	2.111	3.032	.078	.003	21.574
1977 Total .....	10.262	3.284	3.901	2.702	2.482	.077	.005	22.713
1978 Total .....	10.238	3.297	3.987	3.024	3.110	.064	.003	23.724
1979 Total .....	11.260	3.613	3.283	2.776	3.107	.084	.005	24.128
1980 Total .....	12.123	3.810	2.634	2.739	3.085	.110	.005	24.505
1981 Total .....	12.583	3.768	2.202	3.008	3.072	.123	.004	24.760
1982 Total .....	12.582	3.342	1.568	3.131	3.539	.105	.003	24.270
1983 Total .....	13.213	2.998	1.544	3.203	3.868	.129	.004	24.956
1984 Total .....	14.020	3.220	1.286	3.553	3.767	.165	.009	26.020
1985 Total .....	14.542	3.160	1.090	4.149	3.385	.198	.015	26.519
1986 Total .....	14.444	2.691	1.452	4.471	3.413	.219	.012	26.703
1987 Total .....	15.173	2.935	1.257	4.906	3.084	.229	.016	27.600
1988 Total .....	15.850	2.709	1.563	5.661	2.630	.217	.017	28.648
1989 Total .....	15.988	2.871	1.685	5.677	2.848	.197	.020	29.286
1990 Total .....	16.189	2.882	1.250	6.161	2.914	.181	.021	29.599
1991 Total .....	16.028	2.856	1.178	6.579	3.083	.170	.021	29.915
1992 Total .....	16.211	2.826	.951	6.807	2.780	.170	.022	29.547
1993 January .....	1.432	.168	.077	.631	.275	.014	.002	2.599
February .....	1.317	.165	.074	.548	.226	.013	.002	2.346
March .....	1.384	.198	.090	.498	.263	.014	.002	2.450
April .....	1.230	.178	.055	.461	.275	.014	.002	2.214
May .....	1.239	.171	.056	.538	.310	.012	.001	2.328
June .....	1.406	.260	.083	.562	.284	.012	.001	2.608
July .....	1.625	.341	.121	.604	.272	.013	.001	2.977
August .....	1.609	.365	.126	.600	.242	.014	.002	2.957
September .....	1.372	.264	.102	.534	.210	.013	.002	2.497
October .....	1.340	.240	.080	.475	.205	.013	.002	2.355
November .....	1.356	.213	.079	.501	.211	.013	.002	2.374
December .....	1.480	.178	.108	.567	.245	.013	.002	2.594
Total .....	16.790	2.741	1.052	6.519	3.017	.158	.021	30.299
1994 January .....	1.580	.174	.155	R .607	.236	.013	.002	R 2.767
February .....	1.354	.152	.103	R .532	.237	.012	.002	2.393
March .....	1.368	R .190	.084	R .523	.273	.012	.002	R 2.452
April .....	1.242	R .208	.081	.461	.273	.012	.002	2.280
May .....	1.305	.221	.074	.518	.282	.012	.002	2.414
June .....	1.513	.326	.106	.553	.275	.011	.002	2.785
July .....	1.583	.370	.100	.632	.266	.012	.002	R 2.964
August .....	1.566	R .391	.064	.642	R .235	.013	.002	R 2.912
September .....	1.375	.302	R .053	.594	.190	.012	.002	2.528
October .....	1.333	.270	.048	.542	.203	.012	.002	2.410
November .....	R 1.280	R .236	.047	.590	.221	.012	.002	R 2.389
December .....	R 1.410	R .212	.052	.646	.250	.012	.002	R 2.585
Total .....	R 16.910	R 3.053	R .968	R 6.841	R 2.941	.145	.020	R 30.879
1995 January .....	1.478	.203	.046	.677	.267	.009	.001	2.680

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Includes residual and distillate fuel oils, petroleum coke, and small amounts of kerosene and jet fuel.

<sup>c</sup> Includes net imports of electricity.

<sup>d</sup> "Other" is electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy.

R=Revised data.

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

Additional Notes and Sources: See end of section.



# Energy Consumption Notes and Sources

The data in this section of the *Monthly Energy Review (MER)* are obtained initially from a group of energy-related surveys, typically called "supply surveys," conducted by the Energy Information Administration (EIA). Supply surveys are those surveys 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 the 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 the 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. The numbered notes that follow elaborate on essential information in Section 2.

**1. Total Energy Consumed:** Total energy consumed includes coal, natural gas (including supplemental gaseous fuels), petroleum products supplied, electric utility and industrial generation of hydroelectric power, net imports of electricity generated from hydroelectric power, and electricity generated from nuclear power. Total energy consumed also includes electricity generated from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available.

**2. Economic Sectors:** Energy use is assigned to the major economic sectors according to the following guidelines as closely as possible:

- Residential—All private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector.
- Commercial—Business establishments that are not engaged in transportation or in manufacturing or

other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial.

- Industrial—Manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in this sector range from steel mills to small farms to companies assembling electronic components.
- Transportation—Private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.
- Electric Utility—Privately and publicly owned establishments that generate, transmit, distribute, and sell electricity primarily for use by the public and meet the definition of an electric utility. Non-utility power producers are not included in the electric utility sector.

Although the end-use allocations are made according to these aggregations as closely as possible, some data are collected by using different classifications. For example, data on agricultural use of natural gas are collected and reported in the commercial sector, rather than in the industrial sector. Since agricultural use of natural gas cannot be identified separately, it is included in the commercial sector in this report. 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.

**3. Conversion Factors:** See the conversion factors listed in Appendix A.

**4. Coal:** Coal is anthracite, bituminous coal (including subbituminous coal), and lignite. Sources:

- 1973-September 1977: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys*.
- Electric Utilities—October 1977 forward: Energy Information Administration (EIA), Form EIA-759 (formerly Federal Power Commission (FPC) Form FPC-4), "Monthly Power Plant Report."
- Other Industrial—October 1977-December 1979: EIA, Form EIA-3, "Monthly Coal Consumption Report - Manufacturing Plants"; January 1980 for-

ward: EIA, Form EIA-3, "Quarterly Coal Consumption Report - Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.

- **Coke Plants**—October 1977-December 1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981-December 1984: EIA, Form EIA-5/5A, "Coke Plant Report - Quarterly/Annual Supplement"; January 1985 forward: EIA, Form EIA-5/5A, "Coke Plant Report - Quarterly."
- **Residential and Commercial**—October 1977-December 1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers - Upper Lake Docks"; January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report," quarterly.

**5. Natural Gas:** Natural gas consumption by end use is based on data presented in Table 4.4 of this report. For Section 2 calculations, lease and plant fuel consumption are added to industrial deliveries, and pipeline fuel represents transportation use of natural gas. Values in Btu are derived by using the conversion factors provided in Appendix A. Sources:

- 1973-1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
- 1976-1978: EIA, *Energy Data Reports*, "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979*.
- 1980-1992: EIA, *Natural Gas Annual*.
- 1993: EIA, *Natural Gas Monthly*.
- **Electric Utilities**—1973-1976: Form FPC-4, "Monthly Power Plant Report"; 1977-1981: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report," residential and commercial monthly sales data for 1973-1979, which are used to estimate monthly consumption values from EIA annual consumption values.

**6. Petroleum:** Petroleum consumption by end use is the sum of all individual petroleum products estimated to be consumed in each end-use sector. First, total consumption by product is determined. Petroleum consumption in this section of the *Monthly Energy Review (MER)* is the series called "petroleum products supplied" in Section 3. Sources for petroleum products supplied by individual products are:

- 1973-1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
- 1976-1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
- 1981-1993: EIA, *Petroleum Supply Annual*.
- 1994 and 1995: EIA, *Petroleum Supply Monthly*.

Specific petroleum products' end-use allocation procedures follow:

- **Aviation Gasoline**—All product supplied is assigned to the transportation sector.
- **Asphalt**—All product supplied is assigned to the industrial sector.
- **Distillate Fuel**—Product supplied is assigned to electric utilities and non-electric utilities as follows:

#### *Electric Utilities, All Periods.*

For 1973-1979, consumption of distillate fuel is assumed to be the amount of petroleum (minus small amounts of kerosene and kerosene-type jet fuel deliveries) consumed in gas turbine and internal combustion plants. For 1980 forward, consumption of distillate fuel is assumed to be the amount of light oil (minus small amounts of kerosene deliveries through 1982) consumed at electric utilities. (See Table 7.3)

Sources: 1973-September 1977: FPC, Form FPC-4, "Monthly Power Plant Report"; October 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

#### *Sectors Other Than Electric Utilities, Annual Estimates Through 1993.*

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

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

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

- Since 1979, the industrial sector adjusted sales total is the sum of the adjusted sales for industrial, farm, oil company, off-highway, diesel, and all other uses. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

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

#### ***Sectors Other Than Electric Utilities, Monthly Estimates Through 1993.***

- 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 1983-1992, 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." The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.

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

#### ***Sectors Other Than Electric Utilities, 1994 and 1995.***

Each month's non-electric utility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the non-electric utility subtotal in the same month in 1993.

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

osene-type and naphtha-type) is consumed by the transportation sector.

- **Kerosene**—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual sales grouped into end-use sectors from EIA's *Fuel Oil and Kerosene Sales* reports (based primarily on data collected by Form EIA-821, previously Form EIA-172), as follows:

- Residential deliveries are taken directly from the *Sales* reports for 1979-1993. Sales for 1993 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

- Commercial sales are directly from the *Sales* reports for 1979-1993. Sales for 1993 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

- Industrial sales are directly from the *Sales* reports for 1979-1993. Sales for 1993 are used as estimates for succeeding periods. Prior to 1979, each year's sales category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

- **Liquefied Petroleum Gases (LPG)**—The annual shares of LPG's total consumption that are estimated to be consumed by each end-use sector are applied to each month's total LPG consumption (i.e., product supplied) to create monthly end-use consumption estimates. The annual end-use shares are calculated in the following manner:

- 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 high of 67 percent in 1981 to a low of 37 percent in 1987.

- 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.

The sources of the annual sales data for creating annual end-use 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.

- 1984-1993: 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.

- 1994 and 1995: The 1993 source is used to estimate succeeding periods.

- **Lubricants**—Total product supplied 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**—Total product supplied monthly is allocated to the major end-use 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**—The portion consumed by electric utilities is from Form EIA-759, "Monthly Power Plant Report" (formerly Form FPC-4). The

remaining petroleum coke is assigned to the industrial sector.

- **Residual Fuel**—Product supplied is assigned to electric utilities and non-electric utilities as follows:

#### *Electric Utilities, All Periods.*

For 1973-1979, consumption of residual fuel is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980 forward, consumption of residual fuel is assumed to be the amount of heavy oil consumed at electric utilities. (See Table 7.3)

Sources: 1973-September 1977: Form FPC-4, "Monthly Power Plant Report"; October 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report"; 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

#### *Sectors Other Than Electric Utilities, Annual Estimates Through 1993.*

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

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

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

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

#### *Sectors Other Than Electric Utilities, Monthly Estimates Through 1993.*

- 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 1983-1992, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

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

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

### **Sectors Other Than Electric Utilities, 1994 and 1995.**

Each month's non-electric utility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the non-electric utility subtotal in the same month in 1993.

- **Road Oil**—All product supplied is assigned to the industrial sector.
- **All Other Petroleum Products**—The product supplied of all remaining petroleum products is assigned to the industrial sector.

### **7. Nuclear Electric Power, Geothermal, and Wood, Waste, Wind, Photovoltaic, and Solar Thermal Energy Sources Connected to Electric Utility Distribution Systems: Sources:**

- 1973-1976: FPC, Form FPC-4, "Monthly Power Plant Report."
- 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report."
- 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

**8. Hydroelectric Power:** Includes electricity generated by hydroelectric power at electric utilities, small amounts in the industrial sector, and net imports of electricity, which are assumed to be generated by hydroelectric power and are included in the electric utilities sector.

Sources for electric utilities sector:

- 1973-1976: FPC, Form FPC-4, "Monthly Power Plant Report."
- 1977-1981: FERC, Form FPC-4, "Monthly Power Plant Report."
- 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

Sources for industrial sector:

- 1973-1978: 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.
- 1979: FPC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts and EIA estimates for all other plants.
- 1980 forward: Annual generation estimated by EIA as the average generation over the 6-year period of 1974-1979; monthly generation estimated to be in proportion to each month's hydroelectricity generation in the electric utility industry in 1980.

Sources for imports and exports of electricity:

- 1973-September 1977: Unpublished Federal Power Commission data.
- October 1977-1980: Unpublished Economic Regulatory Administration (ERA) data.
- 1981: DOE, Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).
- 1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.
- 1984-1986: DOE, ERA, *Electricity Transactions Across International Borders*.
- 1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."
- 1989-1992: DOE, Assistant Secretary for Fossil Energy, Form FE-781-R, "Annual Report of International Electrical Export/Import Data."
- 1993 forward: EIA estimates based on preliminary data from the National Energy Board of Canada and DOE, Assistant Secretary for Fossil Energy.

**9. Net Imports of Coal Coke:** Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports. Sources:

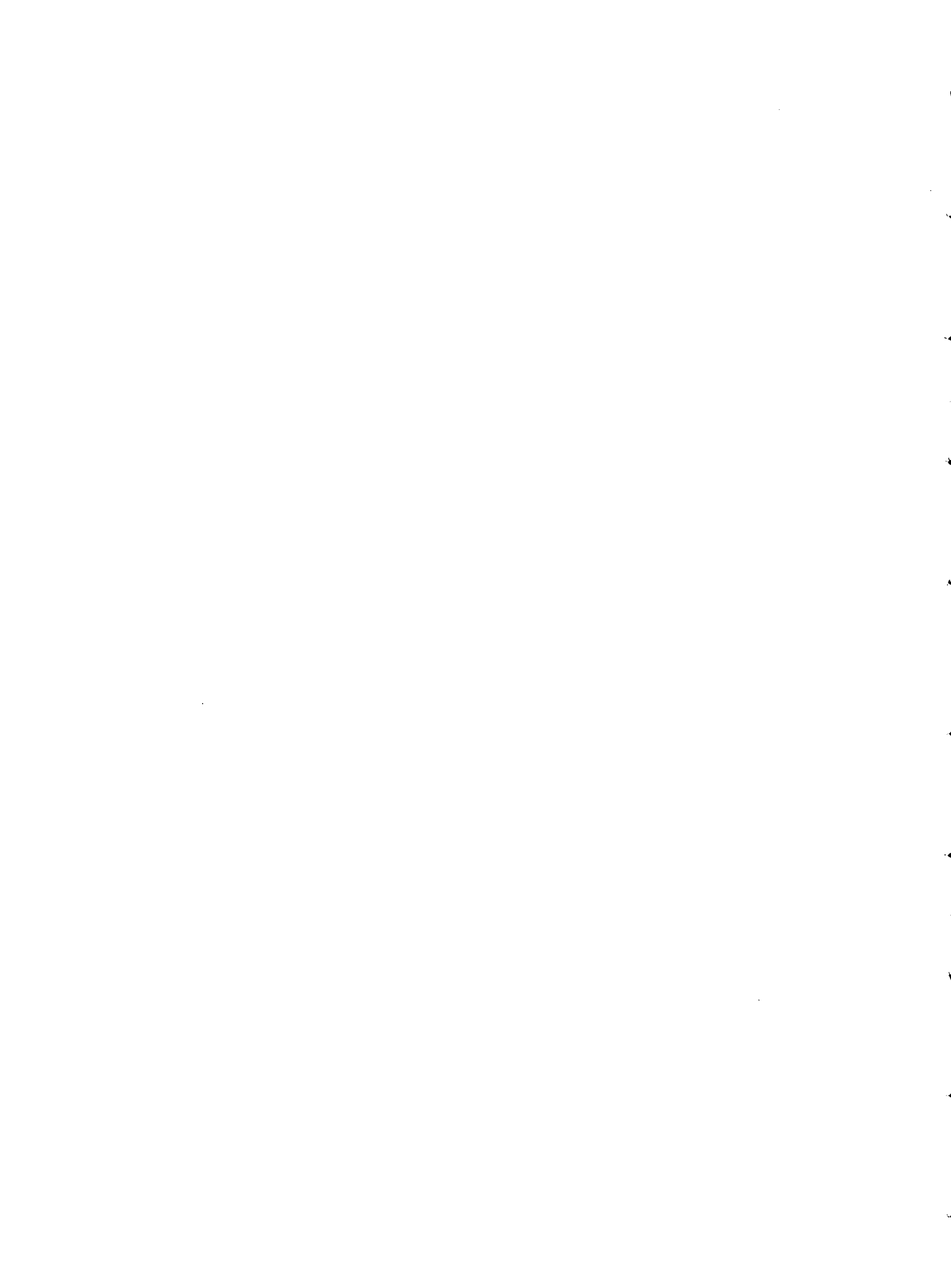
- 1973-1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter.
- 1976-1980: EIA, *Energy Data Report*, "Coke and Coal Chemicals" annual.
- 1981: EIA, *Energy Data Report*, "Coke Plant Report," quarterly.
- 1982 forward: EIA, *Quarterly Coal Report*.

**10. Electricity:** End-use consumption of electricity is based on Table 7.2 sales data. "Other," which is primarily for use in government buildings, is added to the commercial sector, except for approximately 4 percent used by railroads and railways and attributed to the

transportation sector. For 1973-1983 and 1994, "Monthly Series" data are used directly. For 1984-1993, monthly estimates are created by dividing each month's "Monthly Series" value by the "Monthly Series" total for the year and multiplying by the "Annual Series" value for the year. Kilowatthours are converted to Btu at the rate of 3,412 Btu per kilowatthour. See Table 7.2 for sources of the electricity sales data.

**11. Electrical System Energy Losses:** Electrical system energy losses are calculated as the difference between total energy input at electric utilities and the total energy content of electricity sold to end-use consumers. Most of those 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 fos-

sil 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>2</sup> averaged 8.6 million barrels per day in March 1995, 3 percent higher than the previous month's rate and 1 percent<sup>3</sup> higher than the March 1994 rate.

In March 1995, 17.3 million barrels per day of petroleum products were supplied for domestic use, the same as the March 1994 rate. Motor gasoline accounted for 45 percent of the total; distillate fuel oil, 19 percent; and residual fuel oil, 5 percent.

Motor gasoline supplied during March 1995 averaged 7.8 million barrels per day, 4 percent above the previous month's rate and 6 percent above the March 1994 rate. Total motor gasoline stocks were 212 million barrels at the end of March 1995, 13 million barrels below the stock level in the previous month and 2 million barrels below the stock level 1 year earlier.

Distillate fuel oil supplied during March 1995 averaged 3.3 million barrels per day, 12 percent lower than the previous month's rate and 2 percent lower than the March 1994 rate. Distillate fuel oil ending stocks for March 1995 were 119 million barrels, 3 million barrels below the stock level in the previous month but 19 million barrels above the level 1 year earlier.

Residual fuel oil supplied in March 1995 averaged 0.8 million barrels per day, 27 percent lower than the previous month's rate and 23 percent lower than the March 1994 rate. Residual fuel oil stocks measured 36 million barrels at the end of March 1995, the same as the stock level in the previous month but 5 million barrels below the stock level 1 year earlier.

### New Petroleum Data Available

Beginning with data for week ending April 14, 1995, the following tables from the *Weekly Petroleum Status Report* are now available in fixed- and comma-delimited formats on the Electronic Publication Bulletin Board (EPUB):

Table 1	Petroleum Balance Sheet, 4 Weeks Ending 4/14/95
Table 10	U.S. Refiner Acquisition Cost of Crude Oil 1992 to Present
Table 11	U.S. Average Retail Selling Prices of Motor Gasoline and Residential Heating Oil, 1992 to Present
Table 12	World Crude Oil Prices
Table 13	Spot Market Product Prices, Rotterdam and New York
Table 14	Datalog
Table 15	Weather Summary, Selected U.S. Cities
Table 16	U.S. Petroleum Balance Sheet, Week Ending 4/14/95

See EPUB "File area #2 Oil & Gas Reports" for details on unformatted file layouts for data released April 19, 1995. If you have any questions, contact Lynn Greenfield on 202-586-2992.

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 1994.

<sup>2</sup>Total import data include imports into the Strategic Petroleum Reserve.

<sup>3</sup>Percentage changes are based on numbers shown in the following tables.

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

	Field Production			Stock Change <sup>a</sup>		Petroleum Products Supplied	Ending 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
							Million Barrels
Thousand Barrels per Day							Million Barrels
1973 Average	10,975	9,208	1,738	-11	146	17,308	1,008
1974 Average	10,498	8,774	1,688	62	117	16,653	<sup>e</sup> 1,074
1975 Average	10,045	8,375	1,633	<sup>e</sup> 17	<sup>e</sup> 15	16,322	1,133
1976 Average	9,774	8,132	1,604	39	-96	17,461	1,112
1977 Average	9,913	8,245	1,618	170	378	18,431	1,312
1978 Average	10,328	8,707	1,567	78	-172	18,847	1,278
1979 Average	10,179	8,552	1,584	148	25	18,513	1,341
1980 Average	10,214	8,597	1,573	98	42	17,056	<sup>e</sup> 1,392
1981 Average	10,230	8,572	1,609	<sup>e</sup> 290	<sup>e</sup> -130	16,058	1,484
1982 Average	10,252	8,649	1,550	136	-283	15,296	<sup>e</sup> 1,430
1983 Average	10,299	8,688	1,559	<sup>e</sup> 214	<sup>e</sup> -234	15,231	1,454
1984 Average	10,554	8,879	1,630	199	81	15,726	1,556
1985 Average	10,636	8,971	1,609	50	-153	15,726	1,519
1986 Average	10,289	8,680	1,551	78	124	16,281	1,593
1987 Average	10,008	8,349	1,595	128	-87	16,665	1,607
1988 Average	9,818	8,140	1,625	1	-29	17,283	1,597
1989 Average	9,219	7,613	1,546	86	-129	17,325	1,581
1990 Average	8,994	7,355	1,559	-35	142	16,988	1,621
1991 Average	9,168	7,417	1,659	-42	32	16,714	1,617
1992 Average	8,996	7,171	1,697	-1	-68	17,033	<sup>e</sup> 1,592
1993 January	9,254	6,961	1,737	295	<sup>e</sup> 560	16,173	1,618
February	8,907	6,943	1,777	219	-796	17,334	1,602
March	8,987	6,974	1,793	212	-602	17,575	1,590
April	8,897	6,881	1,802	523	356	16,781	1,617
May	8,800	6,847	1,732	147	915	16,508	1,650
June	8,747	6,795	1,753	2	573	17,096	1,667
July	8,657	6,688	1,741	6	497	17,357	1,682
August	8,720	6,758	1,747	-505	299	17,332	1,676
September	8,652	6,712	1,732	-439	86	17,650	1,665
October	8,893	6,839	1,768	328	403	17,323	1,688
November	8,847	6,912	1,670	251	-320	17,780	1,686
December	8,668	6,858	1,579	-53	-1,198	17,953	1,647
Average	8,836	6,847	1,736	81	70	17,237	1,647
1994 January	<sup>E</sup> 8,674	<sup>E</sup> 6,777	1,619	-16	-831	17,924	1,620
February	<sup>E</sup> 8,586	<sup>E</sup> 6,745	1,642	-164	-1,225	18,302	1,581
March	<sup>E</sup> 8,688	<sup>E</sup> 6,719	1,676	339	-438	17,289	1,578
April	<sup>E</sup> 8,528	<sup>E</sup> 6,634	1,687	-58	311	17,428	1,585
May	<sup>E</sup> 8,546	<sup>E</sup> 6,658	1,715	-213	977	17,094	1,609
June	<sup>E</sup> 8,546	<sup>E</sup> 6,567	1,736	-204	457	17,830	1,616
July	<sup>E</sup> 8,580	<sup>E</sup> 6,528	1,756	187	855	17,474	1,649
August	<sup>E</sup> 8,537	<sup>E</sup> 6,547	1,766	-43	291	18,107	1,656
September	<sup>E</sup> 8,613	<sup>E</sup> 6,551	1,793	112	580	17,469	1,677
October	<sup>E</sup> 8,600	<sup>E</sup> 6,578	1,747	294	-546	17,656	1,669
November	<sup>E</sup> 8,649	<sup>E</sup> 6,542	1,796	106	329	17,340	1,682
December	<sup>E</sup> 8,764	<sup>E</sup> 6,686	1,799	-155	-776	18,280	1,654
Average	<sup>E</sup> 8,610	<sup>E</sup> 6,627	1,728	17	4	17,679	1,654
1995 January	<sup>E</sup> 8,664	<sup>E</sup> 6,596	1,773	-279	-117	17,167	1,641
February	<sup>RE</sup> 8,832	<sup>RE</sup> 6,703	<sup>R</sup> 1,774	<sup>R</sup> -48	<sup>R</sup> -1,315	<sup>R</sup> 18,355	<sup>R</sup> 1,603
March	<sup>E</sup> 8,606	<sup>PE</sup> 6,531	<sup>E</sup> 1,793	<sup>E</sup> 424	<sup>E</sup> -413	<sup>E</sup> 17,318	<sup>E</sup> 1,606
3-Month Average	<sup>E</sup> 8,696	<sup>PE</sup> 6,607	<sup>E</sup> 1,780	<sup>E</sup> 35	<sup>E</sup> -592	<sup>E</sup> 17,589	<sup>E</sup> 1,606
1994 3-Month Average	<sup>E</sup> 8,652	<sup>E</sup> 6,747	1,646	60	-818	17,823	1,578
1993 3-Month Average	9,054	6,960	1,769	243	-263	17,017	1,590

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

<sup>b</sup> Stocks are totals as of end of period.

<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 data. E=Estimate.

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

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S1. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, 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 January .....	8,004	6,292	1,712	1,135	129	1,006	6,869
February .....	7,948	6,156	1,792	1,033	166	867	6,915
March .....	8,285	6,488	1,797	970	139	831	7,315
April .....	8,768	6,928	1,840	1,067	73	994	7,701
May .....	8,663	6,809	1,854	1,082	112	970	7,581
June .....	8,805	7,201	1,604	900	150	750	7,905
July .....	9,219	7,289	1,930	1,001	62	938	8,218
August .....	8,429	6,641	1,789	829	55	774	7,600
September .....	8,531	6,581	1,950	902	107	795	7,629
October .....	9,197	7,181	2,015	881	62	819	8,316
November .....	8,903	6,997	1,906	980	67	913	7,923
December .....	8,645	6,838	1,807	1,250	63	1,188	7,394
Average .....	8,620	6,787	1,833	1,003	98	904	7,618
1994 January .....	7,914	5,961	1,953	927	110	817	6,987
February .....	8,501	6,313	2,187	882	116	766	7,619
March .....	8,500	6,377	2,123	936	40	896	7,564
April .....	8,927	6,937	1,990	868	120	749	8,059
May .....	9,155	7,163	1,993	929	118	812	8,226
June .....	9,263	7,358	1,906	867	107	760	8,396
July .....	9,778	7,867	1,911	877	84	793	8,901
August .....	9,523	7,528	1,996	913	72	841	8,611
September .....	9,526	7,722	1,804	891	61	830	8,635
October .....	8,642	6,993	1,649	997	138	859	7,646
November .....	8,527	6,863	1,663	1,000	102	898	7,527
December .....	8,861	7,193	1,668	1,208	118	1,090	7,653
Average .....	8,929	7,027	1,902	942	99	843	7,986
1995 January .....	7,955	6,503	1,452	978	113	865	6,977
February .....	<sup>R</sup> 8,358	<sup>R</sup> 6,565	<sup>R</sup> 1,793	<sup>R</sup> 1,062	<sup>R</sup> 95	<sup>R</sup> 967	<sup>R</sup> 7,296
March .....	<sup>E</sup> 8,583	<sup>E</sup> 7,147	<sup>E</sup> 1,436	<sup>E</sup> 992	<sup>E</sup> 102	<sup>E</sup> 890	<sup>E</sup> 7,591
3-Month Average .....	<sup>E</sup> 8,297	<sup>E</sup> 6,744	<sup>E</sup> 1,553	<sup>E</sup> 1,009	<sup>E</sup> 103	<sup>E</sup> 905	<sup>E</sup> 7,288
1994 3-Month Average .....	8,298	6,214	2,085	916	88	828	7,382
1993 3-Month Average .....	8,083	6,317	1,766	1,046	144	903	7,037

<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 data. E=Estimate.

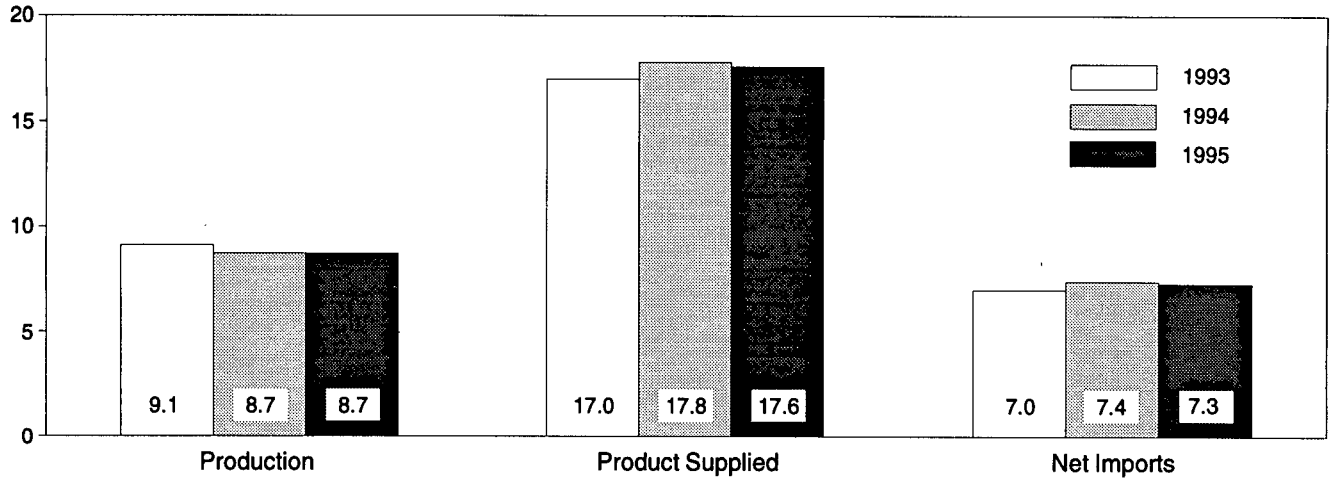
Notes: • Crude oil includes lease condensate. • Totals may not equal sum

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

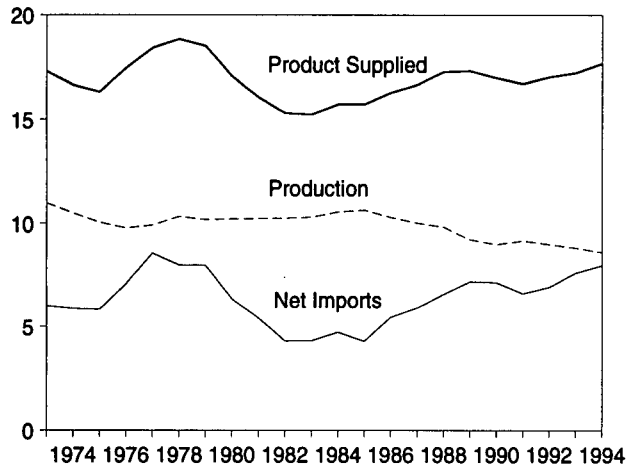
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S1. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S1.

**Figure 3.1 Petroleum Overview**  
(Million Barrels per Day)

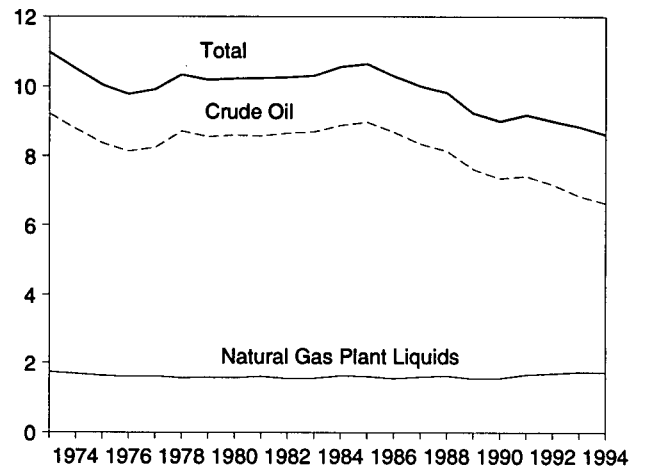
**Overview, January-March**



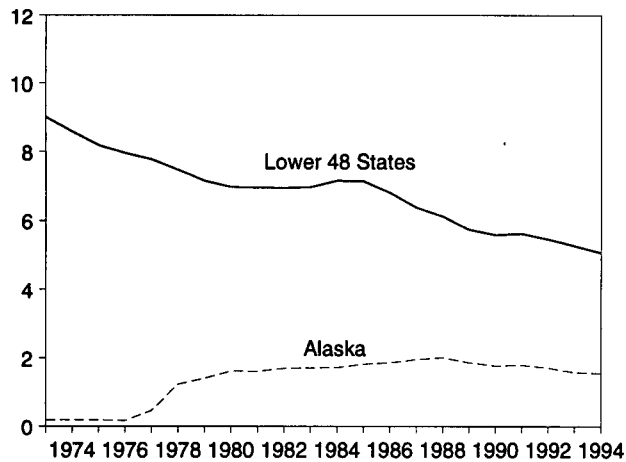
**Overview, 1973-1994**



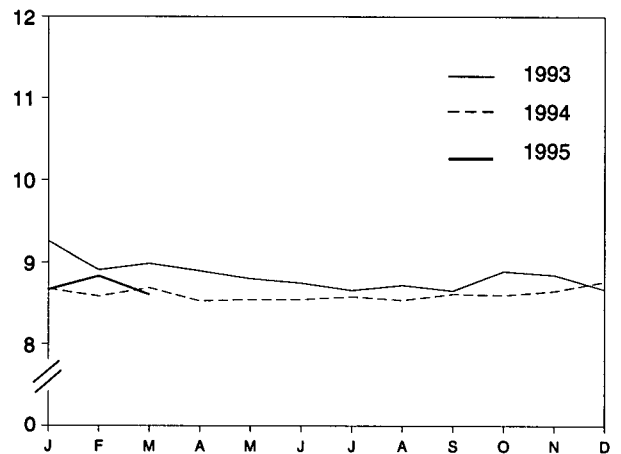
**Production, 1973-1994**



**Crude Oil Production, 1973-1994**



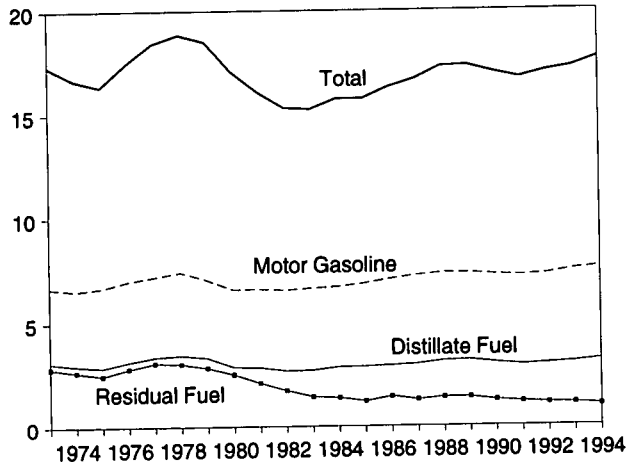
**Total Production, Monthly**



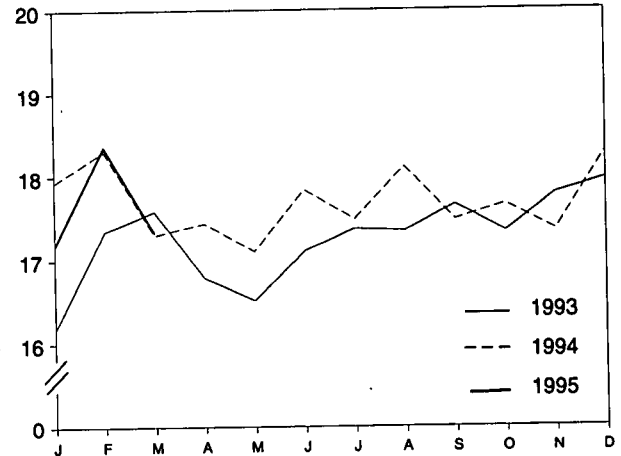
Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 3.1a, 3.1b, and 3.2a.

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

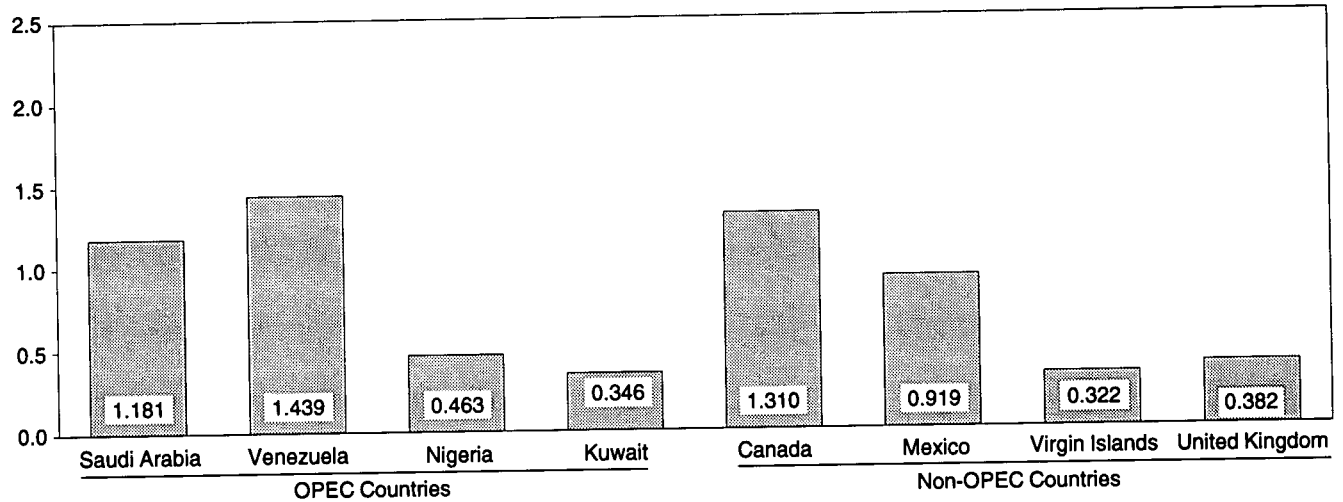
**Product Supplied, 1973-1994**



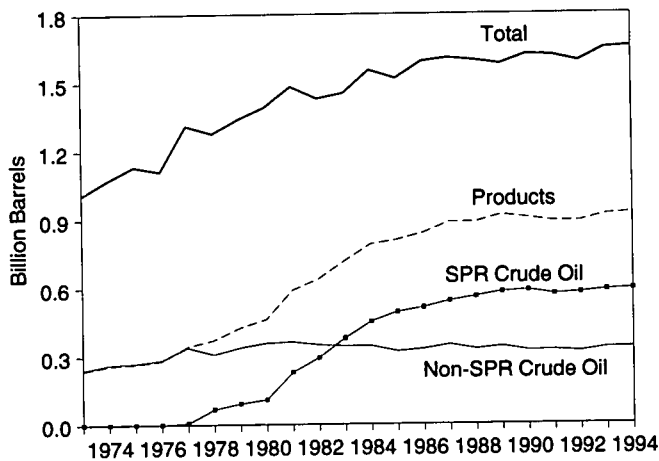
**Product Supplied, Monthly**



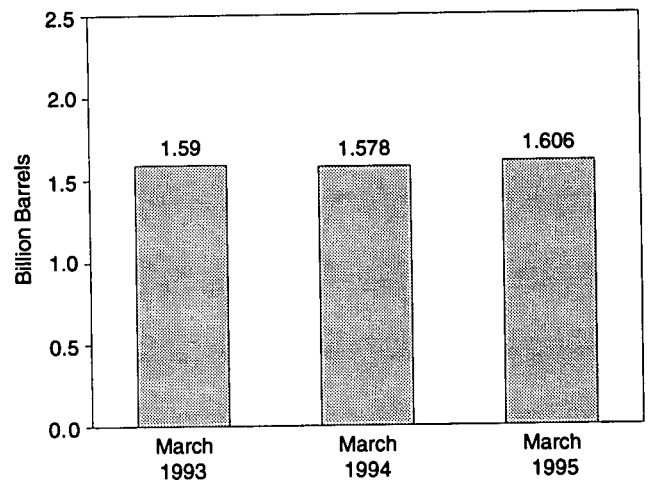
**Imports from Selected Countries, February 1995**



**Stocks, End of Year, 1973-1994**



**Total Stocks, End of Month**



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

Sources: Tables 3.1a, 3.2b, 3.3a, 3.3b, 3.3d-3.3h, 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 January	6,961	1,654	6,292	0	6,292	118	—
February	6,943	1,628	6,156	0	6,156	162	—
March	6,974	1,639	6,488	32	6,455	101	—
April	6,881	1,587	6,928	112	6,817	333	—
May	6,847	1,568	6,809	0	6,809	443	—
June	6,795	1,520	7,201	0	7,201	293	—
July	6,688	1,441	7,289	0	7,289	236	—
August	6,758	1,528	6,641	0	6,641	3	—
September	6,712	1,471	6,581	34	6,547	224	—
October	6,839	1,610	7,181	0	7,181	109	—
November	6,912	1,670	6,997	0	6,997	106	—
December	6,858	1,671	6,838	0	6,838	-98	—
Average	6,847	1,582	6,787	15	6,772	168	—
1994 January	<sup>E</sup> 6,777	<sup>E</sup> 1,658	5,961	0	5,961	651	—
February	<sup>E</sup> 6,745	<sup>E</sup> 1,594	6,313	0	6,313	37	—
March	<sup>E</sup> 6,719	<sup>E</sup> 1,581	6,377	99	6,278	272	—
April	<sup>E</sup> 6,634	<sup>E</sup> 1,502	6,937	31	6,906	316	—
May	<sup>E</sup> 6,658	<sup>E</sup> 1,576	7,163	0	7,163	361	—
June	<sup>E</sup> 6,567	<sup>E</sup> 1,514	7,358	17	7,341	350	—
July	<sup>E</sup> 6,528	<sup>E</sup> 1,492	7,867	0	7,867	241	—
August	<sup>E</sup> 6,547	<sup>E</sup> 1,497	7,528	0	7,528	466	—
September	<sup>E</sup> 6,551	<sup>E</sup> 1,514	7,722	0	7,722	149	—
October	<sup>E</sup> 6,578	<sup>E</sup> 1,603	6,993	0	6,993	405	—
November	<sup>E</sup> 6,542	<sup>E</sup> 1,518	6,863	0	6,863	787	—
December	<sup>E</sup> 6,686	<sup>E</sup> 1,636	7,193	0	7,193	52	—
Average	<sup>E</sup> 6,627	<sup>E</sup> 1,557	7,027	12	7,014	342	—
1995 January	<sup>RE</sup> 6,596	<sup>RE</sup> 1,575	6,503	0	6,503	352	—
February	<sup>RE</sup> 6,703	<sup>RE</sup> 1,578	<sup>R</sup> 6,565	0	<sup>R</sup> 6,565	<sup>R</sup> 155	—
March	<sup>PE</sup> 6,531	<sup>PE</sup> 1,526	<sup>E</sup> 7,147	<sup>E</sup> 0	<sup>E</sup> 7,147	<sup>E</sup> 389	—
3-Month Average	<sup>PE</sup> 6,607	<sup>PE</sup> 1,559	<sup>E</sup> 6,744	<sup>E</sup> 0	<sup>E</sup> 6,744	<sup>E</sup> 303	—
1994 3-Month Average	<sup>E</sup> 6,747	<sup>E</sup> 1,611	6,214	34	6,180	329	—
1993 3-Month Average	6,960	1,641	6,317	11	6,306	126	—

<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 data. —=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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S2. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S2.

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

	Disposition						Ending 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 January	(s)	19	276	12,938	129	10	902	575	327
February	(s)	18	201	12,865	166	10	908	576	332
March	0	58	154	13,200	139	11	915	578	337
April	(s)	136	387	13,538	73	9	930	582	349
May	0	13	134	13,829	112	10	935	582	353
June	0	21	-20	14,129	150	8	935	583	352
July	0	19	-13	14,136	62	9	935	583	352
August	0	24	-529	13,844	55	8	920	584	335
September	(s)	52	-491	13,841	107	8	906	586	321
October	0	19	309	13,729	62	10	917	586	330
November	0	18	233	13,686	67	10	924	587	337
December	0	9	-62	13,571	63	16	922	587	335
Average	(s)	34	47	13,613	98	10	922	587	335
1994 January	0	4	-19	13,285	110	10	922	587	335
February	0	(s)	-164	13,132	116	12	917	587	330
March	0	99	241	12,978	40	10	928	590	338
April	(s)	31	-89	13,817	120	9	926	591	335
May	0	(s)	-213	14,269	118	9	920	591	328
June	0	16	-220	14,364	107	7	913	592	322
July	0	(s)	187	14,356	84	8	919	592	328
August	0	(s)	-43	14,505	72	7	918	592	326
September	0	0	112	14,240	61	9	921	592	330
October	0	0	294	13,537	138	8	930	592	339
November	0	(s)	106	13,978	102	7	934	592	342
December	0	(s)	-155	13,958	118	10	929	592	337
Average	(s)	13	5	13,872	99	9	929	592	337
1995 January	0	(s)	-279	13,610	113	7	920	592	328
February	0	(s)	<sup>R</sup> -48	<sup>R</sup> 13,367	<sup>R</sup> 95	8	<sup>R</sup> 919	592	<sup>R</sup> 327
March	<sup>E</sup> 0	<sup>E</sup> (s)	<sup>E</sup> 424	<sup>E</sup> 13,531	<sup>E</sup> 102	<sup>E</sup> 9	<sup>E</sup> 929	<sup>E</sup> 592	<sup>E</sup> 338
3-Month Average	<sup>E</sup> 0	<sup>E</sup> (s)	<sup>E</sup> 35	<sup>E</sup> 13,507	<sup>E</sup> 103	<sup>E</sup> 8	<sup>E</sup> 929	<sup>E</sup> 592	<sup>E</sup> 338
1994 3-Month Average	0	35	25	13,131	88	11	928	590	338
1993 3-Month Average	(s)	32	211	13,005	144	10	915	578	337

<sup>a</sup> Stocks are totals as of 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.

<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 data. - =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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S2. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S2.

**Table 3.3a Petroleum Imports: Algeria, Iraq, Kuwait, and Libya**  
(Thousand Barrels per Day)

	Arab OPEC <sup>a</sup>							
	Algeria		Iraq		Kuwait <sup>b</sup>		Libya	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average .....	136	120	4	4	47	42	164	133
1974 Average .....	190	180	0	0	5	5	4	4
1975 Average .....	282	264	2	2	16	4	232	223
1976 Average .....	432	408	26	26	5	1	453	444
1977 Average .....	559	544	74	74	48	42	723	704
1978 Average .....	649	634	62	62	6	5	654	638
1979 Average .....	636	608	88	88	8	5	658	642
1980 Average .....	488	456	28	28	27	27	554	548
1981 Average .....	311	261	(s)	0	0	0	319	317
1982 Average .....	170	90	3	3	5	2	26	23
1983 Average .....	240	176	10	10	14	7	0	0
1984 Average .....	323	194	12	12	36	24	1	0
1985 Average .....	187	84	46	46	21	4	4	0
1986 Average .....	271	78	81	81	68	28	0	0
1987 Average .....	295	115	83	82	84	70	0	0
1988 Average .....	300	58	345	343	92	80	0	0
1989 Average .....	269	60	449	441	157	155	0	0
1990 Average .....	280	63	518	514	86	79	0	0
1991 Average .....	253	44	0	0	6	6	0	0
1992 Average .....	196	24	0	0	51	39	0	0
1993 January .....	153	28	0	0	144	129	0	0
February .....	256	0	0	0	251	229	0	0
March .....	185	7	0	0	316	300	0	0
April .....	258	26	0	0	279	279	0	0
May .....	228	3	0	0	222	222	0	0
June .....	169	32	0	0	235	235	0	0
July .....	246	6	0	0	368	362	0	0
August .....	241	28	0	0	467	451	0	0
September .....	192	0	0	0	445	431	0	0
October .....	317	80	0	0	530	526	0	0
November .....	222	52	0	0	486	470	0	0
December .....	169	25	0	0	484	484	0	0
Average .....	220	24	0	0	353	344	0	0
1994 January .....	233	35	0	0	309	309	0	0
February .....	226	20	0	0	423	423	0	0
March .....	278	22	0	0	476	476	0	0
April .....	245	30	0	0	261	238	0	0
May .....	261	0	0	0	362	362	0	0
June .....	178	2	0	0	255	255	0	0
July .....	301	38	0	0	345	345	0	0
August .....	282	39	0	0	306	306	0	0
September .....	237	20	0	0	361	361	0	0
October .....	217	38	0	0	165	148	0	0
November .....	203	20	0	0	249	240	0	0
December .....	259	39	0	0	240	227	0	0
Average .....	244	25	0	0	312	307	0	0
1995 January .....	168	0	0	0	130	120	0	0
February .....	358	64	0	0	346	324	0	0
2-Month Average .....	258	30	0	0	232	217	0	0
1994 2-Month Average .....	230	28	0	0	363	363	0	0
1993 2-Month Average .....	202	15	0	0	195	176	0	0

<sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in Saudi Arabia.

(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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.



**Table 3.3b Petroleum Imports: Qatar, Saudi Arabia, U.A.E., and Total Arab OPEC**  
(Thousand Barrels per Day)

	Arab OPEC <sup>a</sup>						Total Arab OPEC <sup>a</sup>	
	Qatar		Saudi Arabia <sup>b</sup>		United Arab Emirates			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average .....	7	7	486	462	71	71	915	838
1974 Average .....	17	17	461	438	74	69	752	713
1975 Average .....	18	18	715	701	117	117	1,383	1,330
1976 Average .....	24	24	1,230	1,222	254	254	2,424	2,378
1977 Average .....	67	67	1,380	1,373	335	333	3,185	3,136
1978 Average .....	64	64	1,144	1,142	385	385	2,963	2,930
1979 Average .....	31	31	1,356	1,347	281	281	3,058	3,002
1980 Average .....	22	22	1,261	1,250	172	172	2,551	2,503
1981 Average .....	7	7	1,129	1,112	81	77	1,848	1,774
1982 Average .....	7	7	552	530	92	81	854	736
1983 Average .....	(s)	0	337	321	30	18	632	533
1984 Average .....	5	4	325	309	117	90	819	634
1985 Average .....	(s)	0	168	132	45	35	472	300
1986 Average .....	13	12	685	618	44	38	1,162	854
1987 Average .....	0	0	751	642	61	56	1,274	965
1988 Average .....	0	0	1,073	911	29	23	1,839	1,415
1989 Average .....	2	2	1,224	1,116	28	21	2,130	1,794
1990 Average .....	4	4	1,339	1,195	17	9	2,244	1,864
1991 Average .....	0	0	1,802	1,703	3	2	2,064	1,754
1992 Average .....	1	0	1,720	1,597	6	0	1,974	1,660
1993 January .....	0	0	1,688	1,571	0	0	1,984	1,728
February .....	0	0	1,626	1,480	0	0	2,133	1,709
March .....	6	0	1,479	1,349	0	0	1,987	1,655
April .....	0	0	1,644	1,515	17	17	2,198	1,837
May .....	0	0	1,524	1,361	59	59	2,034	1,646
June .....	0	0	1,540	1,413	66	66	2,010	1,746
July .....	0	0	1,283	1,171	19	0	1,917	1,538
August .....	0	0	1,151	1,036	0	0	1,859	1,515
September .....	0	0	1,329	1,181	0	0	1,966	1,612
October .....	0	0	1,115	969	0	0	1,961	1,574
November .....	0	0	1,281	1,152	1	0	1,989	1,673
December .....	0	0	1,330	1,205	0	0	1,983	1,713
Average .....	1	0	1,414	1,282	14	12	2,000	1,661
1994 January .....	0	0	1,320	1,175	0	0	1,863	1,520
February .....	0	0	1,071	1,023	0	0	1,719	1,467
March .....	0	0	1,128	1,055	0	0	1,883	1,553
April .....	0	0	1,586	1,428	4	0	2,097	1,696
May .....	0	0	1,438	1,394	0	0	2,062	1,757
June .....	0	0	1,395	1,277	0	0	1,829	1,535
July .....	0	0	1,414	1,310	53	53	2,113	1,745
August .....	0	0	1,360	1,271	0	0	1,948	1,615
September .....	0	0	1,486	1,364	40	40	2,125	1,786
October .....	0	0	1,601	1,500	38	23	2,020	1,709
November .....	0	0	1,477	1,357	0	0	1,929	1,617
December .....	0	0	1,526	1,388	15	15	2,040	1,669
Average .....	0	0	1,402	1,297	13	11	1,971	1,640
1995 January .....	0	0	1,309	1,251	20	20	1,628	1,391
February .....	0	0	1,181	1,134	13	13	1,897	1,535
2-Month Average .....	0	0	1,249	1,196	17	17	1,756	1,459
1994 2-Month Average .....	0	0	1,202	1,103	0	0	1,795	1,494
1993 2-Month Average .....	0	0	1,658	1,528	0	0	2,055	1,719

<sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in Saudi Arabia.

(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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

**Table 3.3c Petroleum Imports: Ecuador, Gabon, Indonesia, and Iran**  
(Thousand Barrels per Day)

	Non-Arab OPEC <sup>a</sup>							
	Ecuador <sup>b</sup>		Gabon		Indonesia		Iran	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average .....	48	47	0	0	213	200	223	216
1974 Average .....	42	42	23	23	300	284	469	463
1975 Average .....	57	57	27	27	390	379	280	278
1976 Average .....	51	51	28	26	539	537	298	298
1977 Average .....	57	55	42	35	541	507	535	530
1978 Average .....	54	38	41	38	573	533	555	554
1979 Average .....	42	30	42	42	420	380	304	297
1980 Average .....	27	17	26	25	348	314	9	8
1981 Average .....	48	38	35	35	366	318	0	0
1982 Average .....	42	32	40	40	248	226	35	35
1983 Average .....	61	56	59	59	338	315	48	48
1984 Average .....	55	47	58	57	343	304	10	10
1985 Average .....	67	56	52	51	314	292	27	27
1986 Average .....	77	64	26	25	318	297	19	19
1987 Average .....	29	23	35	35	285	262	98	98
1988 Average .....	47	33	16	15	205	186	<sup>c</sup> (s)	<sup>c</sup> (s)
1989 Average .....	89	80	50	49	183	158	0	0
1990 Average .....	49	38	64	64	114	98	0	0
1991 Average .....	63	53	84	84	111	102	32	32
1992 Average .....	65	62	124	123	78	70	0	0
1993 January .....	(b)	(b)	90	89	37	37	0	0
February .....	(b)	(b)	88	88	52	51	0	0
March .....	(b)	(b)	126	123	67	64	0	0
April .....	(b)	(b)	127	127	76	76	0	0
May .....	(b)	(b)	169	169	82	82	0	0
June .....	(b)	(b)	107	107	97	67	0	0
July .....	(b)	(b)	168	166	55	55	0	0
August .....	(b)	(b)	152	152	95	80	0	0
September .....	(b)	(b)	211	211	51	40	0	0
October .....	(b)	(b)	242	242	131	82	0	0
November .....	(b)	(b)	143	136	74	34	0	0
December .....	(b)	(b)	191	191	156	114	0	0
Average .....	(b)	(b)	152	151	81	65	0	0
1994 January .....	(b)	(b)	144	144	140	81	0	0
February .....	(b)	(b)	212	208	103	59	0	0
March .....	(b)	(b)	91	91	112	50	0	0
April .....	(b)	(b)	288	288	88	88	0	0
May .....	(b)	(b)	187	187	94	76	0	0
June .....	(b)	(b)	223	223	155	155	0	0
July .....	(b)	(b)	216	216	196	196	0	0
August .....	(b)	(b)	142	142	119	112	0	0
September .....	(b)	(b)	194	194	61	61	0	0
October .....	(b)	(b)	235	235	96	89	0	0
November .....	(b)	(b)	254	254	71	56	0	0
December .....	(b)	(b)	154	154	113	95	0	0
Average .....	(b)	(b)	194	194	113	93	0	0
1995 January .....	(b)	(b)	224	224	38	38	0	0
February .....	(b)	(b)	186	186	129	87	0	0
2-Month Average .....	(b)	(b)	206	206	81	61	0	0
1994 2-Month Average .....	(b)	(b)	176	174	122	71	0	0
1993 2-Month Average .....	(b)	(b)	89	88	44	44	0	0

<sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<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> 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 October

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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

**Table 3.3d Petroleum Imports: Nigeria, Venezuela, Total Non-Arab OPEC, and Total OPEC**  
(Thousand Barrels per Day)

	Non-Arab OPEC <sup>a</sup>				Total Non-Arab OPEC <sup>a,b</sup>		Total OPEC <sup>a,b</sup>	
	Nigeria		Venezuela					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average .....	459	448	1,135	344	2,078	1,257	2,993	2,095
1974 Average .....	713	697	979	319	2,527	1,827	3,280	2,540
1975 Average .....	762	746	702	395	2,219	1,882	3,601	3,211
1976 Average .....	1,025	1,014	700	241	2,642	2,167	5,066	4,545
1977 Average .....	1,143	1,130	690	250	3,008	2,507	6,193	5,643
1978 Average .....	919	910	646	181	2,788	2,254	5,751	5,184
1979 Average .....	1,080	1,069	690	293	2,579	2,110	5,637	5,112
1980 Average .....	857	841	481	156	1,749	1,361	4,300	3,864
1981 Average .....	620	611	406	147	1,476	1,149	3,323	2,922
1982 Average .....	514	510	412	155	1,291	998	2,146	1,734
1983 Average .....	302	301	422	164	1,231	944	1,862	1,477
1984 Average .....	216	207	548	253	1,230	878	2,049	1,512
1985 Average .....	293	280	605	306	1,358	1,012	1,830	1,312
1986 Average .....	440	437	793	416	1,674	1,259	2,837	2,113
1987 Average .....	535	529	804	488	1,787	1,435	3,060	2,400
1988 Average .....	618	607	794	439	1,681	1,281	3,520	2,696
1989 Average .....	815	800	873	495	2,010	1,582	4,140	3,376
1990 Average .....	800	784	1,025	666	2,052	1,650	4,296	3,514
1991 Average .....	703	683	1,035	668	2,028	1,622	4,092	3,377
1992 Average .....	681	665	1,170	826	2,117	1,746	4,092	3,406
1993 January .....	729	729	1,397	1,038	<sup>b</sup> 2,254	<sup>b</sup> 1,892	<sup>b</sup> 4,238	<sup>b</sup> 3,620
February .....	927	913	1,296	925	2,363	1,976	4,496	3,685
March .....	928	892	1,173	835	2,295	1,914	4,282	3,570
April .....	892	871	1,314	1,023	2,409	2,097	4,608	3,934
May .....	760	741	1,264	992	2,276	1,985	4,309	3,630
June .....	848	827	1,292	999	2,343	2,000	4,353	3,746
July .....	893	888	1,384	1,068	2,500	2,177	4,417	3,715
August .....	562	549	1,383	1,135	2,192	1,915	4,051	3,431
September .....	514	496	1,273	1,050	2,048	1,796	4,014	3,408
October .....	603	593	1,276	993	2,251	1,910	4,213	3,484
November .....	636	612	1,322	1,108	2,175	1,891	4,165	3,563
December .....	598	569	1,230	952	2,176	1,827	4,159	3,540
Average .....	740	722	1,300	1,010	2,273	1,948	4,273	3,609
1994 January .....	310	274	1,185	901	1,780	1,400	3,643	2,920
February .....	576	557	1,204	946	2,094	1,770	3,814	3,237
March .....	441	402	1,219	915	1,862	1,457	3,745	3,010
April .....	631	621	1,272	1,016	2,280	2,014	4,377	3,710
May .....	732	730	1,297	1,004	2,309	1,996	4,371	3,753
June .....	842	837	1,449	1,088	2,669	2,303	4,498	3,838
July .....	703	694	1,298	1,030	2,413	2,136	4,525	3,881
August .....	1,037	1,010	1,241	992	2,539	2,255	4,487	3,870
September .....	578	578	1,410	1,106	2,243	1,939	4,368	3,725
October .....	569	559	1,385	1,101	2,284	1,984	4,304	3,693
November .....	485	478	1,433	1,085	2,243	1,873	4,172	3,490
December .....	739	739	1,405	1,183	2,411	2,171	4,451	3,840
Average .....	637	624	1,317	1,031	2,261	1,942	4,232	3,582
1995 January .....	583	575	1,355	1,059	2,201	1,897	3,828	3,288
February .....	463	463	1,439	1,083	2,217	1,819	4,114	3,354
2-Month Average .....	526	522	1,395	1,071	2,208	1,860	3,964	3,319
1994 2-Month Average .....	436	408	1,194	923	1,929	1,576	3,724	3,070
1993 2-Month Average .....	823	816	1,349	984	2,306	1,932	4,361	3,651

<sup>a</sup> Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> As of January 1993, excludes petroleum imported from Ecuador, which withdrew from OPEC on December 31, 1992.

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.

Sources: • 1973-1990: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

**Table 3.3e Petroleum Imports: Angola, Australia, Bahama Islands, Brazil, Canada, and China**  
(Thousand Barrels per Day)

	Non-OPEC <sup>a</sup>											
	Angola		Australia		Bahama Islands		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 January .....	354	354	(s)	0	18	0	3	0	1,052	778	60	60
February .....	348	348	0	0	26	0	22	0	1,095	782	44	44
March .....	408	408	0	0	38	0	27	0	1,033	770	79	73
April .....	344	344	0	0	16	0	56	0	1,052	783	0	0
May .....	299	299	13	13	8	0	41	0	1,128	874	40	40
June .....	209	209	34	34	7	0	19	0	1,117	911	48	46
July .....	402	402	40	40	31	0	48	0	1,264	991	24	24
August .....	258	258	33	27	41	0	32	0	1,247	966	38	38
September .....	282	282	0	0	37	0	59	0	1,319	1,023	91	89
October .....	440	440	53	47	53	0	15	0	1,370	1,030	61	61
November .....	307	307	0	0	29	0	61	0	1,236	917	68	68
December .....	379	379	53	53	30	0	10	0	1,255	964	61	61
Average .....	336	336	19	18	28	0	33	0	1,181	900	51	50
1994 January .....	338	338	12	0	28	0	11	0	1,234	905	81	78
February .....	295	282	0	0	79	0	12	0	1,364	994	44	44
March .....	291	265	11	11	52	0	10	0	1,328	987	107	104
April .....	284	284	0	0	39	0	42	0	1,191	930	70	67
May .....	354	331	32	32	58	0	96	0	1,157	905	80	80
June .....	278	278	11	11	14	0	62	0	1,202	973	37	36
July .....	304	299	44	44	18	0	53	0	1,224	984	92	92
August .....	358	347	13	13	20	0	38	0	1,350	1,056	64	64
September .....	455	448	35	35	17	0	21	0	1,151	886	63	63
October .....	286	286	22	22	15	0	18	0	1,092	839	18	18
November .....	328	328	22	22	8	0	0	0	1,096	844	79	79
December .....	402	380	0	0	6	0	8	8	1,386	1,054	40	40
Average .....	331	322	17	16	29	0	31	1	1,231	946	65	64
1995 January .....	273	262	21	21	6	0	0	0	1,349	1,009	64	62
February .....	348	335	22	22	8	0	0	0	1,310	965	21	21
2-Month Average .....	308	297	22	22	7	0	0	0	1,331	988	44	42
1994 2-Month Average .....	317	311	6	0	52	0	11	0	1,296	947	64	62
1993 2-Month Average .....	351	351	(s)	0	22	0	12	0	1,072	780	53	53

<sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

(s)=Less than 500 barrels per day.

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

are included. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

**Table 3.3f Petroleum Imports: Colombia, Ecuador, Italy, Malaysia, Mexico, and Netherlands**

(Thousand Barrels per Day)

	Non-OPEC <sup>a</sup>											
	Colombia		Ecuador <sup>b</sup>		Italy		Malaysia		Mexico		Netherlands	
	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	53	0
1974 Average .....	5	0	-	-	74	0	12	1	8	2	43	0
1975 Average .....	9	0	-	-	27	0	8	5	71	70	19	4
1976 Average .....	21	6	-	-	39	0	18	16	87	87	8	0
1977 Average .....	17	0	-	-	51	0	66	55	179	177	31	4
1978 Average .....	20	0	-	-	38	0	42	37	318	316	5	2
1979 Average .....	18	0	-	-	30	0	66	52	439	437	23	7
1980 Average .....	4	0	-	-	4	0	70	61	533	507	2	(s)
1981 Average .....	1	0	-	-	11	0	36	33	522	469	30	(s)
1982 Average .....	5	0	-	-	18	(s)	20	18	685	645	35	(s)
1983 Average .....	10	0	-	-	18	(s)	4	3	826	766	65	3
1984 Average .....	8	0	-	-	45	(s)	1	0	748	659	65	3
1985 Average .....	23	0	-	-	60	(s)	3	1	816	715	58	0
1986 Average .....	87	57	-	-	76	0	12	11	699	621	54	0
1987 Average .....	148	115	-	-	54	1	13	12	655	602	60	0
1988 Average .....	134	106	-	-	65	5	19	19	747	674	61	0
1989 Average .....	172	136	-	-	34	3	39	39	767	716	49	0
1990 Average .....	182	140	-	-	58	2	41	40	755	689	55	0
1991 Average .....	163	123	-	-	47	3	24	24	807	759	29	0
1992 Average .....	126	102	-	-	55	0	10	10	830	787	26	0
1993 January .....	188	167	76	70	56	0	0	0	858	820	11	0
February .....	148	137	14	14	34	0	0	0	807	748	18	0
March .....	161	129	59	59	43	0	11	10	844	798	10	0
April .....	178	165	74	62	14	0	8	8	832	796	0	0
May .....	147	90	56	56	26	0	21	10	917	846	10	0
June .....	176	143	75	75	25	0	0	0	987	959	10	0
July .....	204	184	96	96	25	0	11	11	943	878	21	0
August .....	131	101	121	121	50	0	14	14	862	809	17	0
September .....	224	170	49	49	32	0	28	28	929	867	22	0
October .....	192	182	146	135	40	0	14	10	1,013	951	0	0
November .....	164	143	115	106	30	0	0	0	1,116	1,041	(s)	0
December .....	134	85	84	84	0	0	28	28	909	837	6	0
Average .....	171	141	81	78	31	0	11	10	919	863	10	0
1994 January .....	182	149	128	128	8	0	11	0	971	945	35	0
February .....	184	131	96	96	35	0	19	15	967	926	43	0
March .....	188	167	37	37	16	0	13	0	1,067	1,014	33	0
April .....	241	197	52	52	13	0	3	0	987	963	23	0
May .....	105	75	85	85	19	0	0	0	957	917	79	0
June .....	112	101	72	72	12	0	10	10	1,040	974	38	0
July .....	127	127	144	144	35	0	36	36	926	889	35	0
August .....	181	181	115	115	52	0	13	7	928	885	33	0
September .....	144	144	63	63	34	0	9	0	1,043	963	34	0
October .....	215	215	110	110	21	0	0	0	940	881	18	0
November .....	118	118	85	85	17	0	0	0	1,037	981	1	0
December .....	124	124	96	96	9	0	6	0	963	944	4	0
Average .....	160	144	90	90	22	0	10	6	985	940	31	0
1995 January .....	191	181	130	130	4	0	21	21	942	909	0	0
February .....	158	148	107	107	1	0	0	0	919	888	17	0
2-Month Average .....	175	166	119	119	3	0	11	11	931	899	8	0
1994 2-Month Average .....	183	141	113	113	20	0	15	7	969	936	39	0
1993 2-Month Average .....	169	153	47	43	46	0	0	0	834	786	14	0

<sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> Through 1992, Ecuador 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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

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

	Non-OPEC <sup>a</sup>											
	Netherlands Antilles		Norway		Puerto Rico		Russia <sup>b</sup>		Spain		Trinidad and Tobago	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	585	0	1	0	99	0	26	0	26	0	255	60
1974 Average	511	0	1	1	90	0	20	0	12	0	251	63
1975 Average	332	0	17	12	90	0	14	0	1	0	242	115
1976 Average	275	0	36	35	88	0	11	2	1	0	274	104
1977 Average	211	0	50	48	105	0	12	2	10	0	289	134
1978 Average	229	0	104	104	94	0	8	1	3	0	253	142
1979 Average	231	0	75	75	92	0	1	0	4	0	190	123
1980 Average	225	0	144	144	88	0	1	0	1	0	176	115
1981 Average	197	0	119	114	62	0	5	(s)	1	(s)	133	102
1982 Average	175	0	102	102	50	0	1	0	3	(s)	112	92
1983 Average	189	0	66	65	40	0	1	(s)	2	(s)	96	83
1984 Average	188	0	114	112	42	0	13	(s)	11	0	94	87
1985 Average	40	0	32	31	28	0	8	(s)	29	1	113	98
1986 Average	25	0	60	53	21	0	18	(s)	53	0	125	93
1987 Average	29	0	80	70	21	0	11	0	55	0	106	75
1988 Average	36	0	67	62	22	0	29	0	68	0	97	71
1989 Average	42	0	138	127	32	0	48	0	67	0	94	73
1990 Average	31	0	102	96	32	0	45	1	47	0	96	76
1991 Average	81	0	82	74	27	0	29	1	33	0	88	72
1992 Average	65	0	127	119	26	0	18	5	32	0	95	70
1993 January	73	0	70	70	37	0	0	0	44	0	59	48
February	80	0	62	61	21	0	0	0	19	0	72	58
March	61	0	122	115	26	0	0	0	21	0	92	71
April	97	0	170	170	18	0	32	32	61	0	78	55
May	81	0	222	222	38	0	32	32	42	0	68	51
June	55	0	160	160	29	0	77	51	20	0	77	55
July	52	0	215	215	49	0	157	134	41	0	82	53
August	56	0	180	161	30	0	26	0	37	0	50	37
September	101	0	113	113	28	0	57	29	54	0	70	55
October	122	0	115	93	30	0	176	123	33	0	69	54
November	90	0	162	155	23	0	56	32	30	0	66	55
December	118	0	108	101	14	0	38	0	42	0	103	71
Average	82	0	142	137	29	0	55	36	37	0	74	55
1994 January	162	0	101	96	20	0	11	0	26	0	79	60
February	119	0	199	166	11	0	14	0	31	0	92	80
March	102	0	108	108	14	0	34	34	37	0	68	54
April	73	0	205	184	17	0	0	0	45	0	76	56
May	70	0	159	159	21	0	32	32	53	0	68	58
June	69	0	176	158	42	0	133	133	50	0	106	79
July	121	0	276	257	43	0	82	82	25	0	63	55
August	114	0	206	198	23	0	21	15	38	0	92	55
September	95	0	347	336	17	0	6	0	56	0	64	56
October	77	0	310	300	20	0	30	30	35	0	79	65
November	96	0	214	195	6	0	0	0	22	0	59	55
December	43	0	125	123	10	0	0	0	26	0	74	74
Average	95	0	202	190	20	0	30	27	37	0	77	62
1995 January	75	0	200	170	6	0	0	0	7	0	91	91
February	58	0	194	164	7	0	0	0	9	0	60	60
2-Month Average	67	0	197	167	6	0	0	0	8	0	76	76
1994 2-Month Average	142	0	147	129	16	0	12	0	28	0	85	70
1993 2-Month Average	76	0	66	66	30	0	0	0	32	0	65	53

<sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> Imports from other States in the former U.S.S.R. may be included in imports from Russia for the years 1973 through 1992.

(s)=Less than 500 barrels per day.

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

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

**Table 3.3h Petroleum Imports: United Kingdom, Virgin Islands, Other Non-OPEC, Total Non-OPEC, and Total Imports**  
(Thousand Barrels per Day)

	Non-OPEC <sup>a</sup>						Total Non-OPEC <sup>a,b</sup>		Total Imports	
	United Kingdom		Virgin Islands		Other Non-OPEC					
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1973 Average	15	0	329	0	153	36	3,263	1,149	6,256	3,244
1974 Average	8	0	391	0	122	30	2,832	937	6,112	3,477
1975 Average	14	(s)	406	0	120	14	2,454	893	6,056	4,105
1976 Average	31	13	422	0	203	101	2,247	742	7,313	5,287
1977 Average	126	97	466	0	287	157	2,614	971	8,807	6,615
1978 Average	180	169	428	0	239	146	2,612	1,172	8,363	6,356
1979 Average	202	197	431	0	269	192	2,819	1,407	8,456	6,519
1980 Average	176	173	388	0	219	162	2,609	1,399	6,909	5,263
1981 Average	375	369	327	0	236	163	2,672	1,474	5,996	4,396
1982 Average	456	441	316	0	306	174	2,968	1,754	5,113	3,488
1983 Average	382	365	282	0	378	215	3,189	1,853	5,051	3,329
1984 Average	402	378	294	0	411	210	3,388	1,914	5,437	3,426
1985 Average	310	278	247	0	394	137	3,237	1,888	5,067	3,201
1986 Average	350	317	244	0	426	144	3,387	2,065	6,224	4,178
1987 Average	352	304	272	0	459	196	3,617	2,274	6,678	4,674
1988 Average	315	254	242	0	487	196	3,882	2,411	7,402	5,107
1989 Average	215	160	321	0	457	197	3,921	2,467	8,061	5,843
1990 Average	189	155	282	0	417	180	3,721	2,381	8,018	5,894
1991 Average	138	106	243	0	282	137	3,535	2,405	7,627	5,782
1992 Average	230	200	249	0	335	149	3,796	2,676	7,888	6,083
1993 January	229	201	252	0	325	104	3,766	2,672	8,004	6,292
February	173	127	244	0	223	151	3,452	2,471	7,948	6,156
March	332	298	244	0	393	186	4,003	2,918	8,285	6,488
April	413	337	245	0	472	243	4,161	2,995	8,768	6,928
May	522	495	279	0	363	152	4,353	3,179	8,663	6,809
June	458	408	290	0	581	405	4,452	3,455	8,805	7,201
July	292	247	202	0	600	299	4,801	3,574	9,219	7,289
August	343	323	256	0	556	356	4,378	3,210	8,429	6,641
September	286	217	184	0	552	251	4,517	3,173	8,531	6,581
October	353	338	236	0	453	233	4,984	3,698	9,197	7,181
November	351	340	330	0	503	270	4,739	3,434	8,903	6,997
December	432	403	288	0	394	231	4,486	3,298	8,645	6,838
Average	350	312	254	0	452	240	<sup>b</sup> 4,347	<sup>b</sup> 3,178	8,620	6,787
1994 January	205	161	276	0	353	181	4,271	3,041	7,914	5,961
February	290	232	351	0	441	111	4,687	3,077	8,501	6,313
March	459	394	325	0	454	191	4,755	3,366	8,500	6,377
April	377	282	325	0	488	212	4,550	3,227	8,927	6,937
May	404	345	312	0	643	390	4,784	3,409	9,155	7,163
June	537	485	361	0	405	209	4,766	3,520	9,263	7,358
July	678	578	294	0	634	400	5,253	3,986	9,778	7,867
August	509	473	356	0	513	249	5,036	3,658	9,523	7,528
September	736	717	360	0	409	287	5,159	3,997	9,526	7,722
October	370	323	313	0	350	212	4,338	3,300	8,642	6,993
November	618	507	292	0	257	159	4,355	3,374	8,527	6,863
December	305	255	369	0	414	254	4,410	3,352	8,861	7,193
Average	458	396	328	0	447	239	4,697	3,444	8,929	7,027
1995 January	256	228	283	0	209	131	4,126	3,215	7,955	6,503
February	382	359	322	0	300	143	4,244	3,211	8,358	6,565
2-Month Average	316	290	301	0	252	136	4,182	3,213	8,146	6,532
1994 2-Month Average	246	195	312	0	395	148	4,469	3,058	8,193	6,128
1993 2-Month Average	203	166	248	0	277	126	3,617	2,576	7,977	6,227

<sup>a</sup> Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

<sup>b</sup> As of January 1993, includes petroleum imported from Ecuador, which withdrew from OPEC on December 31, 1992.

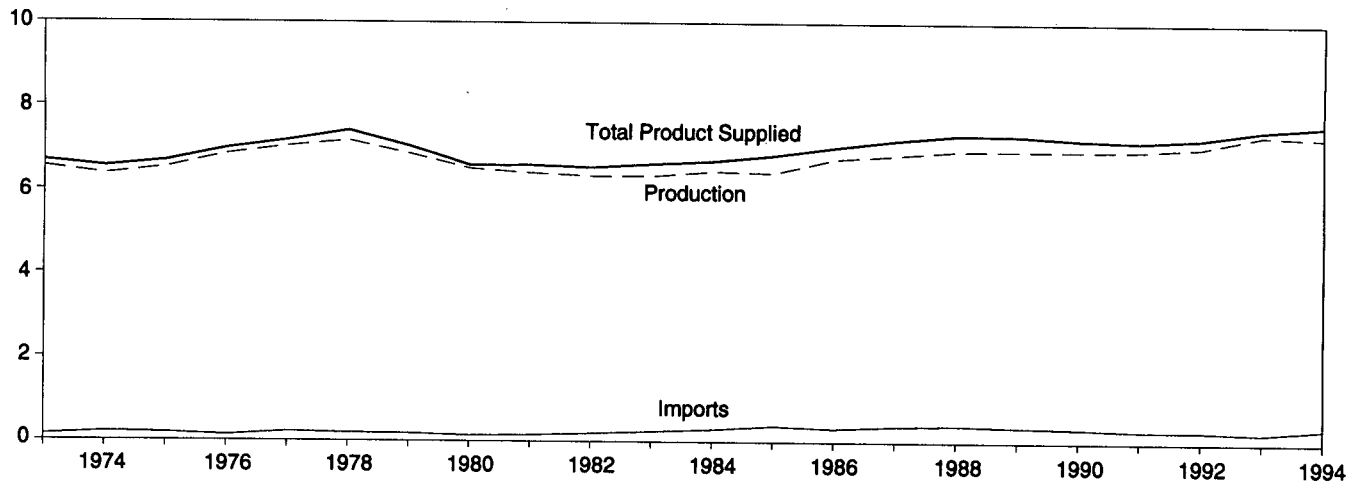
(s)=Less than 500 barrels per day.

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.

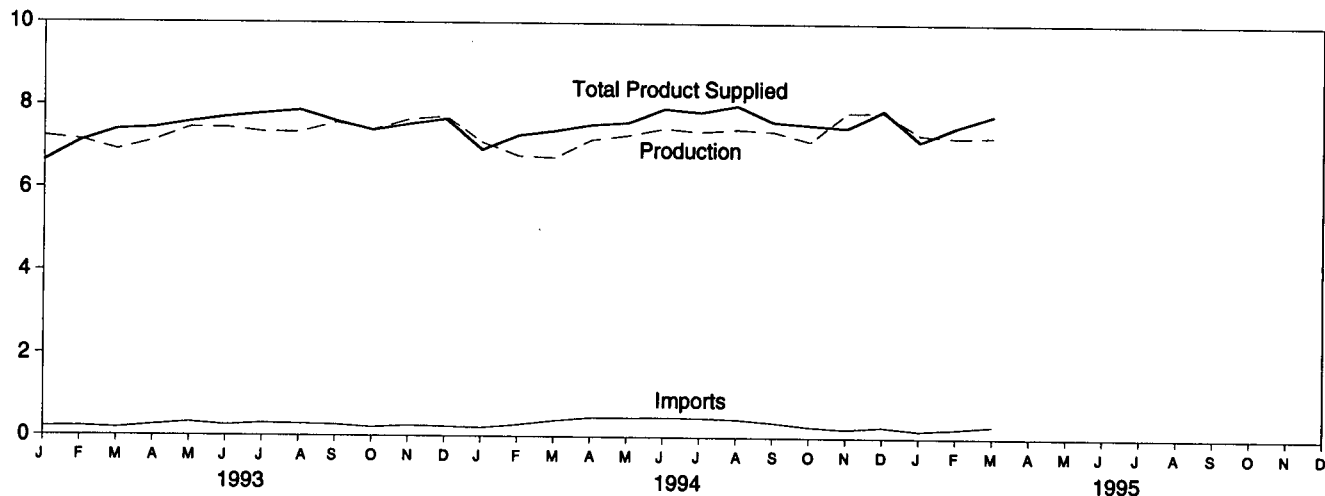
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S3. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S3.

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

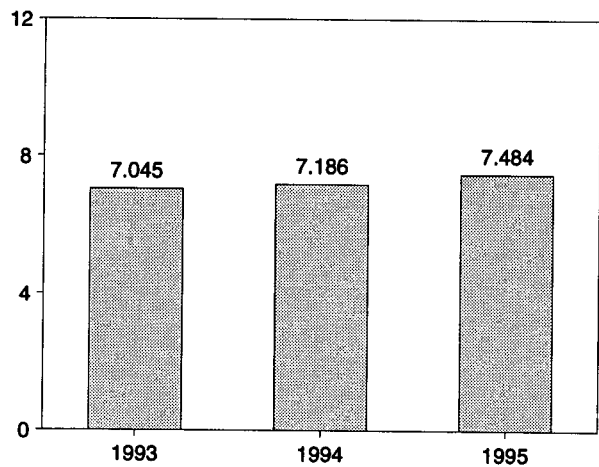
**Overview, 1973-1994**



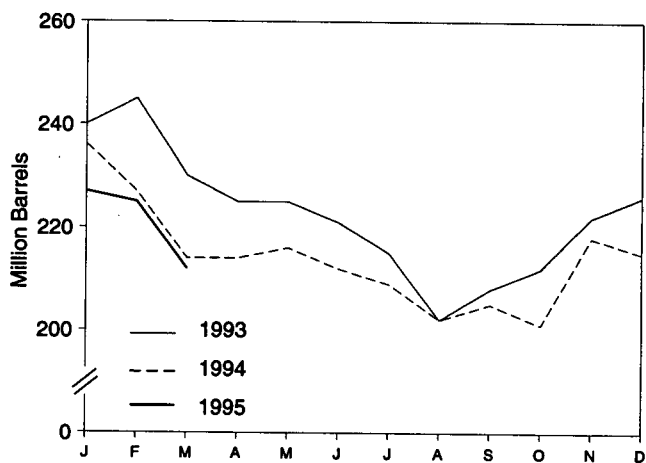
**Overview, Monthly**



**Product Supplied, January-March**



**Stocks, End of Month**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 3.4.



**Table 3.4 Finished Motor Gasoline Supply and Disposition**

	Supply		Disposition			Motor Gasoline Ending Stocks <sup>a</sup>		Oxygenates Ending 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> -25	2	6,588	253	203	NA
1982 Average .....	6,338	197	-28	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 January .....	<sup>g</sup> 7,228	204	652	142	<sup>g</sup> 6,639	240	198	<sup>h</sup> 15
February .....	7,144	216	149	99	7,112	245	202	14
March .....	6,904	177	-417	109	7,389	230	189	15
April .....	7,126	253	-168	111	7,435	225	184	15
May .....	7,446	323	93	90	7,585	225	187	17
June .....	7,442	251	-88	81	7,700	221	184	18
July .....	7,337	300	-240	92	7,785	215	177	20
August .....	7,335	283	-323	77	7,864	202	167	21
September .....	7,573	267	148	85	7,607	208	171	19
October .....	7,394	210	142	80	7,382	212	176	18
November .....	7,652	252	245	126	7,533	222	183	16
December .....	7,725	231	132	162	7,661	226	187	13
Average .....	7,360	247	26	105	7,476	226	187	13
1994 January .....	7,098	206	291	97	6,916	236	195	11
February .....	6,780	281	-288	77	7,272	227	187	11
March .....	6,740	387	-340	88	7,379	214	176	13
April .....	7,171	460	28	73	7,530	214	177	15
May .....	7,282	464	90	64	7,592	216	180	16
June .....	7,448	473	-93	88	7,926	212	177	18
July .....	7,372	464	-88	78	7,846	209	174	22
August .....	7,432	434	-211	70	8,007	202	168	24
September .....	7,387	360	53	74	7,619	205	169	25
October .....	7,149	263	-245	110	7,547	201	162	23
November .....	7,849	209	470	108	7,479	218	176	20
December .....	7,860	265	-8	231	7,902	215	175	17
Average .....	7,300	356	-28	97	7,587	215	175	17
1995 January .....	7,317	174	235	100	7,157	227	183	16
February .....	<sup>R</sup> 7,250	<sup>R</sup> 223	<sup>R</sup> -116	<sup>R</sup> 84	<sup>R</sup> 7,505	<sup>R</sup> 225	180	16
March .....	<sup>E</sup> 7,268	<sup>E</sup> 292	<sup>E</sup> -346	<sup>E</sup> 113	<sup>E</sup> 7,793	<sup>E</sup> 212	<sup>E</sup> 169	NA
3-Month Average .....	<sup>E</sup> 7,279	<sup>E</sup> 230	<sup>E</sup> -75	<sup>E</sup> 100	<sup>E</sup> 7,484	<sup>E</sup> 212	<sup>E</sup> 169	NA
1994 3-Month Average .....	6,876	292	-107	88	7,186	214	176	13
1993 3-Month Average .....	7,090	198	127	117	7,045	230	189	15

<sup>a</sup> Stocks are totals as of 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.

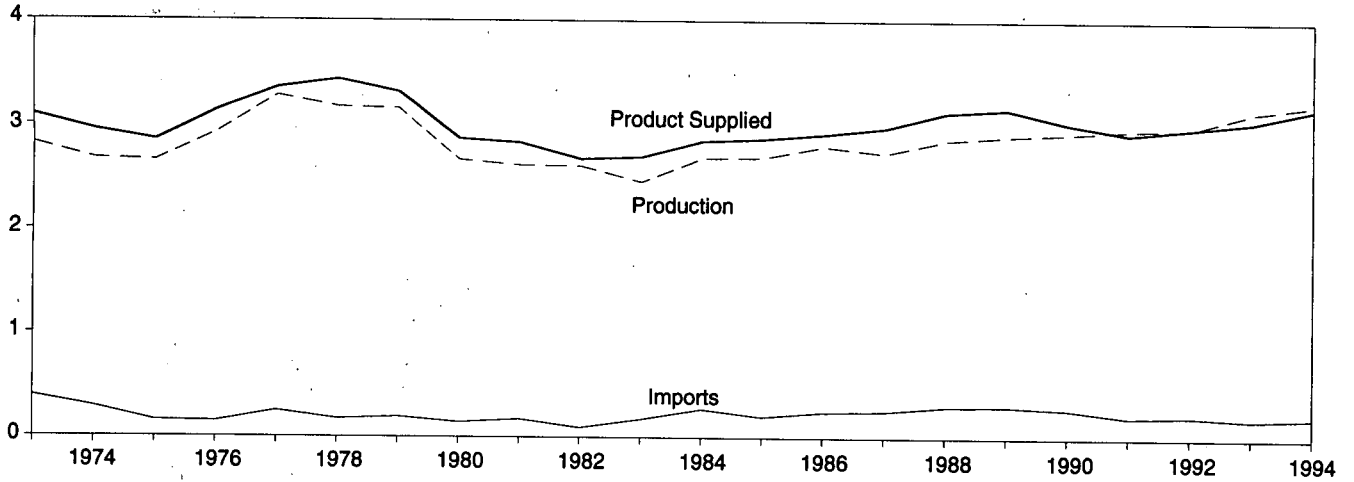
<sup>h</sup> See Note 1 at end of section.

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

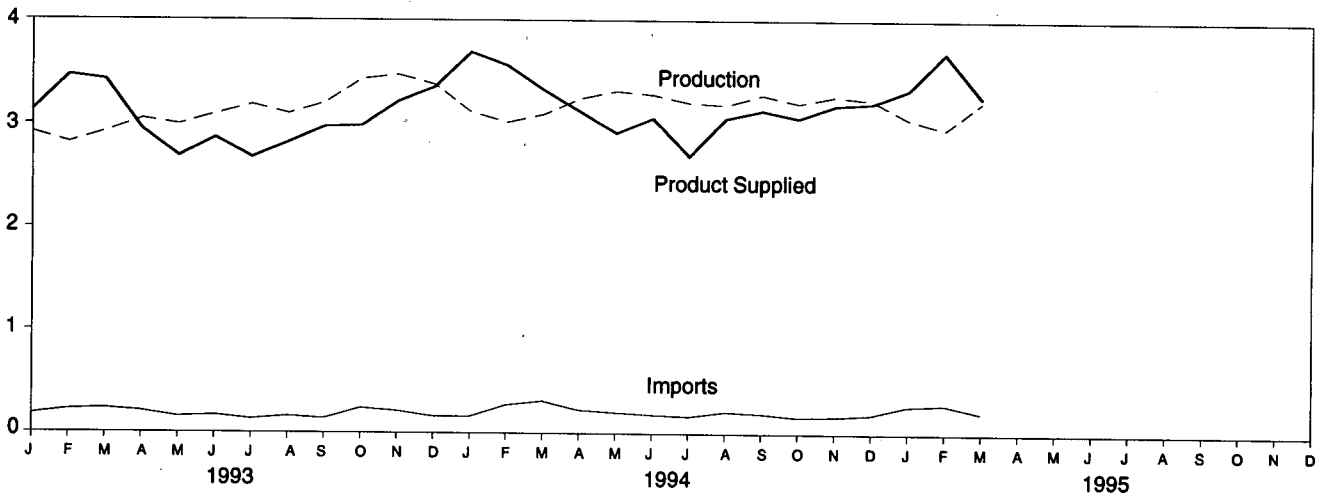
Note: Geographic coverage is the 50 States and the District of Columbia. Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S4. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S4.

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

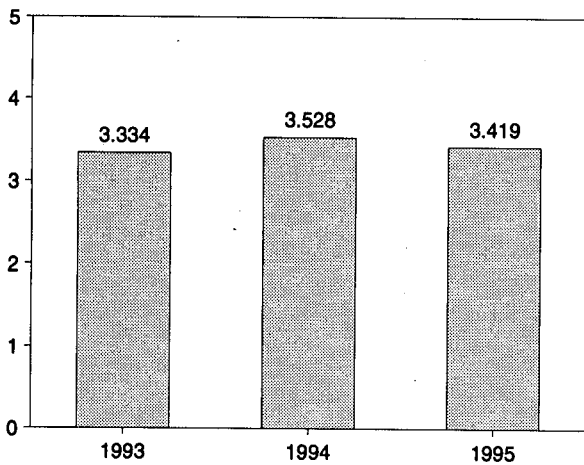
**Overview, 1973-1994**



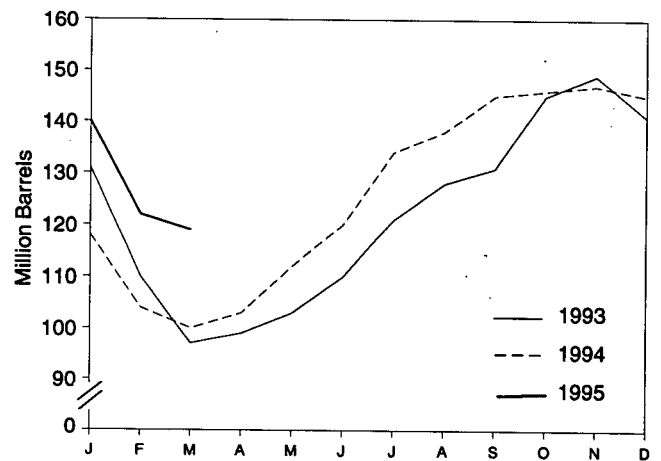
**Overview, Monthly**



**Product Supplied, January-March**



**Stocks, End of Month**



Source: Table 3.5.

**Table 3.5 Distillate Fuel Oil Supply and Disposition**

	Supply			Disposition			Ending 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 January	2,914	182	-	-318	287	3,128	131	<sup>g</sup> 15	<sup>g</sup> 115
February	2,815	224	-	-727	301	3,465	110	12	99
March	2,919	235	-	-420	154	3,420	97	11	87
April	3,047	209	-	71	241	2,943	99	12	88
May	2,994	153	-	106	355	2,685	103	12	91
June	3,093	168	-	241	158	2,863	110	15	95
July	3,186	130	-	346	296	2,674	121	21	100
August	3,100	159	-	243	196	2,820	128	44	84
September	3,205	137	-	102	267	2,973	131	48	84
October	3,432	242	-	453	237	2,983	145	55	90
November	3,474	214	-	127	342	3,218	149	64	85
December	3,382	160	-	-267	453	3,357	141	64	77
Average	3,132	184	-	1	274	3,041	141	64	77
1994 January	3,117	160	-	-746	332	3,692	118	56	62
February	3,019	276	-	-505	235	3,565	104	49	55
March	3,095	313	-	-142	220	3,330	100	50	50
April	3,250	226	-	100	252	3,124	103	56	46
May	3,319	202	-	317	289	2,915	112	61	52
June	3,287	181	-	239	168	3,061	120	61	58
July	3,211	164	-	461	220	2,694	134	68	65
August	3,189	211	-	147	193	3,060	138	67	72
September	3,286	193	-	205	140	3,135	145	66	79
October	3,206	159	-	46	256	3,063	146	67	79
November	3,274	166	-	44	211	3,185	147	70	78
December	3,236	185	-	-70	284	3,207	145	72	73
Average	3,208	202	-	11	234	3,166	145	72	73
1995 January	3,055	270	-	-152	141	3,335	140	69	71
February	<sup>R</sup> 2,954	<sup>R</sup> 287	-	<sup>R</sup> -660	<sup>R</sup> 212	<sup>R</sup> 3,689	<sup>R</sup> 122	63	<sup>R</sup> 59
March	<sup>E</sup> 3,220	<sup>E</sup> 201	-	<sup>E</sup> -59	<sup>E</sup> 220	<sup>E</sup> 3,260	<sup>E</sup> 119	<sup>E</sup> 61	<sup>E</sup> 57
3-Month Average	<sup>E</sup> 3,081	<sup>E</sup> 251	-	<sup>E</sup> -278	<sup>E</sup> 190	<sup>E</sup> 3,419	<sup>E</sup> 119	<sup>E</sup> 61	<sup>E</sup> 57
1994 3-Month Average	3,079	249	-	-463	263	3,528	100	50	50
1993 3-Month Average	2,885	214	-	-481	245	3,334	97	11	87

<sup>a</sup> Stocks are totals as of end of period.

<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.

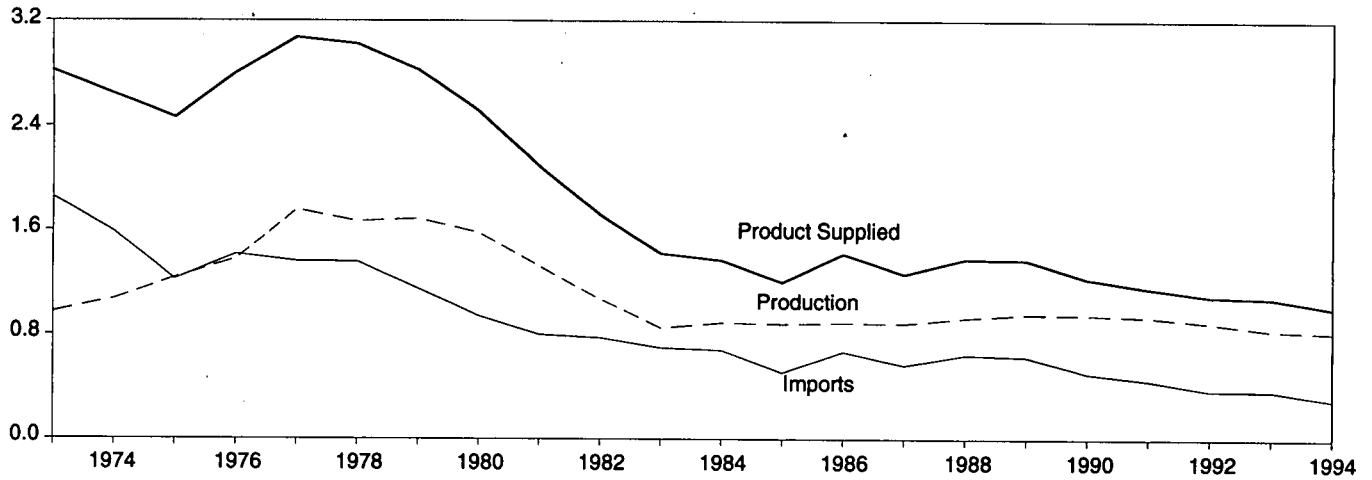
<sup>R</sup>=Revised data. <sup>NA</sup>=Not available. <sup>-</sup>=Not applicable. <sup>E</sup>=Estimate.

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

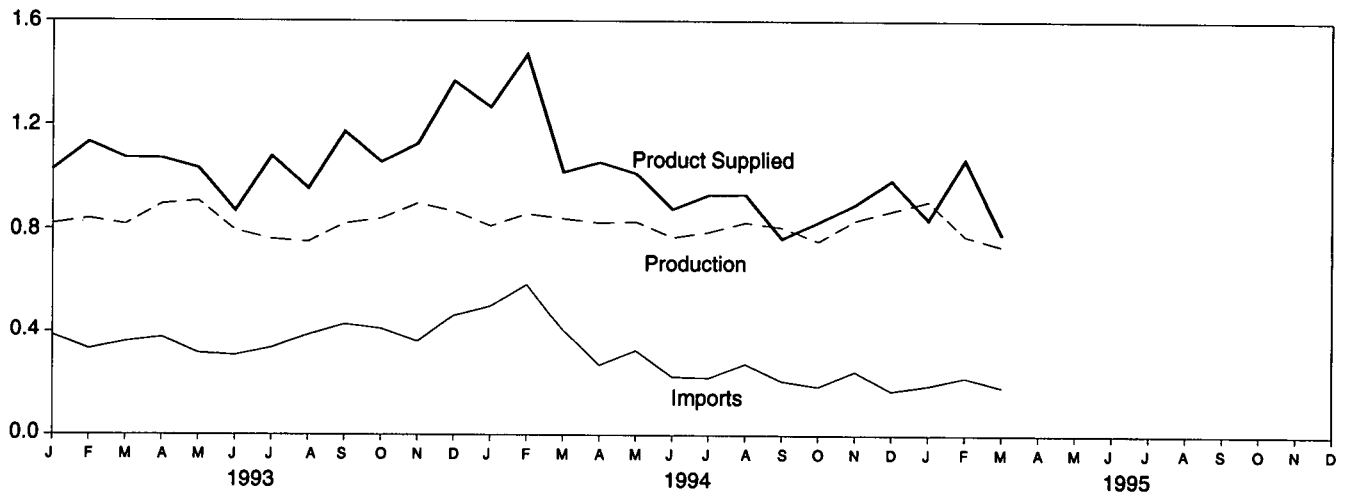
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S5. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S5.

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

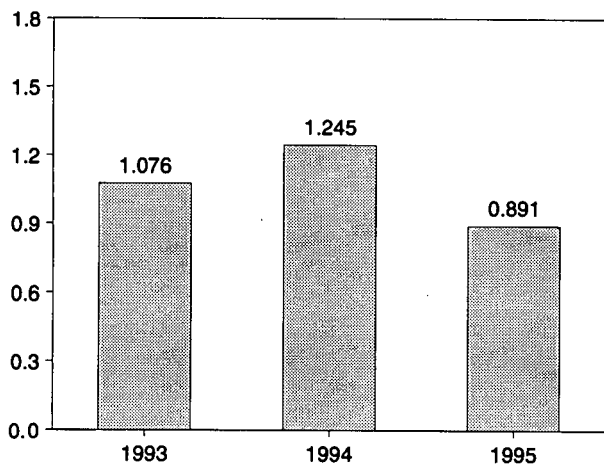
**Overview, 1973-1994**



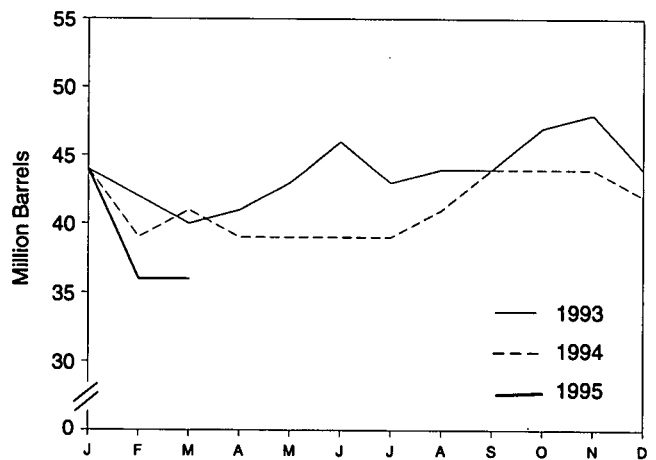
**Overview, Monthly**



**Product Supplied, January-March**



**Stocks, End of Month**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 3.6.

**Table 3.6 Residual Fuel Oil Supply and Disposition**

	Supply			Disposition			Ending 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 January .....	820	385	-	44	133	1,028	44
February .....	840	332	-	-74	113	1,132	42
March .....	818	360	-	-47	152	1,073	40
April .....	896	377	-	32	169	1,071	41
May .....	908	316	-	54	137	1,033	43
June .....	795	308	-	87	147	870	46
July .....	762	337	-	-102	122	1,079	43
August .....	752	387	-	64	120	955	44
September .....	822	430	-	-31	110	1,173	44
October .....	841	412	-	103	94	1,057	47
November .....	899	361	-	48	86	1,126	48
December .....	869	467	-	-129	98	1,367	44
Average .....	835	373	-	4	123	1,080	44
1994 January .....	813	503	-	-16	64	1,267	44
February .....	859	586	-	-152	127	1,470	39
March .....	841	407	-	54	175	1,019	41
April .....	825	272	-	-70	110	1,057	39
May .....	830	328	-	13	129	1,015	39
June .....	770	227	-	-3	122	879	39
July .....	791	223	-	-2	83	933	39
August .....	828	277	-	52	120	934	41
September .....	809	211	-	113	141	766	44
October .....	756	190	-	-18	134	830	44
November .....	836	248	-	5	182	897	44
December .....	873	173	-	-58	115	988	42
Average .....	819	302	-	-6	125	1,002	42
1995 January .....	909	194	-	60	203	839	44
February .....	<sup>R</sup> 776	<sup>R</sup> 225	-	<sup>R</sup> -275	<sup>R</sup> 208	<sup>R</sup> 1,069	<sup>R</sup> 36
March .....	<sup>E</sup> 737	<sup>E</sup> 188	-	<sup>E</sup> -15	<sup>E</sup> 158	<sup>E</sup> 781	<sup>E</sup> 36
3-Month Average .....	<sup>E</sup> 808	<sup>E</sup> 201	-	<sup>E</sup> -70	<sup>E</sup> 189	<sup>E</sup> 891	<sup>E</sup> 36
1994 3-Month Average .....	837	495	-	-34	122	1,245	41
1993 3-Month Average .....	825	360	-	-24	133	1,076	40

<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 totals as of end of period.

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

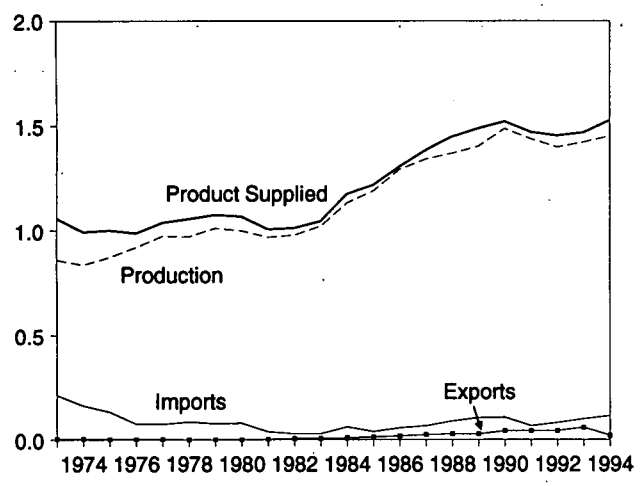
<sup>e</sup> See Note 3 at end of section.

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

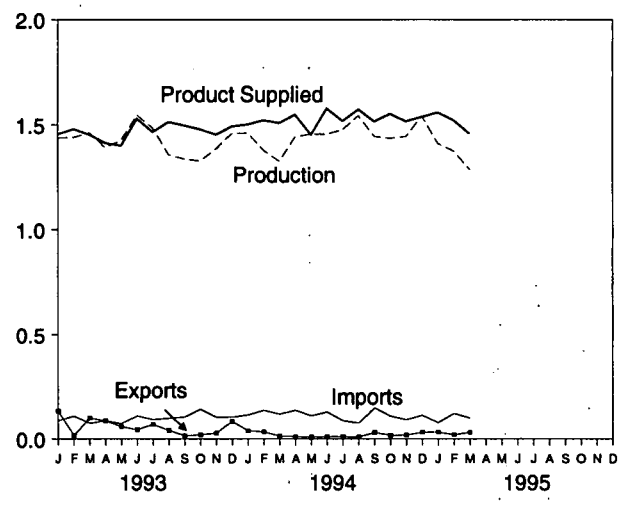
Note: Geographic coverage is the 50 States and the District of Columbia.  
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S6. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S6.

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

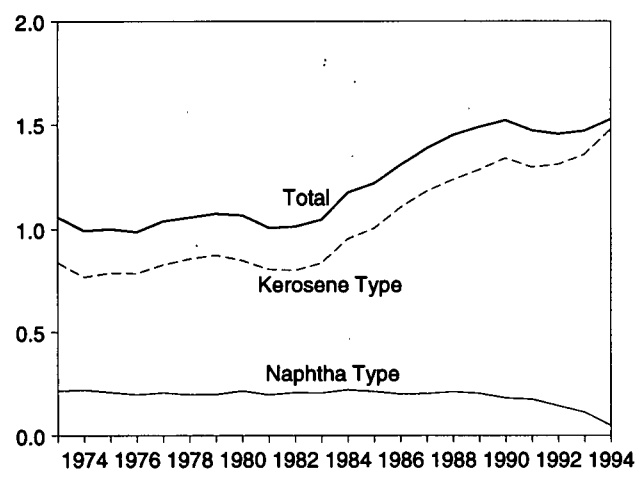
**Overview, 1973-1994**



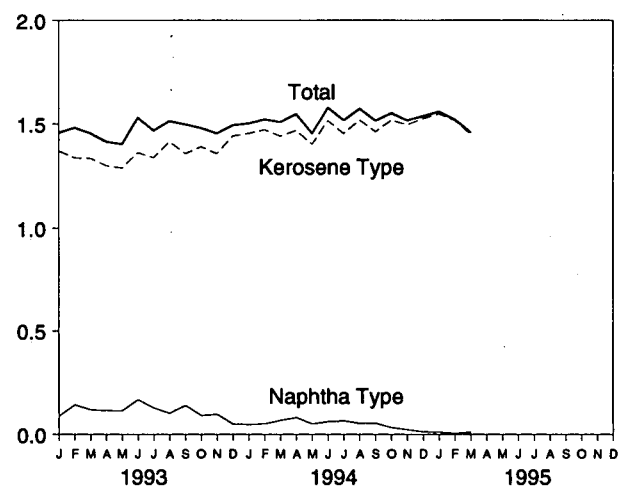
**Overview, Monthly**



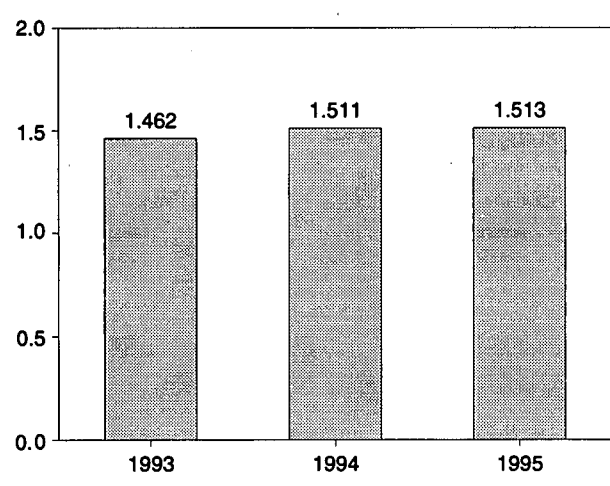
**Product Supplied by Type, 1973-1994**



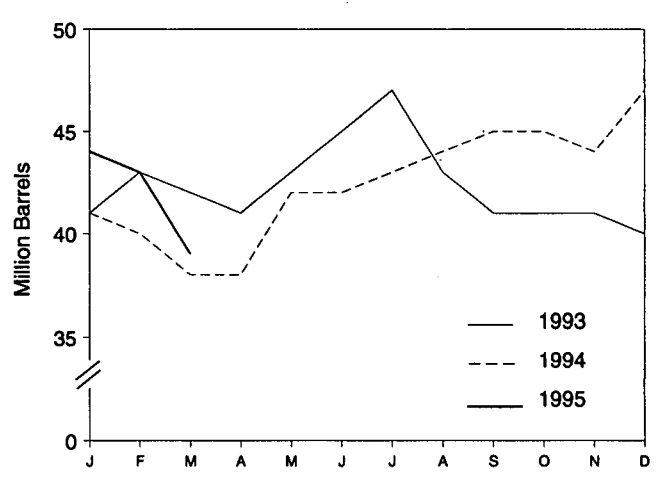
**Product Supplied by Type, Monthly**



**Product Supplied, January-March**



**Stocks, End of Month**



Source: Table 3.7.

**Table 3.7 Jet Fuel Supply and Disposition**

	Supply			Disposition				Ending 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	<sup>c</sup> 29	<sup>c</sup> 24
1975 Average	871	691	133	<sup>c</sup> 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	<sup>c</sup> 42	<sup>c</sup> 36
1981 Average	968	775	38	<sup>c</sup> -4	2	1,007	809	41	34
1982 Average	978	778	29	-12	6	1,013	804	<sup>c</sup> 37	<sup>c</sup> 31
1983 Average	1,022	817	29	<sup>c</sup> (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 January	1,437	1,308	89	-64	134	1,456	1,369	41	36
February	1,440	1,316	110	53	17	1,480	1,337	43	38
March	1,463	1,332	76	-15	101	1,453	1,335	42	38
April	1,391	1,265	88	-23	88	1,413	1,299	41	37
May	1,427	1,302	75	42	60	1,401	1,288	43	38
June	1,547	1,407	111	83	45	1,530	1,362	45	41
July	1,485	1,359	94	42	71	1,466	1,338	47	43
August	1,358	1,257	100	-98	42	1,514	1,413	43	40
September	1,338	1,241	106	-69	16	1,497	1,357	41	38
October	1,329	1,242	143	-27	20	1,479	1,389	41	37
November	1,386	1,301	105	8	29	1,453	1,357	41	38
December	1,459	1,382	105	-13	85	1,493	1,441	40	38
Average	1,422	1,309	100	-7	59	1,469	1,357	40	38
1994 January	1,461	1,394	116	36	40	1,502	1,453	41	39
February	1,379	1,331	138	-41	35	1,522	1,471	40	38
March	1,327	1,271	120	-77	14	1,509	1,440	38	36
April	1,442	1,393	138	20	12	1,548	1,467	38	36
May	1,456	1,402	112	106	9	1,453	1,401	42	40
June	1,456	1,399	130	-2	11	1,578	1,516	42	40
July	1,477	1,420	88	36	11	1,518	1,452	43	41
August	1,544	1,498	77	38	10	1,573	1,519	44	42
September	1,444	1,419	149	46	31	1,516	1,461	45	44
October	1,435	1,409	110	-25	18	1,552	1,518	45	43
November	1,444	1,433	93	(s)	19	1,517	1,495	44	43
December	1,543	1,533	114	86	33	1,538	1,526	47	46
Average	1,451	1,409	115	19	20	1,527	1,477	47	46
1995 January	1,412	1,402	79	-101	33	1,559	1,548	44	43
February	<sup>R</sup> 1,376	<sup>R</sup> 1,366	<sup>R</sup> 123	<sup>R</sup> -44	<sup>R</sup> 21	<sup>R</sup> 1,522	<sup>R</sup> 1,516	<sup>R</sup> 43	42
March	<sup>E</sup> 1,288	<sup>E</sup> 1,276	<sup>E</sup> 101	<sup>E</sup> -100	<sup>E</sup> 32	<sup>E</sup> 1,458	<sup>E</sup> 1,447	<sup>E</sup> 39	<sup>E</sup> 38
3-Month Average	<sup>E</sup> 1,358	<sup>E</sup> 1,347	<sup>E</sup> 100	<sup>E</sup> -83	<sup>E</sup> 29	<sup>E</sup> 1,513	<sup>E</sup> 1,503	<sup>E</sup> 39	<sup>E</sup> 38
1994 3-Month Average	1,389	1,332	124	-27	30	1,511	1,454	38	36
1993 3-Month Average	1,447	1,318	91	-11	86	1,462	1,347	42	38

<sup>a</sup> Stocks are totals as of 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.

<sup>R</sup>=Revised data. <sup>E</sup>=Estimate. (s)=Less than +500 barrels per day and

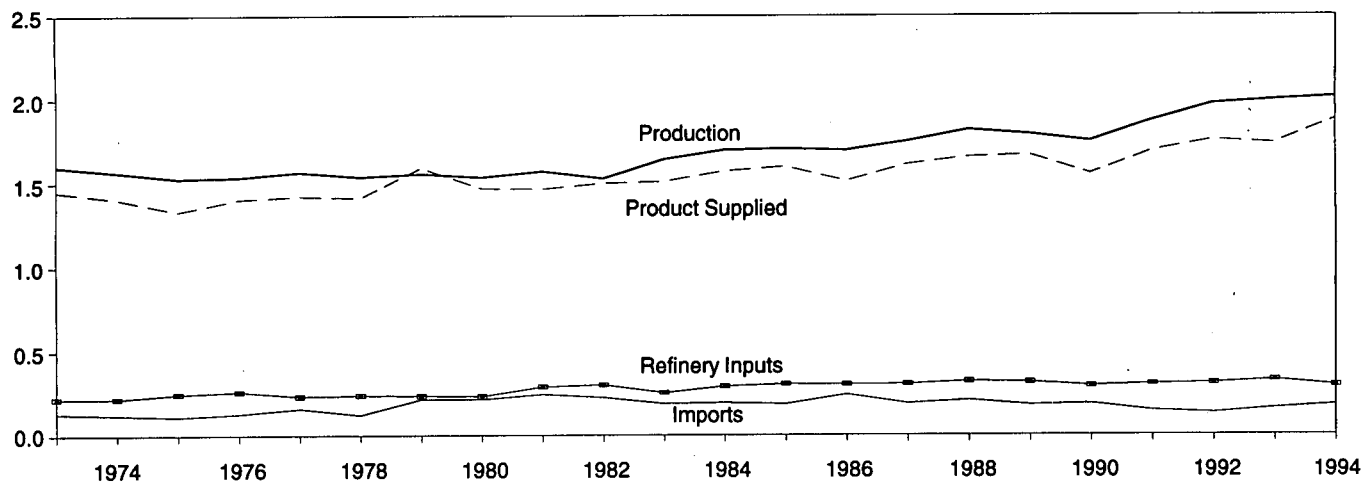
greater than -500 barrels per day.

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

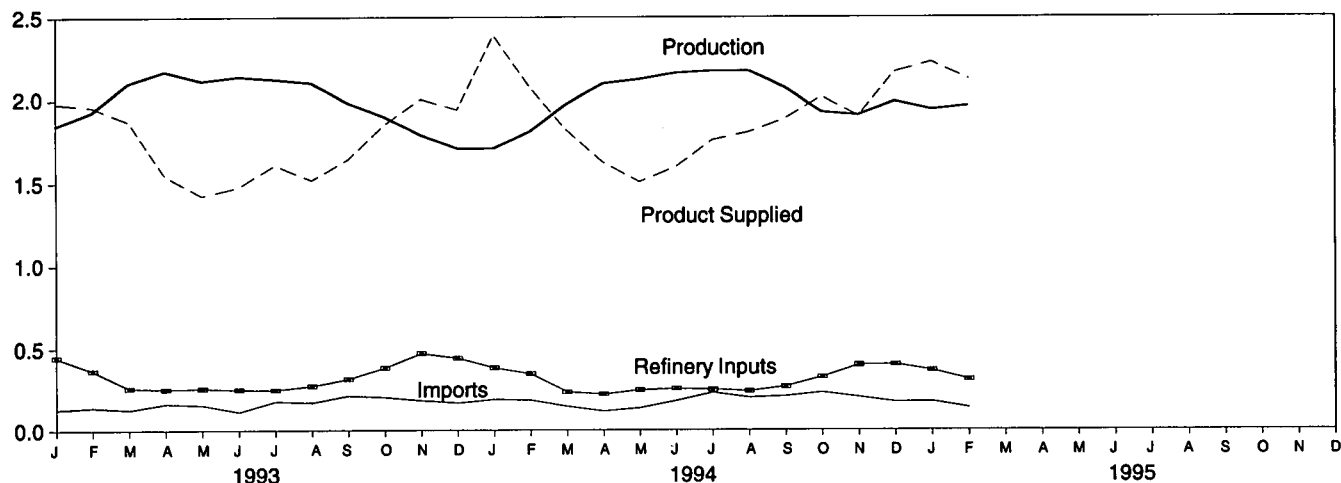
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S7. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S7.

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

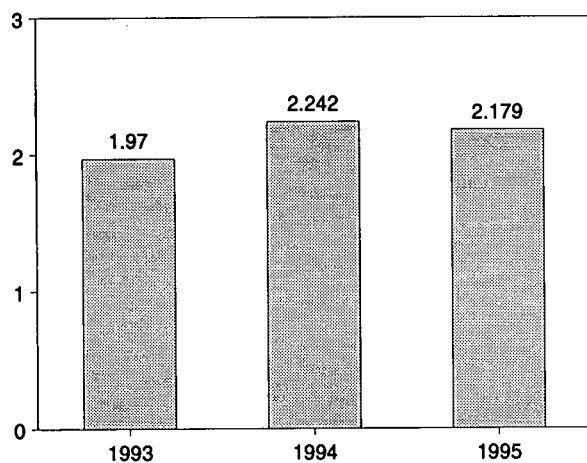
**Overview, 1973-1994**



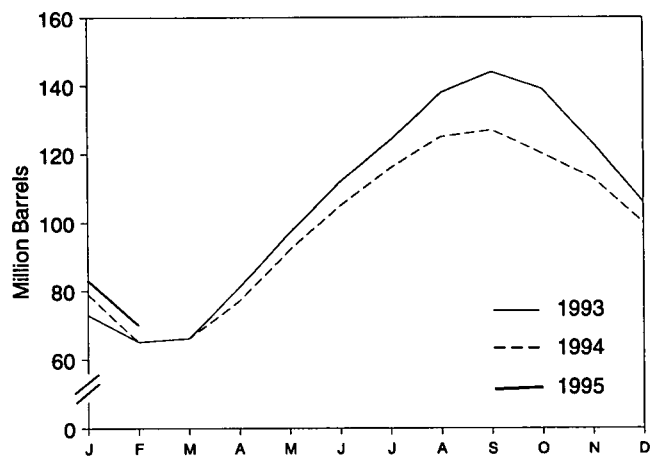
**Overview, Monthly**



**Product Supplied, January and February**



**Stocks, End of Month**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 3.8.



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

	Supply		Disposition				Ending 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 January .....	1,845	126	-492	444	39	1,980	73
February .....	1,929	138	-309	363	55	1,958	65
March .....	2,103	124	53	256	47	1,871	66
April .....	2,172	161	472	250	69	1,542	81
May .....	2,116	153	540	254	50	1,425	97
June .....	2,141	111	489	247	41	1,476	112
July .....	2,125	175	391	246	54	1,609	124
August .....	2,105	168	442	269	45	1,517	138
September .....	1,984	210	204	312	35	1,644	144
October .....	1,899	200	-154	381	21	1,851	139
November .....	1,789	181	-527	469	21	2,007	123
December .....	1,710	166	-545	440	40	1,942	106
Average .....	1,993	160	49	327	43	1,734	106
1994 January .....	1,710	187	-902	381	28	2,390	79
February .....	1,809	182	-474	343	44	2,077	65
March .....	1,976	144	35	232	37	1,816	66
April .....	2,099	114	341	218	29	1,625	77
May .....	2,123	133	477	243	32	1,505	92
June .....	2,161	177	448	251	41	1,597	105
July .....	2,174	227	358	246	40	1,757	116
August .....	2,175	196	296	236	37	1,803	125
September .....	2,073	205	71	264	56	1,886	127
October .....	1,925	228	-229	322	40	2,019	120
November .....	1,907	199	-226	396	35	1,902	113
December .....	1,991	169	-448	399	41	2,168	100
Average .....	2,011	180	-19	294	38	1,878	100
1995 January .....	1,941	172	-542	363	64	2,228	83
February .....	1,964	134	-456	306	122	2,125	70
2-Month Average .....	1,952	154	-501	336	91	2,179	70
1994 2-Month Average .....	1,757	185	-699	363	36	2,242	65
1993 2-Month Average .....	1,885	132	-405	406	46	1,970	65

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

<sup>b</sup> Stocks are totals as of end of period.

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

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

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

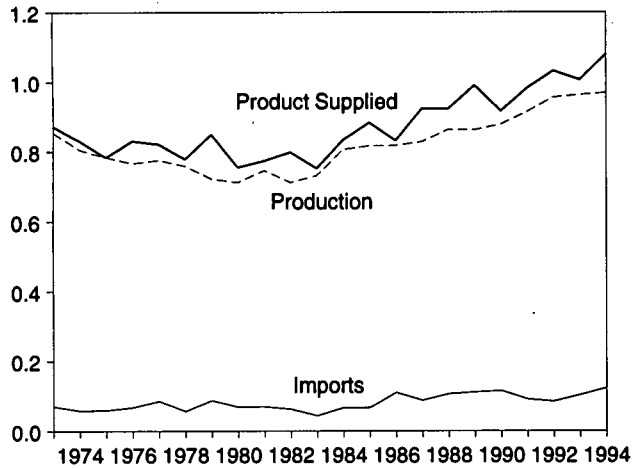
propylene, normal butane, butylene, isobutane and isobutylene.

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

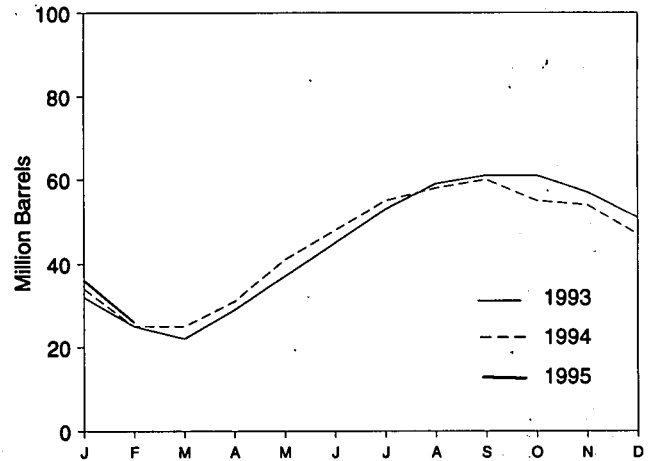
Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S8. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S9.

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

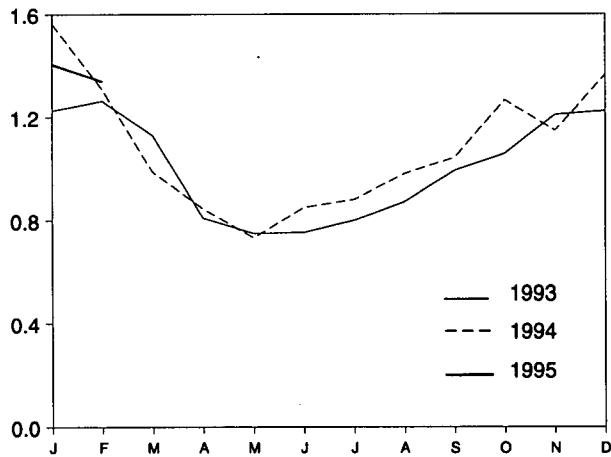
**Overview, 1973-1994**



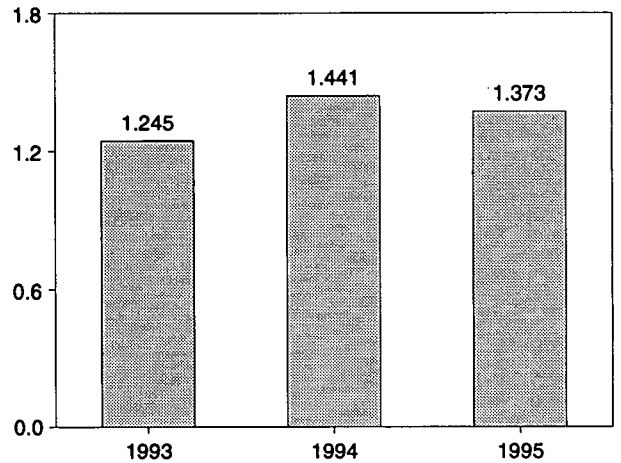
**Stocks, End of Month**



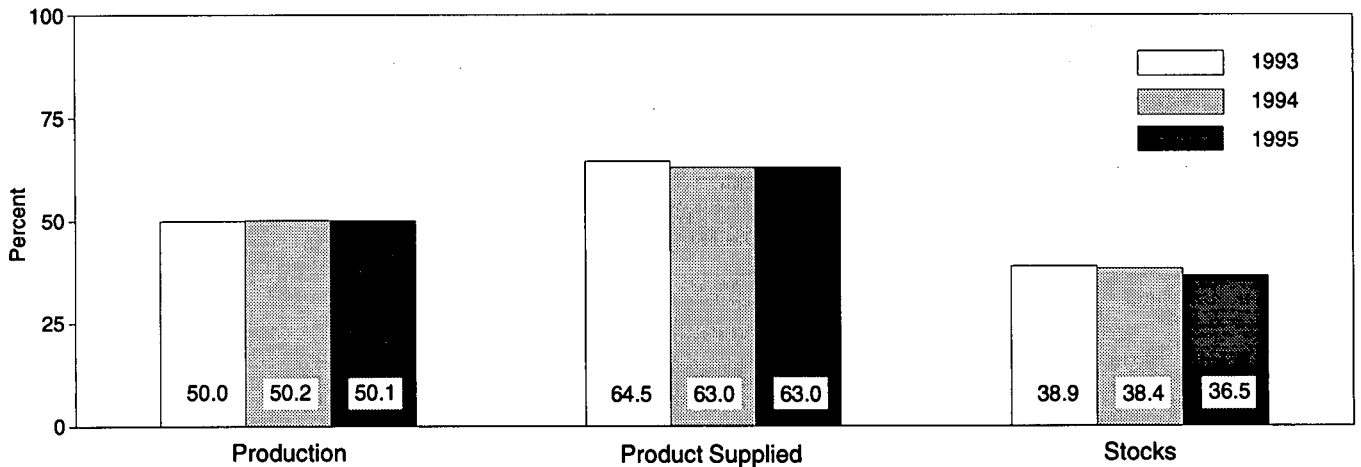
**Product Supplied, Monthly**



**Product Supplied, January and February**



**Share of Liquefied Petroleum Gases, February**



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Table 3.9 and, for calculation of shares, data prior to rounding for publication in Tables 3.8 and 3.9.

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

	Supply		Disposition				Ending 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 January .....	968	79	-212	1	31	1,227	32
February .....	964	82	-255	(s)	37	1,264	25
March .....	966	85	-109	(s)	32	1,129	22
April .....	980	108	238	(s)	40	809	29
May .....	951	96	266	0	30	750	37
June .....	967	75	265	0	23	754	45
July .....	963	118	256	0	26	800	53
August .....	960	116	178	0	27	871	59
September .....	969	132	92	0	17	992	61
October .....	954	107	-11	0	13	1,059	61
November .....	963	138	-126	0	17	1,209	57
December .....	953	102	-195	0	25	1,225	51
Average .....	963	103	34	(s)	26	1,006	51
1994 January .....	892	134	-555	0	19	1,562	34
February .....	908	119	-316	6	30	1,308	25
March .....	941	85	11	0	29	987	25
April .....	980	81	196	0	20	845	31
May .....	978	89	313	0	20	733	41
June .....	979	115	224	0	20	850	48
July .....	979	149	226	0	22	880	55
August .....	982	133	107	0	28	980	58
September .....	1,008	131	77	0	20	1,043	60
October .....	953	162	-176	0	24	1,267	55
November .....	997	137	-40	0	27	1,147	54
December .....	1,031	127	-233	0	29	1,363	47
Average .....	969	122	-13	(s)	24	1,080	47
1995 January .....	1,002	108	-350	0	55	1,405	36
February .....	983	94	-361	0	100	1,338	26
2-Month Average .....	993	101	-355	0	76	1,373	26
1994 2-Month Average .....	900	127	-442	3	24	1,441	25
1993 2-Month Average .....	966	81	-232	0	33	1,245	25

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

<sup>b</sup> Stocks are totals as of 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.

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 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S8.

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

	Supply		Disposition				Ending Stocks <sup>b</sup>
	Total Production	Imports	Stock Change <sup>a</sup>	Refinery Inputs	Exports	Products Supplied	
	Thousand Barrels per Day						
1973 Average .....	2,833	290	1	750	162	2,211	179
1974 Average .....	2,722	269	25	665	172	2,129	<sup>c</sup> 188
1975 Average .....	2,547	144	<sup>c</sup> -6	537	158	2,001	188
1976 Average .....	2,725	129	(s)	524	172	2,158	188
1977 Average .....	2,939	130	20	514	164	2,371	195
1978 Average .....	3,076	80	-12	492	165	2,511	191
1979 Average .....	3,141	116	24	352	208	2,673	200
1980 Average .....	2,957	130	15	310	197	2,566	<sup>c</sup> 205
1981 Average .....	2,771	188	<sup>c</sup> -42	723	197	2,081	241
1982 Average .....	2,475	305	-68	787	205	<sup>d</sup> 1,857	<sup>c</sup> 216
1983 Average .....	2,437	382	<sup>c</sup> -6	712	236	1,877	<sup>c</sup> 217
1984 Average .....	2,500	503	<sup>c</sup> -32	791	236	2,007	198
1985 Average .....	2,532	550	22	886	227	1,947	206
1986 Average .....	2,704	504	-15	888	291	2,045	201
1987 Average .....	2,737	543	-1	829	264	2,187	200
1988 Average .....	2,773	645	22	799	294	2,303	208
1989 Average .....	2,771	627	12	797	305	2,285	213
1990 Average .....	2,842	705	-32	887	289	2,402	201
1991 Average .....	2,826	675	18	936	277	2,269	208
1992 Average .....	2,928	707	-3	906	263	2,470	<sup>c</sup> 207
1993 January .....	<sup>e</sup> 3,147	726	<sup>c</sup> 739	929	<sup>e</sup> 271	<sup>e</sup> 1,933	229
February .....	2,853	773	111	1,057	282	2,176	233
March .....	2,887	826	245	843	269	2,356	240
April .....	2,935	753	-29	1,033	315	2,368	239
May .....	2,941	834	80	1,048	278	2,368	242
June .....	3,099	654	-239	1,064	278	2,650	235
July .....	3,213	894	61	1,008	303	2,735	237
August .....	3,167	693	-28	940	294	2,654	236
September .....	3,067	800	-268	1,104	282	2,749	228
October .....	3,195	810	-114	1,189	369	2,561	224
November .....	3,080	795	-222	1,355	309	2,433	217
December .....	2,816	678	-376	1,403	349	2,117	206
Average .....	3,035	770	-2	1,081	300	2,426	206
1994 January .....	2,719	780	507	590	256	2,147	221
February .....	2,779	725	236	638	248	2,383	228
March .....	2,805	753	32	939	361	2,226	229
April .....	2,901	780	-108	981	272	2,536	226
May .....	3,088	754	-26	975	288	2,605	225
June .....	3,127	716	-133	865	331	2,781	221
July .....	3,155	745	89	733	361	2,717	223
August .....	3,087	801	-31	782	411	2,725	223
September .....	3,086	686	92	754	388	2,538	225
October .....	3,067	700	-75	902	300	2,638	223
November .....	2,996	749	37	1,013	344	2,352	224
December .....	2,862	762	-278	1,049	386	2,467	215
Average .....	2,974	746	27	853	329	2,510	215
1995 January .....	2,819	563	383	634	324	2,041	227
February .....	2,914	802	236	722	320	2,438	234
2-Month Average .....	2,864	676	313	676	322	2,229	234
1994 2-Month Average .....	2,748	754	378	613	252	2,259	228
1993 2-Month Average .....	3,008	748	441	990	277	2,049	233

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

<sup>b</sup> Stocks are totals as of 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.

Sources: • 1973-1980: Energy Information Administration (EIA), *Petroleum Supply Monthly*, February 1993, Table S9. • 1981 forward: EIA, *Petroleum Supply Monthly*, April 1995, Table S10.

# Petroleum Notes

1. 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*.

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.

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*.

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:

- Liquefied Petroleum Gases: 1983—108.
- Propane and Propylene: 1983—55.
- Other Petroleum Products: 1983—210.

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.

**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).

**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
3.10	Products Supplied	1982	1,857	1,856

## Section 4. Natural Gas

Total dry natural gas production in the United States during February 1995 was an estimated 1.5 trillion cubic feet, 1 percent<sup>4</sup> lower than production during the previous February.

Consumption of natural and supplemental gas in February 1995 was 2.1 trillion cubic feet, 5 percent below the level in February 1994.

Deliveries to residential consumers in January 1995 (latest date for which data are available) were 806 billion cubic feet, 16 percent below the previous January's deliveries. Total deliveries to industrial consumers during January 1995

were 738 billion cubic feet, 2 percent higher than the previous January's level.

Imports of natural gas in February 1995 were 209 billion cubic feet, 7 percent higher than imports in the previous February.

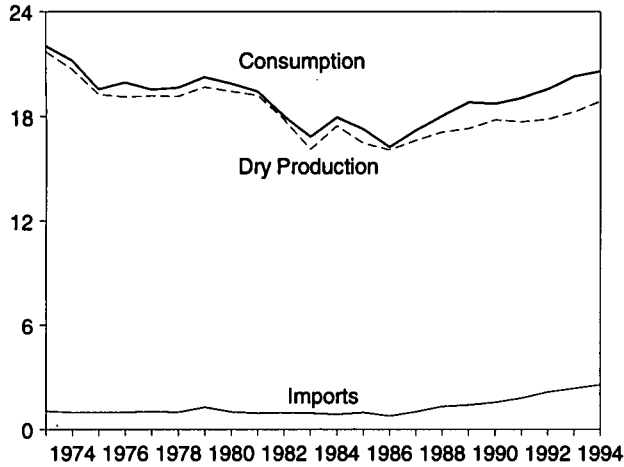
Stocks of working gas<sup>5</sup> in underground natural gas storage reservoirs at the end of February 1995 totaled 1.5 trillion cubic feet, 41 percent above the level of stocks available 1 year earlier. Net withdrawals from storage during February 1995 were 499 billion cubic feet, 1 percent above the amount of withdrawals during the previous February.

<sup>4</sup>Percentage changes are based on unrounded data.

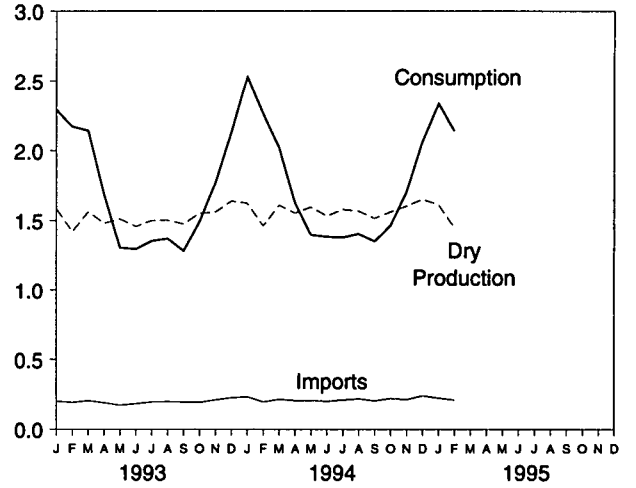
<sup>5</sup>Gas available for withdrawal.

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

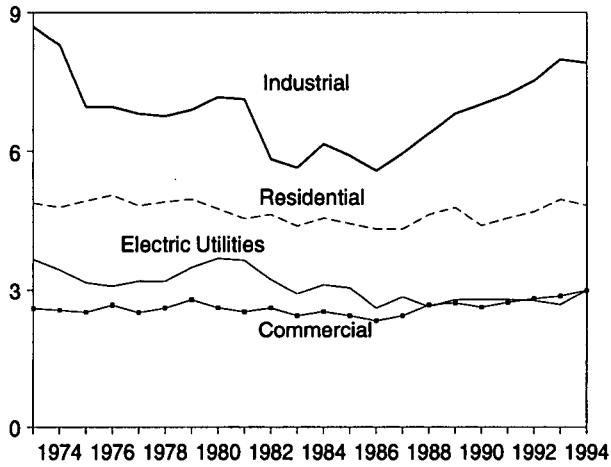
Overview, 1973-1994



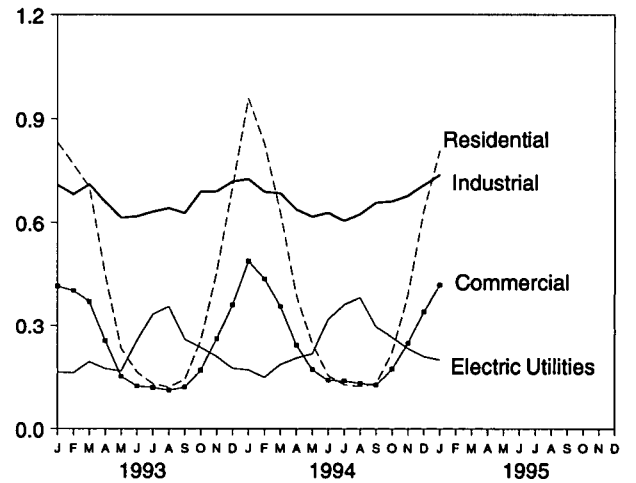
Overview, Monthly



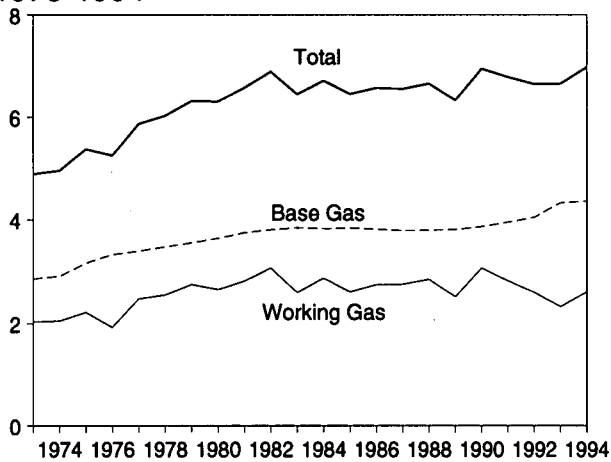
Consumption by Sector, 1973-1994



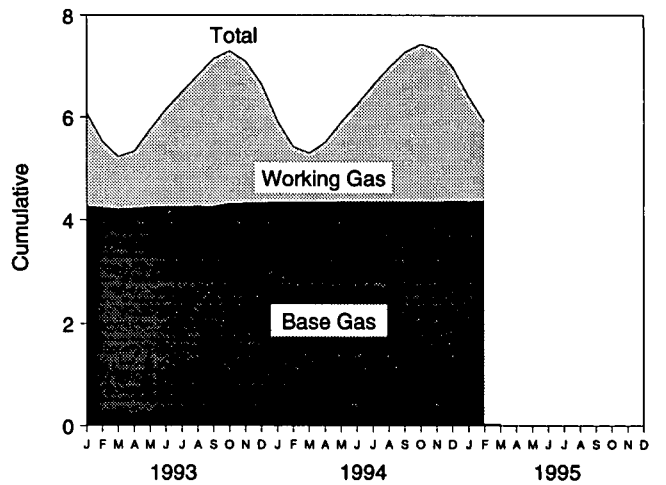
Consumption by Sector, Monthly



Underground Storage, End of Year, 1973-1994



Underground Storage, End of Month



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 4.2, 4.4, and 4.5.



**Table 4.1 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 (Wet) <sup>e</sup>	Extraction Loss <sup>f</sup>	Total 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 January	1,965	261	35	10	1,658	77	1,581
February	1,767	235	31	11	1,490	69	1,421
March	1,943	262	35	9	1,637	76	1,561
April	1,843	247	33	9	1,553	72	1,481
May	1,879	252	35	9	1,584	73	1,511
June	1,795	229	27	11	1,527	71	1,457
July	1,851	232	36	9	1,573	73	1,501
August	1,871	250	37	9	1,575	73	1,502
September	1,832	240	35	10	1,548	72	1,476
October	1,951	277	36	10	1,628	75	1,552
November	1,967	285	36	8	1,637	76	1,561
December	2,064	299	37	10	1,719	80	1,639
Total	22,729	3,069	414	116	19,130	886	18,244
1994 January	<sup>R</sup> 2,045	<sup>R</sup> 300	33	9	1,702	79	1,623
February	<sup>R</sup> 1,843	270	30	8	<sup>R</sup> 1,534	<sup>R</sup> 71	<sup>R</sup> 1,462
March	<sup>R</sup> 2,033	<sup>R</sup> 300	35	9	<sup>R</sup> 1,689	79	<sup>R</sup> 1,610
April	<sup>R</sup> 1,944	<sup>R</sup> 274	33	9	<sup>R</sup> 1,628	76	<sup>R</sup> 1,553
May	<sup>R</sup> 2,003	<sup>R</sup> 286	34	9	<sup>R</sup> 1,675	78	<sup>R</sup> 1,597
June	<sup>R</sup> 1,906	<sup>R</sup> 261	27	9	<sup>R</sup> 1,608	75	<sup>R</sup> 1,533
July	<sup>R</sup> 1,965	<sup>R</sup> 269	30	10	<sup>R</sup> 1,656	77	<sup>R</sup> 1,579
August	<sup>R</sup> 1,951	<sup>R</sup> 267	28	10	<sup>R</sup> 1,645	77	<sup>R</sup> 1,568
September	<sup>R</sup> 1,890	<sup>R</sup> 262	29	10	<sup>R</sup> 1,590	<sup>R</sup> 74	<sup>R</sup> 1,516
October	<sup>R</sup> 1,987	308	30	10	<sup>R</sup> 1,638	76	<sup>R</sup> 1,562
November	<sup>R</sup> 2,018	<sup>R</sup> 296	30	10	<sup>R</sup> 1,681	78	<sup>R</sup> 1,603
December	<sup>R</sup> 2,111	<sup>R</sup> 338	<sup>R</sup> 30	10	<sup>R</sup> 1,732	<sup>R</sup> 81	<sup>R</sup> 1,651
Total	<sup>R</sup> 23,695	<sup>R</sup> 3,432	<sup>R</sup> 369	<sup>R</sup> 116	<sup>R</sup> 19,779	<sup>R</sup> 922	<sup>R</sup> 18,857
1995 January	<sup>E</sup> 2,019	<sup>E</sup> 283	<sup>E</sup> 31	<sup>E</sup> 11	<sup>E</sup> 1,694	<sup>E</sup> 79	<sup>E</sup> 1,615
February	<sup>E</sup> 1,833	<sup>E</sup> 274	<sup>E</sup> 27	<sup>E</sup> 9	<sup>E</sup> 1,523	<sup>E</sup> 71	<sup>E</sup> 1,452
2-Month Total	<sup>E</sup> 3,852	<sup>E</sup> 557	<sup>E</sup> 58	<sup>E</sup> 20	<sup>E</sup> 3,217	<sup>E</sup> 150	<sup>E</sup> 3,067
1994 2-Month Total	3,887	570	64	18	3,236	151	3,085
1993 2-Month Total	3,732	497	66	21	3,148	146	3,002

<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 1 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 2 at end of section.

<sup>f</sup> See Note 3 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 data. NA=Not available. 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.

Sources: • 1973-1986: Energy Information Administration (EIA), *Natural Gas Annual 1991*, Table 95. • 1987 forward: EIA, *Natural Gas Monthly*, April 1995, Table 1.

**Table 4.2 Natural Gas Supply and Disposition**  
(Billion Cubic Feet)

	Supply					Total Supply/ Disposition <sup>d</sup>	Disposition		
	Total Dry Gas Production	Withdrawals from Storage <sup>a</sup>	Supplemental Gaseous Fuels <sup>b</sup>	Imports <sup>c</sup>	Balancing Item <sup>b</sup>		Additions to Storage <sup>a</sup>	Exports <sup>c</sup>	Consumption <sup>b</sup>
1973 Total	<sup>e</sup> 21,731	1,533	NA	1,033	-196	24,101	1,974	77	22,049
1974 Total	<sup>e</sup> 20,713	1,701	NA	959	-289	23,084	1,784	77	21,223
1975 Total	<sup>e</sup> 19,236	1,760	NA	953	-235	21,714	2,104	73	19,538
1976 Total	<sup>e</sup> 19,098	1,921	NA	964	-216	21,767	1,756	65	19,946
1977 Total	<sup>e</sup> 19,163	1,750	NA	1,011	-41	21,883	2,307	56	19,521
1978 Total	<sup>e</sup> 19,122	2,158	NA	966	-287	21,958	2,278	53	19,627
1979 Total	<sup>e</sup> 19,663	2,047	NA	1,253	-372	22,591	2,295	56	20,241
1980 Total	19,403	1,972	155	985	-640	21,875	1,949	49	19,877
1981 Total	19,181	1,930	176	904	-500	21,691	2,228	59	19,404
1982 Total	17,820	2,164	145	933	-537	20,525	2,472	52	18,001
1983 Total	16,094	2,270	132	918	<sup>f</sup> -703	18,712	1,822	55	16,835
1984 Total	17,466	2,098	110	843	<sup>f</sup> -217	20,300	2,295	55	17,951
1985 Total	16,454	2,397	126	950	-428	19,499	2,163	55	17,281
1986 Total	16,059	1,837	113	750	-493	18,266	1,984	61	16,221
1987 Total	16,621	1,905	101	993	-444	19,176	1,911	54	17,211
1988 Total	17,103	2,270	101	1,294	-453	20,315	2,211	74	18,030
1989 Total	17,311	2,854	107	1,382	-218	21,435	2,528	107	18,801
1990 Total	17,810	1,986	123	1,532	-149	21,302	2,499	86	18,716
1991 Total	17,698	2,752	113	1,773	-500	21,836	2,672	129	19,035
1992 Total	17,840	2,772	118	2,138	-508	22,360	2,599	216	19,544
1993 January	1,581	<sup>R</sup> 645	13	200	<sup>R</sup> -106	<sup>R</sup> 2,333	<sup>R</sup> 24	17	2,292
February	1,421	<sup>R</sup> 621	11	191	<sup>R</sup> -48	<sup>R</sup> 2,196	<sup>R</sup> 9	12	2,175
March	1,561	<sup>R</sup> 406	12	204	<sup>R</sup> 46	<sup>R</sup> 2,229	<sup>R</sup> 66	16	2,146
April	1,481	<sup>R</sup> 89	10	189	<sup>R</sup> 138	<sup>R</sup> 1,907	<sup>R</sup> 211	11	1,685
May	1,511	<sup>R</sup> 16	7	171	<sup>R</sup> 98	<sup>R</sup> 1,804	<sup>R</sup> 490	11	1,303
June	1,457	<sup>R</sup> 22	9	182	<sup>R</sup> 72	<sup>R</sup> 1,742	<sup>R</sup> 438	11	1,293
July	1,501	<sup>R</sup> 21	8	195	<sup>R</sup> 50	<sup>R</sup> 1,775	<sup>R</sup> 410	13	1,352
August	1,502	<sup>R</sup> 32	8	197	<sup>R</sup> 26	<sup>R</sup> 1,765	<sup>R</sup> 386	11	1,369
September	1,476	<sup>R</sup> 12	8	194	<sup>R</sup> 4	<sup>R</sup> 1,694	<sup>R</sup> 404	10	1,280
October	1,552	<sup>R</sup> 89	10	192	<sup>R</sup> -81	<sup>R</sup> 1,763	<sup>R</sup> 261	9	1,493
November	1,561	<sup>R</sup> 313	11	210	<sup>R</sup> -221	<sup>R</sup> 1,874	<sup>R</sup> 94	10	1,771
December	1,639	<sup>R</sup> 532	13	225	<sup>R</sup> -222	<sup>R</sup> 2,186	<sup>R</sup> 41	10	2,134
Total	18,244	2,799	119	2,350	-244	23,268	2,835	140	20,293
1994 January	1,623	757	14	233	<sup>R</sup> -54	2,573	33	11	2,529
February	<sup>R</sup> 1,462	543	12	195	<sup>R</sup> 114	2,327	49	11	2,267
March	<sup>R</sup> 1,610	<sup>R</sup> 236	11	214	<sup>R</sup> 73	<sup>R</sup> 2,145	103	19	<sup>R</sup> 2,023
April	<sup>R</sup> 1,553	68	10	205	<sup>R</sup> 77	<sup>R</sup> 1,913	280	8	<sup>R</sup> 1,625
May	<sup>R</sup> 1,597	25	10	206	<sup>R</sup> -14	1,824	<sup>R</sup> 417	9	<sup>R</sup> 1,398
June	<sup>R</sup> 1,533	33	9	200	<sup>R</sup> -4	<sup>R</sup> 1,771	375	12	<sup>R</sup> 1,384
July	<sup>R</sup> 1,579	24	10	209	<sup>R</sup> -30	<sup>R</sup> 1,792	<sup>R</sup> 403	11	<sup>R</sup> 1,379
August	<sup>R</sup> 1,568	29	9	218	<sup>R</sup> -42	1,782	<sup>R</sup> 364	14	<sup>R</sup> 1,405
September	<sup>R</sup> 1,516	<sup>R</sup> 21	10	203	<sup>R</sup> -50	1,699	335	14	1,350
October	<sup>R</sup> 1,562	<sup>R</sup> 53	10	221	<sup>R</sup> -156	<sup>R</sup> 1,690	<sup>R</sup> 215	11	<sup>R</sup> 1,464
November	<sup>R</sup> 1,603	<sup>R</sup> 196	11	212	<sup>R</sup> -209	<sup>R</sup> 1,813	<sup>R</sup> 98	12	1,703
December	<sup>R</sup> 1,651	<sup>R</sup> 422	13	<sup>R</sup> 241	<sup>R</sup> -196	<sup>R</sup> 2,131	<sup>R</sup> 54	13	<sup>R</sup> 2,063
Total	<sup>R</sup> 18,857	<sup>R</sup> 2,408	129	<sup>R</sup> 2,558	<sup>R</sup> -493	<sup>R</sup> 23,459	<sup>R</sup> 2,726	144	<sup>R</sup> 20,589
1995 January	<sup>E</sup> 1,615	<sup>R</sup> 619	13	224	<sup>R</sup> -80	<sup>R</sup> 2,392	40	12	<sup>R</sup> 2,339
February	<sup>E</sup> 1,452	541	12	209	-13	2,201	43	13	2,146
2-Month Total	<sup>E</sup> 3,067	1,160	26	433	-93	4,593	83	25	4,485
1994 2-Month Total	3,085	1,300	26	428	60	4,900	82	22	4,796
1993 2-Month Total	3,002	1,267	24	391	-154	4,530	34	29	4,467

<sup>a</sup> Data for 1980-1992 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 at end of section.

<sup>b</sup> See Notes at end of section.

<sup>c</sup> See Table 4.3.

<sup>d</sup> Data for 1978 forward do not include in-transit receipts and deliveries.

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

<sup>f</sup> See Note 7 at end of section.

R=Revised data. NA=Not available. 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.

Sources: See end of section.

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

	Imports				Exports			
	Canada <sup>a</sup>	Algeria <sup>b</sup>	Other <sup>c</sup>	Total	Canada <sup>a</sup>	Mexico <sup>a</sup>	Japan <sup>b</sup>	Total
1973 Total .....	1,028	3	2	1,033	15	14	48	77
1974 Total .....	959	0	(s)	959	13	13	50	77
1975 Total .....	948	5	0	953	10	9	53	73
1976 Total .....	954	10	0	964	8	7	50	65
1977 Total .....	997	11	2	1,011	(s)	4	52	56
1978 Total .....	881	84	0	966	(s)	4	48	53
1979 Total .....	1,001	253	0	1,253	(s)	4	51	56
1980 Total .....	797	86	102	985	(s)	4	45	49
1981 Total .....	762	37	105	904	(s)	3	56	59
1982 Total .....	783	55	95	933	(s)	2	50	52
1983 Total .....	712	131	75	918	(s)	2	53	55
1984 Total .....	755	36	52	843	(s)	2	53	55
1985 Total .....	926	24	0	950	(s)	2	53	55
1986 Total .....	749	0	2	750	9	2	50	61
1987 Total .....	993	0	0	993	3	2	49	54
1988 Total .....	1,276	17	0	1,294	20	2	52	74
1989 Total .....	1,339	42	0	1,382	38	17	51	107
1990 Total .....	1,448	84	0	1,532	17	16	53	86
1991 Total .....	1,710	64	0	1,773	15	60	54	129
1992 Total .....	2,094	43	0	2,138	68	96	53	216
1993 January .....	195	5	0	200	4	8	4	17
February .....	183	8	0	191	6	2	4	12
March .....	199	5	0	204	7	4	6	16
April .....	181	8	0	189	4	3	4	11
May .....	166	5	0	171	3	4	4	11
June .....	175	8	0	182	3	4	3	11
July .....	187	8	0	195	4	4	5	13
August .....	192	5	0	197	3	3	5	11
September .....	184	10	0	194	2	2	5	10
October .....	187	5	0	192	3	2	3	9
November .....	202	8	0	210	3	2	5	10
December .....	216	8	2	225	3	1	7	10
Total .....	2,267	82	2	2,350	45	40	56	140
1994 January .....	221	10	2	233	4	2	5	11
February .....	189	5	1	195	6	1	4	11
March .....	204	8	2	214	12	2	6	19
April .....	198	8	0	205	4	1	4	8
May .....	200	5	2	206	3	2	4	9
June .....	194	5	1	200	5	1	6	12
July .....	202	8	0	209	3	2	6	11
August .....	218	0	0	218	1	7	6	14
September .....	200	3	0	203	1	7	6	14
October .....	221	0	0	221	2	4	6	11
November .....	212	0	0	212	2	4	6	12
December .....	<sup>R</sup> 241	0	0	<sup>R</sup> 241	2	4	7	13
Total .....	<sup>R</sup> 2,500	51	7	<sup>R</sup> 2,558	44	37	63	144
1995 January .....	222	3	0	224	3	4	6	12
February .....	206	3	0	209	3	4	6	13
2-Month Total .....	428	5	0	433	6	8	11	25
1994 2-Month Total .....	411	15	2	428	10	3	9	22
1993 2-Month Total .....	378	13	0	391	10	10	9	29

<sup>a</sup> By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977 and 1981. See Note 5 at end of section.

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

<sup>c</sup> Other imports are from Mexico, except for 1986, when they came from Indonesia.

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

Notes: • See Note 5 at end of section. • Totals may not equal sum of

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

Sources: • 1973-1987: Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas."

• 1988 forward: EIA, *Natural Gas Monthly*, April 1995, Tables 5 and 6.

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

	Lease and Plant Fuel	Pipeline Fuel <sup>a</sup>	Delivered to Consumers					Total Consumption
			Residential	Commercial <sup>b</sup>	Industrial	Electric Utilities	Total	
1973 Total .....	1,496	728	4,879	2,597	8,689	3,660	19,825	22,049
1974 Total .....	1,477	669	4,786	2,556	8,292	3,443	19,077	21,223
1975 Total .....	1,396	583	4,924	2,508	6,968	3,158	17,558	19,538
1976 Total .....	1,634	548	5,051	2,668	6,964	3,081	17,764	19,946
1977 Total .....	1,659	533	4,821	2,501	6,815	3,191	17,329	19,521
1978 Total .....	1,648	530	4,903	2,601	6,757	3,188	17,449	19,627
1979 Total .....	1,499	601	4,965	2,786	6,899	3,491	18,141	20,241
1980 Total .....	1,026	635	4,752	2,611	7,172	3,682	18,216	19,877
1981 Total .....	928	642	4,546	2,520	7,128	3,640	17,834	19,404
1982 Total .....	1,109	596	4,633	2,606	5,831	3,226	16,295	18,001
1983 Total .....	978	490	4,381	2,433	5,643	2,911	15,367	16,835
1984 Total .....	1,077	529	4,555	2,524	6,154	3,111	16,345	17,951
1985 Total .....	966	504	4,433	2,432	5,901	3,044	15,811	17,281
1986 Total .....	923	485	4,314	2,318	5,579	2,602	14,814	16,221
1987 Total .....	1,149	519	4,315	2,430	5,953	2,844	15,542	17,211
1988 Total .....	1,096	614	4,630	2,670	6,383	2,636	16,320	18,030
1989 Total .....	1,070	629	4,781	2,718	6,816	2,787	17,102	18,801
1990 Total .....	1,236	660	4,391	2,623	7,018	2,787	16,820	18,716
1991 Total .....	1,129	601	4,556	2,729	7,231	2,789	17,305	19,035
1992 Total .....	1,171	588	4,690	2,803	7,527	2,766	17,786	19,544
1993 January .....	102	72	831	416	708	164	2,119	2,292
February .....	92	68	768	403	681	162	2,015	2,175
March .....	101	67	703	371	710	194	1,978	2,146
April .....	96	52	450	254	659	174	1,537	1,685
May .....	98	39	232	152	614	167	1,166	1,303
June .....	94	39	164	123	618	255	1,160	1,293
July .....	96	41	130	119	631	334	1,214	1,352
August .....	97	42	120	111	641	357	1,230	1,369
September .....	95	39	142	120	627	258	1,146	1,280
October .....	101	45	255	169	689	235	1,347	1,493
November .....	102	55	457	260	689	208	1,615	1,771
December .....	107	66	705	362	719	174	1,961	2,134
Total .....	1,180	624	4,957	2,863	7,986	2,682	18,488	20,293
1994 January .....	107	78	959	489	726	<sup>R</sup> 170	2,344	2,529
February .....	96	70	827	437	688	<sup>R</sup> 149	2,101	2,267
March .....	106	62	628	357	<sup>R</sup> 684	<sup>R</sup> 186	<sup>R</sup> 1,855	<sup>R</sup> 2,023
April .....	102	50	390	<sup>R</sup> 241	637	<sup>R</sup> 204	<sup>R</sup> 1,473	<sup>R</sup> 1,625
May .....	105	43	246	<sup>R</sup> 171	617	<sup>R</sup> 216	<sup>R</sup> 1,250	<sup>R</sup> 1,398
June .....	101	43	154	<sup>R</sup> 140	628	<sup>R</sup> 319	<sup>R</sup> 1,241	<sup>R</sup> 1,384
July .....	104	42	127	<sup>R</sup> 138	605	<sup>R</sup> 362	<sup>R</sup> 1,233	<sup>R</sup> 1,379
August .....	103	43	122	<sup>R</sup> 131	<sup>R</sup> 624	<sup>R</sup> 382	<sup>R</sup> 1,259	<sup>R</sup> 1,405
September .....	100	42	130	126	657	<sup>R</sup> 296	<sup>R</sup> 1,209	1,350
October .....	103	45	220	172	661	<sup>R</sup> 264	1,317	<sup>R</sup> 1,464
November .....	105	52	390	247	677	<sup>R</sup> 231	1,546	1,703
December .....	<sup>R</sup> 108	63	<sup>R</sup> 634	<sup>R</sup> 341	<sup>R</sup> 708	<sup>R</sup> 208	<sup>R</sup> 1,891	<sup>R</sup> 2,063
Total .....	1,238	<sup>R</sup> 633	<sup>R</sup> 4,828	<sup>R</sup> 2,991	<sup>R</sup> 7,912	<sup>R</sup> 2,987	<sup>R</sup> 18,718	<sup>R</sup> 20,589
1995 January .....	106	72	806	419	738	199	2,161	2,339

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

<sup>b</sup> Small quantities of natural gas delivered for use as vehicle fuel are included in the 1990-1993 annual totals but not in the monthly data.

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

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

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

Sources: • 1973-1986: Energy Information Administration (EIA), *Natural Gas Annual 1991*, Table 97. • 1987 forward: EIA, *Natural Gas Monthly*, April 1995, Table 3.

**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	Injections <sup>b</sup>	Withdrawals <sup>b</sup>	Net <sup>c</sup>
1973 Total .....	2,864	2,034	4,898	305	17.6	1,974	1,533	442
1974 Total .....	2,912	2,050	4,962	16	.8	1,784	1,701	84
1975 Total .....	3,162	2,212	5,374	162	7.9	2,104	1,760	344
1976 Total .....	3,323	1,926	5,250	-286	-12.9	1,756	1,921	-165
1977 Total .....	3,391	2,475	5,866	549	28.5	2,307	1,750	557
1978 Total .....	3,473	2,547	6,020	72	2.9	2,278	2,158	120
1979 Total .....	3,553	2,753	6,306	207	8.1	2,295	2,047	248
1980 Total .....	3,642	2,655	6,297	-99	-3.6	1,896	1,910	-14
1981 Total .....	3,752	2,817	6,569	162	6.1	2,180	1,887	293
1982 Total .....	3,808	3,071	6,879	255	9.0	2,399	2,094	306
1983 Total .....	3,847	2,595	6,442	-476	-15.5	1,700	2,142	-442
1984 Total .....	3,830	2,876	6,706	281	10.8	2,252	2,064	188
1985 Total .....	3,842	2,607	6,448	-270	-9.4	2,128	2,359	-231
1986 Total .....	3,819	2,749	6,567	142	5.5	1,952	1,812	140
1987 Total .....	3,792	2,756	6,548	7	.3	1,887	1,881	6
1988 Total .....	3,800	2,850	6,650	94	3.4	2,174	2,244	-69
1989 Total .....	3,812	2,513	6,325	-337	-11.8	2,491	2,804	-313
1990 Total .....	3,868	3,068	6,936	555	22.1	2,433	1,934	499
1991 Total .....	3,954	2,824	6,778	-244	-8.0	2,608	2,689	-80
1992 Total .....	4,044	2,597	6,641	-227	-8.0	2,555	2,724	-168
1993 January .....	4,259	1,827	6,085	-389	-17.6	37	592	-555
February .....	4,231	1,303	5,533	-535	-29.1	22	569	-547
March .....	4,204	1,029	5,233	-516	-33.4	79	383	-304
April .....	4,219	1,120	5,340	-453	-28.8	212	103	109
May .....	4,244	1,521	5,765	-327	-17.7	456	30	426
June .....	4,257	1,895	6,151	-258	-12.0	410	36	374
July .....	4,256	2,240	6,497	-219	-8.9	385	35	350
August .....	4,263	2,554	6,817	-207	-7.5	364	45	319
September .....	4,256	2,884	7,140	-160	-5.3	378	26	353
October .....	4,315	2,978	7,292	-245	-7.6	256	103	153
November .....	4,326	2,762	7,088	-292	-9.5	106	303	-197
December .....	4,327	2,322	6,649	-275	-10.6	54	492	-439
Total .....	4,327	2,322	6,649	-275	-10.6	2,760	2,717	43
1994 January .....	4,348	1,579	5,927	-247	-13.5	33	757	-724
February .....	4,337	<sup>R</sup> 1,091	<sup>R</sup> 5,428	-212	-16.3	49	543	-494
March .....	4,343	<sup>R</sup> 958	<sup>R</sup> 5,301	<sup>R</sup> -71	<sup>R</sup> -6.9	103	<sup>R</sup> 236	<sup>R</sup> -133
April .....	<sup>R</sup> 4,345	<sup>R</sup> 1,172	<sup>R</sup> 5,517	<sup>R</sup> 52	<sup>R</sup> 4.6	280	68	212
May .....	<sup>R</sup> 4,352	<sup>R</sup> 1,554	<sup>R</sup> 5,906	<sup>R</sup> 33	<sup>R</sup> 2.2	<sup>R</sup> 417	25	<sup>R</sup> 392
June .....	4,352	1,896	6,248	2	.1	375	33	<sup>R</sup> 342
July .....	4,355	<sup>R</sup> 2,273	<sup>R</sup> 6,629	<sup>R</sup> 33	<sup>R</sup> 1.5	<sup>R</sup> 403	24	<sup>R</sup> 379
August .....	<sup>R</sup> 4,355	<sup>R</sup> 2,607	<sup>R</sup> 6,962	<sup>R</sup> 53	<sup>R</sup> 2.1	<sup>R</sup> 364	29	<sup>R</sup> 334
September .....	4,353	<sup>R</sup> 2,912	<sup>R</sup> 7,265	<sup>R</sup> 28	<sup>R</sup> 1.0	335	<sup>R</sup> 21	313
October .....	<sup>R</sup> 4,354	<sup>R</sup> 3,075	<sup>R</sup> 7,429	<sup>R</sup> 97	<sup>R</sup> 3.3	<sup>R</sup> 215	<sup>R</sup> 53	161
November .....	<sup>R</sup> 4,353	<sup>R</sup> 2,978	<sup>R</sup> 7,331	<sup>R</sup> 216	<sup>R</sup> 7.8	<sup>R</sup> 98	<sup>R</sup> 196	-98
December .....	<sup>R</sup> 4,360	<sup>R</sup> 2,606	<sup>R</sup> 6,966	<sup>R</sup> 284	<sup>R</sup> 12.2	<sup>R</sup> 54	<sup>R</sup> 422	-368
Total .....	<sup>R</sup> 4,360	<sup>R</sup> 2,606	<sup>R</sup> 6,966	<sup>R</sup> 284	<sup>R</sup> 12.2	<sup>R</sup> 2,726	<sup>R</sup> 2,408	<sup>R</sup> 317
1995 January .....	<sup>R</sup> 4,356	<sup>R</sup> 2,033	<sup>R</sup> 6,389	<sup>R</sup> 454	<sup>R</sup> 28.7	40	<sup>R</sup> 619	<sup>R</sup> -578
February .....	4,359	1,536	5,895	445	40.8	43	541	-499

<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 1980-1992, data differ from those shown on Table 4.2, which includes liquefied natural gas storage for that period.

<sup>c</sup> Positive numbers indicate injections are greater than withdrawals. Negative numbers indicate withdrawals are greater than injections. Net injections or withdrawals may not equal the difference between applicable

ending stocks. See Note 8 at end of section.

R=Revised data.

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

Sources: See end of section.

# Natural Gas Notes

**1. Nonhydrocarbon Gases Removed:** Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the Energy Information Administration (EIA) *Natural Gas Annual (NGA) 1992*. Data are not available prior to 1980. Monthly data are reported by three States and computed for six States. Monthly data are preliminary until after publication of the EIA *NGA*. Differences between annual data published in the EIA *NGA* and the sum of the preliminary monthly data (January-December) are allocated proportionally to the months to create final monthly data. For further information on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly (NGM)*.

## 2. Production.

- Annual data: Final annual data are from the EIA *NGA*.
- Estimated monthly data: Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *NGM*.
- Preliminary monthly data: Monthly data are considered preliminary until after publication of the EIA *NGA*. Preliminary monthly data are gathered from reports to the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary, to a standard 14.73 psi pressure base. Unless there are major changes, data are not revised until after publication of the EIA *NGA*.
- Final monthly data: Differences between annual data in the EIA *NGA* and the sum of preliminary monthly data (January-December) are allocated proportionally to the months to create final monthly data.

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

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

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

Monthly data are revised and considered final after the publication of the EIA *NGA*. Final monthly data are es-

timated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the EIA *NGA*.

**4. Supplemental Gaseous Fuels:** Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

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

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

**5. Imports and Exports:** The United States imports natural gas via pipeline from Canada. Prior to 1985, it also imported natural gas via pipeline from Mexico. Liquefied natural gas (LNG) arrives via tanker from Algeria. One shipment of LNG was received from Indonesia in December 1986. 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 LNG via tanker to Japan.

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*.

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

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

**7. Balancing Item:** The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due

to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

The increase of 0.2 trillion cubic feet (Tcf) in the "Balancing Item" category in 1983, followed by a decline of 0.5 Tcf in 1984, reflected unusually large differences resulting from the use of the annual billing cycle (essentially December 15 through the following December 14) consumption data in conjunction with calendar year supply data. Record cold temperatures during the last half of December 1983 resulted in a reported 0.3 Tcf increase in net withdrawals from underground storage for peak shaving as compared with the same period in 1982, but the effect of this cold weather was reflected primarily in 1984 consumption data. For underground storage data, see Table F2 in the May 1985 *NGM*, which was published in July 1985.

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

Monthly underground storage data are collected from the Federal Energy Regulatory Commission (FERC) Forms FERC-8 (interstate data) and 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 1980-1989 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.

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	1985	8,087
1976	6,544	1986	8,145
1977	6,678	1987	8,124
1978	6,890	1988	8,124
1979	6,929	1989	8,124
1980	7,434	1990	8,125
1981	7,805	1991	7,993
1982	7,915	1992	7,932
1983	7,985	1993	7,989
1984	8,043	1994	8,043

Current capacity is 8,043 billion cubic feet.

## Sources for Table 4.2

- **1973-1986: Total Dry Gas Production**—Energy Information Administration (EIA), *Natural Gas Annual 1991*, Table 95. **Withdrawals from Storage, 1973-1975 and 1980-1986**—EIA, *Natural Gas Annual 1991*, Table 96. **Withdrawals from Storage, 1976-1979**—EIA, *Natural Gas Production and Consumption 1979*, Table 1. **Supplemental Gaseous Fuels, 1980-1986**—EIA, *Natural Gas Annual 1990, Volume 2*, Table 12. **Imports, Additions to Storage, Exports, and Consumption**—EIA, *Natural Gas Annual 1991*, Table 96. **Total Supply/Disposition**—Sum of disposition items. **Balancing Item**—Total supply/disposition minus all other supply items.

- **1987 forward:** EIA, *Natural Gas Monthly*, April 1995, Table 2.

## Sources for Table 4.5

- **Storage Activity: 1973-1975**—Energy Information Administration (EIA) *Natural Gas Annual 1990, Volume 2*, Table 9. **1976-1979**—EIA, *Natural Gas Production and Consumption 1979*, Table 1. **1980-1986**—EIA, *Natural Gas Annual 1990, Volume 2*, Table 11. **1987-1991**—EIA, *Natural Gas Monthly*, February 1995, Table 13. **1992 forward:** Estimated by EIA.

- **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." **1979-1986**—EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report." **1987 forward**—EIA, *Natural Gas Monthly*, April 1995, Table 13.





# Section 5. Oil and Gas Resource Development

Seismic activity statistics are not available for this month. The Society of Exploration Geophysicists, source of these data, is reorganizing its survey effort.

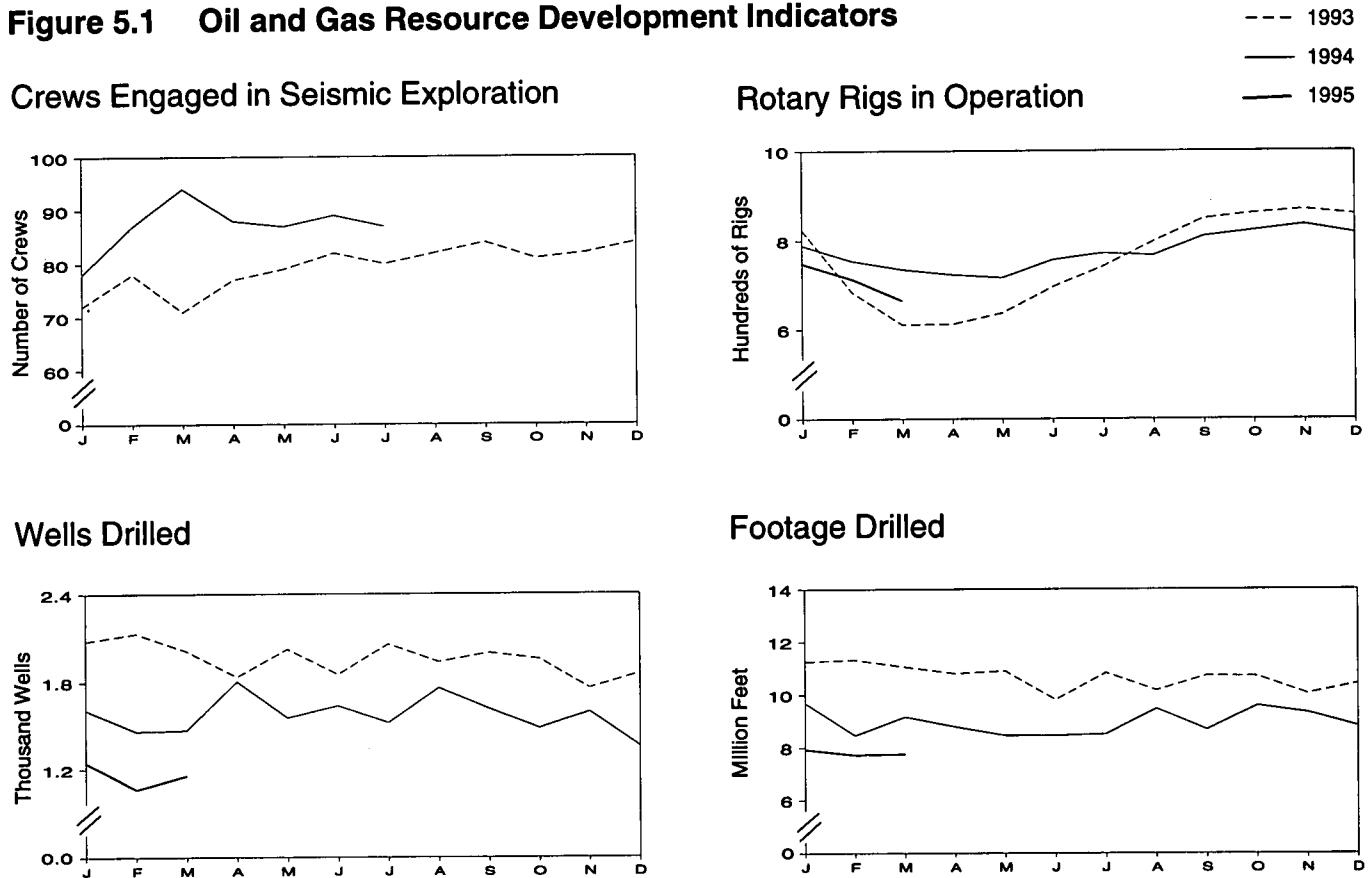
The March 1995 rotary rig count of 665 was 7 percent lower than the count in the previous month and 10 percent lower than the count in March 1994. Of the total number of rigs in operation, 575 were onshore and 90 were offshore. The number of onshore rigs was down 10 percent from the number in March 1994, and the number of offshore rigs was down 9 percent.

Total footage drilled in March 1995 was 7.75 million feet, up less than 1 percent from footage

drilled in February 1995 and down 15 percent from that drilled in March 1994.

The estimated number of exploratory and development oil and gas wells drilled during March 1995 was 872, 8 percent higher than the number drilled in February 1995 and 20 percent lower than the number drilled in March 1994. The estimated number of oil wells drilled was 410 and the estimated number of gas wells was 462, 21 percent lower and 19 percent lower, respectively, than their March 1994 levels. The estimated number of dry holes drilled in March 1995 was 284, up 13 percent from the number drilled in February 1995 and 26 percent lower than the number drilled in March 1994.

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



Sources: Tables 5.1 and 5.2.

**Table 5.1 Oil and Gas Drilling Activity Measurements**

	Crews Engaged in Seismic Exploration			Rotary Rigs in Operation <sup>a</sup>					Total Footage Drilled <sup>c</sup>	Active Well Servicing Units <sup>d</sup>
	Offshore	Onshore	Total	By Site		By Type		Total <sup>b</sup>		
				Offshore	Onshore	Oil	Gas			
	Monthly Average			Weekly Average						
1973 Average .....	23	227	250	84	1,110	NA	NA	1,194	139,427	NA
1974 Average .....	31	274	305	94	1,378	NA	NA	1,472	153,791	NA
1975 Average .....	30	254	284	106	1,554	NA	NA	1,660	181,046	NA
1976 Average .....	25	237	262	129	1,529	NA	NA	1,658	187,291	2,601
1977 Average .....	27	281	308	167	1,834	NA	NA	2,001	215,696	2,828
1978 Average .....	25	327	352	185	2,074	NA	NA	2,259	238,388	2,988
1979 Average .....	30	370	400	207	1,970	NA	NA	2,177	243,686	3,399
1980 Average .....	37	493	530	231	2,678	NA	NA	2,909	312,303	4,089
1981 Average .....	44	637	681	256	3,714	NA	NA	3,970	408,842	4,850
1982 Average .....	57	531	588	243	2,862	NA	NA	3,105	378,437	4,248
1983 Average .....	47	426	473	199	2,033	NA	NA	2,232	318,585	3,732
1984 Average .....	49	445	494	213	2,215	NA	NA	2,428	370,730	4,663
1985 Average .....	45	333	378	206	1,774	NA	NA	1,980	312,569	4,716
1986 Average .....	24	176	200	99	865	NA	NA	964	177,486	3,036
1987 Average .....	24	153	177	95	841	NA	NA	936	161,226	3,060
1988 Average .....	29	153	182	123	813	554	354	936	153,340	3,341
1989 Average .....	23	109	132	105	764	453	401	869	133,383	3,391
1990 Average .....	23	102	125	108	902	532	464	1,010	149,378	3,658
1991 Average .....	19	85	104	81	779	482	351	860	142,111	3,331
1992 Average .....	12	64	76	52	669	373	331	721	121,451	2,732
1993 January .....	17	55	72	72	752	335	454	824	11,265	2,807
February .....	15	63	78	69	615	311	334	684	11,331	2,899
March .....	16	55	71	62	549	315	268	611	R 11,068	2,829
April .....	14	63	77	69	543	320	270	612	10,822	2,703
May .....	15	64	79	73	564	323	294	637	10,915	2,848
June .....	17	65	82	83	612	350	327	695	9,814	3,087
July .....	15	65	80	85	656	368	360	741	10,846	3,178
August .....	16	66	82	87	710	397	390	797	10,177	3,423
September .....	18	66	84	89	759	418	421	848	10,745	3,341
October .....	15	66	81	93	767	441	411	860	10,717	3,519
November .....	17	65	82	99	769	453	408	868	10,052	3,604
December .....	18	66	84	103	754	425	426	857	10,435	3,662
Average .....	16	63	79	82	672	373	364	754	R 128,187	3,158
1994 January .....	18	60	78	99	690	356	425	789	9,694	3,386
February .....	18	69	87	95	659	337	405	754	8,461	3,063
March .....	19	75	94	99	636	323	403	735	R 9,163	2,977
April .....	20	68	88	106	617	314	398	723	8,786	2,649
May .....	22	65	87	104	612	320	382	716	8,453	2,798
June .....	20	69	89	113	643	331	408	756	8,452	2,785
July .....	23	64	87	107	664	341	415	771	8,506	2,992
August .....	NA	NA	NA	95	671	320	433	766	9,470	2,941
September .....	NA	NA	NA	97	712	325	471	809	R 8,672	3,010
October .....	NA	NA	NA	99	723	342	467	822	9,587	2,991
November .....	NA	NA	NA	106	729	361	460	835	9,325	2,977
December .....	NA	NA	NA	107	709	354	447	816	8,805	2,964
Average .....	NA	NA	NA	102	673	335	427	775	R 107,374	2,961
1995 January .....	NA	NA	NA	106	642	325	411	748	7,928	2,855
February .....	NA	NA	NA	100	613	326	375	713	7,717	R 2,877
March .....	NA	NA	NA	90	575	322	331	665	7,751	E 2,850
3-Month Average ...	NA	NA	NA	98	607	324	369	705	23,396	E 2,861
1994 3-Month Average ...	18	68	86	97	660	337	410	757	27,318	3,142
1993 3-Month Average ...	16	58	74	68	639	320	352	707	33,664	2,845

<sup>a</sup> Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Annual data are averages of 52- or 53-week reporting periods, not calendar years.

<sup>b</sup> Sum of oil, gas, and miscellaneous other rigs, which is not shown.

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

<sup>d</sup> See Glossary.

R=Revised data. NA=Not available. E=Estimate.

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

Sources: • Crews Engaged in Seismic Exploration: Society of Exploration Geophysicists, Tulsa, Oklahoma, *Monthly Seismic Crew Count*. • Rotary Rigs in Operation: Baker Hughes, Inc., Houston, Texas, *Rotary Rigs Running-by State*. • 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 Servicing Units: American Association of Oilwell Servicing Contractors, Dallas, Texas, *Well Servicing*.

**Table 5.2 Oil and Gas Wells Drilled**  
(Number of Wells)

	Exploratory				Development				Total			
	Oil	Gas	Dry	Total	Oil	Gas	Dry	Total	Oil	Gas	Dry	Total
1973 Total .....	654	1,079	6,038	7,771	9,597	5,896	4,428	19,921	10,251	6,975	10,466	27,692
1974 Total .....	870	1,205	6,894	8,969	12,794	5,965	5,311	24,070	13,664	7,170	12,205	33,039
1975 Total .....	991	1,263	7,207	9,461	15,988	6,907	6,529	29,424	16,979	8,170	13,736	38,885
1976 Total .....	1,100	1,362	6,854	9,316	16,597	8,076	6,951	31,624	17,697	9,438	13,805	40,940
1977 Total .....	1,183	1,562	7,402	10,147	17,517	10,557	7,634	35,708	18,700	12,119	15,036	45,855
1978 Total .....	1,191	1,792	8,054	11,037	17,874	12,613	8,537	39,024	19,065	14,405	16,591	50,061
1979 Total .....	1,335	1,920	7,478	10,733	19,368	13,250	8,560	41,178	20,703	15,170	16,038	51,911
1980 Total .....	1,781	2,094	9,035	12,910	30,497	15,129	11,302	56,928	32,278	17,223	20,337	69,838
1981 Total .....	2,667	2,533	12,297	17,497	40,176	17,374	14,987	72,537	42,843	19,907	27,284	90,034
1982 Total .....	2,470	2,168	11,346	15,984	36,672	16,776	15,036	68,484	39,142	18,944	26,382	84,468
1983 Total .....	2,113	1,660	10,271	14,044	35,086	12,896	14,065	62,047	37,199	14,556	24,336	76,091
1984 Total .....	2,335	1,599	11,482	15,416	40,250	15,413	14,315	69,978	42,585	17,012	25,797	85,394
1985 Total .....	1,879	1,282	9,445	12,606	33,142	12,970	11,763	57,875	35,021	14,252	21,208	70,481
1986 Total .....	988	733	5,511	7,232	17,713	7,402	7,255	32,370	18,701	8,135	12,766	39,602
1987 Total .....	859	673	5,179	6,711	15,327	7,084	6,302	28,713	16,186	7,757	11,481	35,424
1988 Total .....	792	663	4,766	6,221	12,530	7,575	5,476	25,581	13,322	8,238	10,242	31,802
1989 Total .....	580	654	4,001	5,235	9,759	8,571	4,490	22,820	10,339	9,225	8,491	28,055
1990 Total .....	617	<sup>R</sup> 587	3,782	<sup>R</sup> 4,986	11,533	<sup>R</sup> 9,853	4,830	<sup>R</sup> 26,216	12,150	10,440	8,612	31,202
1991 Total .....	545	464	3,322	4,331	11,363	8,773	4,609	24,745	11,908	9,237	7,931	29,076
1992 Total .....	446	358	2,538	3,342	8,257	7,587	3,938	19,782	8,703	7,945	6,476	23,124
1993 January .....	41	35	162	238	622	926	290	1,838	663	961	452	2,076
February .....	32	41	171	244	586	948	351	1,885	618	989	522	2,129
March .....	24	25	187	236	626	<sup>R</sup> 895	252	<sup>R</sup> 1,773	650	<sup>R</sup> 920	439	<sup>R</sup> 2,009
April .....	42	26	205	273	584	624	355	1,563	626	650	560	1,836
May .....	40	36	176	252	595	712	462	1,769	635	748	638	2,021
June .....	39	32	193	264	621	582	384	1,587	660	614	577	1,851
July .....	36	<sup>R</sup> 27	256	<sup>R</sup> 319	674	<sup>R</sup> 564	498	<sup>R</sup> 1,736	710	591	754	2,055
August .....	<sup>R</sup> 21	35	226	<sup>R</sup> 282	<sup>R</sup> 695	600	357	<sup>R</sup> 1,652	716	635	583	1,934
September .....	29	30	223	282	656	652	405	1,713	685	682	628	1,995
October .....	37	42	186	265	688	678	323	1,689	725	720	509	1,954
November .....	28	<sup>R</sup> 32	198	<sup>R</sup> 258	632	<sup>R</sup> 555	312	<sup>R</sup> 1,499	660	587	510	1,757
December .....	25	32	194	251	666	614	326	1,606	691	646	520	1,857
Total .....	<sup>R</sup> 394	393	2,377	<sup>R</sup> 3,164	<sup>R</sup> 7,645	<sup>R</sup> 8,350	4,315	<sup>R</sup> 20,310	8,039	<sup>R</sup> 8,743	6,692	<sup>R</sup> 23,474
1994 January .....	<sup>R</sup> 47	<sup>R</sup> 35	183	<sup>R</sup> 265	<sup>R</sup> 581	<sup>R</sup> 522	238	<sup>R</sup> 1,341	628	557	421	1,606
February .....	26	42	121	189	547	513	211	1,271	573	555	332	1,460
March .....	28	54	164	246	488	<sup>R</sup> 516	218	<sup>R</sup> 1,222	516	<sup>R</sup> 570	382	<sup>R</sup> 1,468
April .....	54	58	144	256	623	566	359	1,548	677	624	503	1,804
May .....	36	34	177	247	400	581	325	1,306	436	615	502	1,553
June .....	49	41	175	265	504	569	297	1,370	553	610	472	1,635
July .....	40	55	177	272	373	631	242	1,246	413	686	419	1,518
August .....	34	37	201	272	523	684	279	1,486	557	721	480	1,758
September .....	38	<sup>R</sup> 46	180	<sup>R</sup> 264	<sup>R</sup> 460	<sup>R</sup> 650	<sup>R</sup> 240	<sup>R</sup> 1,350	<sup>R</sup> 498	<sup>R</sup> 696	<sup>R</sup> 420	<sup>R</sup> 1,614
October .....	33	<sup>R</sup> 2	163	<sup>R</sup> 198	415	<sup>R</sup> 644	224	<sup>R</sup> 1,283	448	646	387	1,481
November .....	39	<sup>R</sup> 4	200	<sup>R</sup> 243	449	<sup>R</sup> 662	238	<sup>R</sup> 1,349	488	666	438	1,592
December .....	<sup>R</sup> 48	<sup>R</sup> 3	167	<sup>R</sup> 218	<sup>R</sup> 443	<sup>R</sup> 488	207	<sup>R</sup> 1,138	<sup>R</sup> 491	<sup>R</sup> 491	374	<sup>R</sup> 1,356
Total .....	<sup>R</sup> 472	<sup>R</sup> 411	2,052	<sup>R</sup> 2,935	<sup>R</sup> 5,806	<sup>R</sup> 7,026	<sup>R</sup> 3,078	<sup>R</sup> 15,910	<sup>R</sup> 6,278	<sup>R</sup> 7,437	<sup>R</sup> 5,130	<sup>R</sup> 18,845
1995 January .....	38	<sup>R</sup> 17	137	<sup>R</sup> 192	392	<sup>R</sup> 500	161	<sup>R</sup> 1,053	430	<sup>R</sup> 517	298	<sup>R</sup> 1,245
February .....	<sup>R</sup> 35	<sup>R</sup> 13	102	<sup>R</sup> 150	<sup>R</sup> 303	<sup>R</sup> 459	150	<sup>R</sup> 912	338	<sup>R</sup> 472	252	<sup>R</sup> 1,062
March .....	38	13	127	178	372	449	157	978	410	462	284	1,156
3-Month Total .....	111	43	366	520	1,067	1,408	468	2,943	1,178	1,451	834	3,463
1994 3-Month Total .....	101	131	468	700	1,616	1,551	667	3,834	1,717	1,682	1,135	4,534
1993 3-Month Total .....	97	101	520	718	1,834	2,769	893	5,496	1,931	2,870	1,413	6,214

R=Revised data.

Notes: • Service wells, stratigraphic tests, and core tests are excluded.

• Due to the method of estimation, data shown on this page are frequently revised. See end of section. • Geographic coverage is the 50 States and the

District of Columbia.

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

## Oil and Gas Resource Development Notes

Three well types are considered in the *Monthly Energy Review (MER)* drilling statistics: "completed for oil," "completed for gas," and "dry hole." Wells that productively encounter both crude oil and natural gas are categorized as "completed for 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-generated (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API.

Estimates for a given month are first published in the *MER* for that month. Revisions of the "oil," "gas," and "dry" components are made in the 6th, 12th, and 24th subsequent months, as newly reported data allow refinement of the estimates. Unscheduled revisions may also occur when the latest estimate differs by more than 15 percent during the first 5 months, more than 10 percent during the next 6 months, or more than 2 percent thereafter through 5 years. After 5 years, the reported API data are published in lieu of EIA-generated estimates. Additional information about the EIA estimation methodology may be found in "Estimating Well Completions," the feature article published in the March 1985 *MER*.

## Section 6. Coal

Coal production in February 1995 totaled 86 million short tons, 6 percent<sup>6</sup> higher than the 82 million short tons produced in February 1994.

Electric utility coal consumption in January 1995 totaled 71 million short tons, 6 percent lower than the consumption level in January 1994.

Electric utility coal stocks were 125 million short tons at the end of January 1995, up 28 percent from the 98 million short tons at the end of January 1994.

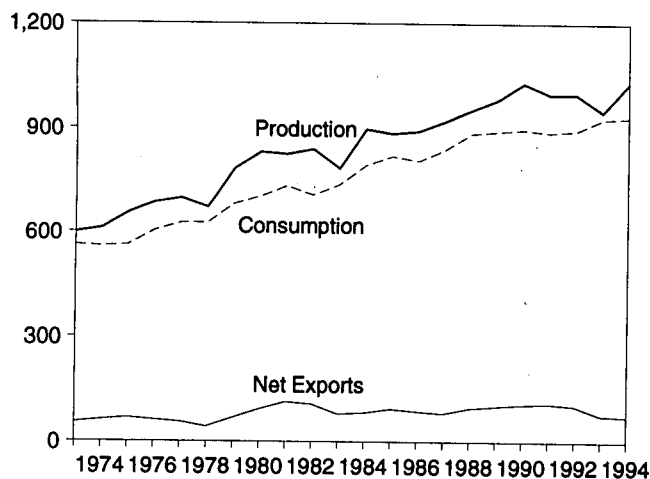
Coal exports in January 1995 totaled 6 million short tons, 31 percent higher than exports in January 1994. Coal imports in January 1995 totaled 530 thousand short tons, 2 percent lower than imports in January 1994.

<sup>6</sup>Percentage changes are based on unrounded data.

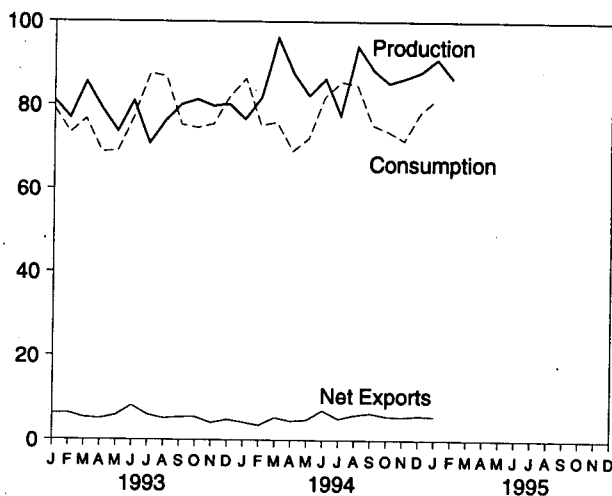
# Figure 6.1 Coal

(Million Short Tons)

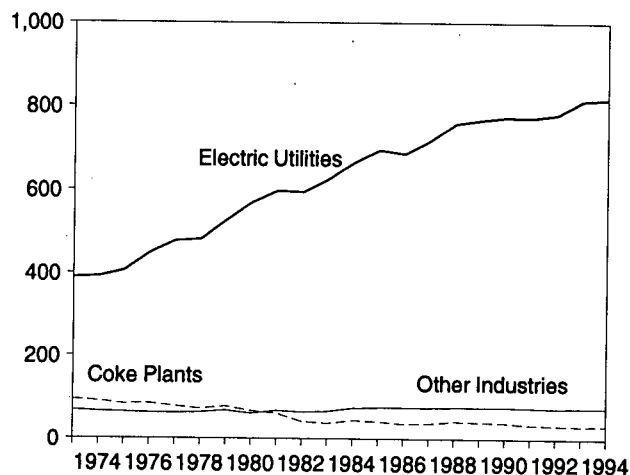
## Overview, 1973-1994



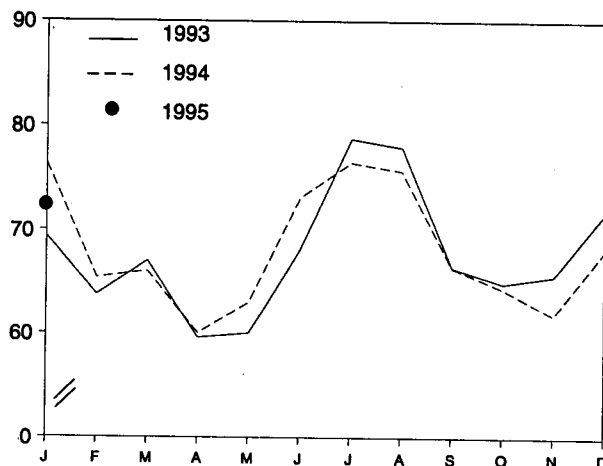
## Overview, Monthly



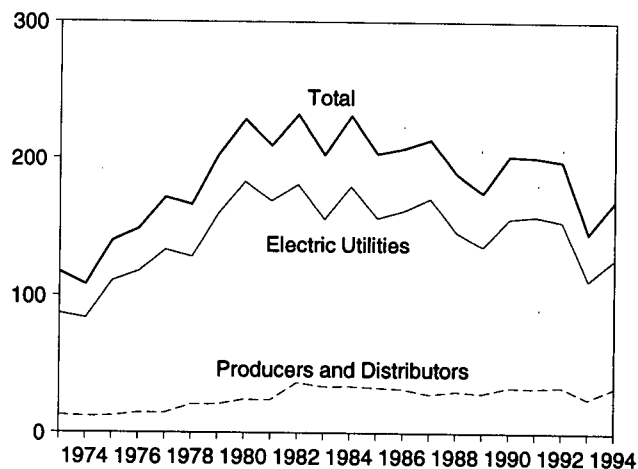
## Consumption by Sector, 1973-1994



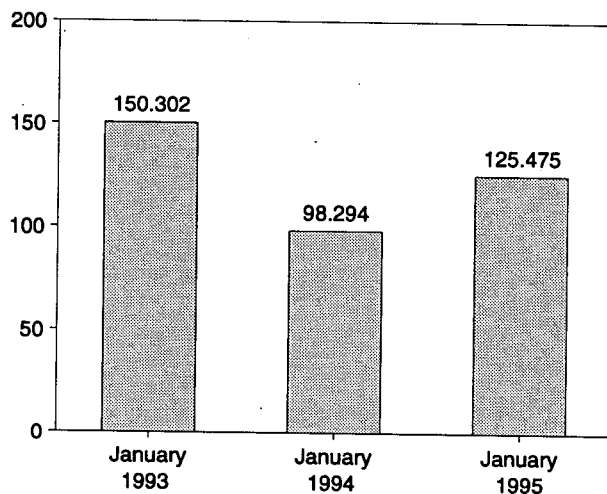
## Consumption by Electric Utilities, Monthly



## Stocks, End of Year, 1973-1994



## Stocks at Electric Utilities, End of Month



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 6.1, 6.2, and 6.3.

**Table 6.1 Coal Overview**  
(Thousand Short Tons)

	Production	Consumption	Imports <sup>a</sup>	Exports	Stocks <sup>b</sup>
1973 Total .....	598,568	562,584	127	53,587	116,865
1974 Total .....	610,023	558,402	2,080	60,661	107,957
1975 Total .....	654,641	562,640	940	66,309	140,158
1976 Total .....	684,913	603,790	1,203	60,021	148,659
1977 Total .....	697,205	625,291	1,647	54,312	171,323
1978 Total .....	670,164	625,225	2,953	40,714	166,246
1979 Total .....	781,134	680,524	2,059	66,042	202,472
1980 Total .....	829,700	702,730	1,194	91,742	228,407
1981 Total .....	823,775	732,627	1,043	112,541	209,423
1982 Total .....	838,112	706,911	742	106,277	232,038
1983 Total .....	782,091	736,672	1,271	77,772	202,584
1984 Total .....	895,921	791,296	1,286	81,483	231,300
1985 Total .....	883,638	818,049	1,952	92,680	203,367
1986 Total .....	890,315	804,231	2,212	85,518	207,319
1987 Total .....	918,762	836,941	1,747	79,607	213,780
1988 Total .....	950,265	883,642	2,134	95,023	188,831
1989 Total .....	980,729	889,699	2,851	100,815	175,087
1990 Total .....	1,029,076	895,480	2,699	105,804	201,629
1991 Total .....	995,984	887,621	3,390	108,969	200,682
1992 Total .....	997,545	892,421	3,803	102,516	197,685
1993 January .....	80,982	79,116	344	6,506	195,037
February .....	76,919	73,372	454	6,715	192,442
March .....	85,516	76,677	415	5,648	191,072
April .....	79,074	68,719	281	5,268	194,213
May .....	73,728	68,998	298	6,060	195,654
June .....	80,948	77,102	514	8,619	189,669
July .....	70,798	67,695	643	6,573	168,179
August .....	76,277	86,870	747	5,830	152,790
September .....	80,056	75,306	753	6,120	149,092
October .....	81,232	74,635	1,054	6,485	150,745
November .....	79,720	75,471	970	5,019	151,116
December .....	80,176	81,981	836	5,677	145,742
Total .....	945,424	925,944	7,309	74,519	145,742
1994 January .....	R 76,637	R 86,422	540	4,731	R 134,969
February .....	R 81,656	R 75,205	753	4,252	R 136,688
March .....	R 96,087	R 75,938	557	5,894	R 146,409
April .....	R 87,683	R 68,998	456	4,976	R 155,480
May .....	R 82,262	R 72,083	550	5,326	R 163,632
June .....	R 86,367	R 82,037	571	7,637	R 162,414
July .....	R 77,537	R 85,619	833	5,882	R 152,717
August .....	R 94,082	R 84,765	731	6,670	R 151,355
September .....	R 88,518	R 75,360	740	7,152	R 154,160
October .....	R 85,298	R 73,786	434	6,110	R 158,706
November .....	R 86,512	R 71,543	601	6,098	R 165,549
December .....	R 88,009	R 78,272	819	6,630	R 169,305
Total .....	R 1,030,649	R 930,027	7,584	71,359	R 169,305
1995 January .....	91,062	E 81,539	530	6,184	E 165,438
February .....	86,459	NA	NA	NA	NA
2-Month Total .....	177,521	NA	NA	NA	NA
1994 2-Month Total .....	158,294	161,627	1,293	8,983	136,688
1993 2-Month Total .....	157,901	152,488	798	13,221	192,442

<sup>a</sup> Includes Puerto Rico.

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

R=Revised data. NA=Not available. E=Estimate.

Notes: • Data through 1993 are final. Subsequent data are preliminary.

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

Sources: See end of section.

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

	Residential and Commercial	Industrial		Electric Utilities	Total
		Coke Plants	Other Industrial Including Transportation		
1973 Total .....	11,117	94,101	68,154	389,212	562,584
1974 Total .....	11,417	90,191	64,983	391,811	558,402
1975 Total .....	9,410	83,598	63,670	405,962	562,640
1976 Total .....	8,916	84,704	61,799	448,371	603,790
1977 Total .....	8,954	77,739	61,472	477,126	625,291
1978 Total .....	9,511	71,394	63,085	481,235	625,225
1979 Total .....	8,388	77,368	67,717	527,051	680,524
1980 Total .....	6,452	66,657	60,347	569,274	702,730
1981 Total .....	7,421	61,014	67,395	596,797	732,627
1982 Total .....	8,240	40,908	64,097	593,666	706,911
1983 Total .....	8,448	37,033	65,980	625,211	736,672
1984 Total .....	9,130	44,022	73,745	664,399	791,296
1985 Total .....	7,779	41,056	75,372	693,841	818,049
1986 Total .....	7,667	35,924	75,583	685,056	804,231
1987 Total .....	6,914	36,957	75,175	717,894	836,941
1988 Total .....	7,130	41,888	76,252	758,372	883,642
1989 Total .....	6,167	40,508	76,134	766,888	889,699
1990 Total .....	6,724	38,877	76,330	773,549	895,480
1991 Total .....	6,094	33,854	75,405	772,268	887,621
1992 Total .....	6,153	32,366	74,042	779,860	892,421
1993 January .....	662	2,674	6,380	69,400	79,116
February .....	641	2,468	6,451	63,812	73,372
March .....	514	2,640	6,450	67,073	76,677
April .....	613	2,578	5,931	59,596	68,719
May .....	323	2,719	5,925	60,032	68,998
June .....	418	2,588	5,978	68,118	77,102
July .....	424	2,678	5,876	78,717	87,695
August .....	382	2,664	5,892	77,932	86,870
September .....	288	2,618	5,907	66,493	75,306
October .....	386	2,660	6,647	64,941	74,635
November .....	649	2,447	6,697	65,677	75,471
December .....	921	2,587	6,757	71,717	81,981
Total .....	6,221	31,323	74,892	813,508	925,944
1994 January .....	R 854	R 2,619	R 6,588	76,362	R 86,422
February .....	R 669	R 2,481	R 6,599	65,455	R 75,205
March .....	R 493	R 2,654	R 6,693	66,098	R 75,938
April .....	R 455	R 2,633	R 5,870	60,040	R 68,998
May .....	R 334	R 2,743	R 5,921	63,084	R 72,083
June .....	R 398	R 2,592	R 5,917	73,130	R 82,037
July .....	R 456	R 2,673	R 6,001	76,489	R 85,619
August .....	R 392	R 2,659	R 6,032	75,682	R 84,765
September .....	R 288	R 2,613	R 6,014	66,445	R 75,360
October .....	R 337	R 2,643	R 6,358	64,447	R 73,786
November .....	R 541	R 2,666	R 6,460	R 61,877	R 71,543
December .....	R 796	R 2,767	R 6,549	R 68,161	R 78,272
Total .....	R 6,013	R 31,743	R 75,001	R 817,270	R 930,027
1995 January .....	E 691	E 2,557	E 6,860	71,431	E 81,539

R=Revised data. E=Estimate.

Notes: • For sector-specific reporting and estimating information, see Note 2 at end of section. • Data through 1993 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent

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

Sources: See end of section.



**Table 6.3 Coal Stocks, End of Period**  
(Thousand Short Tons)

	Consumer				Producers and Distributors	Total <sup>a</sup>
	Coke Plants	Other Industrial	Electric Utilities	Total <sup>a</sup>		
1973 Year .....	6,998	10,370	86,967	104,335	12,530	116,865
1974 Year .....	6,209	6,605	83,509	96,323	11,634	107,957
1975 Year .....	8,797	8,529	110,724	128,050	12,108	140,158
1976 Year .....	9,902	7,100	117,436	134,438	14,221	148,659
1977 Year .....	12,816	11,063	133,219	157,098	14,225	171,323
1978 Year .....	8,278	9,048	128,225	145,551	20,695	166,246
1979 Year .....	10,155	11,777	159,714	181,646	20,826	202,472
1980 Year .....	9,067	11,951	183,010	204,028	24,379	228,407
1981 Year .....	6,475	9,906	168,893	185,274	24,149	209,423
1982 Year .....	4,642	9,479	181,132	195,254	36,784	232,038
1983 Year .....	4,346	8,710	155,598	168,654	33,931	202,584
1984 Year .....	6,166	11,317	179,727	197,211	34,090	231,300
1985 Year .....	3,420	10,438	156,376	170,234	33,133	203,367
1986 Year .....	2,992	10,429	161,806	175,226	32,093	207,319
1987 Year .....	3,884	10,777	170,797	185,459	28,321	213,780
1988 Year .....	3,137	8,768	146,507	158,413	30,418	188,831
1989 Year .....	2,864	7,363	135,860	146,087	29,000	175,087
1990 Year .....	3,329	8,716	156,166	168,210	33,418	201,629
1991 Year .....	2,773	7,061	157,876	167,711	32,971	200,682
1992 Year .....	2,597	6,965	154,130	163,692	33,993	197,685
1993 January .....	2,668	6,587	150,302	159,557	35,480	195,037
February .....	2,739	6,209	146,528	155,476	36,967	192,442
March .....	2,809	5,831	143,978	152,619	38,453	191,072
April .....	2,879	5,911	148,178	156,968	37,245	194,213
May .....	2,949	5,990	150,678	159,618	36,036	195,654
June .....	3,020	6,070	145,753	154,842	34,827	189,669
July .....	2,858	6,227	126,815	135,900	32,279	168,179
August .....	2,697	6,383	113,978	123,058	29,731	152,790
September .....	2,536	6,540	112,833	121,909	27,183	149,092
October .....	2,491	6,599	115,105	124,195	26,550	150,745
November .....	2,446	6,657	116,095	125,199	25,917	151,116
December .....	2,401	6,716	111,341	120,458	25,284	145,742
1994 January .....	R 2,349	R 6,091	98,294	R 106,733	R 28,236	R 134,969
February .....	R 2,296	5,465	R 97,739	R 105,500	R 31,188	R 136,688
March .....	R 2,243	4,840	R 105,186	R 112,269	R 34,139	R 146,409
April .....	R 2,418	R 5,059	113,324	R 120,801	R 34,679	R 155,480
May .....	R 2,592	R 5,279	R 120,543	R 128,414	R 35,218	R 163,632
June .....	R 2,767	R 5,499	118,391	R 126,657	R 35,758	R 162,414
July .....	R 2,749	R 5,725	109,419	R 117,893	R 34,823	R 152,717
August .....	R 2,732	R 5,951	R 108,783	R 117,466	R 33,889	R 151,355
September .....	R 2,714	R 6,177	R 112,314	R 121,205	R 32,955	R 154,160
October .....	R 2,695	R 6,295	116,673	R 125,663	R 33,043	R 158,706
November .....	R 2,676	R 6,413	123,328	R 132,418	R 33,131	R 165,549
December .....	R 2,657	R 6,532	R 126,897	R 136,086	R 33,219	R 169,305
1995 January .....	E 1,843	E 6,120	125,475	E 133,438	E 32,000	E 165,438

<sup>a</sup> Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

R=Revised data. E=Estimate.

Notes: • For sector-specific reporting and estimating information, see Note 3 at end of section. • Data through 1993 are final. Subsequent data are

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

Sources: See end of section.

# Coal Notes

**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 Interstate Commerce Commission. 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.

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

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

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

- **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.
- **Other Industrial**—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: foods, Standard Industrial Classification (SIC) 20; paper and products, SIC 26; chemicals and products, SIC 28; petroleum products, SIC 29; clay, glass, and stone products, SIC 32; and primary metals, SIC 33. The monthly ratios are computed as the monthly sum of the weighted indices as a proportion of the quarterly sum of the weighted indices by using the 1977 proportion as the weights.

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

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

- **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.
- **Other Industrial**—Prior to 1978, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. For 1978-1982, monthly estimates were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. From 1983 forward, other industrial coal stocks are estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available. • **Electric Utilities: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward**—EIA, Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report."
- **Electric Utilities**—Monthly stocks data at electric utility plants are taken directly from reported data.
- **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.

**4. Imports and Exports:** All coal import and export figures are taken directly from data reported monthly by the Bureau of the Census.

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

### Sources for Table 6.1

- **Production: 1973-September 1977**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook and Minerals Industry Surveys*. **October 1977 forward**—Energy Information Administration, *Weekly Coal Production*.
- **Consumption:** Table 6.2.
- **Imports and Exports:** U.S. Department of Commerce, Bureau of the Census, Monthly Reports IM-145 (Imports) and EM-545 (Exports).
- **Stocks:** Table 6.3.

### Sources for Table 6.2

- **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 forward**—EIA, Form EIA-6, "Coal Distribution Report, quarterly."
- **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."
- **Other Industrial: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977-1979**—EIA, Form EIA-3, "Monthly Coal Consumption Report-Manufacturing Plants." **1980 forward**—EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report, quarterly."
- **Electric Utilities: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward**—EIA, Form EIA-759 (formerly Form FPC-4), "Monthly Power Plant Report."

### Sources for Table 6.3

• **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."

• **Other Industrial: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Sur-*

*veys*. **October 1977-1979**—EIA, Form EIA-3, "Monthly Coal Consumption Report-Manufacturing Plants." **1980 forward**—EIA, Form EIA-3, "Quarterly Coal Consumption Report-Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.

• **Electric Utilities: 1973-September 1977**—DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*. **October 1977 forward**—EIA, Form EI-A759 (formerly Form FPC-4), "Monthly Power Plant Report."

• **Producers and Distributors:** EIA, Form EIA-6, "Coal Distribution Report," quarterly.

## Section 7. Electricity

During January 1995, electric utilities generated 253 billion kilowatthours of electricity, 3 percent<sup>7</sup> less than in January 1994. Coal-fired generation totaled 142 billion kilowatthours, 7 percent less than in January 1994. Nuclear generation totaled 63 billion kilowatthours, 11 percent above the level 1 year earlier. Hydroelectric generation totaled 23 billion kilowatthours, 17 percent higher than the January 1994 level. Natural gas-fired generation was 19 billion kilowatthours, 15 percent higher than the January 1994 level. Petroleum-fired generation totaled 4 billion kilowatthours, 72 percent below the level 1 year earlier.

Sales of electricity to all ultimate consumers in the United States in January 1995 were 254 billion kilowatthours, 2 percent lower than sales during January 1994. Sales to residential consumers during January 1995 were 97 billion kilowatthours, 7 percent lower than the level of sales during the previous year. Sales to industrial consumers totaled 81 billion kilowatthours in January 1995, 3 percent above the level 1 year earlier. Commercial sales were 68 billion

kilowatthours, slightly higher than the level of commercial sales during the previous year. In January 1995, other sales totaled 8 billion kilowatthours, slightly higher than the January 1994 level.

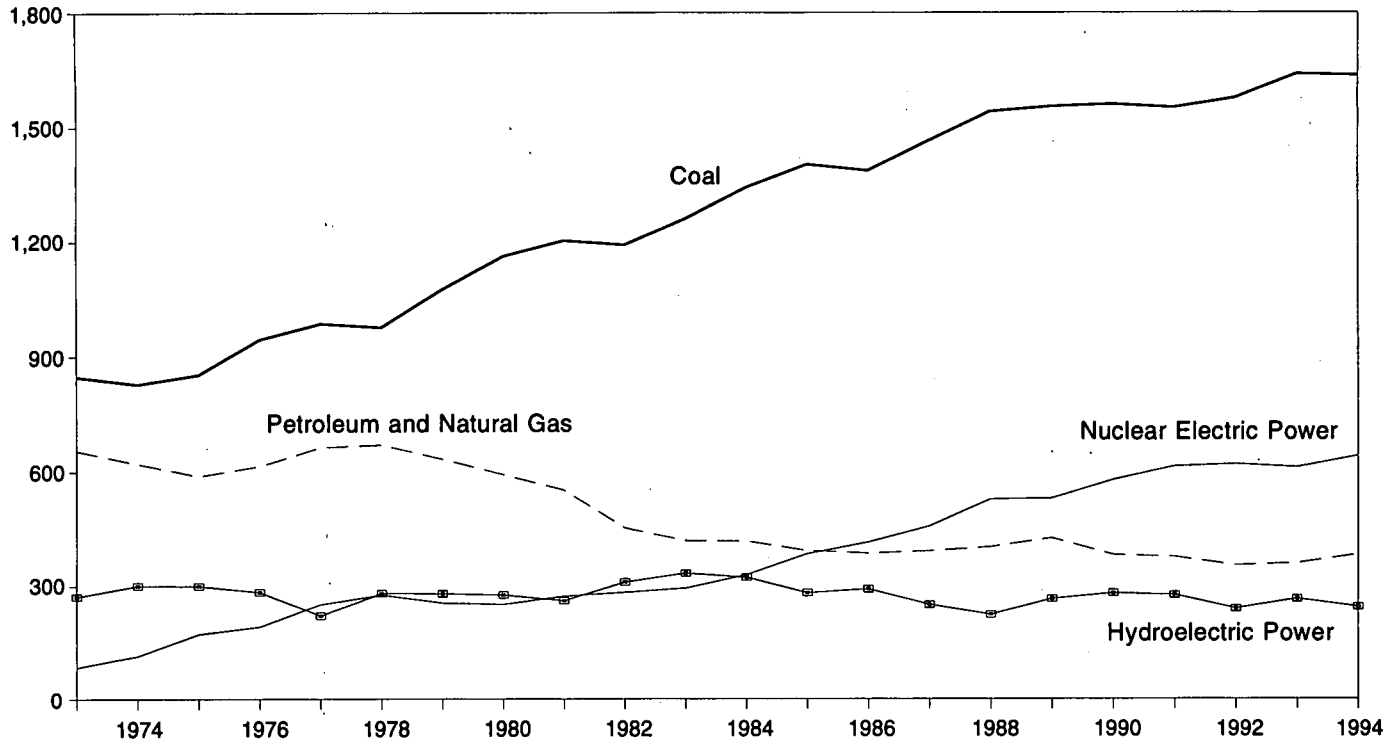
Electric utility consumption of coal during January 1995 was 71 million short tons, 6 percent below consumption in January 1994. Petroleum consumption (excluding petroleum coke) during January 1995 was 7 million barrels, 71 percent below the level of consumption in January 1994. During January 1995, electric utilities consumed 199 billion cubic feet of natural gas, 17 percent above the January 1994 consumption level.

On January 31, 1995, electric utility stocks of all types of coal totaled 125 million short tons, 28 percent above the level on January 31, 1994. Stocks of petroleum (excluding petroleum coke) on January 31, 1995, totaled 62 million barrels, 7 percent above the level on January 31, 1994.

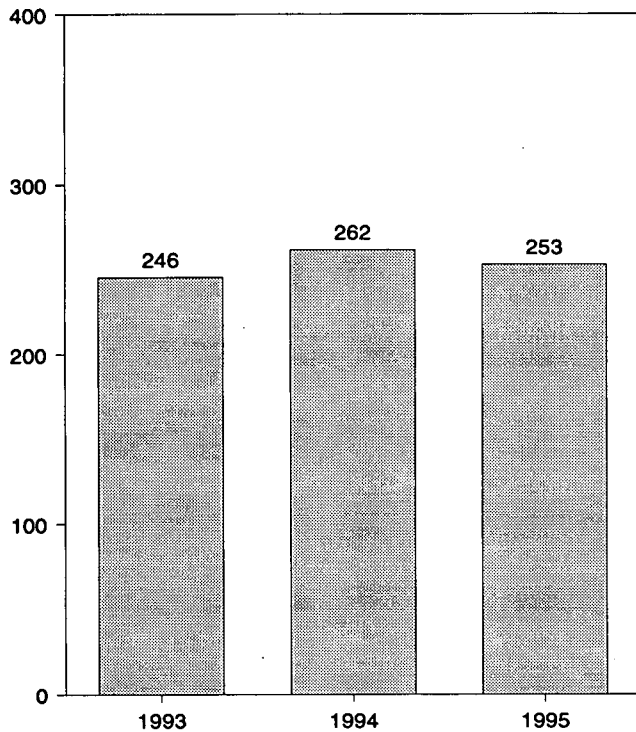
<sup>7</sup>Percentage changes are based on numbers shown in the following tables.

**Figure 7.1 Electric Utility Net Generation of Electricity**  
(Billion Kilowatthours)

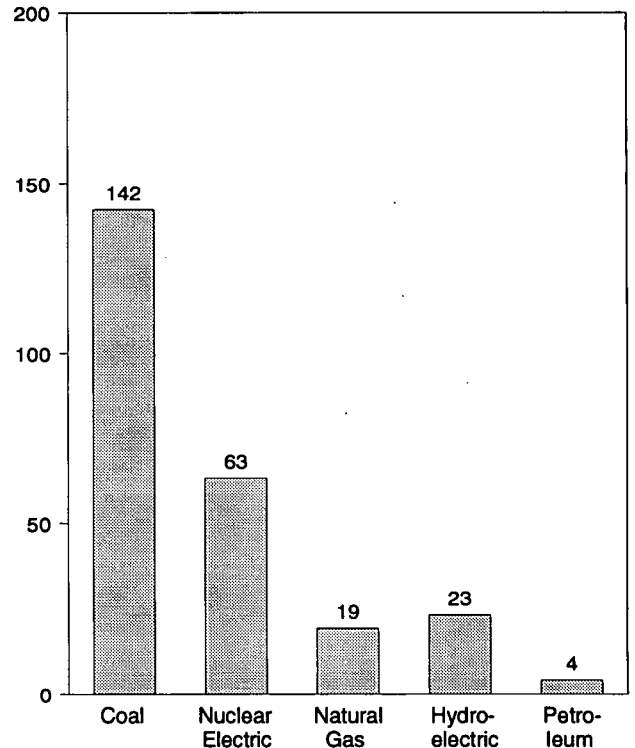
By Source, 1973-1994



Total, January



Total by Source, January 1995



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 7.1.

**Table 7.1 Electric Utility Net Generation of Electricity**

(Million Kilowatthours)

	Coal	Natural Gas <sup>a</sup>	Petroleum <sup>b</sup>	Nuclear Electric Power	Hydro-Electric Power	Geothermal Energy	Other <sup>c</sup>	Total
1973 Total	847,651	340,858	314,343	83,479	272,083	1,966	328	1,860,710
1974 Total	828,433	320,065	300,931	113,976	301,032	2,453	251	1,867,140
1975 Total	852,786	299,778	289,095	172,505	300,047	3,246	191	1,917,649
1976 Total	944,391	294,624	319,988	191,104	283,707	3,616	266	2,037,696
1977 Total	985,219	305,505	358,179	250,883	220,475	3,582	481	2,124,323
1978 Total	975,742	305,391	365,060	276,403	280,419	2,978	338	2,206,331
1979 Total	1,075,037	329,485	303,525	255,155	279,783	3,889	498	2,247,372
1980 Total	1,161,562	346,240	245,994	251,116	276,021	5,073	433	2,286,439
1981 Total	1,203,203	345,777	206,421	272,674	260,684	5,686	368	2,294,812
1982 Total	1,192,004	305,260	146,797	282,773	309,213	4,843	321	2,241,211
1983 Total	1,259,424	274,098	144,499	293,677	332,130	6,075	381	2,310,285
1984 Total	1,341,681	297,394	119,808	327,634	321,150	7,741	898	2,416,304
1985 Total	1,402,128	291,946	100,202	383,691	281,149	9,325	1,399	2,469,841
1986 Total	1,385,831	248,508	136,585	414,038	290,844	10,308	1,195	2,487,310
1987 Total	1,463,781	272,621	118,493	455,270	249,695	10,775	1,491	2,572,127
1988 Total	1,540,653	252,801	148,900	526,973	222,940	10,300	1,684	2,704,250
1989 Total	1,553,661	266,598	158,318	529,355	265,063	9,342	1,968	2,784,304
1990 Total	1,559,606	264,089	117,017	576,862	279,926	8,581	2,070	2,808,151
1991 Total	1,551,167	264,172	111,463	612,565	275,519	8,087	2,050	2,825,023
1992 Total	1,575,895	263,872	88,916	618,776	239,559	8,104	2,096	2,797,219
1993 January	138,354	15,807	7,239	59,076	24,453	651	202	245,782
February	130,069	15,768	6,939	51,319	19,722	633	167	224,617
March	136,404	18,783	8,569	46,606	23,587	659	193	234,801
April	120,325	16,684	5,205	43,199	25,160	654	148	211,374
May	120,878	15,845	5,267	50,367	29,323	582	135	222,396
June	137,485	24,393	7,809	52,620	26,600	586	139	249,633
July	158,400	31,705	11,341	56,502	23,556	643	144	282,292
August	156,197	34,263	11,975	56,209	19,667	653	167	279,132
September	134,001	24,978	9,759	49,989	17,073	630	173	236,603
October	130,926	22,912	7,659	44,434	16,899	625	174	223,629
November	132,288	20,535	7,479	46,862	17,898	618	174	225,855
December	143,824	17,242	10,299	53,108	21,125	637	178	246,412
Total	1,639,151	258,915	99,539	610,291	265,063	7,571	1,994	2,882,525
1994 January	152,752	16,847	14,600	<sup>R</sup> 56,847	19,843	631	177	<sup>R</sup> 261,697
February	131,138	<sup>R</sup> 14,523	9,655	<sup>R</sup> 49,821	19,146	574	154	<sup>R</sup> 225,011
March	<sup>R</sup> 133,528	<sup>R</sup> 18,177	7,960	<sup>R</sup> 48,969	<sup>R</sup> 22,161	578	170	<sup>R</sup> 231,544
April	<sup>R</sup> 119,755	<sup>R</sup> 20,235	7,674	<sup>R</sup> 43,192	<sup>R</sup> 23,219	592	150	<sup>R</sup> 214,817
May	<sup>R</sup> 126,454	<sup>R</sup> 20,676	6,991	<sup>R</sup> 48,525	<sup>R</sup> 24,329	581	147	<sup>R</sup> 227,703
June	<sup>R</sup> 147,440	<sup>R</sup> 30,744	<sup>R</sup> 9,887	51,751	<sup>R</sup> 23,360	522	154	<sup>R</sup> 263,859
July	<sup>R</sup> 152,182	<sup>R</sup> 34,857	9,317	59,123	<sup>R</sup> 21,938	553	179	<sup>R</sup> 278,149
August	<sup>R</sup> 151,389	<sup>R</sup> 37,195	<sup>R</sup> 6,064	60,104	<sup>R</sup> 19,119	<sup>R</sup> 610	164	<sup>R</sup> 274,645
September	132,059	28,803	<sup>R</sup> 5,027	55,628	15,431	<sup>R</sup> 564	151	<sup>R</sup> 237,663
October	<sup>R</sup> 129,637	<sup>R</sup> 25,936	<sup>R</sup> 4,566	50,703	16,368	578	184	<sup>R</sup> 227,972
November	<sup>R</sup> 123,604	<sup>R</sup> 22,774	<sup>R</sup> 4,480	55,280	<sup>R</sup> 17,858	572	177	<sup>R</sup> 224,746
December	<sup>R</sup> 135,556	<sup>R</sup> 20,348	<sup>R</sup> 4,815	60,497	20,919	584	187	<sup>R</sup> 242,906
Total	<sup>R</sup> 1,635,493	<sup>R</sup> 291,115	<sup>R</sup> 91,039	<sup>R</sup> 640,440	<sup>R</sup> 243,693	<sup>R</sup> 6,941	1,992	<sup>R</sup> 2,910,712
1995 January	142,412	19,338	4,159	63,342	23,299	408	126	253,085

<sup>a</sup> Includes supplemental gaseous fuel.

<sup>b</sup> Includes fuel oil nos. 1, 2, 4, 5, and 6, crude oil, kerosene, and petroleum coke.

<sup>c</sup> "Other" is electricity produced from biomass fuels, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

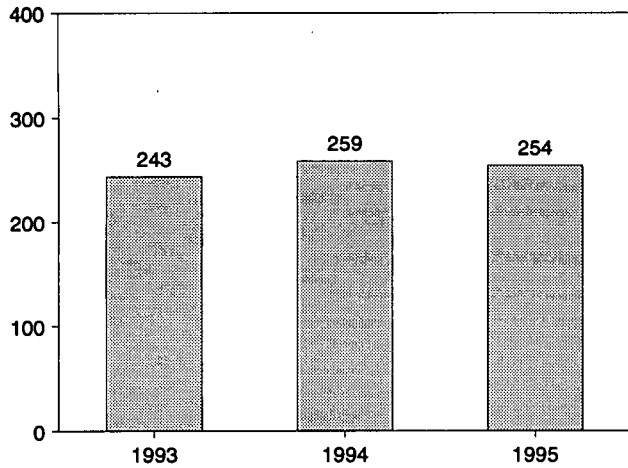
R=Revised data.

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

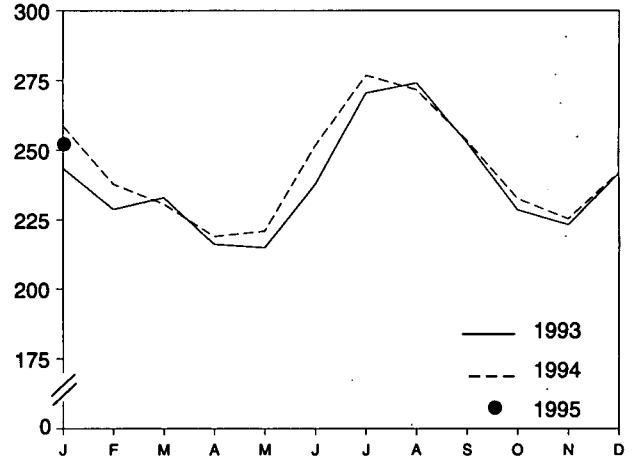
Sources: See end of section.

**Figure 7.2 Electric Utility Retail Sales of Electricity**  
(Billion Kilowatthours)

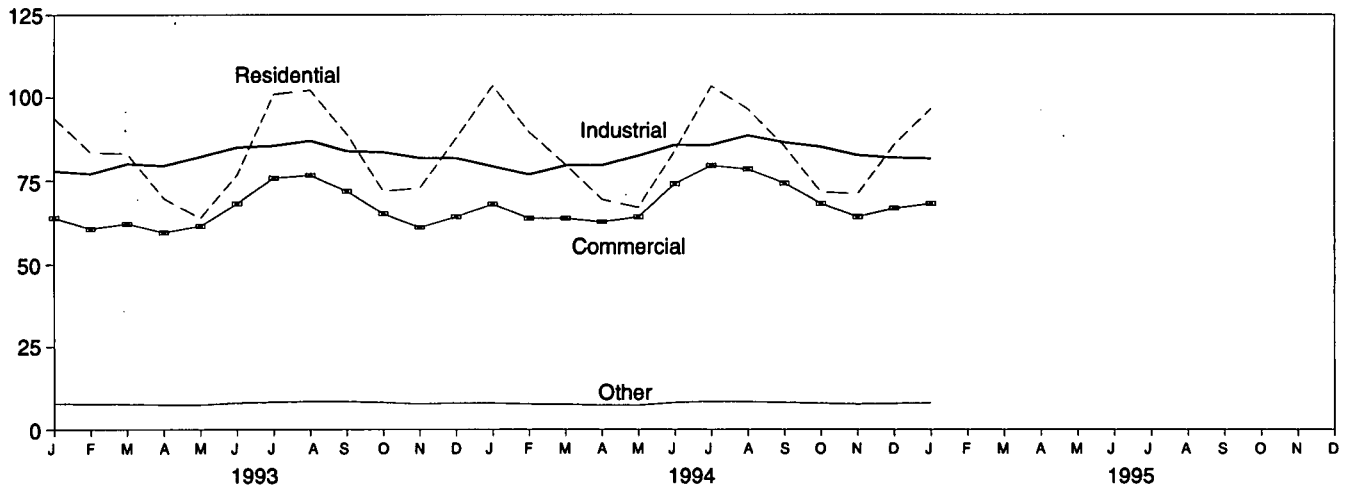
**Total, January**



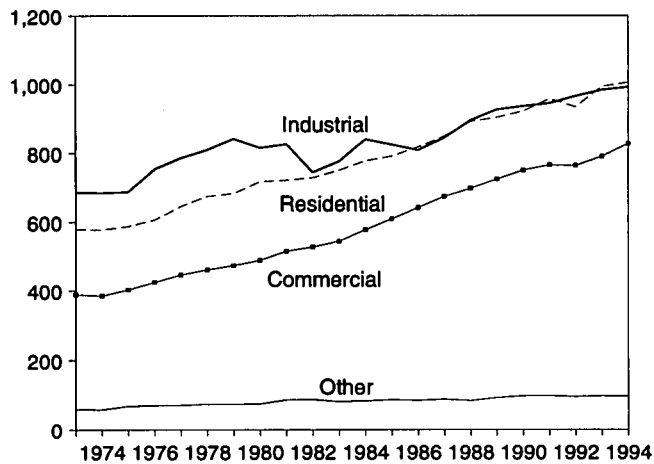
**Total, Monthly**



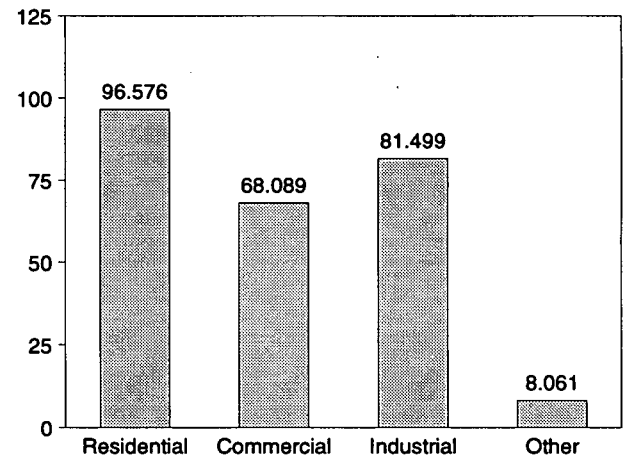
**By Sector, Monthly**



**By Sector, 1973-1994**



**By Sector, January 1995**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 7.2, Monthly Series.



**Table 7.2 Electric Utility Retail Sales of Electricity by End-Use Sector**  
(Million Kilowatthours)

	Residential		Commercial		Industrial		Other <sup>a</sup>		Total	
	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series	Monthly Series <sup>b</sup>	Annual Series
1973 Total	579,231	NA	388,266	NA	686,085	NA	59,326	NA	1,712,909	NA
1974 Total	578,184	NA	384,826	NA	684,875	NA	58,039	NA	1,705,924	NA
1975 Total	588,140	NA	403,049	NA	687,680	NA	68,222	NA	1,747,091	NA
1976 Total	606,452	NA	425,094	NA	754,069	NA	69,631	NA	1,855,246	NA
1977 Total	645,239	NA	446,514	NA	786,037	NA	70,571	NA	1,948,361	NA
1978 Total	674,466	NA	461,163	NA	809,078	NA	73,215	NA	2,017,922	NA
1979 Total	682,819	NA	473,307	NA	841,903	NA	73,070	NA	2,071,099	NA
1980 Total	717,495	NA	488,155	NA	815,067	NA	73,732	NA	2,094,449	NA
1981 Total	722,265	NA	514,338	NA	825,743	NA	84,756	NA	2,147,103	NA
1982 Total	729,520	NA	526,397	NA	744,949	NA	85,575	NA	2,086,441	NA
1983 Total	750,948	NA	543,788	NA	775,999	NA	80,219	NA	2,150,955	NA
1984 Total	777,654	780,092	578,281	582,621	840,588	837,836	81,849	85,248	2,278,372	2,285,796
1985 Total	790,977	793,934	608,968	605,989	824,523	836,772	85,075	87,279	2,309,543	2,323,974
1986 Total	817,663	819,088	641,469	630,520	808,292	830,531	83,409	88,615	2,350,835	2,368,753
1987 Total	849,613	850,410	673,707	660,433	845,266	858,233	86,854	88,196	2,455,440	2,457,272
1988 Total	892,125	892,866	697,711	699,100	895,751	896,498	82,362	89,598	2,567,949	2,578,062
1989 Total	903,979	905,525	725,229	725,861	926,376	926,659	91,066	89,765	2,646,651	2,646,809
1990 Total	921,473	924,019	750,835	751,027	936,428	945,522	95,936	91,988	2,704,672	2,712,555
1991 Total	957,801	955,417	765,476	765,664	944,684	946,583	96,513	94,339	2,764,474	2,762,003
1992 Total	934,044	935,939	763,664	761,271	965,356	972,714	94,003	93,442	2,757,067	2,763,365
1993 January	93,740	-	63,998	-	77,832	-	7,930	-	243,499	-
February	83,376	-	60,609	-	77,008	-	7,752	-	228,745	-
March	83,023	-	62,169	-	80,028	-	7,734	-	232,954	-
April	69,669	-	59,479	-	79,465	-	7,511	-	216,123	-
May	63,852	-	61,430	-	82,090	-	7,496	-	214,868	-
June	76,555	-	68,107	-	84,887	-	8,088	-	237,637	-
July	101,026	-	75,706	-	85,371	-	8,351	-	270,454	-
August	102,181	-	76,533	-	86,814	-	8,551	-	274,080	-
September	88,884	-	71,734	-	83,804	-	8,525	-	252,948	-
October	71,731	-	65,180	-	83,443	-	8,271	-	228,625	-
November	72,667	-	61,023	-	81,738	-	7,795	-	223,244	-
December	R 87,656	-	R 64,257	-	R 81,632	-	R 8,059	-	R 241,604	-
Total	R 994,380	994,781	R 790,225	794,573	R 984,111	977,164	R 96,065	94,944	R 2,864,782	2,861,462
1994 January	R 103,502	-	R 67,928	-	R 79,231	-	R 8,046	-	R 258,706	-
February	R 89,432	-	R 63,815	-	R 76,758	-	R 7,746	-	R 237,750	-
March	R 79,708	-	R 63,786	-	R 79,494	-	R 7,676	-	R 230,664	-
April	R 69,318	-	R 62,713	-	R 79,556	-	R 7,389	-	R 218,976	-
May	R 66,991	-	R 64,174	-	R 82,362	-	R 7,403	-	R 220,931	-
June	R 83,868	-	R 73,936	-	R 85,553	-	R 8,214	-	R 251,570	-
July	103,327	-	R 79,470	-	R 85,517	-	8,530	-	R 276,844	-
August	R 96,486	-	R 78,336	-	R 88,378	-	R 8,441	-	R 271,641	-
September	R 85,122	-	R 74,120	-	R 86,257	-	R 8,220	-	R 253,720	-
October	R 71,511	-	R 68,107	-	R 84,979	-	R 8,004	-	R 232,602	-
November	R 70,901	-	R 64,226	-	R 82,534	-	R 7,728	-	R 225,388	-
December	85,637	-	66,698	-	81,803	-	7,929	-	242,068	-
Total	R 1,005,804	NA	R 827,309	NA	R 992,422	NA	R 95,326	NA	R 2,920,860	NA
1995 January	96,576	-	68,089	-	81,499	-	8,061	-	254,226	-

<sup>a</sup> "Other" is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

<sup>b</sup> Annual totals are the sums of the monthly values.

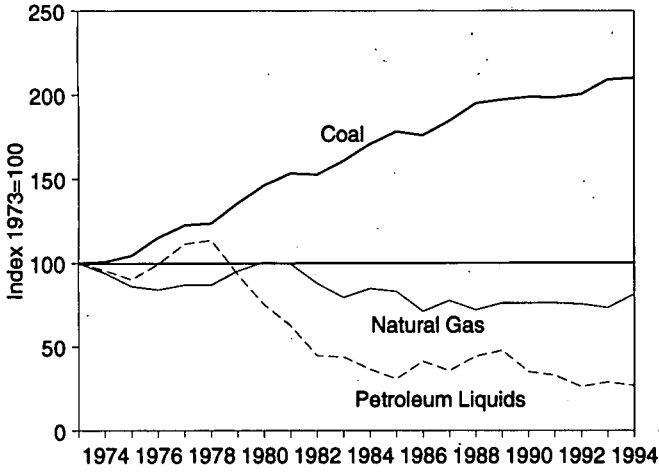
R=Revised data. NA=Not available. --=Not applicable.

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

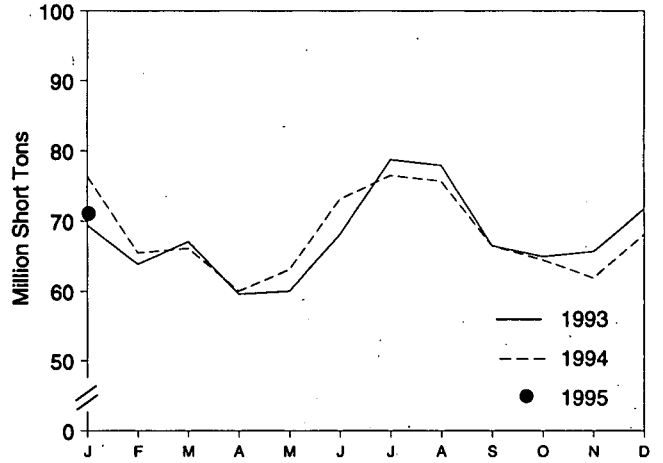
Sources: See end of section.

# Figure 7.3 Electric Utility Consumption and Stocks of Fossil Fuels

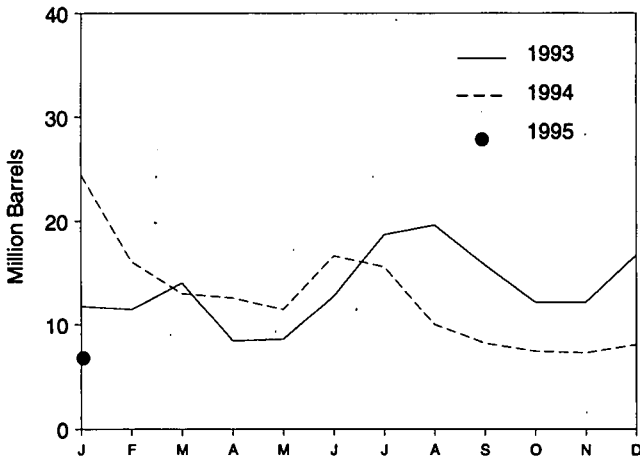
## Fuels Consumed, 1973-1994



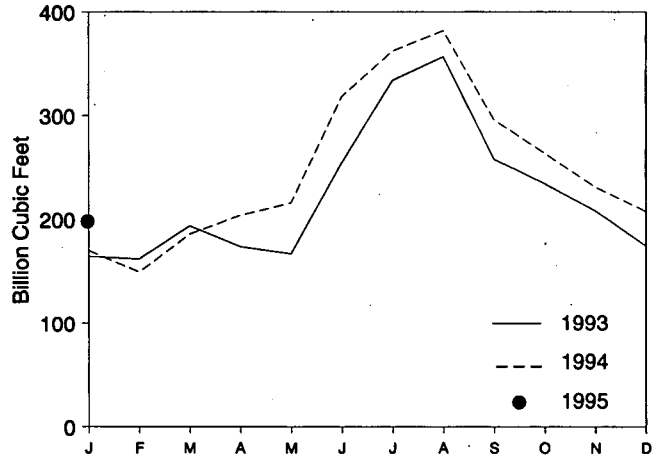
## Coal Consumed, Monthly



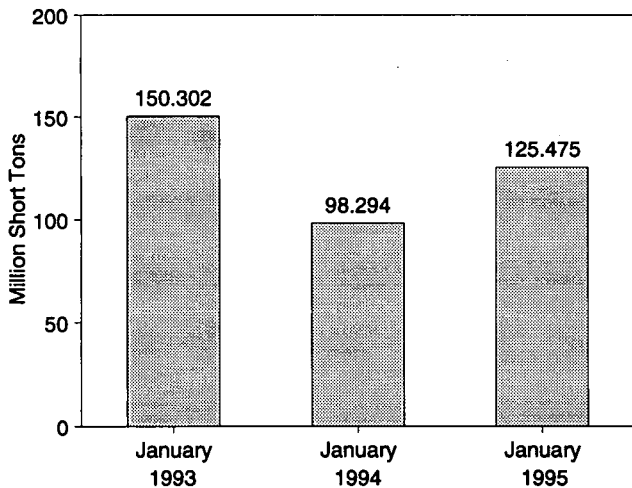
## Petroleum Liquids Consumed, Monthly



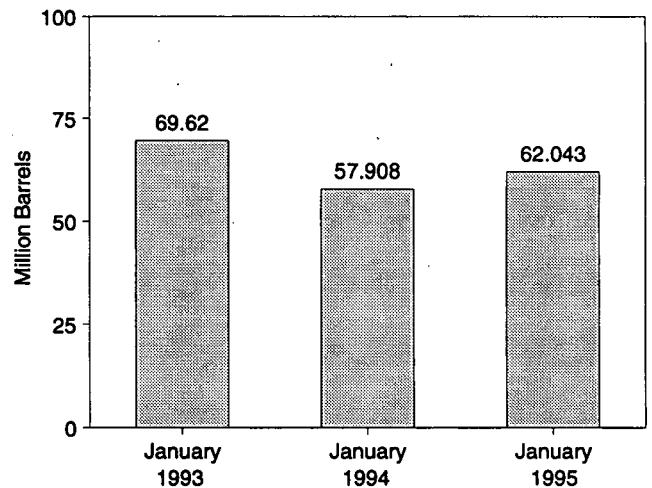
## Natural Gas Consumed, Monthly



## Coal Stocks, End of Month



## Petroleum Liquids Stocks, End of Month



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 7.3 and 7.4.

**Table 7.3 Electric Utility Consumption of Fossil Fuels To Generate Electricity**

	Coal				Petroleum						Natural Gas <sup>d</sup>
	Anthracite	Bituminous Coal	Lignite	Total	By Type of Petroleum		By Prime Mover Type		Total Liquids	Petroleum Coke	
					Heavy Oil <sup>a</sup>	Light Oil <sup>b</sup>	Steam Plants	GT/IC <sup>c</sup>			
<b>1973 Total</b> .....	1,443	376,975	10,794	389,212	NA	NA	513,190	47,058	560,248	507	3,660,172
<b>1974 Total</b> .....	1,498	378,643	11,670	391,811	NA	NA	483,146	53,128	536,274	625	3,443,428
<b>1975 Total</b> .....	1,480	388,523	15,960	405,962	NA	NA	467,221	38,907	506,128	70	3,157,669
<b>1976 Total</b> .....	1,350	425,205	21,817	448,371	NA	NA	514,077	41,843	555,920	68	3,080,868
<b>1977 Total</b> .....	1,425	451,051	24,650	477,126	NA	NA	574,869	48,837	623,705	98	3,191,200
<b>1978 Total</b> .....	1,064	448,763	31,407	481,235	NA	NA	588,319	47,520	635,839	398	3,188,363
<b>1979 Total</b> .....	1,046	488,129	37,876	527,051	NA	NA	492,606	30,691	523,297	268	3,490,523
<b>1980 Total</b> .....	951	526,680	41,642	569,274	391,163	29,051	401,863	18,351	420,214	179	3,681,595
<b>1981 Total</b> .....	1,221	550,784	44,792	596,797	329,798	21,313	339,680	11,431	351,111	139	3,640,154
<b>1982 Total</b> .....	1,075	543,346	49,245	593,666	234,434	15,337	243,537	6,234	249,771	149	3,225,518
<b>1983 Total</b> .....	1,036	570,108	54,067	625,211	228,984	16,512	237,845	7,652	245,497	261	2,910,767
<b>1984 Total</b> .....	1,070	606,339	56,990	664,399	189,289	15,190	197,050	7,429	204,479	252	3,111,342
<b>1985 Total</b> .....	1,033	631,885	60,923	693,841	158,779	14,635	166,842	6,572	173,414	231	3,044,083
<b>1986 Total</b> .....	829	616,134	68,093	685,056	216,156	14,326	222,500	7,983	230,482	313	2,602,370
<b>1987 Total</b> .....	972	647,824	69,098	717,894	184,011	15,367	190,818	8,560	199,378	348	2,844,051
<b>1988 Total</b> .....	1,063	681,048	76,260	758,372	229,327	18,769	235,817	12,279	248,096	409	2,635,613
<b>1989 Total</b> .....	1,049	688,504	77,335	766,888	241,960	25,491	250,315	17,136	267,451	517	2,787,012
<b>1990 Total</b> .....	1,031	694,317	78,201	773,549	181,231	14,823	187,531	8,523	196,054	819	2,787,332
<b>1991 Total</b> .....	994	691,275	79,999	772,268	171,157	13,729	177,286	7,600	184,886	722	2,789,014
<b>1992 Total</b> .....	986	698,626	80,248	779,860	135,779	11,556	141,163	6,172	147,335	999	2,765,608
<b>1993 January</b> .....	79	61,703	7,617	69,400	10,804	1,013	11,265	552	11,817	92	164,374
February .....	88	57,293	6,431	63,812	10,569	935	11,002	503	11,504	81	161,928
March .....	101	60,969	6,002	67,073	12,784	1,277	13,313	748	14,061	87	193,811
April .....	84	53,755	5,757	59,596	7,629	819	8,094	354	8,448	79	173,834
May .....	81	53,380	6,570	60,032	7,722	868	8,198	392	8,590	86	166,840
June .....	80	61,090	6,948	68,118	11,756	1,033	12,249	540	12,789	98	254,823
July .....	73	71,134	7,511	78,717	16,896	1,817	17,406	1,306	18,713	125	334,101
August .....	67	70,241	7,624	77,932	18,044	1,566	18,509	1,101	19,610	112	357,027
September .....	60	60,143	6,289	66,493	14,730	1,031	15,111	650	15,761	129	258,325
October .....	64	59,125	5,752	64,941	11,318	897	11,771	444	12,216	112	234,544
November .....	81	59,385	6,211	65,677	11,339	886	11,781	444	12,225	101	208,335
December .....	92	64,516	7,109	71,717	15,694	1,027	16,206	514	16,720	120	174,498
<b>Total</b> .....	951	732,736	79,821	813,508	149,287	13,168	154,905	7,549	162,454	1,220	2,682,440
<b>1994 January</b> .....	82	69,022	7,257	76,362	20,743	<sup>R</sup> 3,709	21,602	<sup>R</sup> 2,850	<sup>R</sup> 24,452	112	<sup>R</sup> 169,983
February .....	98	58,843	6,514	65,455	14,697	1,397	15,242	851	16,094	88	<sup>R</sup> 149,156
March .....	100	59,696	6,303	66,098	12,026	1,014	12,532	509	13,040	93	<sup>R</sup> 185,924
April .....	88	54,246	5,706	60,040	11,585	1,041	12,043	583	12,626	71	<sup>R</sup> 203,934
May .....	89	56,482	6,513	63,084	10,346	1,164	10,839	670	11,510	59	<sup>R</sup> 216,022
June .....	87	66,162	6,881	73,130	14,775	<sup>R</sup> 1,871	15,369	<sup>R</sup> 1,278	<sup>R</sup> 16,646	71	<sup>R</sup> 318,528
July .....	98	69,428	6,964	76,489	14,062	1,530	14,576	<sup>R</sup> 1,016	15,592	76	<sup>R</sup> 362,444
August .....	92	68,713	6,877	75,682	8,992	<sup>R</sup> 1,021	9,453	<sup>R</sup> 559	<sup>R</sup> 10,013	65	<sup>R</sup> 382,114
September .....	93	59,873	6,479	66,445	7,346	<sup>R</sup> 870	7,759	<sup>R</sup> 456	<sup>R</sup> 8,216	62	<sup>R</sup> 295,956
October .....	107	58,011	6,330	64,447	6,634	<sup>R</sup> 811	7,057	<sup>R</sup> 387	<sup>R</sup> 7,444	62	<sup>R</sup> 263,958
November .....	90	<sup>R</sup> 55,542	6,245	<sup>R</sup> 61,877	6,432	<sup>R</sup> 863	<sup>R</sup> 6,910	<sup>R</sup> 385	<sup>R</sup> 7,294	59	<sup>R</sup> 231,242
December .....	100	<sup>R</sup> 61,084	6,977	<sup>R</sup> 68,161	7,029	<sup>R</sup> 1,048	<sup>R</sup> 7,523	554	<sup>R</sup> 8,077	57	<sup>R</sup> 207,886
<b>Total</b> .....	1,123	<sup>R</sup> 737,102	79,045	<sup>R</sup> 817,270	134,666	<sup>R</sup> 16,338	<sup>R</sup> 140,907	<sup>R</sup> 10,097	<sup>R</sup> 151,004	875	<sup>R</sup> 2,987,146
<b>1995 January</b> .....	75	64,253	7,103	71,431	5,955	1,057	6,380	632	7,012	64	198,657

<sup>a</sup> Heavy oil includes fuel oil nos. 4, 5, and 6, and residual fuel oils.

<sup>b</sup> Light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>c</sup> GT/IC = Gas turbine and internal combustion plants.

<sup>d</sup> Includes supplemental gaseous fuels.

R=Revised data. NA=Not available.

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

Sources: See end of section.

**Table 7.4 Electric Utility Stocks of Coal and Petroleum, End of Period**

	Coal				Petroleum					
	Anthracite	Bituminous Coal	Lignite	Total	By Type of Petroleum		By Prime Mover Type		Total Liquids	Petroleum Coke
					Heavy Oil <sup>a</sup>	Light Oil <sup>b</sup>	Steam Plants	GT/IC <sup>c</sup>		
	Thousand Short Tons				Thousand Barrels					
1973 Total .....	1,066	84,941	961	86,967	NA	NA	79,121	10,095	89,216	312
1974 Total .....	930	81,712	867	83,509	NA	NA	97,718	15,199	112,917	35
1975 Total .....	982	107,927	1,815	110,724	NA	NA	108,825	18,432	125,257	31
1976 Total .....	1,000	114,130	2,306	117,436	NA	NA	106,993	14,703	121,696	32
1977 Total .....	2,321	128,210	2,688	133,219	NA	NA	124,750	19,281	144,031	44
1978 Total .....	2,178	123,020	3,027	128,225	NA	NA	102,402	16,386	118,788	198
1979 Total .....	3,274	152,981	3,459	159,714	NA	NA	111,121	20,301	131,422	183
1980 Total .....	4,741	174,154	4,115	183,010	105,351	30,023	117,227	18,147	135,374	52
1981 Total .....	5,537	158,258	5,098	168,893	102,042	26,094	112,380	15,756	128,136	42
1982 Total .....	6,080	170,480	4,573	181,132	95,515	23,369	105,287	13,597	118,884	41
1983 Total .....	6,507	145,250	3,841	155,598	70,573	18,801	78,285	11,090	89,375	55
1984 Total .....	6,710	167,118	5,899	179,727	68,503	19,116	76,836	10,784	87,619	50
1985 Total .....	7,189	142,144	7,043	156,376	57,304	16,386	64,704	8,985	73,689	49
1986 Total .....	7,099	148,665	6,042	161,806	56,841	16,269	64,258	8,853	73,111	40
1987 Total .....	6,940	156,670	7,187	170,797	55,069	15,759	61,705	9,123	70,827	51
1988 Total .....	6,561	133,434	6,512	146,507	54,187	15,099	60,311	8,974	69,285	86
1989 Total .....	6,403	122,967	6,490	135,860	47,446	13,824	53,309	7,962	61,270	105
1990 Total .....	6,499	142,650	7,016	156,166	67,030	16,471	73,306	10,195	83,501	94
1991 Total .....	6,513	145,367	5,996	157,876	58,636	16,357	65,032	9,961	74,993	70
1992 Total .....	6,215	142,156	5,759	154,130	56,135	15,714	62,374	9,475	71,849	67
1993 January .....	6,166	138,615	5,521	150,302	53,781	15,840	60,193	9,428	69,620	65
February .....	6,107	135,063	5,357	146,528	50,005	15,131	56,303	8,833	65,136	60
March .....	6,036	132,183	5,758	143,978	45,313	14,914	51,528	8,698	60,227	66
April .....	5,802	136,199	6,177	148,178	47,356	14,856	53,475	8,736	62,211	77
May .....	5,773	138,668	6,238	150,678	50,422	14,669	56,495	8,596	65,091	82
June .....	5,766	133,977	6,009	145,753	49,294	14,936	55,604	8,626	64,230	92
July .....	5,755	115,383	5,677	126,815	47,401	14,618	53,639	8,380	62,019	90
August .....	5,745	102,582	5,651	113,978	43,943	14,842	50,223	8,562	58,785	99
September .....	5,735	100,951	6,147	112,833	45,913	14,774	52,071	8,617	60,687	62
October .....	5,718	102,700	6,687	115,105	46,298	14,822	52,385	8,735	61,120	69
November .....	5,693	103,447	6,955	116,095	46,603	14,878	52,812	8,668	61,481	84
December .....	5,639	98,560	7,142	111,341	46,769	15,674	53,360	9,083	62,443	89
1994 January .....	5,576	86,043	6,676	98,294	42,781	15,127	49,922	7,986	57,908	83
February .....	5,496	<sup>R</sup> 85,523	6,720	<sup>R</sup> 97,739	44,764	<sup>R</sup> 15,289	<sup>R</sup> 51,209	8,843	<sup>R</sup> 60,053	73
March .....	5,420	<sup>R</sup> 92,333	7,433	<sup>R</sup> 105,186	45,750	<sup>R</sup> 15,024	<sup>R</sup> 51,950	8,824	<sup>R</sup> 60,774	89
April .....	5,360	100,161	7,803	113,324	44,221	<sup>R</sup> 14,937	<sup>R</sup> 50,528	8,630	<sup>R</sup> 59,158	103
May .....	5,309	<sup>R</sup> 107,716	7,518	<sup>R</sup> 120,543	46,104	<sup>R</sup> 15,170	52,623	<sup>R</sup> 8,651	<sup>R</sup> 61,274	78
June .....	5,275	105,668	7,449	118,391	44,719	<sup>R</sup> 15,541	<sup>R</sup> 51,361	<sup>R</sup> 8,898	<sup>R</sup> 60,259	63
July .....	5,214	96,502	7,704	109,419	44,259	<sup>R</sup> 15,323	<sup>R</sup> 50,654	<sup>R</sup> 8,928	<sup>R</sup> 59,582	37
August .....	5,173	<sup>R</sup> 95,932	7,679	<sup>R</sup> 108,783	46,420	<sup>R</sup> 15,509	<sup>R</sup> 52,643	<sup>R</sup> 9,286	<sup>R</sup> 61,929	25
September .....	5,133	<sup>R</sup> 99,793	7,388	<sup>R</sup> 112,314	47,111	<sup>R</sup> 15,586	53,261	<sup>R</sup> 9,437	<sup>R</sup> 62,697	35
October .....	5,080	104,432	7,161	116,673	<sup>R</sup> 45,971	<sup>R</sup> 15,930	<sup>R</sup> 52,182	<sup>R</sup> 9,720	<sup>R</sup> 61,902	33
November .....	4,903	110,569	7,856	123,328	46,475	<sup>R</sup> 16,128	52,730	<sup>R</sup> 9,873	<sup>R</sup> 62,603	51
December .....	4,879	<sup>R</sup> 115,325	6,893	<sup>R</sup> 126,897	46,342	<sup>R</sup> 16,644	<sup>R</sup> 52,814	<sup>R</sup> 10,172	<sup>R</sup> 62,986	69
1995 January .....	4,849	114,316	6,309	125,475	45,428	16,615	51,758	10,285	62,043	75

<sup>a</sup> Heavy oil includes fuel oil nos. 4, 5, and 6, and residual fuel oils.

<sup>b</sup> Light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>c</sup> GT/IC = Gas turbine and internal combustion plants.

R=Revised data. NA=Not available.

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

Sources: See end of section.

## Sources for Table 7.1

- **1973-September 1977**—Federal Power Commission Form FPC-4, "Monthly Power Plant Report."
- **October 1977-1979**—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report."
- **1980**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1991, Table 4, and (for geothermal energy and other) FERC, Form FPC-4, "Monthly Power Plant Report."
- **1981**—EIA, *Electric Power Monthly*, March 1992, Table 4, and (for geothermal energy and other) FERC, Form FPC-4, "Monthly Power Plant Report."
- **1982**—EIA, *Electric Power Monthly*, March 1993, Table 4, and (for geothermal energy and other) EIA, Form EIA-759, "Monthly Power Plant Report."
- **1983-1992**—EIA, *Electric Power Monthly*, March 1994, Table 4, and (for geothermal energy and other) EIA, Form EIA-759, "Monthly Power Plant Report."
- **1993 and 1994**—EIA, *Electric Power Monthly*, April 1995, Tables 4 and 5.

## Sources for Table 7.2

- **1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."
- **October 1977-1979**—Federal Energy Regulatory Commission, Form FERC-5, "Electric Operating Revenue and Income."
- **1980**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1991, Table 51.
- **1981**—EIA, *Electric Power Monthly*, March 1992, Table 51.
- **1982**—EIA, *Electric Power Monthly*, March 1993, Table 51.

- **1983 and 1992 monthly data**—EIA, *Electric Power Monthly*, March 1994, Table 51.

- **1984 forward (except 1992 monthly data)**—EIA, *Electric Power Monthly*, April 1995, Table 52.

## Sources for Table 7.3

- **Prime Mover Type Data: 1973-September 1977**—Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report." **October 1977-1981**—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report." **1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."
- **All Other Data: 1973-September 1977**—FPC, Form FPC-4, "Monthly Power Plant Report." **October 1977-1979**—FERC, Form FPC-4, "Monthly Power Plant Report." **1980**—EIA, *Electric Power Monthly*, March 1991, Table 17. **1981**—EIA, *Electric Power Monthly*, March 1992, Table 17. **1982**—EIA, *Electric Power Monthly*, March 1993, Table 17. **1983**—EIA, *Electric Power Monthly*, March 1994, Table 18. **1984**—EIA, *Electric Power Monthly*, March 1995, Table 18. **1985 forward**—EIA, *Electric Power Monthly*, April 1995, Table 18.

## Sources for Table 7.4

- **Prime Mover Type Data: 1973-September 1977**—Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report." **October 1977-1981**—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report." **1982 forward**—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."
- **All Other Data: 1973-September 1977**—FPC, Form FPC-4, "Monthly Power Plant Report." **October 1977-1979**—FERC, Form FPC-4 "Monthly Power Plant Report." **1980**—EIA, *Electric Power Monthly*, March 1991, Table 29. **1981**—EIA, *Electric Power Monthly*, March 1992, Table 29. **1982**—EIA, *Electric Power Monthly*, March 1993, Table 29. **1983 and 1992 monthly data**—EIA, *Electric Power Monthly*, March 1994, Table 29. **1984 forward (except 1992 monthly data)**—EIA, *Electric Power Monthly*, April 1995, Table 29.



## Section 8. Nuclear Energy

In January 1995, U.S. nuclear generating units produced a total of 63 net terawatthours (billion kilowatthours) of electricity, 11 percent<sup>8</sup> more than in January 1994. Nuclear units generated at an average capacity factor of 86.0 percent, 9 percentage points higher than in January 1994. Nuclear power supplied 25.0 percent of the total electric utility-generated electricity in January 1995, compared with 21.7 percent in January 1994.

No low- or full power licenses for nuclear power plants were issued by the Nuclear Regulatory Commission during January 1995.

On January 31, 1995, there were 109 operable nuclear generating units in the United States, with a collective net summer capability of 99.0 million kilowatts of elec-

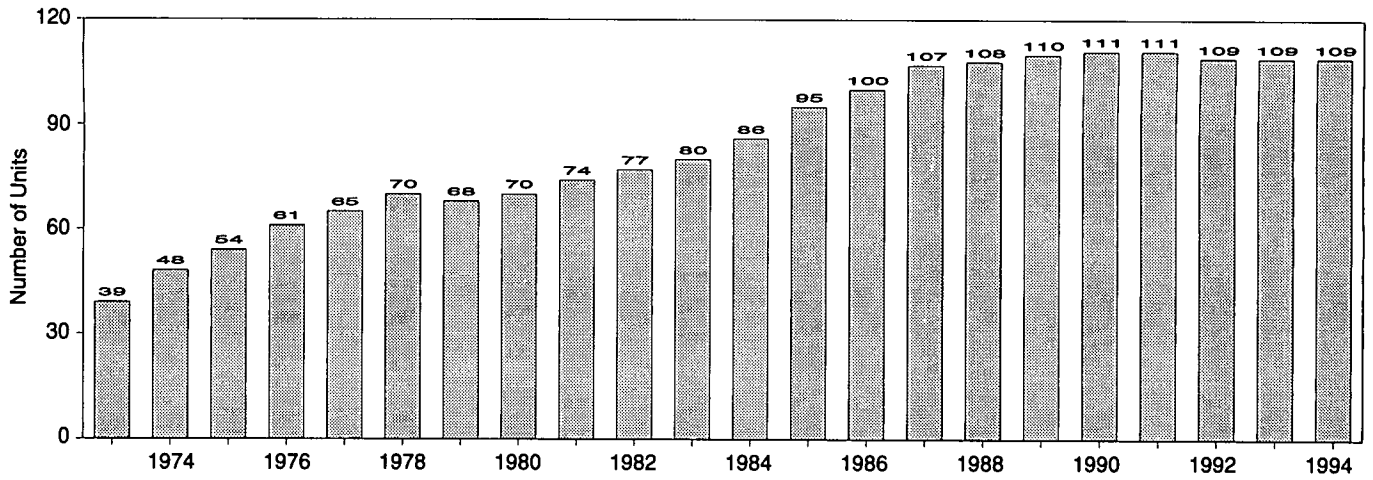
tricity. Of the 109 operable units, 10 units generated at less than 25 percent of capacity because of maintenance, refueling, or repair outage, and 7 of the 10 units generated no electricity during the month including two operable units, Browns Ferry 1 and 3, that have been shut down since March 1985.

As of January 31, 1995, there were 116 domestic nuclear generating units in all stages of construction and operation. Seven units possess a construction permit, although construction for 6 of the 7 units was canceled or halted. The aggregate net design capacity of operable units was 101.1 million kilowatts, and the design capacity of the 7 units with construction permits was 8.5 million kilowatts, for a total design capacity of 109.6 million kilowatts.

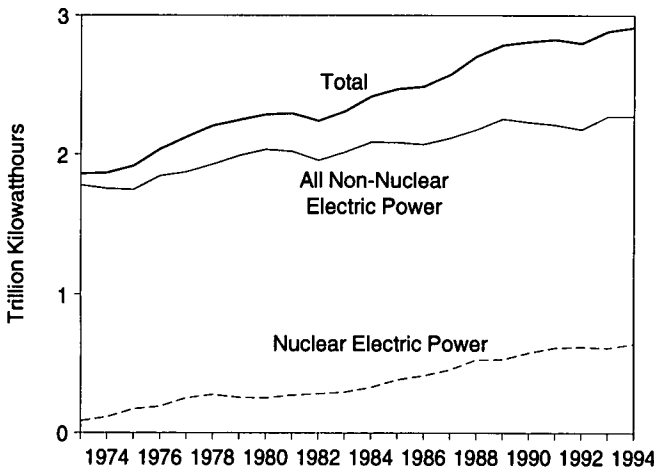
<sup>8</sup>Percent changes are based on numbers shown in the following tables.

# Figure 8.1 Nuclear Power Plant Operations

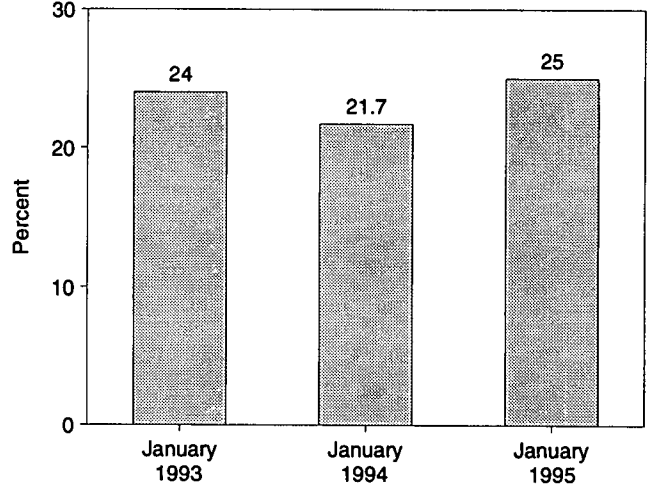
## Operable Units, End of Year, 1973-1994



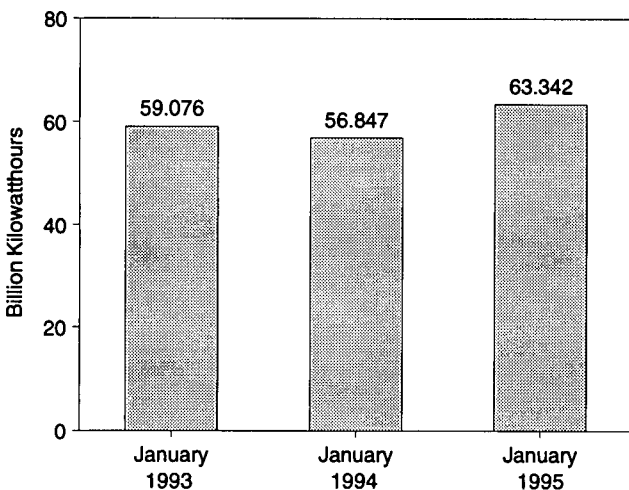
## Net Generation of Electricity, 1973-1994



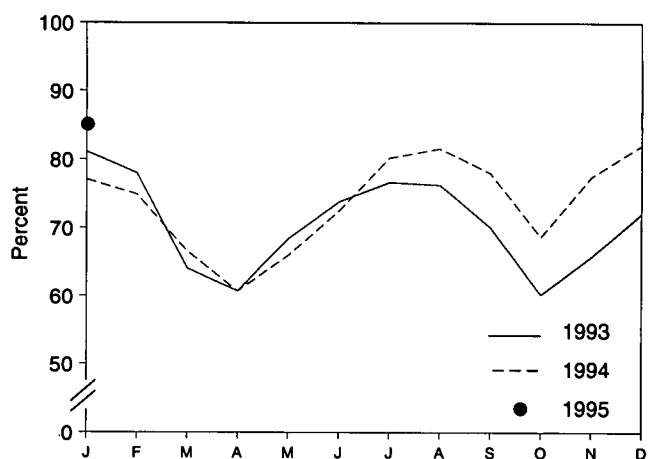
## Nuclear Portion of Domestic Electricity Net Generation



## Nuclear Electricity Net Generation



## Capacity Factor, Monthly



Note: Because vertical scales differ, graphs should not be compared.  
Sources: Tables 7.1 and 8.1.



**Table 8.1 Nuclear Power Plant Operations**

	Operable Units <sup>a,b</sup>	Nuclear Electricity Net Generation	Nuclear Portion of Domestic Electricity Net Generation	Net Summer Capability of Operable Units <sup>a,c</sup>	Capacity Factor <sup>d</sup>
	Number	Million Kilowatthours	Percent	Million Kilowatts	Percent
1973 Year .....	39	83,479	4.5	22.683	53.5
1974 Year .....	48	113,976	6.1	31.867	47.8
1975 Year .....	54	172,505	9.0	37.267	55.9
1976 Year .....	61	191,104	9.4	43.822	54.7
1977 Year .....	65	250,883	11.8	46.303	63.3
1978 Year .....	70	276,403	12.5	50.824	64.5
1979 Year .....	68	255,155	11.4	49.747	58.4
1980 Year .....	70	251,116	11.0	51.810	56.3
1981 Year .....	74	272,674	11.9	56.042	58.2
1982 Year .....	77	282,773	12.6	60.035	56.6
1983 Year .....	80	293,677	12.7	63.009	54.4
1984 Year .....	86	327,634	13.6	69.652	56.3
1985 Year .....	95	383,691	15.5	79.397	58.0
1986 Year .....	100	414,038	16.6	85.241	56.9
1987 Year .....	107	455,270	17.7	93.583	57.4
1988 Year .....	108	526,973	19.5	94.695	63.5
1989 Year .....	110	529,355	19.0	98.161	62.2
1990 Year .....	111	576,862	20.5	99.624	66.0
1991 Year .....	111	612,565	21.7	99.589	70.2
1992 Year .....	109	618,776	22.1	98.985	70.9
1993 January .....	108	59,076	24.0	97.881	81.1
February .....	108	51,319	22.8	97.881	78.0
March .....	108	46,606	19.8	97.881	64.0
April .....	109	43,199	20.4	99.031	60.7
May .....	109	50,367	22.6	99.031	68.4
June .....	109	52,620	21.1	99.031	73.8
July .....	109	56,502	20.0	99.031	76.7
August .....	109	56,209	20.1	99.031	76.3
September .....	109	49,989	21.1	99.031	70.1
October .....	109	44,434	19.9	99.094	60.2
November .....	109	46,862	20.7	99.094	65.7
December .....	109	53,108	21.6	99.041	72.1
Year .....	109	610,291	21.2	99.041	70.5
1994 January .....	109	<sup>R</sup> 56,847	<sup>R</sup> 21.7	99.041	<sup>R</sup> 77.1
February .....	109	<sup>R</sup> 49,821	<sup>R</sup> 22.1	99.041	74.9
March .....	109	<sup>R</sup> 48,969	<sup>R</sup> 21.1	99.041	<sup>R</sup> 66.5
April .....	109	<sup>R</sup> 43,192	20.1	99.041	<sup>R</sup> 60.7
May .....	109	<sup>R</sup> 48,525	21.3	99.041	<sup>R</sup> 65.9
June .....	109	51,751	19.6	99.041	72.5
July .....	109	59,123	21.3	99.041	80.2
August .....	109	60,104	21.9	99.041	81.6
September .....	109	55,628	23.4	99.041	78.0
October .....	109	50,703	22.2	99.041	68.7
November .....	109	55,280	24.6	99.041	77.5
December .....	109	60,497	24.9	99.041	82.1
Year .....	109	<sup>R</sup> 640,440	22.0	99.041	<sup>R</sup> 73.8
1995 January .....	109	63,342	25.0	99.041	86.0

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

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

<sup>c</sup> For the definition of "Net Summer Capability," see Note 3 at end of section.

<sup>d</sup> For an explanation of the method of calculating the capacity factor, see Note 4 at end of section.

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

Notes: • 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.

Sources: See end of section.

**Table 8.2 Nuclear Generating Units, End of Period**

	Licensed for Operation		Construction Permits		On Order	Announced	Total	Total Design Capacity <sup>c</sup>
	Operable <sup>a</sup>	In Startup <sup>b</sup>	Granted	Pending				
	Number of Units							
1973 Year .....	39	2	57	52	49	9	208	198
1974 Year .....	48	5	62	75	30	6	226	223
1975 Year .....	54	2	69	69	14	5	213	212
1976 Year .....	61	1	71	63	16	2	214	211
1977 Year .....	65	2	78	49	13	2	209	203
1978 Year .....	70	0	88	32	5	0	195	191
1979 Year .....	68	0	90	24	3	0	185	180
1980 Year .....	70	1	82	12	3	0	168	162
1981 Year .....	74	0	76	11	2	0	163	157
1982 Year .....	77	2	60	3	2	0	144	134
1983 Year .....	80	3	53	0	2	0	138	129
1984 Year .....	86	6	38	0	2	0	132	123
1985 Year .....	95	3	30	0	2	0	130	121
1986 Year .....	100	7	19	0	2	0	128	119
1987 Year .....	107	4	14	0	2	0	127	119
1988 Year .....	108	3	12	0	0	0	123	115
1989 Year .....	110	1	10	0	0	0	121	113
1990 Year .....	111	0	8	0	0	0	119	111
1991 Year .....	111	0	8	0	0	0	119	111
1992 Year .....	109	0	8	0	0	0	117	111
1993 January .....	108	0	8	0	0	0	116	110
February .....	108	1	7	0	0	0	116	110
March .....	108	1	7	0	0	0	116	110
April .....	109	0	7	0	0	0	116	110
May .....	109	0	7	0	0	0	116	110
June .....	109	0	7	0	0	0	116	110
July .....	109	0	7	0	0	0	116	110
August .....	109	0	7	0	0	0	116	110
September .....	109	0	7	0	0	0	116	110
October .....	109	0	7	0	0	0	116	110
November .....	109	0	7	0	0	0	116	110
December .....	109	0	7	0	0	0	116	110
1994 January .....	109	0	7	0	0	0	116	110
February .....	109	0	7	0	0	0	116	110
March .....	109	0	7	0	0	0	116	110
April .....	109	0	7	0	0	0	116	110
May .....	109	0	7	0	0	0	116	110
June .....	109	0	7	0	0	0	116	110
July .....	109	0	7	0	0	0	116	110
August .....	109	0	7	0	0	0	116	110
September .....	109	0	7	0	0	0	116	110
October .....	109	0	7	0	0	0	116	110
November .....	109	0	7	0	0	0	116	110
December .....	109	0	7	0	0	0	116	110
1995 January .....	109	0	7	0	0	0	116	110

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

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

<sup>c</sup> Net design electrical rating (DER) is used because many of the units were canceled prior to being assigned a net summer capability. See Note 3

at end of section.

Note: Geographic coverage is the 50 States and the District of Columbia. Sources: See end of section.

# Nuclear Energy Notes

**1. Operable Units:** Nuclear generating units that have been issued a full-power license by the Nuclear Regulatory Commission (NRC).

**Exceptions:** The Shippingport (60 megawatts (MW)) and the Hanford-N (840 MW) nuclear units were included in the operable units until 1982 and 1988, respectively. The Shippingport unit was excluded from the operable category during March 1974-August 1977 due to a major core modification outage. Hanford-N, an unlicensed unit used for defense materiel production, was included in the operable category because power was produced as by-product and sold commercially. Three Mile Island 2 (880 MW) experienced a major accident in 1979 and, although that unit still retains its operating license and site cleanup continues, there is no plan to restart it. Therefore, it has not been included in the operable category since March 1979. Although Shoreham received a full-power license in April 1989, the unit is not currently scheduled to operate and, therefore, has not been included in the operable category. Rancho Seco (873 MW) was shut down by the Sacramento Municipal Utility District (SMUD) in June 1989 following a referendum on its continued operation. Because there are currently no plans to operate it as a nuclear unit, it is no longer included as an operable unit but is identified as a unit shut down for an extended period. As soon as SMUD and the NRC formalize the plant's official retirement, it will be noted as such in this report. The Department of Energy-operated Experimental Breeder Reactor 2 unit is not a commercial reactor and is therefore not included in the operable category.

In addition, nine units have been retired and therefore removed from the operable category. Those units are: Peach Bottom 1 (40 MW) and Indian Point 1 (265 MW), both retired in 1974; Humboldt Bay (65 MW), officially retired in 1976; Dresden 1 (200 MW), retired in August 1979; LaCrosse (51 MW), retired in May 1987; Fort Saint Vrain (217 MW), retired in August 1989; Yankee Rowe 1 (185 MW), retired in February 1992; San Onofre 1 (436 MW), retired in December 1992; and Trojan (1,104 MW), retired in January 1993.

**2. In Startup:** The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its full-power license. During that period, the unit is undergoing low-power testing and the maximum level of operation is 5 percent of the unit's design thermal rating.

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

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

power of a typical nuclear power plant is about 5 percent of gross generation.

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

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

## Sources for Table 8.1

- **Operable Units: 1973-1982**—U.S. Department of Energy (DOE), Office of Nuclear Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward**—Nuclear Regulatory Commission (NRC), "Licensed Operating Reactors" (NUREG-0020).
- **Nuclear Electricity Net Generation:** Table 7.1.
- **Nuclear Portion of Domestic Electricity Net Generation**—Calculated from data in Table 7.1.
- **Net Summer Capability of Operable Units: 1973-1982**—Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward**—Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generation Report," and monthly updates as appropriate.
- **Capacity Factor**—EIA, Office of Coal, Nuclear, Electric and Alternate Fuels.

## Sources for Table 8.2

- **Licensed for Operation: 1973-1982**—U.S. Department of Energy (DOE), Office of Nuclear Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones." **1983 forward**—Nuclear Regulatory Commission (NRC), "Licensed Operating Reactors" (NUREG-0020).
- **Construction Permits, On Order, and Announced: 1973-1982**—Compiled from various sources, primarily DOE, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; Energy Information Adminis-

tration (EIA), Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1989"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987." **1983 forward**—NRC, "Summary Information Report" (NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and various journals.

• **Total Design Capacity: 1973-1982**—Compiled from various sources, primarily DOE, Office of Nuclear Reac-

tor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones"; EIA, CNEAF, "Nuclear Steam-Electric Units That Have Been in Operation as of 1957-1987"; EIA, CNEAF, "Monthly Report for Electric Utilities-Power Generation"; EIA, CNEAF, "Nuclear Plant Cancellations: Causes, Costs, and Consequences"; and Utility Data Institute, Inc., "U.S. Nuclear Plant Statistics, 1987." **1983 forward**—NRC, "Summary Information Report" (NUREG-0871); NRC, "Licensed Operating Reactors" (NUREG-0020); and EIA, Form EIA-860, "Annual Electric Generator Report."

## Section 9. Energy Prices

**Crude Oil.** The average price of domestic crude oil purchased at the wellhead was \$13.98 per barrel in January 1995, 33 percent higher than the level in January 1994. The refiner acquisition cost of imported crude oil in January 1995 was \$16.51 per barrel, 28 percent above the January 1994 level. The average cost of domestic crude oil in January 1995 was \$16.51, 30 percent higher than the January 1994 average.

**Motor Gasoline.** The national city average retail price of unleaded regular gasoline at all types of stations was \$1.12 per gallon in February 1995, 7 percent higher than the price in February 1994. The price of unleaded premium gasoline averaged \$1.32 per gallon in February 1995, 6 percent higher than the price in February 1994.

**Residual Fuel Oil.** The average price, excluding taxes, of residual fuel oil sold to end users in January 1995 was 40 cents per gallon, 4 percent above the previous month's price and 22 percent above the January 1994 average. The average resale price, excluding taxes, of residual fuel oil in January 1995 was 36 cents per gallon, 5 percent above the December 1994 average and 25 percent higher than the price 1 year earlier.

**Aviation Fuel.** The average price, excluding taxes, of aviation gasoline sold to end users in January 1995 was \$1.00 per gallon, slightly higher than the previous month's price and 12 percent higher than the January 1994 price. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in January 1995 was 52 cents per gallon, 3 percent lower than the previous month's average price but 1 percent higher than the January 1994 average price.

**No. 2 Distillate Fuel Oil.** The January 1995 national average price, excluding taxes, of heating oil sold to residential customers was 87 cents per gallon, 1 percent higher than the December 1994 price but 2 percent lower than the January 1994 price. The average price of No. 2 fuel oil sold to all end users was 56 cents per gallon in January 1995, 1 percent lower than the

December 1994 price and 6 percent lower than the January 1994 price.

**Electricity.** The average price of electricity sold to all ultimate consumers in the United States in January 1995 was 6.60 cents per kilowatthour, 1 percent lower than the January 1994 mean price. The price of electricity sold to residential consumers in January 1995 averaged 7.85 cents per kilowatthour, 1 percent higher than the January 1994 price. The price of electricity sold to commercial consumers averaged 7.34 cents per kilowatthour in January 1995, 1 percent lower than the January 1994 price. The price of electricity sold to other consumers was 6.45 cents per kilowatthour, 1 percent below the January 1994 price. The price of electricity sold to industrial users in January 1995 averaged 4.52 cents per kilowatthour, 2 percent below the price 1 year earlier.

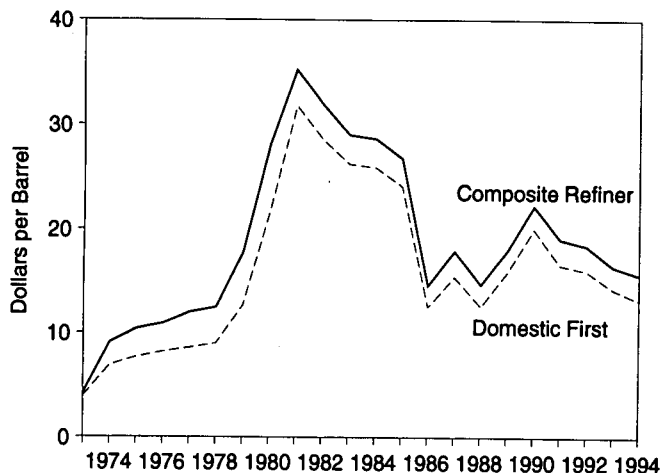
Beginning with January 1986, there were new series of national average price estimates based on a statistically derived sample of both publicly and privately owned electric utilities. Previously, average price estimates were derived from selected privately owned electric utilities and were not national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

**Natural Gas.** The estimated average wellhead price of natural gas for January 1995 was \$1.64 per thousand cubic feet, 18 percent below the January 1994 price.

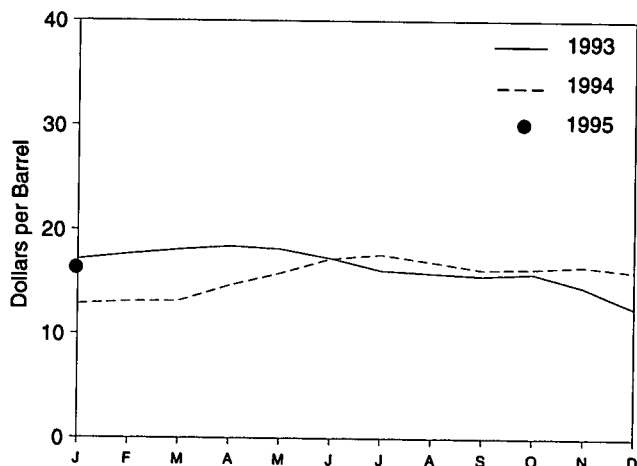
The average price of natural gas delivered to electric utility plants was \$2.17 per thousand cubic feet in December 1994 (latest date for which data are available) 21 percent below the December 1993 price. The average price of natural gas used by residential consumers in January 1995 was \$5.83 per thousand cubic feet, 2 percent below the January 1994 price. The average price of natural gas used by commercial consumers in January 1995 was \$5.22 per thousand cubic feet, 4 percent lower than the January 1994 price. The average price of natural gas used by industrial consumers in January 1995 was \$2.89 per thousand cubic feet, 18 percent below the January 1994 price.

# Figure 9.1 Petroleum Prices

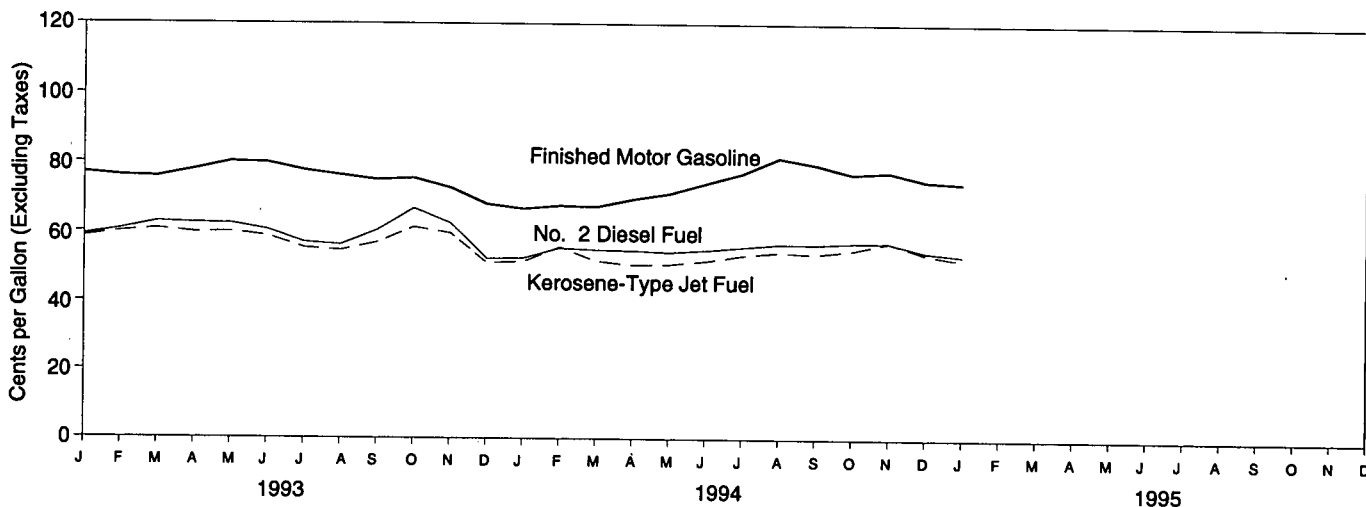
## Crude Oil Prices, 1973-1994



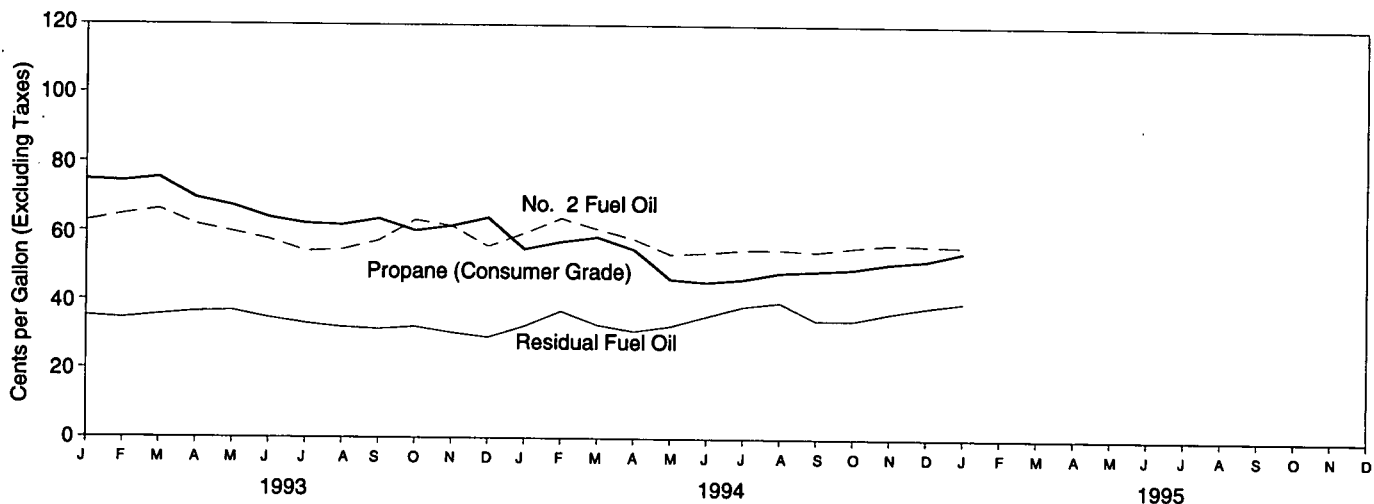
## Composite Refiner Acquisition Cost, Monthly



## 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



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 January .....	14.70	15.24	16.36	17.40	16.80	17.11
February .....	15.53	16.09	17.12	17.84	17.41	17.64
March .....	15.94	16.60	17.56	18.31	17.82	18.08
April .....	16.15	16.30	17.55	18.49	18.35	18.42
May .....	16.03	16.19	17.30	18.44	17.89	18.16
June .....	15.06	15.10	16.32	17.70	16.80	17.26
July .....	13.83	14.23	15.45	16.39	15.81	16.10
August .....	13.75	14.19	15.26	16.01	15.64	15.83
September .....	13.39	14.09	14.95	15.82	15.32	15.59
October .....	13.72	14.12	15.01	16.04	15.59	15.81
November .....	12.45	12.90	13.83	14.99	14.05	14.51
December .....	10.38	11.63	12.33	12.46	12.56	12.51
Average .....	14.25	14.71	15.72	16.67	16.14	16.41
1994 January .....	10.51	12.10	12.70	12.72	12.93	12.82
February .....	10.73	11.99	12.64	13.24	12.90	13.07
March .....	10.81	12.22	12.88	13.14	13.18	13.16
April .....	12.33	13.46	14.23	14.74	14.54	14.64
May .....	14.03	14.55	15.55	15.88	15.74	15.81
June .....	14.95	15.47	16.52	17.38	17.04	17.21
July .....	15.31	16.18	17.17	17.74	17.55	17.64
August .....	14.50	14.91	16.05	17.22	16.67	16.92
September .....	13.62	14.32	15.47	16.46	15.90	16.18
October .....	13.84	14.74	15.67	16.35	16.23	16.29
November .....	14.14	<sup>R</sup> 14.84	<sup>R</sup> 15.99	16.63	16.46	16.54
December .....	13.43	<sup>R</sup> 14.54	<sup>R</sup> 15.61	16.22	15.78	16.03
Average .....	13.19	<sup>R</sup> 14.15	<sup>R</sup> 15.16	15.68	15.51	15.59
1995 January .....	13.98	14.84	16.06	16.51	16.51	16.51

<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 data. <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.

Sources: See end of section.

**Table 9.2 F.O.B. Costs of Crude Oil Imports from Selected Countries**

(Dollars per Barrel)

	Algeria	Indonesia	Iran <sup>a</sup>	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC <sup>b</sup>	Total OPEC <sup>c</sup>
1973 Average <sup>d</sup> .....	7.23	5.67	4.24	NA	7.81	3.25	NA	5.39	4.84	4.06	5.43
1974 Average .....	13.23	11.99	10.85	W	12.44	10.17	NA	10.71	10.02	10.96	11.33
1975 Average .....	11.93	12.55	10.81	11.44	11.82	10.87	NA	11.04	10.86	11.18	11.34
1976 Average .....	13.05	12.76	11.61	12.22	13.08	11.62	W	11.39	11.92	12.06	12.23
1977 Average .....	14.35	13.57	12.68	13.42	14.44	12.38	14.11	12.63	13.19	13.13	13.29
1978 Average .....	14.12	13.61	12.65	13.24	14.05	12.70	13.82	12.38	13.35	13.28	13.31
1979 Average .....	20.53	19.03	22.93	20.27	21.69	17.28	21.70	16.90	21.10	19.27	19.88
1980 Average .....	36.67	32.17	NA	31.06	35.93	28.17	34.36	24.81	34.34	31.57	32.21
1981 Average .....	39.08	35.62	( <sup>e</sup> )	33.01	38.31	32.60	36.06	28.95	36.69	34.79	35.17
1982 Average .....	34.20	35.11	30.97	28.08	35.13	33.73	33.42	23.74	31.96	33.84	33.48
1983 Average .....	30.09	29.92	28.39	25.20	29.81	27.53	29.91	21.48	27.96	28.28	28.46
1984 Average .....	28.34	29.13	27.42	26.39	29.51	27.67	28.87	24.23	27.79	27.79	27.79
1985 Average .....	26.89	27.12	W	25.33	28.04	22.04	27.64	23.64	26.12	24.34	25.67
1986 Average .....	13.62	13.19	W	11.84	14.35	11.36	13.84	10.92	13.32	11.59	12.21
1987 Average .....	16.79	17.40	W	16.36	18.47	15.12	18.28	15.08	17.11	15.80	16.43
1988 Average .....	W	13.81	( <sup>e</sup> )	12.18	15.16	12.16	14.80	12.96	13.45	12.57	13.43
1989 Average .....	W	17.01	( <sup>e</sup> )	15.96	18.31	16.29	17.89	16.09	17.12	16.72	17.06
1990 Average .....	W	21.29	( <sup>e</sup> )	19.26	22.46	20.36	23.43	19.55	19.88	18.84	20.40
1991 Average .....	W	18.69	15.58	15.37	20.29	14.62	20.81	14.91	17.79	15.59	16.99
1992 Average .....	W	17.06	( <sup>e</sup> )	15.26	19.98	15.85	19.61	14.39	17.65	16.50	16.87
1993 January .....	( <sup>e</sup> )	W	( <sup>e</sup> )	14.14	17.95	15.55	18.29	12.99	15.19	15.63	15.63
February .....	( <sup>e</sup> )	W	( <sup>e</sup> )	14.64	19.06	16.13	18.13	13.68	16.51	16.36	16.49
March .....	W	W	( <sup>e</sup> )	15.16	19.33	16.34	18.51	14.22	16.84	16.73	16.91
April .....	( <sup>e</sup> )	W	( <sup>e</sup> )	15.04	19.21	15.23	18.36	14.52	16.76	15.46	16.41
May .....	( <sup>e</sup> )	19.14	( <sup>e</sup> )	15.15	18.90	13.62	18.29	13.89	16.63	14.09	16.16
June .....	( <sup>e</sup> )	W	( <sup>e</sup> )	14.04	18.00	W	17.03	12.44	15.86	14.20	14.95
July .....	W	16.48	( <sup>e</sup> )	13.09	17.46	W	16.07	11.96	14.97	13.67	14.19
August .....	( <sup>e</sup> )	17.74	( <sup>e</sup> )	13.20	17.42	W	16.73	12.56	14.68	14.13	14.18
September ...	W	W	( <sup>e</sup> )	13.50	16.73	W	16.06	12.72	14.23	12.72	14.13
October .....	W	W	( <sup>e</sup> )	13.74	17.02	11.16	16.31	11.87	14.88	12.94	13.75
November ....	W	W	( <sup>e</sup> )	12.27	15.80	11.15	15.29	9.97	13.85	12.19	12.45
December ....	W	W	( <sup>e</sup> )	11.19	14.21	W	14.19	9.34	11.86	11.47	11.44
Average .....	W	17.13	( <sup>e</sup> )	13.74	17.79	13.77	16.64	12.46	15.17	14.25	14.78
1994 January .....	W	W	( <sup>e</sup> )	11.30	14.88	11.02	W	10.87	12.26	11.45	12.42
February .....	( <sup>e</sup> )	14.46	( <sup>a</sup> )	11.43	14.00	11.38	W	10.35	12.19	11.31	11.81
March .....	W	W	( <sup>a</sup> )	11.64	14.27	12.61	13.68	11.00	12.27	12.24	12.23
April .....	W	13.28	( <sup>a</sup> )	12.86	15.65	13.49	W	11.81	13.68	13.45	13.58
May .....	( <sup>e</sup> )	15.24	( <sup>a</sup> )	13.64	16.70	14.43	15.77	12.79	15.16	14.38	14.46
June .....	W	15.91	( <sup>a</sup> )	15.00	17.31	15.98	16.53	13.23	16.01	16.05	15.33
July .....	W	17.44	( <sup>a</sup> )	15.70	18.02	15.86	17.29	14.27	16.72	16.19	15.91
August .....	W	W	( <sup>a</sup> )	14.58	16.69	13.95	16.70	12.31	15.94	14.05	14.27
September ...	( <sup>e</sup> )	W	( <sup>a</sup> )	13.51	16.35	14.80	15.41	12.09	15.44	14.82	13.91
October .....	( <sup>e</sup> )	W	( <sup>a</sup> )	14.42	17.01	14.26	16.42	12.90	15.29	14.23	14.49
November ....	( <sup>e</sup> )	W	( <sup>a</sup> )	15.19	<sup>R</sup> 17.16	W	<sup>R</sup> W	<sup>R</sup> 12.23	<sup>R</sup> 15.69	W	14.32
December ....	W	W	( <sup>a</sup> )	<sup>R</sup> 14.78	<sup>R</sup> 16.57	W	<sup>R</sup> 16.03	<sup>R</sup> 12.20	<sup>R</sup> 15.32	<sup>R</sup> 14.41	<sup>R</sup> 13.96
Average .....	W	<sup>R</sup> 15.51	( <sup>e</sup> )	<sup>R</sup> 13.66	<sup>R</sup> 16.34	<sup>R</sup> 13.80	<sup>R</sup> 15.69	<sup>R</sup> 12.21	<sup>R</sup> 14.68	<sup>R</sup> 13.81	<sup>R</sup> 13.96
1995 January .....	( <sup>e</sup> )	W	( <sup>e</sup> )	14.99	16.96	15.72	W	12.86	15.37	15.69	14.43

<sup>a</sup> Beginning with February 1994, data for Iran are no longer reported in the *Petroleum Marketing Monthly*.

<sup>b</sup> The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>c</sup> Current members of OPEC are Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. Prior to 1993, Ecuador was also a member. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

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

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

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

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 1995, Table 24.



**Table 9.3 Landed Costs of Crude Oil Imports from Selected Countries**  
(Dollars per Barrel)

	Algeria	Canada	Indonesia	Iran <sup>a</sup>	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela	Other Countries	Arab OPEC <sup>b</sup>	Total OPEC <sup>c</sup>
1973 Average <sup>d</sup> .....	8.39	5.33	7.22	6.48	NA	9.08	5.37	NA	5.99	6.99	5.92	6.85
1974 Average .....	13.97	11.48	13.20	12.48	W	13.16	11.63	NA	11.25	12.93	12.39	12.49
1975 Average .....	12.86	12.84	13.83	12.51	12.61	12.70	12.50	NA	12.36	12.66	12.71	12.70
1976 Average .....	13.90	13.36	13.85	12.86	12.64	13.81	13.06	W	11.89	13.36	13.31	13.32
1977 Average .....	15.24	14.13	14.65	13.86	13.82	15.29	13.69	14.83	13.11	14.56	14.30	14.35
1978 Average .....	14.93	14.41	14.65	13.89	13.56	14.88	13.94	14.53	12.84	14.58	14.36	14.34
1979 Average .....	21.88	20.22	20.63	24.21	20.77	22.97	18.95	22.97	17.65	22.86	20.79	21.29
1980 Average .....	37.92	30.11	33.92	NA	31.77	37.15	29.80	35.68	25.92	36.15	32.97	33.56
1981 Average .....	40.46	32.32	37.31	( <sup>e</sup> )	33.70	39.66	34.20	37.29	29.91	38.54	36.22	36.60
1982 Average .....	35.35	27.15	36.70	32.46	28.63	36.16	34.99	34.25	24.93	34.03	35.15	34.81
1983 Average .....	31.26	25.63	31.57	29.81	25.78	30.85	29.27	30.87	22.94	29.68	29.87	29.84
1984 Average .....	29.06	26.56	30.87	28.70	26.85	30.36	29.20	29.45	25.19	29.21	29.10	29.06
1985 Average .....	27.51	25.71	28.67	25.79	25.63	28.96	24.72	28.36	24.43	27.33	25.90	26.86
1986 Average .....	14.82	13.43	14.63	12.38	12.17	15.29	12.84	14.63	11.52	14.25	13.14	13.46
1987 Average .....	17.87	17.04	18.49	18.28	16.69	19.32	16.81	18.78	15.76	18.30	17.32	17.64
1988 Average .....	W	13.50	15.15	W	12.58	15.88	13.37	15.82	13.66	14.45	13.60	14.18
1989 Average .....	19.13	16.81	18.35	( <sup>e</sup> )	16.35	19.19	17.34	18.74	16.78	18.08	17.41	17.78
1990 Average .....	W	20.48	22.50	( <sup>e</sup> )	19.64	23.33	21.82	22.65	20.31	20.52	20.64	21.23
1991 Average .....	W	17.16	20.20	17.54	15.89	21.39	17.22	21.37	15.92	19.73	17.45	18.08
1992 Average .....	W	17.04	18.76	( <sup>e</sup> )	15.60	20.78	17.48	20.63	15.13	19.25	17.63	17.81
1993 January .....	( <sup>e</sup> )	15.28	W	( <sup>e</sup> )	14.50	18.94	16.46	19.12	14.07	17.22	16.49	16.67
February .....	( <sup>e</sup> )	15.84	W	( <sup>e</sup> )	14.98	19.92	17.30	19.28	14.60	18.17	17.30	17.44
March .....	W	16.48	W	( <sup>e</sup> )	15.50	20.25	17.56	19.43	15.14	18.44	17.62	17.84
April .....	W	16.79	20.01	( <sup>e</sup> )	15.56	20.18	17.46	19.32	15.55	18.41	17.45	17.71
May .....	W	16.82	20.67	( <sup>e</sup> )	15.57	19.83	16.45	19.33	14.91	18.33	16.56	17.22
June .....	( <sup>e</sup> )	16.25	W	( <sup>e</sup> )	14.49	18.94	15.83	18.67	13.49	17.42	15.92	16.06
July .....	W	15.30	17.86	( <sup>e</sup> )	13.44	18.31	14.95	17.51	12.92	16.45	14.98	15.32
August .....	( <sup>e</sup> )	14.94	19.28	( <sup>e</sup> )	13.66	18.10	15.04	17.56	13.32	16.04	15.09	15.23
September .....	W	14.56	W	( <sup>e</sup> )	13.83	17.65	14.31	16.95	13.46	15.53	14.34	14.85
October .....	W	15.14	W	( <sup>e</sup> )	14.11	17.98	14.13	16.67	12.70	15.68	14.34	14.70
November .....	W	14.28	W	( <sup>e</sup> )	12.63	16.72	13.03	16.57	10.81	14.74	13.15	13.34
December .....	W	12.44	15.72	( <sup>e</sup> )	11.39	15.09	11.74	15.14	10.14	12.82	11.67	12.05
Average .....	17.34	15.27	18.55	( <sup>e</sup> )	14.11	18.73	15.40	17.92	13.39	16.44	15.28	15.68
1994 January .....	W	12.05	W	( <sup>e</sup> )	11.65	15.56	11.84	14.98	11.72	13.47	11.96	12.90
February .....	( <sup>e</sup> )	12.05	16.14	( <sup>a</sup> )	11.70	14.67	12.12	15.40	11.12	13.51	12.01	12.45
March .....	W	11.92	W	( <sup>a</sup> )	11.91	15.11	12.90	14.67	11.78	13.22	12.49	12.84
April .....	W	13.43	14.82	( <sup>a</sup> )	13.21	16.44	14.05	15.31	12.72	15.02	13.98	14.36
May .....	( <sup>e</sup> )	15.25	16.43	( <sup>a</sup> )	14.06	17.34	15.58	16.33	13.52	16.40	15.45	15.48
June .....	W	16.45	16.94	( <sup>a</sup> )	15.42	18.19	16.81	17.40	14.16	17.07	16.72	16.52
July .....	W	17.53	18.24	( <sup>a</sup> )	16.17	18.78	17.02	17.96	15.02	17.73	17.04	16.94
August .....	W	16.51	19.63	( <sup>a</sup> )	14.98	17.78	15.61	17.41	13.24	16.92	15.69	15.65
September .....	W	15.50	W	( <sup>a</sup> )	14.04	17.39	15.62	16.62	13.04	16.38	15.46	15.25
October .....	W	15.54	W	( <sup>a</sup> )	14.82	17.85	15.43	17.06	13.85	16.28	15.35	15.51
November .....	W	<sup>R</sup> 16.07	W	( <sup>a</sup> )	<sup>R</sup> 15.59	<sup>R</sup> 18.06	<sup>R</sup> 15.88	<sup>R</sup> 17.12	<sup>R</sup> 13.32	<sup>R</sup> 16.91	<sup>R</sup> 15.86	<sup>R</sup> 15.66
December .....	W	15.40	W	( <sup>a</sup> )	<sup>R</sup> 15.59	<sup>R</sup> 17.47	<sup>R</sup> 15.44	<sup>R</sup> 16.98	<sup>R</sup> 13.32	<sup>R</sup> 16.54	<sup>R</sup> 15.42	<sup>R</sup> 15.26
Average .....	W	14.83	16.87	( <sup>e</sup> )	<sup>R</sup> 14.09	<sup>R</sup> 17.21	<sup>R</sup> 15.03	<sup>R</sup> 16.65	<sup>R</sup> 13.12	<sup>R</sup> 15.90	<sup>R</sup> 14.93	<sup>R</sup> 15.03
1995 January .....	W	16.03	W	( <sup>e</sup> )	15.53	17.34	16.57	17.55	13.92	16.76	16.57	15.96

<sup>a</sup> Beginning with February 1994, data for Iran are no longer reported in the *Petroleum Marketing Monthly*.

<sup>b</sup> The Arab members of OPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>c</sup> Current members of OPEC are Gabon, Indonesia, Iran, Nigeria, and Venezuela, as well as the Arab members. Prior to 1993, Ecuador was also a member. The cost of imports from the Neutral Zone between Kuwait and Saudi Arabia is included in the cost of imports from "Total OPEC."

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

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

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

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 1995, 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 January .....	NA	111.7	131.3	118.2
February .....	NA	110.8	130.1	117.2
March .....	NA	109.8	129.4	116.3
April .....	NA	111.2	130.4	117.5
May .....	NA	112.9	131.9	119.3
June .....	NA	113.0	132.1	119.4
July .....	NA	110.9	130.5	117.4
August .....	NA	109.7	129.4	116.3
September .....	NA	108.5	128.2	115.1
October .....	NA	112.7	132.3	119.3
November .....	NA	111.3	130.5	117.8
December .....	NA	107.0	126.8	113.6
Average .....	NA	110.8	130.2	117.3
1994 January .....	NA	104.3	124.0	110.9
February .....	NA	105.1	124.5	111.4
March .....	NA	104.5	124.3	110.9
April .....	NA	106.4	126.0	112.8
May .....	NA	108.0	127.4	114.3
June .....	NA	110.6	130.0	116.7
July .....	NA	113.6	132.7	119.9
August .....	NA	118.2	136.7	124.3
September .....	NA	117.7	136.4	123.7
October .....	NA	115.2	134.5	121.2
November .....	NA	116.3	135.4	122.2
December .....	NA	114.3	133.7	120.3
Average .....	NA	111.2	130.5	117.4
1995 January .....	NA	112.9	132.4	119.0
February .....	NA	112.0	131.6	118.1

<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.

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 January .....	36.8	40.7	27.3	32.3	31.5	35.2
February .....	35.5	40.8	26.7	31.0	30.9	34.5
March .....	39.1	42.6	27.5	31.6	32.9	35.6
April .....	38.4	43.6	29.0	32.4	33.3	36.5
May .....	34.8	41.9	27.8	34.1	31.1	36.8
June .....	33.7	40.6	26.7	31.5	30.2	34.7
July .....	32.7	40.2	24.6	28.5	27.5	33.1
August .....	31.6	36.4	23.7	28.7	27.2	32.0
September .....	31.9	37.0	24.1	28.6	27.1	31.5
October .....	32.1	38.3	25.7	29.6	28.7	32.2
November .....	30.7	38.1	22.5	27.5	26.2	30.5
December .....	27.5	35.1	21.8	25.8	24.8	29.2
Average .....	33.7	39.7	25.6	30.3	29.3	33.7
1994 January .....	33.8	39.7	23.2	27.7	28.7	32.5
February .....	39.3	44.8	25.8	31.3	34.2	36.9
March .....	30.0	39.9	24.3	29.5	27.5	32.9
April .....	29.4	35.2	25.8	29.5	27.6	31.1
May .....	31.7	35.9	27.4	31.1	29.6	32.6
June .....	35.8	38.6	30.9	34.2	33.4	35.6
July .....	37.8	41.2	34.4	37.2	36.2	38.4
August .....	37.1	43.0	32.7	38.2	35.2	39.6
September .....	32.6	41.1	27.8	32.2	30.1	34.4
October .....	32.6	38.7	30.6	33.0	31.6	34.4
November .....	35.7	39.8	33.0	35.4	34.4	36.6
December .....	<sup>R</sup> 36.9	<sup>R</sup> 42.2	<sup>R</sup> 32.0	<sup>R</sup> 36.9	<sup>R</sup> 34.1	<sup>R</sup> 38.3
Average .....	34.5	40.1	28.9	<sup>R</sup> 33.0	<sup>R</sup> 31.8	35.2
1995 January .....	38.4	45.7	32.9	37.4	35.9	39.7

R=Revised data.

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.

Source: EIA, *Petroleum Marketing Monthly*, April 1995, 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 January .....	63.8	96.9	57.7	61.4	54.4	54.9	40.2
February .....	63.8	96.5	60.4	63.7	56.9	57.4	36.7
March .....	65.2	97.4	60.3	65.4	59.0	60.0	38.2
April .....	67.7	97.7	59.8	60.8	57.5	59.8	36.2
May .....	69.1	99.4	60.1	58.3	56.9	59.6	34.0
June .....	66.2	99.1	58.5	56.9	55.0	57.2	33.8
July .....	62.7	97.9	55.1	53.6	51.0	53.2	33.3
August .....	62.9	96.9	55.1	55.6	51.0	53.2	33.3
September .....	61.5	96.3	56.6	58.7	54.8	58.9	34.1
October .....	61.7	95.0	60.5	65.5	58.1	65.8	34.7
November .....	57.0	92.7	58.7	62.4	53.1	58.9	33.6
December .....	50.3	87.4	51.0	53.6	45.1	46.8	30.9
Average .....	62.6	96.5	57.7	60.4	54.4	57.0	35.1
1994 January .....	52.1	87.1	52.6	65.7	50.8	49.1	32.3
February .....	54.6	87.8	56.0	73.5	54.1	52.8	34.0
March .....	54.9	87.4	52.4	59.8	49.7	52.9	31.8
April .....	57.8	89.5	50.8	55.0	48.9	52.3	30.5
May .....	59.2	91.2	50.6	53.2	48.9	51.7	30.4
June .....	62.6	93.2	51.5	53.8	49.8	52.2	29.9
July .....	65.4	96.1	53.8	55.1	50.9	53.7	29.8
August .....	67.8	98.5	54.4	55.1	51.4	54.1	31.0
September .....	61.0	97.3	54.0	55.3	50.1	54.2	31.7
October .....	61.5	95.4	54.4	59.1	50.8	55.2	33.5
November .....	62.2	94.9	56.3	60.7	51.0	55.1	35.0
December .....	57.9	<sup>R</sup> 95.0	<sup>R</sup> 53.1	57.4	49.5	<sup>R</sup> 50.8	35.8
Average .....	59.9	93.3	53.4	61.8	50.6	52.9	32.5
1995 January .....	60.2	94.5	52.1	56.7	49.4	50.1	35.5

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

R=Revised data.

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.

Source: EIA, *Petroleum Marketing Monthly*, April 1995, 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	58.0	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	68.5	64.8	73.0
1992 Average .....	78.7	102.7	61.0	78.8	62.7	61.9	64.3
1993 January .....	76.9	100.3	58.5	81.4	62.8	59.0	74.8
February .....	76.0	99.9	59.9	81.3	64.7	60.6	74.3
March .....	75.7	99.4	60.7	83.2	66.2	62.8	75.4
April .....	77.8	100.7	59.7	77.0	61.9	62.4	69.5
May .....	80.1	102.2	59.9	68.8	59.8	62.3	67.3
June .....	79.8	102.5	58.7	65.3	57.6	60.5	63.9
July .....	77.6	99.7	55.3	61.4	54.1	56.9	62.2
August .....	76.2	98.8	54.6	61.9	54.6	56.2	61.8
September .....	74.9	98.2	56.9	66.5	57.3	60.4	63.6
October .....	75.4	98.0	61.3	77.5	63.3	66.7	60.2
November .....	72.6	95.7	59.6	79.4	61.6	62.5	61.6
December .....	68.0	91.2	51.2	72.5	55.7	52.4	64.0
Average .....	75.9	99.0	58.0	75.4	60.2	60.2	67.3
1994 January .....	66.7	88.6	51.6	79.5	59.6	52.6	54.9
February .....	67.6	88.4	55.7	84.1	63.9	55.4	57.1
March .....	67.3	89.0	51.8	78.2	60.8	54.9	58.5
April .....	69.5	91.3	50.7	69.7	58.0	54.7	54.9
May .....	71.1	92.3	50.9	55.2	53.5	54.3	46.3
June .....	74.1	95.6	51.9	54.5	54.0	54.9	45.5
July .....	77.0	95.9	53.5	60.4	54.9	55.8	46.4
August .....	81.5	101.7	54.4	57.8	55.0	56.7	48.3
September .....	79.6	101.1	53.9	58.3	54.4	56.6	48.8
October .....	76.9	100.0	55.0	61.5	55.7	57.1	49.4
November .....	77.5	100.0	57.2	64.0	56.7	57.2	51.0
December .....	<sup>R</sup> 74.9	99.2	53.9	<sup>R</sup> 64.7	56.4	54.5	51.9
Average .....	<sup>R</sup> 73.7	95.6	53.4	66.0	57.2	55.4	51.7
1995 January .....	74.3	99.6	52.3	67.1	56.1	53.5	54.4

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

R=Revised data. NA=Not available.

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

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

Source: EIA, *Petroleum Marketing Monthly*, April 1995, 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 January .....	85.2	87.1	93.4	94.0	91.7	94.9	104.4	96.2	88.6
February .....	85.4	86.9	93.3	94.4	91.8	96.2	104.2	96.4	89.1
March .....	86.4	86.6	93.7	94.8	92.4	96.7	104.3	96.2	89.8
April .....	83.0	84.5	91.2	91.5	90.4	93.6	100.4	95.0	89.0
May .....	81.7	83.9	91.3	91.1	90.7	91.6	99.5	91.6	86.7
June .....	81.1	82.4	89.7	88.6	87.6	88.6	97.8	87.1	83.9
July .....	78.5	78.3	85.5	83.9	85.2	86.5	95.1	87.4	78.8
August .....	77.4	76.0	85.6	83.4	82.7	84.0	92.7	85.3	77.1
September .....	78.3	74.9	86.6	83.8	84.8	84.2	93.6	85.9	80.4
October .....	82.9	77.0	87.6	86.1	86.0	88.6	96.3	89.7	83.2
November .....	80.8	76.9	86.6	85.7	87.8	88.8	95.9	89.4	84.7
December .....	79.6	77.5	86.9	83.9	85.9	88.2	93.9	87.3	84.2
Average .....	82.6	82.8	90.4	89.7	89.3	91.9	100.1	92.4	86.3
1994 January .....	83.7	80.4	88.3	88.5	87.5	90.2	97.3	91.7	87.7
February .....	90.4	86.6	91.6	91.0	91.7	93.8	100.9	96.0	92.6
March .....	85.9	83.2	90.8	88.5	90.0	92.1	99.6	94.6	90.4
April .....	80.8	78.0	88.2	86.3	85.6	89.4	95.5	90.4	86.2
May .....	77.4	74.9	86.5	84.9	84.4	85.4	96.3	85.2	83.7
June .....	76.3	72.7	84.5	84.0	83.1	86.3	96.6	83.5	80.3
July .....	76.3	71.6	82.9	82.5	82.0	84.2	93.9	82.8	75.8
August .....	78.1	73.1	83.7	78.8	84.5	81.1	89.1	NA	78.0
September .....	78.5	73.5	83.3	80.9	85.2	80.5	90.8	NA	79.1
October .....	77.6	74.0	83.9	83.0	84.9	83.7	92.3	NA	80.1
November .....	77.8	73.7	84.3	83.5	86.2	83.9	93.4	NA	81.3
December .....	<sup>R</sup> 77.6	<sup>R</sup> 77.3	85.2	<sup>R</sup> 84.3	<sup>R</sup> 87.5	86.1	<sup>R</sup> 94.6	NA	<sup>R</sup> 82.0
Average .....	82.0	<sup>R</sup> 78.9	87.3	86.9	87.7	88.7	<sup>R</sup> 96.6	<sup>R</sup> 90.0	<sup>R</sup> 85.7
1995 January .....	77.9	78.4	85.9	84.8	87.2	86.7	95.6	NA	83.0

R=Revised data. 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.

Source: EIA, *Petroleum Marketing Monthly*, April 1995, 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 January .....	91.2	105.2	100.5	92.4	88.5	84.2	88.1	81.8	87.3	82.8	82.9
February .....	90.8	106.8	101.4	93.5	88.8	85.5	87.5	82.3	88.2	83.3	83.0
March .....	92.4	108.5	101.7	94.2	90.1	86.6	89.9	83.1	90.0	84.0	83.9
April .....	91.6	106.7	99.2	90.3	87.6	86.9	90.5	84.9	86.5	84.6	83.4
May .....	89.4	104.3	96.2	88.4	87.0	86.0	89.2	83.6	84.8	84.9	84.3
June .....	90.6	100.4	94.7	85.7	87.0	86.5	87.2	82.0	81.3	84.0	83.6
July .....	86.4	100.2	92.3	84.5	81.0	79.2	83.2	79.1	79.4	84.0	82.4
August .....	83.5	96.1	91.3	84.0	80.1	78.6	82.1	76.7	77.4	78.6	79.9
September .....	84.6	95.5	92.4	84.9	80.5	81.4	85.5	79.3	81.2	82.6	83.1
October .....	87.4	102.1	94.1	85.1	84.3	85.5	89.9	82.7	87.2	81.6	87.0
November .....	88.3	100.9	95.8	84.2	84.3	84.5	86.3	80.2	82.4	82.5	84.8
December .....	88.6	100.5	94.6	85.5	84.8	80.9	82.0	77.1	78.6	78.6	80.6
Average .....	89.9	104.5	98.1	89.3	85.6	84.0	87.2	81.0	84.4	82.3	83.2
1994 January .....	92.1	102.6	98.4	88.6	86.3	81.3	85.6	79.1	77.6	79.4	80.8
February .....	91.5	105.5	99.2	88.6	86.4	84.0	88.0	81.9	81.6	81.8	80.8
March .....	91.1	102.0	96.6	86.6	85.1	81.8	87.8	80.7	77.4	82.5	80.2
April .....	89.1	93.7	92.3	83.1	78.1	81.3	87.7	81.4	74.7	81.5	80.1
May .....	86.4	83.6	86.6	82.5	74.8	79.8	86.9	80.5	74.4	80.6	79.8
June .....	82.9	78.9	87.4	79.9	73.6	76.8	86.6	82.0	75.5	79.8	79.9
July .....	82.0	W	86.2	79.4	73.6	76.9	87.1	80.4	77.2	81.5	79.9
August .....	82.3	81.9	85.3	80.5	75.2	75.6	84.9	81.6	77.2	79.2	80.8
September .....	83.3	NA	86.6	80.4	76.2	79.8	84.3	82.2	76.6	79.9	81.2
October .....	84.9	95.5	89.3	82.3	79.3	79.8	85.8	81.4	77.6	80.6	82.8
November .....	86.0	97.7	91.8	84.1	81.4	79.9	86.5	81.3	80.8	80.6	81.2
December .....	<sup>R</sup> 86.2	101.3	<sup>R</sup> 93.8	<sup>R</sup> 84.8	81.7	<sup>R</sup> 81.1	86.2	<sup>R</sup> 82.5	<sup>R</sup> 79.9	<sup>R</sup> 81.2	<sup>R</sup> 80.3
Average .....	<sup>R</sup> 89.3	99.9	95.0	85.4	81.6	81.2	86.6	81.0	77.9	<sup>R</sup> 80.9	<sup>R</sup> 80.8
1995 January .....	88.4	102.4	94.3	85.1	82.6	81.2	86.0	82.4	82.0	80.6	80.1

R=Revised data. 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.

Source: EIA, *Petroleum Marketing Monthly*, April 1995, 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 January .....	85.0	100.5	91.7	95.1	94.3
February .....	84.1	101.6	89.9	95.1	94.6
March .....	87.8	99.0	90.7	96.9	95.4
April .....	84.6	100.5	92.1	96.1	92.6
May .....	83.2	99.1	91.3	96.8	91.1
June .....	82.8	95.1	90.3	98.1	88.9
July .....	80.0	91.3	86.1	98.0	85.6
August .....	77.0	89.3	83.5	99.7	84.1
September .....	85.3	97.1	92.0	95.2	85.5
October .....	94.7	105.4	100.2	98.6	88.7
November .....	97.4	103.7	97.4	95.0	88.5
December .....	81.1	96.6	87.8	91.7	86.6
Average .....	86.2	99.9	91.8	96.1	91.1
1994 January .....	73.3	92.8	86.0	88.8	89.6
February .....	73.8	96.2	87.9	88.5	92.8
March .....	77.2	96.9	88.4	89.3	91.4
April .....	76.1	97.3	88.1	88.6	87.9
May .....	76.8	95.1	87.1	90.0	85.9
June .....	73.4	91.8	85.1	87.6	84.8
July .....	74.5	82.9	82.3	88.1	82.6
August .....	80.8	78.8	NA	81.0	82.2
September .....	83.1	89.9	87.7	83.4	83.2
October .....	85.3	95.6	90.8	85.1	84.5
November .....	84.9	98.9	91.3	86.6	85.6
December .....	<sup>R</sup> 84.5	<sup>R</sup> 97.3	89.2	84.0	<sup>R</sup> 86.8
Average .....	78.6	<sup>R</sup> 95.1	88.3	87.0	<sup>R</sup> 88.3
1995 January .....	80.2	95.1	88.3	82.9	87.4

R=Revised data. 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.

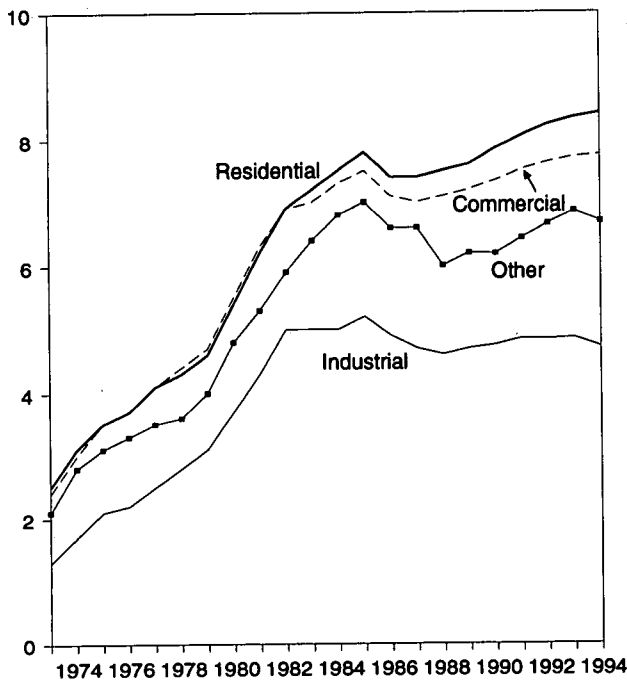
• Prices prior to 1983 are Energy Information Administration (EIA) estimates. See Note 6 at end of section.

Source: EIA, *Petroleum Marketing Monthly*, April 1995, Table 18.

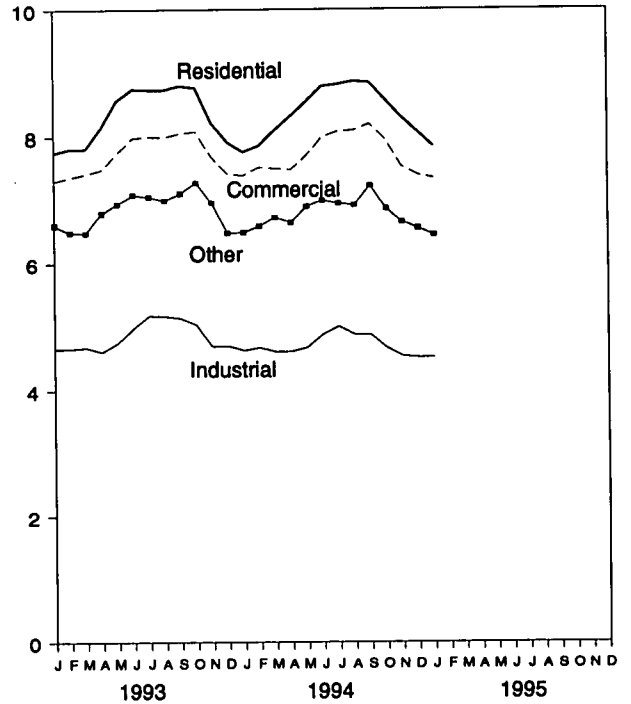


**Figure 9.2 Retail Prices of Electricity Sold by Electric Utilities**  
(Cents per Kilowatt-hour)

By Sector, 1973-1994



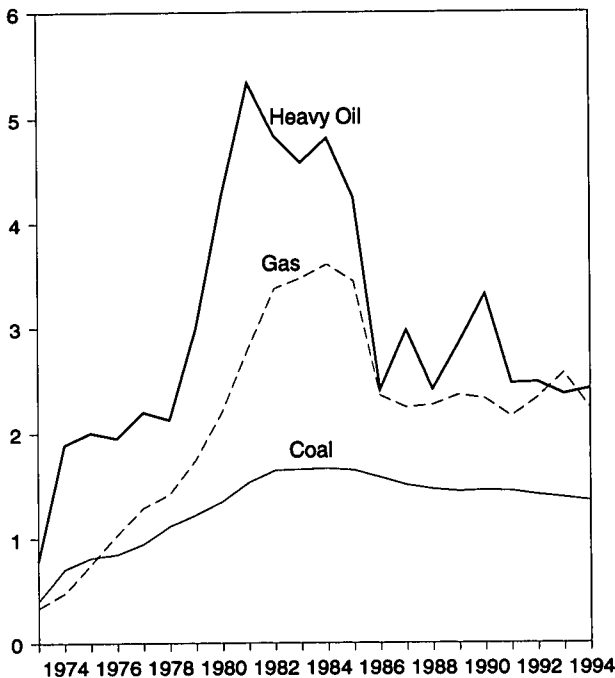
By Sector, Monthly



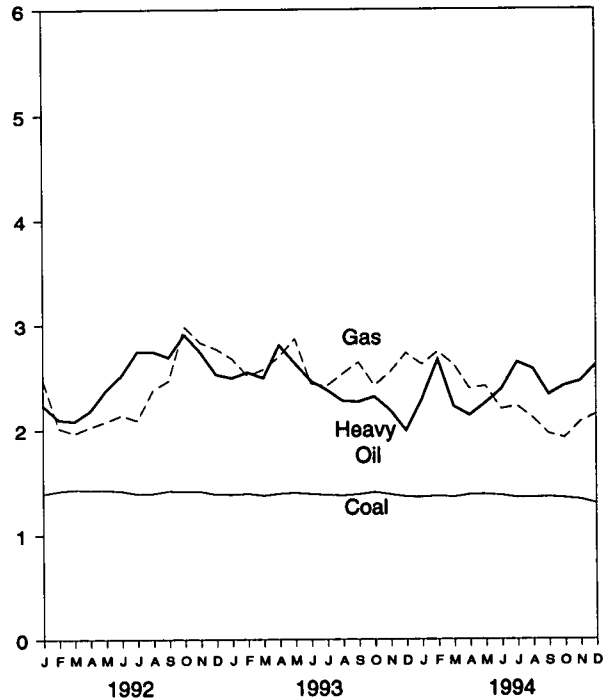
Source: Table 9.9, Monthly Series.

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

Costs, 1973-1994



Costs, Monthly



Source: Table 9.10.

**Table 9.9 Retail Prices of Electricity Sold by Electric Utilities**  
(Cents per Kilowatthour)

	Residential		Commercial		Industrial		Other <sup>a</sup>		Total <sup>b</sup>	
	Monthly Series <sup>c</sup>	Annual Series	Monthly Series <sup>c</sup>	Annual Series	Monthly Series <sup>c</sup>	Annual Series	Monthly Series <sup>c</sup>	Annual Series	Monthly Series <sup>c</sup>	Annual Series
1973 Average .....	2.5	NA	2.4	NA	1.3	NA	2.1	NA	2.0	NA
1974 Average .....	3.1	NA	3.0	NA	1.7	NA	2.8	NA	2.5	NA
1975 Average .....	3.5	NA	3.5	NA	2.1	NA	3.1	NA	2.9	NA
1976 Average .....	3.7	NA	3.7	NA	2.2	NA	3.3	NA	3.1	NA
1977 Average .....	4.1	NA	4.1	NA	2.5	NA	3.5	NA	3.4	NA
1978 Average .....	4.3	NA	4.4	NA	2.8	NA	3.6	NA	3.7	NA
1979 Average .....	4.6	NA	4.7	NA	3.1	NA	4.0	NA	4.0	NA
1980 Average .....	5.4	NA	5.5	NA	3.7	NA	4.8	NA	4.7	NA
1981 Average .....	6.2	NA	6.3	NA	4.3	NA	5.3	NA	5.5	NA
1982 Average .....	6.9	NA	6.9	NA	5.0	NA	5.9	NA	6.1	NA
1983 Average .....	7.2	NA	7.0	NA	5.0	NA	6.4	NA	6.3	NA
1984 Average .....	7.5	7.15	7.3	7.13	5.0	4.83	6.8	5.90	6.5	6.25
1985 Average .....	7.8	7.39	7.5	7.27	5.2	4.97	7.0	6.09	6.7	6.44
1986 Average .....	7.4	7.42	7.1	7.20	4.9	4.93	6.6	6.11	6.4	6.44
1987 Average .....	7.4	7.45	7.0	7.08	4.7	4.77	6.6	6.21	6.3	6.37
1988 Average .....	7.5	7.48	7.1	7.04	4.6	4.70	6.0	6.20	6.3	6.35
1989 Average .....	7.6	7.65	7.2	7.20	4.7	4.72	6.2	6.25	6.4	6.45
1990 Average .....	7.85	7.83	7.34	7.34	4.75	4.74	6.19	6.40	6.57	6.57
1991 Average .....	8.05	8.04	7.51	7.53	4.85	4.83	6.43	6.51	6.75	6.75
1992 Average .....	8.23	8.21	7.63	7.66	4.84	4.83	6.66	6.74	6.83	6.82
1993 January .....	7.75	-	7.30	-	4.66	-	6.60	-	6.61	-
February .....	7.81	-	7.36	-	4.66	-	6.49	-	6.59	-
March .....	7.81	-	7.41	-	4.68	-	6.48	-	6.58	-
April .....	8.14	-	7.47	-	4.61	-	6.79	-	6.61	-
May .....	8.57	-	7.74	-	4.75	-	6.93	-	6.81	-
June .....	8.75	-	7.98	-	4.98	-	7.08	-	7.13	-
July .....	8.74	-	8.00	-	5.18	-	7.05	-	7.36	-
August .....	8.74	-	7.99	-	5.17	-	6.99	-	7.35	-
September .....	8.80	-	8.05	-	5.14	-	7.10	-	7.32	-
October .....	8.77	-	8.08	-	5.03	-	7.27	-	7.15	-
November .....	8.22	-	7.68	-	4.69	-	6.95	-	6.74	-
December .....	7.92	-	7.41	-	4.70	-	6.48	-	6.65	-
Average .....	8.34	8.32	7.72	7.74	4.86	4.85	6.86	6.88	6.92	6.93
1994 January .....	R 7.76	-	R 7.38	-	R 4.63	-	R 6.49	-	6.66	-
February .....	R 7.86	-	R 7.51	-	R 4.67	-	R 6.58	-	6.69	-
March .....	R 8.10	-	R 7.49	-	R 4.61	-	R 6.72	-	R 6.68	-
April .....	8.32	-	R 7.47	-	R 4.61	-	R 6.64	-	R 6.67	-
May .....	8.55	-	7.70	-	4.67	-	6.89	-	R 6.80	-
June .....	8.79	-	7.99	-	R 4.88	-	6.99	-	R 7.17	-
July .....	8.82	-	8.08	-	R 5.00	-	6.94	-	7.37	-
August .....	R 8.87	-	8.10	-	R 4.88	-	6.91	-	R 7.29	-
September .....	R 8.85	-	R 8.20	-	R 4.88	-	R 7.22	-	R 7.25	-
October .....	R 8.58	-	R 7.95	-	R 4.67	-	R 6.86	-	6.91	-
November .....	8.31	-	R 7.53	-	4.54	-	R 6.65	-	6.65	-
December .....	8.08	-	7.39	-	4.52	-	6.55	-	6.64	-
Average .....	8.41	NA	R 7.75	NA	R 4.72	NA	R 6.69	NA	6.92	NA
1995 January .....	7.85	-	7.34	-	4.52	-	6.45	-	6.60	-

<sup>a</sup> "Other" is public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

<sup>b</sup> Average price for total sales to ultimate consumers.

<sup>c</sup> Annual values are the sum of the monthly revenue divided by the sum of the monthly sales. Data through 1979 cover privately owned electric utilities in Classes A and B. Data for 1980-1985 cover selected privately owned electric utilities in Class A whose electric operating revenue was \$100 million or more during the previous year. See Note 7 at end of section.

R=Revised data. NA=Not available. - =Not applicable.

Notes: • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of electric utility billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. See Note 7 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Sources: See end of section.

**Table 9.10 Quantity and Cost of Fossil-Fuel Receipts at Steam-Electric Utility Plants**

	Coal		Petroleum				Gas <sup>a</sup>		All Fossil Fuels <sup>b</sup>
	Quantity (thousand short tons)	Cost (cents per million Btu)	Heavy Oil <sup>b</sup>		Total <sup>b,c</sup>		Quantity (million cubic feet)	Cost (cents per million Btu)	Cost (cents per million Btu)
			Quantity (thousand barrels)	Cost (cents per million Btu)	Quantity (thousand barrels)	Cost (cents per million Btu)			
1973 Year	374,842	40.5	512,650	78.5	535,859	80.0	3,382,677	33.8	47.6
1974 Year	384,868	70.9	479,166	189.0	515,217	191.0	3,225,203	48.2	91.4
1975 Year	431,527	81.4	457,582	200.5	510,352	202.3	3,034,808	75.2	104.4
1976 Year	454,858	84.8	495,363	195.2	549,973	199.0	2,962,811	103.4	111.9
1977 Year	490,415	94.7	563,685	219.8	635,556	224.9	3,106,403	129.1	129.7
1978 Year	476,169	111.6	546,197	212.5	616,040	219.1	3,140,654	142.2	141.1
1979 Year	556,558	122.4	479,705	298.8	515,695	307.2	3,368,976	174.9	163.9
1980 Year	593,995	135.1	394,159	426.7	419,140	435.1	3,588,814	219.9	192.8
1981 Year	579,374	153.2	327,477	533.4	345,544	542.5	3,573,558	280.5	225.6
1982 Year	601,427	164.7	228,200	483.2	239,111	492.2	3,161,348	337.6	224.9
1983 Year	592,728	165.6	211,705	457.8	219,652	462.8	2,732,248	347.4	220.6
1984 Year	684,111	166.4	193,832	481.2	202,372	486.3	2,878,808	360.3	219.1
1985 Year	666,743	164.8	156,410	424.4	164,947	431.7	2,808,921	344.4	209.4
1986 Year	686,964	157.9	220,585	240.1	228,522	243.7	2,387,622	235.1	175.0
1987 Year	721,298	150.6	187,300	297.6	194,578	301.1	2,605,191	224.0	170.6
1988 Year	727,775	146.6	230,234	240.5	236,924	243.9	2,362,721	226.3	164.3
1989 Year	753,217	144.5	237,668	284.6	246,422	289.3	2,472,506	235.5	167.5
1990 Year	786,627	145.5	202,281	331.9	209,350	338.4	2,490,979	232.1	168.9
1991 Year	769,923	144.7	163,106	246.5	169,625	254.8	2,630,818	215.3	160.3
1992 January	64,678	139.6	12,039	223.2	12,539	230.0	159,815	247.1	155.2
February	61,603	142.1	13,634	209.8	14,107	216.1	160,328	201.7	152.7
March	63,857	143.4	12,779	208.2	13,186	214.1	198,040	196.8	153.7
April	60,661	142.7	10,144	217.8	10,555	225.7	218,468	202.6	154.8
May	63,407	142.9	10,079	237.1	10,498	245.1	227,857	207.8	156.4
June	63,704	141.9	10,888	251.4	11,352	260.0	254,025	213.6	158.3
July	64,400	139.3	12,706	274.1	13,217	281.2	315,543	208.9	159.2
August	70,241	139.6	12,152	274.1	12,664	281.2	287,373	237.3	161.6
September	66,503	142.0	8,883	268.5	9,319	277.6	259,771	246.3	163.0
October	66,907	141.3	10,772	290.5	11,221	297.7	205,039	297.9	167.5
November	64,005	141.5	11,161	273.5	11,636	280.5	182,505	282.6	164.5
December	65,998	138.6	13,302	252.1	14,097	261.9	168,913	276.5	160.0
Year	775,963	141.2	138,537	247.5	144,390	255.1	2,637,678	232.8	159.0
1993 January	65,219	138.5	8,437	248.7	9,027	259.1	159,320	267.3	156.2
February	59,225	139.3	7,002	254.1	7,421	263.8	153,537	250.7	155.6
March	63,957	137.5	8,548	248.6	9,022	258.8	185,876	256.7	156.4
April	63,814	139.3	10,074	280.0	10,534	286.5	169,838	268.9	159.9
May	62,568	140.0	10,378	262.7	10,803	269.3	163,917	286.3	161.7
June	63,702	139.0	10,638	245.8	11,149	254.2	244,015	243.2	159.9
July	59,853	138.0	15,424	237.3	16,045	243.3	313,392	240.9	164.5
August	65,843	137.4	15,099	227.0	15,624	232.2	340,505	252.6	165.1
September	65,357	138.5	15,324	226.1	15,766	231.0	250,296	263.6	162.8
October	67,123	140.5	13,596	231.0	14,005	236.6	226,238	241.3	159.1
November	65,938	138.4	10,868	218.0	11,420	227.3	201,903	254.0	156.9
December	66,552	136.2	16,331	198.8	17,085	205.5	165,685	272.4	154.9
Year	769,152	138.5	141,719	236.2	147,902	243.3	2,574,523	256.0	159.5
1994 January	62,601	135.8	16,700	228.5	17,781	237.9	160,321	261.5	156.6
February	64,409	136.8	16,554	266.2	17,543	274.4	142,801	273.5	158.9
March	72,938	135.8	12,796	221.6	13,319	227.7	179,885	261.5	153.1
April	67,372	138.1	9,904	213.1	10,400	220.9	199,308	238.2	153.6
May	70,978	138.3	13,291	224.8	13,885	231.2	211,856	240.6	155.3
June	70,066	137.4	13,461	237.3	14,333	246.1	302,189	219.1	156.4
July	67,586	135.2	14,128	263.4	14,675	268.0	347,699	221.9	158.7
August	75,308	135.4	11,135	256.9	11,562	262.1	360,603	210.4	153.8
September	69,922	135.8	8,495	232.5	8,966	240.2	283,770	195.7	148.8
October	69,226	134.8	4,830	241.0	5,328	254.6	252,373	191.7	145.6
November	68,850	133.4	6,308	245.2	6,847	256.9	220,927	206.9	146.3
December	72,354	129.7	7,715	260.9	8,421	271.1	199,716	214.0	143.9
Year	831,610	135.5	135,319	241.1	143,059	249.0	2,861,447	223.0	152.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Heavy oil includes fuel oil nos. 4, 5, and 6, and topped crude oil. The weighted averages for petroleum and all fossil fuels include both heavy and light oil (fuel oil nos. 1 and 2, kerosene, and jet fuel) prices. Data do not include petroleum coke.

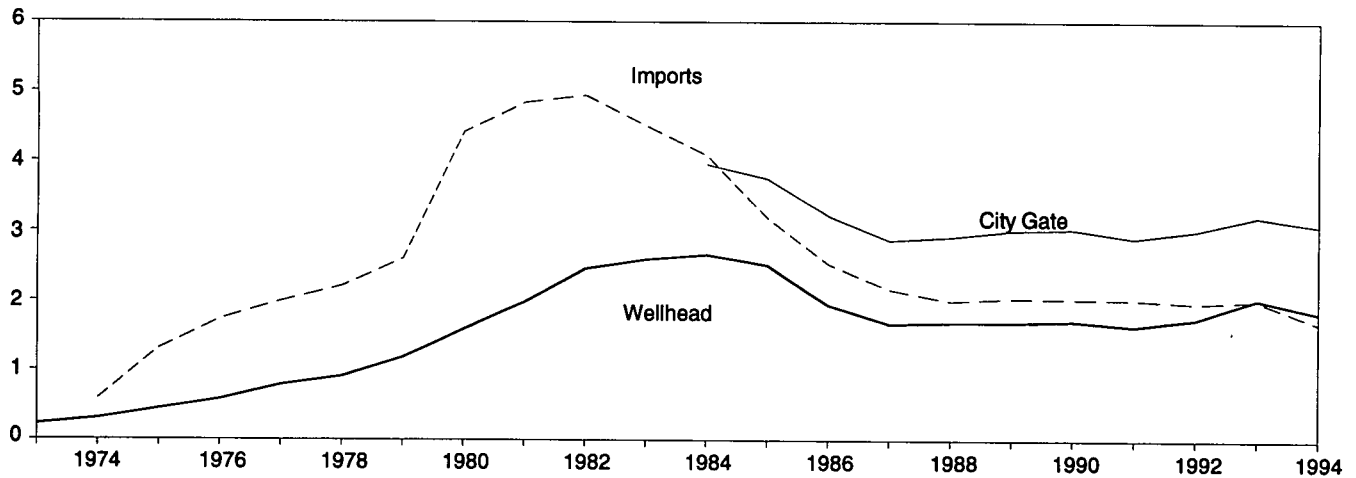
<sup>c</sup> Data for 1973-1982 do not include small quantities of re-refined motor oil, bunker oil, and liquefied petroleum gas.

Notes: • See Note 8 at end of section. • Geographic coverage is the 50 States and the District of Columbia.

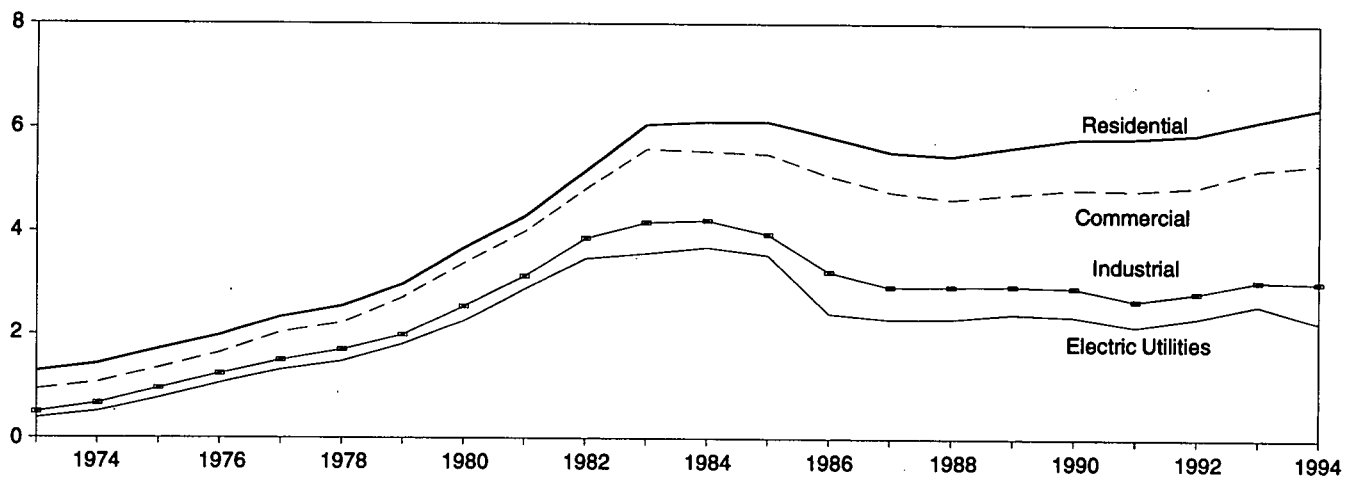
Sources: See end of section.

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

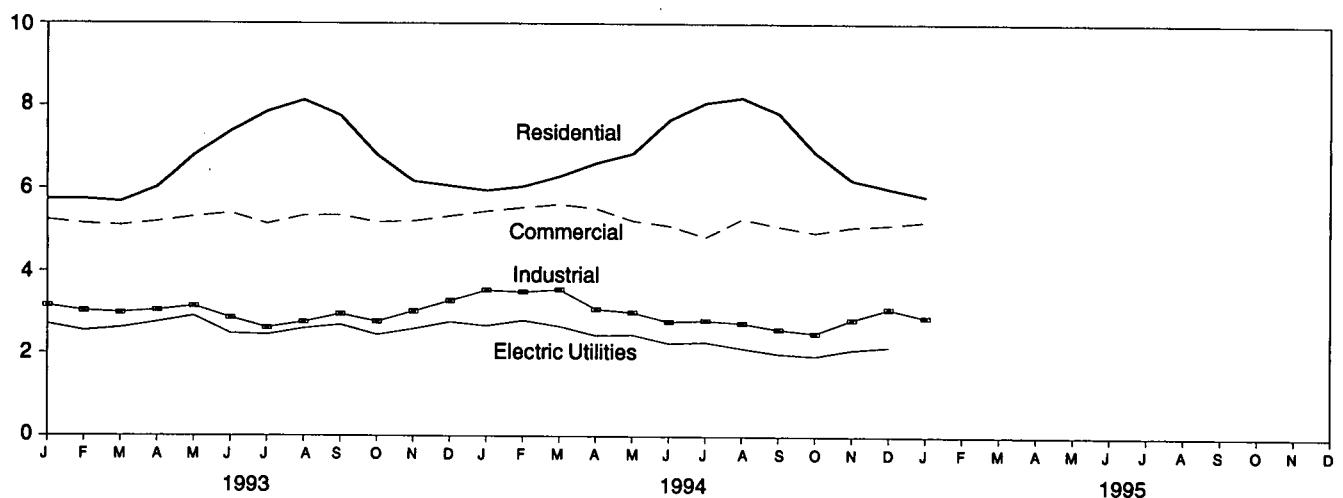
**Selected Prices, 1973-1994**



**Delivered to Consumers, 1973-1994**



**Delivered to Consumers, Monthly**



Note: Because vertical scales differ, graphs should not be compared.  
Source: Table 9.11.

**Table 9.11 Natural Gas Prices**  
(Dollars per Thousand Cubic Feet)

	Wellhead	Major Interstate Pipeline Companies		City Gate	Delivered to Consumers <sup>a,b</sup>			
		Imports	Purchases from Producers		Residential	Commercial	Industrial	Electric Utilities <sup>c</sup>
1973 Average .....	0.22	NA	NA	NA	1.29	0.94	0.50	0.38
1974 Average .....	.30	.59	.27	NA	1.43	1.07	.67	.51
1975 Average .....	.44	1.31	.37	NA	1.71	1.35	.96	.77
1976 Average .....	.58	1.73	.48	NA	1.98	1.64	1.24	1.06
1977 Average .....	.79	1.99	.70	NA	2.35	2.04	1.50	1.32
1978 Average .....	.91	2.21	.83	NA	2.56	2.23	1.70	1.48
1979 Average .....	1.18	2.60	1.22	NA	2.98	2.73	1.99	1.81
1980 Average .....	1.59	4.42	1.63	NA	3.68	3.39	2.56	2.27
1981 Average .....	1.98	4.84	2.15	NA	4.29	4.00	3.14	2.89
1982 Average .....	2.46	4.94	2.72	NA	5.17	4.82	3.87	3.48
1983 Average .....	2.59	4.51	2.93	NA	6.06	5.59	4.18	3.58
1984 Average .....	2.66	4.08	2.91	3.95	6.12	5.55	4.22	3.70
1985 Average .....	2.51	3.19	2.85	3.75	6.12	5.50	3.95	3.55
1986 Average .....	1.94	2.53	2.39	3.22	5.83	5.08	3.23	2.43
1987 Average .....	1.67	2.17	2.10	2.87	5.54	4.77	2.94	2.32
1988 Average .....	1.69	2.00	2.13	2.92	5.47	4.63	2.95	2.33
1989 Average .....	1.69	2.04	2.18	3.01	5.64	4.74	2.96	2.43
1990 Average .....	1.71	2.03	2.19	3.03	5.80	4.83	2.93	2.38
1991 Average .....	1.64	2.02	1.92	2.90	5.82	4.81	2.69	2.18
1992 Average .....	1.74	1.97	2.09	3.01	5.89	4.88	2.84	2.36
1993 January .....	1.95	2.04	2.17	3.11	5.73	5.23	3.15	2.70
February .....	1.76	1.91	1.94	2.94	5.73	5.14	3.02	2.54
March .....	1.94	1.78	2.21	3.06	5.67	5.10	2.98	2.61
April .....	2.09	2.15	2.27	3.24	6.02	5.19	3.04	2.75
May .....	2.35	2.13	2.63	3.58	6.78	5.31	3.14	2.90
June .....	1.91	1.95	2.02	3.44	7.37	5.40	2.86	2.48
July .....	1.94	1.78	2.03	3.34	7.85	5.14	2.62	2.45
August .....	2.04	2.25	2.36	3.35	8.13	5.34	2.76	2.60
September .....	2.19	2.07	2.59	3.54	7.75	5.35	2.95	2.69
October .....	1.96	1.96	2.05	3.15	6.79	5.18	2.77	2.45
November .....	1.96	1.85	2.27	3.15	6.17	5.21	3.02	2.59
December .....	2.24	2.25	2.69	3.27	6.06	5.33	3.28	2.76
Average .....	2.03	2.01	2.27	3.21	6.16	5.22	3.07	2.61
1994 January .....	2.00	<sup>R</sup> 2.09	<sup>R</sup> 2.70	3.05	5.95	5.45	3.54	2.67
February .....	2.13	1.81	3.31	3.27	6.05	5.54	3.50	2.80
March .....	2.12	2.04	2.81	3.33	6.30	<sup>R</sup> 5.62	<sup>R</sup> 3.56	2.66
April .....	1.91	2.06	2.51	3.15	6.61	<sup>R</sup> 5.52	3.08	2.44
May .....	1.94	1.53	2.65	3.18	6.84	<sup>R</sup> 5.23	3.00	2.46
June .....	1.75	1.90	2.43	<sup>R</sup> 3.20	7.66	<sup>R</sup> 5.11	<sup>R</sup> 2.78	2.25
July .....	1.84	1.44	2.34	3.16	8.08	<sup>R</sup> 4.84	<sup>R</sup> 2.81	2.28
August .....	1.74	1.79	2.33	3.16	8.20	<sup>R</sup> 5.28	2.75	2.13
September .....	1.56	1.39	2.08	2.92	7.83	<sup>R</sup> 5.10	2.60	2.00
October .....	1.48	1.28	1.79	2.82	6.87	<sup>R</sup> 4.95	2.51	1.95
November .....	1.68	1.25	1.46	2.84	6.22	<sup>R</sup> 5.09	2.84	2.10
December .....	<sup>R</sup> 1.72	1.58	2.85	<sup>R</sup> 2.86	6.02	<sup>R</sup> 5.14	<sup>R</sup> 3.10	<sup>R</sup> 2.17
Average .....	1.83	1.68	<sup>R</sup> 2.44	3.08	6.40	<sup>R</sup> 5.33	<sup>R</sup> 3.04	<sup>R</sup> 2.27
1995 January .....	<sup>E</sup> 1.64	1.42	1.22	2.79	5.83	5.22	2.89	NA

<sup>a</sup> Includes supplemental gaseous fuels.

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

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

R=Revised data. NA=Not available. E=Estimate.

Notes: • Prices shown on this page are intended to include all taxes. See

Note 9 at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 States and the District of Columbia.

Sources: See end of section.

## Energy Prices Notes

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."

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.

3. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

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 Pe-

troleum 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.

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.

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 sales among resellers. How-

ever, 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.

7. National average electricity prices are shown in two data series. The "Annual Series" is based on data from publicly and privately owned electric utilities that report on Form EIA-861, "Annual Electric Utility Report." The "Monthly Series" is based on data from over 250 utilities statistically chosen as a sample of the utilities that report on Form EIA-861. The selected utilities report monthly on Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions," formerly the "Electric Utility Company Monthly Statement." Annual values shown for the monthly series are the sum of the monthly revenue divided by the sum of the monthly sales. Prior to January 1986, only privately owned utilities were included in the monthly survey and the sample was chosen by using cut-off techniques; from January 1986 through 1992, the sample was chosen using stratification techniques.

8. Data for 1973-1982 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974-1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983-1990 cover all electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991 forward cover all electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50 megawatts or greater.

9. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all Federal, State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers' bills are sometimes excluded by the reporting utilities.

Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, and electric utility consumers. They do not include the price of natural gas delivered to industrial and commercial consumers on behalf of third parties. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.4. Additional information is available in the EIA Natural Gas Monthly, Appendix C.

### Sources for Table 9.1

• **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 1995, Table 1.

• **F.O.B. and Landed Cost of Imports: October 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 1995, 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 1995, Table 1.

### Sources for Table 9.9

• **Monthly Series: 1973-September 1977**—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income." **October 1977-February 1980**—Federal Energy Regulatory Commission (FERC), Form FERC-5, "Electric Operating Revenue and Income." **March 1980-December 1980**—FERC, Form FERC-5, "Electric Utility Company Monthly Statement." **1981**—Energy Information Administration (EIA), *Electric Power Monthly*, March 1992, Table 59. **1982**—EIA, *Electric Power Monthly*, March 1993, Table 59. **1983**—EIA, *Electric Power Monthly*, March 1994, Table 59. **1984 (and 1993 monthly data)**—EIA, *Electric Power Monthly*, March 1995, Table 60. **1985 forward (except 1993 monthly data)**—EIA, *Electric Power Monthly*, April 1995, Table 60.

• **Annual Series: 1973-1993**—EIA, *Electric Power Monthly*, April 1995, Table 60.

### Sources for Table 9.10

• **1973-1979**—Annual data for quantity are simple sums of unrounded monthly values and for cost are averages of monthly values, weighted by quantities of Btu, from the following: **1973-May 1977**—Federal Power Commission, Form FPC-423, "Monthly Report on Cost and Quality of Fuels for Electric Utility Plants." **June 1977-December 1977**—Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report on Cost and

Quality of Fuels for Electric Utility Plants.” 1978 and 1979—Energy Information Administration (EIA), Form FERC-423, “Monthly Report on Cost and Quality of Fuels for Electric Utility Plants.”

- 1980—EIA, *Electric Power Monthly*, April 1991, Table 33.
- 1981—EIA, *Electric Power Monthly*, April 1992, Table 33.
- 1982—EIA, *Electric Power Monthly*, April 1993, Table 33.
- 1983—EIA, *Electric Power Monthly*, April 1994, Table 34.
- 1984 forward—EIA, *Electric Power Monthly*, April 1995, Table 34.

## Sources for Table 9.11

- 1973-1986: **Wellhead**—Energy Information Administration (EIA), *Natural Gas Annual 1991*, Table 95. **Major Interstate Pipeline Companies, 1974-1977**—Calculated from revenue and sales data reported to the Federal Power Commission (FPC), Form FPC-11, “Natural Gas Pipeline Company Monthly Statement.” **Major Interstate Pipeline Companies, 1978-1983**—EIA, *Natural Gas Monthly*, December 1984, Table 10. **Major Interstate Pipeline Companies, 1984-1986**—EIA, *Natural Gas Monthly*, December 1989, Table 4. **City Gate, 1984-1986**—EIA, *Natural Gas Monthly*, December 1989, Table 4. **Delivered to Consumers, 1973-1986**—EIA, *Natural Gas Annual 1991*, Table 98
- 1987 forward—EIA, *Natural Gas Monthly*, April 1995, Table 4.



## Section 10. International Energy

**Crude Oil Production.** World crude oil production during January 1995 was 61 million barrels per day, down 0.5 million barrels per day from the level in the previous month.

Organization of Petroleum Exporting Countries (OPEC) production during January 1995 averaged 26 million barrels per day, down 0.1 million barrels per day from the level during the previous month. Production by the Arab members of OPEC in January 1995 averaged 16 million barrels per day, down 0.2 million barrels per day from the December 1994 level. During January 1995, production increased in the United Arab Emirates by 10 thousand barrels per day and in Kuwait by 5 thousand barrels per day. Production decreased in Saudi Arabia by 195 thousand barrels per day and in Qatar by 10 thousand barrels per day. Production remained unchanged in Algeria, Iraq, and Libya. Among the non-Arab members of OPEC, production during January 1995 increased in Venezuela by 70 thousand barrels per day and in Nigeria by 45 thousand barrels per day. Production decreased in Iran by 50 thousand barrels per day and remained the same in Indonesia.

Among the non-OPEC nations, production during January 1995 decreased in the United States by 90 thousand barrels per day and in both the United Kingdom and the former U.S.S.R. by 85 thousand barrels per day. Production remained the same in Ecuador, Canada, China, and Mexico.

**Petroleum Consumption.** In November 1994, consumption in all Organization for Economic Cooperation and

Development (OECD) countries was 40.5 million barrels per day, less than 1 percent lower than the November 1993 rate. The consumption rate was higher than it was 1 year ago in Japan (+8 percent)<sup>9</sup>, and Canada (+2 percent). Consumption was lower in France (-11 percent), Germany (-5 percent), the United States and the United Kingdom (both -2 percent), and Italy (less than 1 percent), compared with the level 1 year earlier.

**Petroleum Stocks.** For all OECD countries, petroleum stocks at the end of November 1994 totaled 3.8 billion barrels, nearly 1 percent higher than the ending stock level in November 1993. Stock levels were higher in Canada (+8 percent), France (+7 percent), and Japan (+2 percent). Stocks were lower in the United Kingdom (-4 percent), Italy (-2 percent), the United States and Germany (both less than 1 percent), compared with levels 1 year earlier.

**Nuclear Electricity Generation.** Based on *Nucleonics Week* information for January 1995, all reporting countries with nuclear capacity generated 212.3 gross terawatt-hours<sup>10</sup> of nuclear-generated electricity.

During 1994, three nuclear units became operable: Guangdong-2 in China during February; Ikata-3 in Japan during March; and Laguna Verde-2 in Mexico during November. Two units were permanently shutdown: Dounreay in the United Kingdom during March and Bugey-1 in France during May.

As of January 31, 1995, there were 431 operable nuclear generating units in the world.

<sup>9</sup> Percentage changes are based on unrounded data.

<sup>10</sup> One terawatt-hour equals 1 billion kilowatt-hours.

**Table 10.1a World Crude Oil Production: Algeria Through Venezuela**  
(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait <sup>a</sup>	Libya	Qatar	Saudi Arabia <sup>a</sup>	United Arab Emirates	Arab OPEC <sup>b</sup>	Indonesia	Iran	Nigeria	Venezuela
1973 Average .....	1,097	2,018	3,020	2,175	570	7,596	1,533	18,009	1,339	5,861	2,054	3,366
1974 Average .....	1,009	1,971	2,546	1,521	518	8,480	1,679	17,724	1,375	6,022	2,255	2,976
1975 Average .....	983	2,262	2,084	1,480	438	7,075	1,664	15,985	1,307	5,350	1,783	2,346
1976 Average .....	1,075	2,415	2,145	1,933	497	8,577	1,936	18,579	1,504	5,883	2,067	2,294
1977 Average .....	1,152	2,348	1,969	2,063	445	9,245	1,999	19,221	1,686	5,663	2,085	2,238
1978 Average .....	1,231	2,563	2,131	1,983	487	8,301	1,831	18,525	1,635	5,242	1,897	2,165
1979 Average .....	1,224	3,477	2,500	2,092	508	9,532	1,831	21,163	1,591	3,168	2,302	2,356
1980 Average .....	1,106	2,514	1,656	1,787	472	9,900	1,709	19,144	1,577	1,662	2,055	2,168
1981 Average .....	1,002	1,000	1,125	1,140	405	9,815	1,474	15,961	1,605	1,380	1,433	2,102
1982 Average .....	987	1,012	823	1,150	330	6,483	1,250	12,035	1,339	2,214	1,295	1,895
1983 Average .....	968	1,005	1,064	1,105	295	5,086	1,149	10,672	1,343	2,440	1,241	1,801
1984 Average .....	1,014	1,209	1,157	1,087	394	4,663	1,146	10,670	1,412	2,174	1,388	1,798
1985 Average .....	1,037	1,433	1,023	1,059	301	3,388	1,193	9,434	1,325	2,250	1,495	1,677
1986 Average .....	945	1,690	1,419	1,034	308	4,870	1,330	11,596	1,390	2,035	1,467	1,787
1987 Average .....	1,048	2,079	1,585	972	293	4,265	1,541	11,783	1,343	2,298	1,341	1,752
1988 Average .....	1,040	2,685	1,492	1,175	346	5,086	1,565	13,389	1,342	2,240	1,450	1,903
1989 Average .....	1,095	2,897	1,783	1,150	380	5,064	1,860	14,229	1,409	2,810	1,716	1,907
1990 Average .....	1,175	2,040	1,175	1,375	406	6,410	2,117	14,698	1,462	3,088	1,810	2,137
1991 Average .....	1,230	305	190	1,483	395	8,115	2,386	14,104	1,592	3,312	1,892	2,375
1992 Average .....	1,217	450	1,029	1,483	396	8,438	2,325	15,338	1,566	3,429	1,982	2,334
1993 January .....	1,210	500	1,675	1,480	450	8,500	2,295	16,110	1,550	3,650	2,125	2,410
February .....	1,210	500	1,865	1,425	430	8,440	2,305	16,175	1,530	3,750	2,105	2,390
March .....	1,200	500	1,650	1,350	400	8,300	2,270	15,670	1,500	3,700	2,075	2,340
April .....	1,200	500	1,645	1,350	400	8,000	2,270	15,365	1,480	3,500	2,025	2,340
May .....	1,200	500	1,713	1,350	420	8,000	2,230	15,413	1,510	3,650	2,025	2,340
June .....	1,200	500	1,775	1,350	400	8,150	2,230	15,605	1,510	3,650	1,995	2,340
July .....	1,180	500	1,940	1,350	410	8,240	2,210	15,830	1,510	3,800	1,975	2,390
August .....	1,180	500	2,045	1,370	410	8,345	2,210	16,060	1,510	3,500	2,025	2,390
September .....	1,180	530	2,020	1,370	410	8,270	2,220	16,000	1,510	3,650	2,045	2,380
October .....	1,180	530	2,045	1,390	410	8,145	2,220	15,920	1,480	3,700	2,005	2,400
November .....	1,170	540	2,045	1,370	410	7,995	2,220	15,750	1,480	3,550	2,025	2,400
December .....	1,170	540	2,050	1,370	410	8,000	2,220	15,760	1,510	3,700	2,175	2,400
Average .....	1,190	512	1,872	1,377	413	8,198	2,241	15,803	1,507	3,650	2,050	2,377
1994 January .....	1,170	540	1,995	1,370	410	8,095	2,220	15,800	1,510	3,600	2,175	2,490
February .....	1,170	540	1,998	1,370	395	8,088	2,245	15,805	1,510	3,550	2,175	2,490
March .....	1,170	540	2,005	1,370	410	8,095	2,220	15,810	1,510	3,650	2,125	2,490
April .....	1,170	550	2,020	1,370	410	8,110	2,220	15,850	1,510	3,500	2,045	2,480
May .....	1,170	550	2,050	1,370	410	8,090	2,230	15,870	1,510	3,550	2,075	2,500
June .....	1,170	550	2,050	1,370	420	8,090	2,250	15,900	1,510	3,650	2,065	2,500
July .....	1,170	550	2,050	1,380	440	8,100	2,250	15,940	1,510	3,550	1,965	2,520
August .....	1,170	550	2,050	1,390	400	8,120	2,250	15,930	1,530	3,600	1,580	2,540
September .....	1,170	550	2,050	1,370	410	8,180	2,250	15,980	1,510	3,650	1,985	2,540
October .....	1,170	550	2,045	1,390	350	8,245	2,210	15,960	1,520	3,600	2,055	2,540
November .....	1,170	550	2,045	1,390	420	8,245	2,210	16,030	1,520	3,700	1,955	2,540
December .....	1,170	550	2,050	1,390	430	8,300	2,240	16,130	1,520	3,600	1,940	2,530
Average .....	1,170	548	2,034	1,378	409	8,147	2,233	15,918	1,514	3,600	2,010	2,514
1995 January .....	1,170	550	2,055	1,390	420	8,105	2,250	15,940	1,520	3,550	1,985	2,600

<sup>a</sup> Includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone from 1973 through July 1990 and in June 1991. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In January 1995, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 410 thousand barrels per day.

<sup>b</sup> The Arab members of the Organization of Petroleum Exporting Countries (OPEC) are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United

Arab Emirates. Production in the Neutral Zone between Kuwait and Saudi Arabia is included in "Arab OPEC."

Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Sources: See end of section.

**Table 10.1b World Crude Oil Production: Total OPEC, Ecuador Through Former U.S.S.R., and World**  
(Thousand Barrels per Day)

	Total OPEC <sup>a</sup>	Ecuador <sup>a</sup>	Persian Gulf Nations <sup>b</sup>	Canada	China	Mexico	United Kingdom	United States	Former U.S.S.R.	Other <sup>c</sup>	World
1973 Average	30,779	209	20,668	1,798	1,090	465	2	9,208	8,324	3,804	55,679
1974 Average	30,552	177	21,282	1,551	1,315	571	2	8,774	8,912	3,862	55,716
1975 Average	26,994	161	18,934	1,430	1,490	705	12	8,375	9,523	4,139	52,828
1976 Average	30,549	188	21,514	1,314	1,670	831	245	8,132	10,060	4,355	57,344
1977 Average	31,115	183	21,725	1,321	1,874	981	768	8,245	10,603	4,616	59,707
1978 Average	29,673	202	20,606	1,316	2,082	1,209	1,082	8,707	11,105	4,782	60,158
1979 Average	30,784	214	21,066	1,500	2,122	1,461	1,568	8,552	11,384	5,089	62,674
1980 Average	26,781	204	17,961	1,435	2,114	1,936	1,622	8,597	11,706	5,204	59,599
1981 Average	22,632	211	15,245	1,285	2,012	2,313	1,811	8,572	11,850	5,390	56,076
1982 Average	18,934	211	12,156	1,271	2,045	2,748	2,065	8,649	11,912	5,646	53,481
1983 Average	17,654	237	11,081	1,356	2,120	2,689	2,291	8,688	11,972	6,248	53,255
1984 Average	17,599	258	10,784	1,438	2,296	2,780	2,480	8,879	11,861	6,897	54,488
1985 Average	16,353	281	9,630	1,471	2,505	2,745	2,530	8,971	11,585	7,540	53,981
1986 Average	18,441	293	11,696	1,474	2,620	2,435	2,539	8,680	11,895	7,850	56,227
1987 Average	18,672	174	12,103	1,535	2,690	2,548	2,406	8,349	11,985	8,242	56,601
1988 Average	20,483	302	13,457	1,616	2,730	2,512	2,232	8,140	11,978	8,669	58,662
1989 Average	22,279	279	14,837	1,560	2,757	2,520	1,802	7,613	11,625	9,338	59,773
1990 Average	23,465	285	15,278	1,553	2,774	2,553	1,820	7,355	10,880	9,785	60,471
1991 Average	23,569	299	14,741	1,548	2,835	2,680	1,797	7,417	9,887	10,074	60,105
1992 Average	24,947	318	16,104	1,598	2,838	2,668	1,825	7,171	8,388	10,501	60,255
1993 January	26,145	330	17,105	1,570	2,885	2,605	1,815	6,961	7,800	10,406	60,517
February	26,250	330	17,325	1,610	2,875	2,610	1,925	6,943	7,785	10,547	60,874
March	25,585	330	16,855	1,635	2,885	2,635	1,710	6,974	7,685	10,714	60,154
April	25,010	330	16,350	1,605	2,900	2,674	1,695	6,881	7,665	10,679	59,439
May	25,238	345	16,548	1,660	2,925	2,673	1,745	6,847	7,495	10,703	59,630
June	25,400	350	16,740	1,725	2,960	2,675	1,675	6,795	7,400	10,381	59,361
July	25,795	350	17,135	1,710	2,930	2,650	1,930	6,688	7,120	10,795	59,968
August	25,775	350	17,045	1,770	2,855	2,650	1,940	6,758	7,025	10,671	59,794
September	25,875	350	17,135	1,740	2,895	2,700	1,945	6,712	6,915	10,685	59,817
October	25,795	360	17,085	1,725	2,975	2,700	2,060	6,839	6,910	10,909	60,273
November	25,495	360	16,795	1,675	2,945	2,730	2,195	6,912	6,915	11,100	60,327
December	25,835	360	16,955	1,710	2,898	2,745	2,270	6,858	6,885	11,158	60,718
Average	25,681	346	16,921	1,678	2,911	2,671	1,909	6,847	7,297	10,731	60,070
1994 January	25,865	360	16,895	1,665	2,900	2,745	2,280	E 6,777	6,985	11,066	60,643
February	25,820	360	16,850	1,720	2,920	2,710	2,280	E 6,745	6,715	11,223	60,493
March	25,895	360	16,955	1,705	2,920	2,685	2,315	E 6,719	6,660	11,143	60,402
April	25,715	365	16,845	1,670	2,940	2,700	2,340	E 6,634	6,485	11,157	60,006
May	25,845	365	16,915	1,705	2,940	2,690	2,345	E 6,658	6,635	11,210	60,393
June	25,965	375	17,045	1,725	2,950	2,675	2,340	E 6,567	6,650	11,448	60,695
July	25,825	385	16,975	1,800	2,940	2,675	2,275	E 6,528	6,540	11,405	60,373
August	25,520	385	17,005	1,790	2,950	2,675	2,315	E 6,547	6,520	11,495	60,197
September	26,005	400	17,125	R 1,815	2,910	2,680	2,475	E 6,551	6,480	R 11,475	R 60,791
October	26,015	395	17,035	R 1,735	2,950	2,685	2,435	E 6,578	6,560	11,910	R 61,263
November	26,085	R 395	17,205	R 1,780	2,970	2,675	2,485	E 6,542	R 6,580	11,920	R 61,432
December	26,060	R 395	17,205	R 1,760	R 2,980	2,675	2,605	E 6,686	R 6,520	R 12,054	R 61,735
Average	25,884	R 378	17,005	R 1,739	R 2,939	2,689	2,375	E 6,627	R 6,611	R 11,460	R 60,703
1995 January	25,930	395	16,965	1,760	2,980	2,675	2,520	6,596	6,435	11,987	61,278

<sup>a</sup> "Total OPEC" consists of Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Total OPEC." Although Ecuador belonged to OPEC from November 19, 1973, until December 31, 1992, when it formally withdrew, it is not included in "Total OPEC."

<sup>b</sup> The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Persian Gulf Nations."

<sup>c</sup> "Other" is a calculated total derived from the difference between "World

and the sum of production in "Total OPEC," Ecuador, Canada, China, Mexico, the United Kingdom, the United States, and the former U.S.S.R.

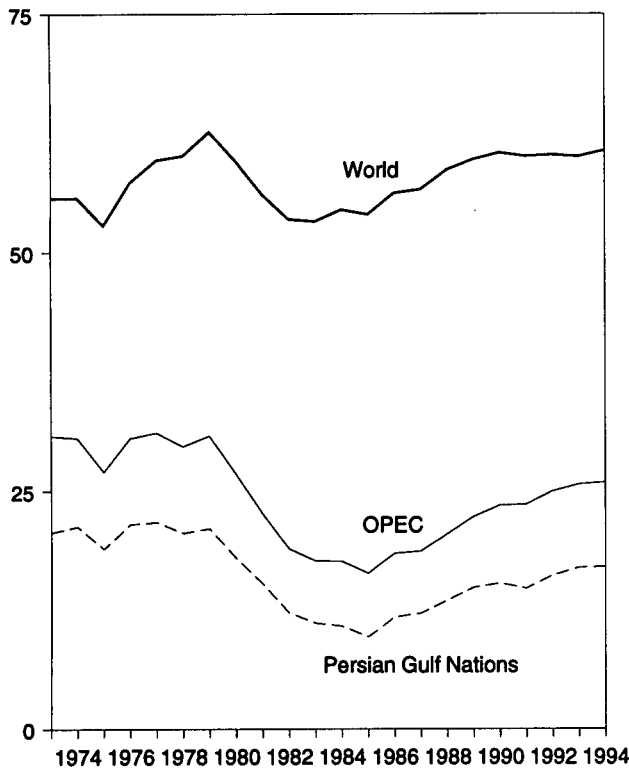
R=Revised data. E=Estimate.

Notes: • Crude oil includes lease condensate but excludes natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

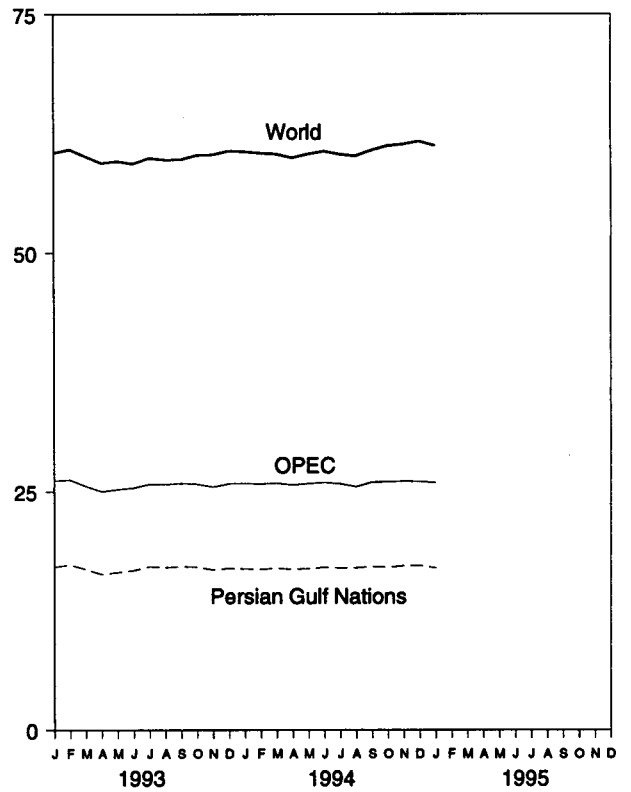
Sources: See end of section.

**Figure 10.1 Crude Oil Production**  
(Million Barrels per Day)

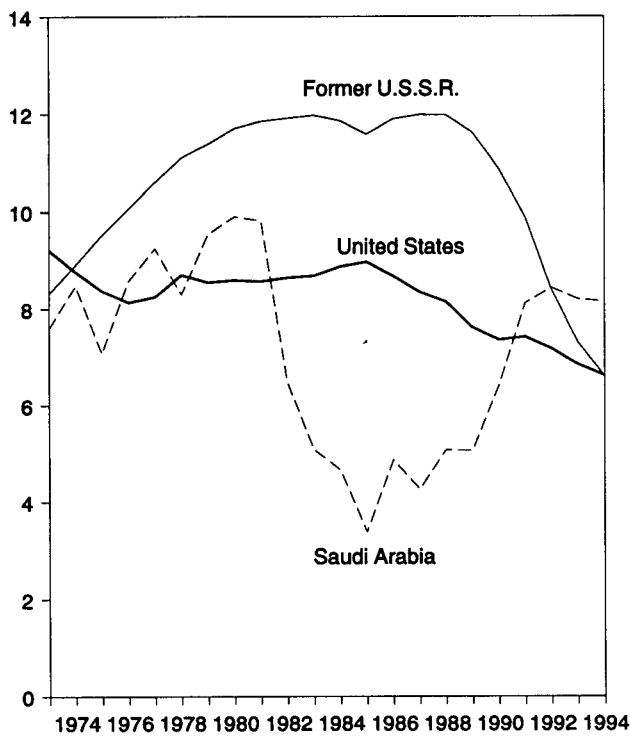
**World Production, 1973-1994**



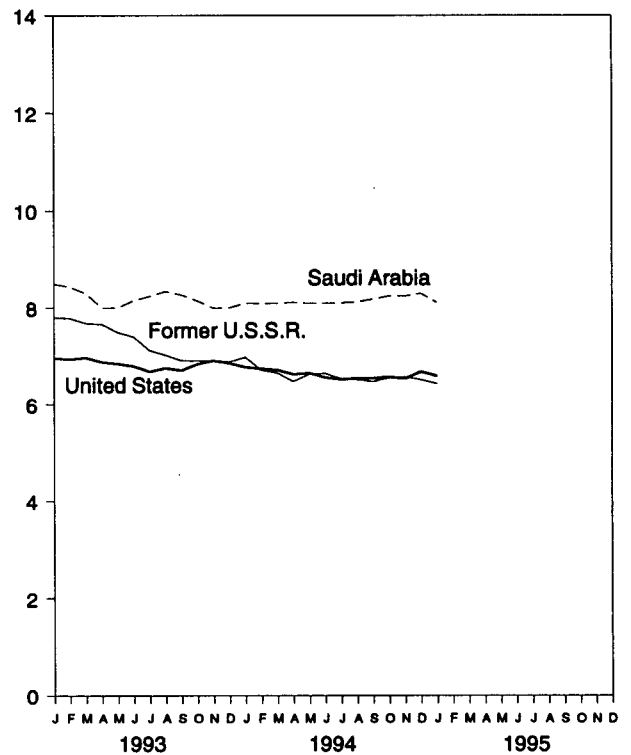
**World Production, Monthly**



**Leading Producers, 1973-1994**

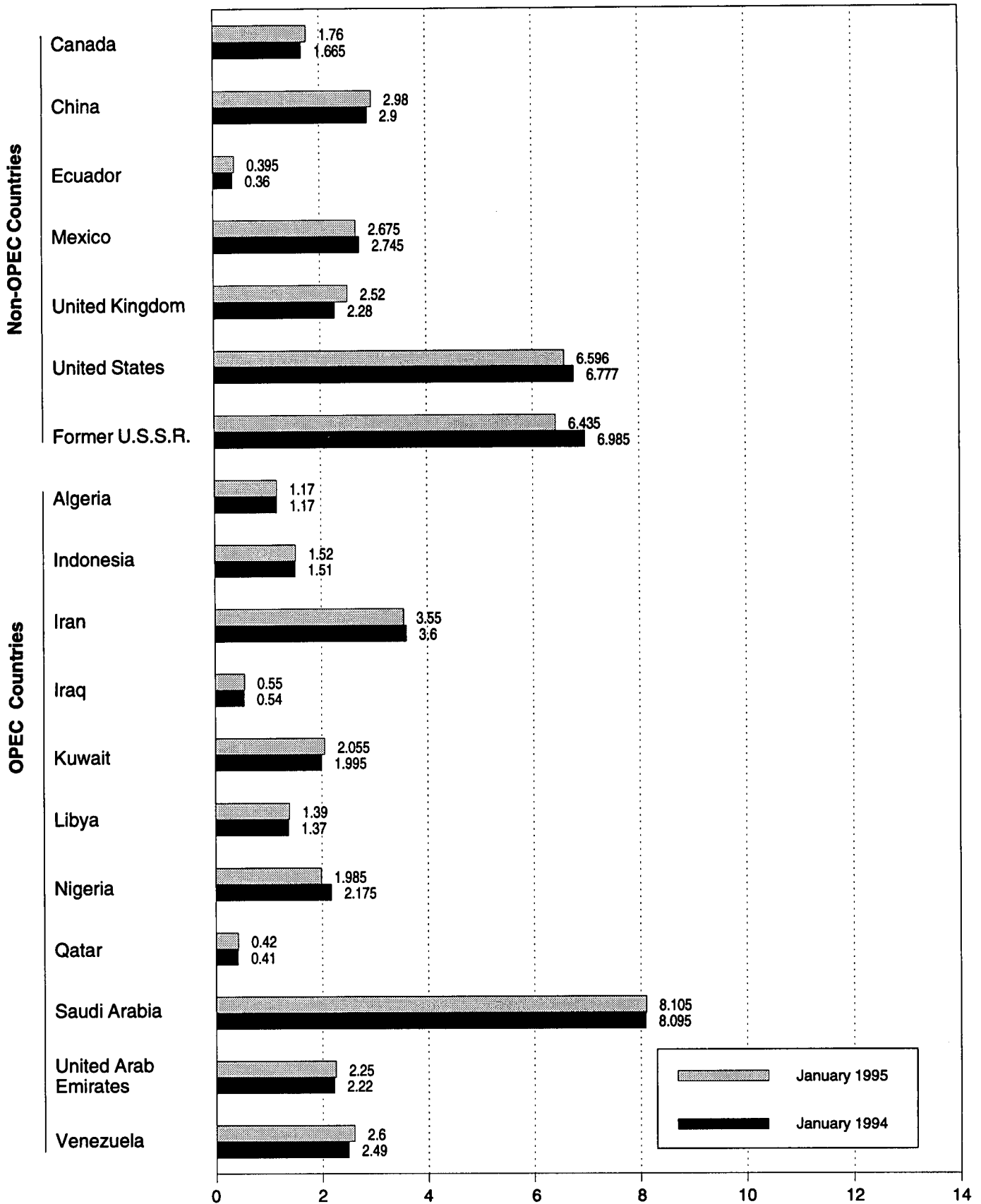


**Leading Producers, Monthly**



Note: OPEC is the Organization of Petroleum Exporting Countries.  
Sources: Tables 10.1a and 10.1b.

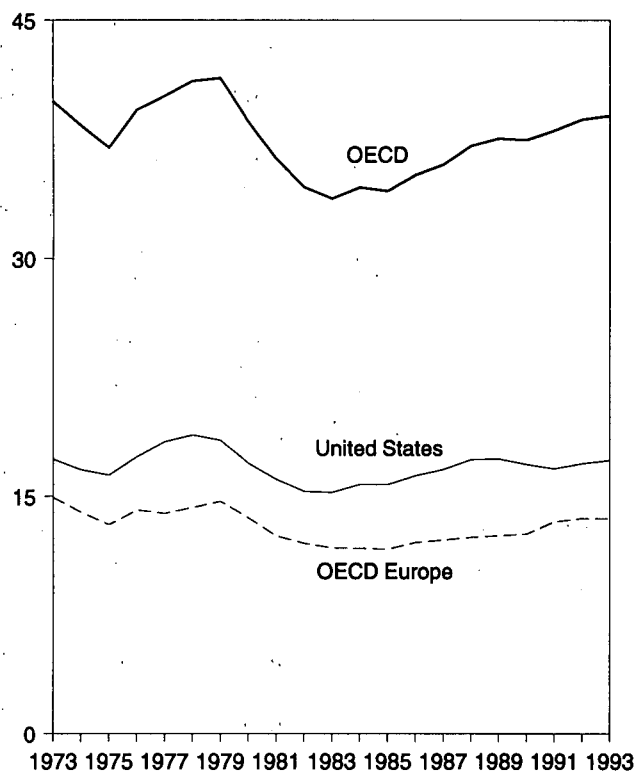
**Figure 10.2 Crude Oil Production by Selected Country**  
(Million Barrels per Day)



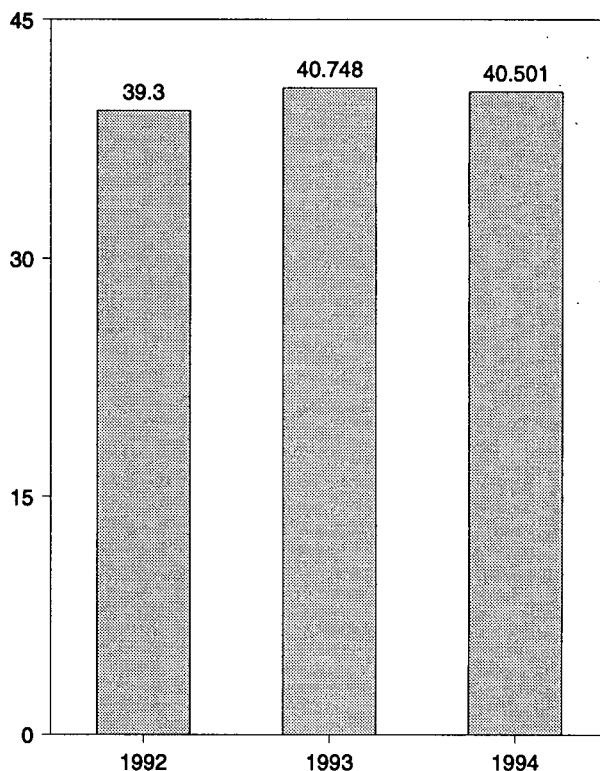
Note: OPEC is the Organization of Petroleum Exporting Countries.  
Sources: Tables 10.1a and 10.1b.

**Figure 10.3 Petroleum Consumption in OECD Countries**  
(Million Barrels per Day)

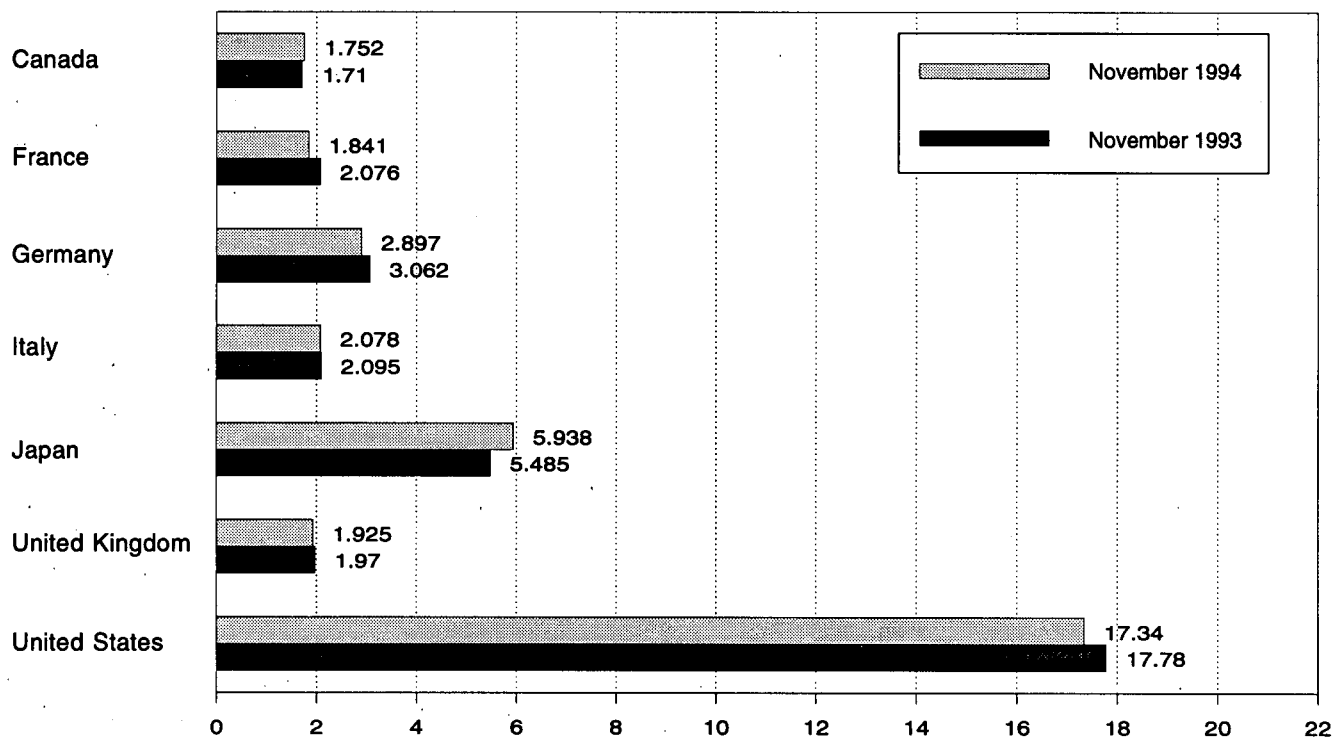
**Overview, 1973-1993**



**OECD Total, November**



**By Selected OECD Country**



Note: OECD is the Organization for Economic Cooperation and Development.  
Source: Table 10.2.

**Table 10.2 Petroleum Consumption in OECD Countries**  
(Thousand Barrels per Day)

	Canada	France	Germany <sup>a</sup>	Italy	Japan	United Kingdom	United States	OECD Europe <sup>b</sup>	Other OECD <sup>c</sup>	OECD <sup>d</sup>
1973 Average	1,729	2,601	3,055	2,068	4,949	2,341	17,308	14,925	988	39,900
1974 Average	1,779	2,447	2,748	2,004	4,864	2,210	16,653	13,988	1,095	38,379
1975 Average	1,779	2,252	2,650	1,855	4,621	1,911	16,322	13,217	1,041	36,980
1976 Average	1,818	2,420	2,877	1,971	4,837	1,892	17,461	14,124	1,119	39,358
1977 Average	1,850	2,294	2,865	1,897	4,880	1,905	18,431	13,916	1,160	40,237
1978 Average	1,902	2,408	2,927	1,952	4,945	1,938	18,847	14,290	1,204	41,187
1979 Average	1,971	2,463	3,003	2,039	5,050	1,971	18,513	14,667	1,178	41,379
1980 Average	1,873	2,256	2,707	1,934	4,960	1,725	17,056	13,634	1,072	38,595
1981 Average	1,768	2,023	2,449	1,874	4,848	1,590	16,058	12,515	1,080	36,269
1982 Average	1,578	1,880	2,372	1,781	4,582	1,590	15,296	12,053	1,008	34,517
1983 Average	1,448	1,835	2,324	1,750	4,395	1,531	15,231	11,765	954	33,793
1984 Average	1,472	1,754	2,322	1,646	4,576	1,849	15,726	11,736	989	34,500
1985 Average	1,504	1,775	2,338	1,717	4,384	1,634	15,726	11,681	976	34,271
1986 Average	1,506	1,772	2,498	1,738	4,439	1,649	16,281	12,102	951	35,279
1987 Average	1,548	1,789	2,424	1,855	4,484	1,603	16,665	12,255	959	35,911
1988 Average	1,693	1,797	2,422	1,836	4,752	1,697	17,283	12,427	939	37,093
1989 Average	1,733	1,857	2,280	1,930	4,983	1,738	17,325	12,531	998	37,570
1990 Average	1,690	1,818	2,382	1,872	5,140	1,752	16,988	12,629	1,027	37,475
1991 Average	1,622	1,935	2,828	1,863	5,284	1,801	16,714	13,391	1,056	38,067
1992 January	1,627	2,211	2,968	2,237	5,768	1,833	17,012	14,459	1,020	39,885
February	1,623	2,106	2,814	2,149	6,339	1,819	16,893	14,051	1,051	39,956
March	1,595	1,937	2,809	1,886	5,865	1,818	16,825	13,681	1,060	39,026
April	1,581	1,990	2,893	1,891	5,205	1,858	16,764	13,666	1,047	38,263
May	1,589	1,629	2,588	1,671	4,838	1,695	16,485	12,346	1,008	36,266
June	1,646	1,815	2,699	1,801	4,942	1,725	16,978	13,035	1,092	37,694
July	1,642	1,926	3,029	1,900	5,117	1,804	17,143	13,661	1,033	38,596
August	1,675	1,733	2,829	1,655	4,955	1,700	16,929	12,909	950	37,418
September	1,654	1,953	3,072	2,003	5,139	1,870	16,876	14,222	1,052	38,943
October	1,705	1,939	2,752	1,930	5,303	1,825	17,448	13,474	1,019	38,949
November	1,714	1,888	2,823	2,053	5,637	1,853	17,091	13,805	1,054	39,300
December	1,670	1,999	2,841	2,077	6,277	1,839	17,928	13,989	1,109	40,974
Average	1,643	1,926	2,843	1,937	5,446	1,803	17,033	13,605	1,041	38,768
1993 January	1,567	1,953	2,532	1,858	5,929	1,715	16,173	12,822	969	37,459
February	1,676	2,139	2,897	1,970	6,278	1,863	17,334	14,014	1,132	40,435
March	1,674	2,012	2,935	1,945	6,230	1,875	17,575	14,027	1,167	40,673
April	1,569	1,933	2,822	1,708	5,440	1,719	16,781	13,108	1,122	38,020
May	1,576	1,697	2,589	1,688	4,754	1,664	16,508	12,071	1,144	36,053
June	1,680	1,964	3,047	1,735	4,949	1,796	17,096	13,613	1,109	38,447
July	1,674	1,857	2,970	1,799	4,849	1,794	17,357	13,639	1,052	38,570
August	1,724	1,657	2,897	1,718	4,777	1,777	17,332	13,074	1,118	38,024
September	1,731	1,796	3,168	1,921	4,757	1,834	17,650	14,069	1,095	39,301
October	1,651	1,822	2,818	1,911	4,979	1,789	17,323	13,474	1,117	38,544
November	1,710	2,076	3,062	2,095	5,485	1,970	17,780	14,639	1,134	40,748
December	1,697	2,016	3,129	2,210	6,205	1,834	17,953	14,737	1,298	41,889
Average	1,661	1,908	2,904	1,879	5,381	1,802	17,237	13,601	1,121	39,001
1994 January	1,650	1,878	2,472	1,784	5,891	1,721	17,924	12,797	1,054	39,316
February	1,728	1,998	2,987	1,917	6,498	1,896	18,302	14,253	1,175	41,956
March	1,690	1,855	3,067	1,902	6,247	1,932	17,289	13,955	1,218	40,999
April	1,587	1,881	2,914	1,827	5,276	1,786	17,428	13,534	1,174	38,998
May	1,650	1,703	2,746	1,683	4,878	1,747	17,094	12,705	1,207	37,535
June	1,654	1,842	2,999	1,694	5,125	1,857	17,830	13,669	1,249	39,526
July	1,681	1,801	2,813	1,713	5,582	1,723	17,474	13,021	1,203	38,961
August	1,751	1,763	2,898	1,707	5,600	1,723	18,107	13,328	1,155	39,941
September	1,741	1,950	3,028	1,955	5,337	1,838	17,469	14,229	1,203	39,979
October	1,698	1,872	2,868	1,880	5,339	1,830	17,656	13,628	1,095	39,417
November	1,752	1,841	2,897	2,078	5,938	1,925	17,340	14,173	1,298	40,501
11-Mo. Average	1,689	1,851	2,879	1,829	5,604	1,815	17,624	13,562	1,184	39,663
1993 11-Mo. Average	1,657	1,898	2,883	1,849	5,305	1,799	17,170	13,496	1,105	38,733
1992 11-Mo. Average	1,641	1,920	2,843	1,924	5,369	1,799	16,950	13,569	1,035	38,564

<sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

<sup>b</sup> "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

<sup>d</sup> The Organization for Economic Cooperation and Development (OECD)

consists of Canada, Japan, the United States, "OECD Europe" and "Other OECD."

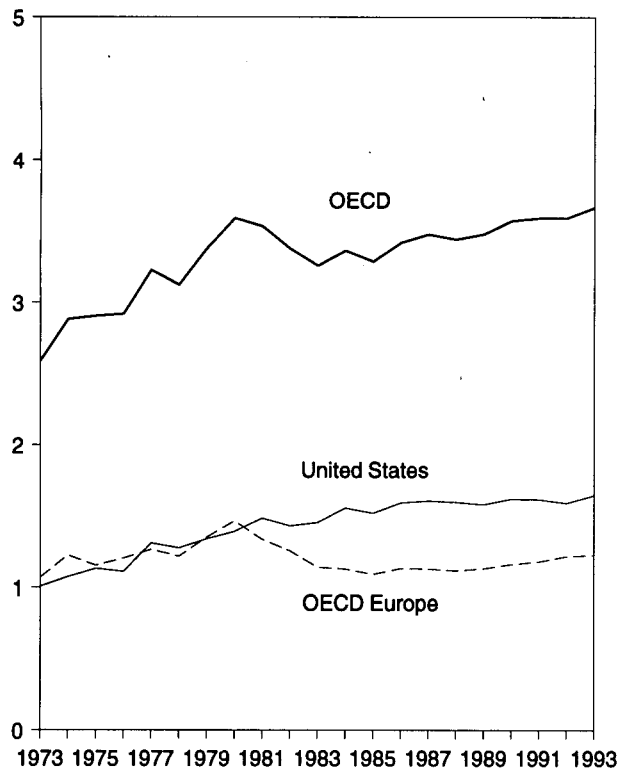
R=Revised data.

Notes: • Data through 1992 are final. Subsequent data are preliminary.  
• Totals may not equal sum of components due to independent rounding.  
• U.S. geographic coverage is the 50 States and the District of Columbia.

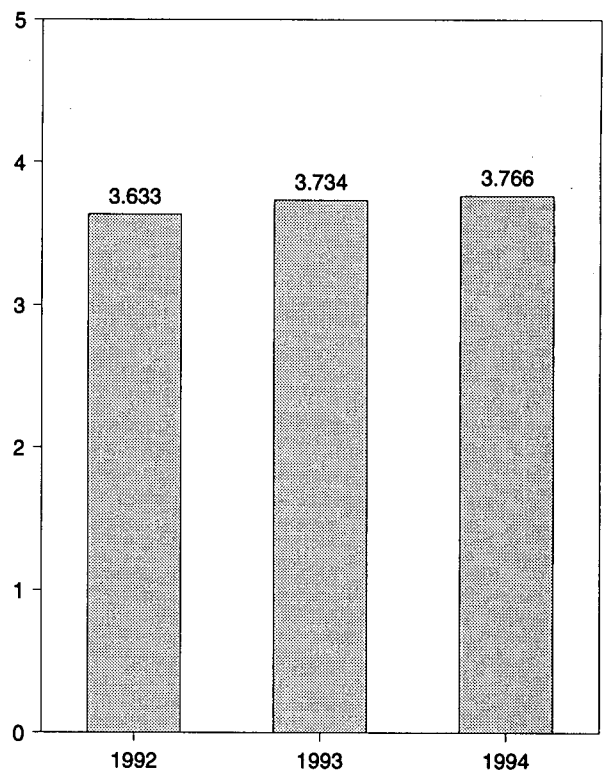
Sources: • United States: Table 3.1a. • All Other Data: 1973-1979—International Energy Agency (IEA), *Annual Oil and Gas Statistics of OECD Countries*. 1980 forward—IEA, quarterly and monthly computer tapes supporting *Quarterly Oil Statistics and Energy Balances*.

**Figure 10.4 Petroleum Stocks in OECD Countries**  
(Billion Barrels)

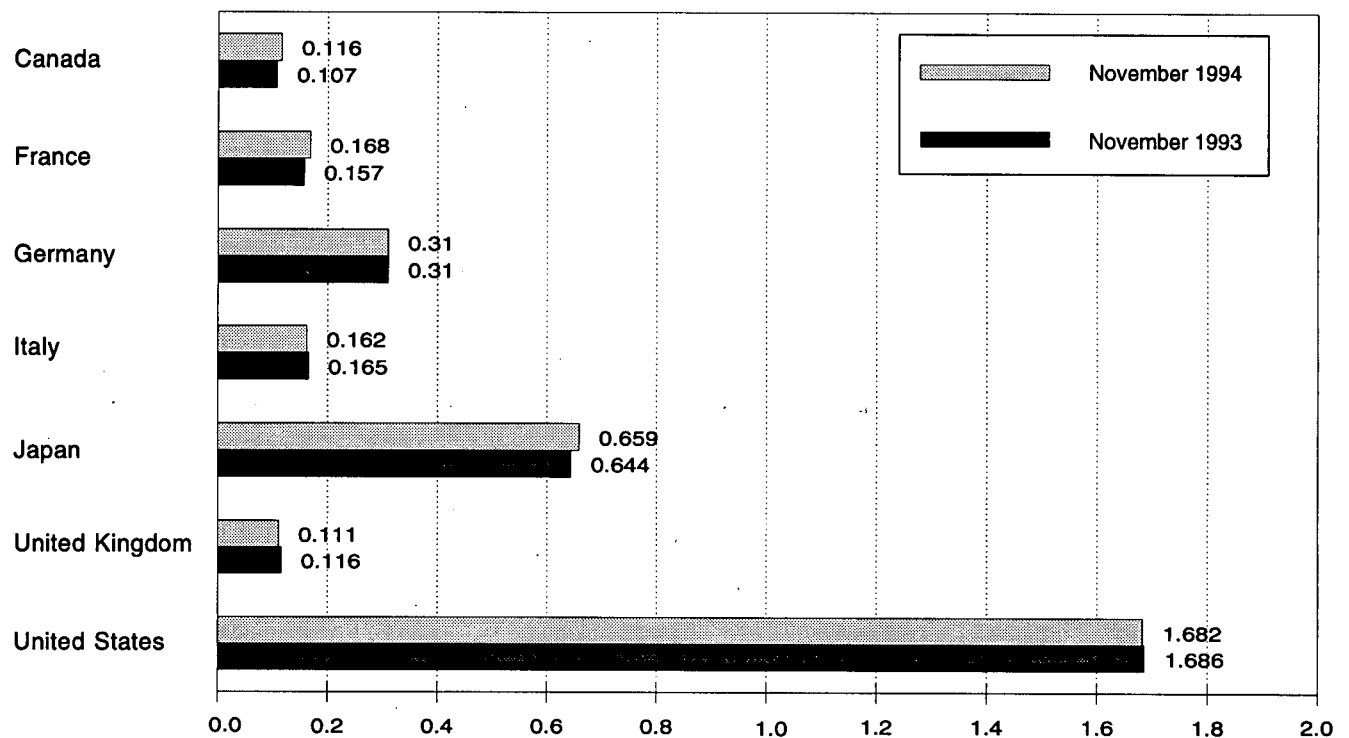
Overview, End of Year, 1973-1993



OECD Stocks, End of Month, November



By Selected Country, End of Month



Note: OECD is the Organization for Economic Cooperation and Development.  
Source: Table 10.3.



**Table 10.3 Petroleum Stocks in OECD Countries, End of Period**  
(Million Barrels)

	Canada	France	Germany <sup>a</sup>	Italy	Japan	United Kingdom	United States	OECD Europe <sup>b</sup>	Other OECD <sup>c</sup>	OECD <sup>d</sup>
1973 Year .....	140	201	181	152	303	156	1,008	1,070	67	2,588
1974 Year .....	145	249	213	167	370	191	1,074	1,227	64	2,880
1975 Year .....	174	225	187	143	375	165	1,133	1,154	67	2,903
1976 Year .....	153	234	208	143	380	165	1,112	1,205	68	2,918
1977 Year .....	167	239	225	161	409	148	1,312	1,268	68	3,224
1978 Year .....	144	201	238	154	413	157	1,278	1,219	68	3,122
1979 Year .....	150	226	272	163	460	169	1,341	1,353	75	3,379
1980 Year .....	164	243	319	170	495	168	1,392	1,464	72	3,587
1981 Year .....	161	214	297	167	482	143	1,484	1,337	67	3,531
1982 Year .....	136	193	272	179	484	125	1,430	1,258	68	3,376
1983 Year .....	121	153	249	149	470	118	1,454	1,142	68	3,255
1984 Year .....	128	152	239	159	479	112	1,556	1,130	69	3,362
1985 Year .....	113	139	233	157	494	123	1,519	1,092	66	3,284
1986 Year .....	111	127	252	155	509	124	1,593	1,133	72	3,418
1987 Year .....	126	127	259	169	540	121	1,607	1,130	R 71	3,474
1988 Year .....	116	140	266	155	538	112	1,597	1,118	71	3,440
1989 Year .....	114	138	271	164	577	118	1,581	1,133	71	3,476
1990 Year .....	121	140	265	172	590	112	1,621	1,163	73	3,568
1991 Year .....	119	153	288	160	606	119	1,617	1,181	65	3,588
1992 January .....	117	149	293	167	600	116	1,610	1,167	68	3,563
February .....	111	145	303	172	595	118	1,588	1,180	66	3,541
March .....	111	142	303	169	585	115	1,571	1,161	66	3,494
April .....	111	140	307	165	578	115	1,583	1,171	62	3,504
May .....	108	147	311	171	587	115	1,602	1,189	63	3,550
June .....	112	147	307	166	583	114	1,603	1,190	69	3,556
July .....	110	146	299	166	585	120	1,620	1,181	67	3,563
August .....	113	150	303	169	604	117	1,621	1,210	69	3,616
September .....	110	148	299	165	607	112	1,636	1,193	69	3,615
October .....	108	148	302	166	613	112	1,640	1,200	69	3,630
November .....	110	149	306	172	610	115	1,636	1,206	71	3,633
December .....	107	146	310	174	603	113	1,592	1,219	67	3,588
1993 January .....	108	162	319	173	615	120	1,618	1,250	68	3,660
February .....	102	157	317	168	607	120	1,602	1,236	68	3,616
March .....	103	155	312	165	594	120	1,590	1,220	66	3,574
April .....	106	155	311	166	585	116	1,617	1,215	73	3,595
May .....	106	162	320	172	593	117	1,650	1,227	68	3,644
June .....	107	157	310	168	603	119	1,667	1,208	70	3,654
July .....	113	156	313	169	618	115	1,682	1,207	70	3,690
August .....	114	168	316	170	635	117	1,676	1,247	70	3,742
September .....	108	165	312	162	648	115	1,665	1,237	77	3,735
October .....	105	167	318	162	654	111	1,688	1,232	78	3,758
November .....	107	157	310	165	644	116	1,686	1,219	78	3,734
December .....	102	158	310	165	619	118	1,647	1,229	68	3,665
1994 January .....	102	165	322	166	618	118	1,620	1,250	69	3,659
February .....	97	159	315	157	612	111	1,581	1,205	68	3,563
March .....	102	152	307	154	603	110	1,578	1,183	72	3,538
April .....	106	152	310	159	612	108	1,585	1,187	73	3,564
May .....	108	155	314	160	629	116	1,609	1,215	71	3,632
June .....	112	161	308	157	631	112	1,616	1,218	70	3,648
July .....	121	159	313	157	625	114	1,649	1,229	75	3,697
August .....	115	164	310	162	634	116	1,656	1,245	74	3,725
September .....	117	159	305	155	647	114	1,677	1,224	73	3,738
October .....	119	164	307	160	658	111	1,669	1,232	74	3,752
November .....	116	168	310	162	659	111	1,682	1,237	72	3,766

<sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

<sup>b</sup> "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories.

<sup>d</sup> The Organization for Economic Cooperation and Development (OECD) consists of Canada, Japan, the United States, "OECD Europe" and "Other OECD."

R=Revised data.

Notes: • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of

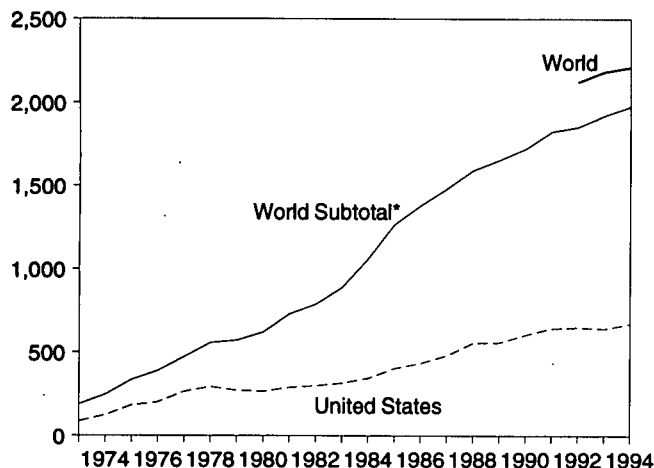
ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for those in the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Data through 1992 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Sources: • United States: Table 3.1a. • All Other Data: International Energy Agency, quarterly and monthly computer tapes supporting *Quarterly Oil Statistics and Energy Balances*.

# Figure 10.5 Nuclear Electricity Gross Generation

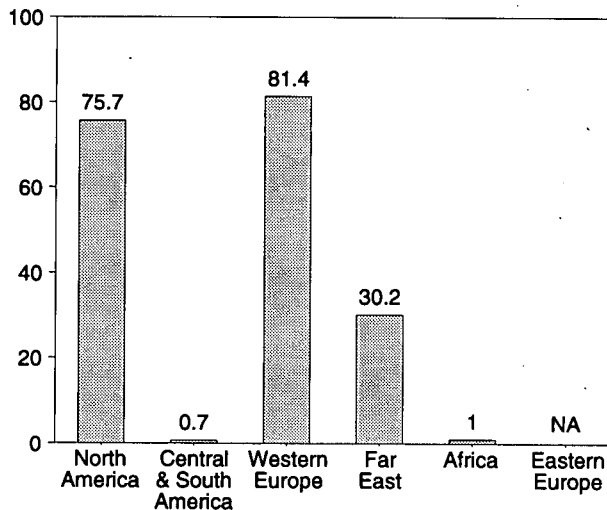
(Billion Kilowatthours)

## U.S. and World, 1973-1994



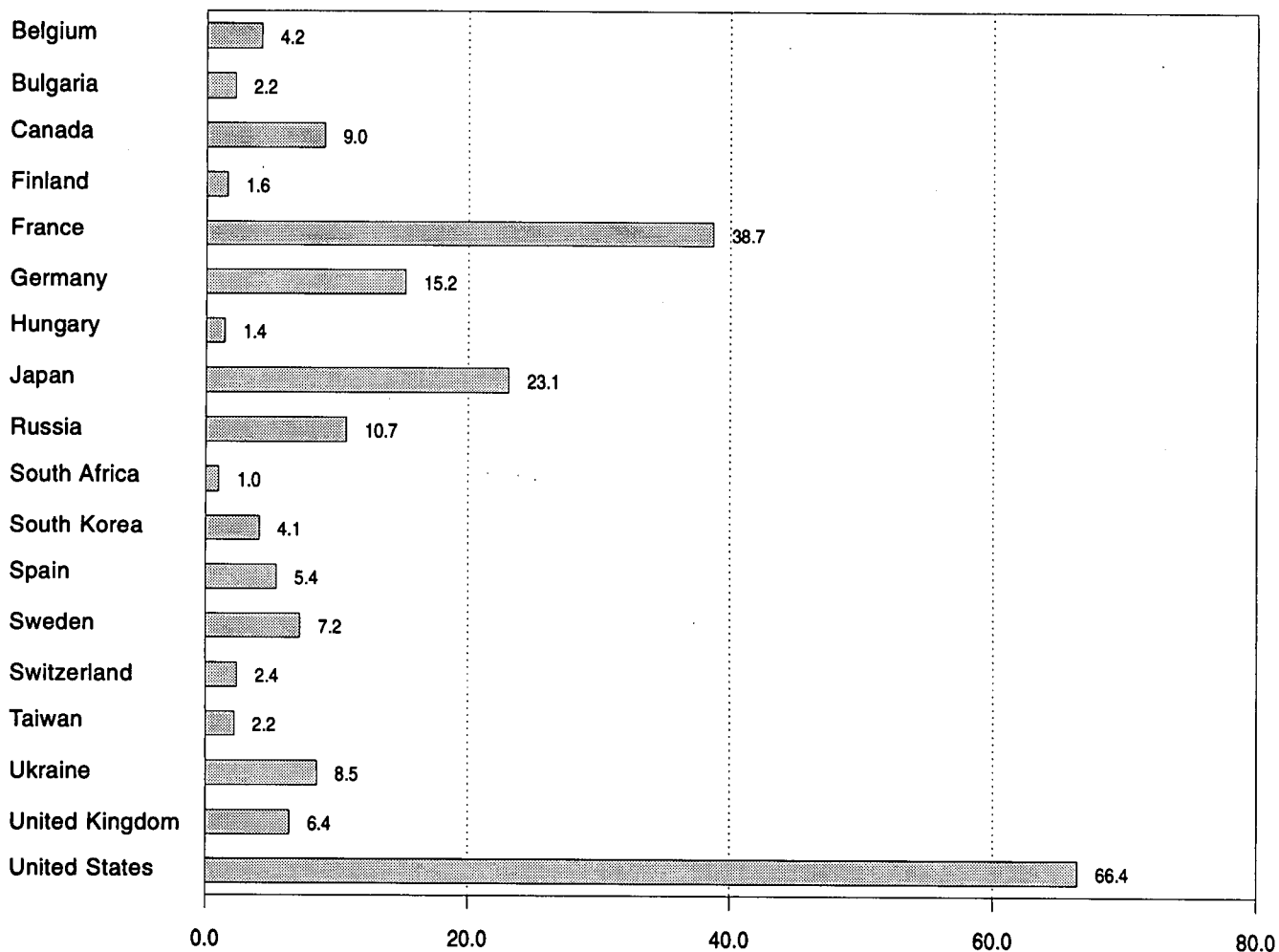
\*World excluding Eastern Europe.

## By Region, January 1995



NA = Not available.

## By Selected Country, January 1995



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

Sources: Tables 10.4a-10.4e.

**Table 10.4a Nuclear Electricity Gross Generation: Regions and World**  
(Billion Kilowatthours)

	North America	Central and South America	Western Europe	Far East	Africa	Subtotal	Eastern Europe <sup>a</sup>	World
1973 Total	103.1	-	73.9	12.3	-	189.3	NA	NA
1974 Total	139.7	1.0	83.9	21.4	-	246.0	NA	NA
1975 Total	195.5	2.5	111.7	24.4	-	334.1	NA	NA
1976 Total	219.8	2.6	126.2	40.3	-	388.9	NA	NA
1977 Total	290.8	1.6	148.1	31.5	-	472.0	NA	NA
1978 Total	325.4	2.9	166.9	60.6	-	555.9	NA	NA
1979 Total	309.0	2.7	184.3	74.7	-	570.7	NA	NA
1980 Total	305.8	2.3	214.2	97.4	-	619.8	NA	NA
1981 Total	331.8	2.8	293.4	102.9	-	730.9	NA	NA
1982 Total	341.2	1.9	321.8	123.6	-	788.5	NA	NA
1983 Total	366.6	3.6	377.2	140.1	-	887.5	NA	NA
1984 Total	397.6	6.6	485.4	167.7	4.2	1,061.5	NA	NA
1985 Total	465.6	9.1	582.8	202.0	5.9	1,265.4	NA	NA
1986 Total	508.8	5.8	631.5	223.6	9.3	1,378.9	NA	NA
1987 Total	560.1	6.2	648.3	259.5	6.6	1,480.7	NA	NA
1988 Total	639.7	5.5	688.1	248.5	11.1	1,592.8	NA	NA
1989 Total	640.2	6.6	732.2	263.4	11.7	1,654.1	NA	NA
1990 Total	681.3	9.4	738.6	284.3	8.9	1,722.5	NA	NA
1991 Total	733.4	9.2	769.7	303.3	9.7	1,825.2	NA	NA
1992 Total	735.2	8.8	783.9	315.2	9.9	1,852.9	E 271.5	E 2,124.5
1993 January	70.5	.8	78.9	28.1	.6	178.9	NA	NA
February	61.5	.6	72.6	25.3	.6	160.6	NA	NA
March	57.7	.6	76.3	26.9	.5	162.1	NA	NA
April	53.2	.7	68.6	25.6	.6	148.7	NA	NA
May	60.0	.7	60.1	E 25.9	.8	E 147.5	NA	NA
June	63.0	.7	60.7	E 26.0	.5	E 151.0	NA	NA
July	68.6	.7	60.8	E 31.8	1.0	E 163.1	NA	NA
August	68.5	.7	57.9	E 33.3	.9	E 161.2	NA	NA
September	60.8	.7	63.9	E 28.5	.5	E 154.4	NA	NA
October	55.8	.4	65.7	E 28.5	.4	E 150.7	NA	NA
November	57.7	.6	70.6	E 27.9	.4	E 157.2	NA	NA
December	65.5	.7	81.0	E 30.0	.8	E 178.1	NA	NA
Total	744.6	8.1	817.0	RE 345.2	7.7	E 1,922.7	E 263.0	E 2,185.6
1994 January	69.5	.7	76.3	E 28.6	.9	E 176.0	NA	NA
February	61.3	.7	67.5	E 25.0	.8	E 155.2	NA	NA
March	61.8	.7	70.3	E 27.0	.8	E 160.5	NA	NA
April	55.0	.7	66.8	E 28.3	1.0	E 151.8	NA	NA
May	60.3	.7	60.2	E 28.2	1.3	E 150.7	NA	NA
June	63.6	.7	59.9	E 28.0	1.1	E 153.3	NA	NA
July	72.1	.7	60.2	E 33.6	1.1	E 167.7	NA	NA
August	73.3	.7	62.6	E 36.2	.9	E 173.8	NA	NA
September	67.6	.5	66.9	E 29.6	.4	E 165.0	NA	NA
October	62.5	.7	70.0	E 28.6	.5	E 162.3	NA	NA
November	67.4	.7	72.6	E 28.5	.6	E 169.8	NA	NA
December	72.9	.7	82.4	E 30.9	.8	E 187.7	NA	NA
Total	787.3	8.2	815.5	E 355.1	10.3	E 1,976.4	E 237.3	E 2,213.7
1995 January	75.7	E .7	81.4	E 30.2	1.0	E 189.0	NA	NA

<sup>a</sup> See Table 10.4e for country-specific estimated annual generation in 1992, 1993, and 1994, and available monthly generation in 1993 and 1994 for Eastern Europe.

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

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants

themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for regions may not sum to totals due to independent rounding.

Source: McGraw-Hill Publishing Company, *Nucleonics Week*.

**Table 10.4b Nuclear Electricity Gross Generation: North, Central, and South America**  
(Billion Kilowatthours)

	Canada	Mexico	United States	North America	Argentina	Brazil	Central and South America
1973 Total .....	15.3	-	87.8	103.1	-	-	-
1974 Total .....	15.4	-	124.3	139.7	1.0	-	1.0
1975 Total .....	13.2	-	182.3	195.5	2.5	-	2.5
1976 Total .....	18.0	-	201.8	219.8	2.6	-	2.6
1977 Total .....	26.6	-	264.2	290.8	1.6	-	1.6
1978 Total .....	33.0	-	292.4	325.4	2.9	-	2.9
1979 Total .....	38.4	-	270.6	309.0	2.7	-	2.7
1980 Total .....	40.4	-	265.4	305.8	2.3	-	2.3
1981 Total .....	43.3	-	288.5	331.8	2.8	-	2.8
1982 Total .....	42.6	-	298.6	341.2	1.9	0.1	1.9
1983 Total .....	53.0	-	313.6	366.6	3.4	.2	3.6
1984 Total .....	53.8	-	343.8	397.6	4.5	2.1	6.6
1985 Total .....	62.9	-	402.7	465.6	5.8	3.4	9.1
1986 Total .....	74.6	-	434.1	508.8	5.7	.1	5.8
1987 Total .....	80.6	-	479.5	560.1	5.2	1.0	6.2
1988 Total .....	85.6	-	554.1	639.7	5.1	.3	5.5
1989 Total .....	83.2	-	557.0	640.2	5.0	1.6	6.6
1990 Total .....	75.8	2.1	603.4	681.3	7.4	2.0	9.4
1991 Total .....	86.1	4.2	643.0	733.4	7.7	1.4	9.2
1992 Total .....	81.3	3.9	650.0	735.2	7.1	1.8	8.8
1993 January .....	8.2	.5	61.8	70.5	.6	.2	.8
February .....	7.4	.3	53.7	61.5	.4	.2	.6
March .....	7.8	.1	49.8	57.7	.6	(s)	.6
April .....	7.3	.5	45.4	53.2	.7	.0	.7
May .....	6.7	.5	52.8	60.0	.7	.0	.7
June .....	7.1	.5	55.4	63.0	.7	.0	.7
July .....	9.3	.5	58.9	68.6	.7	.0	.7
August .....	9.1	.5	58.9	68.5	.7	.0	.7
September .....	7.9	.5	52.5	60.8	.7	.0	.7
October .....	8.5	.4	46.9	55.8	.4	.0	.4
November .....	8.2	.4	49.1	57.7	.6	.0	.6
December .....	9.2	.4	55.9	65.5	.7	.0	.7
Total .....	97.6	4.9	642.0	744.6	7.7	.4	8.1
1994 January .....	9.7	.2	59.6	69.5	.7	.0	.7
February .....	9.1	.0	52.2	61.3	.7	.0	.7
March .....	10.5	(s)	51.3	61.8	.7	.0	.7
April .....	9.1	.4	45.4	55.0	.7	.0	.7
May .....	8.8	.4	51.1	60.3	.7	.0	.7
June .....	8.7	.5	54.5	63.6	.7	.0	.7
July .....	9.5	.5	62.2	72.1	.7	.0	.7
August .....	9.7	.4	63.1	73.3	.7	.0	.7
September .....	8.8	.4	58.3	67.6	.5	.0	.5
October .....	8.8	.5	53.2	62.5	.7	.0	.7
November .....	9.0	.4	58.0	67.4	.7	.0	.7
December .....	9.0	.4	63.5	72.9	.7	.0	.7
Total .....	110.7	4.2	672.4	787.3	8.2	.0	8.2
1995 January .....	9.0	.3	66.4	75.7	.7	E,0	E,7

--Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in

some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Source: McGraw-Hill Publishing Company, *Nucleonics Week*.

**Table 10.4c Nuclear Electricity Gross Generation: Western Europe**  
(Billion Kilowatthours)

	Belgium	Finland	France	Germany <sup>a</sup>	Italy <sup>b</sup>	Netherlands	Spain	Sweden	Switzerland	United Kingdom <sup>c</sup>	Western Europe
<b>1973 Total</b> .....	0.0	—	14.7	11.9	3.1	1.1	6.5	2.1	6.2	28.2	73.9
<b>1974 Total</b> .....	.1	—	14.7	12.0	3.4	3.3	7.2	2.3	7.0	33.8	83.9
<b>1975 Total</b> .....	6.8	—	18.3	21.7	3.8	3.3	7.5	12.0	7.7	30.5	111.7
<b>1976 Total</b> .....	10.0	—	15.8	24.5	3.8	3.9	7.6	16.0	7.9	36.8	126.2
<b>1977 Total</b> .....	11.9	2.7	17.9	36.0	3.4	3.7	6.5	19.9	8.1	38.1	148.1
<b>1978 Total</b> .....	12.5	3.3	30.6	35.7	4.5	4.1	7.6	23.8	8.3	36.6	166.9
<b>1979 Total</b> .....	11.4	6.7	39.9	42.2	2.6	3.5	6.7	21.0	11.8	38.5	184.3
<b>1980 Total</b> .....	12.5	7.0	61.2	43.7	2.2	4.2	5.2	26.7	14.3	37.2	214.2
<b>1981 Total</b> .....	12.8	14.5	105.2	53.4	2.7	3.7	9.4	37.7	15.2	38.9	293.4
<b>1982 Total</b> .....	15.6	16.5	108.9	63.4	6.8	3.9	8.8	38.8	15.0	44.1	321.8
<b>1983 Total</b> .....	24.1	17.4	144.2	65.8	5.8	3.6	10.7	40.4	15.5	49.6	377.2
<b>1984 Total</b> .....	27.7	18.5	191.2	92.6	6.9	3.8	23.1	51.3	16.3	54.1	485.4
<b>1985 Total</b> .....	34.5	18.8	224.0	125.8	7.0	3.9	28.0	58.6	22.4	59.7	582.8
<b>1986 Total</b> .....	38.6	18.8	254.3	118.9	8.7	4.2	37.5	69.9	22.5	58.2	631.5
<b>1987 Total</b> .....	41.9	19.4	265.5	130.2	.2	3.6	41.2	67.2	23.0	56.2	648.3
<b>1988 Total</b> .....	43.1	19.3	274.9	145.2	.0	3.7	50.4	69.4	22.7	59.4	688.1
<b>1989 Total</b> .....	41.2	18.8	302.5	149.6	.0	4.0	56.1	65.6	22.8	71.6	732.2
<b>1990 Total</b> .....	42.7	18.9	314.1	147.2	.0	3.4	54.3	68.2	23.6	66.1	738.6
<b>1991 Total</b> .....	42.9	19.2	331.4	147.3	.0	3.3	55.6	76.8	22.9	70.4	769.7
<b>1992 Total</b> .....	43.5	19.0	337.6	158.8	.0	3.8	55.8	63.5	23.4	78.5	783.9
<b>1993 January</b> .....	4.3	1.8	36.3	15.1	.0	.4	5.4	5.8	2.3	7.6	78.9
February .....	3.7	1.6	32.7	13.9	.0	.3	4.3	5.9	2.1	7.9	72.6
March .....	3.4	1.8	34.3	14.2	.0	.1	4.9	7.1	2.3	8.3	76.3
April .....	3.3	1.7	30.5	12.4	.0	.1	4.2	6.6	2.0	7.7	68.6
May .....	3.1	1.3	26.9	11.8	.0	.4	4.1	4.6	1.9	6.0	60.1
June .....	3.0	1.6	25.4	12.0	.0	.4	4.4	4.7	1.2	8.2	60.7
July .....	3.2	1.8	26.9	12.3	.0	.4	5.0	3.1	1.8	6.4	60.8
August .....	3.4	1.5	25.9	11.1	.0	.4	5.1	3.2	1.1	6.1	57.9
September .....	3.4	1.3	28.8	11.2	.0	.4	4.6	4.1	1.7	8.4	63.9
October .....	3.2	1.8	29.1	12.6	.0	.4	4.7	4.7	2.2	6.9	65.7
November .....	3.7	1.7	33.7	12.6	.0	.4	4.2	5.3	2.3	6.7	70.6
December .....	4.3	1.8	36.2	14.3	.0	.4	5.2	6.3	2.4	10.2	81.0
<b>Total</b> .....	<b>41.9</b>	<b>19.6</b>	<b>366.7</b>	<b>153.5</b>	<b>.0</b>	<b>3.9</b>	<b>56.1</b>	<b>61.4</b>	<b>23.3</b>	<b>90.4</b>	<b>817.0</b>
<b>1994 January</b> .....	4.3	1.8	34.1	13.8	.0	.4	5.1	6.9	2.4	7.6	76.3
February .....	3.5	1.6	30.8	12.1	.0	.1	4.1	6.7	2.1	6.6	67.5
March .....	3.6	1.8	30.5	12.7	.0	.1	4.1	7.2	2.3	7.9	70.3
April .....	3.3	1.7	28.6	12.0	.0	.4	4.3	6.9	2.3	7.3	66.8
May .....	2.8	1.1	25.3	11.2	.0	.4	4.7	5.6	2.0	7.2	60.2
June .....	2.4	1.6	25.5	11.8	.0	.4	4.1	4.3	1.4	8.5	59.9
July .....	2.6	1.5	28.0	10.6	.0	.4	4.8	4.4	1.5	6.5	60.2
August .....	3.3	1.4	28.1	11.5	.0	.4	5.3	4.5	1.2	7.0	62.6
September .....	3.2	1.4	28.7	12.3	.0	.3	5.1	5.5	2.1	8.3	66.9
October .....	3.5	1.8	30.8	13.7	.0	.4	4.1	6.7	2.4	6.5	70.0
November .....	4.0	1.7	31.7	14.1	.0	.4	4.2	7.1	2.3	7.1	72.6
December .....	4.3	1.8	37.1	15.2	.0	.4	5.3	7.0	2.4	8.8	82.4
<b>Total</b> .....	<b>40.6</b>	<b>19.1</b>	<b>359.1</b>	<b>151.1</b>	<b>.0</b>	<b>4.0</b>	<b>55.1</b>	<b>72.8</b>	<b>24.2</b>	<b>89.5</b>	<b>815.5</b>
<b>1995 January</b> .....	4.2	1.6	38.7	15.2	.0	.3	5.4	7.2	2.4	6.4	81.4

<sup>a</sup> Through December 1990, the data for Germany are for the former West Germany only. Beginning with January 1991, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

<sup>b</sup> In 1987, Italy's citizens voted for a nuclear power moratorium, which shut down their nuclear power plants indefinitely.

<sup>c</sup> Monthly data for the United Kingdom are totals for 4- or 5-week reporting periods, not calendar months.

— =Not applicable.

Notes: • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Source: McGraw-Hill Publishing Company, *Nucleonics Week*.

**Table 10.4d Nuclear Electricity Gross Generation: Far East and Africa**  
(Billion Kilowatthours)

	China <sup>a</sup>	India	Japan	Pakistan	South Korea	Taiwan	Far East	South Africa <sup>b</sup>
1973 Total	-	2.5	9.4	0.5	-	-	12.3	-
1974 Total	-	1.9	18.9	.6	-	-	21.4	-
1975 Total	-	2.5	21.3	.5	-	-	24.4	-
1976 Total	-	3.2	36.6	.5	-	-	40.3	-
1977 Total	-	2.8	28.2	.3	0.1	0.1	31.5	-
1978 Total	-	2.3	53.1	.2	2.3	2.7	60.6	-
1979 Total	-	3.2	62.0	(s)	3.2	6.3	74.7	-
1980 Total	-	2.9	82.8	.1	3.5	8.2	97.4	-
1981 Total	-	3.1	86.0	.2	2.9	10.7	102.9	-
1982 Total	-	2.2	104.5	.1	3.8	13.1	123.6	-
1983 Total	-	2.9	109.1	.2	9.0	18.9	140.1	-
1984 Total	-	4.1	127.2	.3	11.8	24.3	167.7	4.2
1985 Total	-	4.5	152.0	.3	16.5	28.7	202.0	5.9
1986 Total	-	5.1	164.8	.5	26.1	26.9	223.6	9.3
1987 Total	-	5.5	182.8	.3	37.8	33.1	259.5	6.6
1988 Total	-	6.1	173.6	.2	38.7	29.9	248.5	11.1
1989 Total	-	4.0	183.7	.1	47.2	28.3	263.4	11.7
1990 Total	-	6.3	191.9	.4	52.8	32.9	284.3	8.9
1991 Total	-	5.4	205.8	.4	56.3	35.3	303.3	9.7
1992 Total	-	6.3	218.0	.6	56.4	33.8	315.2	9.9
1993 January	-	.7	19.5	(s)	4.8	3.0	28.1	.6
February	-	.6	17.4	.1	4.5	2.7	25.3	.6
March	-	.6	18.9	.1	4.6	2.8	26.9	.5
April	-	.2	17.6	.1	4.8	2.8	25.6	.6
May	NA	.4	17.4	(s)	5.3	2.7	E 25.9	.8
June	NA	.5	17.9	(s)	5.1	2.6	E 26.0	.5
July	NA	.7	22.3	.1	5.5	3.4	E 31.8	1.0
August	NA	.5	24.2	(s)	4.9	3.6	E 33.3	.9
September	NA	.4	20.5	.1	4.6	2.9	E 28.5	.5
October	NA	.5	20.6	(s)	4.6	2.8	E 28.5	.4
November	NA	.5	20.9	.0	4.2	2.3	E 27.9	.4
December	NA	.6	21.5	(s)	5.1	2.8	E 30.0	.8
Total	E 2.6	6.2	243.5	.4	58.1	34.3	RE 345.2	7.7
1994 January	NA	.4	20.5	.1	5.0	2.6	E 28.6	.9
February	NA	.3	17.8	(s)	4.1	2.8	E 25.0	.8
March	NA	.4	19.0	.1	4.6	2.9	E 27.0	.8
April	NA	.4	20.2	(s)	4.9	2.7	E 28.3	1.0
May	NA	.5	19.8	.1	4.9	2.9	E 28.2	1.3
June	NA	.5	19.4	.1	5.0	2.9	E 28.0	1.1
July	NA	.4	24.3	(s)	5.5	3.3	E 33.6	1.1
August	NA	.5	26.9	(s)	5.3	3.5	E 36.2	.9
September	NA	.3	21.7	(s)	4.8	2.9	E 29.6	.4
October	NA	.3	20.5	.1	5.0	2.8	E 28.6	.5
November	NA	.5	20.6	(s)	4.7	2.7	E 28.5	.6
December	NA	.6	23.1	.1	4.3	2.9	E 30.9	.8
Total	E 2.6	5.0	253.8	.6	58.3	34.8	E 355.1	10.3
1995 January	NA	.7	23.1	(s)	4.1	2.2	E 30.2	1.0

<sup>a</sup> The total gross generation estimate for 1993 and 1994 for China is calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency (IAEA) and is published in *Nuclear Power Reactors in the World*, April 1994.

<sup>b</sup> South Africa comprises all of Africa's nuclear electricity generation.  
R=Revised data. NA=Not available. - =Not applicable. E=Estimate.  
(s)=Less than 0.05 billion kilowatthours.

Notes: • The Philippines has a nuclear generating unit under construction.

Its earliest initial commercial operation is projected to be in 1996. • Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves. • Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Source: McGraw-Hill Publishing Company, *Nucleonics Week*.

**Table 10.4e Nuclear Electricity Gross Generation: Eastern Europe**  
(Billion Kilowatthours)

	Bulgaria	Czech Republic <sup>a</sup>	Hungary	Kazakhstan <sup>a</sup>	Lithuania <sup>a</sup>	Romania <sup>b</sup>	Russia	Slovakia <sup>a</sup>	Slovenia	Ukraine	Eastern Europe <sup>c</sup>
1973 Total	—	—	—	NA	—	—	NA	NA	—	—	NA
1974 Total	NA	—	—	NA	—	—	NA	NA	—	—	NA
1975 Total	NA	—	—	NA	—	—	NA	NA	—	—	NA
1976 Total	NA	—	—	NA	—	—	NA	NA	—	—	NA
1977 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1978 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1979 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1980 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1981 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1982 Total	NA	—	—	NA	—	—	NA	NA	—	NA	NA
1983 Total	NA	—	NA	NA	—	—	NA	NA	NA	NA	NA
1984 Total	NA	—	NA	NA	—	—	NA	NA	NA	NA	NA
1985 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1986 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1987 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1988 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1989 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1990 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1991 Total	NA	NA	NA	NA	NA	—	NA	NA	NA	NA	NA
1992 Total	E 12.2	E 12.9	E 13.8	E .5	E 16.4	—	E 125.6	E 11.7	E 4.0	E 74.6	E 271.5
1993 January	E 1.5	NA	1.4	NA	NA	—	11.0	NA	.5	E 7.8	NA
February	E 1.5	NA	1.2	NA	NA	—	9.8	NA	.4	E 7.8	NA
March	E 1.5	NA	1.2	NA	NA	—	10.6	NA	.4	7.8	NA
April	E 1.5	NA	1.0	NA	NA	—	10.3	NA	.5	5.5	NA
May	1.2	NA	1.0	NA	NA	—	9.6	NA	.2	5.1	NA
June	.8	NA	1.0	NA	NA	—	10.1	NA	.0	5.0	NA
July	.9	NA	1.0	NA	NA	—	8.4	NA	(s)	5.6	NA
August	.9	NA	1.0	NA	NA	—	9.5	NA	.4	6.0	NA
September	1.1	.9	1.0	NA	NA	—	9.3	NA	.5	5.1	NA
October	.6	.9	1.2	NA	NA	—	9.7	NA	.5	5.3	NA
November	.9	1.0	1.3	NA	NA	—	10.4	NA	.4	5.3	NA
December	1.6	.9	1.4	NA	NA	—	11.9	NA	.3	6.3	NA
Total	14.0	E 13.2	13.8	E .4	E 12.9	—	120.4	E 11.6	4.0	E 72.7	E 263.0
1994 January	1.6	1.2	1.4	NA	NA	—	11.0	NA	.3	7.6	NA
February	1.4	1.2	1.2	NA	NA	—	10.0	NA	.4	6.7	NA
March	1.6	1.3	1.2	NA	NA	—	9.5	NA	.4	6.5	NA
April	1.1	1.3	1.0	NA	NA	—	8.0	NA	.5	5.8	NA
May	1.1	1.3	1.0	NA	NA	—	7.5	NA	.5	6.2	NA
June	.8	1.3	1.0	NA	NA	—	7.0	NA	.5	5.8	NA
July	.6	1.3	1.1	NA	NA	—	7.2	NA	.4	3.7	NA
August	.9	NA	1.0	NA	NA	—	6.0	NA	.3	2.9	NA
September	.8	NA	1.0	NA	NA	—	6.5	NA	(s)	3.6	NA
October	1.2	NA	1.3	NA	NA	—	7.5	NA	.4	5.4	NA
November	1.6	NA	1.3	NA	NA	—	8.4	NA	.5	6.7	NA
December	E 1.6	NA	1.4	NA	NA	—	9.2	NA	.5	7.4	NA
Total	E 14.5	E 13.2	14.0	E .4	E 12.9	—	97.7	E 11.6	4.6	68.4	E 237.3
1995 January	2.2	NA	1.4	NA	NA	—	10.7	NA	.5	8.5	NA

<sup>a</sup> The total gross generation estimate for 1993 and 1994 for Czech Republic, Kazakhstan, Lithuania, and Slovakia is calculated as 5 percent more than the annual net nuclear generation reported by the International Atomic Energy Agency (IAEA) and is published in *Nuclear Power Reactors in the World*, April 1994.

<sup>b</sup> Romania has a nuclear generating unit under construction. Its earliest initial operation is projected to be in 1995.

<sup>c</sup> The total gross generation estimate for 1992 for Eastern European countries are calculated as 5 percent more than the annual net nuclear generation reported by the IAEA and published in the Energy Information Administration annual report, *World Nuclear Capacity and Fuel Cycle Requirements 1993*, November 1993, Table 10.

NA=Not available. —=Not applicable. E=Estimate. (s)=Less than 0.05 billion kilowatthours.

Notes: • Armenia has two nuclear generating units under construction.

The earliest commercial operation for one unit is projected to be in 2000.

• Net figures are generally less than gross figures by about 5 percent, the difference being the energy consumed by the generating plants themselves.

• Monthly data may not sum to annual totals due to independent rounding and because precommercial generation is included in some annual totals but not in the monthly data. • Data for countries may not sum to regional totals due to independent rounding.

Source: McGraw-Hill Publishing Company, *Nucleonics Week*.





# Appendix A. Thermal Conversion Factors

The thermal conversion factors presented in the following eight 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 have a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu/barrel = 66.36 million Btu).

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 more heavily than the thermal conversion factor for propane.

In general, the annual thermal conversion factors presented in Tables A1 through A8 are computed from final annual data. However, if the current year's final data are not available in time for publication, thermal conversion factors for the current year are computed from the best available data and are labeled "preliminary." The source of each factor is described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A8 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	Petrochemical Feedstocks	
Aviation Gasoline .....	5.048	Naphtha Less Than 401° F .....	5.248
Butane .....	4.326	Other Oils Equal to or Greater Than 401° F ...	5.825
Butane-Propane Mixture <sup>a</sup> .....	4.130	Still Gas .....	6.000
Distillate Fuel Oil .....	5.825	Petroleum Coke .....	6.024
Ethane .....	3.082	Plant Condensate .....	5.418
Ethane-Propane Mixture <sup>b</sup> .....	3.308	Propane .....	3.836
Isobutane .....	3.974	Residual Fuel Oil .....	6.287
Jet Fuel, Kerosene Type .....	5.670	Road Oil .....	6.636
Jet Fuel, Naphtha Type .....	5.355	Special Naphthas .....	5.248
Kerosene .....	5.670	Still Gas .....	6.000
Lubricants .....	6.065	Unfinished Oils .....	5.825
Motor Gasoline .....	5.253	Unfractionated Stream .....	5.418
Natural Gasoline and Isopentane .....	4.620	Waxes .....	5.537
Pentanes Plus .....	4.620	Miscellaneous .....	5.796

<sup>a</sup> 60 percent butane and 40 percent propane.

<sup>b</sup> 70 percent ethane and 30 percent propane.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A2. Approximate Heat Content of Crude Oil, Crude Oil and Products, and Natural Gas Plant Liquids**  
(Million Btu per Barrel)

	Crude Oil			Crude Oil and Products		Natural Gas Plant Liquids Production
	Production	Imports	Exports	Imports	Exports	
1973 .....	5.800	5.817	5.800	5.897	5.752	4.049
1974 .....	5.800	5.827	5.800	5.884	5.774	4.011
1975 .....	5.800	5.821	5.800	5.858	5.748	3.984
1976 .....	5.800	5.808	5.800	5.856	5.745	3.964
1977 .....	5.800	5.810	5.800	5.834	5.797	3.941
1978 .....	5.800	5.802	5.800	5.839	5.808	3.925
1979 .....	5.800	5.810	5.800	5.810	5.832	3.955
1980 .....	5.800	5.812	5.800	5.796	5.820	3.914
1981 .....	5.800	5.818	5.800	5.775	5.821	3.930
1982 .....	5.800	5.826	5.800	5.775	5.820	3.872
1983 .....	5.800	5.825	5.800	5.774	5.800	3.839
1984 .....	5.800	5.823	5.800	5.745	5.850	3.812
1985 .....	5.800	5.832	5.800	5.736	5.814	3.815
1986 .....	5.800	5.903	5.800	5.808	5.832	3.797
1987 .....	5.800	5.901	5.800	5.820	5.858	3.804
1988 .....	5.800	5.900	5.800	5.820	5.840	3.800
1989 .....	5.800	5.906	5.800	5.833	5.857	3.826
1990 .....	5.800	5.934	5.800	5.849	5.833	3.822
1991 .....	5.800	5.948	5.800	5.873	5.823	3.807
1992 .....	5.800	5.953	5.800	5.877	5.777	3.804
1993 .....	5.800	5.954	5.800	5.883	5.779	3.801
1994 <sup>a</sup> .....	5.800	5.951	5.800	5.863	5.781	3.794
1995 <sup>a</sup> .....	5.800	5.951	5.800	5.863	5.781	3.794

<sup>a</sup> Preliminary.

Note: Crude oil includes lease condensate.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A3. Approximate Heat Content of Petroleum Products, Weighted Averages**  
(Million Btu per Barrel)

	Consumption					Imports	Exports	LPG Consumption
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total			
1973 .....	5.387	5.568	5.395	6.245	5.515	5.983	5.752	3.746
1974 .....	5.377	5.538	5.394	6.238	5.504	5.959	5.773	3.730
1975 .....	5.358	5.528	5.392	6.250	5.494	5.935	5.747	3.715
1976 .....	5.383	5.538	5.395	6.251	5.504	5.980	5.743	3.711
1977 .....	5.389	5.555	5.400	6.249	5.518	5.908	5.796	3.677
1978 .....	5.382	5.553	5.404	6.251	5.519	5.955	5.814	3.669
1979 .....	5.471	5.418	5.428	6.258	5.494	5.811	5.864	3.680
1980 .....	5.468	5.376	5.440	6.254	5.479	5.748	5.841	3.674
1981 .....	5.409	5.313	5.432	6.258	5.448	5.659	5.837	3.643
1982 .....	5.392	5.263	5.422	6.258	5.415	5.664	5.829	3.615
1983 .....	5.286	5.273	5.415	6.255	5.406	5.677	5.800	3.614
1984 .....	5.384	5.223	5.422	6.251	5.395	5.613	5.867	3.599
1985 .....	5.326	5.221	5.423	6.247	5.387	5.572	5.819	3.603
1986 .....	5.357	5.286	5.427	6.257	5.418	5.624	5.839	3.640
1987 .....	5.316	5.253	5.430	6.249	5.403	5.599	5.860	3.659
1988 .....	5.320	5.248	5.434	6.250	5.410	5.618	5.842	3.652
1989 .....	5.257	5.233	5.440	6.241	5.410	5.641	5.869	3.683
1990 .....	5.208	5.272	5.445	6.247	5.411	5.614	5.838	3.625
1991 .....	5.163	5.192	5.442	6.248	5.384	5.636	5.827	3.614
1992 .....	5.169	5.188	5.445	6.243	5.378	5.623	5.774	3.624
1993 .....	<sup>R</sup> 5.148	5.200	5.438	6.241	5.379	5.620	5.777	3.606
1994 <sup>a</sup> .....	5.122	5.181	5.441	6.231	5.370	5.538	5.779	3.635
1995 <sup>a</sup> .....	5.122	5.181	5.441	6.231	5.370	5.538	5.779	3.635

<sup>a</sup> Preliminary.

<sup>R</sup> Revised data.

Note: Weighted averages of the products included in each category are calculated by using heat content values shown in Table A1.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A4. Approximate Heat Content of Natural Gas**  
(Btu per Cubic Foot)

	Production		Consumption			Imports	Exports
	Dry	Marketed (Wet)	Sectors Other Than Electric Utilities	Electric Utilities	Total		
1973	1,021	1,093	1,020	1,024	1,021	1,026	1,023
1974	1,024	1,097	1,024	1,022	1,024	1,027	1,016
1975	1,021	1,095	1,020	1,026	1,021	1,026	1,014
1976	1,020	1,093	1,019	1,023	1,020	1,025	1,013
1977	1,021	1,093	1,019	1,029	1,021	1,026	1,013
1978	1,019	1,088	1,016	1,034	1,019	1,030	1,013
1979	1,021	1,092	1,018	1,035	1,021	1,037	1,013
1980	1,026	1,098	1,024	1,035	1,026	1,022	1,013
1981	1,027	1,103	1,025	1,035	1,027	1,014	1,011
1982	1,028	1,107	1,026	1,036	1,028	1,018	1,011
1983	1,031	1,115	1,031	1,030	1,031	1,024	1,010
1984	1,031	1,109	1,030	1,035	1,031	1,005	1,010
1985	1,032	1,112	1,031	1,038	1,032	1,002	1,011
1986	1,030	1,110	1,029	1,034	1,030	997	1,008
1987	1,031	1,112	1,031	1,032	1,031	999	1,011
1988	1,029	1,109	1,029	1,028	1,029	1,002	1,018
1989	1,031	1,107	1,031	1,030	1,031	1,004	1,019
1990	1,031	1,105	1,030	1,034	1,031	1,012	1,018
1991	1,030	1,108	1,031	1,024	1,030	1,014	1,022
1992	1,030	1,110	1,031	1,022	1,030	1,011	1,018
1993	1,027	1,106	1,028	1,022	1,027	1,020	1,016
1994 <sup>a</sup>	1,027	1,106	1,028	1,022	1,027	1,020	1,016
1995 <sup>a</sup>	1,027	1,106	1,028	1,022	1,027	1,020	1,016

<sup>a</sup> Preliminary.  
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A5. Approximate Heat Content of Coal**  
(Million Btu per Short Ton)

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial <sup>a</sup>	Electric Utilities <sup>b</sup>	Total		
1973	23.376	22.831	26.780	22.586	22.246	23.057	25.000	26.596
1974	23.072	22.479	26.778	22.419	21.781	22.677	25.000	26.700
1975	22.897	22.261	26.782	22.436	21.642	22.506	25.000	26.562
1976	22.855	22.774	26.781	22.530	21.679	22.498	25.000	26.601
1977	22.597	22.919	26.787	22.322	21.508	22.265	25.000	26.548
1978	22.248	22.466	26.789	22.207	21.275	22.017	25.000	26.478
1979	22.454	22.242	26.788	22.452	21.364	22.100	25.000	26.548
1980	22.415	22.543	26.790	22.690	21.295	21.947	25.000	26.384
1981	22.308	22.474	26.794	22.585	21.085	21.713	25.000	26.160
1982	22.239	22.695	26.797	22.712	21.194	21.674	25.000	26.223
1983	22.052	22.775	26.798	22.691	21.133	21.576	25.000	26.291
1984	22.010	22.844	26.799	22.543	21.101	21.573	25.000	26.402
1985	21.870	22.646	26.798	22.020	20.959	21.366	25.000	26.307
1986	21.913	22.947	26.798	22.198	21.084	21.462	25.000	26.292
1987	21.922	23.404	26.799	22.381	21.136	21.517	25.000	26.291
1988	21.823	23.571	26.799	22.360	20.900	21.328	25.000	26.299
1989	21.765	23.650	26.800	22.347	20.848	21.272	25.000	26.160
1990	21.822	23.137	26.799	22.457	20.929	21.331	25.000	26.202
1991	21.681	23.114	26.799	22.460	20.755	21.146	25.000	26.188
1992	21.646	23.105	26.799	22.250	20.787	21.143	25.000	26.161
1993 <sup>c</sup>	21.388	22.994	26.800	22.123	20.639	20.983	25.000	26.335
1994 <sup>c</sup>	21.352	23.600	26.800	22.067	20.691	21.015	25.000	26.329

<sup>a</sup> Includes transportation.  
<sup>b</sup> Data shown in this column are not the same as those shown in the *Electric Power Monthly* (EPM). The EPM data report coal receipts; the data shown here represent coal consumption.  
<sup>c</sup> Preliminary.  
Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A6. Approximate Heat Content of Bituminous Coal and Lignite**  
(Million Btu per Short Ton)

	Production	Consumption					Imports	Exports
		Residential and Commercial	Coke Plants	Other Industrial <sup>a</sup>	Electric Utilities	Total		
1973	23.391	22.887	26.800	22.585	22.262	23.073	25.000	26.612
1974	23.087	22.523	26.800	22.420	21.799	22.694	25.000	26.716
1975	22.910	22.258	26.800	22.439	21.659	22.522	25.000	26.573
1976	22.863	22.819	26.800	22.528	21.692	22.509	25.000	26.613
1977	22.597	22.594	26.800	22.290	21.521	22.266	25.000	26.561
1978	22.242	22.078	26.800	22.175	21.284	22.014	25.000	26.501
1979	22.449	21.884	26.800	22.436	21.372	22.100	25.000	26.570
1980	22.411	22.488	26.800	22.690	21.301	21.950	25.000	26.404
1981	22.301	22.010	26.800	22.572	21.091	21.710	25.000	26.176
1982	22.233	22.226	26.800	22.695	21.200	21.670	25.000	26.231
1983	22.048	22.438	26.800	22.680	21.141	21.576	25.000	26.300
1984	22.005	22.406	26.800	22.525	21.108	21.570	25.000	26.410
1985	21.867	22.568	26.800	22.013	20.965	21.368	25.000	26.320
1986	21.908	22.669	26.800	22.185	21.091	21.462	25.000	26.308
1987	21.918	22.800	26.800	22.360	21.143	21.514	25.000	26.304
1988	21.817	23.135	26.800	22.341	20.905	21.324	25.000	26.308
1989	21.759	22.917	26.800	22.324	20.854	21.268	25.000	26.166
1990	21.819	22.678	26.800	22.444	20.935	21.330	25.000	26.207
1991	21.678	22.635	26.800	22.448	20.761	21.146	25.000	26.192
1992	21.643	22.768	26.800	22.242	20.792	21.142	25.000	26.165
1993	21.383	22.749	26.800	22.111	20.644	20.983	25.000	26.341
1994 <sup>b</sup>	21.348	23.004	26.800	22.036	20.699	21.012	25.000	26.335
1995 <sup>b</sup>	21.348	23.004	26.800	22.036	20.699	21.012	25.000	26.335

<sup>a</sup> Includes transportation.

<sup>b</sup> Preliminary.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A7. Approximate Heat Content of Anthracite and Coal Coke**  
(Million Btu per Short Ton)

	Production	Anthracite			Imports and Exports	Coal Coke Imports and Exports
		Consumption				
		Sectors Other Than Electric Utilities	Electric Utilities	Total		
1973	22.132	22.674	17.920	21.464	25.400	24.800
1974	21.711	22.330	17.200	20.919	25.400	24.800
1975	21.582	22.272	17.064	20.762	25.400	24.800
1976	22.045	22.618	17.526	21.254	25.400	24.800
1977	22.661	24.101	17.244	22.066	25.400	24.800
1978	23.079	24.388	17.104	22.398	25.400	24.800
1979	23.170	24.272	17.454	22.069	25.400	24.800
1980	22.869	22.719	17.652	21.405	25.400	24.800
1981	23.291	23.749	18.168	22.080	25.400	24.800
1982	23.289	24.578	18.160	22.518	25.400	24.800
1983	22.734	24.536	16.516	21.583	25.400	24.800
1984	23.107	25.128	17.018	22.322	25.400	24.800
1985	22.428	23.031	16.784	20.817	25.400	24.800
1986	23.084	24.399	15.578	21.512	25.400	24.800
1987	23.108	26.293	15.962	22.435	25.400	24.800
1988	23.266	26.021	17.312	22.423	25.400	24.800
1989	23.385	27.196	16.310	22.623	25.400	24.800
1990	22.574	25.199	16.140	21.668	25.400	24.800
1991	22.573	25.268	15.858	21.410	25.400	24.800
1992	22.572	24.617	16.944	21.423	25.400	24.800
1993	22.573	24.096	16.534	21.262	25.400	24.800
1994 <sup>a</sup>	22.574	26.280	14.878	21.711	25.400	24.800
1995 <sup>a</sup>	22.574	26.280	14.878	21.711	25.400	24.800

<sup>a</sup> Preliminary.

Source: See "Thermal Conversion Factor Source Documentation," which follows Table A8.

**Table A8. Approximate Heat Rates for Electricity**  
(Btu per Kilowatthour)

	Electricity Generation			Electricity Consumption
	Fossil-Fueled Steam-Electric Plants <sup>a</sup>	Nuclear Steam-Electric Plants	Geothermal Energy Plants	
1973 .....	10,389	10,903	21,674	3,412
1974 .....	10,442	11,161	21,674	3,412
1975 .....	10,406	11,013	21,611	3,412
1976 .....	10,373	11,047	21,611	3,412
1977 .....	10,435	10,769	21,611	3,412
1978 .....	10,361	10,941	21,611	3,412
1979 .....	10,353	10,879	21,545	3,412
1980 .....	10,388	10,908	21,639	3,412
1981 .....	10,453	11,030	21,639	3,412
1982 .....	10,454	11,073	21,629	3,412
1983 .....	10,520	10,905	21,290	3,412
1984 .....	10,440	10,843	21,303	3,412
1985 .....	10,447	10,813	21,263	3,412
1986 .....	10,446	10,799	21,263	3,412
1987 .....	10,419	10,776	21,263	3,412
1988 .....	10,324	10,743	21,096	3,412
1989 .....	10,317	10,724	21,096	3,412
1990 .....	10,335	10,680	21,096	3,412
1991 .....	10,352	10,740	20,997	3,412
1992 .....	10,302	10,678	20,914	3,412
1993 .....	10,280	10,682	20,914	3,412
1994 <sup>b</sup> .....	10,280	10,682	20,914	3,412
1995 <sup>b</sup> .....	10,280	10,682	20,914	3,412

<sup>a</sup> This thermal conversion factor is used for hydroelectric power generation and for biomass fuels, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

<sup>b</sup> Preliminary.

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, by determining the average American Petroleum Institute (API) gravity of crude imported from each foreign country from Form ERA-60 in 1977 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.**

**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 (LPG) Consumption.** Calculated annually by EIA as the average of the thermal conversion factors of each liquefied petroleum gas consumed, weighted by the quantity of each liquefied petroleum gas consumed.

**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.** EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for "Gasoline, Motor Fuel" 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.

**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 30,120,000 Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

**Petroleum Products, Total Consumption.** Calculated annually by EIA as the average of the

thermal conversion factors for all petroleum products consumed, weighted by the quantity of each petroleum product consumed.

**Petroleum Products, Consumption by Electric Utilities.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed at electric utilities, weighted by the quantity of each petroleum product consumed at electric utilities. The quantity of petroleum consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

**Petroleum Products, Consumption by Industrial Users.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed in the industrial sector, weighted by the estimated quantity of each petroleum product consumed in the industrial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

**Petroleum Products, Consumption by Residential and Commercial Users.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential and commercial sector, weighted by the estimated quantity of each petroleum product consumed in the residential and commercial sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

**Petroleum Products, Consumption by Transportation Users.** Calculated annually by EIA as the average of the thermal conversion factor for all petroleum products consumed in the transportation sector, weighted by the estimated quantity of each petroleum product consumed in the transportation sector. The quantity of petroleum products consumed is estimated in the State Energy Data System as documented in the *State Energy Data Report*.

**Petroleum Products, Exports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product, weighted by the quantity of each petroleum product exported.

**Petroleum Products, Imports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported, weighted by the quantity of each petroleum product imported.

**Plant Condensate.** Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Residual Fuel Oil.** EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Road Oil.** EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, which was assumed to be equal to that of asphalt (see **Asphalt**) and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*.

**Special Naphthas.** EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, which was assumed to be equal to that of total gasoline (aviation and motor) factor and was first published in the *Petroleum Statement, Annual, 1970*.

**Still Gas.** EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel and first published in the *Petroleum Statement, Annual, 1970*.

**Unfinished Oil.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see **Distillate Fuel Oil**) and first published in the *Annual Report to Congress, Volume 3, 1977*.

**Unfractionated Stream.** EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see **Plant Condensate**) and first published in the *Annual Report to Congress, Volume 2, 1981*.

**Waxes.** EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

## **Approximate Heat Content of Natural Gas**

**Natural Gas, Total Consumption.** 1973-1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity of natural gas consumed. The heat content and quantity consumed are from Form EIA-176. Published sources are: 1980-1989: EIA, *Natural Gas Annual 1992, Volume 2, Table 15*. 1990-1992: EIA, *Natural Gas Annual 1992, Volume 2, Table 16*. 1993 forward: 1992 value used as an estimate.

**Natural Gas, Consumption by Electric Utilities.** Calculated annually by EIA by dividing the total heat content of natural gas received at electric utilities by the total quantity received at electric utilities. The

heat contents and receipts are from Form FERC-423 and predecessor forms.

**Natural Gas, Consumption by Sectors Other Than Electric Utilities.** Calculated annually by EIA by dividing the heat content of all natural gas consumed less the heat content of natural gas consumed at electric utilities by the quantity of all natural gas consumed less the quantity of natural gas consumed at electric utilities. Data are from Forms EIA-176, FERC-423, EIA-759, and predecessor forms.

**Natural Gas, Exports.** Calculated annually by EIA by dividing the heat content of exported natural gas by the quantity of natural gas exported, both reported on Form FPC-14.

**Natural Gas, Imports.** Calculated annually by EIA by dividing the heat content of imported natural gas by the quantity of natural gas imported, both reported on Form FPC-14.

**Natural Gas Production, Dry.** Assumed by EIA to be equal to the thermal conversion factor for the consumption of dry natural gas. See **Natural Gas Total Consumption.**

**Natural Gas Production, Marketed (Wet).** Calculated annually by EIA by adding the heat content of dry natural gas production and the total heat content of natural gas plant liquids production and dividing this sum by the total quantity of marketed (wet) natural gas production.

## **Approximate Heat Content of Coal and Coal Coke**

**Anthracite, Total Consumption.** Calculated annually by EIA by dividing the sum of the heat content of anthracite consumed by electric utilities and all other sectors combined by the total quantity of anthracite consumed.

**Anthracite, Consumption by Electric Utilities.** Calculated annually by EIA by dividing the heat content of anthracite receipts at electric utilities by the quantity of anthracite received at electric utilities. Heat contents and receipts are from Form FERC-423 and predecessor forms.

**Anthracite, Consumption by Sectors Other Than Electric Utilities.** Calculated annually by EIA by dividing the heat content of anthracite production less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumed by sectors other than electric utilities less the quantity of anthracite stock changes, losses, and "unaccounted for."

**Anthracite, Imports and Exports.** EIA assumed the anthracite imports and exports to be freshly mined

anthracite having an estimated heat content of 25.40 million Btu per short ton.

**Anthracite, Production.** Calculated annually by EIA by dividing the sum of the heat content of freshly mined anthracite (estimated to have an average heat content of 25.400 million Btu per short ton) and the heat content of anthracite recovered from culm banks and river dredging (estimated to have a heat content of 17.500 million Btu per short ton) by the total quantity of anthracite production.

**Bituminous Coal and Lignite, Total Consumption.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumed by electric utilities, coal coke plants, other industrial plants, the residential and commercial sector, and the transportation sector by the sum of their respective tonnages.

**Bituminous Coal and Lignite, Consumption by Coke Plants.** Estimated by EIA to be 26.800 million Btu per short ton on the basis of an input/output analysis of coal carbonization.

**Bituminous Coal and Lignite, Consumption by Electric Utilities.** Calculated annually by EIA by dividing the total heat content of bituminous coal and lignite received at electric utilities by the total quantity received at electric utilities. Heat contents and receipts are from Form FERC-423 and predecessor forms.

**Bituminous Coal and Lignite, Consumption by Other Industrial and Transportation Users.** 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by other industrial users and that of coal consumed at electric utilities in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to other industrial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to other industrial users from each coal-producing area, and the sum total of the heat content was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

**Bituminous Coal and Lignite, Consumption by Residential and Commercial Users.** 1973: Calculated by EIA through regression analysis measuring the difference between the average Btu value of coal consumed by residential and commercial users and that of coal consumed by electric utilities.



in the 1974-1982 period. 1974 forward: Calculated annually by EIA by assuming that the bituminous coal and lignite delivered to residential and commercial users from each coal-producing area (reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to that of bituminous coal and lignite received at electric utilities from each of the same coal-producing areas (reported on Form FERC-423). The average Btu value of coal by coal-producing area was applied to the volume of deliveries to residential and commercial users from each coal-producing area, and the total of the heat value was divided by the total volume of deliveries. Coal-producing areas are the Bureau of Mines coal-producing districts for 1974 through 1989 and coal-producing States for 1990 forward.

**Bituminous Coal and Lignite, Exports.** Calculated annually by EIA by dividing the sum of the heat content of exported metallurgical coal (estimated to average 27,000 million Btu per short ton) and the heat content of exported steam coal (estimated to have an average thermal content of 25,000 million Btu per short ton) by the total quantity of bituminous coal and lignite exported.

**Bituminous Coal and Lignite, Imports.** EIA estimated the average thermal conversion factor to be 25,000 million Btu per short ton.

**Bituminous Coal and Lignite, Production.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumption, net exports, stock changes, and unaccounted for by the sum of their respective tonnages. Consumers' stock changes by sectors were assumed to have the same conversion factor as that of the consumption sector. Producers' stock changes and unaccounted for were assumed to have the same conversion factor as that for consumption by all users.

**Coal, Consumption.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumption by the sum of their respective tonnages.

**Coal, Consumption by Electric Utilities.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite received at electric utilities by the sum of their respective tonnages received.

**Coal, Consumption by Sectors Other Than Electric Utilities.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumed by sectors other than electric utilities by the sum of their respective tonnages.

**Coal, Exports.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite exported by the sum of their respective tonnages.

**Coal, Imports.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite imported by the sum of their respective tonnages.

**Coal, Production.** Calculated annually by EIA by dividing the sum of the total heat content of bituminous coal and lignite and anthracite production by the sum of their respective tonnages.

**Coal Coke, Imports and Exports.** EIA adopted the Bureau of Mines estimate of 24,800 million Btu per short ton.

## Approximate Heat Rates for Electricity

**Fossil-Fueled Steam-Electric Plant Generation.** There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, wood and waste, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA uses data from Form EIA-767 to calculate a rate factor that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption such as droughts. The heat content of a kilowatt-hour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatt-hour. 1973-1991: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Electric Plant Cost and Power Production Expenses 1991*, Table 9. 1992 forward: Unpublished factors calculated on the basis of data from Form EIA-767.

**Geothermal Energy Plant Generation.** 1973-1981: Calculated annually by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12. 1982 forward: Estimated annually by EIA on the basis of an informal survey of relevant plants.

**Nuclear Steam-Electric Plant Generation.** 1973-1991: Calculated annually by EIA by dividing the total heat content consumed in nuclear generating units by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation are reported on Form FERC-1, Form EIA-412, and predecessor forms. The factors, beginning with 1982 data, are published in the following EIA reports—1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. 1983-1991: *Electric Plant Cost and Power Production Expenses 1991*, Table 13. 1992 forward: Calculated annually by EIA by dividing the total heat content of the steam leaving the nuclear generating units to generate electricity by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported in Nuclear Regulatory Commission, *Licensed Operating Reactors—Status Summary Report*.



## Appendix B. Metric and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. However, because U.S. commerce involves other nations, most of which use metric units of measure, the U.S. Government is committed to the transition to the metric system, as stated in the Metric Conversion Act of 1975 (Public Law 94-168), amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), and Executive Order 12770 of July 25, 1991.

The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. customary units. For example, 500 short

tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

**Table B1. Metric Conversion Factors**

Type of Unit	U.S. Unit	multiplied by	Conversion Factor	equals	Metric Unit
<b>Mass</b>	short tons (2,000 lb)	x	0.907 184 7	=	metric tons (t)
	long tons	x	1.016 047	=	metric tons (t)
	pounds (lb)	x	0.453 592 37 <sup>a</sup>	=	kilograms (kg)
	pounds uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	x	0.384 647 <sup>b</sup>	=	kilograms uranium (kgU)
	ounces, avoirdupois (avdp oz)	x	28.349 52	=	grams (g)
<b>Volume</b>	barrels of oil (bbl)	x	0.158 987 3	=	cubic meters (m <sup>3</sup> )
	cubic yards (yd <sup>3</sup> )	x	0.764 555	=	cubic meters (m <sup>3</sup> )
	cubic feet (ft <sup>3</sup> )	x	0.028 316 85	=	cubic meters (m <sup>3</sup> )
	U.S. gallons (gal)	x	3.785 412	=	liters (L)
	ounces, fluid (fl oz)	x	29.573 53	=	milliliters (mL)
	cubic inches (in <sup>3</sup> )	x	16.387 06	=	milliliters (mL)
	<b>Length</b>	miles (mi)	x	1.609 344 <sup>a</sup>	=
yards (yd)		x	0.914 4 <sup>a</sup>	=	meters (m)
feet (ft)		x	0.304 8 <sup>a</sup>	=	meters (m)
inches (in)		x	2.54 <sup>b</sup>	=	centimeters (cm)
<b>Area</b>	acres	x	0.404 69	=	hectares (ha)
	square miles (mi <sup>2</sup> )	x	2.589 988	=	square kilometers (km <sup>2</sup> )
	square yards (yd <sup>2</sup> )	x	0.836 127 4	=	square meters (m <sup>2</sup> )
	square feet (ft <sup>2</sup> )	x	0.092 903 04 <sup>a</sup>	=	square meters (m <sup>2</sup> )
	square inches (in <sup>2</sup> )	x	6.451 6 <sup>b</sup>	=	square centimeters (cm <sup>2</sup> )
<b>Temperature</b>	degrees Fahrenheit (°F)	x	5/9 (after subtracting 32) <sup>a,c</sup>	=	degrees Celsius (°C)
<b>Energy</b>	British thermal units (Btu)	x	1, 055.055 852 62 <sup>a,d</sup>	=	joules (J)
	calories (cal)	x	4.186 8 <sup>a</sup>	=	joules (J)
	kilowatthours (kWh)	x	3.6 <sup>a</sup>	=	megajoules (MJ)

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

<sup>c</sup>To convert degrees Celsius (°C) to degrees Fahrenheit (°F) exactly, multiply by 9/5, then add 32.

<sup>d</sup>The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, contact Dr. Barry Taylor at Building 221, Room B610, National Institute of Standards and Technology, Gaithersburg, MD 20899, or on telephone number 301-975-4220.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 27, 1993), pp. 9-11, 13, and 16. • National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

**Table B2. Metric Prefixes**

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10 <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

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	multiplied by	Conversion Factor	equals	Final Unit
Petroleum	barrels (bbl)	x	42 <sup>a</sup>	=	U.S. gallons (gal)
Coal	short tons	x	2,000 <sup>a</sup>	=	pounds (lb)
	long tons	x	2,240 <sup>a</sup>	=	pounds (lb)
	metric tons (t)	x	1,000 <sup>a</sup>	=	kilograms (kg)
Wood	ords (cd)	x	1.25 <sup>b</sup>	=	short tons
	ords (cd)	x	128 <sup>a</sup>	=	cubic feet (ft <sup>3</sup> )

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.



## Appendix C. Carbon Dioxide Emission Factors for Coal

The need for accurate estimates of carbon dioxide emissions produced during the combustion of coal has led the Energy Information Administration (EIA) to develop basic emission factors. Basic emission factors reflect the carbon-to-heat-content ratio of coal, a ratio which measures carbon dioxide emissions per unit of energy (pounds per million Btu), assuming complete combustion. These basic factors are derived from 5,426 sample analyses maintained in EIA's Coal Analysis File. Variations in the carbon-to-heat-content of different coals were observed to follow coal rank and geographic origin, leading EIA to develop basic emission factors specific to the rank and the State of origin of the coal.

On the basis of these rank- and State-specific basic emission factors for coal, EIA has also developed emission factors by sector. These sectoral emission factors weight the coal consumed in a given sector by its rank and State of origin. Table C1 presents the U.S. average carbon dioxide emission factors for coal by sector. Emission factors differ among sectors and within a given sector over time for a number of reasons:

- A higher average emission factor in the residential and commercial sector can be attributed to the steady consumption of bituminous coal and anthracite (presumably for home heating).
- Virtually all of the coal consumed by coke plants comes from only a few States in the Appalachian Coal Basin (West Virginia, Virginia, and eastern Kentucky). Hence, the emission factors for this sector have remained fairly constant.
- Other industrial users of coal (not coke plants) increased consumption of low-rank, high-emission western coals, which has contributed to a rise in their average emission factor.
- Electric utilities, which account for most U.S. coal consumption, have shifted over time away from high-rank, low-emission bituminous coal to low-rank, high-emission subbituminous coal and lignite as reflected in a gradually rising weighted-average carbon dioxide emission factor.

**Table C1. Average Carbon Dioxide Emission Factors for Coal by Coal-Consuming Sector**  
(Pounds of Carbon Dioxide per Million Btu)

Year	Residential and Commercial	Industrial		Electric Utilities	U.S. Average <sup>b</sup>
		Coke Plants <sup>a</sup>	Other Coal		
1980 .....	210.6	205.8	205.9	206.7	206.5
1981 .....	212.0	205.8	205.9	206.9	206.7
1982 .....	210.4	205.7	206.0	207.0	206.9
1983 .....	209.2	205.5	205.9	207.1	207.0
1984 .....	209.5	205.6	206.2	207.1	207.0
1985 .....	209.3	205.6	206.4	207.3	207.1
1986 .....	209.2	205.4	206.5	207.3	207.1
1987 .....	209.4	205.2	206.4	207.3	207.2
1988 .....	209.1	205.3	206.4	207.6	207.3
1989 .....	209.7	205.3	206.6	207.5	207.3
1990 .....	209.5	206.2	206.8	207.6	207.4
1991 .....	210.2	206.2	206.9	207.7	◦ 207.5

<sup>a</sup>No allowances have been made for carbon retained in non-energy coal chemical byproducts from the coal carbonization process.

<sup>b</sup>Weighted average. The weights used are consumption values by sector.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.





# Appendix D. List of Features

The following is a complete list of features that have appeared in the *Monthly Energy Review* since the first issue was published in October 1974. There are four categories of features on the list. "Articles" cover a wide range of energy-related subjects in depth. "Highlights" summarize the most important information presented in the subject Energy Information Administration (EIA) report. "Energy Previews"

provide brief overviews of EIA preliminary energy data on a given topic. "EIA Data News" items present information on recent changes in the scope, design, methodology, and findings of EIA's energy surveys and databases. Questions and comments about features may be directed to Barbara T. Fichman by telephone at 202-586-5737, by fax at 202-586-0018, or by Internet E-Mail at [bfichman@eia.doe.gov](mailto:bfichman@eia.doe.gov).

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<b>1995</b>	
Highlights: <i>Manufacturing Consumption of Energy 1991</i> .....	January 1995
Article: U.S. Wind Energy Potential: The Effect of the Proximity of Wind Resources to Transmission Lines .....	February 1995
EIA Data News: The Response Analysis Survey: Evaluating Manufacturing Energy Consumption Survey Methodology .....	March 1995
<b>1994</b>	
Energy Preview: Commercial Buildings Energy Consumption Survey, Preliminary Estimates, 1992 .....	January 1994
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Highlights: <i>Energy Use and Carbon Emissions: Some International Comparisons</i> .....	April 1994
Highlights: <i>Commercial Buildings Characteristics 1992</i> .....	June 1994
Article: Demand, Supply, and Price Outlook for Reformulated Motor Gasoline 1995 .....	July 1994
Article: Commercial Nuclear Electric Power in the United States: Problems and Prospects .....	August 1994
Highlights: <i>Reducing Home Heating and Cooling Costs</i> .....	August 1994
Energy Preview: Commercial Buildings Energy Consumption and Expenditures 1992, Preliminary Estimates .....	September 1994
Article: Carbon Dioxide Emission Factors for Coal: A Summary .....	September 1994
Article: The Impact of Flow Control and Tax Reform on Ownership and Growth in the U.S. Waste-to-Energy Industry .....	September 1994
EIA Data News: Data Collection on Alternative-Fuel Vehicles .....	October 1994
Highlights: <i>Energy End-Use Intensities in Commercial Buildings</i> .....	October 1994
Article: Change in Method for Estimating Fuel Economy for the Residential Transportation Energy Consumption Survey .....	October 1994
Article: Comparability of Supply- and Consumption-Derived Estimates of Manufacturing Energy Consumption .....	October 1994
Energy Preview: Housing Characteristics 1993, Selected Preliminary Estimates .....	November 1994
Energy Preview: Propane-Provider Fleet Survey 1993, Preliminary Estimates .....	November 1994
Energy Preview: Atlanta Private Fleet Survey 1994, Preliminary Estimates .....	December 1994
<b>1993</b>	
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Highlights: <i>Natural Gas 1992: Issues and Trends</i> .....	September 1993
Highlights: <i>International Energy Outlook 1993</i> .....	October 1993
Highlights: <i>The Changing Structure of the U.S. Coal Industry: An Update</i> .....	November 1993
Highlights: <i>Emissions of Greenhouse Gases in the United States 1985-1990</i> .....	December 1993
Highlights: <i>Assessment of Energy Use in Multibuilding Facilities</i> .....	December 1993

**1992**

Energy Preview: Residential Energy Consumption and Expenditures Preliminary Estimates, 1990 .....	April 1992
EIA Data News: Oxygenate Data Collection Begins .....	May 1992
Highlights: <i>Lighting in Commercial Buildings</i> .....	June 1992
Article: Demand, Supply, and Price Outlook for Oxygenated Gasoline, Winter 1992-1993 .....	August 1992
EIA Data News: EIA Statistics on Electric Utility Demand-Side Management .....	September 1992
EIA Data News: EIA Statistics on Nonutility Power Producers .....	October 1992
Highlights: <i>Derived Annual Estimates of Manufacturing Energy Consumption, 1974-1988</i> .....	November 1992
Article: Energy Efficiency in the Manufacturing Sector .....	December 1992

**1991**

Highlights: <i>U.S. Energy Industry Financial Developments, 1990 Fourth Quarter</i> .....	March 1991
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Highlights: <i>U.S. Oil and Gas Reserves by Year of Field Discovery</i> .....	August 1990

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Article: Monthly U.S. Crude Oil Production Estimates .....	March 1989
Article: Superconductivity and Energy Production and Consumption .....	May 1989
Highlights: <i>Commercial Buildings Consumption and Expenditures 1986</i> .....	May 1989
Article: Higher Prices Yield Improved Energy Industry Financial Results in the First Half of 1989 .....	June 1989
Article: The Future Structure of the U.S. Commercial Nuclear Power Equipment Manufacturing Industry .....	July 1989
Highlights: <i>Potential Costs of Restricting Chlorofluorocarbon Use</i> .....	September 1989
Highlights: Manufacturing Energy Consumption Survey: Changes in Energy Efficiency, 1980-1985 .....	October 1989
Highlights: Household Energy Consumption and Expenditures 1987, Part 1: National Data .....	November 1989
Article: Improved Energy Profits Offset by Refining Results in 1989 .....	December 1989

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Article: The U.S. Energy Industry's Financial Recovery Continued in the First Half of 1988 .....	June 1988
Article: A U.S. Perspective on Condensate .....	June 1988
Article: State Energy Severance Taxes, 1972-1987 .....	July 1988
Highlights: Manufacturing Energy Consumption Survey: Consumption of Energy, 1985 .....	September 1988
Highlights: Profiles of Foreign Direct Investment in U.S. Energy 1987 .....	October 1988
Highlights: Manufacturing Energy Consumption Survey: Fuel Switching, 1985 .....	November 1988
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Article: Manufacturing Sector Energy Consumption, 1985 Provisional Estimates .....	January 1987
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Highlights: Consumption and Expenditures, April 1984 Through March 1985, Part 2: Regional Data .....	May 1987
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Article: End-Use Consumption of Residential Energy .....	July 1987
Highlights: Uranium Industry Annual 1986 .....	September 1987
Highlights: Potential Oil Production from ANWR .....	October 1987
Highlights: Profiles of Foreign Direct Investment in U.S. Energy 1986 .....	November 1987
Article: The U.S. Energy Industry in 1987: A Slow Recovery .....	December 1987

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Article: State Motor Gasoline Taxes, 1960-1985 .....	March 1986
Article: The Impact of Low Oil Prices on Electric Utility Fuel Choice .....	June 1986
Article: U.S. Energy Industry Financial Developments, 1986 Second Quarter .....	June 1986
Highlights: International Energy Annual 1985 .....	September 1986
Article: U.S. Energy Industry Financial Developments, 1986 .....	December 1986

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Highlights: <i>Performance Profiles of Major Energy Producers 1983</i> .....	February 1985
Article: Estimating Well Completions .....	March 1985
Highlights: State Energy Price and Expenditure Report 1970-1982 .....	March 1985
Highlights: State Energy Data Report, Consumption Estimates, 1960-1983 .....	April 1985
Highlights: Annual Outlook for U.S. Electric Power 1985 .....	June 1985
Highlights: <i>Short-Term Energy Outlook, Volume 1, October 1985</i> .....	August 1985
Highlights: <i>Analysis of Growth in Electricity Demand, 1980-1984</i> .....	August 1985
Highlights: <i>Profiles of Foreign Direct Investment in U.S. Energy 1984</i> .....	November 1985
Highlights: Performance Profiles of Major Energy Producers 1984 .....	December 1985

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Highlights: Annual Energy Outlook 1983 .....	March 1984
Highlights: State Energy Data Report, Consumption Estimates, 1960-1982 .....	March 1984
Highlights: State Energy Price and Expenditure Report, 1970-1981 .....	May 1984
Highlights: Solar Collector Manufacturing Activity 1983 .....	June 1984
Highlights: International Energy Annual 1983 .....	September 1984
Highlights: Estimates of U.S. Wood Energy Consumption, 1980-1983 .....	September 1984
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Highlights: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report .....	September 1983
Article: Residential Energy Consumption, 1978 Through 1981 .....	September 1983
Article: Exploring for Oil and Gas .....	November 1983
Article: The Influence of Federal Actions on Petroleum Exploration .....	December 1983[2]
Article: Aggregate Statistics: Accurate or Misleading? .....	December 1983[3]

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Article: Natural Gas Drilling and Production Under the Natural Gas Policy Act .....	February 1982
Highlights: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report ..	September 1982
Article: Impacts of Financial Constraints on the Electric Utility Industry .....	October 1982
Highlights: Energy Company Development Patterns in the Postembargo Era .....	November 1982

**Feature****Cover Date****1981**

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Article: Information Services of the Energy Information Administration .....	September 1981
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Article: The Solar Collector Industry and Solar Energy .....	February 1980
Article: Trends in the Installation of Energy Using Equipment in New Residential Buildings .....	March 1980
Article: The Energy Information Administration's Oil and Gas Reserves Program—The First Year's Report .....	June 1980
Article: Energy From Urban Waste .....	August 1980
Article: Natural Gas Liquids: Revisions to 1979 Data .....	October 1980
Article: EIA Weekly Petroleum Data: Data Collection and Methods of Estimation .....	November 1980
Article: The Department of Energy Disclosure Policy for Individually Identifiable Information Maintained by the Energy Information Administration .....	December 1980

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Article: The Energy Requirements of U.S. Agriculture .....	July 1979
Article: Three Mile Island—Possible Regulatory Responses and Their Impacts on the Nation's Short-Term Electric Utility Fuel Outlook .....	October 1979
Article: Reduction in Natural Gas Requirements Due to Fuel Switching .....	December 1979

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Article: Crude Oil Entitlements Program .....	January 1977
Article: Motor Gasoline Supply and Demand .....	July 1977

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Article: Home Heating Conservation Alternatives and the Solar Collector Industry .....	March 1976
Article: Trends in United States Petroleum Imports .....	September 1976

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# Glossary

**Anthracite:** A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. Often referred to as hard coal. It conforms to ASTM Specification D388-84 for anthracite, meta-anthracite, and semianthracite.

**Asphalt:** A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

**ASTM:** The American Society for Testing and Materials.

**Aviation Gasoline Blending Components:** Naphthas that are used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, and reformat). Excludes oxygenates (alcohols and ethers), butane, and pentanes plus.

**Aviation Gasoline, Finished:** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

**Barrel (petroleum):** A unit of volume equal to 42 U.S. gallons.

**Base (Cushion) Gas:** The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

**Bituminous Coal:** A dense black coal, often with well-defined bands of bright and dull material, with a moisture content usually less than 20 percent. Often referred to as soft coal. It is the most common coal and is used primarily for generating electricity, making coke, and space heating. It conforms to ASTM Specification D388-84 for bituminous coal. In this report, bituminous coal includes subbituminous coal.

**British Thermal Unit (Btu):** The quantity of heat needed to raise the temperature of 1 pound of water by 1° F at or near 39.2° F. See **Heat Content of a Quantity of Fuel, Gross** and **Heat Content of a Quantity of Fuel, Net**.

**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.

**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 black or brownish-black solid, combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, subbituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value. Coal rank indicates the progressive alteration, or coalification, from lignite to anthracite. Lignite contains approximately 9 to 17 million Btu per ton. The heat contents of subbituminous and bituminous coal range from 16 to 24 million Btu per ton, and from 19 to 30 million Btu per ton, respectively. Anthracite contains approximately 22 to 28 million Btu per ton.

**Coal Coke:** A hard, porous product made from baking bituminous coal in ovens at temperatures as high as 2,000° F. It is used both as a fuel and as a reducing agent in smelting iron ore in a blast furnace.

**Commercial Sector:** The commercial sector, as defined economically, consists of business establishments that are not engaged in transportation or in manufacturing or other types of industrial activity (agriculture, mining, or construction). Commercial establishments include hotels, motels,

restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; religious and nonprofit organizations; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public services are also included if the establishment operating them is considered commercial.

**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.

**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.

**Cost, Insurance, Freight (CIF):** A type of sale in which the buyer of the product agrees to pay a unit price that includes the f.o.b. value of the product at the point of origin plus all costs of insurance and transportation. This type of transaction differs from a "delivered" purchase in that the buyer accepts the quantity as determined at the loading port (as certified by the Bill of Lading and Quality Report) rather than pay on the basis of the quantity and quality ascertained at the unloading port. It is similar to the terms of an f.o.b. sale, except that the seller, as a service for which he is compensated, arranges for transportation and insurance.

**Crude Oil f.o.b. Price:** The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

**Crude Oil (Including Lease Condensate):** A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

**Crude Oil Landed Cost:** The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. The cost does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

**Crude Oil Refinery Input:** The total crude oil put into processing units at refineries.

**Crude Oil Stocks:** Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

**Crude Oil Used Directly:** Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

**Cubic Foot (natural gas):** A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60° F.

**Degree-Day Normals:** Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1961-1990). The averages may be simple degree-day normals or population-weighted degree-day normals.

**Degree-Days, Cooling (CDD):** The number of degrees per day that the daily average temperature is above 65° F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

**Degree-Days, Heating (HDD):** The number of degrees per day that the daily average temperature is below 65° F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

**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 comprised of from three to eight States, which are assigned weights based on the ratio of the population of the region to the total population of the Nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

**Design Electrical Rating, Net:** The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

**Development Well:** A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

**Distillate Fuel Oil:** A general classification for one of the petroleum fractions produced in conventional distillation operations. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation.

**Dry Hole:** An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

**Dry Natural Gas Production (as a decrement from gas reserves):** The volume of natural gas withdrawn from reservoirs during the report year less (1) the volume returned to such reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; (2) shrinkage resulting from the removal of lease condensate and plant liquids; and (3) nonhydrocarbon gases, where they occur in sufficient quantity to render the gas unmarketable. Volumes of gas withdrawn from gas storage reservoirs and native gas that has been transferred to the storage category are not considered production. This is not the same as marketed production, since the latter also excludes vented and flared gas but contains liquids.

**Dry Natural Gas Production (as an increment to gas supply):** Gross withdrawals from production reservoirs less gas used in reservoir repressuring, amounts vented and flared, nonhydrocarbons removed, and various natural gas constituents, such as ethane, propane, and butane, removed at natural gas processing plants. The parameters for measurement are 60° F and 14.73 pounds standard per square inch absolute.

**Electrical System Energy Losses:** The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

**Electricity Generation:** The process of producing electric energy or transforming other forms of energy into electric energy. Also the amount of electric energy produced or expressed in watt-hours (Wh).

**Electricity Generation, Gross:** The total amount of electric energy produced by the generating station or stations, measured at the generator terminals.

**Electricity Generation, Net:** Gross generation less electricity consumed at the generating plant for station use. Electricity required for pumping at pumped-storage plants is regarded as plant use and is deducted from gross generation.

**Electricity Production:** Net electricity (gross electricity output measured at generator terminals minus power plant use) generated by publicly and

privately owned electric utilities. Excludes industrial electricity generation (except autogeneration of hydroelectric power).

**Electricity Sales:** The amount of kilowatt-hours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

**Electric Power Plant:** A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

**Electric Utility:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities for the generation, transmission, distribution, or sale of electric energy, primarily for use by the public, and that files forms listed in the *Code of Federal Regulations*, Title 18, Part 141. Facilities that qualify as cogenerators or small power producers under the Public Utility Regulatory Policies Act are not considered electric utilities.

**Electric Utility Sector:** The electric utility sector consists of privately and publicly owned establishments that generate, transmit, distribute, or sell electricity primarily for use by the public and that meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

**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 kilowatt-hours, 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 Consumption, End-Use:** *Primary end-use energy consumption* is the sum of fossil fuel consumption by the four end-use sectors (residential, commercial, industrial, and transportation) and generation of hydroelectric power by nonelectric utilities. *Net end-use energy consumption* includes

electric utility sales to those sectors but excludes electrical system energy losses. *Total end-use energy consumption* includes both electric utility sales to the four end-use sectors and electrical system energy losses.

**Energy Consumption, Total:** The sum of fossil fuel consumption by the five sectors (residential, commercial, industrial, transportation, and electric utility) plus hydroelectric power, nuclear electric power, net imports of coal coke, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

**Energy Source:** A substance, such as petroleum, natural gas, or coal, that supplies heat or power. In Energy Information Administration reports, electricity and renewable forms of energy, such as biomass, geothermal, wind, and solar, are considered to be energy sources.

**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.

**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 unproved area, to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir, or to extend the limit of a known oil or gas reservoir.

**Exports:** Shipments of goods from the 50 States and the District of Columbia to foreign countries and to Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**f.a.s.:** See **Free Alongside Ship**.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

**Federal Power Commission (FPC):** The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the Department of Energy was created. Its functions were divided between the Department of

Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**First Purchase Price:** The marketed first sales price of domestic crude oil, consistent with the removal price defined by the provisions of the Windfall Profits Tax on Domestic Crude Oil (Public Law 96-223, Sec. 4998 (c)).

**Flared Natural Gas:** Natural gas burned in flares on the base site or at gas processing plants.

**f.o.b.:** See **Free on Board**.

**Footage Drilled:** Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

**Former U.S.S.R.:** See **U.S.S.R.**

**Fossil Fuel:** Any naturally occurring organic fuel, such as petroleum, coal, and natural gas.

**Fossil Fuel Steam-Electric Power Plant:** An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

**Free Alongside Ship (f.a.s.):** The value of a commodity at the port of exportation, generally including the purchase price, plus all charges incurred in placing the commodity alongside the carrier at the port of exportation.

**Free on Board (f.o.b.):** A transaction whereby the seller makes the product available within an agreed-on period at a given port at a given price. It is the responsibility of the buyer to arrange for the transportation and insurance.

**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 (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) limited to 10 percent by volume



of alcohol. Gasohol is included in finished leaded and unleaded motor gasoline.

**Gas-Turbine Electric Power Plant:** A plant in which the prime mover is a gas turbine. A gas turbine typically consists of an axial-flow air compressor, one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases expand to drive the generator and then are used to run the compressor.

**Gas Well:** A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

**Geothermal Energy:** Energy from the internal heat of the Earth, which may be residual heat, friction heat, or a result of radioactive decay. The heat is found in rocks and fluids at various depths and can be extracted by drilling and/or pumping.

**Geothermal Energy (as used at electric utilities):** Hot water or steam extracted from geothermal reservoirs in the Earth's crust and supplied to steam turbines at electric utilities that drive generators to produce electricity.

**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.

**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. 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.

**Imports:** Receipts of goods into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**Industrial Sector:** The industrial sector comprises manufacturing industries, which make up the largest part of the sector, along with mining, construction, agriculture, fisheries, and forestry. Establishments in this sector range from steel mills, to small farms, to companies assembling electronic components.

**Internal Combustion Electric Power Plant:** A power plant in which the prime mover is an internal combustion engine. Diesel or gas-fired engines are the principal types used in electric power plants. The plant is usually operated during periods of high demand for electricity.

**Jet Fuel:** The term includes kerosene-type jet fuel and naphtha-type jet fuel. Kerosene-type jet fuel is a kerosene-quality product used primarily for commercial turbojet and turboprop aircraft engines. Naphtha-type jet fuel is a fuel in the heavy naphthas range used primarily for military turbojet and turboprop aircraft engines.

**Kerosene:** A petroleum distillate that has 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.

**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 as fuel in natural gas processing plants.

**Lease Condensate:** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**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:** A brownish-black coal of low rank with a high content of moisture and volatile matter. Often referred to as brown coal. It is used almost exclusively for electric power generation. It conforms to ASTM Specification D388-84 for lignite.

**Liquefied Natural Gas (LNG):** Natural gas (primarily methane) that has been liquefied by reducing its temperature to  $-260^{\circ}$  F at atmospheric pressure.

**Liquefied Petroleum Gases (LPG):** Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

**Low-Power Testing:** The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

**Lubricants:** Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

**Marketed Production:** Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

**Methanol:** A light, volatile alcohol ( $\text{CH}_3\text{OH}$ ) 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 Components:** Naphthas that will be used for blending or compounding into finished motor gasoline (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, and zylene).

Excluded are oxygenates (alcohols and ethers), butane, and pentanes plus.

**Motor Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, includes a range in distillation temperatures from  $122$  to  $158^{\circ}$  F at the 10-percent recovery point and from  $365$  to  $374^{\circ}$  F at the 90-percent recovery point. Motor gasoline includes reformulated motor gasoline, oxygenated motor gasoline, and other finished motor gasoline. Blendstock is excluded until blending has been completed.

- *Reformulated Motor Gasoline:* Motor gasoline, formulated for use in motor vehicles, the composition and properties of which are certified as "reformulated motor gasoline" by the Environmental Protection Agency.
- *Oxygenated Motor Gasoline:* Motor gasoline, formulated for use in motor vehicles, that has an oxygen content of 1.8 percent or higher by weight.
- *Other Finished Motor Gasoline:* Motor gasoline that is not included in the reformulated or oxygenated categories.

**Motor Gasoline, Finished Gasohol:** A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol, but sometimes methanol) in which 10 percent or more of the product is alcohol.

**Motor Gasoline, Finished Leaded:** Motor gasoline that contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Motor Gasoline, Finished Leaded Premium:** Motor gasoline having an antiknock index, calculated as  $(R+M)/2$ , greater than 90 and containing more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon.

**Motor Gasoline, Finished Leaded Regular:** Motor gasoline having an antiknock index, calculated as  $(R+M)/2$ , greater than or equal to 87 and less than or equal to 90 and containing more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

**Motor Gasoline, Finished Unleaded:** Motor gasoline containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blendstock is excluded until blending has

been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Motor Gasoline, Finished Unleaded Midgrade:** Motor gasoline having an antiknock index, calculated as  $(R+M)/2$ , greater than or equal to 88 and less than or equal to 90 and containing not more than 0.05 gram of phosphorus per gallon.

**Motor Gasoline, Finished Unleaded Premium:** Motor gasoline having an antiknock index, calculated as  $(R+M)/2$ , greater than 90 and containing not more than 0.05 gram of lead or 0.005 gram of phosphorus per gallon.

**Motor Gasoline, Finished Unleaded Regular:** Motor gasoline having an antiknock index, calculated as  $(R+M)/2$ , of 87 containing not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon.

**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:** Includes finished leaded motor gasoline (premium and regular), finished unleaded motor gasoline (premium, midgrade, and regular), motor gasoline blending components, and gasohol.

**MTBE (Methyl Tertiary Butyl Ether):** An ether,  $(CH_3)_3COCH_3$ , intended for motor gasoline blending. See **Oxygenates**.

**Naphtha:** A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

**Natural Gas:** A mixture of hydrocarbons (principally methane) and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas, Dry:** The marketable portion of natural gas production, which is obtained by subtracting extraction losses, including natural gas liquids removed at natural gas processing plants, from total production.

**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 Materials 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 Gas, Wet:** Natural gas prior to the extraction of liquids and other miscellaneous products.

**Net Consumption:** See **Energy Consumption, End-Use**.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

**Nuclear Electric Power:** Electricity generated by an electric power plant whose turbines are driven by steam generated in a reactor by heat from the fissioning of nuclear fuel.

**Nuclear Electric Power Plant:** A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

**Nuclear Reactor:** An apparatus in which the nuclear fission chain can be initiated, maintained, and controlled so that energy is released at a specific rate. The reactor includes fissionable material (fuel), such as uranium or plutonium; fertile material; moderating material (unless it is a fast reactor); a heavy-walled pressure vessel; shielding to protect personnel; provision for heat removal; and control elements and instrumentation.

**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 (Including Lease Condensate)**.

**Oil Well:** A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

**Operable (nuclear):** A U.S. nuclear generating unit is considered operable after it completes low-power testing and is issued a full-power operating license by the Nuclear Regulatory Commission. A foreign nuclear generating unit is considered operable once it has generated electricity to the grid.

**Organization for Economic Cooperation and Development (OECD):** Current members are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States and its territories (Guam, Puerto Rico, and the Virgin Islands), and Germany.

**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, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

**Oxygenated Motor Gasoline:** See **Motor Gasoline, Finished**.

**Oxygenates:** Any substance which, when added to motor gasoline, increases the amount of oxygen in that motor gasoline blend. Through a series of waivers and interpretive rules, the Environmental Protection Agency (EPA) has determined the allowable limits for oxygenates in unleaded gasoline. The "Substantially Similar" Interpretive Rules (56 FR [February 11, 1991]) allows blends of aliphatic alcohols other than methanol and aliphatic ethers, provided the oxygen content does not exceed 2.7 percent by weight. The "Substantially Similar" Interpretive Rules also provide for blends of methanol up to 0.3 percent by volume exclusive of other oxygenates, and butanol or alcohols of a higher molecular weight up to 2.75 percent by weight. Individual waivers pertaining to the use of oxygenates in unleaded motor gasoline have been issued by the EPA. They include:

- **Fuel Ethanol.** Blends of up to 10 percent by volume anhydrous ethanol (200 proof).
- **Methanol.** Blends of methanol and gasoline-grade tertiary butyl alcohol (GTBA)

such that the total oxygen content does not exceed 3.5 percent by weight and the ratio of methanol to GTBA is less than or equal to 1. It is also specified that this blended fuel must meet ASTM volatility specifications.

Blends of up to 5.0 percent by volume methanol with a minimum of 2.5 percent by volume co-solvent alcohols having carbon number of 4 or less (i.e., ethanol, propanol, butanol, and/or GTBA). The total oxygen must not exceed 3.7 percent by weight, and the blend must meet ASTM volatility specifications as well as phase separation and alcohol purity specifications.

- **MTBE (Methyl tertiary butyl ether).** Blends up to 15.0 percent by volume MTBE that must meet the ASTM D4814 specifications. Blenders must take precautions that the blends are not used as base gasolines for other oxygenated blends.

**Pentanes Plus:** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

**Petrochemical Feedstocks:** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

**Petroleum:** A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

**Petroleum Coke:** A residue that is the final product of the condensation process in cracking. The product is either marketable petroleum coke or catalyst petroleum coke.

**Petroleum Coke, Catalyst:** The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

**Petroleum Coke, Marketable:** Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or further purified by calcining.

**Petroleum Consumption:** The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus

quantity and net additions are a minus quantity) and exports.

**Petroleum Imports:** Imports of petroleum into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

**Petroleum Products:** Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Products Supplied:** See **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 and Solar Thermal Energy (as used at electric utilities):** Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted at electric utilities into electricity by means of solar (photovoltaic) cells or concentrating (focusing) collectors.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

**Primary Consumption:** See **Energy Consumption, End-Use**.

**Propane:** A normally gaseous straight-chain hydrocarbon ( $C_3H_8$ ). It is a colorless paraffinic gas that boils at a temperature of  $-43.67^\circ F$ . It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

**Propylene:** An olefinic hydrocarbon ( $C_3H_6$ ) recovered from refinery or petrochemical processes.

**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 wood, waste, photovoltaic, and solar thermal energy.

**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:** The residential sector is considered to consist of all private residences, whether occupied or vacant, owned or rented, including single-family homes, multifamily housing units, and mobile homes. Secondary homes, such as summer homes, are also included. Institutional housing, such as school dormitories, hospitals, and military barracks, generally are not included in the residential sector; they are included in the commercial sector.

**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, electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

**Road Oil:** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

**Rotary Rig:** A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

**Short Ton (coal):** A unit of weight equal to 2,000 pounds.

**SIC:** See **Standard Industrial Classification**.

**Solar Energy:** The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

**Standard Industrial Classification (SIC):** A set of codes developed by the Office of Management and Budget which categorizes industries into groups with similar economic activities.

**Startup Test Phase of Nuclear Power Plant:** A nuclear power plant that has been licensed by the Nuclear Regulatory Commission to operate but is still in the initial testing phase, during which the production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer and places it in commercial operation status. A request is then submitted to the appropriate utility rate commission to include the power plant in the rate base calculation.

**Steam-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.

**Strategic Petroleum Reserve (SPR):** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Supplemental Gaseous Fuels:** Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

**Synthetic Natural Gas (SNG):** A manufactured product chemically similar in most respects to natural gas, resulting from the conversion or reforming of petroleum hydrocarbons. It may easily be substituted for, or interchanged with, pipeline quality natural gas. Also referred to as substitute natural gas.

**Total Consumption:** See **Energy Consumption, End-Use.**

**Transportation Sector:** The transportation sector consists of private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.

**Unaccounted-for Crude Oil:** Arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production and imports, less changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

**Underground Storage:** The storage of natural gas in underground reservoirs at a different location from which it was produced.

**United States:** Unless otherwise noted, "United States" in this publication means the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

**U.S.S.R.:** The Union of Soviet Socialist Republics consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. As a political entity, the U.S.S.R. ceased to exist as of December 31, 1991.

**Vented Natural Gas:** Gas released into the air on the base site or at processing plants.

**Wellhead Price:** The value of crude oil or natural gas at the mouth of the well.

**Well Servicing Unit:** Truck-mounted equipment generally used for downhole services after a well is drilled. Services include well completions and recompletions, maintenance, repairs, workovers, and well plugging and abandonments. Jobs range from minor operations, such as pulling the rods and rod pumps out of an oil well, replacing the pump and rerunning the assemblage into the well, to major workovers, such as milling out and repairing collapsed casing. Well depth and characteristics determine the type of equipment used.

**Wind Energy (as used at electric utilities):** The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blades rotating from a hub) that drive generators to produce electricity for distribution.

**Wood and Waste (as used at electric utilities):** Wood energy, garbage, bagasse, sewerage gas, and other industrial, agricultural, and urban refuse used to generate electricity for distribution.

**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 gas in a reservoir that is in addition to the base (cushion) gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any given season.

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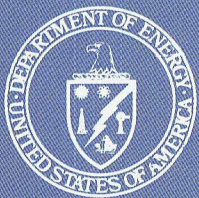
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